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# A Single Campus Study of the Green Dot Bystander Intervention Program

Brittany F. Hollis  
*Old Dominion University*

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**A SINGLE CAMPUS STUDY OF THE GREEN DOT BYSTANDER INTERVENTION  
PROGRAM**

by

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## **ABSTRACT**

### **A SINGLE CAMPUS STUDY OF THE GREEN DOT BYSTANDER INTERVENTION**

#### **PROGRAM**

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Old Dominion University, 2018  
Director: Dr. Michelle L. Kelley

Sexual assault is a serious public health issue that is especially problematic on college campuses. To combat sexual violence on college campuses prevention programs have been instituted by many universities. One such prevention program, the Green Dot program, works to teach students what constitutes sexual violence and how to prevent it by increasing bystander intervention. The current study examined the effectiveness of Green Dot at a large southeastern university. The Theory of Planned Behavior (TPB) was used as the theoretical framework. TPB examines how efficacy, attitudes, and norms influence behavior. Students were recruited to participate in the Green Dot program via the Women's Center. Green Dot participants were asked to complete a survey before Green Dot, one-week after, and a one-month follow-up. Hierarchical linear modeling (HLM) was used to examine the data longitudinally. It was hypothesized that participants in Green Dot training would increase bystander behaviors, efficacy, and attitudes, as well as social sexual norm perceptions. Results using HLM indicate that there were significant differences between the comparison and experimental group, such that the comparison group has higher bystander efficacy scores. Additionally, men and women differed significantly on the perceived social sexual behaviors of the average male on campus, such that men had more positive perceived sexual norms for the average male on campus. Although small findings, this research is important in understanding how to safely intervene in possible instances of power-based violence, which is critical in preventing sexual violence.

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This dissertation is dedicated to the women who have inspired and supported me throughout my life and graduate career.

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## **CHAPTER 1**

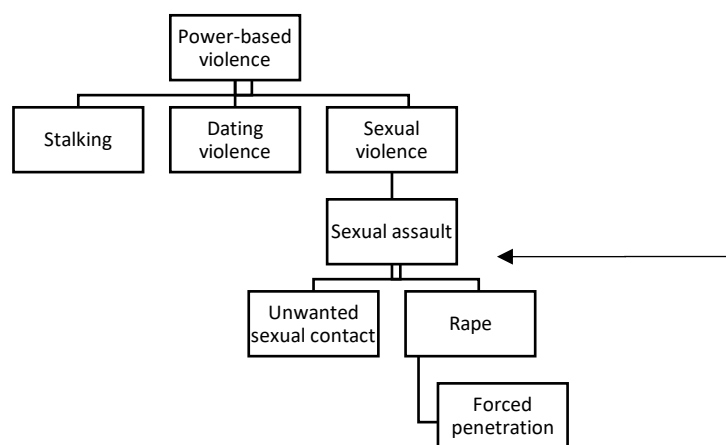
### **INTRODUCTION**

The Center for Disease Control (CDC) defines sexual violence as a sexual act committed against an individual without that person's freely given consent (Basile, Smith, Breiding, Black, & Mahendra, 2014). Sexual violence is a massive public health issue in the United States with one in five women reporting rape in their lifetime (Banyard & Moynihan, 2011; Banyard, Moynihan, Walsh, Cohn, & Ward, 2010; Basile et al., 2014; Cook-Craig, Millspaugh et al., 2014). Sexual violence is especially problematic for college women who are at high risk of experiencing sexual violence (Brown, Banyard, & Moynihan, 2014). In fact, approximately 20 to 25 percent of college women experience rape or attempted rape during their undergraduate careers (Hatten, 2017; Muehlenhard, Peterson, Humphreys, & Jozkowski, 2017). Further, the costs of sexual violence are staggering. Each act of sexual violence is hypothesized to cost approximately \$87,000 to \$122,461 in loss of productivity, quality of life, and healthcare expenses (Hatten, 2017; Miller, Cohen, & Wiersema, 1996; World Health Organization, 2013; Peterson, DeGue, Florence, & Lokey, 2017). Given the frequency with which undergraduate women experience sexual violence on college campuses, the mental health and economic costs of sexual violence, and the effect sexual violence can have on the retention rate of students, numerous prevention programs have been developed. In the present study, the effectiveness of a specific violence prevention program (i.e., Green Dot), designed to increase bystander intervention, was examined.

#### **Definitions**

Sexual violence encompasses many behaviors. For simplicity, in the present study, sexual violence includes both sexual assault and rape. Of note, these terms are often used

interchangeably; however, they are different and for clarification and generalizability the following definitions are used. The CDC defines sexual assault as “unwanted sexual contact which consists of touching in a sexual nature, oral sex, sexual intercourse, anal sex, or penetration with a finger or object” (Krebs, Lindquist, Warner, Fisher, & Martin, 2009, p. 641). The Bureau of Justice Statistics defines rape as forced vaginal, anal, or oral penetration. Figure 1 is a graphic representation of power-based violence and the material covered in the Green Dot program. For clarification, Green Dot works to prevent all power-based violence (stalking, dating violence, and sexual assault). However, this study focused solely on the sexual assault prevention aspect of Green Dot.



*Figure 1.* Graphic representation of power-based violence (the material covered during the Green Dot Program). Note that stalking, dating violence, and sexual violence all are interrelated, but for parsimony they are represented separately in this graph.

### **Laws Targeting the Prevention of Sexual Violence on College Campuses**

In 1972, Congress passed Title IX, enforced by the Office of Civil Rights within the U.S. Department of Education, states that, “no person will be denied educational benefits based on

sex” (Congress, 1972; Henrick, 2013). Additionally, in 1998 the Jeanne Clery amendments to the Violence Against Women Act (VAWA) of 1994, mandated that colleges and universities must provide policies to the public about education and awareness of crime, which includes sexual violence (Azimi & Daigle, 2017). Of note, at the participating university, annual reports indicate that there were four, ten, and six on-campus rapes reported to police in the years 2013, 2014, and 2015, respectively (*Annual Security and Fire Safety Report*, 2016). Moreover, if an institution fails to fulfill its Title IX requirements they can be financially penalized by losing federal funding (Henrick, 2013), and currently, 106 colleges and universities are currently under investigation for Title IX violations (Azimi & Daigle, 2017). Of concern, no school has yet to lose federal funding, or experience any consequence, for not adhering to Title IX guidance.

Under the Obama administration, the White House established the Task Force to Protect Students from Sexual Assault (2013) with the goal of identifying the scope of the problem on college campuses. The Task Force published guidance (which clarifies the regulations of Title IX, but does not carry the weight of a law) that federally funded schools work to prevent and respond effectively to sexual assault (Coker et al., 2015; McMahon et al., 2015b). The implementation of this guidance looks different depending on the institution. For example, the *participating university* presents a brief video and group discussion during freshman preview about what constitutes sexual assault, dating violence, and stalking, and how to help create a campus community that does not accept sexual violence. Although this brief presentation is a great first step, there are limitations to this format. For example, the presentation is on the first Saturday morning that students are on campus. Also, the program is approximately 30 minutes long. Given the brevity of the program, it is unlikely that students who attend the program truly understand the many ways in which sexual assault can occur, the different ways to prevent or

reduce it, and how to address sexual violence when it does occur. Although there are improvements to be made, the Women's Center at the participating university works assiduously year-round to bring awareness campaigns and events to the campus that aim to help prevent and stop sexual violence.

The current research is vital, especially in the present political climate. As noted above, during the Obama administration there were advances made for holding schools accountable and making sure that survivors of sexual violence were given necessary resources (Bolger & Brodsky, 2017). However, the current administration does not share the same agenda. Education secretary, Betsy DeVos, has recently rolled back Obama-era guidance on Title IX, citing that there is not enough due process for perpetrators (Tatum, 2017). The guidance serves as a recommendation to colleges and universities as to how to conduct investigations and hearings (Tatum, 2017). Essentially, DeVos, and the current administration, believe the Obama administration went too far in protecting survivors' civil rights to a safe educational environment and had not done enough to protect the due process of the accused (Bolger & Brodsky, 2017). This assumption is incorrect, as the Obama administration's guidance for schools provided rights for all parties involved (Bolger & Brodsky, 2017). It is important to protect the safety of all students, which is why Title IX is incredibly important.

### **Reporting Sexual Violence on College Campuses**

Title IX and VAWA were put in place partially to help end campus sexual violence, and are vital in helping survivors and increasing report rates of campus sexual violence (Basile et al., 2014; Koss, 1992). According to the Rape, Abuse, & Incest National Network (RAINN) only 20 percent of college students report sexual assault to law enforcement. Further, the Climate Survey on Sexual Assault and Sexual misconduct found a 5-28% report rate based on results across 27

universities conducted via the Association for American Universities (Cantor et al., 2015). There are many reasons why sexual violence is not reported. One reason survivors may not report sexual assault is that in popular culture rapists are often depicted as strangers who hide behind the bushes; however, this is rarely the case (DeMaria et al., 2015). In the majority of sexual assault cases the perpetrator is known to the survivor (Hatten, 2017; Kendrick, Apenyo, & Callender Highlander, 2017). In fact, the National College Women's Sexual Violence Study (NCVS) found that 90% of sexual assault survivors knew their perpetrator prior to the assault (Fisher, Cullen, & Turner, 2000; Hatten, 2017). Due to the inconsistency in what is often portrayed in the media as rape and actual experiences of rape, when an assault does not fit the stranger in the bushes scenario, many survivors may not be certain that what they experienced was rape.

The prevalence of sexual assault on college campuses may be the result of fewer authorities present (i.e., parents, teachers), high levels of alcohol and drug use, Greek life, frequent partying, and the desire to fit in (Azimi & Daigle, 2017). Thus, the college environment, being a target rich environment, may contribute to the high levels of sexual violence across college campuses in the United States (Azimi & Daigle, 2017). For example, the participating university made news headlines in the fall of 2015, when fraternity members hung banners on their balconies during freshman drop-off day that read, "Rowdy and fun. Hope your babygirl is ready for a good time," "Freshman drop-off here," and "Go ahead and drop mom off too" (Giraldi, 2016). This is an example of Greek life impacting the perception of sexual violence on a college campus. Demeaning and disrespectful comments about women may contribute to perceptions that this type of behavior is acceptable. In turn, behaviors such as those illustrated may increase sexual violence through normalization, reduce the number of survivors who are



willing to report these behaviors, and potentially reduce the number of people willing to be active bystanders (Giraldi, 2016).

Another reason that survivors may not come forward is due to fear of secondary traumatization by the justice system. A recent documentary (i.e., “The Hunting Ground”), detailed the impact of sexual assault on college campuses and the impact sexual assault has on (predominantly) women. The audience witnesses how survivors are ignored by universities and, even worse, blamed for their assaults. Further, perpetrators are often given merely a slap on the wrist at most (e.g., see the *People V. Turner* case at Stanford University; Dick, 2015). Collectively, it is easy to understand that many women do not report sexual violence that occurs on campus for fear of not being believed, being ostracized, not understanding what exactly constitutes sexual violence, and so forth (Wilson & Miller, 2016). There are many reasons survivors do not report or come forward. The reasons mentioned above merely scratch the surface. For example, the participating university is a Minority Serving Institution, therefore, there may be cultural implications for not reporting assaults. Although each survivors’ reasons are important it is not within the scope of this paper to include and discuss all of them. With these many hindrances to reporting sexual assault, reversing Title IX guidance will only make it harder for survivors to report and get the help they need.

### **Bystander Intervention Programs and the Reduction of Sexual Violence on College Campuses**

It is clear that encouraging survivors to report sexual violence is not a sufficient method for decreasing sexual assault on campus. Prevention programs are an essential component to reduce campus sexual violence because they work to curtail sexual violence before it begins. To

develop effective interventions, it is critical to understand what encourages or hinders individuals from intervening to prevent violence.

Research into bystander behavior began in the 60's with Darley and Latane (1968), who sought to understand what motivates someone to intervene in an emergency, a crime, or violent situation. A bystander is a witness to a crime, but whom is not directly involved as a survivor or a perpetrator (Banyard & Moynihan, 2011). Investigators determined that individuals feel more inhibited and less personally responsible for intervening in an emergency when there are others around. This phenomenon is known as diffusion of responsibility (Darley & Latane, 1968; Hatten, 2017). This research, combined with the call form the White House Task Force on the need for research into the most effective manner to prevent sexual violence (McMahon et al., 2015b), has led to the creation of bystander intervention programs that are designed to reduce sexual assault (Coker et al., 2015; Cook-Craig, Coker, et al., 2014; Cook-Craig, Millspaugh, et al., 2014).

Bystander intervention programs seek to help bring awareness to the topic of interpersonal violence and give students' tools to be active bystanders to prevent the occurrence of sexual violence (Banyard, 2008; Cook-Craig, Millspaugh, et al., 2014). Specifically, bystander interventions work to achieve violence prevention by challenging the norms around sexual behavior and against intervening, and thus, increasing actual bystander behavior (Banyard, Moynihan, & Crossman, 2009; Coker et al., 2015). Bystander behavior includes everything from participating in dialogue that challenges the norm of violence, to removing someone from a high-risk situation, to supporting a survivor of violence (Banyard et al., 2009). A decision for someone to engage in bystander behavior first involves awareness of the problem and a feeling of responsibility for intervening (Banyard & Moynihan, 2011; Banyard et al., 2009). The

decision also involves a cost benefit analysis to determine if the positive outcomes outweigh the negative (Banyard et al., 2009). And finally, bystander behavior involves deciding on a course of action (Banyard & Moynihan, 2011; Banyard et al., 2009).

Bystander interventions have gained considerable attention as results show these interventions may increase bystander behavior or intention (or the likelihood of intervening in the future; Banyard, 2008; Cook-Craig, Coker, et al., 2014). Bystander interventions are built on the basis that as individuals are made more aware of the problem of power-based violence on campus and what behaviors constitute aggressive behavior, their previous notions and acceptance of violence will change. The goal is to begin to shift bystander perceptions or attitudes to become less accepting and tolerant of violence and aggression, and to create social consensus supporting intervention (Banyard, 2008). It is expected that this paradigm shift is then translated into action via bystander behaviors.

### **Green Dot Sexual Violence Bystander Prevention Program**

One intervention program that preliminary research has found to positively affect student bystander behavior is Green Dot (Coker et al., 2015). Green Dot is a bystander intervention program developed by Dr. Dorothy Edward in 2007 (Coker et al., 2015). The Green Dot program has been implemented in many universities across the United States and the world, including Canada, Italy, Portugal, and Japan ("Live the Green Dot," 2017). Green Dot seeks to create new social models of bystander behavior through students' contact and engagement with others (Cook-Craig et al., 2014). More specifically, Green Dot seeks to increase the awareness of power-based violence, as well as discuss behaviors that can be used to intervene safely and reduce risk in aggressive power-based situations (Cook-Craig et al., 2014). The name Green Dot comes from a description during training of a map with red dots on it. These red dots are acts of

power-based aggression or violence, a neutral dot is an individual that does not intervene in an aggressive situation, and a green dot is a person who acts as an active bystander to end or proactively avoid a violent situation (Kendrick et al., 2017). In the program, students are shown how to lower the rates of power-based violence via instructions on how to safely intervene during violent or potentially violent situations, and how to become a “green dot” among “red dots” (Kendrick et al., 2017).

**Diffusion of Innovation.** Green Dot recruitment is based on the Diffusion of Innovation theory, which posits that innovation of an idea or norm can spread through a population by targeting those with the most visibility, or leaders in the group, to endorse the idea or norm (Rogers, 1983). The premise is that these leaders will then diffuse the idea or norm to the rest of the population (Rogers, 1983). This model is used by Green Dot to assist in widespread dissemination of bystander behaviors. That is, Green Dot specifically recruits leaders (i.e., athletes, club presidents, etc.) at a specific college or university first, as it is believed that this is the most effective way to diffuse the principles of Green Dot to the larger university campus. After leader’s participate in the program, it is then disseminated to the rest of the student body. Green Dot identifies early adopters (known as Popular Opinion Leaders [POL]) by asking key informants to nominate students on campus (Cook-Craig et al., 2014). This strategy has its roots in HIV prevention (Kelly et al., 1991) and is a unique and novel feature of the Green Dot program (Cook-Craig et al., 2014).

**Five steps of the Green Dot program.** The Green Dot intervention program involves several steps that work to gradually explain the depth of power-based violence while familiarizing students with the concept of being an active bystander (White, 2016). There are five steps that are fundamental to Green Dot: invite, inspire, engage, strengthen, and sustain.

*Invite* people to reconsider their role in prevention (i.e., encourage active bystander behavior). *Inspire* individuals to understand that one small act can make a huge difference. *Engage* the audience by being personable and authentic, as well as including group activity work. *Strengthen* the intervention with follow-up boosters. And *sustain* the idea that violence will not be tolerated, and everyone is expected to do their part in maintaining a peaceful environment.

**Outline of the Green Dot Program.** The following is an outline of the actual Green Dot program given to students. Facilitators begin the program with introductions and activities to get students involved. The concept of being a green dot instead of a red or neutral dot is explained. Awareness is brought to the problem of power-based violence, not only in the frequency with which it occurs on college campuses, but awareness as to what constitutes power-based violence. Once the concepts of power-based violence are explained, detailed strategies are then discussed via scenarios and vignettes. This application gives students the tools they need to safely intervene when they encounter similar situations.

Following are the discussion points of the program. The first discussion point during the program is barriers to action. These include general obstacles, such as the diffusion of responsibility, and personal traits that may impact one's willingness to intervene, such as being shy. Throughout the Green Dot program barriers to intervention are acknowledged (e.g., not knowing if the situation is consensual, fear of ruining someone's good time, and so forth). Green Dot strives to communicate positively with students and meet them where they are, meaning it is not assumed that all students who attend the program are ready to change (Banyard, Eckstein, & Moynihan, 2010). For some students, the program results in merely the potential willingness to agree to possibly intervene in power-based situations. However, Green Dot recognizes that some students may have little to no readiness to change. The lack of a desire to change is acceptable

because participants are getting exposure to concept of power-based violence and how to intervene, which is the first step in changing norms. Further, the program recognizes that if a participant is approached in a forceful way, they may not listen (Hoxmeier, Flay, & Acock, 2016), which is why Green Dot creates an environment of open, non-argumentative, and safe discussion.

The next part of the training then equips individuals with three specific types of Green Dot behaviors, and these are the three D's: Direct, Delegate, and Distract. *Direct*, is direct intervention of the behavior, such as saying something if you are worried that someone may be too drunk to consent to sex. *Delegate* is involving others to help attenuate the situation, for example, asking a friend to check on someone you feel may be in a violent situation. And lastly, *distracting* is a covert diffusion of the situation like asking someone you feel is being taken advantage of, to help you with something (i.e., finding the restroom) to divert them from the situation.

Definitions (from Green Dot curriculum training manual; gd 2.0 college strategy)

Direct: do something yourself.

Delegate: if you can't do something yourself ask friends to help, talk to a trusted RA, coach, faculty or staff member, or a trusted peer.

Distract: if you don't want to address the situation directly or even acknowledge you see it, try to think of a distraction that will defuse the situation or calm things down in the moment.

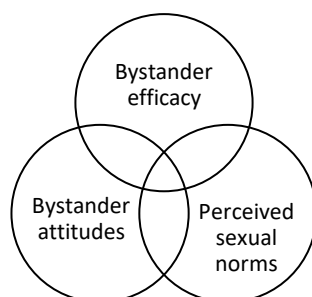
The final step of the program is to have participants sign a pledge that they will do or say something when they see a potential red dot, to encourage friends to do the same, and to support survivors of power-based violence.

**Research on Green Dot.** Research on the effectiveness of Green Dot is still in its infancy. According to the Green Dot website, there are three published articles examining Green Dot as an intervention, as well as four studies underway ("Live the Green Dot," 2017). Two of the three published studies merely discuss the procedural foundation of Green Dot and the beginning stages of implementation (Cook-Craig, Coker, et al., 2014; Cook-Craig, Millspaugh, et al., 2014). The third study examined the effectiveness of Green Dot on three college campuses. Compared to campuses that did not implement Green Dot, male and female participants on the campus that did implement it reported lower rates of power-based violence perpetration and victimization (Coker et al., 2015). However, Coker et al. (2015) was limited because it was cross-sectional, therefore, it cannot be determined that receiving the intervention caused differences between the students at campuses that received Green Dot versus students at campuses that did not. Additionally, in the experimental condition, the implementation of Green Dot was not equivalent for all participants as some participants did not receive all of the training. With these limitations, it is still important to see the potential in Green Dot bystander training. The current study is an in-depth longitudinal analysis of Green Dot on a college campus.

### **The Theory of Planned Behavior as a Theoretical Explanation for Bystander Intervention**

Theoretical explanations for behavior change are vital to understanding the effectiveness of bystander intervention. One well-established theory that helps predict change in behavior is the Theory of Planned Behavior (TPB; Ajzen, 1991). According to the TPB, future behavior is predicted by one's perceived ability to intervene (i.e., efficacy), attitude towards the behavior, and the perceived social norms about the behavior (Ajzen, 1991). All three areas (efficacy, attitude, and norms) need to be addressed to change future behavior.

In the present study bystander efficacy, bystander attitudes, and sexual norms are examined as potential avenues for behavior change. The TPB is a theoretical model that has been used in the intervention literature to predict intervention in situations of cyberbullying (Bastiaensens et al., 2014; DeSmet et al., 2014) and to examine the difference between those who do and do not intervene in high-risk situations (Hoxmeier et al., 2016). The TPB has also been used to predict bystander behavior in power-based violence situations (McMahon et al., 2015b), school violence (Stueve et al., 2006), and the impact emotions play on behaviors (Tangney, Stuewig, & Mashek, 2007). The TPB helps explain the willingness to intervene in an instance of potential power-based violence (see Figure 2).



*Figure 2.* Theory of planned behavior as adapted for bystander behaviors in the current study

**Bystander efficacy.** Green Dot's 3 D's; direct intervention, delegating actual action to another, and distracting the perpetrator or survivor in order to stop the incident, are types of bystander actions (White, 2016). The decision to engage in these actions or behaviors and determine which course of action to take is highly dependent on one's confidence in completing the task (Banyard et al., 2009; McMahon et al., 2015b). This confidence is referred to as



bystander efficacy. Bystander efficacy is vital as it is related to bystander behavior (Banyard, Eckstein, et al., 2010; Banyard et al., 2009). Banyard (2008) found that higher levels of perceived effectiveness or confidence as a bystander was positively correlated with willingness to intervene and actual bystander behavior in power-based situations in a sample of college students.

**Bystander attitude.** In addition to having confidence in one's ability to intervene effectively, bystander attitudes have a large impact on actual behavior (Hoxmeier et al., 2016). Attitudes are how favorable or unfavorable one perceives a behavior to be, and are necessary in predicting behavior (Ajzen, 1991). In a sample of over 800 undergraduates, Hoxmeier et al. (2016) found that those who reported more bystander behavior had higher positive attitudes toward intervening and greater bystander efficacy. According to the TPB (Ajzen, 1991), both bystander efficacy and attitudes are important to examine when predicting behavior.

**Social sexual norms.** The TPB states that predicting behavior not only involves attitude and efficacy, but also perceived social norms (Ajzen, 1991). Social norms are rules, guidelines, and expectations understood by members of a certain group (Hatten, 2017). Students often share common norms (Azimi & Daigle, 2017). Therefore, it is important that bystander interventions focus on changing norms that surround violent or aggressive behaviors (Banyard, Eckstein, et al., 2010), not only to inhibit future perpetration, but also to change norms around actually intervening. As social entities, a person's decision to intervene is highly related to the extent that their immediate community or environment supports their decision (Berkowitz, 2010; Gidycz, Orchowski, & Berkowitz, 2011).

