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## Bystander Self-Efficacy To Prevent Sexual Assault: An Evaluation Of The Impacts Of Online And In-Person Bystander Intervention Training

Morgan Paige Devine

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BYSTANDER SELF-EFFICACY TO PREVENT SEXUAL ASSAULT: AN  
EVALUATION OF THE IMPACTS OF ONLINE AND IN-PERSON BYSTANDER  
INTERVENTION TRAINING

by

Morgan Paige Devine

Bachelor of Science, University of North Dakota, 2016

A Thesis

Submitted to the Graduate Faculty

of the

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in partial fulfillment of the requirements

for the degree of

Master of Arts

Grand Forks, North Dakota

May 2018

This thesis, submitted by Morgan Paige Devine in partial fulfillment of the requirements for the Degree of Master of Arts from the University of North Dakota, has been read by the Faculty Advisory Committee under who the work has been done and is hereby approved.



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Dr. Elizabeth Legerski, Committee Chairperson



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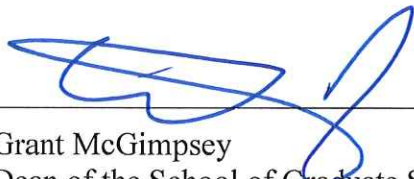
Dr. Justin Berg, Committee Member



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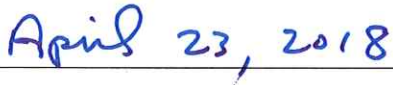
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This thesis is being submitted by the appointed advisory committee as having met all of the requirements of the School of Graduate Studies at the University of North Dakota and is hereby approved.



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## ABSTRACT

To address the alarming rates of sexual assaults on college campuses, the 2013 Campus Sexual Violence Elimination Act required publicly funded colleges to provide some form of sexual assault intervention training to college students. While bystander intervention training is the most common form of primary prevention, there is little research indicating whether online or in-person bystander training is more effective at producing strong bystander self-efficacy and whether bystander intervention is actually occurring. Utilizing data from the 2017 Multi College Bystander Education Efficacy survey taken online by undergraduate students (N = 387) at a Midwestern university, an analysis of self-reported bystander self-efficacy, type of bystander training, and intervention behavior was analyzed. The results of this analysis show statistically significant differences in self-efficacy between groups of students by type of bystander training received. Overall, students who took in-person training had the highest self-efficacy. Even after controlling for gender, race, year in school and Greek affiliation, in-person bystander intervention training had the largest impact on self-efficacy. Nevertheless, the only significant predictor of self-reported intervention behavior was being affiliated with Greek life.



## CHAPTER I

### INTRODUCTION

College campuses are considered at risk environments for sexual assaults. Estimates of sexual assault for women ages 18 to 24 are as high as one in four (Krebs et al., 2009; Mellins et al., 2017). Additionally, most sexual assaults that occur on college campuses are committed by an acquaintance and occur in social settings where others are present such as Greek houses and residence halls. In addition, many have a “preassault phase” during which other people are often present, allowing an opportunity for there to be some type of intervention (McMahon, 2010).

To address the alarming rates of sexual assaults on college campuses, scholars and advocates suggest that effective primary prevention education should be implemented and a larger community responsibility approach should be adopted by campus communities (McMahon et al., 2015). Primary prevention efforts include altering negative attitudes, behaviors and practices that are believed to contribute to the normalization of rape culture and sexual violence as well as teaching behaviors and strategies that students can engage in to challenge rape myths (McMahon, Postmus, & Koenick, 2011). A prime example of rape and sexual assault prevention efforts on college campuses are bystander intervention training programs (McMahon, 2010).

Bystander intervention training programs are directed at the goal of eliminating sexual violence through an emphasis on collective responsibility for the safety of others (Reid, Irwin, & Dye, 2013). Bystander intervention programs aim to increase bystanders' efficacy and willingness to engage in behaviors to deter potential high-risk situations and come to the aid of a victim of sexual assault. Examples of these behaviors include confronting someone that may be walking an intoxicated individual into a room, or making sure that an intoxicated person does not walk home alone from a party, as well as interrupting an intimate moment between two people who are too intoxicated to consent. These programs are implemented with a focus on intervening to stop the actions of perpetrators rather than previous approaches that focused on prevention of victimization (Gidycz, Orchowski, & Berkowitz, 2011). Prevention of victimization strategies used language that deemed men as perpetrators and women as victims, and focused on actions that women could take to avoid being raped rather than preventing sexual assault before it happens (McMahon, 2010; Reid, Irwin, & Dye, 2013). Bystander intervention programs also critically engage participants in actively reducing rape myths and gender prejudice in an effort to reduce violence norms (Brinkman, Dean, Simpson, McGinley, & Rosen, 2015). These components of bystander intervention are necessary to create a greater sense of collective responsibility.

The amount of self-efficacy that bystander programs produce is also essential to effectively reduce the prevalence rates of sexual assault at colleges and universities (McMahon et al., 2015). In this analysis, self-efficacy is one's perceived ability to manage and succeed in intervening and diffusing a risky situation (Bandura, 1997;

McMahon et al., 2015). Bystander training is believed to help students intervene in situations that others around them may be participating in by teaching bystanders how to identify risky situations, take responsibility for acting on behalf of individuals that are participating in the event, and give them the skills necessary to know how to act (Latane & Darley, 1970). Existing research highlights barriers to intervention, best techniques to teach intervention, and who should be targeted as leaders of bystander training (Burn, 2009; Banyard, Moynihan, & Crossman, 2009; Coker, et al. 2011; Coker et al., 2016); nevertheless, there are fewer studies that examine the self-efficacy of those who have received bystander training (some exceptions include Burn, 2009; Exner & Cummings, 2011; Pugh, Ningard, Ven & Butler, 2016; Yule & Grych, 2017). Strong feelings of efficacy are theorized to impact a bystander's willingness to intervene when they deem a situation high risk or see sexual violence taking place (Burn, 2009).

Other studies have been conducted to examine the impact of specific types of bystander intervention trainings. For example, Potter, Moynihan, Stapleton, and Banyard (2009) assessed a media campaign's impact on bystander roles and found that media campaigns are highly effective in changing individuals' perceptions of themselves as bystanders that can prevent rape and sexual violence. Senn and Forrest (2016) studied the effectiveness of in-person bystander intervention training being a requirement of academic curriculum. They concluded that bystander intervention training helps participants to feel better prepared to be prosocial bystanders after only one training session (Senn & Forrest, 2016). In recent years, a third form of active bystander training has become available for colleges and universities to offer (or require) of their students.

Online bystander intervention programs are becoming more common because of the ease of access for students and the cost effectiveness for colleges to implement online programs. Kleinsasser, Jouriles, McDonald, and Rosenfield (2015) found that the online bystander intervention program, Take Care, increased feelings of self-efficacy from baseline to post-treatment surveys. Their results also indicate that those who participated in bystander intervention training reported engaging in more pro-social bystander behaviors than their control group.

