EXAMINING BYSTANDER INTERVENTION DURING SEXUAL ASSAULTS EXPERIENCED BY TRANSGENDER UNDERGRADUATES

by

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To my husband Danny, son Hudson, mother, brother, and dear friends, Shawn and Peg. You are the best village anyone could ask for…without you this journey would not have been possible.

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Elizabeth A. Fulks

ABSTRACT

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Bystander intervention programs train college students to recognize sexual violence and to intervene when it occurs. However, little research has examined how often bystanders are present at assaults experienced by transgender undergraduates or how bystanders behave when there. Therefore, little is known about how plausible it is that bystander intervention programming could address the overwhelming incidence of sexual violence perpetrated against transgender students. Therefore, the purpose of this dissertation is to determine how often bystanders are present during sexual assaults experienced by transgender students, describe what actions bystanders take, and determine if injury severity, presence of reproductive consequences, and number of psychological consequences vary based on bystander presence and bystander actions. Results from this dissertation demonstrate that the majority of assaults transgender students experienced occurred without a third party present (68.3%) and that bystanders were more likely to be present at a party and during assaults perpetrated by strangers as opposed to those that occurred outside of a social situation or those committed by a current or former intimate partner. Assaults with attempted or completed penetration had

significantly lower odds of having a bystander present compared to those with non-consensual contact. Additionally, results from the dissertation also indicate that when bystanders were present, the plurality of bystanders did not intervene (39%) and when they did, they engaged in helpful (21%) and harmful behavior (21.9%). However, active harmful behaviors by bystanders, such as joining the assault, were rare. Finally, bystander behavior had a significant impact on injury severity and psychological consequences. Further, there was a statistically significant increase in the number of psychological consequences experienced by victims when bystanders engaged in harmful behavior as compared to when bystanders take no action. Helpful bystander behavior had no impact on psychological outcomes. Implications for research and programming are discussed throughout the dissertation.

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CHAPTER ONE

INTRODUCTION

Introduction

Federal legislation requires federally funded institutes of higher education to provide campus-wide sexual assault education to all students, including bystander-based training (Violence Against Women Reauthorization Act, 2013). Bystanders are individuals who are present in situations of sexual assault and have the ability to prevent the assault, intervene during an assault, assist the perpetrator, or do nothing at all (Banyard, 2015; Hamby et al., 2016). Using a community approach, bystander intervention programs provide education and training to campus communities to increase awareness of problematic sexual assault scenarios, reduce or eliminate social norms that perpetuate violence, and encourage intervention. While bystander programs are popular, most programs rarely include material specifically designed for students who identify as a sexual or gender minority. Further, there has been a dearth of research that examines the effectiveness of bystander intervention for students who are not cisgender. This is extremely problematic as research demonstrates that transgender individuals face considerable stigma and discrimination on college campuses and are known to have a heightened risk of experiencing sexual assault while in college (Coulter et al., 2017; Grant et al., 2011, Griner et al., 2020; Howard et al., 2019; Hoxmeier, 2016). Without comprehensive research and inclusive programming that addresses the unique experiences of marginalized students, including transgender students, rates of violence are likely to persist (Harris & Linder, 2017).

Background

"Transgender" or "trans" are broad terms used to reference when an individual has a gender identity that differs from their sex designation at birth (Delozier et al., 2020). The term transgender is expansive and can include transgender men and transgender women as well as those who identify as gender non-binary (a gender outside of binary labels such as "man" or "woman") (Nicolazzo et al., 2017) or genderqueer. Often, transgender individuals are homogenized alongside individuals who identify as lesbian, gay, or bisexual. However, sexual orientation and gender identity are vastly different and separate concepts with "…the former focused on the gender of the individual one is attracted to versus the latter focused on having an internalized and outwardly expressed gender identity different from the sex one was assigned at birth" (Landers & Kapadia, 2017, p. 205). According to the Census Bureau, approximately 2.6 million adults identify as transgender in the United States (USA Facts, 2023).

Unfortunately, many transgender persons in the United States (U.S.) experience heightened rates of sexual violence. Data from the 2015 U.S. Transgender Survey (USTS), the largest survey examining the experiences of transgender people in the United States, indicates that more than half (54%) of transgender individuals surveyed reported intimate partner violence and 47% reported a lifetime history of sexual assault (James et al., 2016). Among U.S. college students, those who identify as transgender are significantly more likely to report experiencing sexual assault than their cisgender peers (Coulter et al., 2017; Griner et al., 2020; Howard et al., 2019; Hoxmeier, 2016). More specifically, one study found that transgender undergraduate students had higher odds of experiencing nonconsensual touching as well as attempted and completed vaginal, oral,

and anal penetration (Hoxmeier, 2016). Further, transgender students reported nearly five times the odds of completed penetration without consent and just over six times higher odds of reporting victimization including emotional and sexual abuse in a relationship when compared to cisgender peers (Hoxmeier, 2016). Further, 41.8% of transgender undergraduate students reported being concerned about experiencing a future sexual assault while enrolled in college [23.4% somewhat concerned, 13% very concerned, and 5.4% extremely concerned](Cantor et al., 2020). Finally, while more than 75% of transgender students reported feeling knowledgeable about where to get help at their university if they or a friend experienced sexual assault, many worried that it was somewhat (35.8%), very (29.5%), or extremely (12.6%) likely that the alleged offender or their associates would retaliate against the person making the report and less than half of students surveyed felt that campus officials were very (29.9%) or extremely (11.6%) likely to take reports of sexual misconduct seriously (Cantor et al., 2020, p. 120). Despite these staggering statistics related to campus sexual assault involving transgender students, sexual assault prevention programs have largely ignored transgendered students.

Significance

The impacts of sexual assault are both immediate and long-lasting. Survivors frequently report significant sequelae following sexual assault including psychological, physical and reproductive, educational, and economic impacts which are detailed below (Cantor et al., 2020; Molstad et al., 2023).

Psychological Sequelae

Formative works among cisgender women have found that many sexual assault survivors experience depression, suicidal ideation, poor self-esteem, and poor social

adjustment (Resick, 1993, p. 223; Steketee & Foa, 1987). More recent literature examining psychological sequelae of sexual assault among transgender victims of sexual assault has found that transgender individuals report some of the highest rates of behavioral and emotional consequences following sexual assault (Cantor et al., 2020). This includes feelings of fearfulness and concern for safety (59.4% of transgender students compared to 40.6% of women and 20.4% of men), loss of interest in daily activities (60.1% transgender students compared to 40.9% women and 29.2% men), withdrawal from interactions with friends (61.4% of transgender students compared to 46.4% of women and 29.2% men), nightmares or trouble sleeping (55.8% of transgender students compared to 42.2% women and 21.5% men), and feeling numb or detached (72.9% of transgender students compared to 60.2% women and 38.5% men) (Cantor et al., 2020, p. 25). Further, of those who report being sexually assaulted while in school (K-12 or in a higher learning institution), 68% report attempting suicide (Grant et al., 2011).

Physical and Reproductive Health Impacts

Transgender students who experience sexual assault on college campuses have also been found to report higher rates of physical injury following all types of sexual assault when compared to cisgender peers (Cantor et al., 2020). This includes assault with penetration using physical force, penetration with inability to consent, sexual touching with physical force, or sexual touching without the ability to consent (Cantor et al., 2020, p. A7-26). Transgender victims of college sexual assault also report significant reproductive health implications (Cantor et al., 2020). This includes 11.7% of transgender, non-binary, and genderqueer respondents reporting that they contracted a

sexual transmitted disease or infection following penetration with physical force or inability to consent; a rate that is significantly higher than the 4.6% of women and 6.1% of men who reported the same (Cantor et al., 2020, p. A7-26). Further, 4.5% of transgender, non-binary, and genderqueer respondents reported becoming pregnant following a sexual assault involving penetration with physical force or inability to consent compared to 0.6% of women and 1.2% of men (Cantor et al., 2020, p. A7-26).

Educational Sequela

In response to sexual assault, many college students suffer considerable educational consequences (Mengo & Black, 2015; Molstad et al., 2023). In a large national study, transgender victims of sexual assault reported profound educational sequela following sexual assault and at rates considerably higher than their cisgender peers (Cantor et al., 2020). This includes consequences such as decreased class attendance (54.1% of transgender students compared to 36.3% of women and 28% of men), difficulty focusing on assignments and exams (68.7% of transgender students surveyed compared to 55.5% of women and 38.2% men surveyed), and difficulty going to work (39% transgender students compared to 23.2% of women and 17.7% men) (Cantor et al., 2020). College students who have experienced sexual victimization while in college are also more likely to experience a drop in overall grade point average (GPA) and may also be more likely to withdraw from school (Mengo & Black, 2015; Molstad et al., 2023). Further, of those transgender students who left college because of negative experiences, 30% did not return and 48% reported having experienced homelessness (Grant et al., 2011). While immediate educational sequela may occur following sexual assault, the long-term economic effects of educational consequences can be devastating.

Economic Impact

In addition to the psychological, physical, reproductive, and educational impacts of sexual assault, there is also a significant economic burden. Medical bills, lost wages, decreased work productivity, and legal proceedings all contribute to the lifetime cost of sexual assault, which is currently estimated at $122,461 per victim or $3.1 trillion for all victims in the United States (Peterson et al., 2017). This includes $1.2 trillion in medical costs, $1.6 trillion in lost work productivity among victims and perpetrators, $234 billion in criminal justice activities, and $36 billion in other costs including victim property loss or damage …with government sources pay nearly one-third ($1 trillion) of the total economic burden" (Peterson et al., 2017, p. 697).

Literature Review

Sexual Assaults Involving Bystanders & Bystander Opportunity

Early data from the National Crime Victimization Survey (NCVS) conducted by the U.S. Department of Justice between 1993 and 1999 suggested that third parties were present during 29% of the time during a sexual assault (Planty, 2002, p. 1). The survey measured a wide range of victimizations including completed or attempted attacks, unwanted sexual contact, grabbing or fondling, and verbal threats (Planty, 2002, p. 7). Hamby et al. (2016) studied bystander intervention during a range of interpersonal violence situations, including physical, psychological, and sexual assault. These researchers reported that of all situations, sexual assault was the least likely to have a bystander present with only 18.4% of participants reporting a bystander present during sexual assault as opposed to all other incidents where a bystander's presence was reported 60% to 70% of the time. Hamby et al. (2016) also studied how bystanders'

actions influenced the situation and found that in cases of sexual assault, actions were helpful 27.3% of the time, harmful 9% of the time, both helpful and harmful 13.6% of the time, and non-impactful 50% of the time (p. 95). Nearly 18% of bystanders who intervened during incidents where a sexual assault occurred were hurt or threatened; the highest percentage reported for all incident types evaluated by the study (Hamby et al., 2016).

Studies about bystander intervention opportunity are often limited in that they utilize the perspective of the bystander rather than that of the sexual assault survivor. To address this gap, Haikalis et al. (2018) utilized a victim-centered approach to determine how often bystanders are present prior to and during sexual assaults, how often there is an opportunity for bystanders to intervene, and how often bystanders engage in bystander behaviors based on victim reporting (p. 1236-1237). Using a sample of 427 women, ages 18 to 25 years, they found that victims reported that bystanders were present *before* their sexual assault 34% of the time (n= 147), absent 57% of the time (n = 244), and unsure about their presence 8% of the time (n = 36) (Haikalis et al., 2018). Victims reported that bystanders were present *during* their sexual assault only 3% of the time (n = *13*) and present both *before and during* the sexual assault in only 2% of cases (n = 8) (Haikalis et al., 2018, p. 1242- 1243). In situations where a sexual assault occurred, Haikalis et al. (2018) found that victims reported that bystanders had the opportunity to intervene to prevent the sexual assault in 67% of cases (n= 98). Results demonstrate that bystanders are sometimes present before a sexual assault occurs but rarely present once it does. Further, the results also indicate that when an individual is present during an assault, the victim often believes that a bystander has the ability to intervene. Collectively, data from

each of these studies highlight the need to further explore how often sexual assaults involve bystanders as well as theoretical reasons why bystanders may or may not intervene when witnessing a sexual assault.

Understanding Bystander Intervention Theory

One of the first studies to examine the role of the bystander was conducted by Darley & Latané (1968) who examined if and when individuals would intervene when faced with an emergent situation. During this study, researchers also tested the concept of the "bystander effect"; the hypothesis that the more bystanders who were present, the less likely any one bystander would provide aid during a medical emergency (Darley & Latané, 1968). Findings demonstrated that a victim is just as likely to receive help from one bystander as from two but is less likely to receive help if there were more than two other bystanders present. Further, the authors found that third parties who do not respond as bystanders fail to do so for several key reasons: the responsibility is diffused among all observers, any potential blame for failing to act is also dispersed, and they perceive that someone else has already intervened (Darley & Latané, 1968).

Expanding on previous work, Latané and Darley (1970) outlined a five-step process for bystander intervention that included key steps that must occur. First, the bystander must identify that something is wrong, next, they must determine that mediation is required, then they must determine the degree of personal responsibility, next they must decide how they will act, and finally they have to intervene (Latané & Darley, 1970 as cited in Latané & Nida, 1981). If any of these five steps is skipped or interrupted, then the bystander will fail to intervene (Latané & Nida, 1981). Since

inception, Latané and Darley's bystander framework has been analyzed and extrapolated to numerous violence prevention programs, including those that target sexual assault.

Application of the Bystander Framework to Sexual Assault Prevention

Early sexual assault prevention programs mainly focused on training women to resist male perpetrators through a number of mechanisms. These early programs encouraged women to learn self-defense and to avoid bars, dark streets, and dangerous areas in the city in order to avoid stranger assault (Swift & Ryan-Finn, 1995, p. 16). These programs largely reflected era-specific gender-based stereotypes and frequently placed the responsibility for resistance on victims rather than perpetrators (Orchowski et al., 2020; Swift & Ryan-Finn, 1995). However, over time, sexual assault prevention programs would evolve and direct their attention to changing the behavior of perpetrators (Swift & Ryan-Finn, 1995, p. 20). These programs often focused on reducing rape-supportive attitudes while also encouraging men to act as partners in assault prevention (Katz, 1995). While this change acknowledged the role that gender plays in sexual assault, prevention efforts remained largely unsuccessful (Coker et al., 2011). To address continued short-comings, researchers began advocating for new approaches that could engage broader communities of students (Banyard et al., 2004). This call for change would ultimately initiate a large paradigm shift within campus violence prevention efforts and spur numerous prevention programs framed around bystander theory (Coker et al., 2011, p. 779). Bystander intervention differs from previous sexual assault prevention techniques because it focuses on creating a community of responsibility where all individuals have the opportunity to prevent or interrupt sexual assault.

Prevalence of Bystander Intervention Programs

Bystander programs continue to gain popularity. As of 2016, roughly 300 colleges have implemented *Green Dot*, and *Bringing in the Bystander* has been used at more than 400 schools in 42 states (Kingkade, 2016). Kafonek and Richards (2017), reported that 32% of four-year institutions of higher education (IHE) have sexual assault programs on their campuses. Additionally, the *Mentors in Violence Prevention* (MVP) project has been used throughout the United States for over 20 years, was officially adopted by the U.S. Marine Corps in 1997, and has been used by the New England Patriots football program (Katz, 2018). Other bystander programs have been implemented by the National Collegiate Athletic Association (NCAA), the United States Department of Defense, as well as state-level prevention strategies in Kentucky, Massachusetts, and New Jersey (McMahon & Banyard, 2012, p.4; Storer et al., 2016). While there are an abundance of sexual assault prevention programs that utilize bystander intervention including dozens, if not hundreds of organization-specific programs, this literature review will focus on three of the most popular: Mentors in Violence Prevention (MVP) project, Bringing in the Bystander, and Green Dot.

Mentors in Violence Prevention (MVP)

The Mentors in Violence Prevention project (Katz, 1995) was one of the first bystander programs developed. Contrary to previous efforts, the program was gender-focused and sought to motivate men with substantial social capital, namely college athletes, to refute sexist attitudes and behaviors in an effort to change rape-supportive behavior on college campuses and reduce gender-based violence (Katz, 1995). During initial development, Katz (1995) proposed that a paradigm shift was necessary; sexual

assault could no longer be viewed as a woman's problem but rather a men's problem that required a community-based solution. To accomplish this, Katz utilized a bystander framework that was relatively new at the time and had shown early success with bullying prevention (Katz, 2018, p. 1775). The MVP program was unique from other bystander programs in that it adopted a fresh perspective on the definition of a bystander, describing them as "…anyone who plays some role in an act of harassment, abuse, or violence but is neither the perpetrator nor the victim" rather than a passerby who chose not intervene (Katz et al., 2011, p. 686).

During the first year of the program, Katz and colleagues recruited college men for participation in three 90-minute sessions (Katz, 1995). Participants were provided with an "MVP playbook" which described "…scenarios portraying thirteen actual and potential sexual assaults. The scenarios range from sexist comments overheard in the locker room to verbal threats of physical harm, date rape, and gang rape" (Katz, 1995, pp. 167-168). Participants were then asked to consider options for intervention with a focus on bystander behavior. Options for action were also discussed within the participant group and participants were encouraged to share real life experiences that were similar to the scenarios (Katz, 1995). Katz argued that the sharing of personal experiences and the "…power of critical dialogue focused on the role of the bystander" acts "…as the vehicle for a shift in both individual beliefs and group norms surrounding the acceptance and perpetuation of rape and battering-supportive attitudes and behaviors" (Katz, 2018, p. 1772). The initial program also included a discussion about how violence against women exists along a continuum and men's action against abuse, no matter how small, was necessary to change social norms (Katz, 1995, p. 170). At the conclusion of the initial

phase of the program, participants who were interested in acting as a mentor to middle school and high school boys were provided with a supplemental workshop (Katz, 1995). While the MVP project initially began as a pilot program for collegiate male athletes, the program grew substantially over time to include middle school and high school students, other college populations, sports teams, and the military (Katz et al., 2011, p. 685).

In 1999, the MVP program underwent intensive evaluation after implementation at ten high schools in Massachusetts (Ward, 2001). To evaluate the impact of the program, students were given pre- and post-program surveys that assessed student knowledge, attitude, and self-efficacy (Ward, 2001). To test students' knowledge change, students were given a survey with five "True/False/I don't know" questions related to gender violence. Questions asked about Massachusetts rape legislation as well as perceptions about violence against women and physical abuse statistics. The researchers found that there were statistically significant differences in students pre- and post-test scores on four of the five questions. More specifically, 98.6% of student respondents knew the rape law in Massachusetts when surveyed after the MVP program as opposed to 75.9% of students who were aware of the law before participating; a statistically significant finding (p=.000) (Ward, 2001, p. 29). There were also significant mean differences between pre- and post-test questions that assessed students' knowledge about the prevalence of violence against women (p=.002) and one that assessed the notion that women and men are not equally violent in relationships (p=.000) (Ward, 2001, p. 29). In addition to knowledge assessment, 16 questions also assessed student attitudes regarding gender violence. (Ward, 2001). The results demonstrated that overall, students' score changed significantly (p =. 000) from pre- to post-test, indicating that the program likely

reduced sexiest views among students (Ward, 2001, p. 34). Finally, the survey concluded with ten questions related to students' self-efficacy in speaking out against gender violence. The results found that students' scores changed ($p=.007$) between pre- and post-testing; an indication that the program elevated students' confidence acting as bystanders to sexist and violent behavior (Ward, 2001, p. 47). However, while scores were overall positive, they did indicate that students still had considerable reservations about intervening and were "…only slightly more than "Unsure" about their ability and resolve to be pro-active and effective bystanders" (Ward, 2001, p. 47).

Cissner (2009) also evaluated the success of the MVP program by looking at its effectiveness within the Greek community at Syracuse University. Study findings revealed that students reported significantly less sexist attitudes at post-test than at pre-test ($p<.001$) and held significantly less sexist attitudes at post-test when compared to the comparison group who did not participate in the program. Researchers also found that there was a significantly improved sense of self-efficacy in preventing gender violence at post-test ($p<.001$) and a significantly greater sense of self-efficacy when compared to the comparison group ($p<.001$) (p. 57). Overall, the program demonstrated "…significant, positive impacts on student knowledge, student awareness of and attitudes about gender violence, students' confidence in themselves to prevent and/or confront sexist and violent behavior, and students' assessment of their peers' attitudes" (Cissner, 2009, p. 7). The researchers also examined overall incidence of reported violence on the Syracuse University campus by examining data for the academic year prior to program implementation and for two years after the program was implemented and found a 20% decline of reported sexual assault but without sufficient evidence to attribute the change

to the MVP program, given that these measures were among the campus community overall as opposed to only the Greek population who underwent training (Cissner, 2009).