The college environment plays a large role in the development of normative sexual beliefs (Gidycz et al., 2011). There is a common misperception that other college students are

more sexually active than they really are, and that others approve of rape supportive norms, when that is not the case (Gidycz et al., 2011). Unfortunately, intentions to intervene are often related to the perceived rape supportive norms of others (Banyard et al., 2009). Peers have an ‘informal social control’ by expressing approval or disapproval to violations of the norm, and that carry weight in an individual’s decision to act (Brown et al., 2014). Research has shown that male peer norms that are supportive of coercive sexual behavior toward women are predictive of an increasing rate of sexual violence (Brown et al., 2014; Schwartz & DeKeseredy, 1997; Schwartz, DeKeseredy, Tait, & Alvi, 2001). Further, perceived peer support for sexual violence is negatively correlated with intervening (Brown & Messman-Moore, 2010). Additionally, men’s willingness to intervene is strongly related to their perceptions of their peers willingness to intervene (Fabiano, Perkins, Berkowitz, Linkenbach, & Stark, 2003).

Although peers can be a negative influence, that is, they can support use of coercive or other forms of non-consensual sexual behavior, but peers can also play a positive role in bystander behaviors. Peers are important in one’s decision to intervene in a type of “informal helping” (Brown et al., 2014). For instance, Brown and colleagues (2014) found that the more students believed their peers supported bystander intervention, the more willing they were to intervene against sexual violence. Peer support for intervening is also related to bystander efficacy (Hatten, 2017). Hatten (2017) found that when participants are led to believe their peers approve of intervening, they report much higher willingness to intervene. Further, these students also report higher bystander efficacy when compared to those who were told their peers disapprove of intervening. Normative social sexual beliefs are important in one’s social acceptance of sexual aggression and also in their decision to intervene.

Individuals often perceive the norm of specific behaviors or attitudes, among their peers, to be more negative than is the case (Bruner, 2003; Darlington, 2014). For example, students often overestimate the amount of alcohol their peers consume (Bruner, 2003). The disparity between actual and perceived norms is thought to influence behavior (Darlington, 2014). The current study looked at the perception of normative attitudes of student's peers in order to examine the relationship between norms and actual behavior within the framework of TPB.

**Sex and bystander behaviors.** There are different patterns of bystander behavior between men and women (Palmer, Nicksa, & McMahon, 2016). Women are more likely than men to experience sexual assault and more likely to indirectly intervene (Palmer et al., 2016), Men, on the other hand, are more likely to directly intervene and to think that sexual assault is not a problem on campus (DeMaria et al., 2015). Women, also note feeling fearful on campus, and creating strategies to avoid sexually violent situations (i.e., never walking alone at night; DeMaria et al., 2015). Although men and women have different experiences on campus, and men are often perpetrators of sexual violence, it is vital in bystander training to treat men as potential bystanders as opposed to potential perpetrators, and women as potential bystanders instead of potential survivors (DeMaria et al., 2015). Prevention strategies that operate in this manner show significant results of lower reported post-intervention violence levels for men (Coker et al., 2015). By including men as part of the solution the intervention momentum gains more participants, as well as, gaining men who can influence other men who may be in high risk situations. For this reason, both men and women participate in Green Dot. Further, sex was included in the models as a control variable.

Additionally, research shows that there are many different demographic variables that play an important role in an individual's decision to be an active bystander (Amar, Sutherland, &

Laughon, 2014; Brown et al., 2014; Diamond-Welch, Hetzel-Riggin, & Hemingway, 2016; Fabiano et al., 2003; Gable, Lamb, Brodt, & Atwell, 2017; Kilmartin et al., 2008). For example, Brown et al. (2014) found in an undergraduate sample of 232 students that a) women reported more bystander intentions than did men, and b) Black students reported more bystander behaviors than White students. Another study by Diamond-Welch and colleagues (2016), found that year in school mediated the association between race, gender, and bystander behavior. Although these variables are important to examine, the current study did not analyze these variables due to the small sample size.

### **Adverse Childhood Experiences**

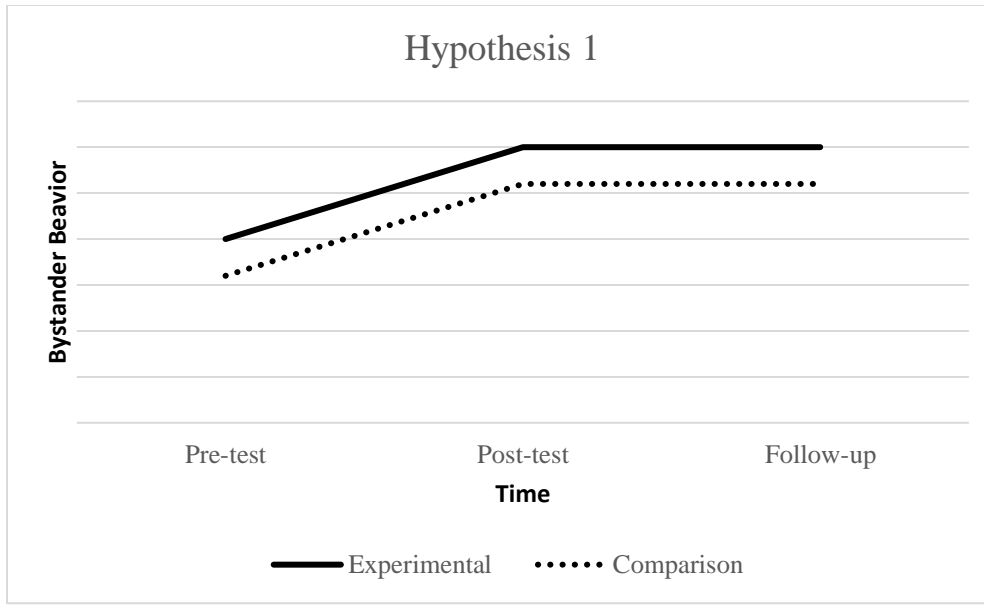
There are other risks for experiencing sexual assault aside from the college environment. The most significant predictor of unwanted sexual experiences for women in college is previous abuse or sexual assault (Smith, White, & Holland, 2003). Survivors of adult sexual violence are more likely to have experienced previous childhood/adolescent abuse compared to individuals who have not experienced adult sexual violence (Jewkes, Flood, & Lang, 2015). The concept of revictimization has been thoroughly studied and replicated many times over, and indicates that trauma in childhood and adolescence is highly predictive of later adult trauma (Azimi & Daigle, 2017; Littleton & Decker, 2016; Messman-Moore & Long, 2003; Messman-Moore, Walsh, & DiLillo, 2010). This accumulation of trauma in childhood until the age of 18 is known as Adverse Childhood Experiences (ACE). Chronic exposure to ACEs is associated with many negative health symptoms in adulthood, and these can have long-term and enduring effects over a lifetime (Reuben et al., 2016; Thompson et al., 2015). Although ACEs are important factors to note when studying survivors, they have yet to be examined in relation to the willingness of a bystander to intervene in instances of power-based violence.

Further, research on bystanders with previous abuse, or knowledge of someone who has been abused, is extremely limited. However, McMahon (2010) found in a sample of incoming undergraduates that students who knew someone that had been sexually assaulted were more willing to intervene than those who did not. Additionally, Banyard (2008) found in an undergraduate sample, that individuals who had more prosocial attitudes, higher bystander efficacy, knew someone who was a survivor of sexual violence, and had taken a class on sexual violence expressed greater bystander willingness to intervene than those that had not. Although these are important findings, there is a dearth of information on previous histories of bystanders and ACE connections with bystander behavior (Banyard, 2008). Additionally, there is little known about the potential connection between knowing a survivor of sexual trauma and bystander behavior. For this reason, ACEs and having a connection with someone who is a survivor of sexual trauma, was explored in the current study.

### **Hypotheses**

The current study sought to examine the effectiveness of Green Dot, while also assessing related predictors of bystander behavior.

Hypothesis 1: Green Dot would significantly increase reported bystander behavior for the experimental group compared to the comparison group (see Figure 3).



*Figure 3.* Hypothesis 1: Expected bystander behavior over time

In congruence with the Theory of Planned Behavior (TPB), the current hypotheses tested whether Green Dot increased bystander efficacy, attitudes, and lower perceived negative social sexual norms.

Hypothesis 2a: Green Dot would significantly increase bystander efficacy for the experimental group compared to the comparison group (see Figure 4).

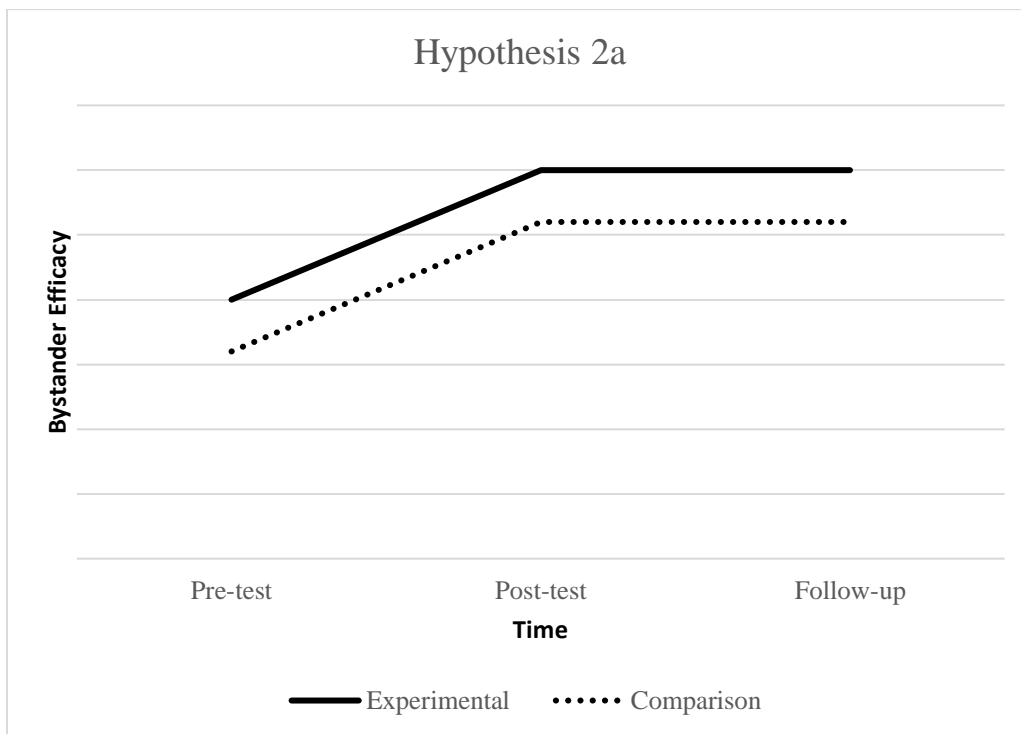


Figure 4. Hypothesis 2a: Expected bystander efficacy over time

Hypothesis 2b: Participation in Green Dot would significantly increase positive bystander attitudes for the experimental group compared to the comparison group (see Figure 5).

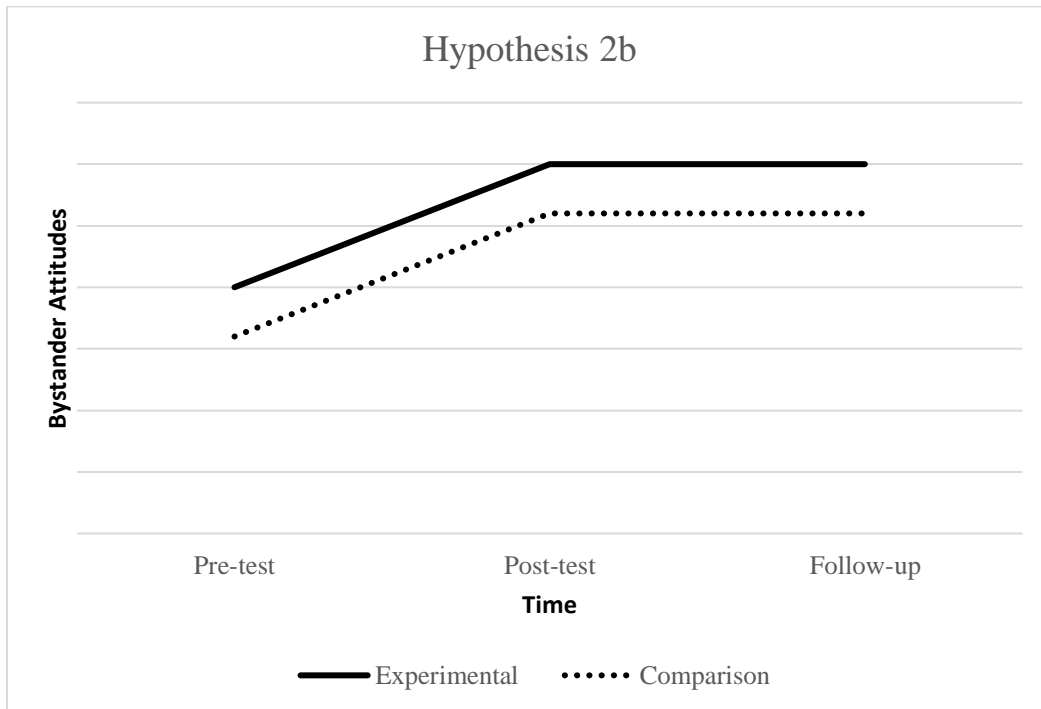


Figure 5. Hypothesis 2b: Expected bystander attitudes over time



Hypothesis 2c: Participation in Green Dot would significantly increase positive perceived social sexual norms for the average male and female on campus for the experimental group compared to the comparison group (see Figure 6).

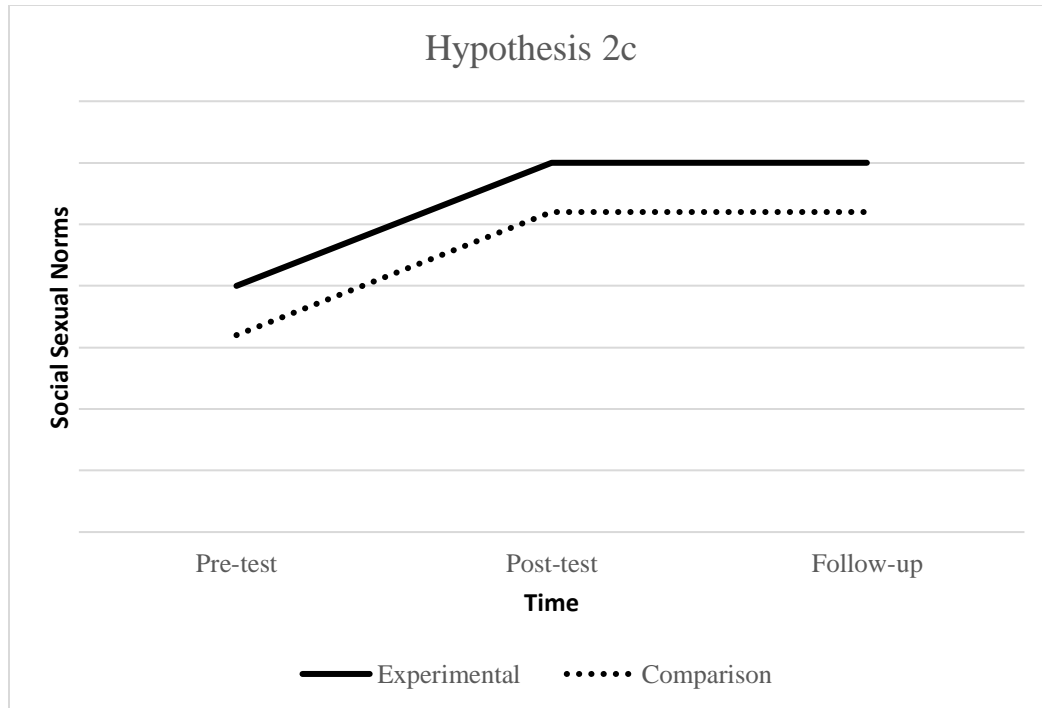
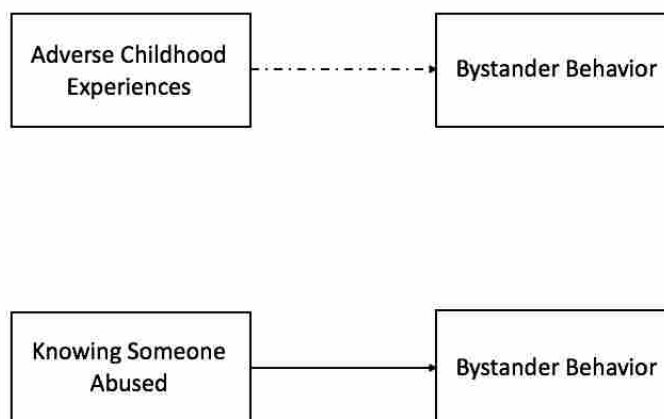


Figure 6. Hypothesis 2c: Expected social sexual norms over time

As a research question, previous ACEs and connections to someone who a survivor of sexual trauma were examined as predictors of bystander behaviors. Due to the lack of previous research on how ACEs may be associated with bystander behavior, a directional hypothesis was not made. It is hypothesized, however, based on Banyard (2008) that participants who know someone who is a survivor of sexual trauma would be more likely to intervene (see Figure 7).

Exploratory hypothesis 1a: ACEs would significantly predict bystander behavior.

Exploratory hypothesis 1b: Knowing someone who has experienced sexual trauma would be significantly and positively associated with bystander behavior.



*Figure 7.* Relationships between adverse childhood experiences (ACE) and knowing someone who has experienced sexual trauma and bystander behavior (Exploratory Hypothesis 1a & 1b). Note the dotted line indicates no directional hypothesis.

**Qualitative component.** In addition to collecting data on bystander behaviors, efficacy, attitudes, and norms, the current study also collected qualitative information on the 3 D's. Specifically, participants were given three vignettes with power-based violence scenarios and

asked how they would respond. Answers were coded by two researchers. These results were explored to see how participants would respond to specific types of violence (i.e., sexual assault, domestic violence, and stalking). Given the lack of previous research, no directional hypotheses were tested, but chi-squares were conducted.

### **Advantages**

The current study is unique in a multitude of ways. First, it is a longitudinal study which is often lacking in the literature (Hoxmeier et al., 2016). Second, it examined how childhood experiences and knowing a survivor of abuse or trauma affected bystander behavior, which is lacking in the literature. Third, it had a (small) comparison group. These variables are unique and important to understanding the effectiveness of bystander interventions over time, and how future bystander interventions can approach individuals who have, or know someone who has, a history of trauma.

The study also examined the effectiveness of Green Dot. Specifically, the results benefit the participating university, as well as contribute to the current literature on bystander behavior. Violence, and specifically sexual violence, is a serious problem and costly for many campuses across the United States. The prevention of sexual violence through bystander interventions may help change that problem and reverse the large burden placed on survivors. Sexual violence prevention research is important for the success of college students (Banyard et al., 2009) as power-based violence interferes with not only physical and mental health, but also academic success.

## CHAPTER 2

### METHODOLOGY

#### Participants

Participants were undergraduate women and men, who took part in the Green Dot program during the 2017-2018 academic year, at a large southeastern university (see Table 1 for demographic information); the comparison group consisted of students who signed up to be in Green Dot but did not attend the training (see Figure 8 for retention).

**Experimental group.** The group that went through Green Dot training ( $N = 94$ ) is referred to as the experimental group. There were 65 participants (69.1% of the total experimental group) who took the pre-test, 46 of those took the one-week post-test, and 43 of those subjects who took the one-month follow-up. The rate of retention was 70.77% from pre-test to post-test and 66.16% from post-test to one-month follow-up.

**Comparison group.** The comparison group consisted of participants who signed up to participate in the Green Dot program, and took the online pre-test, but did not attend the Green Dot training. A total of 13 participants took the pre-test but did not attend the Green Dot training. Of these, 7 took the one-week post-test. These 7 participants also took the one-month follow-up. The retention rate for participants in the comparison group was 53.85% from pre-test to post-test and 53.85% from post-test to follow-up. The comparison group is not considered a true control group due to the lack of equivalent control. Meaning the non-experimental group gets no intervention (as opposed to an equivalent intervention). Therefore, it is considered a comparison group instead of a true control group.

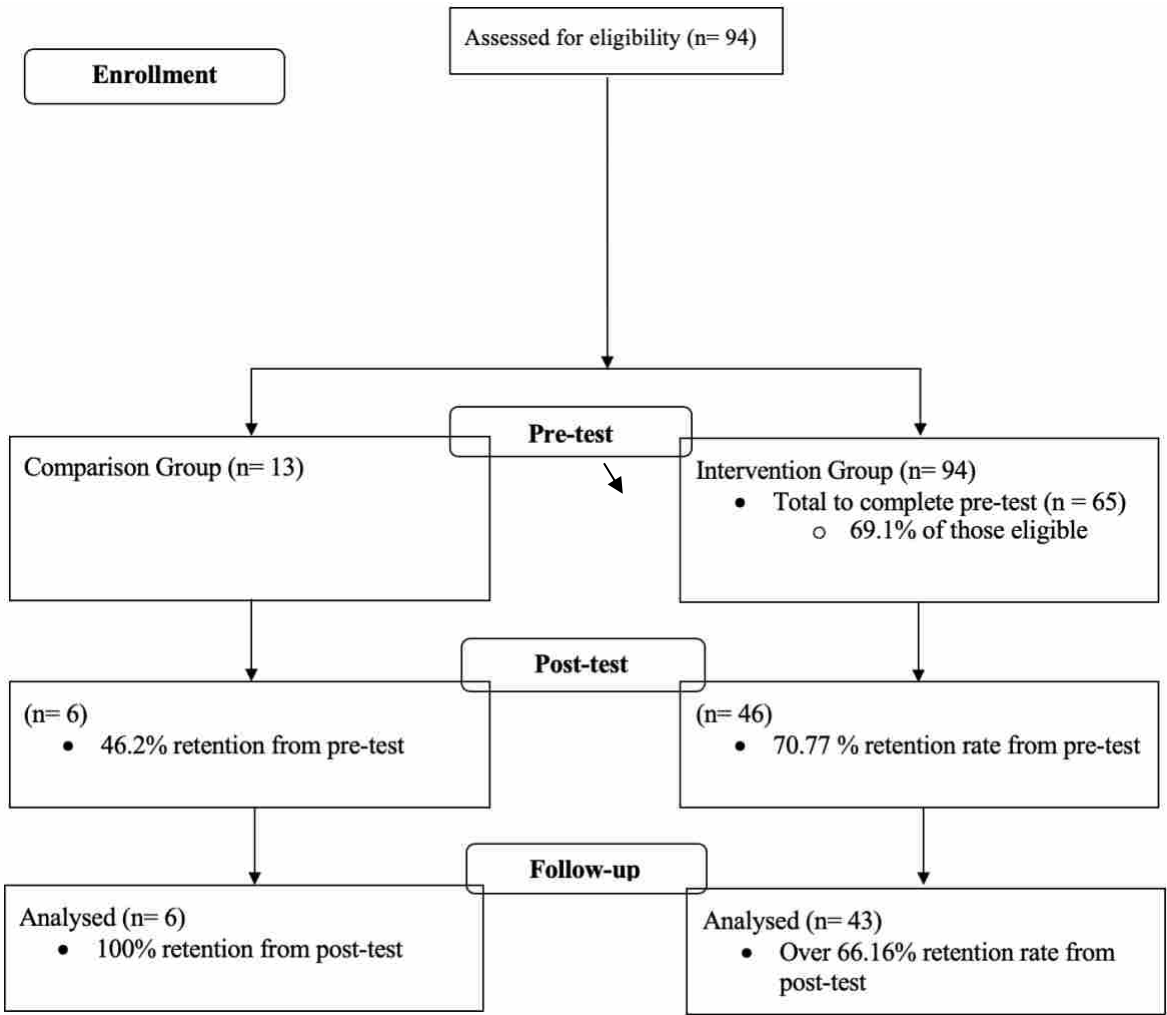


Figure 8. Retention rates for the intervention and comparison group

Table 1

*Demographic Information on the Green Dot Participants (N = 65) and Comparison Participants (N = 13) at Pre-test*