While there are several types of bystander awareness and intervention programs, a gap in the literature exists around studies explaining which types of trainings may be more effective in producing a strong sense of self-efficacy to intervene in situations that the individual may deem as risky (Kleinsassar, Jouriles, McDonald, & Rosenfield, 2015). The present study aims to identify whether in-person or online bystander intervention training produces stronger bystander self-efficacy. Without a strong sense of self-efficacy, individuals may be less likely to intervene in situations that they recognize as risky (Burn, 2009; Bandura, 1997). Determining whether there are significant differences in the amount of self-efficacy produced by online and in-person bystander intervention training is essential to understanding whether various types of trainings should be prevalent or if one type is more effective than others. Such findings can assist educators, bystander program coordinators and higher education employees as they select bystander intervention training programs and violence prevention strategies to reduce the alarming rates of violence that college students report experiencing at colleges and universities across the nation.

## Research Questions

This study examines the efficacy of online bystander intervention training programs and in-person bystander training, and their impact on students intervening in a potentially risky situation. Analyzing data from a sample of 387 college students, I seek to answer the following questions: Are there differences in self-efficacy by type of self-reported bystander intervention training programs (i.e., online, in-person, or both)? Which type of self-reported bystander training is the best predictor of self-efficacy once controlling for demographic factors? And finally, controlling for other factors is self-efficacy significantly associated with likelihood of intervention?

## Organization of the Remainder of the Thesis

The remainder of this thesis is organized as follows: Chapter Two discusses in more detail the current literature and findings about sexual assault on college campuses and the theory behind bystander intervention programs. Chapter Three outlines the method this study used to explore self-efficacy scores for college students who have participated in in-person and online bystander intervention trainings. Chapter Four presents and describes the findings from the statistical analyses. Finally, a discussion of the results in relation to previous literature as well as the limitations and implications of this research are discussed in Chapter Five.

## CHAPTER II

### LITERATURE REVIEW

According to the CDC, one in every five women will be a victim of sexual assault over the course of her lifetime (Dills, Fowler, & Pain, 2016). The prevalence of sexual assault of college aged women, 18 to 24 years old, is one in every four women (Mellins et al., 2017). The addition of the Campus Sexual Violence Elimination Act (SaVE Act) in 2013, to the already existing Campus Clery Act, promoted a national response for sexual violence prevention by requiring the implementation of bystander training programs at all publicly-funded college campuses. Because of the widespread health implications of sexual assault, prevention efforts have increasingly started to involve all members of the campus community (Banyard, Moynihan, & Crossman, 2009). Essential to understanding the effectiveness of the SaVE Act is to study how bystander intervention trainings create effective pro-social and engaged bystanders with strong self-efficacy for intervention (Berkowitz, 2002; Burn, 2009). Understanding whether this implementation has improved the self-efficacy and likelihood of bystander intervention is necessary to identify how effective intervention training programs have been for college age students.

#### **Bystander Intervention**

Currently, the most widespread approach to sexual violence prevention is bystander intervention training programs. Bystander intervention programs aim to educate men and women as potential bystanders or witnesses of a risky situation that they have a responsibility to intervene in, rather than as perpetrators (males) and victims (females). The bystander intervention approach removes gendered stigma about males as perpetrators and instead designates men as bystanders that are essential to preventing sexual violence. Bystander training is believed to help individuals identify and intervene in risky situations that others around them may be participating in and reduce the risks of sexual assault victimization, such as when individuals are so intoxicated or high that they would be easy targets to take advantage of. Existing research highlights barriers to intervention (Latane & Darley, 1970), best ways to teach intervention (Burn, 2009; Elias-Lambert & Black, 2016), and who should be targeted as leaders of bystander training (Banyard, Moynihan, & Crossman, 2009; Coker et al., 2011), but little research has assessed variations in level of self-efficacy across different types of programs and how that might impact bystanders and the likelihood of intervention.

Bystander intervention training programs are largely based on the work of Latane and Darley's (1970) five-step situational model. This model explains the complexities that bystanders may experience while intervening in a risky situation. The first step is the bystander must first notice the event. Second, the bystander must interpret the event as an emergency. Next, the bystander must feel a sense of responsibility for acting on behalf of the individuals who are participating in risky situations. Fourth, the bystander must decide how to act. Finally, the bystander must choose to act. Building on Latane and

Darley's work is that of Banyard, Moynihan, and Plante (2007). These scholars have evaluated bystander intervention programming through a community of responsibility model. This model educates bystanders on the importance of protecting others around them by and being an active bystander in situations that they deem potentially risky.

From past research, several important predictors of engaged bystander behavior have been identified. Predictors relevant to prevention and intervention efforts include diffusion of responsibility, evaluation apprehension, pluralistic ignorance, confidence skills and modeling (Chekroun & Brauer, 2002; Latane, Darley, & McGuire, 1968; Latane & Darley, 1970). For example, Pugh, Ningard, Ven and Butler (2016) found that respondents were sometimes unable to acknowledge when a woman was at risk due to victim ambiguity and victim worthiness assessments, but their skill evaluation and other factors increased their likelihood of intervention. For this reason, the bystander framework is built around overcoming documented barriers and inhibitors so that individuals become better bystanders in their attitudes, behaviors and actions to prevent sexual assault (Coker et al., 2011).

### **Importance of Self-Efficacy**

Previous bystander intervention training research emphasizes the importance of self-efficacy to increase the likelihood of intervention techniques (Burn, 2009; Coker et al., 2011; Coker et al., 2017; McMahon et al., 2015). Self-efficacy is one's perceived ability to manage and be successful in a situation (Bandura, 1997). Self-efficacy theory describes two independent expectancies: an outcome expectancy, which is the belief that a given behavior will (or will not) lead to a given outcome; and a self-efficacy



expectancy, which is the person's belief that he or she is capable (or not) of performing the necessary behavior (Bandura, 1989; Maddux & Rogers, 1983). Self-efficacy is related to one's self-confidence in a specific situation (Eom, Wen & Ashill, 2006) and it directly influences a person's choices, efforts and decisions (Schunk, 1991). Self-efficacy measures focus on an individual's performance capabilities rather than on personal qualities, such as psychological and physical factors (Zimmerman, 2000), and has been used to study everything from adolescent sexual health (Rostosky, Dekhtyar, Cupp, & Anderman, 2008) and sexual risk taking (Rosenthal, Moore & Flynn, 1991), to bullying intervention (Feather, 2016; Pöyhöne, Juvonen, & Salmivalli, 2012) and prevention strategies (Narayanan & Betts, 2014).

Self-efficacy in the context of this study is related to one's perceived ability to recognize and use bystander behaviors to act in a risky situation (McMahon et al., 2015). The importance of self-efficacy in affecting the likelihood of actual bystander intervention is critical to understanding the bystander intervention training philosophy: all members of the community have a role in shifting cultural and social norms to prevent violence (Banyard et al., 2005). Previous research suggests that the stronger the bystander self-efficacy that one reports the more likely that individual is to report that they would intervene in a situation that they perceive as potentially dangerous (Kleinsasser, Jouriles, MacDonald, & Rosenfield, 2015).