Bringing in the Bystander (BITB)

The MVP program would ultimately serve as a guide to other bystander programs, including one of the most popular current iterations of bystander intervention, Bringing in the Bystander (Katz et al., 2011). While the MVP program focused on changing gender-based norms that perpetuate violence against women, Banyard and colleagues (2004) created Bringing in the Bystander using a gender-neutral community based approach. To accomplish this, Banyard and colleagues (2004) utilized existing literature on bystander intervention to incorporate predictors of successful intervention including programming on recognizing inappropriate behavior, skill building, requesting a commitment to intervene, and role modeling (p. 73). During the initial session of the program, facilitators discussed the role of the bystander, the concept of bystander responsibility, and the importance of a sense of community (Banyard et al., 2004). During the second session, role models helped to increase awareness of sexual violence and asked students to apply the concept of bystander responsibility (Banyard et al., 2004, p. 73). During this session participants were also provided education on causes of sexual violence in an effort to build victim empathy (Banyard et al., 2004). Interactive exercises were then provided to teach bystander skills that could be used "…before sexual violence occurs (e.g., hearing sexist comments in the community), during a risky situation (e.g., at a party where one observes physical conflict between partners or sees an overly intoxicated person being taken upstairs by a group of others), and afterward (e.g., friend discloses about abuse)" (Banyard et al., 2004, p. 74). During the final session, exercises

were given to help participants understand which interventions were most appropriate based on the behaviors that were witnessed as well as strategies that helped promote personal safety (Banyard et al., 2004). Campus resources that could be used during intervention as well as resources that would provide students support in their role as an active bystander were also provided (Banyard et al., 2004). At the conclusion of the program, participants were asked to sign a pledge and make a commitment to actively intervene to precent or interrupt sexual violence (Banyard et al., 2004).

In 2007, Banyard and colleagues examined the effectiveness of the initial bystander model by comparing students who did and did not receive two versions of the training. Measures for the evaluation included: knowledge and attitudes about sexual assault, efficacy related to being an active bystander, and actual bystander behaviors (Banyard et al., 2007, p. 465). Two versions of the program were developed, one where participants attended a 90-miunte prevention program and another where students attended three 90-minute sessions about prevention (Banyard et al., 2007). In addition, there was a booster session for all students who attended training, given 2 months after the prevention program was first administered. The session included "...a 5-minute videotaped skit performed by a campus theater troupe depicting a survivor of sexual assault asking for help from several individuals with blindfolds who refuse to see or hear her" (Banyard et al., 2007, p. 466). Then, students participated in "...an open-ended 20-minute discussion about what they remembered from the prevention program" (Banyard et al., 2007, p. 466). All students were then compared to a control group who received no interventions. Two waves of testing were conducted over the course of two academic

years (Banyard et al., 2007). Pretests, posttests, and 2-month follow-up surveys were administered to students in all groups and in all waves (Banyard et al., 2007).

To assess knowledge the authors developed several multiple-choice and short answer questions (Banyard et al., 2007). Participants were scored either "1" or a "0", with higher cumulative scores indicating greater numbers of correct responses (Banyard et al., 2007, p. 471). Attitudes were measured with the Illinois Rape Myth Acceptance Scale (IRMA) and the College Date Rape Attitude Survey (Banyard et al., 2007). A bystander attitude survey, a bystander behavior survey, a bystander efficacy scale, and a decisional balance scale were created by the study authors and also used to assess attitudes (Banyard et al., 2007). A repeated measures multiple analysis of covariance (MANCOVA) was performed with the experimental group and gender as independent variables with six outcome variables (Banyard et al., 2007, p. 473).

Results from the study demonstrated that "participants in both the one- and three-session prevention program groups showed improvement across outcome measures from pretest to posttest as compared to control group participants" (Banyard et al., 2007, p. 478). Further, "…significant increases in prosocial bystander attitudes, increased bystander efficacy, and increases in self-reported bystander behaviors" were also reported in the study (Banyard et al., 2007, p. 478). At the 2-month follow-up, further data were collected about actual bystander behavior; paired sample t-tests were conducted and demonstrated that all three groups showed increases in reported bystander behavior from pretest to 2 months (Banyard et al., 2007, p. 476). However, while significant effects for bystander behavior were found during the posttest and at the 2-month follow-up, results did not remain current at further follow-ups. Overall, the study found that bystander

intervention programs are successful at changing attitudes and beliefs but less effective at changing actual behavior. As discussed previously with other studies, there were no measures in the current study to support that there were any community changes in incidence of sexual assault following the bystander program.

Green Dot

The Green Dot sexual assault intervention program was developed at the University of Kentucky by Dr. Dorothy Edwards and is a widely utilized model for bystander intervention aimed at reducing sexual assault (Coker et al., 2011). The goal of the program was to train students to recognize situations that were likely to result in violence, to aid students in recognizing antecedents to sexual violence, to provide students with the knowledge needed for intervention, and to reduce barriers for students so that they could engage in active bystander behaviors (Coker et al., 2011, p. 782). The first phase of the program consisted of a 50 minute motivational speech that introduced students, school leaders, faculty, and administrators to the concept of bystander intervention and built awareness about the prevalence of sexual violence on college campuses (Coker et al., 2011, p. 781). During the second phase of the program, a diverse group of students were recruited for an on-campus intervention program called Students Educating and Empowering to Develop Safety (SEEDS). The purpose of the SEEDS program was to recruit peer opinion leaders (POLs) who could model bystander behaviors and ultimately help to change social norms on campus. Faculty and students were asked to nominate POLs as existing literature supports that diffusion of new behaviors is most successful with this process (Coker et al., 2011, p. 782). Once POLs were identified, students attended small-group sessions where they were provided

information about sexual assault, assault prevention methods, and appropriate bystander behaviors (Coker et al., 2011). The program also provided education to students about violence against women as well as perpetrator behavior to be aware of so that students felt comfortable executing supportive actions any time there was concern for sexual violence (Coker et al., 2011).

In 2011, Coker et al. conducted a study to evaluate the effectiveness of the Green Dot program in changing social norms and increasing self-observed and actual active bystander behaviors. Findings from the evaluation demonstrates that a considerable number of students received training with 47% of students within the sample (n=2,504) having heard the 50-minute speech during phase one (Coker et al., 2011). Additionally, 95% of students who received the bystander training (SEEDS) also heard a Green Dot speech and 86% who were either volunteering or receiving services at the Violence Intervention and Prevention (VIP) Center at the University of Kentucky (UK) also reported hearing a Green Dot speech (Coker et al., 2011).

A single MANOVA was used to test four study outcomes: (Illinois Rape Myth Acceptance) IRMA scale, Acceptance of General Dating Violence Scale, self-observed and actual active bystander behaviors (Coker et al., 2011). Four groups were created to conduct the statistical analysis. Groups included those with SEEDS training, those who volunteered or received services at VIP but received no SEEDS training, those who only heard the phase one speech but did not attend training or volunteer, and those who did not hear the phase one speech, have training, or volunteer or receive services at VIP (Coker et al., 2011).

Results of the study demonstrated that those who received SEEDS training ($F = 5.29$, $p = .01$), a Green Dot speech alone ($F = 38.80$, $p < .001$), or were engaged at the VIP center without SEEDS training ($F = 4.85$, $p = .02$) had lower rape myth acceptance scores when compared to students who did not receive any intervention (Coker et al., 2011, p. 787). Results also indicated that scores for observed self-reported active bystander behaviors were significantly higher among those students: who were SEEDS trained ($F = 146.11$, $p < .001$), who were VIP engaged but not SEEDS trained ($F = 23.01$, $p < .001$), and who received a Green Dot speech alone ($F = 38.80$, $p < .001$) (Coker et al., 2011, p. 787). Finally, the researchers also found that actual active bystander scores were significantly higher among those who were SEEDS trained ($F = 95.97$, $p < .001$), those who were VIP engaged only ($F = 19.60$, $p < .001$) and those students who only heard a Green Dot speech ($F = 18.26$, $p < .001$) when compared to students receiving no intervention (Coker et al., p. 787). Taken together, the data suggests that exposure to sexual violence prevention programming positively impacts actual and observed bystander behaviors as well as lowers rape myth acceptance scores. In addition to overall study findings, Coker et al. (2011) also examined each of the four outcomes and compared them across each of the different assault prevention interventions (SEEDS, VIP but no SEEDS, and Green Dot Speeches alone). Coker et al. (2011) found that there were no significant differences in IRMA scores or Acceptance of General Dating Violence scores among any of the intervention groups (p. 790). However, when evaluating observed active bystander scores (seeing or hearing someone else engage in bystander behavior such as expressing concern to a friend whose partner was acting jealous or controlling, speaking up if somebody said that someone deserved to be raped, getting a

friend help after being assaulted, etc.) (p. 786), Coker et al.(2011) did find that there was a significant difference between SEEDS-trained students and those who only received the Green Dot speech ($F = 66.41$, $p < .001$). A significant difference also noted between the SEEDS-trained students and those hearing only a Green Dot speech ($F = 49.25$, $p < .001$) when evaluating actual active bystander behaviors (p. 790). These study results support the notion that adding interactive bystander training on top of hearing a speech about bystander intervention and sexual violence may increase self-reported bystander behavior (Coker et al., 2011).

Comparing Bystander Programs

Evaluation of sexual violence prevention programs peaked in the late 1990s and again in 2010 and 2011 (DeGue et al., 2014, p. 350). As a result, a number of metanalyses and systematic reviews have been conducted on hundreds of bystander intervention programs. These studies provide crucial information about the efficacy of bystander intervention across programs, environments, and time.

Katz & Moore (2013). Katz & Moore (2013) conducted an initial meta-analysis on bystander programs that were specific to college campuses. The aim of the study was to "…estimate the degree to which bystander education programs promote favorable outcomes among trained relative to untrained participants" (Katz & Moore, 2013, p. 1057). The outcomes measured in the metanalysis included: bystander efficacy (one's perceived competence in helpfully responding to sexual assault risk), rape-supportive attitudes such as acceptance of rape myths, intent to help as a bystander, rape proclivity, and perpetration behaviors since training (Katz & Moore, 2013). No specific designs were required for the study, though studies were excluded if they were qualitative in

nature, they only contained post-training data, or if the study did not include quantitative data on at least one of the six study outcome variables (Katz & Moore, 2013). Ultimately, twelve studies, covering five different programs, met inclusion criteria. The analysis included three studies that utilized *Bringing in the Bystander,* one study using *The Women's Program,* one study covering *The Men's Project,* six studies using *The Men's Program,* and one study using the *Mentors in Violence Program (MVP)*. Standardized mean differences were calculated between the intervention group and the control group along with effect sizes for each of the six outcome variables (Katz & Moore, 2013). A summary effect size was calculated the authors used Cohen's reference values (as described by Cooper, 2010) to determine a standardized mean difference [.50 = a moderate effect size; .20 = a small effect size] (Katz & Moore, 2013, p. 1058). Results revealed that "…moderate effect sizes were obtained regarding measures of bystander efficacy (.49, 95% CI 5.31 to .66) and intent to help others as a bystander (.58, 95% CI 5 .38 to .78) (Katz & Moore, 2013, p. 1059). These results indicate that students who attended bystander education programming reported more bystander efficacy and more intent to help others (Katz & Moore, 2013). Only small effect sizes were obtained for rape myth acceptance (2.28, 95% CI 5 2.20 to 2.36), rape proclivity (2.17, 95% CI 5 2.03 to 2.30) and for actual bystander behavior (.23, 95% CI 5 .04 to .41) (Katz & Moore, 2013, p. 1059). These results indicate that students who attended bystander education reported less rape myth acceptance and rape proclivity and more actual bystander behaviors but the effects of the programming are small. Overall, the researchers concluded that "…bystander education programs may be more effective in promoting bystander efficacy (e.g., respondents' confidence in their ability to intervene) and intent

to help others than in promoting actual bystander helping behavior" (Katz & Moore, 2013, p. 1059). These results are significant because bystander intervention has become a popular programming technique for college campuses, yet little research demonstrates that bystander programs change actual behaviors as opposed to attitudes and knowledge.

Kettery & Marx (2018). In 2018, Kettery & Marx conducted a systematic review of the literature and a meta-analysis to examine bystander efficacy, intentions, and bystander interventions. The analyses included studies that were conducted at post-secondary institutions in the United States and specifically focused on sexual assault prevention (Kettery & Marx, 2018). Eligible designs for review included: randomized control trials (RCTs), quasi-randomized controlled trials, and controlled quasi-experimental designs (Kettery & Marx, 2018). The outcomes measured in the review included "…(1) self-efficacy with regard to bystander intervention (e.g., respondents' confidence in their ability to intervene), (2) intentions to intervene when witnessing instances or warning signs of sexual assault (e.g., self-perceived likelihood of intervening), or (3) actual intervention behavior when witnessing instances or warning signs of sexual assault (e.g., whether respondents have intervened on behalf of a victim)" (Kettery & Marx, 2018, p. 215). A total of fifteen independent studies met inclusion criteria. Within the analysis, five of the studies utilized the *Bringing in the Bystander* program*,* four utilized the *TakeCare* program*,* one utilized *The Men's Program,* and five others used other bystander educational frameworks.

Of the 15 studies chosen by Kettery & Marx (2018) for review, 10 studies included bystander self-efficacy variables and the researchers found that the average effect of bystander programs was significant and positive (Hedges'g =0.48, 95% CI

[0.25, 0.72]) and measures of bystander self-efficacy were approximately a half a standard deviation higher among college students who participated in a bystander program compared to those who did not (Kettery & Marx, 2018, p. 221). Further, nine studies measured program participants intention to intervene when witnessing a potential sexual assault; the average program effect was significant and overall positive (Hedges' g = 0.27, 95% CI [0.01, 0.53]) with intentions being "…one-fourth a standard deviation higher among college students who participated in a bystander program compared to those who did not…" (Kettery & Marx, 2018, p. 221). Finally, 10 of the 15 studies reported some measure of bystander intervention with two of the studies comparing more than one treatment group with a single control group (Kettery & Marx, 2018). Across these studies, Kettery & Marx (2018) found the effect size to be significant and positive (Hedges'g = 0.27, 95% CI [0.17, 0.37]) with measures of bystander intervention being approximately one-fourth a standard deviation higher among college students who participated in a bystander program compared to those who did not (Kettery & Marx, 2018, p. 222). The overall results from the meta-analysis demonstrate that the effect of bystander educational training programs is significant and positive for bystander efficacy, bystander intention to intervene, and actual bystander intervention. However, it is important to note that out of 151 full-text reports that were screened for eligibility in the study, only 23 studies met the methodological rigor required for the meta-analysis. Further, of the 15 independent study samples used for the meta-analysis, only 10 studies measured actual bystander action as opposed to self-efficacy or intention. This demonstrates a considerable void in determining bystander program efficacy in extant

research. Further studies to specifically test change in bystander behavior as well as actual rates of victimization as opposed to knowledge and attitudes alone is warranted.

Transgender Students & Bystander Programs

Research demonstrates that college students who identify as transgender or non-binary have a heightened risk of experiencing sexual assault (Coulter et al., 2017; Griner et al., 2020; Hoxmeier, 2016). Despite this, most bystander programs fail to specifically address the experiences and needs of transgender students and many almost exclusively utilize heteronormative and cis-normative programming (DeGue et al., 2014; Harris & Linder, 2017; Kirk-Provencher et al., 2023). In fact, a recent meta-analysis of bystander intervention programs revealed that of the 28 peer-reviewed studies reviewed for the analysis, only three studies described content that was representative of students who identify as a sexual or gender minority; two of these studies were specific to same-sex relationships and only one depicted couples with various gender identities and sexual orientations (Kirk-Provencher et al., 2023, p. 117). Additionally, only six studies used the terms transgender or non-binary while the others assessed gender as a binary construct or consistently used sex and gender interchangeably (Kirk-Provencher et al., 2023). These findings have a number of implications. First, for transgender students, heteronormativity and cisnormativity in violence prevention efforts on college campuses may potentially alienate them and prevent them from participating in intervention programs (Hoxmeier et al., 2022). Given that research demonstrates that transgender individuals are often uniquely vulnerable to assault due to their transgender identity and perpetrators often use tactics specific to trans individuals during instances of violence (Peitzmeier et al., 2019); it is crucial that sexual assault prevention programs create vignettes and training

scenarios that are inclusive of transgender victims. Without this, transgender students miss out on crucial programming that may help them gain the knowledge and skills necessary to recognize and avoid sexual assault.

Research demonstrates that transgender individuals are subject to a number of rape myths and stereotypes including those that perpetuate the idea that trans individuals are hypersexual or sexually promiscuous and therefore responsible for their assault and emerging criminology research has demonstrated that transgender individuals are often deemed noncredible as victims of sexualized crimes (Griner et al., 2017; Miller & London, 2021). Given that previous research demonstrates that bystanders most often intervene when they believe the victim deserves help (Latané & Darley, 1970, p. 33) or in situations where they are similar to the victim (Burn, 2009), a lack of inclusive programming is extremely detrimental for trans students as cisgender bystanders may be unwilling to intervene. Therefore, educational programming that is inclusive of transgender individuals, including information to combat rape myths and stereotypes, is critical; without it, these behaviors and beliefs propagate within the campus community.

Literature Summary

A thorough review of the literature demonstrates that bystander intervention programs have evolved considerably over the past two decades and have become widely implemented on college campuses. These programs have been rigorously reviewed and, in many cases, have been found to significantly alter knowledge, attitudes, and beliefs about campus sexual assault and are an important tool in combating campus sexual assault. However, while these programs offer cisgender students the opportunity to gain valuable sexual assault prevention skills, most programs do not include programming

specifically designed for sexual and gender minority students. This lack of inclusivity in educational programming also sends the message that transgender students aren't a part of the mainstream campus community and that the needs of transgender students are not a concern. Without acknowledging and addressing that transgender students experience sexual violence, the violence perpetrated against them becomes normalized and accepted. Further, there is a paucity of research that examines bystander intervention programs for populations that do not identify as White heterosexual cisgender students (Burns et al., 2019; Christensen & Harris, 2019). Given that transgender students experience disproportionate rates of sexual assault on college campuses, there is a great need to understand how often bystanders are present during sexual assaults experienced by transgender students as well as the role that bystanders play during assaults. Only once this information is obtained, can programs begin to address the needs of transgender students.

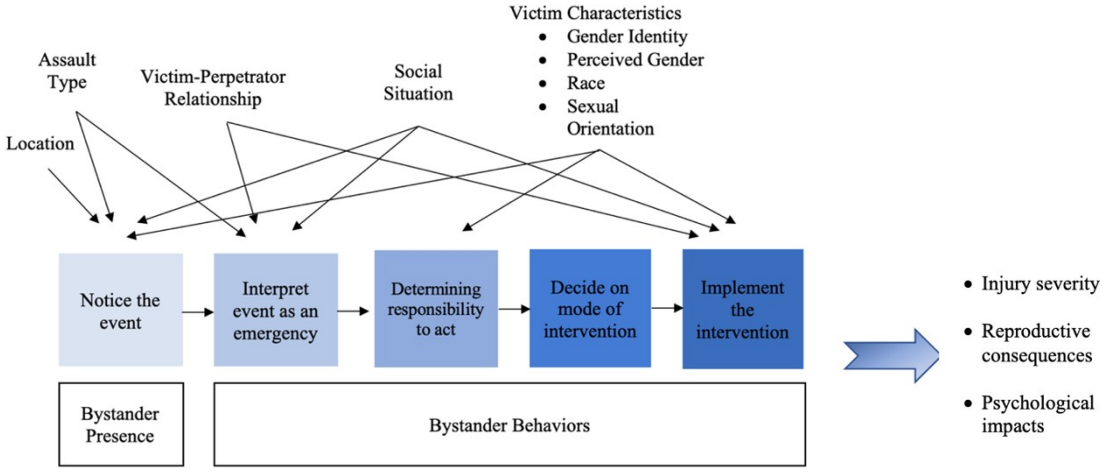
Conceptual Framework

Application of the Bystander Intervention Model

In order to best inform future applications of bystander intervention programs, this study describes the role of bystanders during sexual assaults experienced by transgender undergraduates students as well the actions that bystanders take during these assaults and whether or not bystander presence and bystander actions improve outcomes. The study is informed by the Bystander Intervention Model (BIM) developed by Latané & Darley (1970) as well as the bystander intervention barriers identified by Burn (2009) in addition to contemporary literature, which together have led to the development of the current study's conceptual model, depicted in Figure 1.