	Experimental Mean ( <i>SD</i> )	Comparison Mean ( <i>SD</i> )
Age (in years)	21.2 (3.9)	20.08 (1.6)
Year in college	<u>Frequency (%)</u>	<u>Frequency (%)</u>
Freshman	18 (27.7)	3 (23.1)
Sophomore	10 (15.4)	3 (23.1)
Junior	12 (18.5)	3 (23.1)
Senior	22 (33.8)	4 (30.8)
Post-bachelors	3 (4.6)	0 (0.0)
Biological sex		
Male	16 (24.6)	0 (0.0)
Female	49 (75.4)	13 (100)
Relationship status		
Never dated	5 (7.8)	0 (0.0)
Not currently dating	18 (28.1)	5 (38.5)
Dating but not in a sexual or romantic relationship	10 (15.6)	4 (30.8)
Dating or in a romantic/sexual relationship but not living together	26 (40.6)	3 (23.1)
Living with or married to partner	5 (7.8)	1 (7.7)
Student status		
Full time	62 (95.4)	13 (100)
Part time	3 (4.6)	0 (0.0)

Race (option to choose more than 1)			
	American Indian/Alaskan Native	5 (7.7)	1 (7.1)
	Asian	7 (10.8)	0 (0.0)
	Black/ African American	26 (40)	5 (35.7)
	Hispanic or Latina/o/x	6 (9.2)	2 (14.3)
	Native Hawaiian or Pacific Islander	4 (6.2)	0 (0.0)
	White	29 (44.6)	7 (50.0)
	Other	1 (1.5)	0 (0.0)
Sexual attraction			
Males	Only attracted to females	16 (100)	
Females	Only attracted to females	3 (6.1)	0 (0.0)
	Mostly attracted to females	1 (2.0)	0 (0.0)
	Equally attracted to males and females	2 (4.1)	1 (7.1)
	Mostly attracted to males	10 (20.4)	3 (21.4)
	Only attracted to males	33 (67.3)	9 (64.3)
Do you know anyone who has been sexual abused/assaulted either as a child and/or an adult?			
	Yes	43 (72.9)	
	No	7 (11.9)	
	Not sure	9 (15.3)	

What is your obligation to intervene in aggressive or violent situations?	
1 = I am not obligated to intervene at all	1 (1.7)
2	2 (3.4)
3	15 (25.4)
4	19 (32.2)
5 = I am completely obligated to intervene in future aggressive or violent situations	22 (37.3)
What is the possibility that you will intervene in future aggressive or violent situations?	
1 = it is not possible that I will intervene in future aggressive or violent situations	1 (1.7)
2	1 (1.7)
3	14 (23.7)
4	19 (32.2)
5 = it is possible that I will intervene in future aggressive or violent situations	24 (40.7)
What is your responsibility to intervene in aggressive or violent situations?	
1 = It is not my responsibility to intervene in future aggressive or violent situations	1 (1.7)
2	3 (5.2)
3	20 (34.5)
4	19 (32.8)
5 = it is my sole responsibility to intervene in future aggressive or violent situations	15 (25.9)



**Recruitment.** Students were recruited by Women’s Center staff at on-campus activities including the student involvement fairs (fall and spring), the “Walk A Mile” event, Green Dot day, and the Feminist Activist Fair. At these events, Women Center staff set up a table with information about the center, and upcoming activities. These tables also had a signup sheet to obtain student e-mail addresses. The Women’s Center then followed up via e-mail and gave the student information on the next Green Dot training. This e-mail is where the researcher included a link to the pre-test (for recruitment communication please see the scripts on Appendix A and the Notification Statement in Appendix B). In addition, except for the first Green Dot training, the researcher was at all the trainings (two per semester or four in total) with paper copies of the pre-test in order to have students, who may have missed the e-mail complete, the pre-test.

### **Comparison Group**

As noted above, the comparison group did not get the Green Dot training. These participants were recruited the same way as experimental group participants. Despite signing up to attend the Green Dot training, they did not attend the training. In addition to completing the pre-test, these students were invited to complete the one-week, and one-month follow-up, at the same intervals as the experimental group. Similar to the experimental group, they were e-mailed the pre-test, one-week, and one-month follow-up, respectively.

### **Compensation**

All participants (experimental and comparison) were compensated for their time with online gift cards sent to them via e-mail after participation. The only exception was students who took the paper pre-tests before the first training session; they were paid \$5 cash for their participation. Reimbursement was \$5 for pre-test, \$10 for the post-test, and \$15 for the follow-

up, totaling \$30 for all three time points.<sup>1</sup> Although participants received \$30.00 upon completing all three surveys, this compensation amount seemed reasonable, and not coercive, given the time necessary to complete the surveys.

### **Information Given at On-Campus Events**

The researcher assisted in the recruitment effort. At all events, the researcher talked with students and gave them information on Green Dot (for full script see Appendix Q). If a student expressed interest, the researcher encouraged them to sign up with the Women's Center. The researcher also gave them her e-mail address in case they had questions. Of note, due to restrictions from the Institutional Review Board at the participating university, the researcher was not allowed to collect any information from the students until they agreed to the notification statement at the beginning of the pre-test. Therefore, the researcher could not collect their e-mail addresses or reach out to them until the pre-test.

Once the Women's Center obtained a student's e-mail address, staff from the Women's Center e-mailed the potential participant about the next training, as well as the link to the pre-test with simple instructions. Upon completing the pre-test, the researcher was allowed to reach out to the participant. Therefore, in order to obtain the post-test and follow-up the researcher e-mailed (and texted) the student one week after the Green Dot training with the link to the post-test; one month later the participant was contacted (again via e-mail and text message) with the link to the follow-up.

### **Procedure**

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<sup>1</sup> Funding (\$1,500) for participant compensation was provided by Student Enrollment & Engagement Services (Tom Madison, budget manager). The researcher was also awarded the Alumni Association's Outstanding Scholar Scholarship award at Old Dominion University allotting \$1,500 for compensating participants.

Participants completed the initial survey prior to program participation. For data collection, participants were contacted every day (except weekends) after the initial e-mail about the post-test until they completed the post-test or one-month lapsed. Once follow-up collection began (i.e., after one month had passed), participants were contacted every day until 30 days had elapsed or the end of the semester (whichever came first).

### **Explanation of Green Dot Training**

Green Dot is a comprehensive bystander intervention program that works to train participants on how to promote safety, tolerance, and nonviolence. It gets the name “Green Dot” from an exercise where participants are asked to imagine a map covered with red dots, which represent an act of violence. Individuals are asked to imagine green dots in the middle of the red dots, and these green dots are any behavior or action that promotes tolerance, safety, and nonviolence. For example, a green dot would be an individual who speaks up when someone around them tells a sexist joke. The goal is to increase the number of green dots and show participants how they can change the map of violence.

According to Green Dot, a bystander is any individual who sees or hears about a behavior that is harmful or violent. A passive bystander is someone who sees or hears about the violent behavior (i.e., a red dot) and does nothing, and on the other hand a green dot bystander is an individual who acts to decrease the likelihood of violent behavior. Green Dot works to increase awareness of red dot behaviors in the realm of sexual assault, domestic/dating violence, and stalking, and raising consciousness of everyone’s responsibility to identify and engage in reducing violence (Cook-Craig, Millspaugh, et al., 2014).

Green Dot sessions included 23 students at the October training; 33 at the November training; 15 students at the February training; and 23 students at the March training (total of 94);

and took 6 hours to complete. At the participating university, the Green Dot program is split into two nights to keep the students from being overburdened with information. The Green Dot philosophy is that to reduce violence there needs to be a culture shift or getting a critical mass of people on campus to publicly support and engage in active bystander behavior. As this can seem daunting, one of the goals of the program is to show individuals that isolation and inaction is not an option; culture shift begins at the individual level. Green Dot diffuses innovation and information through social networks and is focused on a grass roots cultural shift (Coker et al., 2015).

At the sessions, there is food and small prizes that students can win, which encourages involvement. The training session begins with introductions and helping the students get acquainted. Additionally, everyone anonymously writes down the reason that they are at the training and these are read out loud throughout the two-night session. After this, one of the trainers tells their personal story and how they have been impacted by power-based violence. Next, the term bystander is explained to the students, and they are given actions to take in power-based aggressive situations, as well as resources. The students are taught the 3 D's (distract, delegate, direct) and real-world examples of the 3 D's are given. One of the main topics throughout the session is the idea that all people can make a difference in their community and everyone is responsible for ending violence. Importantly, the fidelity of these trainings was examined. The researcher, and another student, attended all trainings and assessed fidelity. A fidelity checklist created by Green Dot was provided by the Women's Center.

### **Fidelity**

Green Dot as a program was created to adhere to and meet certain criteria (see Appendix M for a copy of the checklist; An Excel file of fidelity checklist results is available upon

request.). Although there is room in areas for adaptation to the specific university (i.e., picking and editing scenarios and vignettes to make them specific to that university [for example talking about the student center at the participating university]), overall there is a formulated plan for each training. In order to calculate trainer compliance, the researcher and an undergraduate research assistant attended each training. A percentage of overall compliance was calculated by averaging the amount of completed components for each training, and then creating an overall grand average (85.5%). Trainer fidelity over the 2017-2018 academic year was 85.5%. Further, agreement between the researchers was measured by taking 25% of the observed variables (88) and calculating the number of agreements (76) divided by the total number of observed variables which was 86.4%. Cohen's kappa was calculated to 80.06%, which is near perfect (excel file available upon request).

## **Measures**

**Previous abuse (exploratory research question).** *Adverse Childhood Experiences* (ACE; Felitti et al., 1998; see Appendix C). In order to measure adverse childhood experiences the Adverse Childhood Experiences survey was used (Felitti et al., 1998). The measure of ACEs was used in the exploratory hypothesis (1a) to examine if there was a correlation between previous trauma and bystander behavior. The scale assesses for three categories of childhood abuse; psychological abuse, physical abuse, and sexual abuse. And five types of dysfunction experienced in childhood: exposure to substance abuse, mental illness, violent treatment, parental separation, and criminal behavior. Example questions include, "Did a parent or other adult in the household often or very often push, grab, or shove you?" and, "Did an adult or person at least 5 years older ever touch or fondle you in a sexual way?" The response choices are "yes" or "no".

The ACE study was a two-wave assessment of over 8,000 people in Southern California, in collaboration with Kaiser Permanente and the CDC (Dube et al., 2001; Felitti, 2002). The goal of this four year study was to examine the effects of childhood exposure to adversity on adult health outcomes (Felitti, 2002). The ACE is often used as a frequency measure, which is how it was used in the current study (Dube et al., 2001; Felitti, 2002; Felitti et al., 1998). Individuals are defined as being exposed to a category if they respond “yes” to any of the individual questions within that category, therefore, the measurement scale is 0 (unexposed) to 8 (exposed to all categories). Scores were summed to create a composite score (0-8). Previous research indicates good to excellent test-retest reliability (Dube et al., 2003; Steele et al., 2016; Sun et al., 2016). Given that the ACE assesses only events that occurred in childhood and responses should not change from pre-test to post-test, the ACE was only administered at the pre-test. Cronbach’s alpha was .83.

### **Measures to assess the theory of planned behavior component**

**Sexual norms.** *Sexual Social Norms Inventory - Adjusted [Male] & Sexual Social Norms Inventory - Adjusted [Female]* (SSNI; Bruner, 2003; see Appendixes D & E). To determine perceived social sexual norms the SSNI was used. The survey examines the perceived attitudes of the ‘average’ person of the same or opposite gender on campus. This particular survey assesses students’ perceptions of other students’ feelings towards sexual norms and bystander behaviors. To examine perceived social norms of the ‘average’ student the survey prompt is, “Based on the scale below, please indicate how you think the average male/female student at ODU would respond to the following statements.” Example questions include, “They believe that if a woman has been drinking, it’s her fault if she gets raped,” and, “If they witnessed a rape

they would call the police.” The scale was adjusted from 30 questions to 24 with response items from 1 (*strongly disagree*) to 7 (*strongly agree*).

Due to the gendered nature of the questions, and at the recommendation of the committee, the survey was adjusted so that it could be used interchangeably for both males and females. The original study examined both male and female attitudes about how the ‘average man’ on campus would respond. However, the current study was interested in how males view the norms of other males and females, as well as how females view the norms other males and females, on campus. Therefore, some questions were removed. For example, “They encourage their date to drink so she will let them have sex with her,” and, “At parties, they look for women who are drunk and might be more willing to have sex with them” were considered sex specific and removed. Everyone, no matter their sex, was given both surveys asking about the average male and female on campus.

Composites for the scale were created and examined in analyses with appropriate items being reversed. Higher scores on this measure indicate the perception that the average student has more positive feelings toward bystander behavior and lower approval of sexual aggression/assertiveness. Meaning that the higher values on this scale indicate that the student believes the average male/female on campus is likely to intervene as a bystander and not approve of aggressive sexual behaviors. This measure has shown good internal consistency ( $\alpha = .86$ ) and split-half reliability ( $\alpha = .67$ )<sup>2</sup>. Additionally, indicating validity, it has been correlated with the College Date Rape Attitude and Behavior Survey (Gidycz et al., 2011). In the current study, for males on campus the Cronbach’s alpha was .92 at pre-test, .95 at post-test, and .95 at follow-up.

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<sup>2</sup> In the original survey males and females were given one measure and their responses were not examined separately.

For females on campus, Cronbach's alpha was .87 at pre-test, .91 at post-test, and .93 at follow-up.

***Bystander efficacy.*** *Bystander Efficacy Scale* (BES; Banyard, Plante, & Moynihan, 2005; see Appendix F). A 9-item scale that asks participants to rate how confident they feel about performing a specific bystander behavior. The response scale is 1 (*disagree completely*) to 6 (*agree completely*); items are summed to create a composite score, with higher scores indicating greater levels of efficacy. Questions such as, "There are certain things a person can do to prevent violence" and "People can be taught to help prevent violence" seek to understand the participants' level of confidence in their ability to prevent violence. The BES has been found to be valid (Banyard, 2008) and have good internal consistency (McMahon, 2015). Banyard et al. (2008) used the BES when examining sexual and relationship abuse among 948 first-year college students and reported a Cronbach's alpha of .93. In the current study, internal consistency for the BES was  $\alpha = .94$  at pre-test, .97 at post-test, and .97 at follow-up.

***Bystander attitude.*** *Bystander Attitude Scale* (BAS; McMahon, 2010; see Appendix G). The BAS examines attitudes towards bystander behavior. The survey is comprised of 16 questions that assess how likely participants are to participate in a behavior. The response scale ranges from 1 (*not likely*) to 6 (*extremely likely*). Questions include, "Challenge a friend who made a sexist joke," and, "Report a friend that committed a rape." In a study examining theater (i.e., interactive plays) as a means of violence prevention (i.e., SCREAM [Students Challenging Realities and Educating Against Myths]) researchers found adequate reliability ( $\alpha = .78$ ) for the BAS (McMahon, Postmus, Warrener, & Koenick, 2014). Cronbach's alpha for the current study was .75 for the pre-test, .83 for the post-test, and .88 for the follow-up.



***Bystander behaviors (quantitative).*** *Bystander Attitudes* (McMahon, 2010; Appendix I).

This scale measures actual bystander behavior; it contains 16 questions. Instructions ask if the individual has participated in the behavior in the last 30 days (for the one-week post-test participants were asked about the last 7 days). The response items are “yes”, “no”, “wasn’t in the situation”. Example items include, “report a friend who committed a rape,” and, “challenge a friend who made a sexist joke.” In order to create a composite variable of bystander behavior the total number of “yes” responses were summed and divided by the number of possible times an individual could perform a bystander behavior minus the total number of times that individual was not in the situation (total number of “yes” responses/ [16 – “I wasn’t in the situation” responses]; McMahon et al., 2015a). The scale has demonstrated good reliability ( $\alpha = .88$ ; McMahon et al., 2015). In the current study,  $\alpha = .87$  at pre-test,  $.97$  at post-test, and  $.87$  at follow-up.

**Demographics.** The demographics survey assessed age, year in school, biological sex, gender identity, ethnicity, parental education level, sexual identity, relationship status, student status, living situation, any previous experience with bystander interventions, and if so, what particular program (see Appendix J). Additionally, at the end of the survey resources were provided. Finally, a debriefing followed the final one-month follow-up survey (see Appendix K).

### **Qualitative Responses to Open-ended Questions that Assessed Bystander Behaviors in Response to Vignettes**

***Bystander Behavior Vignettes (Palmer et al., 2016; see Appendix H).*** The participants read a total of 3 vignettes. The vignettes described three types of power-based violence situations: sexual assault, dating violence, and stalking. Twelve vignettes were used. Each type of vignette depicts different personal relationships between the survivor, perpetrator, and

bystander. That is, for each type of vignette (i.e., sexual assault, dating violence, and stalking), the bystander will either know the survivor only, the perpetrator only, both, or neither. Thus, it was possible to examine if personal relationships were associated with bystander intervention. Because previous research has shown personal relationships influence one's decision to intervene (Azimi & Daigle, 2017), this design allowed the researcher to examine whether relationship to the survivor and/or perpetrator may influence one's intentions to intervene. Every participant was administered a sexual violence, dating violence, and stalking scenario for each assessment, however, the relationship between the bystander and the survivor and/or perpetrator was randomly chosen via Qualtrics' random assignment option.

The sexual assault and domestic violence vignettes were taken from Palmer et al. (2016). In accordance with the established pattern of vignettes on domestic violence and sexual assault, the researcher created a stalking vignette. Below are examples from each set of vignettes detailing the relationship pattern between bystander and survivor/perpetrator.

Sexual assault scenario:

GROUP 1: You are at a party and go upstairs to use the bathroom. A few minutes ago you noticed [your friend, Crystal] go upstairs with [a guy.] They had been flirting all night and were going to watch some TV. The walls in the apartment are thin, so you can hear them talking in the next room. You hear [Crystal] say, "Alright, Mike, let's finish this TV show." In a few more minutes, you hear [Crystal] say, "Really, stop. I need to go home." Then: "Mike, get off me. Let go of me!" You can see through a crack in the door that he is moving on top of her, and his pants are down. [Crystal] is crying.

Domestic violence scenario:

GROUP 2: You are in the student center eating lunch with a few of your friends. You notice [a girl and a guy] in an intense conversation. You can see that it looks like he is yelling at her and she looks scared or upset. Suddenly he punches the wall. Your friend says, "She looks scared, we should do something".

Stalking scenario:

GROUP 3: You are in the quad with a few of your friends when [your friend, John] starts to talk about [a girl] whom he met on a dating website for locals. He says, “We went out once, but she told me she never wanted to see me again. Too bad because I’ve been harassing her on social media ever since and sending graphic pictures to her phone.”

After reading the vignettes, the participants completed open-ended responses. The researcher worked with another graduate student to code each open-ended response. The *a priori* coding scheme (found in Appendix H; Palmer et al., 2016) was used as a guide in conjunction with grounded theory (Bernard, Wutich, & Ryan, 2016; Birks & Mills, 2015; Schreier, 2012). The overarching themes in the data were direct, delegate, distract, and indirect. However, the researcher and coder also found different combinations and juxtaposed behaviors that were also coded. Frequencies were conducted for each type of response (i.e., direct, delegate, etc.) in each different scenario (i.e., type of violence, relationship to survivor/perpetrator, and assessment time). After extensive discussion, the coders developed a final codebook. Cohen’s Kappa was calculated to determine the number of agreements minus the number of expected agreements by chance divided by the number of items and number of expected agreements by chance (Cohen, 1960;  $\Sigma a - \Sigma ef / N - \Sigma ef$ ). Total kappa was calculated to be  $493 - 77.81 = 415.19$  in the numerator, and  $543 - 77.81 = 465.19$  in the denominator, and divided  $415.19/465.19$  to get a kappa of 89.25% (the 56 X 56 agreement table is available from the author by request). Cohen (1960) suggested that kappa be interpreted as follows: values  $\leq 0$  reflect no agreement, 0.01–0.20 as none to slight, 0.21–0.40 as fair, 0.41–0.60 as moderate, 0.61–0.80 as substantial, and 0.81–1.00 as near perfect agreement. Thus, interrater agreement in the present study was near perfect.

After coding was complete, chi-square tests were run to determine if the responses were statistically different depending on type of scenario, relationship to survivor/perpetrator, and time of assessment (detailed in the results section). There were 543 responses total, 13 (6.6%)

missing responses from the pre-test, 57 (28.8%) from the post-test, and 51 (25.8%) from the follow-up.

Direct, delegate, distract, and indirect were the main categories (taken from Palmer et al., 2016 and Green Dot training). Below is an example of distraction reported in the sexual violence scenario at post-test by a 19-year-old female:

Open the door and use the distraction method that we learned during training. This would involve me opening the door and starting a conversation with Crystal, asking if everything was okay, and that I needed her to come help me with my makeup in the bathroom, and I would wait until in the doorway until she was with me.

The following is an example of direct intervention reported in the sexual violence scenario post-test from a 25-year-old male:

I'd go in there and tell him to get off of her. I would leave until she left and went downstairs with me.

All the coded themes found in the data are below (see Tables 3-5). Underneath those main categories, there are subcategories. These subcategories represent the main category of behavior with additional information (i.e., with assistance, primary, etc.). Below is an example of direct with assistance reported for the sexual violence scenario at pre-test from a 19-year-old female:

I would grab a friend or someone else and go into the room to stop him. I usually go to parties with my boyfriend, so I would bring my boyfriend with me so he can control the guy if he gets angry and I can check up on the girl and make sure she is okay and safe. Then if she didn't have any friends at the party I'd offer to walk her home so that John wouldn't harass her again.

Additionally, many participants reported using multiple behaviors. In these cases, the behavior was subcategorized (i.e., primary, secondary, and tertiary). ‘Primary’ means it was the first reported method of intervention. ‘Secondary’ means it was the second behavior reported, and ‘tertiary’ indicates it was the third method reported. Below is an example of behavior coded as delegate primary (with empathy), delegate secondary. This was reported in the follow-up for the stalking scenario from a 23-year-old female:

I would first explain how it feels to be on the other side [direct with empathy primary]. If he keeps on doing that, I will let him know that I am going to have to tell someone about this [delegate secondary].

Further, participants often reported getting others involved. Getting others involved was considered ‘with assistance’ because the participant chose to intervene, but indicated they would ask for assistance from others, police, and so forth. More specifically, these with assistance categories were not considered a delegate behavior because the participant still reported that they would intervene themselves. Below is an example of direct with assistance reported in the dating violence scenario post-test by a 26-year-old male:

I would approach them with my friend [assistance] and separate them and ask if everything was alright. Then ask if the girl needed anything and ask the guy why he was reacting violently.

‘Empathy’ was also included as a theme because many people reported sharing their lived and personal experiences with the perpetrator or the survivor; therefore, they were considered to be intervening with empathy. Below is an example of empathy (coded as direct with empathy) reported in post-test for the stalking scenario from a 21-year-old female:

I would tell him to knock it off he wouldn't want someone to do that to him and that is no way to treat a woman.

An important note, this woman stated in her pre-test that she would do nothing in this scenario. However, when she responded to the post-test, she reported using intervention strategies.

Some participants reported threatening the perpetrator, usually with things like calling the police or reporting the incident to the police (i.e., 'with threat'). A 22-year-old woman reported she would do nothing in the pre-test and then in the post-test, "confront him and tell him to stop doing it before I report him". Her statement is an example of direct with threat.

Further, if the coders could not clearly understand the behavior that was being reported it was coded as unclear (i.e., 'I would help') and if the participant reported doing nothing they were coded as 'nothing'. Moreover, some participants reported a mixture of behaviors employed at in response to one scenario. These behaviors were considered combinations. These are different from the behaviors that were labeled primary, secondary and tertiary, because the participant reported employing each behavior at once as opposed to one behavior followed by the other. There were many different combinations (reported below). This is an example of a direct delegate compound reported in the follow-up for the stalking scenario: A 19-year-old female said she would, "Tell him to stop, and let him know that that's harassment. Report him"

Additionally, a combination behavior could be considered primary, secondary or tertiary if the participant reported other behaviors in conjunction. After coding was complete, chi-square tests were run to determine if the responses were statistically different depending on type of scenario, relationship to survivor/perpetrator, and time of assessment (detailed in the results section).