Although there are several types of in-person bystander intervention training programs, there are only a few bystander trainings available online (Kleinsasser, Jouriles, MacDonald & Rosenfield, 2015). One example of online training is a program called

Think About It, which engages students in lessons about healthy alcohol consumption and safe sex (Think About It, 2016). Additionally, this training teaches students how to participate in bystander intervention techniques via video examples of risky situations and potential ways to intervene followed by assessment questions.

The more common types of bystander training programs are offered in-person. In-person bystander trainings can be a mass lecture via peer leaders or well-known members of the campus community about what it means to be a bystander in addition to active participation in common scenarios that a bystander may encounter. One example of in-person bystander training is called Green Dot. Green Dot was designed to help students identify potential risks for violence. Understanding how perpetrators target victims allows the bystander to notice a potentially risky situation and select a safe bystander behavior to engage in. Green Dot focuses on “the three Ds” of intervention: “Direct, Delegate and Distract” (Coker et al., 2011). These three types of intervention are supposed to give bystanders various options so they feel as confident and comfortable as possible when they are engaging in intervention. Incoming students and campus peer leaders are often required to listen to a Green Dot speech which consists of a call to action for everyone in the community to become engaged bystanders. Typically, only selected peer leaders and students who ask to participate go through more extensive training to learn active bystander behaviors and strategies for intervention.

While Green Dot is a well-known bystander intervention program, there are others that are available. They all share similar foundations and educational tools, and they all emphasize how to be engaged, active bystanders (Banyard et al., 2007; Cares et

al., 2014; Reid, Irwin, & Dye, 2013). Bringing in the Bystander and Step UP are two in-person bystander intervention training programs that are used across the country; however, the university in the present study does not offer these two programs. The Midwestern university focused on in this study offers a class called Healthy Relationships, Sexuality, and Violence Prevention. This class is offered several times a semester as a one credit weekend class. This class attempts to foster a sense of individual responsibility and prosocial intentions. One-fourth of the class is specifically devoted to bystander intervention. A discussion about potential intervention barriers, assertiveness techniques and safe bystander intervention behaviors are also taught.

Regardless of how the information is taught, each of these programs emphasizes that when a risky situation is developing, there is always something that you can do as a bystander to prevent someone from being victimized. Discussions about best approaches to use for a given scenario, participant role-playing, and practicing of techniques are all ways that these programs create a strong sense of self-efficacy for bystander intervention techniques. Most intervention trainings are geared towards incoming first year students at orientation (McMahon, Postmus, & Koenick, 2011; Reid, Irwin, & Dye, 2013; Yule & Gyrch, 2017) and/or peer leaders who are actively engaged in the campus community and are described as peer mentors who have strong influence (Banyard, Moynihan, & Crossman, 2009). Teaching these tools to peer leaders in particular is another way these programs aim to shift social norms and the culture of violence (Banyard, Moynihan, & Crossman, 2009; Coker et al., 2011). Green Dot is an example of a program that relies

heavily on peer leaders to create social change and increase intervention efforts (Coker et al., 2011).

### **Effectiveness of Bystander Intervention Programs**

Several studies have researched the effectiveness of different bystander intervention programs. Using a pretest/posttest analysis, Banyard, Moynihan, and Crossman (2009) and Coker and colleagues (2011) reported that the in-person bystander trainings known as Bringing in the Bystander and Green Dot significantly reduced rape myths and increased likelihood of intervention among college students. Banyard, Moynihan, and Plante's (2007) research indicated that improvements in knowledge, behaviors and attitudes regarding intervention of sexual assault occurred over a period of four months for those who participated in a one time in-person training program. Senn and Forrest (2016) also found that in-person bystander training as part of the college curriculum effectively increased students' abilities in being better bystanders. This study suggested that bystander intervention training need only occur one time for participants to be better equipped with the tools needed to be effective bystanders. Similarly, McMahon and colleagues (2015) found that Green Dot, also an in-person bystander intervention program, demonstrated not only greater perceptions of self-efficacy in intervening, but over time also increased likelihood of intervention and prevention by bystanders who have taken the program. While in-person trainings have been deemed rather effective, researchers are starting to look at other forms of training. Potter, Moynihan, Stapleton and Banyard (2009) indicated that media campaigns can stimulate contemplation about

reducing sexual violence, but without programming and strategies for students to participate in practicing being bystanders, prosocial bystanders could not exist.

### **Other Important Factors**

Research suggests that peer leadership in teaching bystander intervention is highly effective (Anderson & Whiston, 2005). Because of the close proximity of college students in shared living spaces and other aspects of student life, peers play a key role in future prevention efforts and engage in “emotional peer helping” (Sharkin, Plageman, & Mangold, 2003). Further research suggests that because unwanted sexual experiences often occur in social situations, friends may first be able to see the warning signs of relationship violence and sexual violence taking place (Banyard et al., 2005; Brown, Banyard, & Moynihan, 2014). Sorority, fraternity, and student body leaders become role models and endorsers of new attitudes and behaviors, thus spreading influence for social change (Banyard, Moynihan, & Crossman, 2009).

As a sub community of colleges and universities across the country, Greek life has also been studied. Previous research shows that women in sororities may be at a greater risk for sexual violence than other college women (Mohler-Kuo, Dowdall, Koss, & Wechsler, 2004). For example, Minnow and Einolf (2009) examined the relationship between sorority membership and sexual victimization. These researchers found that 33% of sorority women reported that they had experienced completed rape compared to 6% of nonmembers. Moynihan and colleagues (2011) evaluated the in-person bystander training called Bringing in the Bystander to determine its effectiveness with sorority members. They tested bystander efficacy, likelihood of intervention, and sense of responsibility for

helping end sexual and intimate partner violence. Their results showed an increase in bystander efficacy, intent to intervene, and sense of responsibility among sorority members following bystander training.

Previous scholarship suggests that there are differences in likelihood of intervention among men and women (Elias-Lambert & Black, 2016; Gidycz, Orchowski, & Berkowitz, 2011; Jozkowski, Peterson, Sanders, Dennis, & Reece, 2014). Differences in barriers, self-efficacy, and attitudes among men and women vary significantly. Likewise, Stein (2007) asked male college students about their willingness to engage in rape prevention efforts. He found that at the individual level, men who reported a higher willingness to engage in rape prevention were also more comfortable addressing sexist behavior. Although bystander programs are significantly effective in creating bystander behaviors for both men and women, women scored lower for likelihood of intervention (Amar, Sutherland, & Laughon, 2014). Exner and Cummings (2011) reported similar gendered differences about the stronger likelihood of men intervening while women were significantly more likely to agree that people can be taught how to help prevent violence.

Another key demographic, race, should also be considered. While more white women report experiencing sexual assault, women of color are significantly more likely to report experiencing serious physical injuries as a result of sexual assault (Wolitzky-Taylor et al., 2011). Nevertheless, studies that have examined race and bystander intervention have failed to find significant relationships between participant race and bystander intervention efforts (Frye, 2007).