Figure 1

Study Conceptual Model



Steps in Bystander Intervention Model (BIM)	1. Notice the event	2. Recognize the event as emergent	3. Decide responsibility to act	4. Decide on mode of intervention	5. Implement the intervention
Variables applied to each step of theoretical model	• Assault Type • Location • Social Situation • Victim Characteristics	• Assault Type • Social Situation • Victim-Perpetrator Relationship	• Victim Characteristics	• Social Situation • Victim Perpetrator Relationship • Victim Characteristics	

Noticing an Event

As previously mentioned, the BIM includes a five-step process for bystander intervention which begins when the bystander notices that an unusual event has occurred (Latané & Darley, 1970, p. 32). There are a number of variables that can prevent recognition of the event. Typical distractions include environmental factors such as traffic noises and city sounds as well as a bystander's unfamiliarity with an environment and the presence of other people (Latané & Darley, 1970, p. 32). In the case of campus sexual assault, bystanders may fail to notice an unusual event because they are distracted by

environmental factors common in college party environments such as loud noises or music, crowding, or a preoccupation with friends or other social activities (Burn, 2009). In the case of sexual assault involving transgender students, bystanders may fail to notice an event is occurring because marginalization and discrimination can preclude bystanders from interacting with transgender students. Additionally, while dating violence is a pattern of behavior over time, sexual assaults on college campuses often occur as single instances within college social settings, which can make recognition of dangerous behaviors difficult as there is less opportunity to notice them (McMahon & Banyard, 2012, p. 5). Further, for transgender students specifically, perpetrators may intentionally isolate them from friends or peers in order to victimize them, which would make it difficult for peers to recognize that something is wrong. Given that college sexual assaults occur in a variety of locations and within various social situations, each with their own host of possible distractions, it is prudent to examine how these variables influence bystander behavior and action. Therefore, this dissertation examines the likelihood of bystander presence during sexual assaults experienced by transgender undergraduates as well as whether or not bystanders are more likely to help or hinder transgender student survivors based on victim characteristics, victim-perpetrator relationship, the location and social situation in which an assault occurred and the assault type.

Interpreting the Event as an Emergency

In addition to noticing that an event is occurring, a bystander must also determine that the event they have witnessed is an emergency (Latané & Darley, 1970). While some situations are easily recognized as emergent, more often than not, the event is ambiguous

making recognition difficult (Burn, 2009; Latané & Darley, 1970, p. 33). In the case of campus sexual assault, a number of things contribute to this ambiguity and may influence bystander intervention (Banyard, 2015; Burns, 2009). First, most sexual assaults occur among acquaintances rather than strangers. This is especially true for transgender survivors of sexual assault, who frequently report knowing their assailant (Munson & Cook-Daniels, 2015). Additionally, the majority of sexual assaults that occur on college campuses are not only acquaintance assaults but also occur in social situations where peers are present (McMahon, 2010). Therefore, bystanders may fail to recognize a situation as emergent if the relationship between the victim and perpetrator is unclear or if the victim and perpetrators are known to each other, as acquaintance assaults challenge stereotypical ideas about rape (Burn, 2009). Additionally, collegiate social spheres often perpetuate rape-supportive behaviors such as sexist jokes, unwanted touching, harassment, and ranking of attractiveness (Banyard, 2015; McMahon & Banyard, 2012). Given this, there is often little consensus about the seriousness of these behaviors and therefore, bystanders cannot label the behavior they witness as problematic (Banyard, 2015, p. 55). Second, when people are in the presence of others, they are less likely to notice that an unusual event is occurring and highly likely to rely on the reactions of others as well as peer norms in order to determine if what they have witnessed is an emergency; a phenomena that is magnified in ambiguous situations (Burn, 2009; Latané & Darley, 1970, p. 33). This is particularly troublesome for transgender college students as they must also endure "… discrimination or harassment from their peers (e.g., roommates, classmates, teammates) and other members of the campus community, including the professional staff (e.g., coaches, hall directors, professors, administrators,

campus safety, health services staff)" (Potter et al., 2012, p. 202). Marginalization and discrimination of transgender students fuels cisgender normativity that engenders negative social stratification and anti-trans social norms which create a hostile collegiate environment that normalizes and minimizes violence experienced by transgender students. Therefore, within this dissertation, the victim-perpetrator relationship, the social context in which a sexual assault occurs, and assault type will be studied in order to better understand the role that these variables play in bystander behavior.

Determining a Responsibility to Act

In the third step of the intervention process model created by Latané & Darley (1970), the bystander must assume responsibility for helping (p. 33). Several variables influence this decision, one of which is whether or not the bystander believes that the victim deserves help (Latané & Darley, 1970, p. 33). Research demonstrates that college students moderately support rape myths or "…prejudicial, stereotyped, or false beliefs about rape, rape victims, and rapists…" (Burt, 1980, p. 217), including those that blame the victim and excuse the perpetrator (McMahon, 2010). Examples of cisgender rape myths include, "…"only bad girls get raped," "any healthy woman can resist a rapist if she really wants to" (Burt, 1980, p. 217), "When girls go to parties wearing slutty clothes, they're asking for trouble" (McMahon, 2010, p. 6), "If the rapist doesn't have a weapon, you can't really call it a rape" (McMahon, 2010, p. 6), and the general notion that men can't control themselves (Burt, 1980; Hipp et al., 2017; McMahon, 2010). While most empirical literature examines rape myths related to women, a small amount of recent literature has explored rape myths about transgender and non-binary individuals. Examples include: transgender individuals are hypersexualized and sexually deviant and

therefore responsible for their assault (Griner et al., 2017; Mortimer et al., 2019), "If a transgender person is raped after someone finds out they're transgender, they are partly to blame for not identifying themselves as transgender sooner" (Urban & Porras Pyland, 2021, p. 12), and "People who don't strictly identify as men or women rarely experience rape" (Urban & Porras Pyland, 2021, p. 12).

Research demonstrates that college students who endorse rape myths are less likely to intervene as bystanders during sexual assault as they assign less worthiness to the victim, less blame to the perpetrator and therefore feel less responsibility to intervene (McMahon, 2010; McMahon & Banyard, 2012). Additionally, certain victims characteristics such as sex, gender, age, sexuality, race, and socioeconomic status may predispose victims to victim blaming (Latané & Darley, 1970; van der Bruggen, & Grubb, 2014). While several theories have been used to understand why victims with certain characteristics of sexual assault are often blamed for the assault, one of the most popular theories is the Defensive Attribution Hypothesis as presented by Shaver (1970) (van der Bruggen, & Grubb, 2014). This hypothesis states that "…the level of blame depends on observers' perceived similarity and identification with the victim: when victim and observer are increasingly similar, the victim will be blamed less" (van der Bruggen, & Grubb, 2014, p. 525). This study attempts to address the likelihood of bystander presence and behaviors based on individual factors such as transgender undergraduates' gender identity, perceived gender, race, and sexual orientation as well as evaluate whether or not bystanders are more likely to help or hinder transgender victims based on these variables.

Gender Identity. Gender is one of the most commonly studied variables in bystander research (Burns et al., 2019) though most existing research examines the bystanders' willingness to intervene based on their own gender as opposed to the bystander's willingness to intervene based on perception of the victim's gender. Of those recent studies that have examined gender as a victim characteristic, research has found that both men and women can experience victim blaming based on their gender, though for much different reasons. For men, they are often victim-blamed due to stereotypes about masculinity and one's perceived ability to resist assault (Davies & Rogers, 2006 as cited in van der Bruggen, & Grubb, 2014). Whereas women are often blamed for being too careless or negligent (Davies & Rogers, 2006 as cited in van der Bruggen, & Grubb, 2014). While these emerging studies provide more detail about the role a victim's gender plays in bystander intervention, existing studies have characterized victims using "male" and "female" indicators, largely leaving out those individuals who identify as transgender or non-binary.

Perceived Gender. Research suggests that certain visible markers and characteristics can make an individual's status as transgender easy to identify which heightens their risk for victimization and discrimination (Staples & Fuller, 2021, p. 696). Further, rape myths about how transgender individuals are hypersexual may place those who are visibly perceived as transgender at a heightened risk for assault (Staples & Fuller, 2021). Within this study, we examine perceived gender as a victim characteristic to determine if bystander behaviors are impacted by this variable as transphobia and discrimination may promote victim blaming, rape myth acceptance, and subsequent bystander non-intervention.

Race. Race is an important individual variable to examine when considering factors that may heighten one's likelihood of experiencing violence as several studies have identified that transgender individuals who also identify as a racial minority are more likely to experience sexual assault (Coulter et al., 2017). Further, more recent research has found that a victim's race may influence a bystander's willingness to intervene during sexual assault. For example, one study found that White college women reported less intent to intervene when presented a sexual assault scenario involving a Black potential victim as opposed to a scenario in which the victim's race was undisclosed (though uniformly perceived as White by study participants) (Katz et al., 2017). The same study also found that study participants randomly assigned to the Black potential victim reported less intent to intervene, felt less personally responsible, and perceived the Black potential victim as experiencing greater pleasure than the control victim who was presumed by most study participants to be White (Katz et al., 2017).

Sexual Orientation. Sexual orientation is also an important variable to examine as it is well documented that students who identify as a sexual orientation other than heterosexual experience a considerable amount of stigma on college campuses (Potter et al. 2012). Given that previous literature demonstrates that individuals are most likely to intervene in sexual assault situations where they identify with the victim (van der Bruggen, & Grubb, 2014), it is reasonable to assert that pervasive stigma and discrimination may promote victim blaming, rape minimization, and in turn, bystander passivity. Given that some transgender students may also identify as a sexual minority, it is essential to examine this construct within the study.

Deciding How to Act and Implementing the Intervention

Once an individual notices an event and then decides that they have a personal responsibility to intervene, they must then decide how to do so (Latané & Darley, 1970, p. 34). Often there are two sets of behaviors that the bystander may choose from. The first set of behaviors are direct interventions where the bystander personally intervenes to attend to the emergency (Latané & Darley, 1970). The second set of behaviors are referred to as "detour interventions"; these are interventions where the bystander seeks help from a third party, such as police, in order to attend to the emergency (Latané & Darley, 1970). Each option has its own advantages and disadvantages based on the knowledge and skill set of the bystander as well as the context in which the event occurs (Latané & Darley, 1970). After a bystander has decided how to act, then they must actually implement the action. Rarely once the decision has been made to act will the bystander fail to do so; although if the action is unusually difficult, they may struggle with the execution of it (Latané & Darley, 1970). In the case of sexual assault, social norms and fear of embarrassment can often inhibit bystander intervention as bystanders may be unwilling to sacrifice social capital in the name of intervention (Burn, 2009). Given that transgender individuals face considerable stigma and marginalization, bystanders may be hesitant to intervene in assault scenarios whether the victim is transgender. Therefore, this study seeks to add to the existing literature on bystander actions by describing what actions bystanders take when present during sexual assaults experienced by transgender students and whether or not behaviors vary based on victim characteristics (gender identity, perceived gender, race, and sexual orientation), the social situation in which the assault occurred, and the relationship between the perpetrator and the victim.

Injuries

Previous research has revealed that bystander presence may influence sexual assault survivor outcomes including one's overall psychological and physical well-being (Hamby et al., 2016). Further, previous literature has demonstrated that transgender survivors of sexual assault frequently report significant psychological, physical, and reproductive sequelae (Cantor et al., 2020). However, because few studies examine the role of bystanders in sexual assaults experienced by transgender individuals, even less is known about the role and utility of bystanders during assaults experienced by transgender individuals. Therefore, this study expands on existing literature by evaluating whether or not injury severity, reproductive consequences, and psychological impacts of sexual assault vary depending bystanders presence.

Specific Aims

Given how prevalent bystander intervention programs are, as well as the previous research that has demonstrated heightened risk of assault for transgender and non-binary college students, failing to examine the role of bystanders in sexual assaults involving transgender and non-binary college students would exclude critical information needed for prevention programming. Therefore, the purpose of this dissertation is to describe the role of bystanders in sexual assaults experienced by transgender and non-binary undergraduate students. To do this, there are three specific aims:

1. Determine how often bystanders are present during sexual assaults experienced by transgender and non-binary undergraduate students and determine if likelihood of bystander presence varies based on the assault location, the social situation in which the assault occurred, the relationship

between the victim and the perpetrator, victim characteristics (gender identity, perceived gender, race, and sexual orientation), and the assault type.

2. Determine what actions bystanders take when present during sexual assaults experienced by transgender and non-binary undergraduate students and if bystanders are more likely to help or hinder transgender victims of campus sexual assault based the assault location, the social situation in which the assault occurred, the relationship between the victim and the perpetrator, victim characteristics (gender identity, perceived gender, race, and sexual orientation), and the assault type.
3. Determine if injury severity, reproductive consequences, and number of psychological consequences of sexual assault vary depending on whether or not bystanders are present and whether or not the assault location, the social situation in which the assault occurred, the relationship between the victim and the perpetrator, victim characteristics (gender identity, perceived gender, race, and sexual orientation), and the assault type.

Each aim of the dissertation will be presented in the subsequent chapters as separate manuscripts. The significance of each study's findings will be discussed in their respective manuscripts as well as cumulatively in Chapter 5.

CHAPTER TWO

FIRST MANUSCRIPT

Where Are The Bystanders? Understanding Bystander Presence During Sexual Assaults Experienced By Transgender Undergraduates

Bystander intervention programs have been gaining popularity as one method of sexual assault prevention programming and researchers have found that bystander intervention training is being conducted at 32% of four-year institutions of higher education (IHE) (Kafonek & Richards, 2017; McMahon & Banyard, 2012). However, there has been limited research dedicated to understanding bystander presence during sexual assaults experienced by transgender undergraduate students. Therefore, in this secondary data analysis of a survey of transgender undergraduate student survivors (N=361), descriptive statistics and logistic regression were used to study how often bystanders are present during sexual assaults experienced by transgender undergraduate students and the likelihood of bystander presence based on victim characteristics, victim-perpetrator relationship, assault location, the social situation in which the assault occurred, and the assault type. Findings demonstrated that bystanders are present at approximately one-third of all sexual assaults. Findings also showed that assaults that occurred at a party and those perpetrated by a stranger had significantly higher odds of having a bystander present. Whereas assaults with attempted or completed penetration had significantly lower odds of having a bystander present when compared to those with non-consensual contact. Results suggest that there may be certain social dynamics and

assault types in which bystander intervention programming may be more salient. Other types of prevention programming are also needed to address the two-thirds of assaults at which bystanders are not present to intervene. Further research is needed in order to contextualize study findings and better understand the role that bystanders play.

Introduction

Sexual assault is a widespread problem at colleges and universities in the United States and transgender students, often marginalized in collegiate settings (Grant et al., 2011), experience higher rates of sexual violence when compared to cisgender peers (Coulter et al., 2017; Griner et al., 2020; Howard et al., 2019). In fact, in a recent scoping review, nine studies included in the review studied sexual and relationship based violence among gender minority college students and every study found higher levels of sexual and relationship based violence for gender minority students when compared to cisgender women in college (Klein et al., 2022). Further, in a recent campus climate survey with one of the largest sample sizes of self-identified transgender and non-binary students, Cantor et al. (2020) found that 22.8% of undergraduate transgender students reported having experienced penetration or sexual touching involving physical force and/or the inability to consent or stop what was happening since entering college (compared to 6.8% of undergraduate men and 25.9% of undergraduate women) (Cantor et al., 2020).

In response to persistent rates of sexual violence, colleges across the United States have implemented various sexual assault prevention programs; among the most popular is bystander intervention training (McMahon & Banyard, 2012). Bystander intervention training is shaped from the Bystander Intervention Model (BIM) developed by Latané & Darley (1970) which outlined a five-step process where third parties must notice an

event, recognize the event as emergent, accept responsibility to act, select an intervention, and then act (Latané & Darley, 1970). In the case of sexual assault, bystanders can choose to help to prevent an assault, interrupt an on-going assault, worsen the assault, or do nothing (Banyard, 2015; Hamby et al., 2016). Application of the Bystander Intervention Model to sexual assault prevention programming challenged traditional gender-based prevention methods and instead emphasized a "community of responsibility" where all students have the opportunity and responsibility to act (Banyard, 2011; Burn, 2009). Evaluations of existing bystander programs has found small to-medium significant program effects on measures of bystander efficacy, bystander intent, and bystander intervention (Katz & Moore, 2013; Kettrey & Marx, 2018) but less favorable effects on victimization (Kettrey et al., 2023, p. 832).

While ongoing research supports the use of bystander programs, most bystander programming has historically failed to specifically address the unique needs of transgender students (DeGue et al., 2014; Kirk-Provencher et al., 2023). Further, little research has been done on the contexts of sexual assaults experienced by transgender and nonbinary students on campus, i.e., research that illuminates basic descriptive characteristics of assaults such as how often bystanders are present at assaults experienced by transgender undergraduates and thus how likely it is that bystander intervention programming could plausibly lower the incidence of sexual violence against this population. Given the staggering rates of sexual violence perpetrated against transgender college students, there is a great need to create educational interventions that are effective for students who identify as a gender minority. Therefore, to broaden what is known about sexual assaults perpetrated against transgender undergraduates and to

potentially inform future bystander programming, the contexts and frequency in which bystanders are present during sexual assaults experienced by transgender undergraduates was explored. More specifically, how often bystanders are present during sexual assaults experienced by transgender and non-binary undergraduate students and whether or not the likelihood of bystander presence varied based on victim characteristics (gender identity, perceived gender, race, and sexual orientation), victim-perpetrator relationship, assault location, the social situation in which the assault occurred, and assault type.

Methods

Sample

The current study is a secondary data analysis of the Owning Our Power survey conducted by Dr. Sarah Peitzmeier (Peitzmeier, 2019). Participants for the study were recruited from social media as well as various community and collegiate organizations. To participate in the study, individuals must self-identify as transgender or non-binary, be 18-25 years old, be a current undergraduate college student or recent graduate (Spring 2020), be enrolled in at least one on-campus course during their time as an undergraduate student, and have experienced one instance of sexual assault while a college student. Data from the study was collected from October 2019 through August 2020.

Measures

The *Owning Our Power* survey (and this secondary data analysis) used survey items from a revised and gender-inclusive Sexual Experiences Survey (SES) (Koss & Gidycz, 1985) for data collection. Modification of the SES, including tests of acceptability and validity are described in detail by Peitzmeier et al. (2023b). Additional survey items, including those related to bystander presence and bystander behaviors,

were derived from the National Crime Victim Survey (NCVS). While individual item measures are not easily accessible for the NCVS, extensive information related to survey development and overall methodological assessment is available from the National Crime Victim Survey website.

Victim Characteristics.

Consistent with best practices, participants were given a wide range of possibilities to select from as well as the option to write-in responses for gender identity, sexual orientation, and racial/ethnic identity in order to best understand how they describe their identity (Sell & Conron, 2020). Also consistent with best practices, transgender individuals participated in the development of the survey and a community advisory board with transgender/nonbinary individuals reviewed the survey and provided feedback regarding questions. Individual survey items are discussed in detail below:

Gender Identity. Participants were asked "Although we acknowledge that the choices listed below may not represent your full identity or use the language you prefer, for this survey, which choice best describes your current gender identity?" Choices included: Agender; Bigender or multiple gender; Genderfluid or genderqueer; Man; Nonbinary; Trans man/ FTM/ trans masculine; Trans woman/ MTF/ trans feminine; Two-spirit, Māhū, or another culturally specific gender identity; Woman.

Perceived Gender. Participants were asked "When you first meet someone, what gender do they think you are? [Note: Some people find it uncomfortable to think about how their gender may be perceived by others. This question will help us understand how perceived gender may be related to the types of violence people most commonly encounter.]" Choices included: Cisgender man; Cisgender woman; Trans man or

nonbinary/ genderqueer person assigned a female sex at birth; Trans woman or nonbinary/ genderqueer person assigned a male at birth; They can't tell; It varies.

Sex Assigned at Birth. Participants were asked, "What was your sex assigned at birth?" Choices included: Male and Female.

Race. Participants were asked, "Although we acknowledge that the choices listed below may not represent your full identity or use the language you prefer, for this survey, which choice best describes your racial/ethnic identity?" Choices included: Asian/ Asian American/ Pacific Islander; Black/ African American; Chicanx/ Hispanic/ Latinx; Middle Eastern; Multiracial or Biracial; Native/ Indigenous/ American Indian; White.

Sexual Orientation. Participants were asked, "Although we acknowledge that the choices listed below may not represent your full identity or use the language you prefer, for this survey, which choice best describes your sexual orientation? Choices included: asexual; bisexual; gay; heterosexual/straight; lesbian; pansexual; queer; same-gender loving; sexual orientation not listed above.

Categories within variables were collapsed into a smaller number of categories when there were empty or low-frequency cells. This was done to preserve statistical power while maintaining or enhancing interpretability of the findings. Decisions on which categories to collapse within variables were made on theoretical grounds by reviewing how variables have been modeled in other published literature and by consulting with a researcher with expertise in gender-based violence and in working with transgender individuals. Doing this as opposed to collapsing categories arbitrarily and ubiquitously, is of the utmost important when working with sexual and gender minority

populations, as "…those that fall under the LGBTQ umbrella are not a homogenous group" (Sell & Conron, 2020, p. 142).

Victim-Perpetrator Relationship. The relationship of the perpetrator to the victim was assessed by asking participants "At the time of this event, what was the person's relationship to you? (Mark all that apply)" Responses included: At the time, it was someone I was involved or intimate with; Someone I had formerly been involved or intimate with; Teacher or advisor; Co-worker, boss, or supervisor; Friend; Acquaintance; Stranger; Other; Don't know.