Table 2

*Coding Scheme for Qualitative Data*

<b>Main Category</b>				
	<b>Direct</b>	<b>Delegate</b>	<b>Distract</b>	<b>Indirect</b>
Subcategory	Direct Primary	Delegate primary	Distract primary	Indirect primary
	Direct secondary	Delegate secondary	Distract secondary	Indirect secondary
	Direct with assistance	Delegate with empathy secondary	Distract tertiary	Indirect tertiary
	Direct with assistance primary	Delegate with threat secondary	Direct with assistance	Indirect with assistance secondary
	Direct with assistance secondary		Direct with assistance primary	
	Direct with empathy			
	Direct with empathy primary			
	Direct with threat			

Table 3

*Combination Categories for Qualitative Data*

Direct/ Delegate
Direct/ Distract
Direct OR Distract
Delegate/ Direct with Threat
Unclear/ Delegate
Direct/ Indirect
Distract/ Direct/ Delegate
Direct/ Delegate with Empathy
Direct with Assistance/ Delegate
Delegate/ Distract Primary

Direct/ Indirect Secondary
Delegate/ Indirect Tertiary
Delegate/ Distract Secondary
Direct/ Indirect Tertiary
Delegate/ Indirect
Direct with Assistance/ Indirect
Indirect/ Distract/ Delegate
Indirect/ Delegate
Direct/ Indirect/ Delegate
Distract/ Indirect
Delegate/ Unclear
Distract/ Direct with Assistance/ Primary
Direct with Assistance/ Distract

Table 4

*Miscellaneous Qualitative Categories*

Unclear
Unclear primary
Nothing
Nothing primary
Threat secondary



## CHAPTER 3

### ANALYSES

#### **Brief Overview of the Statistical Model**

This section discusses the analytic results. First, information about power and the sample of participants is presented, followed by data cleaning procedures. This information is followed by a discussion of hierarchical linear models (HLM), qualitative responses, exploratory analyses, and limitations. Given the longitudinal nature of the data, each participant had multiple data points. See Table 5 for the specific analyses used to examine each hypothesis. Additionally, biological sex is included in HLM analyses as a control.

Table 5

*Overview of Analyses for Each Hypothesis*

Hypothesis	Variable	Analyses used
Hypothesis #1: Green Dot would significantly increase reported bystander behavior for the experimental group compared to the comparison group.	Bystander behavior	HLM
Hypothesis # 2: Green Dot would significantly increase bystander efficacy and attitudes and would significantly decrease perceived normative approval of power-based violence for the experimental group compared to the comparison group.	Bystander efficacy	HLM
	Bystander attitudes	HLM
	Social sexual norms	HLM
Exploratory Hypothesis #1: ACEs would significantly predict bystander behavior.	ACE	Linear regression
Exploratory Hypothesis #2: Knowing someone who has experienced sexual trauma would significantly increase bystander behavior.	Knowing someone	Linear regression
Qualitative data	Potential changes in 3 D's over time	Qualitative analysis & Chi-square

In cases where data are longitudinal (i.e., time points nested within individuals), the effect of the predictor variables on the outcome may depend on nesting; therefore, it is important that nesting be accounted for in the model. For this reason, HLM 7 (Raudenbush, Bryk, Cheong, Congdon, & Du Toit, 2011) was used to analyze the data. Each outcome variable (i.e., bystander behavior, efficacy, attitudes, and social sexual norms) was examined with time as a level 1 predictor and group membership and sex as level 2 predictors (these variables do not change over time). This resulted in four sets of models. Group membership was coded as 1 for the experimental group and 0 for the comparison group. Sex was coded as 1 for females and 0 for

males. Time was dummy coded to allow for a non-linear trend (McCoach & Kaniskan, 2010; Table 6).

Table 6

*Dummy Coding*

Treatment	Pre-test	Post-test	Follow-up
Time 1	0	1	0
Time 2	0	0	1

**Data Cleaning**

Prior to data analysis all potentially identifying information was removed and participants were given ID numbers. Outliers were assessed with boxplots and, if more than 3 interquartile ranges from the median, Winsorized (changed to be the next highest score). When creating the bystander behavior scores, total number of “yes” responses were summed. These were examined for outliers before creating composites. On this scale for the pre-test there were 3 outliers scores 15, 14, and 14 changed to 14, 13, and 13, respectively. On the same measure for the post-test there were 8 outliers, six that were 16 and one at 15, Winsorized to 8 and 7, respectively. Next data were checked for skewness and kurtosis (no variables used were skewed or kurtotic; see Table 7).

Table 7

*Descriptive Information about Variables*

Variable	<i>N</i>	Minimum	Maximum	Mean	<i>SD</i>	Skewness	Kurtosis
ACE	76	0	7.00	1.38	1.73	1.73	1.43
Bystander behavior pre-test	72	0	1.00	0.73	0.24	-0.76	0.10
Bystander behavior post-test	38	0	1.00	0.60	0.34	-0.50	-0.74
Bystander behavior follow-up	55	0	1.00	0.73	0.24	-0.76	0.11
Efficacy pre-test	78	20	54	46.32	6.74	-1.19	0.26
Efficacy post-test	52	27	54	47.15	6.42	-0.79	0.11
Efficacy follow-up	55	27	54	46.05	7.44	-0.77	-0.05
Attitudes pre-test	77	39	80	67.14	8.01	-1.07	1.41
Attitudes post-test	52	48	80	67.88	8.49	-0.60	-0.51
Attitudes follow-up	54	44	80	67.70	9.51	-0.97	0.11
SSNI male pre-test	73	51	164	97.01	22.23	0.55	0.74
SSNI male post-test	52	36	161	97.10	29.06	0.36	-0.09
SSNI male follow-up	53	40	168	101.15	27.00	0.30	0.31
SSNI female pre-test	74	18	164	115.38	40.80	-1.22	0.26
SSNI female post-test	52	73	163	131.02	21.79	-0.71	0.11
SSNI female follow-up	54	80	168	131.59	21.93	-0.52	-0.66

Linearity was assessed via scatterplots with Loess lines. None of the data were U or  $\cap$  shaped, indicating the variables were linear. The HLM program was used with restricted maximum likelihood to examine the following models: the unconditional model, and the slopes and intercepts as outcomes model (Raudenbush & Bryk, 2002). In the slopes and intercepts as outcomes model, the predictors (in this case, group membership and sex) are examined to

determine if they significantly predict the intercept, significantly predict the within-person slope, and/or how much variation in the intercept and slope is explained by the predictors (Raudenbush & Bryk, 2002).

Chi-square tests were conducted to examine potential differences between the experimental and comparison groups on demographic variables at baseline (see Table 8). However, because age is continuous it was examined via a *t*-test;  $t(76) = 1.077, p = .332$ . The only variable significantly different at baseline between the experimental and comparison group was sex (as the comparison group was all women,  $p = .045$ ). Therefore, sex was included as a control variable in the HLM models.

Table 8

*Chi-Square test for Differences between Experimental and Comparison Group at Baseline on Demographic Variables*

Variable	<i>df</i>	<i>p</i>	$\chi^2$
Sex	1	.045*	4.026
Year in school	4	.875	1.221
Romantic relationship status	4	.7296	4.913
Student status	1	.380	0.769
Race	8	.094	13.546

*Note.* \* Significant at  $p < .05$ . Sex was coded as 0 = Male, 1 = Female; Year in school was coded 1 = Freshman, 2 = Sophomore, 3 = Junior, 4 = Senior, 5 = Post-bachelors; Romantic relationship status was coded 1 = never dated, 2 = not currently dating, 3 = I go out on dates, but I'm not dating, sexual or romantic, 4 = I am in a dating, sexual or romantic relationship, but not living together, 5 = I am currently married or living with my partner; Student status was coded 1 = full-time, 2 = part-time, 3 = other; Race was coded 1 = American Indian or Alaskan Native, 2 =

Asian, 3 = Black or African American, 4 = Hispanic or Latino/a, 5 = Native Hawaiian or other Pacific Islander, 6 = White, 7 = Other.

### **Bivariate Correlations**

Bivariate correlations were conducted to examine the relationships between the variables (see Table 9). For the experimental group, at pre-test, bystander efficacy was significantly positively related to bystander attitudes, and perceived social sexual norms for the average female on campus. That is, higher bystander efficacy was significantly related to higher bystander attitudes, and lower perception of female sexual norms (i.e., perceiving females to be less sexually assertive). Bystander attitudes was significantly positively related to social sexual norms for the average female on campus, such that positive bystander attitudes were significantly associated with a more positive perception of the sexual norms for women on campus.

At the one-week post-test bystander efficacy was significantly positively correlated with bystander attitude, and perceived social sexual norms for females. Again, higher bystander efficacy was significantly related to higher bystander attitudes, and a more positive perception of the sexual norms for women on campus at the post-test. Similar to results from the pre-test data, bystander attitude was positively correlated with social sexual female norms. Additionally, perceived male and female social sexual norms were positively correlated at post-test, meaning as the perception of sexually aggressive behavior for the average males decreased so did the perception for the average female on campus. Finally, similar to the pre-test and post-test, at the one-month follow-up there was a significant positive correlation between bystander efficacy and bystander attitudes, as well as social sexual norms for females. Bystander behaviors were not correlated with any variables in the experimental group.

For the comparison group, in the post-test, bystander behavior was significantly positively related to bystander attitudes. Meaning that as positive bystander attitudes increased so did reports of bystander behavior. However, bystander efficacy was negatively related to social sexual norms for the average male on campus at post-test for the comparison group. This correlation indicates that as bystander efficacy increased perceived positive social sexual norms for the average male on campus decreased. It is important to note that the comparison group was comprised only of women.

Table 9

*Bivariate Correlations*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Bystander behavior pre-test	-	-.31	-.47	-.29	-.02	-.08	-.24	-.25	-.52	.23	-.46	-.59	-.29	.20	-.39	n/a
2. Bystander behavior post-test	.38*	-	.61	.85*	.92**	.57	.48	.88*	.89*	-.68	-.63	-.23	.65	.36	.93*	n/a
3. Bystander behavior follow-up	.05	.08	-	.28	.77	-.49	.50	.17	.84	-.02	-.65	-.15	.60	.88	.38	n/a
4. Bystander efficacy pre-test	-.06	.04	.02	-	.76	.71	.17	.81	-.11	-.11	-.62	-.27	.37	.49	.91*	n/a
5. Bystander efficacy post-test	-.10	.17	.05	.68**	-	.37	.41	.69	.91*	-.42	-.83*	-.52	.62	.53	.90*	n/a
6. Bystander efficacy follow-up	-.08	-.03	.18	.68**	.78**	-	-.08	.87	-.20	-.38	-.30	-.25	.43	-.14	.47	n/a
7. Bystander attitude pre-test	.05	.06	.07	.54**	.48**	.52**	-	.58	.87*	-.33	-.23	.38	-.47	-.34	-.26	n/a
8. Bystander attitude post-test	-.25	-.10	.03	.49**	.59**	.55**	.70**	-	.60	-.66	-.50	.05	.53	.13	.72	n/a
9. Bystander attitude follow-up	-.20	-.30	.24	.47**	.56**	.74**	.57**	.86**	-	-.27	-.52	.15	.05	.50	.08	n/a
10. SSNI male pre-test	-.17	-.18	-.24	.09	.12	.13	.04	.16	.16	-	-.06	-.08	.04	.13	-.62	n/a



11. SSNI male post-test	-.05	-.11	-.27	.27	.17	.24	.09	.28	.24	.87**	-	.74	-.54	-.71	-.52	n/a
12. SSNI male follow-up	-.08	-.02	-.25	.25	.20	.22	.04	.25	.25	.82**	.92**	-	-.36	-.88*	-.30	n/a
13. SSNI female pre-test	.01	-.24	.02	.55**	.55*	.43**	.44**	.39*	.35*	.24	.25	.20	-	.70	.86*	n/a
14. SSNI female post-test	-.08	.08	-.17	.62**	.58**	.64**	.54**	.58**	.52**	.26	.43**	.46**	.64**	-	.47	n/a
15. SSNI female follow-up	-.13	-.10	.00	.62**	.66**	.73**	.40**	.51**	.60**	.41**	.55**	.55**	.61**	.82**	-	n/a
16. Sex (experimental only)	.00	.02	.16	.12	.13	.05	.24	.37*	.18	-.48**	-.38*	-.35*	.04	.08	.05	-

*Note.* SSNI = Social Sexual Norms Inventory. Spearman's rho reported for sex. The experimental group is below, and the comparison group is above the diagonal. The comparison group was completely female, therefore, there are no correlations for sex differences.

\*  $p < .05$ , \*\*  $p < .01$ .

## Model

As mentioned above, every variable of interest (bystander behavior, efficacy, attitudes, and social sexual norms for males and females) was analyzed via each of the following models (Raudenbush & Bryk, 2002; Raudenbush et al., 2011). Due to the nature of the predictor variables time, gender, and group status (all three dummy coded) were left uncentered as they have a meaningful zero (Raudenbush & Bryk, 2002). Additionally, deviance tests ( $\chi^2$ ) were examined in order to determine if the parameter estimates within the models should be fixed or random (Raudenbush & Bryk, 2002). Meaning each outcome variable was run twice (once as a random effects model and once as a fixed effects model), the significance of the deviance test scores were examined, and the model that fit the data better was used.

**Unconditional model.** In the unconditional model there are no predictors of the outcome variable, as the goal is to create a null model from which to compare other models. The unconditional model calculates how much variance was accounted for in the other models (i.e., to see if the other models explain more variance). And to create the interclass correlation (ICC; participant variability divided by total variability) which indicates the variance in the outcome due to individual differences.

Level 1 (1)

$$Y_{ti} = \pi_{0i} + e_{ti}$$

Level 2

$$\pi_{0i} = \beta_{00} + r_{0i}$$

$Y_{ti}$  = the observed status at time  $t$  for individual  $i$

$e_{ti}$  = level 1 error

$\pi_{0i}$  = the intercept (the true score of person  $i$  at the intercept)

$\beta_{00}$  = person level mean intercept

$r_{0i}$  = random effect

$\tau_{00}$  = level 2 variance ( $r_{0i}$ )

$\sigma^2$  = level 1 variance ( $e_{ti}$ )

$$ICC = \frac{\tau_{00}}{(\tau_{00} + \sigma^2)} \quad (2)$$

**Slopes and intercepts as outcomes.** The slopes and intercepts as outcomes model examines time, group membership, and sex with main effects and interactions (group\*time1, sex\*time1, group\*time2, sex\*time2).

Level 1 (3)

$$Y_{ti} = \pi_{0i} + \pi_{1i}(time1_{ti}) + \pi_{2i}(time2_{ti}) + e_{ti}$$

Level 2

$$\pi_{0i} = \beta_{00} + \beta_{01}(group_i) + \beta_{02}(sex_i) + r_{0i}$$

$$\pi_{1i} = \beta_{10} + \beta_{11}(group_i) + \beta_{12}(sex_i) + r_{1i}$$

$$\pi_{2i} = \beta_{20} + \beta_{21}(group_i) + \beta_{22}(sex_i) + r_{2i}$$

$\pi_{0i}$  = the intercept (initial status)

$\pi_{1i}(time1_{ti})$  = the slope for time 1 (person i)

$\pi_{2i}(time2_{ti})$  = the slope for time 2 (person i)

$e_{ti}$  = level 1 error

$\beta_{00}$  = mean intercept (mean initial status)

$\beta_{10}$  = the growth rate (time 1)

$\beta_{20}$  = the growth rate (time 2)

$r_{0i}$  = random effect

\*  $r_{1i}$

= random effect level 1 (only included if model is run as random instead of fixed)

\*  $r_{2i}$

= random effect level 2 (only included if model is run as random instead of fixed)

## HLM Model Results

**Bystander behavior.** Hypothesis #1: Green Dot would significantly increase reported bystander behavior for the experimental group compared to the control group (see the results of the unconditional model in Table 10).

### *Unconditional model.*

Table 10

*The Unconditional Model for Bystander Behavior*

<i>Fixed Effect</i>	<i>Coefficient</i>	<i>SE</i>	<i>t</i>	
$\beta_{00}$	0.70	0.04	15.63	
<i>Random Effect</i>	<i>Variance Component</i>	<i>df</i>	$\chi^2$	<i>p</i>
$r_{0i}$	0.03	24	48.53	.002
$e_{ti}$	0.08			

$$ICC = \frac{0.026}{(0.026 + 0.077)} = .252 \quad (4)$$

The ICC is .252. This means that 25.2% of the variance in bystander behavior is due to the differences among participants and 74.8% due to change over time.

**Slopes and intercepts as outcomes.** Bystander behavior was examined to determine if there were effects of time, group membership, or sex. Additionally, two interactions were examined to determine if there were effects for group membership over time, or for sex over

time. First, deviance scores were examined to determine if the slopes for the effect of time should be random or fixed (see Table 11). Results of the deviance test indicate that randomizing the slopes does not significantly contribute to the explanation of variance for the outcome variable (bystander behavior), therefore, the fixed effects model was used. Second, results (see Table 12) indicate that there were no significant changes over time in bystander behavior,  $\pi_{1i} = 0.21$  (time 1), and  $\pi_{2i} = -0.12$  (time 2). Additionally, there were no significant differences between groups (experimental or comparison),  $\beta_{01} = -0.11$ , or between men and women (sex),  $\beta_{02} = 0.10$ . Finally, there was no interaction between group membership and time,  $\beta_{11} = -0.08$  (time 1), and  $\beta_{21} = 0.02$  (time 2), or between sex and time,  $\beta_{12} = -0.14$  (time 1), and  $\beta_{22} = 0.07$  (time 2; see Figure 9 for means).

Table 11

*Results of Deviance Test for Bystander Behavior*

Model	Number of Parameters		Deviance
1. Fixed	2		54.31
2. Random	4		52.69
	$\chi^2$	$df$	$p$
Fixed versus random	1.63	2	.444

Table 12

*The Fixed Effect Model for Bystander Behavior*

	<i>Coefficient</i>	<i>SE</i>	<i>t</i>	<i>df</i>	<i>p</i>
Mean bystander behavior					
Intercept, $\pi_{0i}$	0.71	0.26	2.67	22	.014
Group, $\beta_{01}$	-0.11	0.18	-0.61	22	.548
Sex, $\beta_{02}$	0.10	0.21	0.49	22	.626
Group & sex differentiation time 1					
Intercept, $\pi_{1i}$	0.21	0.33	0.65	66	.520
Group, $\beta_{11}$	-0.08	0.23	-0.34	66	.734
Sex, $\beta_{12}$	-0.14	0.26	-0.54	66	.594
Group & sex differentiation time 2					
Intercept, $\pi_{2i}$	-0.12	0.33	-0.36	66	.721
Group, $\beta_{21}$	0.02	0.23	0.10	66	.922
Sex, $\beta_{22}$	0.07	0.26	0.26	66	.800
<i>Random Effect</i>	<i>Standard Deviation</i>	<i>Variance Component</i>	<i>df</i>	$\chi^2$	<i>p</i>
$r_{0i}$	0.16	0.03	22	41.21	.008
$e_{ti}$	0.29	0.09			

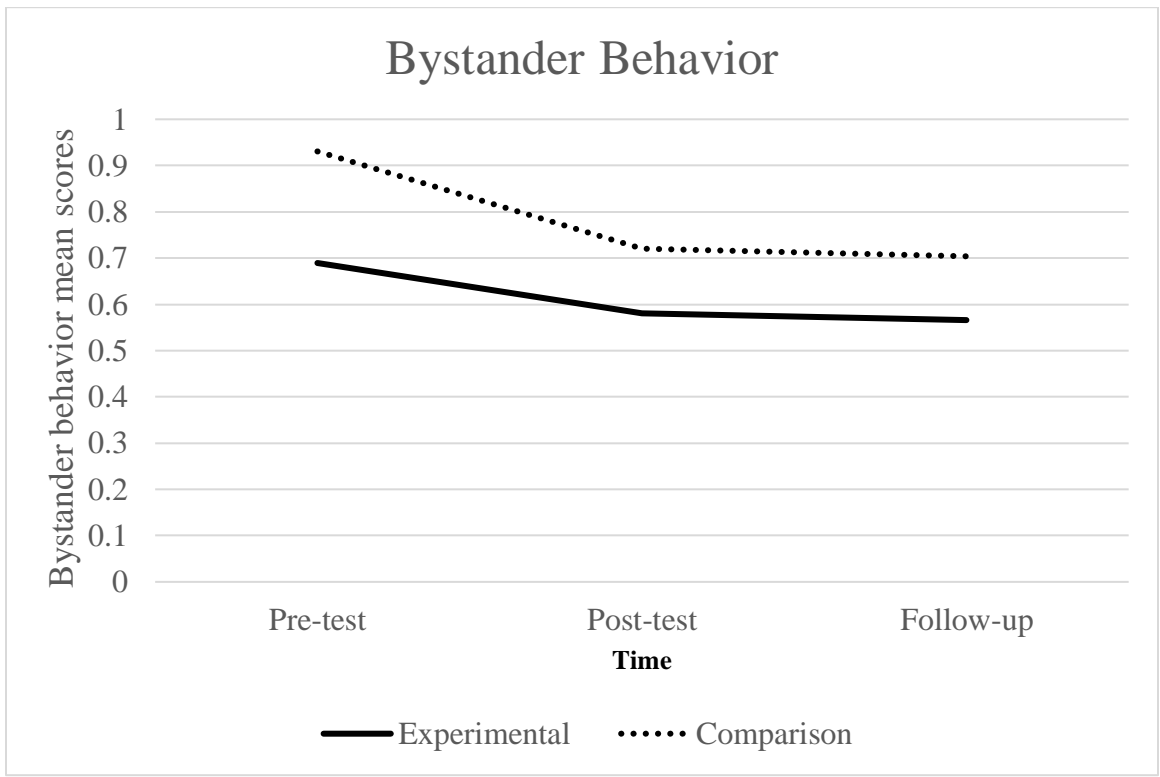


Figure 9. Bystander behavior mean scores over time

**Bystander efficacy.** Hypothesis # 2a: Green Dot would significantly increase bystander efficacy for the experimental group compared to the comparison group (see Table 13 for results of the unconditional model).



***Unconditional model.***

Table 13

*The Unconditional Model for Bystander Efficacy*

<i>Fixed Effect</i>	<i>Coefficient</i>	<i>SE</i>	<i>t</i>	
$\beta_{00}$	47.81	0.88	55.43	
<i>Random Effect</i>	<i>Variance Component</i>	<i>df</i>	$\chi^2$	<i>p</i>
$r_{0i}$	15.79	24	129.68	.001
$e_{ti}$	10.76			

$$ICC = \frac{15.794}{(15.794 + 10.760)} = .595 \quad (5)$$

The ICC is .595. This means that 59.5% of the variance in bystander efficacy is due to the differences among participants and 40.5% due to change over time.

***Slopes and intercepts as outcomes.*** Bystander efficacy was examined to determine if there were effects of time, group membership, or sex. Additionally, two interactions were examined to determine if there were effects of group membership over time, or sex over time. First, deviance scores were examined to determine if the results should be random or fixed (see

Table 14). Results of the deviance test indicate that randomizing the slopes does not significantly contribute to the explanation of variance for the outcome variable (bystander efficacy), therefore, the fixed effects model was used. Second, results (see Table 15) indicate that there were no significant changes over time in bystander efficacy,  $\pi_{1i} = -3.42$  (time 1), and  $\pi_{2i} = -1.03$  (time 2), or between men and women (sex),  $\beta_{02} = -1.94$ . However, there was a significant difference between groups (experimental and comparison),  $\beta_{01} = -5.94$ , such that the comparison group had significantly higher bystander efficacy when compared to the experimental group. Finally, there was no interaction between group membership and time,  $\beta_{11} = 3.75$  (time 1), and  $\beta_{21} = 1.03$  (time 2), or between sex and time,  $\beta_{12} = 1.67$  (time 1), and  $\beta_{22} = 0.78$  (time 2; see Figure 10 for means).