### **Face to Face vs Online Learning**

In addition to considering the impact of various socio-demographic characteristics, how might type of training impact the effectiveness of bystander training? Online education is rapidly becoming more prevalent (Means et al., 2009). Therefore, an issue of increasing importance is understanding the relative effectiveness of online learning programs (Driscoll et al., 2012). Some arguments for online learning environments emphasize its flexibility and student-centered approach, while arguments against, point to substantial doubt about effective teaching due to the “Macdonaldized” nature of online education and limited interaction between students and instructors (Ritzer, 2004; Urtel, 2008).

Proponents of online courses emphasize that student satisfaction varies very little between online and face to face courses (York, 2008). Course assessments have also been found to be very similar between online and face to face classes (Davies & Mendall, 1998). Although there are many studies that provide support for the continued growth of online higher learning opportunities (McFarland & Hamilton, 2005; Parkhurst et al., 2008), there are several studies that challenge the effectiveness of online learning (Ritzer, 2004; Urtel, 2008). For example, Urtel (2008) found that students who took courses face to face had higher exam scores than those who took identical classes online.

Face to face interaction is vital to long term educational benefits (Driscoll et al., 2012). Online education puts the responsibility on the learner, but is only effective if the student is forced to be proactive during the interaction with online materials (Logan, Augustyniak, & Rees, 2002). Furthermore, online education’s effectiveness and attrition is based heavily on students’ motivation to complete the course and interest in course

content (Eom, Wen, & Ashill, 2006). These varying results in empirical studies suggest the need for more research on the effectiveness of online education.

Because of the ease of distribution, online bystander intervention trainings are becoming more prevalent at universities across the country (Kleinsasser, Jouriles, McDonald & Rosenfield, 2015), but the broad literature on the efficacy of online higher learning courses is expansive and divided (Driscoll, Jicha, & Hunt, 2012). Online bystander intervention training for the prevention of sexual violence is a relatively new way of distributing intervention programs to campus community members. Kleinsasser, Jouriles, McDonald, and Rosenfield (2015) found that an online program based on the bystander intervention model of McMahon and colleagues (2015), significantly increased feelings of efficacy for intervening in high-risk situations for sexual violence. Changes in perceived self-efficacy after receiving in-person or online training have been researched separately from one another, but there are few, if any, studies comparing whether the impact of perceived self-efficacy is significantly different after receiving in-person, online, or both types of bystander intervention training. It is that gap that the following study intends to fill.

Based on the current literature regarding bystander intervention programs, self-efficacy and online versus face to face learning, I propose the following research questions and hypotheses:

Research Question 1: Are there differences in self-efficacy by type of self-reported bystander intervention training program (i.e., online, in-person, or both)?



H1: Students who take in-person bystander training will have higher self-efficacy scores than those who take online training or no training.

Research Question 2: Which type of self-reported bystander training is the best predictor of self-efficacy once controlling for demographic factors?

H2: In-person bystander intervention training will have a larger impact on self-efficacy scores compared to no training or online training.

Research Question 3: Controlling for other factors is self-efficacy significantly associated with likelihood of intervention?

H3: Students who have higher self-efficacy scores will be more likely to intervene in potentially risky situations.

In the next chapter, I will discuss the dataset and sample. This will include a description of the data collection process, the measurement of each variable, and the statistical strategy used to analyze the data.

## CHAPTER III

### METHOD

#### *Data and Procedures*

The 2017 Multi College Bystander Efficacy Evaluation (mcBEE) survey will be used to explore the predictors and outcomes of bystander self-efficacy for college students who reported participating in bystander intervention training. The mcBEE survey was funded by the Centers for Disease Control in collaboration with researchers from the University of Kentucky. The mcBEE survey was distributed to 24 universities across the United States and was conducted to better understand which bystander training programs are most effective in increasing prevention behaviors and reducing violence on college campuses. The mcBEE survey is useful for the present study because it asks questions specifically regarding types of bystander trainings that students have participated in, bystander self-efficacy, and questions about whether students have actually intervened in potentially risky situations.

This particular survey was distributed to a sample of 3,000 undergraduate students at a Midwestern university in April 2017. Demographics of the student body for the sampled university in the 2016-2017 academic year indicated that 48 percent of the student body were female, 78 percent white and 9 percent of students were Greek affiliated (UND, 2017b). The sampled university's current enrollment of the student body consisted of 24 percent freshman, 22 percent sophomore, 19 percent junior, and 35

percent senior. From 2014 to 2016, the University Police Department reported having investigated 33 sexual offenses (UND, 2017a). Notifications about participation in the survey were emailed to students with a unique link for each individual to take the online survey. Student incentives included an opportunity to be in a drawing for one of 34 \$50 Amazon gift cards. Among the 471 eligible students who responded to the survey, 407 completed or partially completed the survey. After controlling for those with incomplete data, 387 students were left for the analysis of Hypotheses One and Two, and a subsample of 134 students were used for the analysis of Hypothesis Three.

### *Measures*

#### *Dependent Variables*

In this analysis, for Hypotheses One and Two, the dependent variable is self-efficacy. *Self-efficacy* was measured using four questions from the mcBEE survey: “(1) I am able to recognize a situation that might become violent; (2) I can make a difference in reducing dating violence or sexual violence at my university; (3) I have the skills to help prevent dating violence or sexual violence at my university; and (4) I am able to help if I see a situation where someone might be taken advantage of sexually”. Response categories were on a five-point likert scale for which “strongly disagree” was coded 1 and “strongly agree” was coded 5. Responses to the four questions were summed into a total self-efficacy score. This scale had a Cronbach’s Alpha of .778. Scores ranged from 4 to 20, with a value of 4 representing no bystander self-efficacy and a value of 20 representing strong bystander self-efficacy. The mcBEE survey’s accumulation of these questions as a bystander’s self-efficacy score is grounded in research conducted by Banyard, Plante, and Moynihan (2004).

To address Hypothesis Three, the dependent variable is whether the respondent previously engaged in some type of *intervention behavior*. This dependent variable is created through the responses to two questions. In the first question students were asked “Since Fall 2016, while you have been a student at the university, have you seen someone so drunk or high that you worried they would be taken advantage of?” The response options were “yes” or “no”. If the respondent selected “yes”, a follow up question asked, “Thinking about the last time this happened, what did you do?” Response options included “(1) did nothing because I didn’t think it was serious, (2) did nothing because I was afraid something could happen to me, (3) did nothing because I wasn’t sure what to do, (4) did nothing for another reason, (5) asked a friend or someone else for help, (6) created a distraction to try and help, (7) confronted the person, (8) called university police or other authority, or (9) took action in another way”. Respondents could choose more than one response option for this question. A dummy variable was then created. Students who selected any of the last five response options (in other words, intervened) were coded as 1 = any type of action, and all others were coded as 0 = no action taken.