Write-in responses were recoded into existing categories by two coders. If participants chose to record multiple assailants, coders first checked to see the number of assailants identified by the participant earlier in the survey. If there was more than one assailant listed, the response was recoded as "Multiple Assailants". If the respondent selected multiple victim-perpetrator relationships but only indicated one assailant, a hierarchical schematic was used by both coders to select the best relationship category. If there was consensus the response was recorded. If there was no consensus, a third person involved in the study was contacted and the response was discussed until consensus was achieved.

Location. The location of the event was assessed by asking respondents, "Where did this incident occur? Mark all that apply". Choices included: Your house; Home of the person who did this to you; Private residence that was neither your home nor the home of the person who did this to you; University residence hall/dorm, Fraternity or sorority house; Other space used by a single-gender student organization; Other residential

housing; Non-residential building; Outdoors; Restaurant, bar, club; Athletic facility; Inside a vehicle; Other.

Write-in responses were recoded into existing categories by two coders. If participants chose to record multiple locations, a hierarchical schematic was used by both coders to select the most appropriate location. If there was consensus the response was recorded. If there was no consensus, a third person involved in the study was contacted and the response was discussed until consensus was achieved.

Social Situation. The social situation of the assault was determined by asking participants, "How would you best describe the social situation surrounding this incident? (Note: by "date", we mean hanging out with someone where there was an understanding, spoken or not, that you had some romantic or sexual interest in each other)." Choices included: This incident did not occur as part of a social situation; Casually hanging out with friends; a party; a group date; a one-on-one date agreed in advance; spontaneous date (for example, you just met at a bar or friend's house); Other.

Write-in responses were recoded into existing categories by two coders. If there was consensus the response was recorded. If there was no consensus, a third person involved in the study was contacted and the response was discussed until consensus was achieved.

Assault Type. Assault types was determined by asking participants "What type of nonconsensual behavior occurred during this incident? (select all that apply)". Choices included: Someone fondled, kissed, or rubbed up against the private areas of my body or removed some of my clothes without my consent, but did not attempt penetration; Someone TRIED unsuccessfully to penetrate MY genital opening, butt, or mouth with

their genitals, fingers, or an object; Someone penetrated MY genital opening, butt, or mouth with their genitals, fingers, or an object; Someone TRIED unsuccessfully to have me penetrate THEIR genital opening, butt or mouth with my genitals, fingers, or an object; Someone had me penetrate THEIR genital opening, butt, or mouth with my genitals, fingers, or an object; Other.

If participants selected multiple types of non-consensual behavior, a hierarchical schematic was used and the most severe type of contact was recorded. Categories were recoded as: non-consensual contact, attempted penetration, completed penetration.

Bystander Presence. Bystander presence was assessed by asking participants, "Was anyone present during the incident besides you and the offender(s)?" respondents selected "Yes, "No", or "Don't Know".

Analysis

Data analysis was conducted using SPSS 29.0 statistical software program (IBM, Armonk, NY). Descriptive statistics were calculated for all study variables including frequencies and percentages for each categorical variable and mean and standard deviation for the continuous variable. Several chi-square tests of independence were conducted to examine associations between independent and dependent variables. Finally, a binary logistic regression was conducted in order to determine if the likelihood of bystander presence varied based on victim characteristics, the location of the assault, the social situation in which the assault occurred, the victim-perpetrator relationship, and the assault type.

Missing Data

Data was evaluated for missingness in three ways: missing values for each case, percentage of cases with missing values, and percentage of total data points that were missing. Frequencies were calculated for all variables in the study. The bystander presence variable was noted to have a missing data rate of 8.3%. Missing data was dummy coded (0 = not missing, 1 = missing) and a Fisher-Freeman-Halton exact test was carried out to determine if there was a significant association between each of the independent variables in the study (race, gender, sexual orientation, perceived gender, location, social situation, and victim-perpetrator relationship), additional suspected variables of influence (alcohol consumption, drug consumption, alcohol or drug poisoning by an offender, victim asleep, victim passed out, time of day, and on campus location) and the bystander presence variable. Several categorical variables were collapsed due to small cell sizes. Overall assessment of the missing data indicates that there are relatively few missing data with more than 80% of participants providing complete data for all study variables. Further, the Fisher-Freeman-Halton exact test resulted several significant results. First, a relationship (p=.028) was found between race and a missing score for bystander presence, with 25 of 30 missing cases being reported by participants who identified as White. This indicates that those who self-identified as White were more likely to have missing values for the bystander presence variable. Other significant results included: victims who were given alcohol or drugs (p=<.001), victims who were passed out (p=.002), and victims who were asleep (p=<.001). These results indicate that questions about bystanders may have been less applicable to those individuals who were incapacitated or asleep when they were assaulted.

There are several ways to address missingness in data. Several options were considered for the current study including complete case analysis, available case analysis, and imputation. In available case analysis, participants are eliminated from the analytic sample when they have missing data for the specific analysis at hand but are included in the sample for any other analyses in which they have data (Pallant, 2020). This is an appropriate type of analysis provided that missing data does not exceed 20% (El-Masri & Fox-Wasylyshyn, 2005). For missing data in the proposed study, available case analysis was chosen to address missingness as this method is feasible for a novice doctoral level researcher, it is appropriate when there is not an overwhelming amount of missing data, and is the ethically superior choice given the sensitive nature of the survey, which required transgender students, a marginalized population, to share intimate details about a recent sexual assault.

Study Approval

The original Owning Our Power study was review by the University of Michigan Institutional Review Board (IRB) (HUM00168758) and deemed to be exempt. This study, a secondary data analysis, was also granted exemption status by the institutional review board (IRB) at Oakland University (IRB-FY2023-58).

Results

Sample Characteristics

A total of 406 eligible individuals participated in the survey, with 331 participants providing sufficient data for this analysis. Table 1.1 summarizes the sample characteristics for the study. Of note, missing values were excluded from the sample statistics. The mean age ± standard deviation (SD) was 20.78 ± 1.83 years. The majority

of participants were assigned female at birth (AFAB) (77.9%). Participants were most likely to identify as nonbinary (36.9%), followed by identifying as a transman or transmasculine (27.5%), and genderfluid or genderqueer (12.1%). When asked about the race that best describes them, participants predominantly identified as White (63.2%) followed by Chicanx, Hispanic, or Latinx (11.7%) and multiracial or biracial (8.3%). Further, many participants reported their sexual orientation as bisexual (27.6%) or queer (27.9%) and most participants reported that their perceived gender varied (28.7%) or that they were perceived as cisgender (cis woman, 37.8%; cis man, 18.1%).

Table 1.1

Sample Characteristics

Demographic Variable	N	%
Age (*M, SD*)	20.78 (1.83)	
Sex Assigned At Birth		
Male	73	22.1%
Female	258	77.9%
Gender Identity		
Woman	9	2.7%
Man	5	4.2%
Transwoman/FTM/Transfeminine	37	11.2%
Transman/MTF/Transmasculine	91	27.5%
Bigender or multigender	7	2.1%
Nonbinary	122	36.9%
Agender	16	4.8%
Two-spirit, Mahu, other cultural identity	4	1.2%
Genderfluid/Genderqueer	40	12.1%
Race		
Asian/Asian American/API	25	7.7%
Black/African American	19	5.8%
Chicanx/Hispanic/Latinx	38	11.7%
Middle Eastern	5	1.5%
Multiracial/Biracial	27	8.3%
Native/Indigenous/American Indian	6	1.8%
White	206	63.2%
Missing	5	1.5%

Table 1.1 – Continued

Sample Characteristics

Demographic Variable		N	%
Sexual Orientation			
	Asexual	19	5.8%
	Bisexual	91	27.6%
	Gay	22	6.7%
	Heterosexual/Straight	24	7.3%
	Lesbian	35	10.6%
	Pansexual	38	11.5%
	Queer	92	27.9%
	SGL	2	0.6%
	Not listed	7	2.1%
	Missing	1	0.3%
Perceived Gender			
	Cisman	60	18.1%
	Ciswoman	125	37.8%
	Trans man or AFAB	18	5.4%
	Trans woman or AMAB	12	3.6%
	Can't tell	21	6.3%
	Varies	95	28.7%

Descriptive Statistics

Descriptive statistics were calculated for all study variables. Missing values were omitted when calculating descriptive statistics. As seen in Table 1.2, most participants indicated that bystanders were not present during the assault (68.3%). The most commonly reported assault location being a university dorm (23.3%). Most participants indicated that assaults happened in the context of one-on-one dates (22.7%) or hanging out with friends (23.3%). The most common perpetrators of assault in the current study were current or former intimate partners (27.4%), followed by acquaintances (19.5%), friends (19.8%), and strangers (17.6%). The most common type of assault was completed penetration (44.1%) followed by non-consensual contact (31.1%).

Table 1.2

Descriptive Statistics

Study Variable	N	%
Bystander Presence		
No	226	68.3%
Yes	105	31.7%
Location		
Your home	29	8.8%
Perpetrator's home	60	18.1%
Another private residence	30	9.1%
University dorm	77	23.3%
Fraternity or Sorority	9	2.7%
Other residential building	11	3.3%
Non-residential building	13	3.9%
Outdoors	18	5.4%
Bar, Club, Restaurant	16	4.8%
Athletic Facility	1	0.3%
Vehicle	13	3.9%
Other	6	1.8%
Multiple locations	48	14.5%
Social Situation		
Not part of a social situation	58	17.5%
Casually hanging out with friends	77	23.3%
A party	62	18.4%
A group date	4	1.2%
One-on-one date in advance	75	22.7%
Spontaneous date	22	6.6%
Other	34	10.3%
Assault Type		
Non-consensual contact	103	31.1%
Attempted made to penetrate	14	4.2%
Attempted penetration	52	15.7%
Completed made to penetrate	16	4.8%
Completed penetration	146	44.1%

Table 1.2 – Continued

Descriptive Statistics

Study Variable	N	%
Victim-Perpetrator Relationship		
Intimate Partner	90	27.4%
Former Partner	18	5.5%
Teacher or Advisor	2	0.6%
Coworker, boss, supervisor	4	1.2%
Friend	65	19.8%
Acquaintance	64	19.5%
Stranger	58	17.6%
Other	1	0.3%
Multiple Assailants	27	8.2%
Missing	2	0.6%

Chi-square Tests of Independence

Several chi-square tests of independence were conducted to examine demographic differences and bystander presence. Assumptions of the chi-square test of independence requires that all cell sizes must be greater than zero and at least 80% of cells should have expected frequencies of 5 or more (Pallant, 2020). For each of the independent variables, all cells had a value greater than zero, 85% of cells had frequencies of 5 or more and no cells were empty indicating that all assumptions for the test were met.

Results. As reflected in Table 1.3, there were no statistically significant associations found for any of the demographic variables and bystander presence.

Table 1.3

Cross Tabulation of Victim Characteristics and Bystander Presence

		Bystander Presence		
		No	Yes	χ^2
	N=331	226 (68.3%)	105 (31.7%)	
Gender Identity				$\chi^2(3)=2.229$, p=.526
Gender expansive/Non-binary Assigned Female at Birth (AFAB)	159	109 (68.6%)	50 (31.4%)	
Gender expansive/Non-binary Assigned Male at Birth (AMAB)	30	23(76.7%)	7 (23.3%)	
Man/Transman	96	61(63.5%)	35 (36.5%)	
Woman/Transwoman	46	33(71.7%)	13(28.3%)	
Race/Ethnicity				$\chi^2(1)=.333$, p=.564
Black, Indigenous, People of Color (BIPOC)	120	79(65.8%)	41(34.3%)	
White	206	142(68.9%)	64(31.1%)	
Perceived Gender				$\chi^2(3)=1.133$, p=.769
Cisgender woman	125	81(64.8%)	44(35.2%)	
Cisgender man	60	42(70%)	18(30%)	
Transgender	30	21(70%)	9(30%)	
It varies/Unable to tell	116	82(70.7%)	34(29.3%)	
Sexual Orientation				$\chi^2(3)=.428$, p=.934
Straight	24	17(70.8%)	7(29.2%)	
Gay/Lesbian/Same Gender Loving	59	40(67.8%)	19(32.2%)	
Bisexual/Pansexual/Queer	221	149(67.4%)	72(32.6%)	
Asexual/Not Listed	26	19(73.1%)	7(26.9%)	

Note: Significant at the p = <.05 level

Additional bivariate statistics were calculated to examine the relationship between the independent variables (victim-perpetrator relationship, location, social situation, and assault type) and bystander presence (Table 1.4). As seen in Table 1.4, a significant relationship was found between bystander presence and each of the independent variables (victim-perpetrator relationship, location, social situation, and assault type).

Table 1.4

Cross Tabulation of Situational and Contextual Variables, and Bystander Presence

		Bystander Presence		
		No	Yes	χ^2
	N=331	226 (68.3%)	105 (31.7%)	
Victim-Perpetrator Relationship				$\chi^2(5)=35.022$, p=<.001*
Current or Former Intimate Partner	108	94 (87%)	14(13%)	
Friend	65	45(69.2%)	20(30.8%)	
Acquaintance	64	36(56.3%)	28(43.8%)	
Stranger	58	29(50%)	29(50%)	
Other	7	6(85.7%)	1(14.3%)	
Multiple Offenders	27	14(51.9%)	13(48.1%)	
Location				$\chi^2(4)=15.449$, p=.004*
Your home	29	25(86.2%)	4(13.8%)	
Other private residence	90	61(67.8%)	29(32.2%)	
University residence	97	74(76.3%)	23 (23.7%)	
Non-residential space	67	35(52.2%)	32(47.8%)	
Multiple locations	48	31(64.6%)	17(35.4%)	
Social Situation				$\chi^2(5)=48.6723$, p=.001*
Not part of a social situation	58	41(70.7%)	17(29.3%)	
Casually hanging out with friends	77	51(66.2%)	26(33.8%)	
Party	61	24(39.3%)	37(60.7%)	
Group date/Spontaneous date	26	18(69.2%)	8(30.8%)	
One on One Date in advance	75	71(94.7%)	4(5.3%)	
Other	34	21(61.8%)	13(38.2%)	
Assault Type				$\chi^2(2)=28.420$, p=<.001*
Non-consensual contact	103	50(48.5%)	53(51.5%)	
Attempted penetration/made to penetrate	66	47(71.2%)	19(28.8%)	
Completed penetration/made to penetrate	132	129(79.6%)	33(20.4%)	

Note: Significant at the *p = <.05 level

Binary Logistic Regression

A binary logistic regression was carried out to assess the likelihood of bystander presence during sexual assaults experienced by transgender and non-binary undergraduate students. Binary logistic regression is an appropriate test because it allows for the prediction of a dichotomous outcome using predictor variables that are categorical (Pallant, 2020). Testing for collinearity was carried out and demonstrated an absence of multicollinearity. All tolerance values were greater than 0.1 and all variance inflation factor (VIF) values were less than ten (Mertler & Reinhart, 2017).

Results demonstrated that the model was statistically significant ($\chi 2(26) = 102.376$, $p < .001$), explained 37.9% of the variance in bystander presence (Nagelkerke R square), and correctly classified 79.3% of cases. As shown in Table 5, social situation ($p < .001$) and assault type ($p=.003$) were significant predictors. Participants who experienced an assault while at a party had 6.93 higher odds of having a bystander present as compared to those who reported that the assault occurred outside of a social situation. Participants were less likely to report a bystander being present if they reported attempted (OR=.379, 95% CI [.168, .859]) or completed penetration (OR=.328, 95% CI [.165, .653]) (either by being forced to penetrate someone else or by being penetrated themselves) as the type of assault they experienced. Finally, those participants who reported that the perpetrator was a stranger, had 2.87 times higher odds of having a bystander present as compared to those who indicated that the perpetrator was their partner.

Table 1.5

Logistic Regression Predicting Likelihood of Bystander Presence

						Odds Ratio	95% C.I.for EXP(B)	
	B	S.E.	Wald	df	Sig.	(OR)	Lower	Upper
Gender			7.684	3	.053			
Woman/Trans Woman	-.289	.485	.354	1	.552	.749	.289	1.940
Man/ Trans Man	.774	.469	2.725	1	.099	2.167	.865	5.430
Gender Expansive NB AMAB	-.535	.677	.626	1	.429	.586	.155	2.206
Gender Expansive NB AFAB (ref)	-	-	-	-	-	1	-	-
Race								
BIPOC	.213	.306	.485	1	.486	1.237	.680	2.252
White (ref)	-	-	-	-	-	1	-	-
Sexual Orientation			.760	3	.859			
Gay/Lesbian/SGL	.569	.661	.741	1	.389	1.766	.484	6.445
Bisexual/Pansexual/Queer	.387	.594	.423	1	.515	1.472	.459	4.718
Asexual/Not Listed	.328	.786	.174	1	.677	1.388	.297	6.485
Straight (ref)	-	-	-	-	-	1	-	-
Perceived Gender			3.642	3	.303			
Cis Man	-.557	.609	.836	1	.361	.573	.174	1.891
Transgender	-.596	.611	.952	1	.329	.551	.166	1.824
Varied/Can't Tell	-.771	.411	3.516	1	.061	.463	.207	1.036
Cis Woman (ref)	-	-	-	-	1	-	-	-

Note: Significant at the *p = <.05 level

Table 1.5 – Continued

Logistic Regression Predicting Likelihood of Bystander Presence

(cont.)	B	S.E.	Wald	df	Sig.	Odds Ratio (OR)	95% C.I.for EXP(B) Upper	Upper
Location			6.579	4	.160			
Other Private Home	.563	.692	.661	1	.416	1.755	.452	6.810
University residence	.156	.698	.050	1	.823	1.169	.297	4.596
Non-residential space	1.189	.723	2.706	1	.100	3.283	.797	13.534
Multiple locations	.912	.740	1.517	1	.218	2.488	.583	10.611
Your Home (ref)	-	-	-	-	-	1	-	-
Social Situation			27.937	5	<.001*			
Hanging out with friends	.563	.476	1.402	1	.236	1.757	.691	4.464
Party	1.935	.525	13.591	1	<.001*	6.927	2.476	19.385
Group/Spontaneous date	.246	.609	.163	1	.687	1.279	.387	4.219
One on one date in advance	-1.223	.674	3.291	1	.070	.294	.079	1.103
Other	.637	.543	1.377	1	.241	1.892	.652	5.486
Not part of a social situation (ref)	-	-	-	-	-	1	-	-
Victim Perpetrator Relationship			7.878	5	.163			
Friend	.376	.471	.638	1	.425	1.457	.579	3.667
Acquaintance	.484	.464	1.087	1	.297	1.622	.653	4.029
Stranger	1.055	.499	4.464	1	.035*	2.873	1.079	7.647
Other	-1.039	1.246	.695	1	.404	.354	.031	4.067
Multiple	1.032	.576	3.206	1	.073	2.806	.907	8.682
Current or Former Intimate Partner (ref)	-	-	-	-	-	1	-	-
Assault Type			11.475	2	.003*			
Attempted penetration/made to penetrate	-.969	.417	5.410	1	.020*	.379	.168	.859
Completed penetration/made to penetrate	-1.115	.351	10.067	1	.002*	.328	.165	.653
Non-Consensual contact	-	-	-	-	-	1	-	-
Constant	-1.834	.956	3.681	1	.055	.160		

Note: Significant at the *p = <.05 level

Discussion

This study sought to increase formative knowledge about bystander intervention and sexual assaults experienced by transgender undergraduate students by determining how often bystanders are present during sexual assaults experienced by transgender undergraduate students and evaluating the likelihood of bystander presence based on victim characteristics, victim-perpetrator relationship, assault location, the social situation in which the assault occurred, and the type of assault.

Results indicated that 31.7% of participants reported that a third party was present during their sexual assault. These results provide key information and highlight that the majority of sexual assaults that transgender students experience (roughly 7 out of 10) happen without a third party present. These results echo similar findings from the National Crime Victimization Surveys (NCVS), which surveyed households in the United States, and found that bystanders were present during sexual assaults nearly one-third of the time (Planty, 2002; Hart & Miethe, 2008). While federal legislation requires "safe and positive options for bystander intervention that may be carried out by an individual to prevent harm or intervene when there is a risk of domestic violence, dating violence, sexual assault, or stalking …" (Violence Against Women Reauthorization Act, 2013) it is important to note that many existing bystander programs go beyond just teaching individual intervention methods but also encourage primary prevention of sexual assault through positive community messaging that is aimed at challenging social and peer norms that promote rape myths and reduce empathy for victims. This includes interrupting or stopping rape-supportive behaviors such as the use of sexist jokes or sexist language (Banyard et al., 2004; Katz, 1995). Given that in this study, most sexual assaults

experienced by transgender students lack a bystander, bolstering primary prevention techniques in bystander intervention programming is even more warranted in this population. Existing bystander programming should be substantially expanded so that it specifically addresses violence perpetrated against transgender students.

Results on the frequency of bystander presence also shows some difference when compared to recent studies with cisgender women which have reported bystander presence rates to be as high as 34% *prior* to a sexual assault, 2% both *before and during an assault*, and only 3% *during* an assault (Haikalis et al., 2018). Findings also differ from those conducted in a rural community setting with adolescent and adult participants, which found bystander present rates to be just over 18% during sexual assault incidents (Hamby et al., 2016). Findings from this study suggest that bystanders may be present as often or more often during assaults experienced by transgender undergraduate students as compared to those experienced by cisgender college age women. However, given that the current study did not specifically ask participants about the timing of bystander presence (before, during, or after an assault), future studies that specifically query this information would be beneficial .