Table 14

*Results of Deviance Test for Bystander Efficacy*

Model	Number of Parameters		Deviance
1. Fixed	2		397.97
2. Random	4		395.81

	$\chi^2$	<i>df</i>	<i>p</i>
Fixed versus random	2.16	2	.339

Table 15

*The Fixed Effect Model for Bystander Efficacy*

	<i>Coefficient</i>	<i>SE</i>	<i>t</i>	<i>df</i>	<i>p</i>
Mean bystander behavior					
Intercept, $\pi_{0i}$	53.94	4.06	13.29	22	.001
Group, $\beta_{01}$	-5.94	2.81	-2.12	22	.046
Sex, $\beta_{02}$	-1.94	3.17	-0.61	22	.545
Group & sex differentiation time 1					
Intercept, $\pi_{1i}$	-3.42	3.79	-0.90	66	.371
Group, $\beta_{11}$	3.75	2.62	1.43	66	.157
Sex, $\beta_{12}$	1.67	2.96	0.56	66	.574
Group & sex differentiation time 2					
Intercept, $\pi_{2i}$	-1.03	3.79	-0.27	66	.787
Group, $\beta_{21}$	1.03	2.62	0.39	66	.696
Sex, $\beta_{22}$	0.78	2.96	0.26	66	.793
<i>Random Effect</i>	<i>Standard Deviation</i>	<i>Variance Component</i>	<i>df</i>	$\chi^2$	<i>p</i>
$r_{0i}$	3.19	14.57	22	107.64	.001

$e_{ti}$  3.35 11.23

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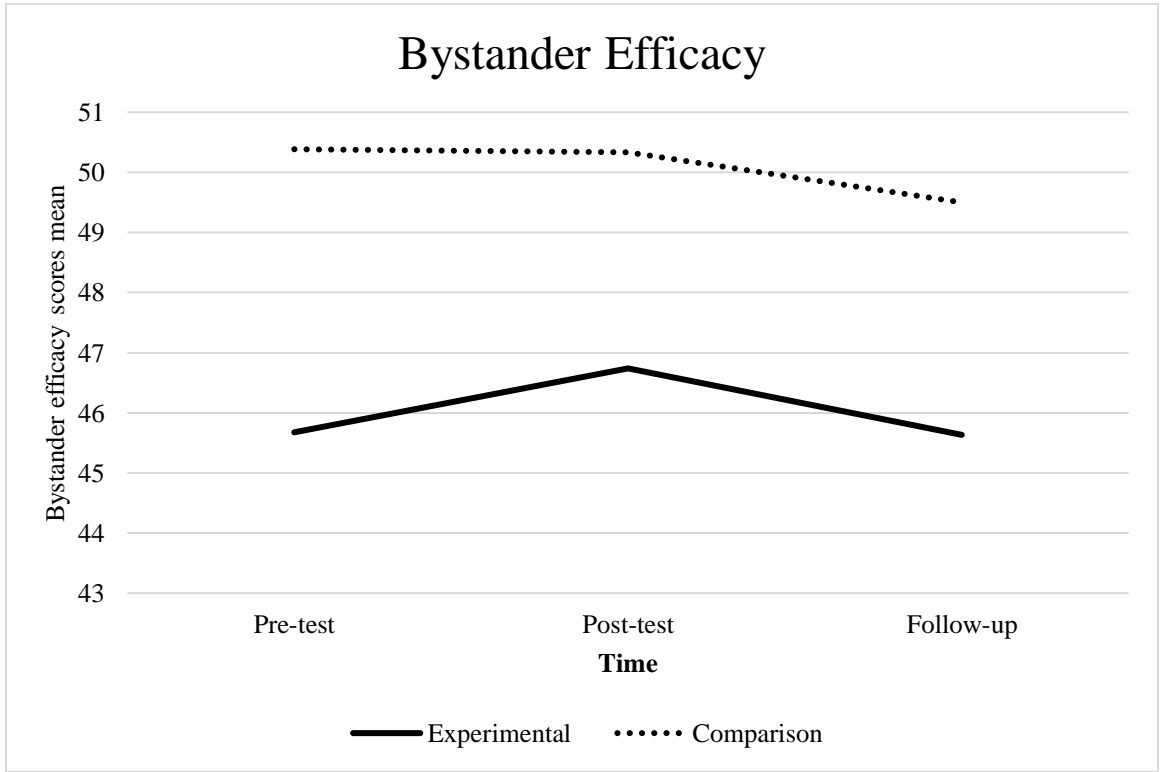


Figure 10. Bystander efficacy mean scores over time

**Bystander attitudes.** Hypothesis # 2b: Green Dot would significantly increase bystander attitudes for the experimental group compared to the comparison group (see Table 16 for results of the unconditional model).

*Unconditional model.*

Table 16

*The Unconditional Model for Bystander Attitudes*

<i>Fixed Effect</i>	<i>Coefficient</i>	<i>SE</i>	<i>t</i>		
$\beta_{00}$	68.76	1.33	51.84		
<i>Random Effect</i>	<i>Variance Component</i>	<i>df</i>	$\chi^2$	<i>p</i>	
$r_{0i}$	41.23	24	239.94	.001	
$e_{ti}$	13.75				

$$ICC = \frac{41.228}{(41.228 + 13.747)} = .750 \quad (6)$$

The ICC is .750. This means that 75.0% of the variance in bystander attitude is due to the differences among participants and 25.0% due to change over time.

*Slopes and intercepts as outcomes.* Bystander attitudes were examined to determine if there were effects of time, group membership, or sex. Additionally, two interactions were examined to determine if there were effects of group membership over time, or sex over time. First, deviance scores were examined to determine if the results should be random or fixed (see Table 17). Results of the deviance test indicate that randomizing the slopes does not significantly contribute to the explanation of variance for the outcome variable (bystander attitude), therefore, the fixed effects model was used. Second, results (see Table 18) indicate that there were no significant changes over time in bystander attitude,  $\pi_{1i} = -1.97$  (time 1), and  $\pi_{2i} = -3.03$  (time 2). Additionally, there were no significant differences between groups (experimental or comparison),  $\beta_{01} = -5.53$ , or between men and women (sex),  $\beta_{02} = 4.39$ . Finally, there was no interaction between group membership and time,  $\beta_{11} = 0.31$  (time 1), and  $\beta_{21} = 1.36$  (time 2), or between sex and time,  $\beta_{12} = 1.72$  (time 1), and  $\beta_{22} = 1.28$  (time 2; see Figure 11 for means).

Table 17

*Results of Deviance Test for Bystander Attitude*

Model	Number of Parameters	Deviance
1. Fixed	2	429.56
2. Random	4	424.66

	$\chi^2$	$df$	$p$
Fixed versus random	4.94	2	.084

Table 18

*The Fixed Effect Model for Bystander Attitude*

	<i>Coefficient</i>	<i>SE</i>	<i>t</i>	<i>df</i>	<i>p</i>
Mean bystander behavior					
Intercept, $\pi_{0i}$	69.86	5.75	12.15	22	.001
Group, $\beta_{01}$	-5.53	3.98	-1.39	22	.178
Sex, $\beta_{02}$	4.39	4.49	0.98	22	.339
Group & sex differentiation time 1					
Intercept, $\pi_{1i}$	-1.97	4.42	-0.45	66	.656
Group, $\beta_{11}$	0.31	3.06	0.10	66	.921
Sex, $\beta_{12}$	1.72	3.45	0.50	66	.619
Group & sex differentiation time 2					
Intercept, $\pi_{2i}$	-3.03	4.42	-0.69	66	.495
Group, $\beta_{21}$	1.36	3.06	0.45	66	.657

Sex, $\beta_{22}$	1.28	3.45	0.37	66	.712
<i>Random Effect</i>	<i>Standard Deviation</i>	<i>Variance Component</i>	<i>df</i>	$\chi^2$	<i>p</i>
$r_{0i}$	6.04	36.45	22	179.39	.001
$e_{ti}$	3.91	15.29			

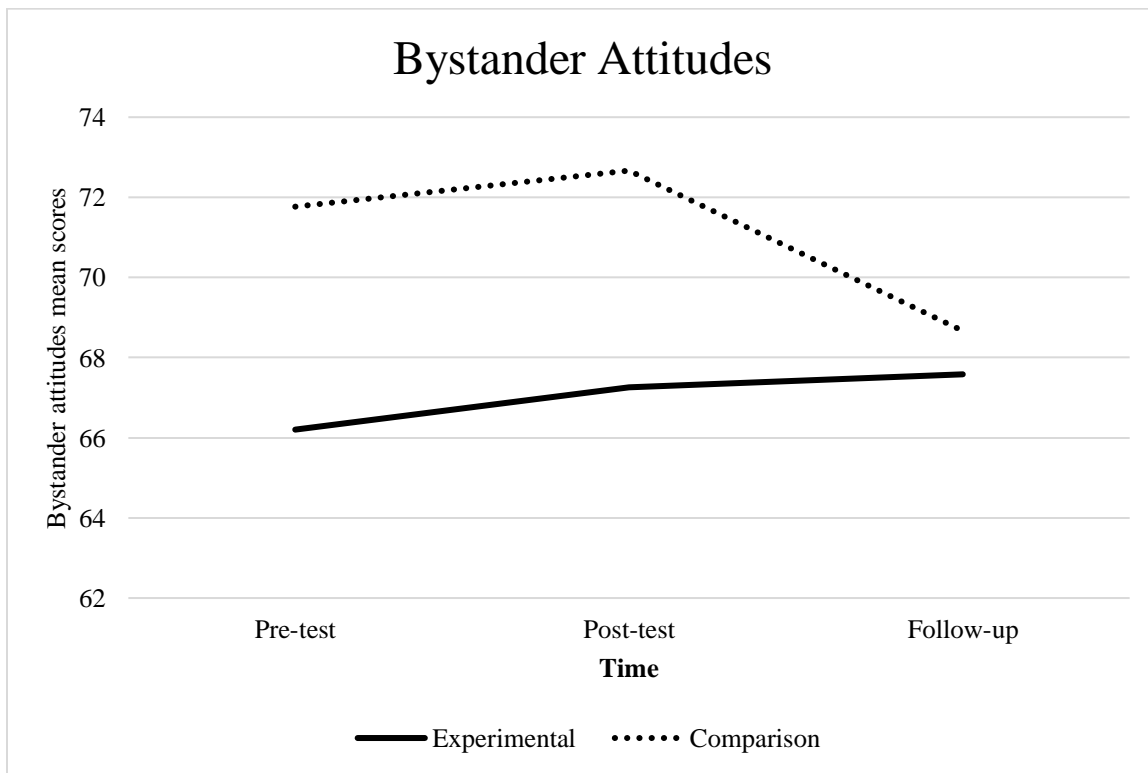


Figure 11. Bystander attitude mean scores over time



**Social Sexual Norms – Male.** Hypothesis 2c: Green Dot would significantly decrease perceived normative approval of power-based violence for males and females on campus for the experimental condition compared to the comparison group (see Table 19 for results of the unconditional model).

*Unconditional model.*

Table 19

*The Unconditional Model for Social Sexual Norms (Average Male on Campus)*

<i>Fixed Effect</i>	<i>Coefficient</i>	<i>SE</i>	<i>t</i>	
$\beta_{00}$	132.08	3.19	41.37	
<i>Random Effect</i>	<i>Variance Component</i>	<i>df</i>	$\chi^2$	<i>p</i>
$r_{0i}$	223.65	24	152.40	.001
$e_{ti}$	125.41			

$$ICC = \frac{223.652}{(223.652 + 125.413)} = .641 \quad (7)$$

The ICC is .641. This means that 64.1% of the variance in the perception of social sexual norms for the average male on campus is due to the differences among participants and 35.9% due to change over time.

*Slopes and intercepts as outcomes.* The perception of social sexual norms for the average male on campus was examined to determine if there were effects of time, group membership, or sex. Additionally, two interactions were examined to determine if there were effects of group membership over time, or sex over time. First, deviance scores were examined to determine if the results should be random or fixed (see Table 20). Results of the deviance test indicate that randomizing the slopes does not significantly contribute to the explanation of variance for the outcome variable (social sexual norms for males on campus), therefore, the fixed effects model was used. Second, results (see Table 21) indicate that there were no significant changes over time in the perception of social sexual norms for the average male on campus,  $\pi_{1i} = -12.77$  (time 1), and  $\pi_{2i} = 3.96$  (time 2). Additionally, there were no significant differences between groups (experimental or comparison),  $\beta_{01} = -7.43$ , but there was a significant difference between men and women (sex),  $\beta_{02} = -39.67$ , such that at pre-test, for the experimental group, men report a significantly higher score when rating the perceived social sexual behavior of the average male on campus. This effect indicates that men in the sample believe the average male on campus to be less sexually aggressive and more likely to intervene as a bystander, compared to the perceptions women in the sample have. Finally, there was no effect between group membership and time,  $\beta_{11} = 12.77$  (time 1), and  $\beta_{21} = -4.96$  (time 2), or between sex and time,  $\beta_{12} = -2.33$  (time 1), and  $\beta_{22} = 5.94$  (time 2; see Figure 12 for means).

Table 20

*Results of Deviance Test for Social Sexual Norms (Average Male on Campus)*

Model	Number of Parameters	Deviance
1. Fixed	2	567.03
2. Random	4	566.54

	$\chi^2$	<i>df</i>	<i>p</i>
Fixed versus random	0.49	2	.78

Table 21

*The Fixed Effect Model for Social Sexual Norms for the Average Male on Campus*

	<i>Coefficient</i>	<i>SE</i>	<i>t</i>	<i>df</i>	<i>p</i>
Mean bystander behavior					
Intercept, $\pi_{0i}$	133.77	16.08	8.31	22	.001
Group, $\beta_{01}$	-7.43	11.12	-0.67	22	.511
Sex, $\beta_{02}$	-39.67	12.55	-3.16	22	.005
Group & sex differentiation time 1					
Intercept, $\pi_{1i}$	-12.77	12.64	-1.01	66	.316
Group, $\beta_{11}$	15.77	8.74	1.80	66	.075

Sex, $\beta_{12}$	-2.33	9.86	-0.24	66	.814
<hr/>					
Group & sex differentiation time 2					
Intercept, $\pi_{2i}$	3.96	12.64	0.31	66	.755
Group, $\beta_{21}$	-4.96	8.74	-0.57	66	.572
Sex, $\beta_{22}$	5.94	9.86	0.60	66	.548
<hr/>					
<i>Random Effect</i>	<i>Standard Deviation</i>	<i>Variance Component</i>	<i>df</i>	$\chi^2$	<i>p</i>
$r_{0i}$	16.73	280.01	22	169.93	.001
$e_{ti}$	11.18	124.93			
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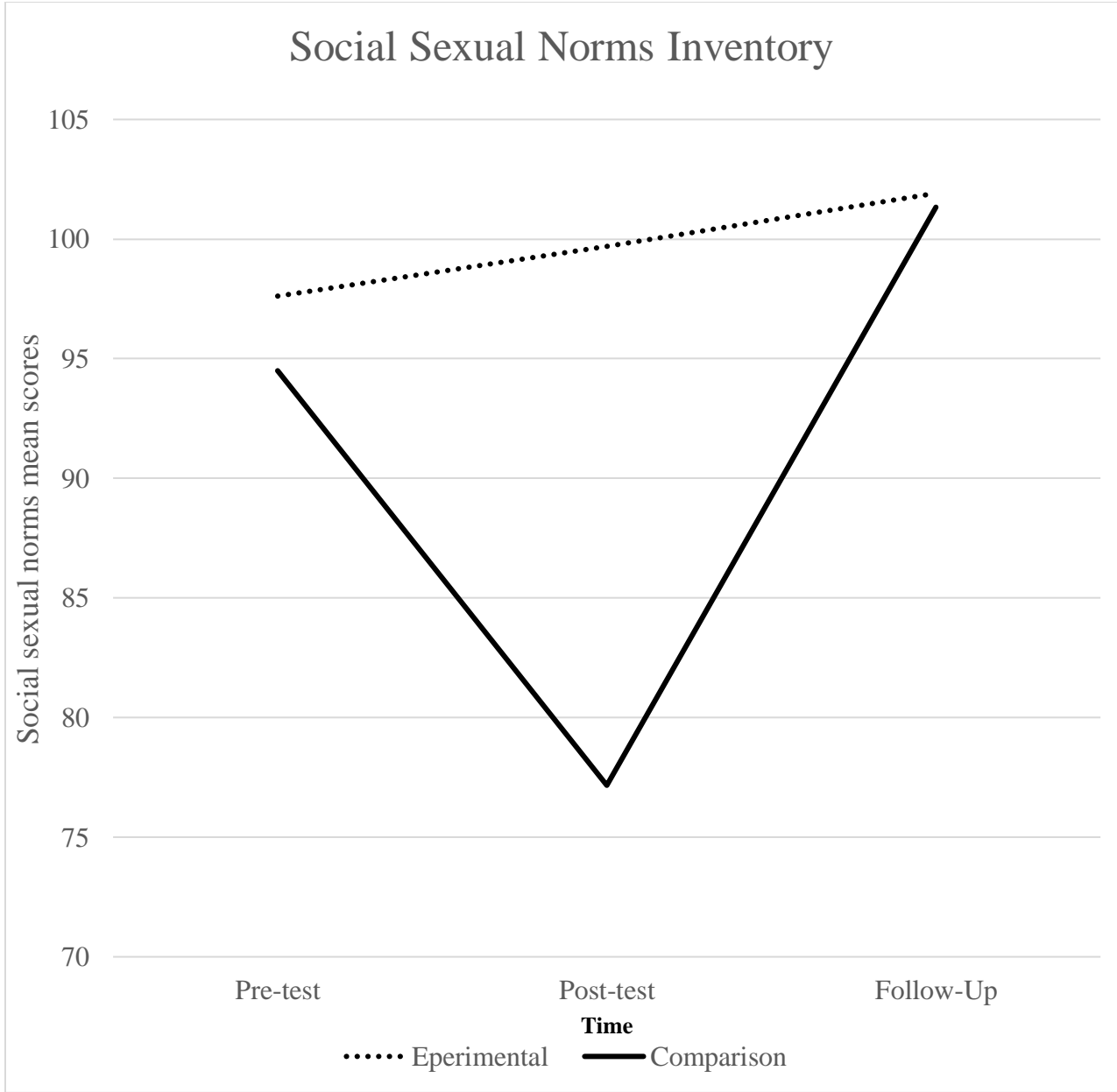


Figure 12. Social sexual norms mean scores over time for average male on campus

**Social Sexual Norms – Female.** Hypothesis 2c: Green Dot would significantly decrease perceived normative approval of power-based violence for males and females on campus for the experimental condition compared to the comparison group (see Table 22 for results of the unconditional model).

**Unconditional model.**

Table 22

*The Unconditional Model for Social Sexual Norms (Average Female on Campus)*

<i>Fixed Effect</i>	<i>Coefficient</i>	<i>SE</i>	<i>t</i>	
$\beta_{00}$	93.77	4.17	22.46	
<i>Random Effect</i>	<i>Variance Component</i>	<i>df</i>	$\chi^2$	<i>p</i>
$r_{0i}$	406.75	24	231.71	.001
$e_{ti}$	141.00			

$$ICC = \frac{406.751}{(406.751 + 140.996)} = .743 \quad (8)$$

The ICC is .743. This means that 74.3% of the variance in the perception of social sexual norms for the average female on campus is due to the differences among participants and 25.7% due to change over time.

**Slopes and intercepts as outcomes.** The perception of social sexual norms for the average female on campus was examined to determine if there were effects for time, group membership, or for sex. Additionally, two interactions were examined to determine if there were effects for group membership over time, and sex over time. First, deviance scores were examined to determine if the results should be random or fixed (see Table 23). Results of the deviance test indicate that randomizing the slopes does not significantly contribute to the explanation of

variance for the outcome variable (social sexual norms for average female on campus), therefore, the fixed effects model was used. Second, results (see Table 24) indicate that there were no significant changes over time in the perception of social sexual norms for the average female on campus,  $\pi_{1i} = 0.75$  (time 1), and  $\pi_{2i} = 4.47$  (time 2). Additionally, there were no significant differences between groups (experimental or comparison),  $\beta_{01} = 3.86$ , or between men and women (sex),  $\beta_{02} = -12.89$ . Finally, there was no interaction between group membership and time,  $\beta_{11} = -2.42$  (time 1), and  $\beta_{21} = -12.14$  (time 2), or between sex and time,  $\beta_{12} = -2.00$  (time 1), and  $\beta_{22} = 3.28$  (time 2; see Figure 13 for means).