### *Independent Variables*

The primary independent variable for Hypothesis One and Two is type of self-reported *bystander training*. At the Midwestern university from which the sample was drawn, there are two types of bystander training offered to students: Think About It (online) and Green Dot (in-person). Bringing in the Bystander and Step UP are also included in this analysis as in-person bystander training programs. Respondents may have participated in these programs before college admission. Finally, a university specific one

credit class called Healthy Relationships, Sexuality, and Violence Prevention was also included as an in-person bystander training program.

To measure students' participation in *bystander training*, students were asked, "Have you received bystander training?" Bystander training programs were then listed and response options included "never", "once", or "multiple times". For this research, respondents checked a "yes" or "no" box that corresponded to whether they had taken one of the six following programs: Think About It, Green Dot, Bringing in the Bystander, Step UP, and a university specific program class called Healthy Relationships, Sexuality, and Violence Prevention.

The variable *type of training* was created such that if a person reported that they had taken Think About It (an online training program) at least once, they were coded as 1. If they reported taking any in-person bystander training (i.e. Green Dot, Bringing in the Bystander, Step UP and the Healthy Relationships, Sexuality, and Violence Prevention class) they were coded as 2. If they reported taking both online bystander intervention training and in-person training, they were coded as 3. If they selected having received none of the bystander intervention trainings, they were coded as 0. This nominal level variable is used in Research Question One. This variable was then coded into four separate dummy variables and used for analyses of Hypotheses Two and Three. The variable *No Training* received was coded 1 = yes and 0 = no, *Online Training* received was coded 1 = yes, 0 = no, *In-person Training* received was coded 1 = yes and 0 = no, and *Both Online and In-person Training* received was coded 1 = yes and 0 = no.

#### *Control Variables*

As described, previous research shows that males and females have different bystander self-efficacy scores. *Gender* is included in this analysis as a dummy variable coded 0 = male and 1 = female. In addition to these variables, *race* is included as a dummy variable coded 0 = white, 1 = non-white which includes black (non-Hispanic), Hispanic, or Other Race (including non-Hispanic American Indian, Asian, Hawaiian Pacific Islander, and individuals who reported more than two races). As described previously, Greek members are often targeted as peer leaders for teaching and passing along the importance of bystander intervention. Greek members are also easily accessible to train in masses. For this analysis, *Greek Affiliated* is coded as a nominal variable where 1 = in a sorority or fraternity, and 0 = not in a sorority or fraternity. Finally, the last control variable used is *year in school*. Since the mcBEE survey was only intended to be distributed to undergraduate students, the ordinal variable has four response categories, 1 = First year, 2 = Sophomore, 3 = Junior, and 4 = Senior, to the question “What is your year in school?”

### *Analysis*

The purpose of this thesis is to quantitatively explore possible differences in bystander self-efficacy scores by type of bystander training and the association between these factors and willingness to intervene. First, descriptive statistics will be analyzed for the dependent and independent variables. Descriptive statistics include measures of central tendency, which provide details about the average or typical case in the distribution, and measures of dispersion detail how similar or different the scores within the sample are.

To test the first hypothesis (students who take in-person bystander training will have higher self-efficacy scores than those who take online training) an analysis of variance (ANOVA) will be analyzed to compare mean levels of self-efficacy across type of self-reported bystander training received (i.e. no training, online training, in-person training, and both in-person and online training). Using a post hoc procedure called the Games-Howell test, we can identify which group differences in self-reported bystander self-efficacy were most significant. Additionally, to test the second hypothesis (in-person bystander intervention training will have a larger impact on self-efficacy scores compared to online training) an OLS regression model will be used to predict self-efficacy scores for individuals using types of self-reported bystander training received and the control variables previously discussed (i.e., gender, race, year in school, and Greek affiliation). Finally, to test the third hypothesis (students who have higher self-efficacy scores will be more likely to intervene in potentially risky situations) a logistic regression model will be used to predict who in fact intervened in situations that they identified as risky, using types of bystander intervention training received and the control variables, with the addition of self-efficacy, as an independent variable. The logistic regression will include two models. Model 1 includes just the control variables and Model 2 adds the independent variables. Because Hypothesis Three is limited to individuals who have seen a risky situation, a smaller subsample will be used. Additionally, a subsample ANOVA and OLS regression will also be used to test for similar relationships between the larger sample and subsample.

In Chapter Four, the descriptive statistics and results from the ANOVA and regression models will be presented. Finally, a discussion of the results in relation to

previous literature as well as the limitations and implications of this research are considered in Chapter Five.



## CHAPTER IV

### RESULTS

This study examines the relationship between self-efficacy and type of bystander intervention training, and self-reported bystander intervention behavior. This chapter presents the findings of the analyses performed to test the proposed hypotheses. First, descriptive statistics for Hypotheses One and Two, including means and standard deviations, are provided. Second, results from the ANOVA and OLS regression are provided. Lastly, the results from the subsample ANOVA and OLS regression along with the logistic regression are presented. The chapter will also summarize whether the results provide support for the three hypotheses.

In this research, there were two dependent variables examined, each a separate measure of self-reported pro-social bystander efficacy and behavior. Primary independent variables were included to analyze four different categories of exposure to bystander intervention training (i.e. no training, online training, in-person training, and both online and in-person training). Finally, control variables included gender, race, year in school and Greek life affiliation. Descriptive statistics for these variables are presented in Table 1. Within the sample, 47 percent reported having received no training, 24 percent reported receiving online training, 16 percent reported receiving in-person training, and 13 percent reported receiving both online and in-person training. The mean self-efficacy score was 15.19 ( $SD = 2.55$ ), indicating that the respondents, on average, had fairly

strong bystander self-efficacy. For the control variables, 64 percent of the sample was female. Only eight percent of the sample was non-white, and 13 percent were affiliated with Greek. The average year in school was 2.33 ( $SD = 1.2$ ). A majority of respondents were first year and sophomore students (57.6 percent), while juniors and seniors made up 42.3 percent of the sample.

Table 1. *Descriptive Statistics (N = 387)*

<b>Variables</b>	<b>Range</b>	<b>M</b>	<b>SD</b>
Self-Efficacy	4-20	15.19	2.55
No Training	0,1	0.47	--
Online Training	0,1	0.24	--
In-Person Training	0,1	0.16	--
Both Online and In-Person Training	0,1	0.13	--
Gender <sup>a</sup>	0,1	0.64	--
Race <sup>b</sup>	0,1	0.08	--
Year in School	1-4	2.33	1.12
Greek Affiliated	0,1	0.13	--

Note: <sup>a</sup> 1 = female, <sup>b</sup> 1 = non-white

### *Analysis of Variance*

Results from the Analysis of Variance (ANOVA) indicate significant differences in the average reported self-efficacy between types of bystander intervention training ( $F(3, 383) = 6.48, p < .001$ ). Table 2 presents the mean self-efficacy score for each type of training, standard deviations, the  $F$ -statistic and degrees of freedom for between and within groups. Results from the ANOVA provide support for Hypothesis One which predicted students who took in-person training would have higher self-efficacy scores than those who took online training. The data show that students who reported taking in-person training ( $M = 16.07, SD = 2.71$ ) or both online and in-person training ( $M = 15.94, SD = 2.25$ ) had the highest scores, while those who reported taking no training had the lowest scores ( $M = 14.65, SD = 2.78$ ). The results from the Games-Howell test indicate

the differences in reported self-efficacy between the no training and in-person training groups are statistically significant ( $p < .01$ ), as well as the differences between the no training and both online and in-person training groups ( $p < .01$ ).