In addition to providing key information about how often bystanders were present, results also provided valuable information about social situations where bystanders were more likely to be present. For example, participants who experienced an assault at a party had significantly higher odds of having a bystander present. These findings were not unusual as it has been well documented that many campus-based sexual assaults occur in party atmospheres both on and off campus where others are present (Armstrong et al., 2006, p. 483). Additionally, assaults involving a stranger also

had higher odds of having a bystander present. These results vary slightly from those from Haikalis et al. (2018) who did not find that stranger assaults were more likely to have a bystander but did find that victim-perpetrator relationship varied based on bystander presence and "…perpetrators were less likely to be a spouse/ex-spouse or current/ex-dating partner when bystanders were present (4% and 25%, respectively) than when bystanders were not present (16% and 45%, respectively)" (p. 1246). Taken together, these results provide rudimentary information about where and in what contexts bystanders are present and suggest that bystander intervention is a potential form of prevention for transgender students given that assaults happen in social situations similar to those already documented in the literature with cisgender women. However, it is critical to note, that to this author's knowledge, there is almost nothing known about the role bystanders play in sexual assaults experienced by transgender students. Given that current bystander intervention programs fail to include transgender students in vignettes and educational programming (DeGue et al., 2014; Kirk-Provencher et al., 2023) and also fail to account for the oppression and marginalization that sexual and gender minority students experience (McMahon et al., 2020, p. 801), it cannot be assumed that bystanders would be willing to act if a victim was transgender or if they would be well intended when doing so. Given this, additional research to contextualize the current study findings about bystander presence is recommended along with expanding this research to better understand bystander actions before making programming recommendations. Should future research indicate that bystander intervention is both plausible and helpful for transgender students, information from this study can be used to adapt and improve bystander intervention programs by creating vignettes and training scenarios that

accurately reflect the circumstances in which assaults actually happen for transgender students and how bystanders may play a role in these situations, as opposed to extemporizing scenarios or omitting them completely.

Results also provided valuable information about situations where bystanders were less likely to be present. Bystanders were not present at 87% of assaults involving a current or former intimate partner, 86.2% of dates that occurred in the victim's home, 94.7% of one-on-one dates agreed upon in advance, 71.2% of assaults where penetration was attempted, and 79.6% of assaults where penetration was completed. In the bivariate analysis, there was a significant relationship between bystander presence and victim-perpetrator relationship, location, social situation, and assault type. However, in the multivariable analysis, only assault type and social situation retained significance with there being significantly lower odds of bystander presence during assaults with attempted and completed penetration compared to assaults that solely involved non-consensual touching. A plausible explanation for why bystanders are not present during assaults involving penetration could be that perpetrators intentionally isolate victims and lure them away from others with the intent of victimizing them. In borrowing from intimate partner violence (IPV) literature, it is well documented that perpetrators frequently use tactics such as intentional misgendering, threatening to out the individual, and claiming that an individual is undesirable due to their transgender identity in order to isolate and coerce victims into undesirable sexual situations (Peitzmeier et al., 2019). While isolative situations may be dangerous for cisgender and transgender students alike, transgender students are at a greater disadvantage because of their minority status. Therefore, in addition to increased inclusivity in bystander programming as mentioned above, it is also

recommended that colleges and universities implement prevention programming that does not rely on third parties as well as those that are designed to address specific tactics used against transgender students and those that address the most severe forms of assault. Sexual assault resistance education programs such as the Enhanced Assess, Acknowledge, Act (EAAA) program are being adapted for transgender students (Peitzmeier et al., 2023a) and have the potential to uniquely address the contexts and tactics specific to transgender students. This type of sexual assault resistance programming is especially necessary given that the most severe forms of assault are those most likely to occur without anyone else present and because it is known that penetrative assaults are likely to cause greater physical injury and it is hypothesized that these forms of assault "may be internalized as more intrusive or distressing than nonpenetrative sexual groping" (Rothman et al., 2021, p. 9615). Future research that is qualitative in nature would be helpful in understanding why bystanders are less likely to be present during attempted and completed penetrative assaults as opposed to those assaults that solely involve non-consensual touching.

Results from this study also demonstrated valuable information about perpetrators of sexual assault against transgender undergraduate students. The most common perpetrators of assault within this study sample were current intimate partners, acquaintances, and friends. These findings are consistent with previous quantitative studies that found that most sexual assaults that occur on college campuses occur among acquaintances rather than strangers (Cantor et al., 2020). However, what is notable in the current study is that 17.6% of participants reported that the perpetrator of their assault was a stranger. In a large, national study, Cantor et al. (2020) reported similar findings in

that 15.8% of women, 13% of men, and 20.8% of transgender or gender non-conforming individuals who have experienced penetrative sexual assault reported that the perpetrator was a stranger. Results suggest that while intimate partners are often the most common perpetrator of assault against transgender college students, transgender students may also have a heightened risk for stranger assault when compared to ciswoman and cismen. Future research in this area is needed in order to definitively establish whether transgender individuals are more likely to experience assaults by strangers than cisgender individuals, perhaps due to being the target of transphobic hate crimes.

Finally, another aim in this study was to determine if bystanders were more likely to be present for certain victims as opposed to others. Cross tabulations using chi-squared testing for independence were carried out with each of the victim characteristics (gender identity, perceived gender, race, and sexual orientation). Results revealed that there were no statistically significant associations found for any of the demographic variables (gender identity, perceived gender, race, and sexual orientation) and bystander presence. This suggests that bystander intervention may be applicable for students with diverse identities.

Limitations

There were several limitations in the current study. First, the sample for the study was primarily White and most participants indicated that they were assigned female at birth (AFAB) which limits generalizability, especially for those who are black, indigenous, people of color (BIPOC) and/or assigned male at birth (AMAB). Second, the study intentionally studied campus-based sexual assault and as such it only queried college age students. Therefore, findings from this study should not be extrapolated to

adolescent or community based samples. Third, this is a secondary data analysis of a survivor focused data set and the original study was not focused on bystander actions and did not ask questions about bystander perspectives or characteristics. Future studies will likely benefit from querying information about those who witness sexual assault and the role bystander characteristics may play. Finally, this study only evaluated bystander presence and not bystander opportunity or intervention. While bystander presence is precursory to bystander opportunity and still provides key information, additional information about third-party opportunities to intervene, such as those described in Haikalis et al. (2018), would also be of benefit.

Conclusion

Understanding the locations and social situations where bystanders are more likely to be present is critical for bystander programming. This study adds to extant literature by describing the frequency and contexts in which bystanders are present during sexual assaults experienced by transgender undergraduate students. Results demonstrated that bystanders were present one-third of the time during sexual assaults experienced by transgender undergraduates and that assaults that occurred at a party, and those perpetrated by a stranger had significantly higher odds of having a bystander present. It is therefore suggested that bystander intervention programming may be applicable in these situations but only after further research explores how bystanders behave in these situations and only after programming is made to be more inclusive. Further, results also show that assaults occurring during one-on-one dates were less likely to have bystanders present and that both strangers and intimate partners were common perpetrators of assault against transgender undergraduate students. Therefore, it is suggested that other types of

sexual assault prevention programming need to be offered on college campuses in addition to bystander intervention programming to address the two-thirds of assaults at which no bystander is present. Programs such as sexual assault resistance education are better suited for situations where transgender students are isolated from peers, where bystanders are not available, or when seeking help from bystanders may be dangerous. Further research that explores the actions that bystanders take and the impacts that bystanders have on victim outcomes is also needed in order to understand the utility of bystander intervention for transgender students. Only once this information is obtained can we collectively begin to create bystander programs that are both inclusive and representative of transgender students' experiences and that are maximally effective at reducing sexual violence against trans and nonbinary students.

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CHAPTER THREE

SECOND MANUSCRIPT

Bystander Behavior During Sexual Assaults Experienced By Transgender Undergraduates

Bystander intervention has been identified as a potentially potent tool to combat sexual assault and research has evolved considerably over the past several decades, especially as it relates to understanding what situational and contextual variables may influence bystander behavior. However, very little is known about how bystanders behave when a victim is transgender. Therefore, the purpose of this secondary data analysis (N=105), was to describe actions that bystanders take during sexual assaults experienced by transgender undergraduate students and to ascertain the likelihood of helpful or harmful bystander behavior based on a number of situational and contextual variables. Results indicate that 39% of bystanders identified by participants in this study did not intervene when present during an assault and of those bystanders who did intervene in a helpful matter (21%), most did so by helping victims get away or recover in the post-assault period. Few bystanders engaged in actively harmful behavior by joining the assault (8.2%) or worsening it (4%). While bivariate analyses did not demonstrate significance, results did suggest that participants who indicated that they experienced a contact assault or were assaulted by a stranger or in a non-residential space were more likely to report helpful behavior when compared to other situations, contexts,

and perpetrator scenarios. Implications for future research and programming are discussed.

Introduction

Federal legislation including Title IX of the Education Amendments of 1972 and the Violence Against Women Reauthorization Act of 2013 requires educational institutions who receive federal funding to provide education and comprehensive sexual assault prevention programming, including active bystander training (Violence Against Women Reauthorization Act, 2013; Gray et al., 2018). Bystander training programs have been identified as a potentially promising avenue to address sexual assault by addressing community norms that perpetuate sexual violence and by training third parties to intervene before, during, or after an assault (Gray et al., 2018; Levine et al., 2020). While research demonstrates that bystander programs have a significant positive effect on bystander intervention (Katz & Moore, 2013; Kettrey & Marx, 2018) actual rates of sexual violence on college campuses remain stagnant (Gray et al., 2018).

While all students are at risk of experiencing sexual assault, research demonstrates that transgender students experience heightened rates of sexual assault (Coulter et al., 2017; Griner et al., 2020; Howard et al., 2019; Hoxmeier, 2016). In fact, studies report that when compared to cisgender peers, transgender undergraduate students have higher odds of experiencing attempted and completed vaginal, oral, and anal penetration as well as higher odds of emotional and sexual abuse in a relationship (Hoxmeier, 2016). Many transgender undergraduate students also report concerns about university officials taking a report of sexual assault seriously and fear retaliation for reporting violence (Cantor et al., 2020). Additionally, information from informal

community-created literature reveals that transgender individuals also likely have concerns related to bystander intervention. For example, a zine published by TransFighters (2021), a trans-led community organization, recommends that trans women view bystanders as potential additional perpetrators rather than potential helpers in an assault situation, reflecting prevalent views within trans communities that positive bystander intervention is only common for cisgender victims. Recent academic work has also reported similar among transgender undergraduates, who indicated that they feared making a scene or attracting attention in order to solicit help out of fear that that bystanders could potentially harm them further (Peitzmeier et al., 2023). Without research that examines the actions that bystanders take when a victim of sexual assault is transgender, it is unknown if these fears are justified.

Finally, there has also been a renewed interest in bystander intervention research with attention to what variables determine or are related to bystander behavior as this information is critical for bystander programming (Mainwaring et al., 2023, p. 1728). Variables of interest may relate to individual characteristics of the bystander or the victim while situational variables are those related to where and how the assault unfolds. Victim characteristics are a critical aspect to understanding bystander behavior as a victim's sex, gender, age, sexuality, race, and socioeconomic status may predispose them to victim blaming (Latané & Darley, 1970; van der Bruggen, & Grubb, 2014) and subsequent inaction by bystanders. Further, for transgender students specifically, research suggests that visible markers and characteristics can make an individual's status as a transgender person easy to ascertain which heightens their risk for victimization and discrimination (Staples & Fuller, 2021, p. 696). Further, stereotypes that perpetuate the idea that

transgender individuals are hypersexual also places those who are visibly perceived as transgender at a heightened risk for assault (Staples & Fuller, 2021) as discrimination may promote victim blaming, rape minimization, and in turn, bystander passivity. In addition to examining victim characteristics, other scholars have identified key situational factors such as the relationship between the victim, the perpetrator, and bystanders (Levine et al., 2020; Mainwaring et al., 2023; Palmer et al., 2016) as variables of importance.

Given persistently high rates of sexual assault on college campuses for transgender students as well as recent recommendations to make bystander intervention programming more inclusive, there is a great need to understand how bystanders behave during sexual assaults experienced by transgender students. Therefore, the purpose of this study is to describe what actions bystanders take during sexual assaults experienced by transgender undergraduate students and examine if bystanders are more likely to help or hinder victims of campus sexual assault based on location, social situation, victim-perpetrator relationship, victim characteristics (gender identity, perceived gender, race, and sexual orientation), and assault type.

Methods

Sample

This study is a secondary data analysis of the *Owning Our Power* study conducted by Dr. Sarah Peitzmeier (Peitzmeier, 2019). In addition to the inclusion criteria described in Chapter 2 of the dissertation, participants in this analysis also needed to indicate that bystanders were present during their assault (N=105) .

Measures

Measures for victim characteristics, victim-perpetrator relationship, location, social situation, and assault type have been previously described in Chapter 2.

Bystander Actions. Bystander actions were assessed using two questions. The first question asked participants, "Did the actions of the other person(s) present help the situation in any of the following ways?" Mark all that apply: helped avoid injury or greater injury to me, scared or chased offender off , helped me get away from offender, protected other people, got me help or helped me recover after the incident , other, the other person(s) present did not help the situation. The second question asked participants: "Did the actions of (this person/any of these people) make the situation worse in any of the following ways?" Mark all that apply: led to injury or greater injury to me, led to other people getting hurt or getting hurt worse than they otherwise would have been hurt, led to offender getting away, made offender angrier, more aggressive, etc., protected offender while offender was hurting me, joined offender in hurting me, other, the other person(s) present did not make the situation worse. Two dichotomous variables were created from the Bystander Actions variable; helpful (coded yes/no) and hurtful (coded yes/no).

Analysis

Missing Data

A subset of data containing only those that reported bystanders as present was created (N=105). Due to the multiple response nature of the helpful and harmful bystander action variables, a new variable was created to indicate if participants selected any answer for the bystander questions. Frequencies were calculated for both helpful and

harmful behaviors. Another variable was then created to assess for missing data using dummy coding and a Fisher-Freeman-Halton exact test was carried out to determine if a significant relationship exists between each of the demographic variables (race, gender, sexual orientation, and perceived gender), other variables of interest, and the harmful bystander action variables. In analyzing the missing data for the helpful bystander behaviors, 3 participants did not select a response (missing data rate of 2.9%). In analyzing the harmful bystander behaviors variable, 6 participants did not select any response (missing data rate of 5.7%). The Fisher-Freeman-Halton exact test did not demonstrate any significant relationships between any of the tested variables and the missing data. Given the small amount of missingness and the non-significant relationship between study variables and missing data, available case analysis was chosen.

Statistical Procedures

SPSS 29.0 (IBM, Armonk, NY) was used for data analysis. Descriptive statistics were calculated for all study variables. Several Fisher's exact tests were conducted to examine associations between independent and dependent variables. Finally, two binary logistic regressions were attempted in order to determine if bystanders behavior varied based on social situation, location, the victim-perpetrator relationship, victim characteristics, and assault type.

Study Approval

The original study was granted exemption from the University of Michigan Institutional Review Board (IRB) (HUM00168758). This proposal for a secondary data analysis was also granted exemption by Oakland University (IRB-FY2023-58).

Results

Sample Characteristics

Sample characteristics for the study are presented in Table 2.1. Missing values were excluded from the sample statistics. The majority of participants were assigned female at birth (AFAB) (82.9%) and were most likely to identify as nonbinary (36.2%) and White (61%). Further, most participants reported that they were perceived as a cisgender woman (41.9%) or that their perceived gender varied (25.7%).

Table 2.1

Sample Characteristics

Demographic Variable	N	%
Age (*M, SD*)	20.877 (2.001)	
Sex Assigned At Birth		
Male	18	17.1%
Female	87	82.9%
Perceived Gender		
Cisman	18	17.1%
Ciswoman	44	41.9%
Trans man or AFAB	6	5.7%
Trans woman or AMAB	3	2.9%
Can't tell	7	6.7%
Varies	27	25.7%
Gender		
Woman	3	2.9%
Man	-	-
Transwoman/FTM/Transfeminine	10	9.5%
Transman/MTF/Transmasculine	35	33.3%
Bigender or multigender	3	2.9%
Nonbinary	38	36.2%
Agender	4	3.8%
Two-spirit, Mahu, other cultural identity	1	1%
Genderfluid/Genderqueer	11	10.5%

Table 2.1—Continued

Sample Characteristics

Demographic Variable (cont.)	N	%
Race		
Asian/Asian American/API	11	10.5%
Black/African American	5	4.8%
Chicanx/Hispanic/Latinx	14	13.3%
Middle Eastern	2	1.9%
Multiracial/Biracial	7	6.7%
Native/Indigenous/American Indian	2	1.9%
White	64	61%
Sexual Orientation		
Asexual	6	5.7%
Bisexual	32	30.5%
Gay	5	4.8%
Heterosexual/Straight	7	6.7%
Lesbian	12	11.4%
Pansexual	13	12.4%
Queer	27	25.7%
SGL	2	1.9%
Not listed	1	1.0%

Descriptive Statistics

Descriptive statistics for all study variables are present in Table 2.2. Among sexual assaults where bystanders were present, the most commonly reported assault location was a private home that did not belong to the victim or the perpetrator (18.1%). Further, most participants indicated that assaults happened in the context of a party (35.2%) or while casually hanging out with friends (22.8%) and the most common perpetrators of assault for transgender undergraduates in situations where bystanders were present were strangers (27.6%) or acquaintances (26.7%) More than 12% of participants indicated that there were multiple assailants. The most common type of assault was non-consensual contact (50.5%).

Table 2.2

Descriptive Statistics

Variable	N	%
Location		
Your home	4	3.8%
Perpetrators home	10	9.5%
Other home	19	18.1%
University dorm	15	14.3%
Fraternity of Sorority	6	5.7%
Residential other	2	1.9%
Non-residential	6	5.7%
Outdoors	6	5.7%
Bar, Club, Restaurant	15	14.3%
Athletic Facility	1	1.0%
Vehicle	1	1.0%
Other	3	2.9%
Multiple locations	17	16.2%
Social Situation		
Not part of a social situation	17	16.2%
Casually hanging out with friends	26	24.8%
A party	37	35.2%
A group date	2	1.9%
One-on-one date in advance	4	3.8%
Spontaneous date	6	5.7%
Other	13	12.4%
Victim-Perpetrator Relationship		
Intimate Partner	11	10.5%
Former Partner	3	2.9%
Coworker, boss, supervisor	1	1.0%
Friend	20	19.0%
Acquaintance	28	26.7%
Stranger	29	27.6%
Multiple Assailants	13	12.4%
Assault Type		
Non-consensual contact	53	50.5%
Attempted made to penetrate	2	1.9%
Attempted penetration	17	16.2%
Completed made to penetrate	2	1.9%
Completed penetration	31	29.5%

Table 2.3 displays participant responses related to helpful bystander behaviors and as seen below, 63.7% of participants indicated that those present did not help the situation. Table 2.4 displays participants responses to harmful bystander behaviors and demonstrates that 64.3% of participants reported that bystanders did not hurt the situation. Harmful behaviors shaded in gray indicate active harmful bystander behaviors; these are behaviors that caused additional harm to the victim or someone else as opposed to passive behaviors where the perpetrator was aided. Of note, bystander action questions allowed for multiple selections by participants therefore categories were not mutually exclusive and totals exceed 100%.

Table 2.3

Helpful or Neutral Bystander Behaviors (n=102)

	N	%
Avoid injury	9	8.8%
Scared offender away	4	3.9%
Helped me get away	19	18.6%
Protected others	4	3.9%
Help me recover afterwards	14	13.7%
Other	7	6.9%
Any helpful response	37	36.3%
Did not help	65	63.7%
Missing	3	2.9%

Table 4

Harmful Bystander Behaviors (n=98)

	N	%
Led to greater injury to me	4	4%
Led to other people getting hurt or getting hurt worse	3	3%
Joined offender in hurting me	8	8.2%
Active hurtful behavior: Greater injury to victim, greater injury to someone else, or joining perpetrator in harming victim	**15**	**15.3%**
Led to offender getting away	12	12.2%
Made offender angrier	5	5.1%
Protected offender	11	11.2%
Other	9	9.2%
Any harmful response	36	36.7%
Did not make worse	63	64.3%
No response to any options	6	5.7%

Finally, the helpful and hurtful bystander behavior questions were examined together to gain a better understanding of how bystanders behave overall. These results are presented below in Table 2.5. Results demonstrate that 39% of bystanders took no action at all while others engaged in either only helpful actions (21%) or only hurtful actions (21.9%). Few participants indicated that bystanders were both helpful and hurtful (11.4%).