Table 23

*Results of Deviance Test for Social Sexual Norms (Average Female on Campus)*

Model	Number of Parameters	Deviance
1. Fixed	2	565.53
2. Random	4	561.89
	$\chi^2$	$df$
Fixed versus random	3.64	2
		$p$
		.162

Table 24

*The Fixed Effect Model for Social Sexual Norms for the Average Female on Campus*

	<i>Coefficient</i>	<i>SE</i>	<i>t</i>	<i>df</i>	<i>p</i>
Mean bystander behavior					
Intercept, $\pi_{0i}$	142.14	15.14	9.39	22	.001
Group, $\beta_{01}$	3.86	10.47	0.37	22	.716
Sex, $\beta_{02}$	-12.89	11.82	-1.09	22	.288
Group & sex differentiation time 1					
Intercept, $\pi_{1i}$	0.75	12.96	0.06	66	.954
Group, $\beta_{11}$	-2.42	8.96	-0.27	66	.788
Sex, $\beta_{12}$	-2.00	10.11	-0.20	66	.844
Group & sex differentiation time 2					
Intercept, $\pi_{2i}$	4.47	12.96	0.35	66	.731
Group, $\beta_{21}$	-12.14	8.96	-1.35	66	.180
Sex, $\beta_{22}$	3.28	10.11	0.32	66	.747
<i>Random Effect</i>	<i>Standard Deviation</i>	<i>Variance Component</i>	<i>df</i>	$\chi^2$	<i>p</i>
$r_{0i}$	15.08	227.51	22	136.23	.001
$e_{ti}$	11.47	131.46			



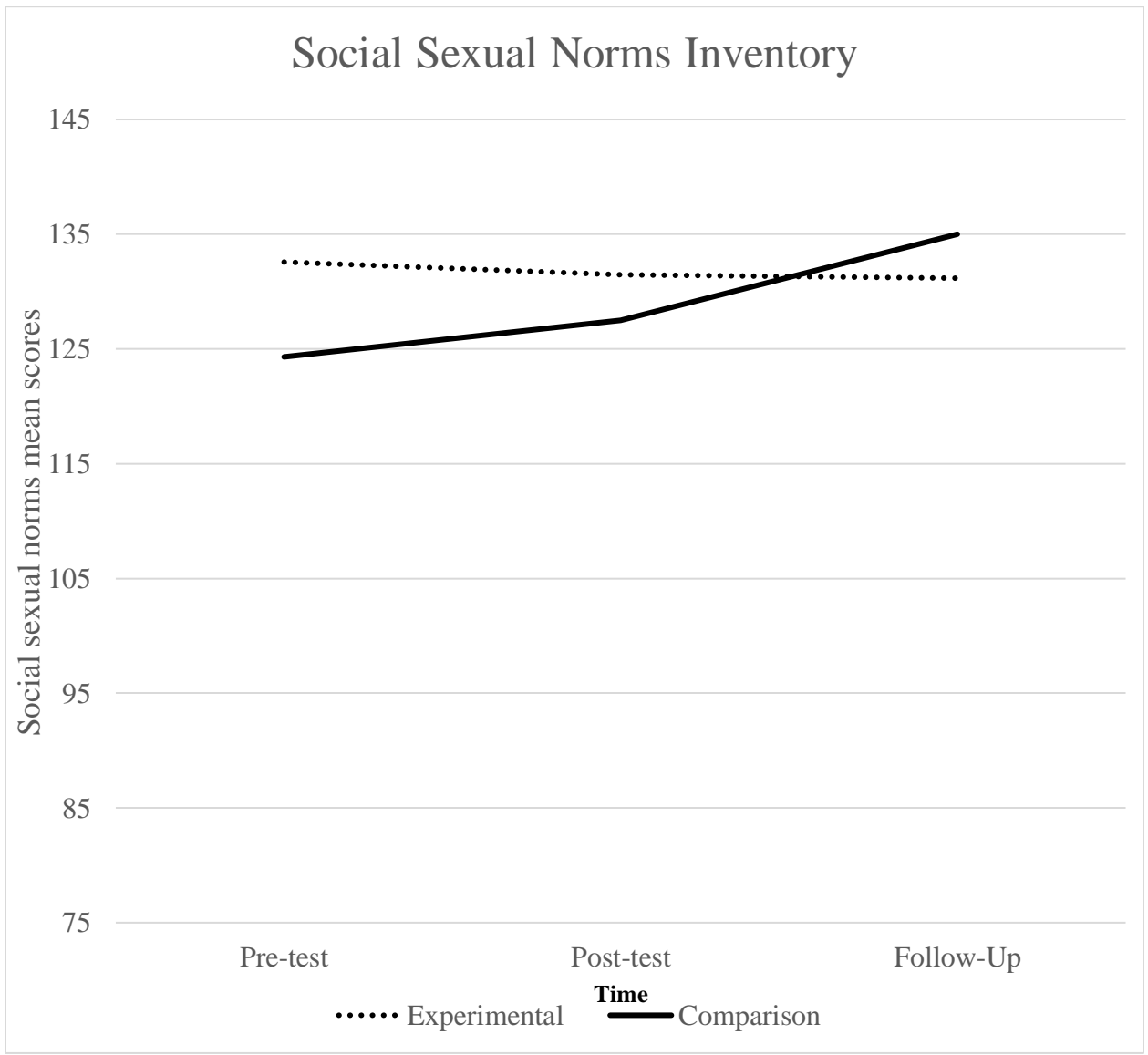


Figure 13. Social sexual norms mean scores over time for average female on campus

**Descriptive information on the qualitative responses (3 D's)**

As noted in the method, each participant was given three vignettes at each assessment that asked how they would respond to a specific power-based violence scenario (i.e., dating violence, sexual violence, and stalking). The responses were coded by the researcher and another

graduate student using grounded theory (Birks & Mills, 2015). In order to better understand the nature of the qualitative responses, frequencies were conducted (see Tables 25 – 27). Response frequencies are presented across the type of relationship the participant had with the survivor and/or perpetrator, by gender, by assessment time, and by type of scenario (i.e., dating violence, sexual violence, stalking). Furthermore, chi-squares were run on each variation of the qualitative categories, however, only one was significant and it is reported below (results of the other chi-square analyses available upon request). The most reported response to every scenario was direct intervention or a variant of direct intervention (i.e., direct intervention with assistance). The second most frequent were delegating responses, followed by distracting. A mix of responses that involved distract and delegate was the most frequently reported combination of more than one type of response to the three types of sexual behaviors. Additionally, it should be mentioned that overall there were very few people who reported doing nothing (0.5%). Below are the qualitative categories and the frequency of responses for each.

Table 25

*Frequency and Percentage of Qualitative Responses Across all Three Assessment Points*

Type of Responses	Pre-test				Post-test				Follow-up			
	Male		Female		Male		Female		Male		Female	
	#	%	#	%	#	%	#	%	#	%	#	%
<b>Direct</b>												
Direct	29	(69.0)	51	(35.9)	24	(66.7)	39	(37.1)	20	(60.6)	33	(28.4)
Direct Primary			10	(7.0)			9	(8.6)	2	(6.1)	7	(6.0)
Direct with Assistance	3	(7.1)	4	(2.8)	3	(8.3)	4	(3.8)	5	(15.2)	4	(3.4)
Direct with Assistance primary			3	(2.1)							3	(2.6)
Direct with Empathy			2	(1.4)	1	(2.8)	4	(3.8)			5	(4.3)
Direct with Empathy Primary			2	(1.4)							1	(0.9)
Direct with Threat			1	(0.7)			1	(1.0)				
Direct with Assistance Primary			1	(0.7)								
Direct with Assistance Secondary												
Direct with Threat	1	(2.4)					2	(1.9)			1	(0.9)
<b>Delegate</b>												
Delegate	1	(2.4)	7	(4.9)	2	(5.6)	11	(10.5)	1	(3.0)	9	(7.8)
Delegate Primary	1	(2.4)	2	(1.4)							1	(0.9)
Delegate Secondary												
Delegate with Threat Secondary												
Delegate with Empathy Secondary												

Table 25 Continued



Type of Responses	Pre-test				Post-test				Follow-up			
	Male		Female		Male		Female		Male		Female	
	#	%	#	%	#	%	#	%	#	%	#	%
Delegate/Direct with Threat Combination												1 (0.9)
Unclear/Delegate Combination			3 (2.1)									
Direct/Indirect Combination							1 (1.0)					7 (6.)
Distract/Direct/Delegate Combination												1 (0.9)
Direct/Delegate with Empathy Combination			1 (0.7)									
Direct with Assistance/Delegate Combination												1 (0.9)
Delegate/Distract Primary Combination							1 (1.0)					
Direct/Indirect Secondary Combination												
Delegate/Indirect Tertiary Combination												
Delegate/Distract Secondary Combination												
Direct/Indirect Tertiary Combination												
Delegate/Indirect Combination			1 (0.7)				1 (1.0)					

Table 25 continued

Type of Responses	Pre-test				Post-test				Follow-up			
	Male		Female		Male		Female		Male		Female	
	#	%	#	%	#	%	#	%	#	%	#	%
Direct with Assistance/Indirect Combination			1	(0.7)								
Indirect/Distract/Delegate Combination											1	(0.9)
Delegate/Direct with Assistance Combination	1	(2.4)					1	(1.0)			1	(0.9)
Distract/Delegate Combination							1	(1.0)			1	(0.9)
Indirect/Delegate Combination			1	(0.7)							1	(0.9)
Direct/Indirect/Delegate Combination											1	(0.9)
Distract/Indirect Combination											1	(0.9)
Delegate/Unclear Combination			1	(0.7)			1	(1.0)			1	(0.9)
Distract/Direct with Assistance Primary Combination										1	(3.0)	
Direct with Assistance/Distract Combination										1	(3.0)	

Table 26

*Frequency and Percentage of Qualitative Responses for Relationship with Perpetrator and Survivor*

Response Type	Perpetrator known		Survivor known		Both known		Neither known	
	M # %	F # %	M # %	F # %	M # %	F # %	M # %	F # %
<b>Direct</b>								
Direct	23 (74.2)	36 (40.0)	12 (57.1)	31 (33.3)	14 (77.8)	34 (37.4)	24 (58.5)	22 (25.0)
Direct Primary		7 (7.8)		3 (3.2)	1 (5.6)	5 (5.5)	1 (2.4)	11 (12.5)
Direct with Assistance	1 (3.2)	3 (3.3)	1 (4.8)	2 (2.2)	2 (11.1)	5 (5.5)	4 (9.8)	2 (2.3)
Direct with Assistance primary		1 (1.1)		2 (2.3)		1 (1.1)		3 (3.4)
Direct with Assistance Secondary								
Direct with Empathy	1 (3.2)	2 (2.2)		2 (2.2)		5 (5.5)		2 (2.3)
Direct with Empathy Primary		1 (1.1)				1 (1.1)		1 (1.1)
Direct with Threat		2 (2.2)		1 (1.1)		2 (2.3)	1 (2.4)	
<b>Delegate</b>								
Delegate	1 (3.2)	6 (6.7)	1 (4.8)	7 (7.5)		5 (5.5)	2 (4.9)	8 (9.1)
Delegate Primary		1 (1.1)					1 (2.4)	2 (2.3)
Table 26 continued								

Response Type	Perpetrator known		Survivor known		Both known		Neither known	
	M # %	F # %	M #%	F # %	M #%	F # %	M # %	F #%
Delegate Secondary								
Delegate with Threat Secondary								
Delegate with Empathy Secondary								
<b>Distract</b>								
Distract		6 (6.7)		11 (11.8)		8 (8.8)		8 (9.1)
Distract Primary		1 (1.1)		2 (2.2)		1 (1.1)		3 (3.4)
Distract Secondary								
Distract Tertiary								2 (2.3)
Distract with Assistance						2 (2.2)		1 (1.1)
<b>Indirect</b>								
Indirect		1 (1.1)	2 (9.5)	4 (4.3)		1 (1.1)		1 (1.1)
Indirect Primary	1 (3.2)			1 (1.1)		1 (1.1)		1 (1.1)
Indirect Secondary								
Indirect Tertiary								
Table 26 continued								
Response Type	Perpetrator known		Survivor known		Both known		Neither known	



	M # %	F # %	M #%	F # %	M #%	F # %	M # %	F #%
Indirect with Assistance Secondary								
<b>Miscellaneous</b>								
Nothing	1 (3.2)		1 (4.8)	1 (1.1)			1 (2.4)	3 (3.4)
Unclear	1 (3.2)	5 (5.6)		8 (8.6)		9 (9.9)	2 (4.9)	4 (4.5)
Nothing Primary								1 (1.1)
Threat Secondary								
Unclear Primary							1 (2.4)	
<b>Combinations</b>								
Direct/Delegate Combination		3 (3.3)	2 (9.5)	10 (10.8)		4 (4.4)	2 (4.9)	5 (5.7)
Direct/Distract Combination		3 (3.3)	1 (4.8)			2 (2.2)		2 (2.3)
Direct OR Distract								1 (1.1)
Delegate/Direct with Threat Combination		1 (1.1)						
Table 26 continued								
Response Type	Perpetrator known		Survivor known		Both known		Neither known	
	M	F	M	F	M	F	M	F

	# %	# %	#%	# %	# %	# %	#%	# %
Unclear/Delegate Combination				2 (2.2)		1 (1.1)		
Direct/Indirect Combination		3 (3.3)				3 (3.3)		2 (2.3)
Distract/Direct/Delegate Combination								1 (1.1)
Direct/Delegate with Empathy Combination		1 (1.1)						
Direct with Assistance/Delegate Combination								1 (1.1)
Delegate/Distract Primary Combination		1 (1.1)						
Direct/Indirect Secondary Combination								
Delegate/Indirect Tertiary Combination								
Delegate/Distract Secondary Combination								
Table 26 continued								
Response Type	Perpetrator known		Survivor known		Both known		Neither known	
	M	F	M	F	M	F	M	F

	# %	# %	# %	# %	# %	# %	# %	
Direct/Indirect Tertiary Combination								
Delegate/Indirect Combination		1 (1.1)					1 (1.1)	
Direct with Assistance/Indirect Combination		1 (1.1)						
Indirect/Distract/Delegate Combination			1 (1.1)					
Delegate/Direct with Assistance Combination		1 (1.1)	1 (1.1)			1 (2.4)		
Distract/Delegate Combination		1 (1.1)	1 (1.1)					
Indirect/Delegate Combination			1 (1.1)				1 (1.1)	
Direct/Indirect/Delegate Combination			1 (1.1)					
Table 26 continued								
Response Type	Perpetrator known		Survivor known		Both known		Neither known	
	M	F	M	F	M	F	M	F

	# %	# %	#%	# %	# %	# %	#%	# %
Distract/Indirect Combination		1 (1.1)						
Delegate/Unclear Combination		1 (1.1)		1 (1.1)				1 (1.1)
Distract/Direct with Assistance Primary Combination							1 (2.4)	
Direct with Assistance/Distract Combination					1 (5.6)			

Table 27

*Frequency and Percentage of Qualitative Responses Across all Three Types of Power-Based Violence*

Type of Responses	Sexual Violence				Dating Violence				Stalking			
	Male		Female		Male		Female		Male		Female	
	#	%	#	%	#	%	#	%	#	%	#	%
<b>Direct</b>												
Direct	25	(67.6)	24	(19.8)	18	(48.6)	44	(36.1)	20	(81.1)	55	(45.8)
Direct Primary			10	(8.3)			6	(4.9)	2	(5.4)	10	(8.3)
Direct with Assistance	1	(2.7)	9	(7.4)	10	(27.0)	2	(1.6)			1	(0.8)
Direct with Assistance primary			4	(3.3)			3	(2.5)				
Direct with Assistance Secondary												
Direct with Empathy									1	(2.7)	11	(9.2)
Direct with Empathy Primary											3	(2.5)
Direct with Threat					1	(2.7)					5	(4.2)
<b>Delegate</b>												
Delegate	1	(2.7)	5	(4.1)	3	(8.1)	14	(11.5)			8	(6.7)
Delegate Primary	1	(2.7)	2	(1.7)							1	(0.8)
Delegate Secondary												
Delegate with Empathy Secondary												
Delegate with Threat Secondary												
<b>Distract</b>												
Distract			13	(10.7)			19	(15.6)			1	(0.8)
Distract Primary			4	(3.3)			3	(2.5)				

Table 27 continued										
Type of Responses	Sexual Violence				Dating Violence				Stalking	
	Male		Female		Male		Female		Male	Female
	#	%	#	%	#	%	#	%	#	%
Distract Secondary										
Distract Tertiary										
Distract with Assistance			1 (0.8)		2 (1.6)					
<b>Indirect</b>										
Indirect					1 (2.7)	3 (2.5)		1 (2.7)	4 (3.3)	
Indirect Primary						2 (1.6)		1 (2.7)	1 (0.8)	
Indirect Secondary										
Indirect Tertiary										
Indirect with Assistance Secondary										
<b>Miscellaneous</b>										
Nothing					2 (5.4)			1 (2.7)	4 (3.3)	
Unclear	2 (5.4)		18 (14.9)		1 (2.7)	8 (6.6)			1 (0.8)	
Nothing Primary						1 (0.8)				
Threat Secondary										
Unclear Primary	1 (2.7)									
<b>Combinations</b>										
Direct/Delegate Combination	3 (8.1)		13 (10.7)			2 (1.6)		1 (2.7)	7 (5.8)	
Direct/Distract Combination	1 (2.7)		3 (2.5)			3 (2.5)			1 (0.8)	
Direct OR Distract						1 (0.8)				

Table 27 continued										
Type of Responses	Sexual Violence				Dating Violence				Stalking	
	Male		Female		Male		Female		Male	Female
	#	%	#	%	#	%	#	%	#	%
Delegate/Direct with Threat Combination			1	(0.8)						
Unclear/Delegate Combination			3	(2.5)						
Direct/Indirect Combination			2	(1.3)			3	(2.5)		3 (2.5)
Distract/Direct/Delegate Combination			1	(0.8)						
Direct/Delegate with Empathy Combination										1 (0.8)
Direct with Assistance/Delegate Combination			1	(0.8)						
Delegate/Distract Primary Combination			1	(0.8)						
Direct/Indirect Secondary Combination										
Delegate/Indirect Tertiary Combination										
Delegate/Distract Secondary Combination										
Direct/Indirect Tertiary Combination										
Delegate/Indirect Combination			2	(1.7)						

Table 27 continued

Type of Responses	Sexual Violence				Dating Violence				Stalking			
	Male		Female		Male		Female		Male		Female	
	#	%	#	%	#	%	#	%	#	%	#	%
Direct with Assistance/Indirect Combination							1	(0.8)				
Indirect/Distract/Delegate Combination												
Delegate/Direct with Assistance Combination	1	(2.7)					2	(1.6)				
Distract/Delegate Combination			1	(0.8)			1	(0.8)				
Indirect/Delegate Combination											2	(1.7)
Direct/Indirect/Delegate Combination											1	(0.8)
Distract/Indirect Combination							1	(0.8)				
Delegate/Unclear Combination			3	(2.5)								
Distract/Direct with Assistance Primary Combination	1	(2.7)										
Direct with Assistance/Distract Combination					1	(2.7)						



Broken down between the pre-test, post-test, and follow-up, direct intervention was the most frequently reported behavior overall. The most commonly reported intervention strategies for the pre-test were direct: ( $n = 80, 20.2\%$ ), delegating ( $n = 8, 2\%$ ), indirect ( $n = 6, 1.5\%$ ), and distract ( $n = 9, 2.3\%$ ). For the post-test, the most frequently reported behaviors were direct/direct primary ( $n = 72, 18.2\%$ ), delegate ( $n = 13, 3.3\%$ ), distract ( $n = 11, 2.8\%$ ), and direct delegate compound ( $n = 6, 1.5\%$ ). In the follow-up, the most common behaviors were direct/direct primary ( $n = 62, 15.7\%$ ), delegate ( $n = 10, 2.5\%$ ), distract ( $n = 13, 3.3\%$ ), and direct delegate compound ( $n = 10, 2.5\%$ ). As for secondary strategies, the most frequently reported behavior was delegate ( $n = 13$  pre-test [ $3.3\%$ ],  $n = 9$  post-test [ $2.3\%$ ], and  $n = 8$  follow-up [ $2.0\%$ ]). Delegate and distract were the second most frequently reported bystander behaviors, with delegate being the most commonly reported secondary strategy. Additionally, there is a decrease in direct behavior post Green Dot, while there is an increase in delegate and distract behaviors. This finding may be a result of the intervention teaching students' new applicable behaviors.

In order to examine the impact that relationship to the perpetrator and/or survivor may have had on reported bystander behavior, the responses were broken down into the four categories of relationship: knowing the perpetrator, survivor, both, or neither. For individuals responding to the scenario in which they know the perpetrator the most common responses were direct/direct primary 66 (54.6%), delegate ( $n = 7, 5.8\%$ ), distract ( $n = 6, 5.0\%$ ). For those who knew the survivor in the scenarios, the most frequently reported behaviors were direct ( $n = 43, 37.7\%$ ), delegate ( $n = 8, 7.0\%$ ), indirect ( $n = 6, 5.3\%$ ), distract ( $n = 11, 9.6\%$ ), and the direct delegate compound ( $n = 12, 10.5\%$ ). In the scenarios where both individuals are known to the bystander, the most commonly reported behaviors were direct/direct primary/direct with assistance ( $n = 61, 55.9\%$ ), delegate ( $n = 6, 5.5\%$ ), and distract ( $n = 8, 7.3\%$ ). For scenarios in

which neither individual was known to the bystander, direct/direct primary ( $n = 58, 45.0\%$ ) behaviors were the most commonly reported followed by, delegate ( $n = 10, 7.8\%$ ), and distract ( $n = 8, 6.2\%$ ). There is a large difference between the amount of people who reported directly intervening in which they knew the perpetrator versus when they knew the survivor (55% to 38% respectively). Additionally, delegating was reported most often for those in scenarios in which neither individual was known to the bystander.

The vignettes were separated into three types; sexual violence, dating violence, and stalking, therefore, responses were also examined for each type. For the sexual violence scenario, the most commonly reported behavior was direct/direct primary/direct with assistance ( $n = 69, 34.9\%$ ), delegate ( $n = 6, 3.0\%$ ), distract ( $n = 13, 6.6\%$ ), unclear ( $n = 20, 10.1\%$ ), and direct delegate combination ( $n = 16, 8.1\%$ ). In the dating violence scenario, the most frequently reported behaviors were direct/direct with assistance ( $n = 74, 37.4\%$ ), delegate ( $n = 17, 8.6\%$ ), and distract ( $n = 19, 9.6\%$ ). For the stalking scenario the majority of participants responded with direct/direct with empathy/direct primary ( $n = 109, 55.1\%$ ) and delegate ( $n = 8, 4.0\%$ ). These findings make it clear that participants more frequently report directly intervening in the stalking scenario, as opposed to the sexual or dating violence vignettes. Further participants reported distraction as a response most frequently for the dating violence scenario. A chi-square was run and there was a significant difference between the three types of scenarios,  $X^2(4) = 24.40, p < .01$ . Next, the adjusted residuals were examined to determine post-hoc which behaviors were significant for each scenario (see Table 28). Results indicated that for sexual violence, distraction was the most common method compared to direct and delegate. In the domestic violence scenario distract and delegate were the most frequently reported. And finally, in the stalking scenario, direct was the most commonly reported behavior.

Table 28

*Chi-square Post-hoc for Reported Bystander Behavior & Scenario*

Type	Sexual Violence			Dating Violence			Stalking		
	Direct	Distract	Delegate	Direct	Distract	Delegate	Direct	Distract	Delegate
Count	49	13	6	62	19	17	85	1	8
Percentage	72.1	19.1	8.8	63.3	19.4	17.3	90.4	1.1	8.5
Adjusted residual	-0.7	<b>1.9</b>	-0.9	-3.5	<b>2.5</b>	<b>2.1</b>	<b>4.2</b>	-4.2	-1.3

*Note.* The adjusted residuals are z-scores, meaning anything above 1.9 is significant.

Finally, the vignettes were also examined across sex (i.e., male and female). For men, the most common type of intervention strategy was direct/direct with assistance ( $n = 84$ , 29.1%), followed by delegating ( $n = 4$ , 1.4%) and direct delegate compound ( $n = 4$ , 1.4%). For women, direct was the most frequently reported response; direct ( $n = 123$ , 13.7%), direct with empathy ( $n = 11$ , 1.2%) direct with assistance ( $n = 12$ , 1.3%), direct primary ( $n = 26$ , 2.9%), and direct delegate compound ( $n = 22$ , 2.4%). Followed by distraction ( $n = 33$ , 3.7%) and delegation ( $n = 27$ , 3.0%). Additionally, women reported they would not intervene only slightly more than men (3.0% v. 1.0% respectively).

### **Exploratory analyses**

Linear regressions were conducted to predict bystander behavior based on adverse childhood experiences (ACE; see Table 29). The predictor was the total composite scores for the

ACE, and the outcome was bystander behavior at the pre-test, post-test, and follow-up. Additionally, the literature notes that specifically sexual abuse is more likely to affect to women and young girls (Finkelhor, Hotaling, Lewis, & Smith, 1990; Wosu, Gelaye, & Williams, 2015). Therefore, in order to ensure findings were not due to a gender effect, sex was controlled for, but the outcome was the same. ACEs did predict reported bystander behavior at pre-test, such that as ACEs decreased bystander behavior increased. Meaning that the more ACEs an individual had the less likely they are to report bystander behavior at the pre-test. However, there is no significant relationship between ACEs and bystander behavior at the post-test and follow-up. Additionally, a second linear regression was conducted to predict bystander behavior based on knowing someone who was sexually assaulted or abused. Knowing someone who had been abused or assaulted did predict bystander behavior at the follow-up. That is knowing someone who had been abuse or assaulted increased participant's likelihood of reporting bystander behaviors at the follow-up.

Table 29

*Linear Regression Results for Exploratory Hypotheses*

Predictor	Outcome	B	SE	$\beta$	<i>t</i>	<i>p</i>
ACE Total	Bystander behavior (pre-test)	-.05	.02	-.34	-3.06	.003*
ACE Total	Bystander behavior (post-test)	.01	.04	.03	0.16	.873
ACE Total	Bystander behavior (follow-up)	.04	.03	.19	1.40	.168
<b>Controlling for sex</b>						
ACE Total	Bystander behavior (pre-test)	-.05	.02	-.38	-3.34	.001*
ACE Total	Bystander behavior (post-test)	-.02	.03	-.08	-0.60	.552
ACE Total	Bystander behavior (follow-up)	.04	.14	.16	1.17	.247
<b>Know Someone who has been abused or assaulted</b>						
Know someone (pre-test)	Bystander behavior (pre-test)	.18	.09	.25	1.98	.053
Know someone (post-test)	Bystander behavior (post-test)	.08	.12	.10	0.65	.521
Know someone (follow-up)	Bystander behavior (follow-up)	.261	.11	.318	2.35	.023*

Note. \*  $p < 0.05$

## CHAPTER 4

### CONCLUSION

#### Discussion of Results

The current study looked at reported changes in behavior over time for participants who completed the Green Dot training. These results were then compared to a small assessment only comparison group. The first hypothesis, that Green Dot would significantly increase reported bystander behavior for the experimental condition compared to the comparison group, was not supported. Reported rates of bystander behavior were not significantly different between conditions, or between men and women, or over time. Changes in reported rates of bystander behavior over time were not significantly different across groups. Moreover, they were not significantly different over time between men and women.