Table 2. *Self-Efficacy Scores by Type of Bystander Training (N = 387)*

	<i>N</i>	<i>M</i>	<i>SD</i>
No Training	183	14.65	2.78
Online Training	94	15.20	2.20
In-Person Training	60	16.07	2.17
Both Online & In-Person Training	50	15.94	2.25

Note: ANOVA results show  $F(3,383) = 6.48, p < .001$

### *Ordinary Least Squares Regression*

The results for the Ordinary Least Squares (OLS) regression analysis predicting bystander self-efficacy are presented in Table 3. The standardized coefficients show the relative influence of each independent variable on the dependent variable. Students who reported participating in online training ( $\beta = .13, p < .05$ ), in-person training ( $\beta = .15, p < .01$ ), and both online and in-person training ( $\beta = .19, p < .001$ ) had higher bystander self-efficacy scores compared to those who reported participating in no training, controlling for the effects of the other variables. For Model 1 and Model 2, only the control variables Year in School ( $\beta = .13, p < .01$ ) and Greek Affiliation ( $\beta = .12, p < .01$ ) were significantly and positively associated with bystander self-efficacy scores. Those who reported participating in Greek life reported higher self-efficacy scores than those who reported not participating in Greek life. The OLS regression supports Hypothesis Two which states that in-person bystander intervention training will have a larger impact on self-efficacy scores compared to online training. Nevertheless, online training was also a

significant predictor of self-efficacy, but had a smaller effect size. Looking at the standardized coefficients in Model 2 shows that in-person training and both online and in-person training have the largest coefficients.

Table 3. *Regression Analysis for Bystander Self-Efficacy (N = 387)*

Variables	Model 1			Model 2		
	<i>B</i>	<i>Std. Error</i>	$\beta$	<i>B</i>	<i>Std. Error</i>	$\beta$
(Constant)	14.298	.343		13.671***	.405	
Online Training <sup>a</sup>				.754*	.335	.127
In-Person Training <sup>a</sup>				1.033**	.375	.147
Both Online & In-Person Training <sup>a</sup>				1.418***	.395	.187
Gender <sup>b</sup>	.463	.267	.087	.402	.264	.076
Race <sup>c</sup>	-.874	.466	-.095	-.892	.460	.096
Year in School	.227*	.113	.100	.925**	.123	.129
Greek Affiliated	1.063**	.381	.140	.932**	.381	.123
Cox & Snell <i>R</i> <sup>2</sup>		.055			.081	

Note: <sup>a</sup> Comparison group is No Training, <sup>b</sup> 1 = female, <sup>c</sup> 1 = non-white;  
\**p* < .05, \*\**p* < .01, \*\*\**p* < .001

### *Binomial Logistic Regression*

To test the third hypothesis, an analysis of self-reported bystander intervention behavior was conducted. In order to be considered for this analysis, respondents must have selected “yes” to the following question, “Since Fall 2016 while you have been a student, have you seen someone so drunk or high that you worried they would be taken advantage of?” Only 134 respondents indicated that they had identified a risky situation. Thus, we are limited to testing Hypothesis Three using this subsample of students.

For the subsample, only 38 percent reported taking any action while 62 percent reported taking no action after identifying a risky situation. For those who reported taking no action, 22 percent reported doing nothing because they were not sure what to do, 14 percent reported doing nothing because they did not think it was serious, 6 percent

reported doing nothing for another reason, and 4 percent reported doing nothing because they were afraid something could happen to them. The most common ways students reported taking some type of action included asking a friend for help (36 percent), confronting the person (23 percent), taking action in another way (16 percent), and creating a distraction (13 percent). Furthermore, no students reported calling the university police or other authorities when identifying a risky situation (0 percent).

Table 4 presents new descriptive statistics, including means and standard deviations for the smaller subsample of 134 respondents. Among the subsample, 42 percent reported having received no training, 24 percent reported receiving online training, 19 percent reported receiving in-person training, and 14 percent reported receiving both online and in-person training. The mean score for bystander self-efficacy was 15.38 ( $SD = 2.09$ ), indicating that the respondents, on average, felt fairly efficacious. A majority of this sample was female (75 percent), white (93 percent), and not affiliated with Greek (84 percent). In this subsample, first year and sophomore students made up 55 percent of the sample, while juniors and seniors made up 45 percent.

Table 4. *Descriptive Statistics for Subsample (N = 134)*

<b>Variables</b>	<b>Range</b>	<b>M</b>	<b>SD</b>
Self-Efficacy	4-20	15.38	2.09
No Training	0,1	.43	--
Online Training	0,1	.24	--
In-Person Training	0,1	.19	--
Both Online & In-Person Training	0,1	.14	--
Gender <sup>a</sup>	0,1	.75	--
Race <sup>b</sup>	0,1	.07	--
Year in School	1-4	2.4	1.12
Greek Affiliated	0,1	.16	--

Note: <sup>a</sup> 1 = female, <sup>b</sup> 1 = non-white

An ANOVA and OLS regression were also run with the subsample ( $N = 134$ ) in order to test if the same relationships observed in the larger sample were also found among the smaller sample. The subsample ANOVA was only statistically significant at the  $p < .100$  level. Table 5 presents the total number of respondents for each type of bystander training, mean self-efficacy scores, the  $F$ -statistic and degrees of freedom for between and within groups. Results for the subsample ANOVA provide support for Hypothesis One which predicted that students who took in-person training would have higher self-efficacy scores than those who took online training ( $F(3,130) = 2.46, p < .100$ ). The data show that students who reported taking in-person training ( $M = 16.23, SD = 1.8$ ) or both online and in-person training ( $M = 15.74, SD = 2.33$ ) had the highest scores, while those who reported taking no training had the lowest scores ( $M = 15, SD = 1.79$ ). Results from the Games-Howell test indicate significant differences between no training and in-person training ( $p < .05$ ).

Table 5. *Self-Efficacy Scores by Type of Bystander Training for Subsample (N = 134)*

	<i>N</i>	<i>M</i>	<i>SD</i>
No Training	57	15	1.79
Online Training	32	15.16	2.5
In-Person Training	26	16.23	1.8
Both Online & In-Person Training	19	15.74	2.33

Note: ANOVA results show  $F(3,133) = 2.46, p < .100$

Table 6 presents the results of the subsample OLS regression. The standardized coefficients show the relative influence of each independent variable on the dependent variable. For the subsample, the only significant predictor of bystander self-efficacy was in-person training ( $\beta = .19, p < .05$ ). Furthermore, no control variables were significantly

associated with bystander self-efficacy for the subsample OLS regression in Model 2; however, in Model 1 Greek affiliation was significant ( $p < .05$ ).