Table 2.5

Helpful and Harmful Bystander Behaviors

	N	%
Helpful actions only	22	21%
Harmful actions only	23	21.9%
Helpful and harmful actions	12	11.4%
No action	41	39%
No response	7	6.7%

Fisher's Exact Test

Several Fisher's exact tests of independence were conducted to examine demographic differences and bystander behaviors. This test, as opposed to a chi-square test, was chosen due to the number of cells with small values and empty cells. As reflected in Table 2.6 and Table 2.7, there were no statistically significant associations found for any of the demographic variables and the helpful or hurtful bystander behaviors.

Table 2.6

Fisher's Exact of Helpful Bystander Behaviors and Participant Demographics

		Helpful Behavior?		
		No	Yes	Fisher's Exact (2-sided)
	N=102	65 (63.7%)	37 (36.3%)	
Gender Identity				.629
Woman/Trans Woman	13	9 (69.2%)	4 (30.8%)	
Man/Trans Man	34	21 (61.8%)	13 (38.2%)	
Gender expansive/NB AFAB	48	32 (66.7%)	16 (33.3%)	
Gender expansive/NB AMAB	7	3 (42.9%)	4 (57.1%)	
Race/Ethnicity				.834
BIPOC	41	27 (65.9%)	14 (34.1%)	
White	61	38 (62.3%)	23 (37.7%)	
Perceived Gender				.570
Cis Woman	42	29 (69%)	13 (31%)	
Cis Man	18	9 (50%)	9 (50%)	
Transgender	8	5 (62.5%)	3 (37.5%)	
It Varies/Can't Tell	34	22 (64.7%)	37 (36.3%)	
Sexual Orientation				.532
Straight	7	3 (42.9%)	4 (57.1%)	
Gay/Lesbian/Same Gender Loving	18	13 (72.2%)	5 (27.8%)	
Bisexual/Pansexual/Queer	70	45 (64.3%)	25 (35.7%)	
Asexual/Not Listed	7	4 (57.1%)	3 (42.9%)	

Note: Significant at the *p = <.05 level

Table 2.7

Fisher's Exact of Hurtful Bystander Behaviors and Participant Demographics

		Hurtful Behavior?		
		No	Yes	Fisher's Exact (2-sided)
	N=99	63 (63.6%)	36 (36.4%)	
Gender Identity				.655
Woman/Trans Woman	13	10 (76.9%)	3 (23.1%)	
Man/Trans Man	33	19 (57.6%)	14 (42.4%)	
Gender expansive/NB AFAB	46	30 (65.2%)	16 (34.8%)	
Gender expansive/NB AMAB	7	4 (57.1%)	3 (42.9%)	
Race/Ethnicity				.835
BIPOC	40	26 (65%)	14 (35%)	
White	59	37 (62.7%)	22 (37.3%)	
Perceived Gender				.489
Cis Woman	41	29 (70.7%)	12 (29.3%)	
Cis Man	17	9 (52.9%)	8 (47.1%)	
Transgender	8	4 (50%)	4 (50%)	
It Varies/Can't Tell	33	21 (63.6%)	12 (36.4%)	
Sexual Orientation				.569
Straight	7	6 (85.7%)	1 (14.3%)	
Gay/Lesbian/Same Gender Loving	19	11 (57.9%)	8 (42.1%)	
Bisexual/Pansexual/Queer	67	43 (64.2%)	24 (35.8%)	
Asexual/Not Listed	6	3 (50%)	3 (50%)	

Note: Significant at the *p = <.05 level

Additional bivariate statistics were calculated to examine the relationship between the independent variables (location, social situation, victim-perpetrator relationship, assault type) and bystander presence. Results are displayed in Table 2.8 and Table 2.9 below.

Table 2.8

Fisher's Exact of Situational and Contextual Variables and Helpful Bystander Behaviors

		Helpful Behavior?		
		No	Yes	Fisher's Exact (2-sided)
	N=102	65 (63.7%)	37 (36.3%)	
Victim-Perpetrator Relationship				.880
Current or former intimate partner	14	10 (71.4%)	4 (28.6%)	
Friend	18	11 (61.1%)	7 (38.9%)	
Acquaintance	28	18 (64.3%)	10 (35.7%)	
Stranger	28	16 (57.1%)	12 (42.9%)	
Multiple, Other (Boss, Coworker, Advisor, Teacher)	14	10 (71.4%)	4 (28.6%)	
Location				.193
Your home	4	2 (50%)	2 (50%)	
Other private residence	28	20 (71.4%)	8 (28.6%)	
University residence	22	17 (77.3%)	5 (22.7%)	
Non-residential space	31	15 (48.4%)	16 (51.6%)	
Multiple locations	17	11 (64.7%)	6 (35.3%)	
Social Situation				.465
Not part of a social situation	17	10 (58.8%)	7 (41.2%)	
Hanging out with friends	26	15 (57.7%)	11 (42.3%)	
A Party	36	25 (69.4%)	11 (30.6%)	
A date (group date, one on one date, spontaneous date)	11	9 (81.8%)	2 (18.2%)	
Other	12	6 (50%)	6 (50%)	
Assault Type				.130
Non-consensual contact	51	29 (56.9%)	22 (43.1%)	
Attempted penetration/made to penetrate	19	11 (57.9%)	8 (42.1%)	
Completed penetration/made to penetrate	32	25 (78.1%)	7 (21.9%)	

Note: Significant at the *p = <.05 level

Table 2.9

Fisher's Exact of Situational and Contextual Variables and Harmful Bystander Behavior

		Harmful Behavior?		
		No	Yes	Fisher's Exact (2-sided)
	N=99	63 (63.6%)	36 (36.4%)	
Victim-Perpetrator Relationship				.088
Current or former intimate partner	14	7 (50%)	7 (50%)	
Friend	19	12 (63.2%)	7 (36.8%)	
Acquaintance	26	16 (61.5%)	10 (38.5%)	
Stranger	28	23 (82.1%)	5 (17.9%)	
Multiple, Other (Boss, Coworker, Advisor, Teacher)	12	5 (41.7%)	7 (58.3%)	
Location				.154
Your home	3	2 (66.7%)	1 (33.3%)	
Other private residence	28	18 (64.3%)	10 (35.7%)	
University residence	20	12 (60%)	8 (40%)	
Non-residential space	31	24 (77.4%)	7 (22.6%)	
Multiple locations	17	7 (41.2%)	10 (58.8%)	
Social Situation				.732
Not part of a social situation	17	11 (64.7%)	6 (35.3%)	
Hanging out with friends	25	13 (52%)	12 (48%)	
A Party	34	23 (67.6%)	11 (32.4%)	
A date (group date, one on one date, spontaneous date)	11	8 (72.7%)	3 (27.3%)	
Other	12	8 (66.7%)	4 (33.3%)	
Assault Type				.056
Non-consensual contact	48	36 (75%)	12 (25%)	
Attempted penetration/made to penetrate	19	11 (57.9%)	8 (42.1%)	
Completed penetration/made to penetrate	32	15 (50%)	16 (50%)	

Note: Significant at the *p = <.05 level

Binary Logistic Regression

Two binary logistic regressions were attempted in order to better understand the likelihood of helpful and hurtful bystander behaviors during sexual assaults experienced by transgender and non-binary undergraduate students. Binary logistic regression is an appropriate method for this analysis as it allows for the prediction of a dichotomous outcome using predictor variables that are categorical or continuous (Pallant, 2020). The first logistic regression model was designed in order to determine if bystanders actions are more likely be helpful based on victim characteristics, the social situation in which the assault occurred, the location in which the assault occurred, the victim perpetrator relationship, and the assault type. The second logistic regression model was designed to determine if bystanders actions are more likely to be hurtful based on victim characteristics, the social situation in which the assault occurred, the location in which the assault occurred, the victim perpetrator relationship, and assault type.

Assumptions. Testing for collinearity was carried out and demonstrated an absence of multicollinearity for both models. All tolerance values were greater than 0.1 and all variance inflation factor (VIF) values were less than ten, which is considered acceptable (Stevens, 2001 as cited in Mertler & Reinhart, 2017).

Results. Unfortunately, results from the two binary logistic regressions demonstrated that both models were not significant and both models had confidence intervals that were extremely wide. Taken together, results suggest that the study likely did not have sufficient power. Results further suggest the possibility of a Type II error, indicating that the study failed to reject the null hypothesis when it may have been true (Mertler & Reinhart, 2017). To remedy this, additional attempts were made by creating

additional regression models for both the helpful and harmful behaviors using backward selection. Unfortunately, this process resulted in an intercept-only model as the best fit. Ultimately, after several attempts to create a well-fitting multivariate model were made, it was evident that without the ability to recruit additional participants, it was not possible to create an appropriate multivariate model that was sufficiently powered. Descriptive statistics and bivariate analyses using Fisher's exact are therefore the most appropriate tests and produced the best fit for the data available in this secondary data analysis. Implications of these findings are discussed below.

Discussion

The purpose of this study was to describe what actions bystanders take during sexual assaults experienced by transgender undergraduate students and to determine what variables, if any, successfully predict the likelihood of helpful and harmful behavior by bystanders. Univariate results in this study provided a fundamental description of sexual assaults experienced by transgender undergraduate students when bystanders were present and the actions that bystanders take, which to date, has been scarcely examined in the literature. Additionally, the logistic regression models yielded non-significant results with large confidence intervals, indicating unstable poor-fitting models, likely due to very small sample size. Future research will likely benefit from a larger sample that can accommodate the significant number of categorical variables that were attempted in this analysis. Implications of these findings are discussed below.

Results demonstrate that the most common perpetrators of assault for transgender undergraduates in situations where bystanders were present were strangers (27.6%), acquaintances (26.7%), and friends (19%). Given that most collegiate sexual assaults

happen among acquaintances and in situations with peers (Budd et al., 2017; Cantor et al., 2020; McMahon, 2010; Sinozich & Langston, 2014), the high percentage of stranger facilitated assaults was an unanticipated result. Given this, bystander programming for transgender students should include messaging related to acquaintance assault as well as stranger assault. Disseminating this information could help students with learning various resistance strategies as students may be willing to engage in some resistance strategies with strangers that they would otherwise be unwilling to use if the perpetrator was known to them. Additionally, a plethora of research over the past several decades has identified college parties, especially those that involve the use of alcohol or drugs, as potentially dangerous social environments that create conditions favorable for sexual assault to occur (Armstrong et al., 2006). Results indicate that the plurality of assaults that transgender students experience when bystanders are present occur in the context of a party (35.2%). Results from this study also indicate that transgender students report non-consensual contact as the most common type of assault experienced among those at which a bystander is present (50.5%). This finding is somewhat anticipated given that research surveying all forms of sexual assault indicates that sexualized touching (defined at nonconsensual contact including touching, kissing, foundling, or grabbing) not only occurs more frequently than other forms of assault (Mellins et al., 2017) but is also often normalized in collegiate party environments (Ronen, 2010).

Results also revealed that the plurality of bystanders (39%) took no action at all during assaults and relatively few bystanders engaged in helping (21%) and harming (21.9%) behaviors. In comparing these findings of transgender undergraduate college students to those among general college students populations, the current study results

demonstrate bystander intervention occurs slightly less often. For example, McMahon et al. (2015) found bystander intervention rates to vary between 55.8% and 78.2% depending on whether or not the intervention occurred during a low-risk situation, a high-risk situation, or following an assault and O'Sullivan et al. (2023), reported that of those students who reported witnessing an assault or potential assault, 75% reported intervening as a bystander. However, these comparisons must be made with caution as most studies with general college student populations rely on bystander reports of intervention as opposed to survivors'. Given that bystanders can and do fail to notice when a sexual assault has occurred (Burn, 2009), bystanders may be unaware that an assault has occurred and rates of intervention may be overreported. In comparing the current study findings to other survivor-driven studies, results are more similar. For example, in a study with college-age women, Haikalis et al. (2018) reported that when bystanders had an opportunity to intervene, the most common response was to remain passive (86%). Similarly, Hamby et al. (2016) surveyed adults and adolescents living in the rural southeastern United States and found that of those who reported experiencing a sexual assault with a bystander present, 50% reported that bystanders had no impact on the incident.

There are a number of reasons that bystanders may fail to intervene during sexual assaults experienced by transgender individuals. To begin, bystanders have to be able to recognize that an unusual event has occurred and then interpret that event as an emergency before they will decide what to do about it (Latané & Darley, 1970). Collegiate party atmospheres that include loud music and a preoccupation with social activities may prevent event recognition (Burn, 2009). Additionally, sexually aggressive

behavior, including sexual touching, is often characterized as normal behavior in bars, college parties, and off-campus party settings (Ronen, 2010; Thompson & Cracco, 2008). Given the large percentage of assaults that occurred in a party environment (35.2%) and the large percentage of respondents that experienced non-consensual touching (50.5%), one plausible explanation as to why nearly 40% of participants in this sample reported a lack of intervention by bystanders, is that they may have not noticed the event nor interpreted it as an emergency. Additionally, when a victim is transgender, they may experience coercive tactics that are trans-specific (Peitzmeier et al., 2019). If bystanders are unfamiliar with these tactics, they may not recognize what is happening. Given that many existing bystander intervention programs address issues related to party atmospheres, including peer norms that perpetuate assault, continued programming in this area is warranted. However, in order to make existing programming more beneficial for transgender students, program content must include basic descriptions of where and how assaults unfold for transgender students as well as tactics that perpetrators are known to use that may be unique for transgender students.

In addition to failing to recognize that an assault has happened, bystanders may also fail to intervene due to a lack of opportunity. This may be applicable in situations where the bystander was asleep or was incapacitated due to the use of alcohol or drugs. Given this, other forms of sexual assault prevention are likely needed in addition to bystander training in order to address situations where bystanders may be incapacitated and unable to help or in situations where fear paralyzes them from doing so. Failure to intervene may also occur due to fear as some research demonstrates that sexual assaults are associated with some of the highest levels of bystander harm when compared to other

types of victimization (Hamby et al., 2016) and individuals who intervene on behalf of sexual and gender minority individuals often fear retaliation from others (Potter et al., 2012). While a limited amount of research has been done related to bystander opportunity and subsequent intervention (Haikalis et al., 2018), additional research is warranted in order to further understand this concept when a victim is transgender.

Next, in looking closer at the helpful actions bystanders took, the most common helpful behaviors that bystanders engaged in were helping victims get away (18.6%) and helping victims to recover after the assault (13.7%). Relatively few participants reported that bystanders helped them to avoid injury (8.8%), scare the offender away (3.9%), or protected others (3.9%). These findings are also consistent with prior research with undergraduate students, where researchers found that students had a greater intent to intervene with victims as opposed to perpetrators and a greater intent to perform post-assault intervention as opposed to intervention before or during the assault (Hoxmeier et al., 2015). To increase active helpful bystander behaviors that occur before or during an assault as opposed to only afterwards, existing bystander programs may need to address concerns that students have related to intervention. Specifically, concerns related to helping a victim who is transgender, especially in college atmospheres or social situations where transphobia is rampant. Finally, programs should also be sure to include transgender-friendly resources that can be used in the post-assault period given that the most helpful behaviors bystanders engage in occur during this time. This would include programming that recognizes that many transgender individuals fear reporting their assault to university officials (Cantor et al., 2020). Future research may help to better understand factors that influence a bystander's decision to deploy certain intervention

behaviors as opposed to others and may help to further refine trans-inclusive content that can be added to bystander programming.

Results from this study also demonstrated that 21.9% of participants reported harmful bystander actions, a rate that is more than double that of the community sample reported by Hamby et al. (2016). However, looking more closely at those participants that reported hurtful actions, most participants indicated that bystanders engaged in passive hurtful behavior. For example, participants indicated that bystanders who engaged in hurtful action did so by helping the offender get away (12.2%) or protecting the offender (11.2%). Only 15.3% of respondents indicated that the bystanders who were present actively participated in harming them by causing greater harm to them or someone else or by joining the perpetrator in the assault. Recent qualitative research among transgender undergraduate students found that transgender students reported concerns with bystander involvement and fear that making a scene or attracting attention in order to solicit help during a sexual assault may actually lead to greater harm or assault escalation due to being visibly transgender or gender non-conforming (Peitzmeier et al., 2023). However, several Fisher's exact tests of independence were conducted to examine victim characteristics and bystander behaviors and no significant differences were found. Results indicate that in this study, bystander behaviors did not vary based on victims' gender identity or perceived gender. This information, coupled with the information that relatively few respondents reported that bystanders joined the assault (8.2%) or led to greater injury (4%), is reassuring and suggests that bystanders may not be inherently harmful to victims due to their transgender identity. Because of this, it is strongly recommended that bystander programs and well as sexual assault resistance programs

integrate this information into programming. While results from this study still report a high rate of inaction by bystanders and transgender students should not rely on bystander intervention alone, results also suggest that the risk of bystanders harming victims is low. Therefore, when confronted with an assailant, transgender student should at least consider lobbying bystanders for help.

While bivariate analyses did not demonstrate significance at the $p = <.05$ level and it is not possible to say that there is a relationship between any of the situational or contextual variables and bystander behaviors, there are several patterns that emerged and future research to further explore these patterns are needed. First, results demonstrate that of the 37 participants who indicated that bystanders were helpful during their assault, 12 participants (32.4%) indicated that the person who assaulted them was a stranger. Additionally, of those participants who reported helpful bystander behavior, 16 participants (43.2%) indicated they were assaulted in a non-residential space, and 22 people (59.5%) indicated that they experienced a non-consensual contact assault. Additionally, results also demonstrate that among those survivors who reported that bystanders were harmful, 16 participants (44.4%) reported experiencing a completed penetrative assault. However, 75% (n= 36) of participants reported no harmful behavior by bystanders during a non-consensual contact assault. Together, results demonstrate that bystanders are more likely to be harmful in penetrative assaults and are unlikely to cause harm to the victim during non-consensual contact assaults. This information is useful as students can be informed of situations where bystander intervention is likely to be beneficial as well as situations where bystanders may be less likely to help or more likely to cause harm. For example, given that participants in this study reported helpful

bystander behavior during stranger assaults, assaults in a non-residential area, and those involving contact assaults, students should be encouraged to utilize bystanders in these situations as opposed to situations where penetrative assault occurs and bystanders were not only not likely to help but more likely to cause greater harm. Bystander programming should consider these findings as they craft scenarios and plan intervention methods. Programming should also work to address the situations where bystanders were not likely to be helpful, such as during penetrative assaults. Bystander programs should work to reduce barriers to intervention in these situations whereas sexual assault resistance programs could work to build interventions that would work when bystanders are not there. Qualitative research that explores bystander behaviors in relation to how these assaults occur and who is present would likely also be beneficial.

Finally, the logistic regression models that were attempted in this study yielded non-significant results with very large confidence intervals, indicating unstable models, which were ultimately discarded. These findings are the result of methodological challenges associated with a secondary analysis of data, including the study's small sample size. Given that Type II errors often occur when sample sizes are small (Shreffler & Huecker, 2023), it is possible that because this study was underpowered, the study was unable to find the true effects of the variables that were tested. Additionally, the inability to include additional variables not initially included in the original study is also a limitation of the study. For example, it has been argued that personal characteristics can influence a bystander's decision-making including their assessment of their personal degree of responsibility for intervening as well as a victim's worthiness of intervention (Latané & Darley, 1970). Therefore, future studies that survey bystander characteristics

would likely provide valuable information about not only who bystanders are but also if certain characteristics are associated with intervention. Comparisons between the personal characteristics of the bystander and the personal characteristics of the transgender victim should also be examined in order to determine if similar characteristics influence bystander presence. Additionally, in early bystander literature, Darley & Latané (1968) hypothesized that the more bystanders that were present, the less likely any one bystander would be to provide aid. However, a number of later studies would refute this (Levine et al., 2020). Almost nothing is known about how the number of bystanders may influence bystander behaviors when the victim is transgender. Future studies that query this information would also provide additional information about what campus sexual assault looks like for transgender students as well as provide important information for bystander programming. Finally, additional information about how the bystander is related to both the victim and the perpetrator would likely also be of value. Research has found that bystanders are more likely to intervene if the victim is known to the bystander (Katz et al., 2014) though this concept has not been examined among transgender individuals. Further, the victim-perpetrator relationship has been studied in a limited capacity (Mainwaring et al., 2023) though no studies have specifically examined this concept when the victim is transgender but may be of value to future studies going forward. Quantitative studies that include the above described variables as well as qualitative studies that garner bystanders' perspectives and motivation or non-motivation for intervention would be of benefit.

Limitations

Despite the strengths of the study, there were also limitations. As discussed above, the small sample size made creating a stable well-fit multivariate model difficult. Additionally, because the sample for the study was primarily White (61%), and assigned female at birth (AFAB) (82.9%), findings should not be generalized to students of color and those who are assigned male at birth (AMAB). Research with a larger and more diverse group of students is needed in order to determine if study findings can be extrapolated to other students.