The second hypothesis was broken down into three parts. The first part of the second hypothesis, that Green Dot would significantly increase reported bystander efficacy for the experimental condition compared to the comparison group, was not supported. Reported rates of bystander efficacy were not significantly between men and women, or over time. However, reported rates of bystander efficacy were significantly different by condition, such that individuals in the comparison group reported significantly higher rates of bystander efficacy compared to the comparison condition. However, changes in reported bystander efficacy over time were not significantly different across groups, nor were they significantly different over time between men and women.

The second part of the hypothesis, that Green Dot would significantly increase reported bystander attitudes for the experimental condition compared to the comparison group, was not supported. Reported rates of bystander attitudes were not significantly different by condition, or

between men and women, or over time. Additionally, changes in reported rates of bystander attitudes over time were not significantly different across groups. Moreover, they were not significantly different over time between men and women.

The third part of the second hypothesis stated that negative perceived social sexual norms for males and females would decrease over time for the experimental group as opposed to the comparison group. Meaning, it was hypothesized that the perception of sexual aggression and bystander behaviors of the average person on campus would decrease over time for the experimental group, as opposed to the comparison group. This hypothesis was not supported. Perceived norms for males were not significantly different by condition, or over time. However, perceived social sexual norms for males were significantly different between men and women, such that males in the sample perceived the average male on campus to be lower in sexual aggression, and more likely to display bystander behaviors, compared to females in the sample. Changes in perceived social sexual norms for the average male on campus over time did not significantly vary over time across groups, or over time between men and women. Additionally, pertaining to the social sexual norms for females, reported perceptions were not significantly different by condition, or between men and women, or over time. Changes over time were not significantly different over time across groups. Moreover, they were not significantly different over time between men and women.

Additionally, there were two exploratory hypotheses. The first was that ACEs would significantly predict bystander behavior. And the second was that knowing someone who had experienced sexual trauma would significantly increase bystander behavior. ACEs did significantly predict bystander behavior at the pre-test, such that as instances of ACEs increased, the rate of reported bystander behavior at the pre-test, decreased. There was no relationship

between ACEs and bystander behavior at the post-test or the follow-up. The literature indicates that ACEs can predict future trauma (Smith et al., 2003; Jewkes et al., 2015), and, it appears that in this sample, ACEs also have an impact on future bystander behavior. Further, knowing someone who was abused or assaulted also increased reported bystander behavior at the follow-up. This finding is similar to McMahon (2010), and Banyard (2008), who both found that knowing someone who was abused or assaulted increased reported bystander willingness, compared to those who did not know someone. Additionally, this finding is only significant at the follow-up. However, this may be due to the fact that participant's may not have known prior to the study if someone in their family or social circle was assaulted or abused in the past. It is possible that Green Dot opened communication between people about the topic of power-based violence, and the sharing of personal experiences with it.

Overall, findings for this study were largely non-significant, and there are a few possible reasons for this. The first is that the sample sizes were small. The second is that individuals who went through the training were all volunteers, meaning that many participants may have been already been aware that power-based violence was a problem on campus that needed to be addressed. Also, these participants had no incentive to attend the training aside from personal improvement. They were not given extra credit for class or paid. That makes this group of participants highly motivated, and, most likely, very different from the general population. Finally, the post-test and follow-up were one week and one-month post intervention, therefore, the timing of the assessments may have led to a lack in reported behaviors because students did not have time to enact such behaviors.

Another important factor is that due to Green Dot's use of the Diffusion of Innovation, and recruitment of POLs, many of the targeted students on campus were leaders in the



community. These leaders, being nominated by faculty members and other students, were positioned as prominent individuals in the community, who were well liked, and have influence. As such, the actual training may not have influenced their bystander behaviors because they may be predisposed (due to their position in the community) to already employ these intervention strategies.

Conclusively, the current study did not find any significant changes over time for either group membership or sex. However, there were significant differences between groups on bystander efficacy, such that the comparison group had higher rates of bystander efficacy. Additionally, there were significant differences between men and women on the perceived social sexual norms for the average male on campus, meaning that women perceived the average male on campus to be more sexually aggressive, and less likely to intervene, compared to men in the sample. Although these results should be interpreted with caution, as the sample sizes were small, it is important to explore explanations for these differences.

**Bystander efficacy.** The finding that the comparison group had higher bystander efficacy, compared to the experimental group, is somewhat surprising as the comparison group did not get the intervention. This finding may be due to the fact that the comparison group was comprised of students who signed up for the training, but could not, or decided not, to attend. It is possible that students in the comparison group already felt qualified to address sexual violence and as such, decided not to attend the intervention. Therefore, these students may have already felt efficacious in their bystander behavior. This may account for higher scores in the comparison group, as compared to the experimental group. It should also be noted; the comparison group was very small. It is possible that the scores for this group may not reflect a true comparison

group. Future research should aim to have random assignment which will control for differences between the experimental and control group.

**Social sexual norms – males.** The results for the social sexual norms inventory for the average male on campus reveal an interesting finding, that men perceived the average male on campus to be lower on sexual aggression and have more positive social sexual behaviors, compared to how women view the average male on campus.

Although speculation, the findings in the current study may be due to the historical perception of male sexuality, such that women may see men as more sexually active and aggressive. Further, in the middle of this study a movement of historical proportions happened, known as the #MeToo movement (J. Bennett, 2017; Gilbert, 2017). This particular movement brought to light the sexual misconduct of many men in positions of power, and resulted in numerous high profile men losing their jobs (J. Bennett, 2017). And even in the present time, months after the explosion of the movement, the media reports on a new case of a high-profile male being caught and reprimanded for sexual misconduct, on a frequent basis (Johnson & Hawbaker, 2018). Women are bombarded with the news that men are committing sexual atrocities on a regular basis. This bombardment may help to explain why women were significantly more likely to rate the average male as being more sexually aggressive, and have less prosocial attitudes towards intervening, than men in the sample. Additionally, the men in this sample were all volunteers, therefore, they may be more prosocial and willing to intervene than the general population. The voluntary nature of this study may result in men in the sample believing that other men on campus are similar to them, while women have a much different perception.

### **Qualitative Data**

The following results are gathered from the analyses of frequencies of qualitative responses, in combination with the chi-square analysis. As noted in the results section, direct intervention was the most commonly used intervention method across all scenarios no matter what the relationship was between the bystander, and the perpetrator/survivor. Also, very few people reported doing nothing in the scenarios. Further, there were two examples of students who reported that they would do nothing in pre-test stalking condition, and then in the post-test, reported intervening in some manner. Additionally, there was a difference in the frequency of response styles over time, such that reported direct intervention decreased over time, while delegating and distracting behaviors increased. These two findings may be indicative of the impact of the bystander training. Although small, these qualitatively details show how students may learn new behaviors and strategies.

The qualitative frequency findings indicate that people report they are (hypothetically) willing to intervene and, most frequently, to do so directly. According to previous literature this finding is not surprising. Palmer and colleagues (2016) found that 67% of their college student sample reported directly intervening when they knew either the perpetrator or survivor. Additionally, in the current study, participants were not afraid to get others involved as delegating was the most frequently reported secondary strategy. Palmer et al. (2016), also found that a substantial portion of their participants would use delegating as an intervention strategy (16%).

Relationship to the survivor/perpetrator also played a role in how participants reported bystander strategies. Participants report being more likely to directly intervene when they knew the perpetrator compared to when they knew the survivor. This finding was unexpected as previous research has found that college students are more willing to directly intervene if they

know the survivor (S. Bennett & Banyard, 2016), or are *just as willing* to intervene if they know the survivor/perpetrator (Branch, Richards, & Dretsch, 2013). However, Palmer et al. (2016) found that bystander intervention was not dependent on knowing the survivor specifically, or the perpetrator specifically. Merely knowing one of them was the motivating factor behind intervention, which may account for the current findings. Further, if the bystander did not know either the survivor or the perpetrator in the scenario, they more frequently reported using delegating strategies, perhaps to satisfy their desire to intervene while quelling their fear of possible retaliation for direct or distract behaviors (Palmer et al., 2016). It is possible that individuals are worried about ramifications for intervening, however, if a bystander knows the perpetrator it may be easier to intervene under the guise of protecting the perpetrator from legal or academic consequences.

In reference to the assessment time and response type, overall direct intervention was the most commonly reported behavior for the pre-test, post-test, and follow-up. However, rates of reported direct intervention actually decline over time from about 20% at the pre-test, to 18% at the post-test, and 15% at the follow-up. At the same time, rates of delegate and distract increase 5% pre-test, 10% post-test, 8% follow-up, and 6% pre-test, 10% post-test, and 11% follow-up, respectively. The increase in reported potential delegate and distract behaviors could be due to the intervention, and student's recognizing that there are more behaviors than direct for bystander intervention. In other words, Green Dot seeks to teach students new ways of bystander behavior than merely directly intervening in the situation. The current finding of increased diversity in response frequency, although small, could indicate the effectiveness of the intervention for teaching students a multitude of methods for intervening.

Further, there are some slight differences in the way that men and women report they would behave in these scenarios. Although, these findings should be interpreted with caution (as there were only 16 men in the sample), it is interesting to note that men less frequently report using the distraction method as a tool for intervention, as opposed to women. Men and women were both likely to report using direct or delegating behaviors, but men report distraction less frequently compared to women. This finding may be due to a lack of fear of repercussions for men (Burn, 2009), however, this suggested implication is not quite satisfying in explaining why men are also likely to use delegating (instead of direct) as a means of intervention. Perhaps it is the idea that the distraction method is elaborate and time consuming, whereas stereotypically men are more likely to be direct, or to directly address a problem, through delegating (Palmer et al., 2016). However, future research should examine this in more detail. Additionally, in the current study women had a slightly higher frequency for reporting no intervention. This finding also falls in line with the idea that women may be afraid of the potential consequences (i.e., retaliatory violence) of intervening. Although this fear is warranted, there is not enough data to build a solid theory, as to this finding, at the current time. Future research should delve into this further, as it may be also be related to upbringing, or culture, etc.

Moreover, direct intervention was most frequently reported in the stalking scenario compared to the sexual or dating violence scenario. The stalking scenario did not involve visibly aggressive behavior (i.e., compared to the male punching the wall in the dating violence vignette). Therefore, students may feel more comfortable, and secure, using direct intervention in this scenario. A common theme in the stalking scenario was empathy, or individuals telling the perpetrator about their personal experience with a similar situation and discussing why the perpetrators behavior was wrong. This use of empathy is an interesting finding as the bystander

is working to change the norms of the perpetrator through sharing personal information. Sharing this type of information is not necessary to intervene. It is an extra step the participant is willing to take in order to show the perpetrator what it is like to be on the receiving end of harassment. Additionally, participants reported using distraction as a common response to the dating violence scenario. The dating violence vignette included seeing physical aggression (i.e., the perpetrator hitting a wall). Therefore, participants may feel more comfortable using the distraction method as a tool of intervention for safety purposes. Further, Palmer et al. (2016) found a similar pattern. Their sample compared responses to the dating violence, and a sexual violence scenario, and they found that individuals were more likely to use direct intervention in the sexual violence scenario compared to the dating violence, and more likely to use indirect intervention in the dating violence scenario compared to the sexual violence.

### **Implications for Green Dot**

The findings of this study, although interpreted with caution, give an insight into the effects, and potential future directions, of Green Dot, at the participating university. The first is targeting men is vital to encouraging intervention because they are half the population, but sometimes neglected in bystander intervention programs (i.e., there were only 16 men, or 21% of the sample, in the current study). The second implication is the potential relationship between the bystander and survivor/perpetrator. It is clear that knowing either person in the situation influences how one responds, therefore, it is essential that this is addressed during the training. For example, it may be important to emphasize that delegating is always an option in situations in which you do not know either the survivor or perpetrator. The third implication is that students appear to be paying attention to the 3 D's, and the different types of bystander behaviors mentioned in the training. There is an increase over time in reported delegate and distract

behaviors, and this may indicate that Green Dot is increasing the tools students have to use when faced with bystander situations

Finally, it is important that there is consistency in the Green Dot trainings on campus. Although there were no significant differences between the trainings for this study, there were some inconsistencies between trainers. These differences are to be expected as the trainers are volunteers who give their time to this cause. But it may be beneficial to have a yearly retreat, or training, where campus trainers come together, and review the material and discuss how it will be presented in the coming year. It is also important to continue evaluating Green Dot on campus. The student body changes rapidly with the culture, and it is vital that Green Dot keep up.

### **Limitations**

Although this study was beneficial to the participating university on progress and effectiveness of Green Dot on campus, there are some limitations. First, this study was not able to randomize the experimental and assessment-only comparison groups. Second, every student beginning their undergraduate career at Old Dominion University is mandated to participate in “First Class”, which is an orientation the Saturday before beginning the fall semester. During this orientation students must attend a 30-minute lecture on sexual and dating violence, given by the Women’s Center. There are also resources given to the students, and time for a short answer and discussion portion. As *all* students are mandated to receive this (and have been for the last four years). It is possible that this impacted results, possibly contributing to the high rate of bystander behaviors, efficacy, attitudes, and perceived norms at baseline, and the lack of change over time. Third, as this was a longitudinal study, attrition did occur, however, the rate was fairly low. Fourth, although there were significant findings power was inadequate (i.e., small sample sizes

for the comparison and experimental group). Before conducting the study, a power analysis was conducted, and it was determined that to have adequate power there needed to be 83 subjects per condition (formula from West et al., 2011). Although this number is high, approximately 20 -25 students attended each training session, totaling 80-100 people. Therefore, it was assumed that sufficient power would be obtained. However, the final sample size for the experimental group was 43, and 7 for the comparison group. The lack of power obtained was surprising given the monetary incentive for students. Fifth, demographic variables like race, etc., were not examined as potential mediating or moderating factors. Although, it is important to understand the intersectionality of demographic variables on bystander behaviors there was not enough data to allow for such in-depth analyses.

Although this research is important there was a lack of time. If there was an unlimited amount of time, the intended sample size would probably have been achieved, and the results may be different. It is important to note, the small sample size is a limitation, but is *not* a reflection of the work done on campus by the Women's Center and/or other prevention efforts on campus. The work that the Women's Center does is vital, and important. Hopefully, this study will be a testament to the positive work that is currently being done by the Women's Center, and its staff and volunteers.

In addition to a small sample size, the sample of Green Dot participants consisted of volunteers. Therefore, it is possible that this sample was different from the general campus population. The participants in this study may already be conscientious and active bystanders on campus.

### **Future Directions**



The results of the current study indicate that more research needs to be conducted on this topic. Future studies would be advantageous to include random assignment, with a control group that gets an intervention (e.g., an intervention on increasing studying productivity). Also, exploring why specific bystander behaviors vary between men and women would be beneficial. Additionally, with a larger sample size, demographic variables should be examined in depth, as there are many different demographic variables that play an important role in an individual's decision to be an active bystander (Amar et al., 2014; Brown et al., 2014; Diamond-Welch et al., 2016; Fabiano et al., 2003; Gable et al., 2017; Kilmartin et al., 2008). This concept of intersectionality on bystander intervention, is an important construct as people are impacted by the different facets that make up who they are as individuals, and these inform their decision making. For example, how does race impact one's decision to intervene? Does the race of the survivor or the perpetrator matter when making a decision to intervene? If so, how does it impact that decision (i.e., the type of intervention method used; direct, delegate, distract)? What if the survivor and the perpetrator are (or present) as the same gender/sex? These are all very important questions that should be examined in future research, particularly at the participating university, which is a minority serving institution, and has a very diverse population.

Further, the efficacy of booster sessions should be examined, and the impact they may have on maintaining bystander behaviors post-intervention. It would be interesting to see what types of booster sessions are most effective (i.e., ones that discuss bystander behavior in the real world or in the news versus booster sessions that discuss bystander behaviors on campus). As well as, the effectiveness of newsletters, and the dissemination of information, to the Green Dot Alumni at a university. Additionally, the current university is conducting focus groups on minority populations to understand how to better serve the entire population. It would be

beneficial to examine the results from these focus groups and determine how the information is being used in order to create more effective means of communicating with minority groups on campus.

## **Conclusion**

The current study sought to examine the effectiveness of the Green Dot program at the participating university by looking at bystander behaviors, efficacy and attitudes, and social sexual norms. There were some interesting and unexpected findings in this study. The first being that the comparison group had significantly higher bystander efficacy at pre-test. Again, this finding should be interpreted with caution because the sample size of the comparison group was very small, but it is still interesting. Additionally, there was a significant difference between men and women in the perception of the average males' social sexual behavior. The significant difference between men and women, indicates that males in the sample perceived the average male on campus to be lower on sexual aggression, and have more positive social behaviors, when compared to women in the sample. Although this finding may appear to be common sense, it points to a deeper belief for women that males are more sexually active and aggressive than women. Additionally, this finding may be "denial" on part of the men in the study who may hold themselves and other men to higher standards compared with men who did not voluntarily participate in this study. Further, ACEs did negatively predict bystander behavior at pre-test, and knowing someone who had been abused or assaulted predicted bystander behavior at the follow-up. These findings are interesting because they have yet to be explored in the literature and may also help bystander programs in the future. It is possible that prevention programs could incorporate ACEs, and/or knowing someone who has been impacted by abuse or assault, into components of their training program.

In reference to the qualitative data there were also many interesting findings. The first is that direct intervention was the most commonly reported intervention behavior, no matter what scenario or gender of the participant. Second, people were more likely to report direct intervention if they knew the perpetrator, compared to the survivor. This finding was unexpected but could be related to the participant not wanting to their friend to get into trouble for his actions or feeling safe to intervene. Further, men were less likely to report using distraction as a method for intervention when compared to women, perhaps due to viewing the distraction method as time consuming (i.e., coming up with an excuse/ploy to interrupt the behavior). Finally, students were more likely to report using direct intervention with the stalking scenario, compared to the dating or sexual violence scenario. Possibly because the stalking scenario included the least amount of violence, or possible chances or retaliation from the perpetrator.

There were multiple unique aspects of this study, the first being the longitudinal research model. Recent studies have advocated for more longitudinal research in sexual violence prevention to better understand the potential long-term impact on bystander behavior (Brown et al., 2014; Hoxmeier et al., 2016). Second, the current study explored the bystander relationship to the survivor and perpetrator. There are studies that examine the relationship between bystander behavior and survivor/perpetrator relationship (Azimi & Daigle, 2017; Banyard, 2008; Palmer et al., 2016), and these studies have mixed results. Third, potential bystander behaviors were examined qualitatively with a foundation in the 3 D's that Green Dot uses to teach participants new possible intervention strategies. Lastly, this study was unique because it examined the potential relationship between previous abuse (or knowing someone with previous abuse) and bystander behaviors.

The current research on Green Dot and other bystander intervention programs indicates potential and promise when it comes to increasing bystander behavior (Banyard et al., 2009; Coker et al., 2015). The current study sought to further our understanding of Green Dot, and to examine predictors, which may potentially increase bystander behavior. As a program and intervention, Green Dot works to target campus leaders who have a wide influence on fellow college students to increase the spread of Green Dot ideas and encourage the campus wide shift of the cultural acceptance of violence (diffusion of innovation). In better understanding the efficacy of bystander intervention programs, there can be increased precision and efficiency in targeting individuals who are likely to be active bystanders, and leaders in challenging accepted norms surrounding power-based violence on campus. Although there is some research pointing to the efficacy and impact of Green Dot (e.g., Coker et al. 2015), the current study did not find support for Green Dot at the participating university. Further, because the changes made by the current political administration, funding for prevention programs has been severely cut, and the participating university no longer conducts Green Dot trainings. However, the lack of understanding of the dynamics of campus sexual violence on part of society at large, and specifically the current political administration's shift in focus to the due process rights of the accused, point to the importance of studying sexual violence prevention. The misunderstanding of campus sexual violence is a reminder that the fight to end sexual violence is not over, there is still much work to be done.

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## APPENDICES

### APPENDIX A

#### SCRIPT FOR E-MAILS AND COMMUNICATION WITH STUDENTS

Researcher: Hello, I see that you're interested in participating in Green Dot at ODU. Green Dot will help you learn more about interpersonal violence and how to be an active bystander. Students who take part in Green Dot are eligible for my dissertation study. It would involve completing three surveys: right before you take part in Green Dot, right after you complete the program, and one month after you take part in the program. If you complete all three surveys, you will receive a total of \$15. Is it okay if I give you some more information about the study?

Student: Yes please.

Researcher: Great! This is my e-mail address. Please contact me for more information.

Thank you!<sup>3</sup>

If they say no the researcher will thank them for their time and give them a business card with the researcher's e-mail address and phone number in case they change their mind.

The day after the on-campus event the Women's Center will send the following e-mail:

Hello,

Hope you're doing well! We spoke recently at an on-campus event. I work with the Women's Center, and specifically, with the Green Dot program. At the event we talked about my research study that will be examining students' experience within the Green Dot program. The study involves completing three online surveys. The first survey is the link at the end of this e-mail.

---

<sup>3</sup> Due to Institutional Review Board stipulations the researcher is not allowed to collect student information prior to taking the survey. Only the Women's Center can collect contact information and reach out to the students.

The second online survey will be sent one week after you complete the Green Dot program. You will receive a \$5 online gift card for participating in the second online survey. One month after the Green Dot program, I will e-mail the final survey. You will receive a \$10 online gift card for completing the last survey—again, this will be one month after the Green Dot program. It is important that you complete all three online surveys. For that reason, you will receive a total of \$15 in online gift cards. The surveys will take approximately 30 minutes each. All the surveys are online, so you can take them at your convenience. Your participation is part of my dissertation research and surveying everyone that takes part in Green Dot is my goal. If you would like to participate, please click this link.

Thank you,

Brittany Hollis

\*After clicking the link, the participants be redirected to the consent form (APPENDIX A).

## APPENDIX B

### NOTIFICATION STATEMENT

**PROJECT TITLE:** Efficacy of Green Dot Bystander Intervention: A Look at Previous Abuse and Relationship to the Victim or Perpetrator on Actual Bystander Behaviors

The purposes of this form are to give you information that may affect your decision whether to say YES or NO to participation in this research, and to record the consent of those who say YES.

#### RESEARCHERS

Responsible Project Investigator, Michelle L. Kelley, Ph.D., Old Dominion University,  
Psychology Department

Brittany Hollis, M.S., Old Dominion University, Psychology Department

#### DESCRIPTION OF RESEARCH STUDY

This study is interested in learning more about interpersonal relationships on campus. This is a three-part study in which you be asked to complete a survey today (before the Green Dot program), again in one week after the Green Dot program, and then again one month after the Green Dot program. After completing this survey, you will be compensated \$5. If you complete the follow-up survey in one week after you complete the Green Dot program, you will be paid \$10. If you complete the survey again in one month after the Green Dot program, you will receive \$30. Therefore, you could receive up to \$30.00 for your participation in this study. Some of the questions ask about previous trauma before entering Old Dominion University, as well as during your time on campus. These include questions about exposure to family violence, child abuse, or sexual assault. In addition, you will be asked whether you experienced traumatic events at Old Dominion University, specifically, have you ever perpetrated a violent act (i.e., sexual assault) and/or been the survivor of a violent act. The ultimate goal is to better understand when and how students intervene in potentially risky situations.

#### NEW INFORMATION

If the researchers find new information during this study that would reasonably change your decision about participating, then they give it to you.