Table 6. *Regression Analysis for Bystander Self-Efficacy for Subsample (N = 134)*

Variables	Model 1			Model 2		
	B	Std. Error	$\beta$	B	Std. Error	$\beta$
(Constant)				14.232***	0.685	
Online Training <sup>a</sup>				.336	.516	.069
In-Person Training <sup>a</sup>				1.02*	.49	.194
Both Online & In-Person Training <sup>a</sup>				.740	.582	.124
Gender <sup>b</sup>	.181	.409	.038	.20	.409	.042
Race <sup>c</sup>	1.28	.676	.162	1.21	.675	.142
Year in School	.158	.159	.085	.168	.190	.09
Greek Affiliated	1.017*	.490	.178	.836	.495	.146
Cox & Snell $R^2$		.062			.098	

Note: <sup>a</sup> Comparison group is No Training, <sup>b</sup> 1 = female, <sup>c</sup> 1 = non-white; \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 7 presents the results of the logistic regression. Only the control variables were entered in Model 1, and the independent variables were added in Model 2. The results for Model 1 (control variables only) indicated that the model was not significant ( $X^2 = 7.78, p > .05$ ). Model 2 adds the independent variables (type of bystander intervention training). The results indicated the model was not significant ( $X^2 = 8.52, p > .05$ ). While neither model was significant, the Cox and Snell  $R^2$  increased from .056 in Model 1 to .062 in Model 2, indicating that Model 2 was a better fit.

In both models, the only significant variable is Greek Affiliation. The results show that students who participate in Greek were 4.4 times greater odds of reporting that they had engaged in bystander behavior by intervening in a situation that they deemed risky. Bystander self-efficacy was associated with a positive increase in the odds of engaging in bystander intervention behavior, but this relationship was not statistically significant. Therefore, Hypothesis Three was not supported.

Table 7. *Binomial Logistic Regression for Bystander Action (N = 134)*

<b>Variables</b>	<b>Model 1</b>			<b>Model 2</b>		
	<b>B</b>	<i>Std. Error</i>	<i>Odds Ratio</i>	<b>B</b>	<i>Std. Error</i>	<i>Odds Ratio</i>
Self-Efficacy				.031	.091	1.0321
Online Training <sup>a</sup>				-.255	.537	.775
In-Person Training <sup>a</sup>				.204	.533	1.226
Both Online & In-Person Training <sup>a</sup>				-.210	.613	.811
Gender <sup>b</sup>	-.408	.429	.665	-.424	.435	.654
Race <sup>c</sup>	-.034	.687	.967	-.092	.705	.913
Year in School	.05	.162	1.052	-.031	.198	.970
Greek Affiliated	1.535**	.656	4.46	1.482*	.669	4.404
-2 log likelihood		170.267			169.523	
Cox & Snell R <sup>2</sup>		.056			.062	
X <sup>2</sup>		7.781			8.524	

Note: <sup>a</sup> Comparison group is No Training, <sup>b</sup> 1 = female, <sup>c</sup> 1 = non-white;  
 \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

In Chapter Five, I will discuss the implications of the results. The contributions of this research to the current literature will be described, along with implications for bystander intervention training and research in the future. Finally, the limitations of the research will be discussed.



## CHAPTER V

### DISCUSSION

In this chapter, a summary of the results related to findings about bystander self-efficacy scores and type of bystander training will be presented. A discussion will be provided about how the present study contributes to the current literature, as well as implications of this research for bystander intervention training. Finally, the limitations of the research will be presented and areas for future research related to bystander intervention training and bystander self-efficacy will be explored.

Bystander education emphasizing social responsibility to protect peers from engaging in risky situations is a critical form of primary intervention that may help to reduce sexual assault rates on college campuses (McMahon, 2010; McMahon, Postmus, & Koenick, 2011). The purpose of the present study was to examine bystander self-efficacy scores among students who reported participating in different types of bystander intervention training. This study also explored self-reported bystander intervention behaviors. Utilizing data from the Multi College Bystander Education Efficacy (mcBEE) survey, an analysis of self-reported bystander self-efficacy scores, type of bystander intervention training, and intervention behavior was analyzed. Specifically, the present study addressed the following research questions: Are there differences in self-efficacy by type of self-reported bystander intervention training program (i.e., online, in-person or both)? Which type of self-reported bystander training is the best predictor of self-efficacy

once controlling for demographic factors? And finally, controlling for other factors does self-efficacy significantly impact likelihood of intervention?

According to the model of bystander intervention and previous research about self-efficacy, bystander intervention programs, and face-to-face versus in-person learning outcomes, I expected to find that self-efficacy scores would vary among those who took different types of bystander intervention training. More specifically, I hypothesized that students who reported taking in-person bystander intervention training would report having the highest self-efficacy scores and that this relationship would persist after controlling for demographic factors. Additionally, I expected to find that self-efficacy scores would have a significant impact on bystander intervention behaviors.

### *Discussion of Results*

The results of this analysis show statistically significant differences in self-efficacy between groups of students by type of bystander training they received. Although students who reported taking online bystander intervention training reported higher levels of self-efficacy than those who reported taking no training, overall students who took in-person bystander intervention training had the highest self-efficacy scores. These findings indicate support for Hypothesis One. In addition, after controlling for gender, race, year in school and Greek affiliation, all types of bystander intervention training were associated with significantly higher levels of self-efficacy than no training at all. Nevertheless, the highest standardized coefficients were for in-person bystander intervention training, meaning that this type of training had the largest impact on self-efficacy, thus supporting Hypothesis Two. These results are important for colleges and universities across the country to consider when exploring bystander intervention training

programs. This finding indicates that moving towards online types of bystander training may not be the most effective at producing bystanders who feel efficacious. The results also indicated that Greek affiliated students had higher self-efficacy scores. Previous literature suggests the targeting of Greek organizations for bystander intervention programs may help reduce the increased risk of sexual assaults at these organizations (McMahon, 2010). The significance of a student's year in school suggests that the potential for exposure to bystander intervention programs and discussions increases over time, thereby increasing bystander self-efficacy.

Despite these findings, Hypothesis Three, which suggested that the higher the level of self-efficacy the more likely students will be to intervene in a risky situation, was not supported. These results suggest that self-efficacy may not be the best predictor of intervention efforts. The most common reasons for inaction noted by participants (i.e., not sure what to do and did not know if the situation was serious), should be further addressed in bystander training to remove these barriers and create better strategies for intervention efforts. In fact, the only significant predictor of self-reported bystander intervention behaviors was being affiliated with Greek life. As previously mentioned, this may be due to the fact that Greek life peer leaders are often recommended targets of bystander intervention training programs. Greek affiliated students are recommended targets because of their likelihood of repeated exposure to opportunities to intervene in risky situations as a result of their association with party settings.