Conclusion

There is a great need to design sexual assault programs that are inclusive of sexual and gender minority students. Yet, until now, there was limited research to inform such efforts. This study addresses current gaps in the literature in a number of ways. First, this study was able to describe the characteristics of sexual assault for transgender undergraduates when bystanders were present and results reveal that many assaults occur in party atmospheres and most frequently involve non-consensual touching. Second, this study also described bystander actions during sexual assaults experienced by transgender undergraduates and found that many (39%) bystanders took no action at all. Of those bystanders who did engage in helpful behavior, they typically did so through victim-mediated measures such as helping the victim escape or by helping the victim seek post-assault care. Bystanders also engaged in harmful behavior as reported by 21.9% of participants though harmful behaviors were generally passive and reports of bystanders worsening an assault were extremely rare (2.9%). Because results demonstrate that there was a high percentage of inaction by bystanders in this sample, it would be important for

future research to address why bystanders chose not to intervene during sexual assaults that transgender students experience. This information will be tantamount in removing barriers to intervention and enhancing existing programs so that they are of benefit to transgender students. Results also need to be addressed among transgender students, who likely have a fear that bystanders will either fail to intervene or will do so in a way that is harmful to them. Given that relatively few bystanders physically harmed victims, making an effort to seek help from bystanders is likely a better option than not asking for help at all. Finally, because just over 20% of the sample was helpful towards transgender students, existing programs should capitalize on this information and use it to strengthen current programming. Specifically, since survivors indicated that bystanders were helpful to them in the post-assault period, programs may begin the process of making programming inclusive by ensuring that post-assault resources include those that will be of benefit to trans students while also acknowledging how certain services, such as those that involve the police, campus officials, or medical professions, may cause concern for some students.

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CHAPTER FOUR

THIRD MANUSCRIPT

Understanding the Impact of Bystander Presence and Action on Victim Outcomes During Sexual Assaults Experienced by Transgender Undergraduates

Abstract

Bystander programming has been identified as a potential strategy for addressing sexual assaults on college campuses. However, despite research that acknowledges that transgender survivors of sexual assault frequently report significant sequelae following assault, often at rates higher than cisgender peers, research that examines the impact that bystanders have on victim outcomes for transgender students following sexual assaults is rare. Therefore, in this sample of transgender undergraduates (N=361), this study examined if injury severity, reproductive consequences, and psychological impacts of sexual assault varied based on bystanders presence during sexual assault experienced by transgender undergraduates. Additionally, using a smaller sample of students who reported that bystanders were present (N=105), this study also examined whether or not actions that bystanders take impact injury severity, reproductive consequences, and psychological impacts. Results found that transgender students experience a multitude of sequela following assault and in situations where bystanders were present, victims reported 14.5% fewer psychological impacts following assault. Additionally, in looking at bystander behaviors, results indicated that bystander behavior had a significant impact on both injury severity and number of psychological consequences. Future research

should further explore how specific bystander behaviors have the potential to mitigate the negative effects that sexual assault has on transgender students.

Introduction

Decades of research has identified significant psychological, emotional, physical, reproductive, educational, and economic sequelae for victims who experience sexual assault. Examples of psychological or emotional consequences victims may experience include depression, suicidal ideation, post-traumatic stress, loss of interest in daily activities, feelings of detachment, and nightmares (Cantor et al., 2020; Resick, 1993; Steketee & Foa, 1987). Physical sequelae may include injuries such as genital-anal injury, bruising, abrasions, or lacerations or reproductive sequelae such as sexually transmitted infections or pregnancy. In response to sexual assault, many college students also suffer considerable educational consequences such as missed class time, a reduction in overall grade point average, and high drop-out rates (Mengo & Black, 2015). Sexual assault may also impact victims financially and losses can result from medical bills and missed worked days (Peterson et al., 2017). While all students are negatively affected by sexual assault, transgender students often report some of the highest rates of negative outcomes following assault, especially when compared to cisgender peers (Cantor et al., 2020).

Given the extensive impact that sexual assault can have on victims, there is a great need to develop and implement sexual assault prevention programs that are effective. One proposed method of prevention is bystander intervention. Bystander intervention programs use skill building, education, and role modeling in an effort to teach students about sexual assault as well as motivate them to intervene prior to a sexual

assault, during a sexual assault, or after a sexual assault (Banyard et al., 2004). Workshops and educational offerings help students to identify the most appropriate intervention methods based on the behaviors that were witnessed as well as strategies that promote personal safety (Banyard et al., 2004). Messaging about the prevalence of sexual assault on college campuses as well as the collective responsibility needed to address violence is also often covered in many bystander programs.

Evaluation of existing bystander programs has found significant program effects on bystanders' intent to intervene and actual intervention as well as both positive and negative outcomes for bystanders who choose to intervene (Banyard et al., 2021; Katz & Moore, 2013; Kettrey & Marx, 2018; Whitte et al., 2017). However, research evaluating victim response to intervention including victim outcomes is relatively rare. Of the research that has evaluated the effect of bystander presence on victim outcomes during various forms of victimization, results were overall mixed (Hamby et al., 2016). Additionally, evaluation of bystander intervention that is inclusive of sexual and gender minority individuals is also rare. In fact, a recent critical review examined 28 peer-reviewed evaluations of bystander intervention programs and found that not a single study reported outcomes specifically for sexual and gender minority individuals (Kirk-Provencer et al., 2023). Given this large gap in the literature, there is a great need to better understand the impact that bystanders have on victim outcomes during sexual assaults experienced by transgender students. Therefore, the purpose of this study is to examine how injury severity, reproductive consequences, and psychological impacts of sexual assault vary based on bystanders presence during sexual assaults experienced by transgender undergraduates. Additionally, this study also examines whether or not

bystander behaviors have a significant impact on injury severity, reproductive consequences, and psychological impacts.

Methods

Sample

The sample, including inclusion criteria, has been previously described in Chapters 2 and 3.

Measures

Measures for victim characteristics, victim-perpetrator relationship, location, social situation, assault type, bystander presence, and bystander actions have been previously described in Chapter 2 and 3.

Bystander Actions. Bystander actions were combined into the following categories: helpful action only, hurtful action only, both helpful and hurtful actions, and no bystander action. The original measure is described in Chapter 3.

Injuries. Injuries were assessed by asking participants, "What sort of injury or injuries did you sustain, if any? (Please note that an incident can be serious regardless of whether you sustained injuries)" Select all that apply: bruises, black-eye, cut, scratches, or swelling; chipped or knocked out teeth; broken bones; strangulation/choking-related injury; genital or internal injury from the sexual contact; other injuries; I did not sustain injuries. Injuries were recoded into a single variable based on injury severity: no injury (0), injury (1), severe injury (2).

Reproductive Consequences. Reproductive consequences were queried by asking the participants "Beyond the injury of the sexual act without your consent, did you experience any other physical consequences?" Select all that apply: sexual transmitted

infection, pregnancy, other, no other physical consequences. Reproductive consequences were recoded into a single variable: No consequences (0), reproductive consequences (1).

Psychological Impacts. Psychological impacts were assessed by asking participants "Did you experience any of the following as a result of the event?" Mark all that apply: difficulty concentrating on studies, assignments or exams; fearfulness or being concerned about safety; loss of interest in daily activities, or feelings of helplessness and hopelessness; nightmares or trouble sleeping; feeling numb and detached; headaches or stomachaches; eating problems or disorders; increased drug or alcohol use, other effects on your life; none of the above.

Analysis

Data analysis was conducted using SPSS 29.0 statistical software program (IBM, Armonk, NY). Descriptive statistics were calculated for all study variables including frequencies and percentages. Fisher's exact tests and Fisher-Freeman-Halton exact tests were conducted to determine if injuries and reproductive consequences vary depending on whether or not bystanders are present or not. Additional Fisher's exact tests and Fisher-Freeman-Halton exact tests were used to determine if injuries and reproductive consequences varied based on each of the four bystander behaviors (helpful only, harmful only, both helpful and harmful, and no actions at all). Two Poisson regressions were also completed. The first regression analysis was conducted to predict the number of psychological consequences victims experienced after sexual assault based on bystander presence. A second regression analysis was conducted with only those participants who indicated that a bystander was present and who reported the actions that the bystander

took. This was done to predict the number of psychological consequences victims experienced after sexual assault based on the actions of bystanders.

Missing Data

Data was evaluated for missingness. A Fisher-Freeman-Halton exact test was carried out to determine if there was a significant association between each of the independent variables in the outcome variables. Results demonstrate 21 of 361 participants did not provide data (5.8% missing rate). The Fisher-Freeman-Halton exact test was performed and two variables had significant results: victim-perpetrator relationship (p=.012) and location (p=.035). Further examination of the results demonstrate that those who reported experiencing an assault in a university residence or in a non-residential space were more likely to have missing data for the psychological consequences variable. Those who reported being assaulted by a stranger were also more likely to have missing values for the psychological consequences variable. To address missing data, available case analysis was chosen and is an appropriate method to use when there is not an overwhelming amount of missing data, which is the case in this study.

Study Approval

Study approval is described in Chapters 2 and 3.

Results

Sample Characteristics

Sample characteristics of the main analysis were previously presented in Chapter 2 and in Chapter 3 for the sub-analysis.

Descriptive Statistics

Descriptive statistics were calculated for all study variables and are presented in Table 3.1. Frequencies and percentages for each variable are presented in Table 3.1. Of note, bystander actions are listed only for those who indicated that bystanders were present during their assault. Additionally, missing values are noted in the table below but were omitted when calculating descriptive statistics.

Table 3.1

Descriptive Statistics

Variable	N	%
Bystander Presence		
No	226	68.3%
Yes	105	31.7%
Bystander Actions (When Present)		
Helpful only	22	21%
Hurtful only	23	21.9%
Helpful & hurtful actions	12	11.4%
No action	41	39%
Missing	7	6.7%
Psychological Impacts		
Difficulty concentrating	199	63.8%
Fearfulness/Safety concerns	206	66%
Loss of interest in daily activities	204	65.4%
Nightmares, trouble sleeping	165	52.9%
Feeling numb or detached	238	76.3%
Headaches/stomachaches	110	35.3%
Eating problems	105	33.7%
Drug or alcohol use	122	39.1%
Other	52	16.7%
Any	312	100%
Multiple	286	91.7%
None	-	-
Missing	19	5.7%

Table 3.1 – Continued

Descriptive Statistics

Variable	N	%
Physical Injuries		
Bruises, black-eye, cut, scratches, or swelling	46	14.1%
Chipped or knocked out teeth	3	0.9%
Broken bones	1	0.3%
Strangulation/chocking-related injury	18	5.5%
Genital or internal injury from the sexual contact	57	17.5%
Other injuries	8	2.5%
Any	97	29.8%
Multiple	28	8.6%
None	229	70.2%
Missing	5	1.5%
Reproductive Consequences		
STI	8	2.5%
Pregnancy	6	1.8%
Other	5	1.6%
Any	17	5.3%
Multiple	2	0.6%
None	301	94.7%
Missing	13	3.9%

Fisher's Exact Test

Fisher's exact tests were conducted to determine if reproductive consequences and injury severity varied depending on whether or not bystanders were present. This test, as opposed to a chi-square test of independence was chosen due to the number of cells with small values. Results are displayed in Table 3.2 and Table 3.3.

Table 3.2

Fisher's Exact Examining Bystander Presence and Reproductive Consequences

			Reproductive Consequences?		Fisher's Exact (2-sided)
			No	Yes	
		N=318	301 (94.7%)	17 (5.3%)	
Bystander Presence					
	No	217	203 (93.5%)	14 (6.5%)	.286
	Yes	101	98 (97%)	3 (3%)	

Note: Significant at the *p = <.05 level

Table 3.3

Fisher's Exact Examining Bystander Presence and Victim Injury

			Level of Injury			Fisher's Exact (2-sided)
			No	Injury	Severe Injury	
		N=326	229 (70.2%)	79 (24.2%)	18(5.5%)	
Bystander Presence						
	No	224	153 (68.3%)	59 (26.3%)	12 (5.4%)	.436
	Yes	102	76 (74.5%)	20 (19.6%)	6 (5.9%)	

Note: Significant at the *p = <.05 level

As reflected above, results from the Fisher's exact tests demonstrated that there was not a significant relationship bystander presence and reproductive consequences (p = .286) or injury severity (p = .436).

Next, using a subset of data where participants reported that bystanders were present (N=105), this study also examined whether or not reproductive consequences and injury severity varied based on bystander behaviors. Results are presented in Table 3.4 and Table 3.5.

Table 3.4

Fisher's Exact Examining Bystander Behaviors and Reproductive Consequences

		Reproductive Consequences?		Fisher's Exact (2-sided)
		No	Yes	
	N=96	93 (96.9%)	3 (3.1%)	
Bystander Behaviors				
Helpful behavior	21	20 (95.2%)	1 (4.8%)	.212
Harmful behavior	23	22 (97.5%)	1 (4.3%)	
Both helpful and harmful	12	11 (91.7%)	1 (8.3%)	
No action	40	40 (100%)	-	

Note: Significant at the *p = <.05 level

Table 3.5

Fisher's Exact Examining Bystander Behaviors and Victim Injury Severity

		Level of Injury			Fisher's Exact (2-sided)
		No	Injury	Severe Injury	
	N=97	73 (85.4%)	18 (18.6%)	6 (6.2%)	
Bystander Behaviors					
Helpful behavior	21	17 (81%)	4 (19%)	-	.021*
Harmful behavior	23	13 (56.5%)	5 (21.7%)	5 (21.7%)	
Both helpful and harmful	12	8 (66.7%)	3 (25%)	1 (8.3%)	
No action	41	35 (85.4%)	6 (14.6%)	-	

Note: Significant at the *p = <.05 level

Results demonstrate that there was no significant relationship between bystander behaviors and reproductive consequences (p=.212). However, there was a significant relationship between bystander behavior and injury severity (p=.021).

Poisson Regression

Poisson regression is superior to other forms of regression when dealing with count data and was chosen for the statistical analysis in this study for a number of reasons. First, other forms of regression are often not appropriate for most count data. For

example, with linear regression, data must be continuous and normally distributed (Hayat & Higgins, 2014), which is not the case with the count data in this analysis. Poisson regression does not require data to be normally distributed and often is a more robust method to analyze count data (Hutchinson & Holtman, 2005, p. 417). Additionally, ordinary least squares (OLS) regression is not an appropriate use for count data as it leads to increased Type 1 errors and may conclude that some variables are "significant predictors when their effects are actually null" (Hutchinson & Holtman, 2005, p. 417). Further, Poisson regression is preferred over a logistic regression in which the variable of interest has been collapsed into a single binary occurrence variable as doing this often results in loss of information and reduced statistical power (Hayat & Higgins, 2014, p. 207).

Assumptions

There are several assumptions required. First, Poisson regression requires that the dependent variable be a count and that all values are whole numbers and non-negative. Second, there must be independence of observations. Third, the data should exhibit Poisson distribution where the variance and mean are equal (equidispersion) (Hutchinson & Holtman, 2005). The independent variable in this regression, the psychological consequences variable, is count data that ranges from zero to nine. All observations are independent. The data demonstrates near equidispersion in both tested models. In sum, all assumptions for the test have been met.

In the first model, bystander presence was entered as a single predictor. Results are displayed below in Table 3.6.

Table 3.6

Poisson Regression Results Predicting Number of Psychological Consequences Based on Bystander Presence

			95% Wald Confidence Interval		Hypothesis Test			95% Wald Confidence Interval for Exp(B)		
Parameter	B	Std. Error	Lower	Upper	Wald Chi-Square	df	Sig.	Exp(B)	Lower	Upper
(Intercept)	1.548	.0315	1.486	1.610	2422.842	1	<.001	4.702	4.421	5.001
Bystander Present	-.157	.0596	-.273	-.040	6.904	1	.009*	.855	.761	.961
Bystander Absent	-	-	-	-	-	-	-	1	-	-

Note: Significant at the *p = <.05 level

The likelihood ratio chi-square test demonstrated that the proposed model was a significant improvement over the null model (p=.008). There was a statistically significant decrease in the number of psychological consequences experienced when there was a bystander present at the time of the sexual assault (RR: .855; 95% CI:.761-.961) and when bystanders were present, survivors experienced 14.5% fewer psychological consequences compared to when bystanders were absent.

In a second model, another Poisson regression was performed using a subset of data where survivors indicated that a bystander was present and the actions that they took (or did not take) (N=98). The descriptive statistics for this data is covered in great detail in a prior publication (Fulks & Peitzmeier, 2023). This model was created in order to ascertain the effects of bystander behaviors on the number of psychological consequences

participants experienced following their sexual assault. Results from this regression analysis are presented in Table 4.7.

Table 3.7

Poisson Regression Results Predicting Number of Psychological Consequences Based on Bystander Actions

			95% Wald Confidence Interval		Hypothesis Test				95% Wald Confidence Interval for Exp(B)	
Parameter	B	Std. Error	Lower	Upper	Wald Chi-Square	df	Sig.	Exp(B)	Lower	Upper
(Intercept)	1.090	.0905	.913	1.268	145.068	1	<.001	2.976	2.492	3.553
Helpful action only	.109	.1480	-.181	.399	.542	1	.461	1.115	.834	1.490
Harmful action only	.570	.1283	.318	.821	19.727	1	<.001*	1.768	1.375	2.273
Helpful and harmful action	.186	.1773	-.162	.533	1.098	1	.295	1.204	.851	1.705
No action (ref)	-	-	-	-	-	-	-	1	-	-

Note: Significant at the *p = <.05 level

In this model, the likelihood ratio chi-square test demonstrated that the proposed model was a significant improvement over the null model (p=<.001). There was a statistically significant increase in the number of psychological consequences experienced by victims when bystanders engaged in harmful behavior only as compared to bystanders taking no action at all (IRR: 1.77, 95% CI:.1.38-2.27). More specifically, when bystanders engaged in harmful behavior only, survivors experienced 76.8% more psychological consequences as opposed to when bystanders take no action at all. Helpful

bystander behavior did not demonstrate a significant relationship to psychological consequences experienced by victims (p=.461).

Discussion

Results from this study demonstrate that participants experienced a multitude of sequelae following their assault. Of those consequences reported by participants, psychological impacts were reported most frequently. More than 75% of the sample reported feeling numb or detached following the assault and more than two-thirds of participants reported difficulty concentrating, loss of interest in daily activities, fearfulness, and safety concerns after the assault. More than 90% of the sample reported multiple psychological impacts after the assault. Findings are very consistent with those found in a national sample of college students where over 70% of transgender students reported feeling numb or detached following a penetrative assault and roughly 60% of transgender survivors reported fearfulness or concerns about safety as well as a loss of interest in daily activities (Cantor et al., 2020). Physical injuries were reported much less frequently than psychological consequences. However, nearly one-third of participants in this study indicated at least one physical injury and 8.6% of participants reported multiple injuries. More participants in this study reported physical injuries as compared to the findings in the campus climate survey conducted by Cantor et al. (2020), where it was noted that 18.9% transgender students who experienced an assault with penetration reported physical injuries and 4.2% of survivors who experienced sexual touching reported physical injuries. Looking further at the type of injuries sustained within this sample, 17.5% of participants reported genital or internal injury and 14.1% reported bruises, black-eyes, cuts, scratches, or swelling. Finally, relatively few individuals

reported reproductive consequences. Sexual transmitted infections were reported by 2.5% (n=9) of participants and pregnancy was reported by 1.8% (n=8) of respondents, findings that are slightly lower than those identified by Cantor et al. (2020).

Results from this study demonstrate the profound impact of sexual assault on participants, with nearly all participants in the study reporting at least one psychological consequence following assault. Further, study findings overall confirm those already identified in the literature (Cantor et al., 2020) and highlight the need to identify effective means for addressing sexual assault, especially for transgender students. Of special importance is the need to find prevention methods as well as post-assault resources and interventions that address the psychological toll that assault takes on victims, especially for transgender individuals, many of whom already experience heightened rates of psychological distress at baseline (Messman & Leslie, 2018). Of note in this study, the initial Poisson regression model demonstrated that bystander presence had a significant negative impact on the number of psychological consequences that survivors experienced following an assault. This information suggests that having a bystander present may reduce the number of psychological sequelae that survivors experience post-assault. The second Poisson model was created using data from only those participants that indicated a bystander was present as well as the actions that bystanders took (N=98). Results demonstrated that there was not a significant relationship between helpful bystander behavior and the number of psychological impacts that survivors experienced post assault as compared to assaults where bystanders took no action at all. There was however, a significant relationship between harmful bystander behavior and the number of psychological impacts that survivors experienced post-assault. In fact, when bystanders

engaged in harmful behavior only, survivors experienced 76.8% more psychological consequences as opposed to when bystanders took no action at all. Results suggest that while bystander presence alone may help to mitigate the psychological impacts of sexual assault, the actions that bystanders take, especially those that are harmful, also have a significant impact on the mental toll that victims experience post-assault. Therefore, bystander prevention programs need to teach bystanders how to address harmful actions by other bystanders, especially for transgender students who likely already face discrimination and other forms of gender-based violence on campus. Additionally, given that research demonstrates that harmful actions by bystanders typically relates to assisting the perpetrator rather than harming the victim (Fulks & Peitzmeier, 2023), bystander programs should a.) teach intervention methods that negate these actions (such as ways to hold perpetrators accountable even when others attempt to support them) and b.) bolster support services for transgender students who may experience additional psychological impacts when perpetrators are aided by bystanders. Further, given that helpful bystander behaviors had no significant impact on the number of psychological sequela survivors experience, other forms of sexual assault prevention, such as resistance programs, as well as sexual assault support services need to be implemented in addition to bystander programming.