### *Implications*

The findings of this study could lead to the implementation of more specific policies regarding the Campus Clery Act and the Campus Sexual Assault Elimination Act

(SaVE Act) of 2013. This study's findings suggest that in-person bystander intervention training is most effective at producing higher bystander self-efficacy scores. Requiring colleges and universities to provide students with in-person bystander intervention training may be the most suitable way to increase bystander self-efficacy scores. An example that could be considered is Green Dot, the only in-person bystander training provided at the Midwestern institution where this survey was taken (Coker et. al, 2011). If all incoming first year students were required to participate in Green Dot training then perhaps risky situations would be interrupted before sexual assault occurs (McMahon, 2010).

While the ease of distribution and cost effectiveness of online learning is appealing, perhaps deterring the use of online bystander intervention training should also be considered. As previous research suggests, the effectiveness of online learning relies heavily on the motivation of each student and their interest in course content (Eom & Wen, 2006; Logan et al., 2002). Online education may not be the most effective way to educate students about the importance of sexual violence prevention, bystander behaviors and techniques for intervention.

The findings of this study also suggest that self-efficacy may not be the best predictor of bystander intervention behavior. Other predictors of bystander intervention may include factors relating to whether a person knows the individuals that are identified as engaging in a risky behavior (Stewart, 2014), feeling responsible for creating an environment that might foster a risky situation (Moynihan, Banyard, Arnold, Eckstein, & Stapleton, 2011), and/or the level of engagement as a responsible bystander (McMahon, Postmus, & Koenick, 2011). The findings of this study suggest that in-person bystander

intervention training and both in-person and online training is only impacting one of the two expectancies for self-efficacy theory. While these two types of trainings appear to create self-efficacy expectancy (individual belief that they are capable of performing a necessary behavior), no type of bystander intervention training created outcome expectancy, which is the belief that a given behavior will lead to a given outcome, which in this case was intervention in an identified risky situation (Bandura, 1989; Maddux & Rogers, 1983).

Finally, these findings suggest that individual level theories may not be adequate for explaining bystander intervention behaviors. Exploring factors such as peer social networks, party contexts, and group intervention dynamics may produce more effective ways to educate students about the role that they must play in reducing sexual violence.

#### *Limitations and Future Research*

The small sample size, and even smaller subsample used to explore intervention behaviors, may have impacted the findings of this study. Another limitation to the data is that students' training, self-efficacy scores and bystander intervention behaviors are self-reported. Because the online bystander intervention program taking place at the school under analysis has only been in place for a few years, some of the students in this survey may not have had exposure to the online training. Furthermore, this training is included with other required online orientation learning programs; therefore, students may not have recognized that they were taking, or had taken, a bystander intervention training. In addition, students may not accurately remember the names of the program they have taken.

Additionally, some of the findings for this study provided limited support for previous research. For example, Kleinsasser, Jouriles, McDonald, and Rosenfield (2015) found that online bystander intervention training was effective at producing pro-social bystanders in comparison to their control group. While the OLS analysis indicated that online training had a statistically significant relationship with self-efficacy, the ANOVA did not support this finding. In fact, the Games-Howell test indicated there was no statistically significant difference in reported self-efficacy between the no training and online training groups. Furthermore, there could have been measurement issues for intervention which could have led to a “no intervention” response, because none of the response options included others being around them to help in intervention techniques. Finally, the wording of some of the survey questions may be problematic. For example, the question regarding previous intervention behavior limited respondents to only think about the most recent school year. Perhaps asking about their entire time spent at the university might have yielded more self-reported bystander intervention behaviors.

Future research should include larger sample sizes and students from other institutions that participated in the mcBEE survey. Data to be collected in spring 2018 will allow for the retesting of these hypotheses. A greater number of respondents may produce different results that align better with previous findings. In addition to using a larger sample size, moving away from self-reported responses and broadening questions about intervention behaviors may provide more insight into how educators can make bystander intervention training more effective.

Another future research suggestion is to include opportunities for qualitative answers. Questions such as “How have you identified risky situations?” and “What

actions did you take to intervene?”, and “Why did you choose those actions?” may provide scholars with more information about how bystander intervention training impacts self-efficacy and bystander intervention behavior, and would further our understanding of how bystander intervention programs should be constructed to best achieve the learning outcomes needed to be engaged bystanders.

Future research also should include additional variables. Control variables that might influence bystander intervention include other types of peer leaders besides Greek affiliated students, such as student athletes and members of student government. While targeting peer leaders is important (Banyard, Moynihan, & Crossman, 2009), perhaps students with a wider range of diverse backgrounds, that may not be attending Greek and other organized groups’ parties, should be trained more extensively as well. In this study, only 13 percent of the sample were affiliated with Greek life which suggests that a majority of students were not suggested targets for additional bystander intervention training.

Other demographic factors that should be considered include chronological age, instead of year in school, and relationship status. Other control variables may include asking about the number of times students have taken bystander intervention training, the number of hours they have participated in training, and the number of times that they have actually intervened in risky situations. Instead of focusing on bystander self-efficacy, perhaps other measures should be explored, such as a person’s sense of accountability and responsibility for one another, their sense of personal safety while intervening, and knowledge about sexual consent. Additionally, asking participants about

whether they knew the potential victim or perpetrator in the risky situation may impact actual intervention behaviors.

This study's findings suggest that self-efficacy is best acquired through in-person bystander intervention training programs. The results also indicated that self-efficacy scores did not significantly influence bystander intervention behaviors. This suggests that bystander self-efficacy may not be best measure for what effects student's decisions to intervene in situations that they recognize as risky. This may be due to the small sample size and should be retested using a larger sample. Nevertheless, other measures of bystander intervention behaviors should be researched. Studying the specific characteristics of in-person training that influence self-efficacy would allow in-person intervention training program coordinators to better understand the mechanisms that impact bystander self-efficacy scores. This knowledge could assist in creating more engaged bystanders and increase the likelihood of intervention behaviors taking place in situations that are potentially risky.

### *Conclusion*

Guided by Latane and Darley's (1970) bystander model, McMahon and colleagues' (2015) research on bystander self-efficacy, and the emerging literature on online versus face to face learning, this study explored the relationship between types of bystander intervention training on bystander self-efficacy scores and intervention behaviors. Bystander intervention training is the most common form of primary prevention currently being utilized to prevent sexual assault on college campuses across the country. Finding that self-efficacy scores are higher after receiving in-person intervention training suggests that colleges should be investing in more in-person



trainings in order to best meet Campus SaVE Act requirements. Although in-person trainings produce high self-efficacy scores, the findings indicate that self-efficacy is not significantly related to likelihood of intervention. This suggests that colleges and universities across the United States need to further sexual assault prevention efforts in more ways than bystander intervention training programs currently provide. To reduce current statistics suggesting that one in four women ages 18 to 24 experience sexual assault, primary prevention efforts may need to focus more on how to get bystanders to intervene when they identify a risky situation.

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