Additionally, while the overall number of physical injuries reported by participants in this sample was significantly less than the psychological impacts reported, a third of participants in this study still indicated at least one type of physical injury. Results from the bivariate analysis found that there was not a significant relationship between bystander presence and injury severity but there was a significant relationship

between bystander actions and injury severity. Further examination of the bivariate analyses demonstrated that in situations where bystanders engaged in helpful behavior, victims were more likely to report avoiding injury. There were also no severe injuries reported by victims who reported only helpful behavior. In situations where bystanders engaged in harmful behavior only, participants were more likely to report severe injury. Finally, in comparing situations where bystanders engaged in harmful behavior and where bystanders took no action at all, situations where bystanders were harmful were still more likely to result in severe injury. Results highlight that positive bystander behaviors as opposed to bystander presence alone likely has a greater potential to mitigate injury and harmful bystander behavior contributes to more serious injury for survivors. These findings should be integrated into existing bystander programs so that students have tangible evidence that intervention matters and can help to improve outcomes for transgender students. Results should also be used to bolster current bystander programming by teaching students how to stop other bystanders from causing greater injury to victims. Forceful sexual assault resistant strategies that can be used against harmful bystanders and perpetrators, especially those that are proven to reduce injury, should also be incorporated into any sexual assault prevention programming given the effect that harmful bystander action has on both injury severity and psychological sequela.

Finally, neither bystander presence nor bystander actions had a significant impact on whether or not survivors experienced reproductive sequelae following an assault. It is therefore suggested that other forms of sexual assault prevention are deployed in addition to bystander programs. Additionally, ensuring easy access to high quality campus health

resources and mental health resources as well as empowering students about the use of them, should be included in all trainings.

Limitations

As mentioned several times throughout the dissertation, the generalizability of study findings for students who are black, indigenous, people of color (BIPOC) and/or assigned male at birth (AMAB) is very limited due to the composition of the sample. Second, this study was purposefully conducted with college students, so results should not be generalized to community populations. Third, this study did not study victim response to bystander intervention and how that may influence outcomes. Future studies will likely benefit from studying how victims' perceptions of bystander behaviors may or may not influence victim outcomes. Finally, it is known that a number of factors influence outcomes for survivors of sexual assault. While this study intended to craft multivariate models testing a number of different situational and contextual variables alongside the bystander presence and bystander action variables, the type of data available in this secondary data analysis as well as the small sample size limited the ability to do this. Future research with a robust, diverse sample that can accommodate a large set of key predictors will likely be able to better address questions related to what factors most influence outcomes for transgender students.

Conclusion

The current study addresses a gap in the bystander intervention literature by describing how bystander presence and bystander actions influence victim outcomes during sexual assaults experienced by transgender undergraduates. Results indicate that transgender students experience high rates of psychological consequences following

assault. Results also demonstrate that there was no significant relationship found between bystander presence and injury severity or the presence of reproductive consequences. There was a however, a statistically significant decrease in the number of psychological consequences victims experienced when there was a bystander present at the time of the sexual assault as opposed to when bystanders were absent. Further, bystander behavior had a significant impact on both injury severity and number of psychological consequences and there was a statistically significant increase in the number of psychological consequences experienced by victims when bystanders engaged in harmful behavior as compared to when bystanders take no action at all. Results support the need to enhance existing bystander programs and specifically address how helpful bystanders can positively impact outcomes and how harmful actions may not only exist in assaults experienced by transgender students but that these behaviors worsen the psychological sequelae that students experience. Comprehensive and multimodal sexual assault programming is also needed given that bystander presence nor action demonstrated a significant impact on reproductive sequela.

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CHAPTER FIVE

DISCUSSION

The purpose of this dissertation is to describe the role of bystanders in sexual assaults experienced by transgender and non-binary undergraduate students by determining how often bystanders are present during sexual assaults experienced by transgender and non-binary undergraduate students, to describe what actions bystanders take when present, and to determine if injury severity, presence of reproductive consequences, and number of psychological consequences vary based on bystander presence and bystander actions. Three manuscripts in the dissertation present these findings (Chapters 2-4) and this final chapter will summarize key findings from each of the studies, discuss the significance of findings overall, address limitations of the work, and explain the need for future research.

Summary of Findings

Chapter 2 of this dissertation includes the manuscript titled "Where are the Bystanders? Understanding Bystander Presence During Sexual Assaults Experienced by Transgender Undergraduates" and addresses Aim 1 of the dissertation. This aim explores how often bystanders are present during sexual assaults experienced by transgender and non-binary undergraduate students and whether or not the likelihood of bystander presence varies based on the location of the assault, the social situation in which the assault occurred, the victim perpetrator relationship, victim characteristics, and assault type. Results from the study provide key information about where and under what

conditions transgender undergraduate students experience assault and demonstrate that assaults occurred in a variety of locations and within a number of different social situations. The most common locations included a university dorm (23.3%), a perpetrators home (18.1%), or at multiple locations (14.5%), while the most common social situation was casually hanging out with friends (23.3%). Current or former intimate partners (27.4%) and acquaintances (19.5%) were the most common perpetrators. Assaults were particularly severe in this sample, with nearly 44.1% of participants indicating that they experienced a completed penetrative assault (either by penetration or by being made to penetrate someone else). Finally, the univariate results indicated that the majority of assaults that transgender undergraduate students experience (nearly 70%) happen without a third party present. In the bivariate analysis, a significant relationship was found between bystander presence and each of the independent variables (victim-perpetrator relationship, location, social situation, and assault type) while none of the victim characteristics were found to have a significant relationship. Logistic regression was then used to further test the relationship between the independent and bystander presence and found that assaults that occurred at a party (OR=6.927, 95% CI [2.746, 19.385]) had significantly higher odds of having a bystander present as compared to those that occurred outside of a social situation as did those perpetrated by a stranger (OR=2.873, 95% CI [1.079, 7.647]) when compared to assaults committed by a current or former intimate partner. Assaults with attempted (OR=.379, 95% CI [.168, .859]) or completed penetration (OR=.328, 95% CI [.165, .653]) had significantly lower odds of having a bystander present when compared to those with non-consensual contact.

The second aim of the dissertation is to describe what actions bystanders take when present during sexual assaults experienced by transgender and non-binary undergraduate students and to determine if bystanders are more likely to help or hinder transgender victims of campus sexual assault based on the location of the assault, the social situation in which the assault occurred, the victim perpetrator relationship, victim characteristics, and assault type. Results for Aim 2 are included in the manuscript, "Bystander Behavior During Sexual Assaults Experienced By Transgender Undergraduates" (Chapter 3). The majority of assaults that occurred when someone else was present occurred while at a party (35.2%) or while casually hanging out with friends (22.8%) and the most common perpetrator of assaults when bystanders were present were strangers. More than half (50.5%) of the sample reported non-consensual touching as the type of assault they experienced. Findings also highlight that the majority of bystanders (39%) did not intervene in any capacity during assaults. Additionally, approximately 1 in 5 bystanders engaged in harmful behavior as described by participants, though most action was directed at perpetrators such as letting them get away (12.2%) or protecting them (11.2%) rather than engaging with victims directly. Only 4% of participants indicated that bystanders caused them greater harm and only 8.2% indicated that the bystander joined the perpetrator in harming them. Just over 20% of participants reported that bystanders were helpful to them, typically by helping them to escape or helping them to seek services after the assault. Bivariate analysis also yielded non-significant results but a closer look at the crosstabulations suggested that there may be a relationship between bystander behaviors and the assault type, assault location, and victim-perpetrator relationship as participants who reported helpful bystander behavior, were also more

likely to report contact assaults, assaults that happen in non-residential spaces, or assaults perpetrated by strangers as opposed to assaults that occur in other situations or contexts and those who reported that bystanders were harmful were more likely to report penetrative assaults and less likely to report contact assaults. Finally, while two separate logistic regression models were attempted in order to determine how gender identity, race, sexual orientation, perceived gender, victim-perpetrator relationship, social situation, assault location, and assault type would influence behaviors, neither model was found to be statistically significant and both models were riddled with wide confidence intervals. Results suggest the possibility of a Type II error, likely due to the very limited sample size.

Chapter 4 includes the manuscript, "Understanding the Impact of Bystander Presence and Action on Victim Outcomes During Sexual Assaults Experienced by Transgender Undergraduates" and addresses Aim 3 of the dissertation. The purpose of Aim 3 is to determine if injury severity, reproductive consequences, and psychological consequences of sexual assault vary based on bystander presence and bystander actions. Univariate results confirmed that participants reported very high rates of psychological distress following sexual assault. In fact, 100% of participants who answered this question on the survey indicated they sustained at least one psychological consequence following assault. Physical injuries, while less common, were still reported by 29.8% of participants. Bivariate results in the study found that there was not a significant relationship between bystander presence and the level of injury ($p = .436$) or reproductive consequences ($p = .286$). There also was not a significant relationship between bystander action and reproductive consequences (p.=212). There was however a significant

relationship between bystander action and injury severity (p=.21). Additionally, two Poisson regression analyses were conducted to test the effect of bystander presence on the number of psychological consequences participants experienced. In the first model, bystander presence was entered as a single independent variable. Results demonstrated that there was a significant decrease in the number of psychological consequences experienced when there was a bystander present at the time of the sexual assault (RR: .855; 95% CI:.761-.961). A second Poisson regression was created with the bystander action variable as a single predictor. Results found that there was a statistically significant increase in the number of psychological consequences experienced by victims when bystanders engaged in harmful behavior only as compared to bystanders taking no action at all (IRR: 1.77, 95% CI:.1.38-2.27) and survivors experienced 76.8% more psychological consequences when bystanders were harmful as opposed to when they took no action at all. Helpful bystander behavior did not demonstrate a significant relationship to psychological consequences experienced by victims (p=.461).

Significance of Findings & Implications for Programming

Application to Current Bystander Programs

In Aim 1 of the dissertation, results show that transgender undergraduates are assaulted in similar places and social situations as cisgender students and that bystanders were present about 30% of the time, which is roughly as often or slightly more often than they are present for cisgender college age women based on previous research. Results also demonstrated that bystander presence did not vary by victim characteristics. Results from Aim 3 demonstrated that there was a statistically significant decrease in the number of psychological consequences experienced when there was a bystander present at the

time of the sexual assault (RR: .855; 95% CI:.761-.961) and when bystanders were present, survivors experienced 14.5% less psychological consequences compared to when bystanders were absent. Further, results also found that there was a significant relationship between bystander behavior and injury severity (p=.021). Taken together results suggest that bystander intervention may be applicable for students with diverse identities especially in certain social situations such as parties where others are present and that intervention may help to mitigate injury and psychological sequelae following assault. However, in Aim 2, results showed that despite being present, nearly 40% of participants reported that bystanders did not intervene during their assault and in Aim 3, helpful bystander behavior did not impact the psychological impact of assault. Given this, research conducted as part of the dissertation suggests that bystander intervention could potentially be a valuable form of prevention programming for transgender students but only after programs determine how to address inaction by bystanders and address how harmful action by bystanders negatively impacts transgender students. Further, programs must also figure out how to create programming that is reflective of how assaults occur for transgender students and where bystander intervention is less likely to be helpful.

First, to address the large percentage of bystanders that did not intervene during assaults experienced by transgender students, programs need to acknowledge that bystanders may fear retaliation from peers if they intervene when a victim is transgender (Potter et al., 2012). However, this fear may be ameliorated by disseminating the findings from Aim 2, which demonstrated that most bystanders are not actively harming victims but instead engaging in passive harmful behavior such as letting the offender get away or protecting the offender. Tactics that focus on ways to assist victims without directly

engaging perpetrators or other harmful bystanders may also help to alleviate fears related to intervention. Examples of passive bystander intervention might include creating a distraction or "...making up a problem to divert the perpetrator's actions, such as saying there was a fight downstairs at the party, the cops were called, or a friend was sick" (McMahon et al., 2013, p. 148). Further, programs may also want to address that bystanders may be unaware that assaults are taking place. Therefore, programs should first make sure to include information about trans specific assault tactics, such as intentional misgendering or threatening to out an individual (Peitzmeier et al., 2019), so that all individuals are aware of how assault tactics can look different for transgender students. Additionally, while transgender students may fear intervention from bystanders the results in Aim 2 suggest that bystanders almost never join the assault or engage in behaviors that worsen the assault so attempting to engage bystanders may still be of benefit.

Additionally, programs must also acknowledge that while rare, bystanders can cause harm to students either directly by engaging in the assault or indirectly by protecting the perpetrator or helping them to get away. Given that harmful behavior was found to be related to more severe injury and a higher number of psychological impacts post-assault, existing programming should specifically train bystanders on how to recognize harmful behaviors from other bystanders and how to intervene when this occurs.

Finally, current programs do not specifically address how assaults occur for transgender students. This must also be remedied. To do this, programs must first acknowledge that most sexual assaults experienced by transgender students lack a

bystander. Because of this, programs should bolster primary prevention techniques by addressing trans stereotypes that promote gender-based violence. Additionally, programs must also address how trans students experience multiple forms of violence and oppression and this may limit trans students' access to services for reporting and post-assault care. This also means that programming needs to create bystander intervention programs that reflect the ways in which transgender students are assaulted including the locations and social situations where assaults are likely to occur and information about who is likely to perpetrate assault against transgender students.

Support for a Multimodal Approach to Sexual Assault

Results from this study also support the need for a multimodal approach to sexual assault prevention. First, results from Aim 1 demonstrate that 7 out of 10 transgender undergraduate students in this sample reported that they did not have a bystander present when they were assaulted. Results also found that a bystander was rarely present when assaults involved a current or former intimate partner, occurred in the victim's home, or during assaults where penetration was attempted or completed. This information, coupled with the results from Aim 2 that demonstrate that nearly 40% of bystanders didn't intervene when present as well as the results from Aim 3 that indicate that survivors experienced 76.8% more psychological consequences when bystanders were harmful as opposed to when they took no action at all, supports the need for prevention programming that does not rely on third parties. While transgender inclusive assault prevention programs are rare, the Enhanced Assess, Acknowledge, Act (EAAA) program is being adapted for transgender students and could not only address how assault situations are unique for transgender students but also provide students with methods to

resist assault when they are in a situation without bystanders or when bystanders are not helpful or even harmful. Finally, given that bystander presence and bystander action did not significantly impact reproductive consequences experienced by victims in the post assault period, programming that addresses ways to mitigate reproductive sequelae following assault as well as information about how to address the impacts of reproductive sequela should be included alongside information about how to find high quality health care that is trans inclusive.

Strengths and Limitations

There are both strengths and limitations to this work. Given that this is a secondary data analysis, this analysis was restricted to those variables that were included in the original Owning Our Power survey. Unfortunately, since the original intent of the Owning Our Power study was not to query information on bystander intervention, participants were not asked about the timing of bystander presence (before, during, or after an assault), which made comparisons to the few studies with cisgender women that were available, difficult. Additionally, information about bystanders (personal characteristics, relationship to the victim, number of bystanders, etc.) was not available to analyze. Questions about victim perceptions of bystander actions or opportunities for intervention were also not queried. Lacking this information made it difficult to contextualize the findings in Aim 2; specifically, whether or not bystanders simply chose not to intervene or if they were unable to for another reason (unaware of the assault, asleep, under the influence of alcohol or drugs, etc.). Another limitation of the study, especially for Aim 2 and part of Aim 3, was the sample size was small, which limited some of the analytical choices for the study. For example, initially a multivariate logistic

regression was chosen for Aim 2 in order to test how various independent variables were related to helpful, harmful, both helpful and harmful, and non-impactful bystander behavior. However, because of the small sample size in the study, two bivariate regression models testing helpful or harmful behavior was chosen instead. Unfortunately, despite doing this, these models were very unstable and markedly under powered. The decision was then made to discard them completely and focus solely on the univariate and bivariate models. While these are not large models, they still fill in key gaps in the literature and provide valuable data. Additionally, it is also important to note that the survey is cross-sectional in nature and therefore causality cannot be determined for any of the analyses. Finally, one other limitation is that the sample was primarily assigned female at birth (AFAB) and White, which makes generalizing results to those assigned male at birth (AMAB) or those who are Black, Indigenous, People of Color (BIPOC) difficult.

However, despite these limitations, one of the biggest strengths of this research is that it is novel and is the first of its kind to examine bystander intervention during sexual assault experienced by transgender students. Given this, it fills a large gap in the literature and has the potential to provide the data and information necessary to increase inclusiveness in existing bystander programs as well as other sexual assault resistance programs. Second, the sampling of the original survey was very robust and recruited individuals from all across the United States and yielded quite a large sample, especially in light of the sensitive questions that were being asked of participants. While the sub-set of data involving bystanders was small, the sample was still large enough to conduct a meaningful study. Finally, another strength of the dissertation is the statistical analysis,

while I am a novice doctoral researcher, I had wonderful mentorship during this process and I was able to use a variety of different statistical tests to address the aims of the research while also learning myself. This led to many different trails and even many errors, but the knowledge gained along the way was invaluable.

Future Research

Findings from this dissertation help to fill a large gap in the literature, however, much work is still left to be done. To begin, future research would be beneficial in confirming the current study findings, especially since findings in this study are the first to really explore bystander intervention during sexual assaults experienced by transgender undergraduates. Additionally, future research that addresses bystander characteristics would also be essential. Specifically, research that examines who bystanders are (personal characteristics), the number of bystanders present, as well as how the relationships between the bystander, the victim, and the perpetrator influence bystander behaviors would provide additional information that could help researchers to understand bystander actions and inform future programs. Additional research should also explore whether or not bystanders have an opportunity to intervene when present, especially given that so many in this sample did not. Qualitative research that explores transgender students' experiences would also help researchers to better understand survivors' perspectives about bystander presence, bystander opportunity, bystander action, and the impact of actions on overall well-being post assault.

OAKLAND UNIVERSITY

Institutional Review Board

Date: September 21, 2022

Study #: IRB-FY2023-58

Study Tile: Examining Bystander Intervention During Sexual Assaults Experienced by Transgender Undergraduates

Submission Type: Initial

IRB Decision: Exempt

Research Team:
Elizabeth Fulks
Laura Pittiglio
Laura Pittiglio, Julie Kruse, Rebecca Cheezum

Based on applicable federal regulations, the above referenced study has been determined to be Exempt, with the following categories:
Category 4. Secondary research for which consent is not required: Secondary research uses of identifiable private information or identifiable biospecimens, if at least one of the following criteria is met:

(i) The identifiable private information or identifiable biospecimens are publicly available;

(ii) Information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects;

(iii) The research involves only information collection and analysis involving the investigator's use of identifiable health information when that use is regulated under 45 CFR parts 160 and 164, subparts A and E, for the purposes of "health care operations" or "research" as those terms are defined at 45 CFR 164.501 or for "public health activities and purposes" as described under 45 CFR 164.512(b); or

(iv) The research is conducted by, or on behalf of, a Federal department or agency using government-generated or government-collected information obtained for nonresearch activities, if the research generates identifiable private information that is or will be maintained on information technology that is subject to and in compliance with section 208(b) of the E-Government Act of 2002, 44 U.S.C. 3501 note, if all of the identifiable private information collected, used, or generated as part of the activity will be maintained in systems of records subject to the Privacy Act of 1974, 5 U.S.C. 552a, and, if applicable, the information used in the research was collected subject to the Paperwork Reduction Act of 1995, 44 U.S.C. 3501 et seq.

Letter and Consent Document:
This letter along with the IRB approved (date-stamped) consent document can be found in Cayuse in the Submission Details page under Letters and Attachments, respectively. Please make sure to use the most recent

IRB approved version of the consent form in consenting participants.

Permission from Research Site(s):
Please note the following:

- This IRB exemption determination letter means that this research has met one or more of the federal criteria for exemption per 45 CFR 46.104- Exempt Research.
- Before the research is initiated, permission to conduct research at a given site must be obtained from all research locations listed in the IRB submission. You must keep copies of all such permission letters for your files.
- It is the responsibility of each researcher to follow all applicable policies and procedures of any outside institution where the research will be conducted.

Modifications:
Any changes to this exempt project must be reviewed by the IRB prior to initiation by submitting a MODIFICATION request. Do not collect data while the changes are being reviewed. Data collected during this time cannot be used in research.

Record Retention:
Exempt projects will be retained by the IRB office for three years after the last action on the project.

This letter can be found in Cayuse in the Submission Details page under Letters and Attachments.

You are approved to start the research. Please retain a copy of this notification for your records.

If you have any questions, please contact the IRB office.

Thank you.

The Oakland University IRB

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