#### WITHDRAWAL PRIVILEGE

It is OK for you to say NO. Even if you say YES now, you are free to say NO later, and walk away or withdrawal from the study – at any time. Your decision will not affect your relationship with Old Dominion University, or otherwise cause a loss of benefits to which you might otherwise be entitled. However, in order to be eligible for the gift card you must complete the entire survey.

#### VOLUNTARY PARTICIPATION

By participating in this research study, you are saying several things. You are saying that you have read this form or have had it read to you, that you are satisfied that you understand this form, the research study, and its risks and benefits. If you have any questions later on, then the researchers should be able to answer them:

Brittany Hollis at [bholl019@odu.edu](mailto:bholl019@odu.edu) or 757-683-4209

Dr. Michelle L. Kelley at [mkelley@odu.edu](mailto:mkelley@odu.edu) or 757-683-4459

If you have any questions about your rights as a participant in this research project, you should contact (anonymously, if you wish) Old Dominion University Office of Research Protection at 757-683-3460

Additionally, feel free to contact Dr. Tancy Vandecar-Burdin is the current IRB Chair (683-3802, [tvandeca@odu.edu](mailto:tvandeca@odu.edu))

**RISKS:** Some of the questions ask about sensitive experiences that you may have had prior to and during attendance at Old Dominion University. Some people find that thinking about past experiences can cause negative feelings. You may be uncomfortable answering some of the sensitive questions. If you feel discomfort you may take a break and come back to the survey or choose not to answer any questions. The researchers keep your responses and results separate from your name, ensuring that all of your answers are confidential.

**BENEFITS:** There are no benefits to you directly, however, your participation may help increase our understanding of violence on campus.

Additionally, in the unlikely event that you call a student investigator and appear upset, we ask you to discontinue the survey. We will ask if it is okay to have Dr. Kelley call you. If you appear more than mildly upset (defined as distressed, crying), Dr. Kelley will ask if you would like to have someone to talk with, and with your permission, she will contact the ODU student counseling center and ask that they contact you to set up an appointment. Again, if you contact Dr. Kelley or the doctoral students, we make every effort to talk with you and ask if you would like to receive a phone call from a mental health clinician who specializes in working with students.

#### CONFIDENTIALITY

All information obtained about you in this study is strictly confidential unless disclosure is required by law. Although your e-mail address will be used to link the pre-test, with the post and follow-up the researchers will take reasonable steps to keep your information confidential. The results of this study may be used in reports, presentations and publications, but the researchers will not identify you. All information will be kept on a USB that is locked with a password, inside a locked drawer, in the department chairs office.

By clicking next you are giving your consent to participate.

## APPENDIX C

### ADVERSE CHILDHOOD EXPERIENCES

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., ... & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, 14(4), 245-258.

#### *Abuse by category*

While you were growing up during your first 18 years of life...

#### *Psychological*

Did a parent or other adult in the household...	Yes	No
Often or very often swear at, insult, or put you down?		
Often or very often act in a way that made you afraid that you would be physically hurt?		
<i>Physical</i>		
Did a parent or other adult in the household...		
Often or very often push, grab, shove, or slap you?		
Often or very often hit you so hard that you had marks or were injured?		
<i>Sexual</i>		
Did an adult or person at least 5 years older ever...		
Touch or fondle you in a sexual way?		
Have you touch their body in a sexual way?		
Attempt oral, anal, or vaginal intercourse with you?		
Actually, have oral, anal, or vaginal intercourse with you?		
<i>Household dysfunction by category</i>		
<i>Substance abuse</i>		
Live with someone who was a problem drinker or alcoholic?		

Live with anyone who used street drugs?		
<i>Mental illness</i>		
Was a household member depressed or mentally ill?		
Did a household member attempt suicide?		
<i>Mother treated violently</i>		
Was your mother (or stepmother)		
Sometimes, often, or very often pushed, grabbed, slapped, or had something thrown at her?		
Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard?		
Ever repeatedly hit over at least a few minutes?		
Ever threatened with, or hurt by, a knife, or gun?		
<i>Father treated violently</i>		
Was your father (or stepfather)		
Sometimes, often, or very often pushed, grabbed, slapped, or had something thrown at him?		
Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard?		
Ever repeatedly hit over at least a few minutes?		
Ever threatened with, or hurt by, a knife, or gun?		
<i>Criminal behavior in household</i>		
Did a household member go to prison?		

*Note.* The italicized words will not be in the actual survey they are just for clarity

## APPENDIX D

### SEXUAL SOCIAL NORMS INVENTORY – ADJUSTED (MALE)

Bruner, J. (2003). *Measuring rape supportive attitudes, behaviors and perceived norms: Validation of a social norms survey*. Doctoral Dissertation. Northern Colorado University.

Based on the scale below circle the number at right that indicates how you think the average male student at Old Dominion University would respond to the following statements:

1. If they witnessed a man pressuring a woman to leave with him, they would ask if everything was okay.
2. If they saw a man physically mistreating a woman, they would do something to help her.
3. If they saw a man put something in a woman's drink, they would tell her.
4. If they saw a man emotionally abusing a woman, they would try to help her.
5. If they witnessed a man hitting a woman, they would call the police.
6. If a man was sexually harassing a woman, they would stay out of it.
7. If they witnessed a rape, they would call the police.
8. They have a problem with men joking about scoring with women.
9. They feel uncomfortable if a friend brags about having sex.
10. They don't like when men use words like "slut" or "bitch" to insult women.
11. It's embarrassing when men they are with make sexual comments about women they don't know.
12. They would think it's fun to watch a porno with a group of friends.
13. If they thought a friend was lying to a woman to obtain sex, they would tell her.
14. They believe even if a woman has her clothes off, she still has the right to say no to sex.
15. They believe that only women who are promiscuous get raped.
16. They believe that being drunk is no excuse for forcing a woman to have sex.
17. They believe that even if a woman is dressed seductively, she does not deserve to be raped.
18. They believe that if a woman lets a man kiss her, it means she wants to have sex with him.
19. They believe that if a woman has been drinking, it is her fault if she gets raped.
20. If a male friend planned to give a woman drugs in order to have sex with her, they would try to stop him.
21. They believe that if a woman goes home with a man, it means she wants to have sex.
22. They believe that sometimes women say no to sex, so they don't seem easy.
23. They believe when a man is very sexually aroused, he may not realize that a woman is resisting his advances.
24. They would rather have a good relationship with one woman than sex with many different women.

- 1 = strongly disagree  
 2 = disagree  
 3 = disagree somewhat  
 4 = neither agree nor disagree  
 5 = agree somewhat  
 6 = agree  
 7 = strongly agree

## APPENDIX E

### SEXUAL SOCIAL NORMS INVENTORY – ADJUSTED (FEMALE)

Bruner, J. (2003). *Measuring rape supportive attitudes, behaviors and perceived norms: Validation of a social norms survey*. Doctoral Dissertation. Northern Colorado University.

Based on the scale below circle the number at right that indicates how you think the average female student at Old Dominion University would respond to the following statements:

1. If they witnessed a man pressuring a woman to leave with him, they would ask if everything was okay.
2. If they saw a man physically mistreating a woman, they would do something to help her.
3. If they saw a man put something in a woman's drink, they would tell her.
4. If they saw a man emotionally abusing a woman, they would try to help her.
5. If they witnessed a man hitting a woman, they would call the police.
6. If a man was sexually harassing a woman, they would stay out of it.
7. If they witnessed a rape, they would call the police.
8. They have a problem with men joking about scoring with women.
9. They feel uncomfortable if a friend brags about having sex.
10. They don't like when men use words like "slut" or "bitch" to insult women.
11. It's embarrassing when men they are with make sexual comments about women they don't know.
12. They would think it's fun to watch a porno with a group of friends.
13. If they thought a friend was lying to a woman to obtain sex, they would tell her.
14. They believe even if a woman has her clothes off, she still has the right to say no to sex.
15. They believe that only women who are promiscuous get raped.
16. They believe that being drunk is no excuse for forcing a woman to have sex.
17. They believe that even if a woman is dressed seductively, she does not deserve to be raped.
18. They believe that if a woman lets a man kiss her, it means she wants to have sex with him.
19. They believe that if a woman has been drinking, it is her fault if she gets raped.
20. If a male friend planned to give a woman drugs in order to have sex with her, they would try to stop him.
21. They believe that if a woman goes home with a man, it means she wants to have sex.
22. They believe that sometimes women say no to sex, so they don't seem easy.
23. They believe when a man is very sexually aroused, he may not realize that a woman is resisting his advances.
24. They would rather have a good relationship with one man than sex with many different men.

1 = strongly disagree

2 = disagree

3 = disagree somewhat

4 = neither agree nor disagree



5 = agree somewhat

6 = agree

7 = strongly agree

## APPENDIX F

### BYSTANDER SELF-EFFICACY

Banyard, V. L., Plante, E. G., & Moynihan, M. M. (2005). *Rape Prevention Through Bystander Education: Final Report*. Washington DC: US Department of Justice. Document no. 208701.

Please answer the following questions about what you think about “violence prevention.”  
Violence is when people fight or hurt others on purpose. Violence prevention means keeping violence from happening or stopping violence before it starts.

1. People’s violent behavior can be prevented.
2. There are certain things a person can do to prevent violence.
3. I myself can make a difference in helping prevent violence.
4. People can be taught to help prevent violence.
5. Doing or saying certain kinds of things can work to help prevent violence.
6. I can learn to do or say the kinds of things that help prevent violence.
7. People can learn to become someone who helps others avoid violence.
8. Even people who are not involved in a fight can do things to help prevent violence.
9. Even when I’m not involved and it’s not about me, I can make a difference in helping prevent violence.

1 = disagree completely

2 = disagree a lot

3 = disagree a little

4 = agree a little

5 = agree a lot

6 = agree completely

## APPENDIX G

### BYSTANDER ATTITUDES

McMahon, S. (2010). Rape myth beliefs and bystander attitudes among incoming college students. *Journal of American College Health*, 59(1), 3-11.

How likely are you to engage in this behavior...

1. Ask for verbal consent when I am intimate with my partner, even if we are in a long-term relationship.
2. Stop sexual activity when asked to, even if I am already sexually aroused.
3. Check in with my friend who looks drunk when s/he goes to a room with someone else at a party.
4. Say something to my friend who is taking a drunk person back to his/her room at a party.
5. Challenge a friend who made a sexist joke.
6. Express my concern if a family member makes a sexist joke.
7. Use the word "ho," "bitch," or "slut" to describe girls.
8. Challenge a friend who uses "ho," "bitch," or "slut" to describe girls.
9. Confront a friend who plans to give someone alcohol to get sex.
10. Refuse to participate in activities where girls' appearances are ranked/rated.
11. Listen to music that includes "ho," bitch," or "slut."
12. Confront a friend who is hooking up with someone who was passed out.
13. Confront a friend if I hear rumors that s/he forced sex on someone.
14. Report a friend that committed a rape.
15. Stop having sex with a partner if s/he says to stop, even if it started consensually.
16. Decide not to have sex with a partner if s/he is drunk.

1 = not likely

2 =

3 =

4 =

5 = extremely likely

## APPENDIX H

### BYSTANDER BEHAVIOR VIGNETTES (DIRECT, DELEGATE, DISTRACT, INDIRECT)

Palmer, J. E., Nicksa, S. C., & McMahon, S. (2016). Does who you know affect how you act? The impact of relationships on bystander intervention in interpersonal violence situations. *Journal of Interpersonal Violence*, doi:10.1177/0886260516628292.

Students will randomly get one of 3 options below

The following are open-ended questions:  
*Sexual Assault Scenario*

What actions would you be most likely to take in the following situation...

**GROUP 1:** You are at a party and go upstairs to use the bathroom. A few minutes ago you noticed [your friend, Crystal,] go upstairs with [a guy.] They had been flirting all night and were going to watch some TV. The walls in the apartment are thin, so you can hear them talking in the next room. You hear [Crystal] say, "Alright, Mike, let's finish this TV show." In a few more minutes, you hear [Crystal] say, "Really, stop. I need to go home." Then: "Mike, get off of me. Let go of me!" You can see through a crack in the door that he is moving on top of her, and his pants are down. [Crystal] is crying.

**GROUP 2:** You are at a party and go upstairs to use the bathroom. A few minutes ago you noticed [a girl] go upstairs with [a guy.] They had been flirting all night and were going to watch some TV. The walls in the apartment are thin, so you can hear them talking in the next room. You hear [the girl] say, "Alright, Mike, let's finish this TV show." In a few more minutes, you hear [the girl] say, "Really, stop. I need to go home." Then: "Mike, get off of me. Let go of me!" You can see through a crack in the door that he is moving on top of her, and his pants are down. [The girl] is crying.

**GROUP 3:** You are at a party and go upstairs to use the bathroom. A few minutes ago you noticed [a girl] go upstairs with [your friend John.] They had been flirting all night and were going to watch some TV. The walls in the apartment are thin, so you can hear them talking in the next room. You hear [the girl] say, "Alright, John, let's finish this TV show." In a few more minutes, you hear [the girl] say, "Really, stop. I need to go home." Then: "John, get off of me. Let go of me!" You can see through a crack in the door that he is moving on top of her, and his pants are down. [The girl] is crying.

**GROUP 4:** You are at a party and go upstairs to use the bathroom. A few minutes ago you noticed [your friend, Crystal,] go upstairs with [your friend, Mike.] They had been flirting all night and were going to watch some TV. The walls in the apartment are thin, so you can hear them talking in the next room. You hear [Crystal] say, "Alright, Mike, let's finish this TV show." In a few more minutes, you hear [Crystal] say, "Really, stop. I need to go home." Then: "Mike,

get off of me. Let go of me!" You can see through a crack in the door that he is moving on top of her, and his pants are down. [Crystal] is crying.

Students will randomly get one of 3 options below

The following are open-ended questions:

*Intimate Partner Violence Scenario*

What actions would you be most likely to take in the following situation...

GROUP 1: You are in the student center eating lunch with a few of your friends. You notice [your friend John] with [his girlfriend]. You and your friends can see that it looks like he is yelling at her and she looks scared or upset. Suddenly he punches the wall. Your friend says, "She looks scared, we should do something".

GROUP 2: You are in the student center eating lunch with a few of your friends. You notice [a girl and a guy] in an intense conversation. You can see that it looks like he is yelling at her and she looks scared or upset. Suddenly he punches the wall. Your friend says, "She looks scared, we should do something".

Group 3: You are in the student center eating lunch with a few of your friends. You notice [your friend Crystal] with [her boyfriend]. You and your friends can see that it looks like he is yelling at her and she looks scared or upset. Suddenly he punches the wall. Your friend says, "She looks scared, we should do something".

GROUP 4: You are in the student center eating lunch with a few of your friends. You notice [your friend John] with [your friend, Crystal]. You and your friends can see that it looks like he is yelling at her and she looks scared or upset. Suddenly he punches the wall. Your friend says, "She looks scared, we should do something".

Students will randomly get one of 3 options below

The following are open-ended questions:

*Stalking Scenario*

What actions would you be most likely to take in the following situation...

GROUP 1: You are in the quad with a few of your friends when [your friend John] starts to talk about [a girl] whom he met on a dating website for locals. He says, “We went out once, but she told me she never wanted to see me again. Too bad because I’ve been harassing her on social media ever since and sending graphic pictures to her phone.”

GROUP 2: You are in the quad with a few of your friends when [a guy] starts to talk about [a girl] whom he met on a dating website for locals. He says, “We went out once, but she told me she never wanted to see me again. Too bad because I’ve been harassing her on social media ever since and sending graphic pictures to her phone.”

Group 3: You are in the quad with a few of your friends when [a guy] starts to talk about [your friend Crystal] whom he met on a dating website for locals. He says, “We went out once, but she told me she never wanted to see me again. Too bad because I’ve been harassing her on social media ever since and sending graphic pictures to her phone.”

Group 4: You are in the quad with a few of your friends when [your friend, John] starts to talk about [your friend, Crystal] whom he met on a dating website for locals. He says, “We went out once, but she told me she never wanted to see me again. Too bad because I’ve been harassing her on social media ever since and sending graphic pictures to her phone.”

Indirect

- Talk to Crystal/the girl later and find out what’s going on.
- Talk to Crystal/the girl later and give her resources to get help.
- Talk to John/the guy later and give him resources to get help.

Delegate

- Call someone I know is sensitive to this issue and ask for his/her assistance or advice.
- Call the police and let them know about the situation.
- Ask someone close to John/the guy to talk him about boundaries.

Direct

- Go up to them and tell [John/the guy] not to treat her that way.
- Tell Crystal/the girl to report him to the police.

*Conceptual categories and survey response options*

Response Options		
	SA Vignette	IPV Vignette
Indirect	Cause some kind of distraction (make your phone ring, make a loud noise) to interrupt them and let them know you're outside the door.	Walk by them and cause some kind of distraction (e.g., talking loudly, coughing loudly) to interrupt them. Go up to them and pretend like you need to talk to them (e.g., you need directions, you need to use one of their phones).
	Find [Crystal/the girl/the girlfriend] later to ask if she's OK.	Find [Crystal/the girl] later and try to find out what was going on.
	Find [Crystal/the girl/the girlfriend] later to give her information or hotline numbers for help.	Find [Crystal/the girl] later and give her information so she can get help.
	Talk to John later to try to find out what was going on. <sup>1</sup>	Find [John/the guy/the boyfriend] later and try to find out what was going on.
	Talk to John later and give him information so he can get help. <sup>1</sup>	Find [John/the guy/the boyfriend] later and give him information so he can get help.



Delegate	Call someone I know is sensitive to this issue and ask for his/her assistance or advice.	Call a friend or someone who you know that is sensitive to this issue and ask for his/her assistance or advice.
	Contact a friend and ask them to come over and help make sure [John/the guy] leaves.	Find a public safety officer or other university staff member to help you interrupt the situation.
	Call the police during the incident and report that [the girl/Crystal] needs help.	Call the police or public safety officer and report that [someone/Crystal] needs help.
Direct	"[Crystal?] Is everything OK?" during the incident.	Go up to them and ask, "Is everything OK?"
	Go into the room and tell [the guy/John] he should leave.	Go up to them and tell [John/the boyfriend] not to talk to her that way.

---

<sup>1</sup>Only included when scenario included known perpetrator.

## APPENDIX I

### BYSTANDER BEHAVIORS

McMahon, S., Postmus, J. L., & Koenick, R. A. (2011). Conceptualizing the engaging bystander approach to sexual violence prevention on college campuses. *Journal of College Student Development*, 52(1), 115-130.

Have you engaged in the following behavior in the past 1 month?

Question

1. Ask for verbal consent when I am intimate with my partner, even if we are in a long-term relationship\*
2. Stop sexual activity when asked to, even if I am already sexually aroused\*
3. Check in with my friend who looks drunk when s/he goes to a room with someone else at a party\*
4. Say something to my friend who is taking a drunk person back to his/her room at a party\*
5. Challenge a friend who made a sexist joke\*
6. Express my concern if a family member makes a sexist joke\*
7. Use the word “ho,” “bitch,” or “slut” to describe girls when I was with my friends
8. Challenge a friend who uses “ho,” “bitch,” or “slut” to describe girls
9. Confront a friend who plans to give someone alcohol to get sex
10. Refuse to participate in activities where girls’ appearances are ranked/rated
11. Listen to music that includes “ho,” “bitch,” or “slut”
12. Confront a friend who is hooking up with someone who was passed out
13. Confront a friend if I hear rumors that s/he forced sex on someone
14. Report a friend that committed a rape
15. Stop having sex with a partner if s/he says to stop, even if it started consensually
16. Decide not to have sex with a partner if s/he is drunk.

Note. \* indicate reverse coding

Response

Yes

No

Wasn't in the situation

**APPENDIX J**  
**DEMOGRAPHICS**

What is your age?

- Age
- 

What is your year in school?

- Freshman
- Sophomore
- Junior
- Senior
- Post-bachelors (i.e., master's student)

What is your biological sex?

- Female
- Male
- Other

What is your preferred gender identity?

- Female
- Male
- Genderqueer
- Non-binary
- Other

How would you describe yourself? (Choose one or more)

- American Indian or Alaska Native
- Asian
- Black or African American
- Hispanic or Latino/Latina
- Native Hawaiian or Other Pacific Islander
- White
- Other

What is the highest level of schooling your mother or father has completed (select whichever is higher)?

- Some elementary, middle, or high school
- High school graduate
- GED

- Vocational school
- Some college
- College graduate
- Master's degree
- Doctorate
- Professional degree such as MD, JD, Nursing

People are different in their sexual attraction to other people. Which best describes your feelings? Are you:

- Only attracted to females
- Mostly attracted to females
- Equally attracted to females and males
- Mostly attracted to males
- Only attracted to males
- Not sure
- Other

Which of the following best describes your dating, sexual or romantic relationship status?

- Never dated
- Not currently dating
- I go out on dates but I'm not in a dating, sexual or romantic relationship
- I am in a dating, sexual or romantic relationship, but not living together
- I am currently married or living with my partner

Are you a full-time or part-time student?

- Full-time
- Part-time
- Other, please specify

Where do you currently live?

- On-campus dorm, apartment or house
- Fraternity or sorority house
- Off-campus

With whom do you live?

- Live alone
- With my parents or other adult relatives
- With a roommate/roommates (not a romantic partner)
- With my husband/wife,
- Boyfriend/girlfriend or other romantic partner

Have you ever participated in a violence prevention program (e.g., Green Dot) previously?

- Yes
- No
  - If so, what was the name of the program?

This study is a three-part study. You will take the first survey, then a week later be e-mailed the second, and then one month later you will receive the third. Please provide us with the e-mail address that you regularly use so we can send you the next survey (i.e., student@odu.edu).

E-mail address

Telephone number

## APPENDIX K

### RESOURCES

Thank you for participating!

The following are hotline numbers that may be useful for you, a friend, or a family member. All these hotlines have staff available to talk 24-7. The phone calls are free and anonymous.

If someone needs to talk about feeling alone, sad or depressed  
Call 1-800-784-2433.

The National Domestic Violence Hotline  
1-800-799-7233 (SAFE)  
[www.ndvh.org](http://www.ndvh.org)

National Dating Abuse Helpline  
1-866-331-9474  
[www.loveisrespect.org](http://www.loveisrespect.org)

National Sexual Assault Hotline  
1-800-656-4673 (HOPE)  
[www.rainn.org](http://www.rainn.org)

National Suicide Prevention Lifeline  
1-800-273-8255 (TALK)  
[www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org)

National Center for Victims of Crime  
1-202-467-8700  
[www.victimsofcrime.org](http://www.victimsofcrime.org)

National Resource Center on Domestic Violence  
1-800-537-2238  
[www.nrcdv.org](http://www.nrcdv.org) and [www.vawnet.org](http://www.vawnet.org)

Futures Without Violence: The National Health Resource Center on Domestic Violence  
1-888-792-2873  
[www.futureswithoutviolence.org](http://www.futureswithoutviolence.org)

National Center on Domestic Violence, Trauma & Mental Health  
1-312-726-7020 ext. 2011  
[www.nationalcenterdvtraumamh.org](http://www.nationalcenterdvtraumamh.org)

Campus Resources  
ODU Women's Center  
1000 Webb University Center Norfolk, VA. 23529  
757-683-4109  
[womenctr@odu.edu](mailto:womenctr@odu.edu)

ODU Counseling Services  
1526 W 49th St, Norfolk, VA 23529  
757-683-4401

LiveSafe app

Community resources  
YWCA  
500 E. Plume St. Ste. 700 Norfolk, VA. 23510  
757-625-1946  
Crisis hotline: 757-251-0144  
[info@ywca-shr.org](mailto:info@ywca-shr.org)

Thank you for your participation in this research project. The information provided by these questionnaires will help psychology researchers and clinicians learn more about characteristics and variables related to college students' understanding of and engagement in risky situations.

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Thank you for taking the time to complete this survey!

We appreciate your time!

Debriefing for student's once they have completed all 3 parts of the study

## **APPENDIX L**

### **DEBRIEFING<sup>4</sup>**

Thank you for your participation in this study. Psychologists are interested in understanding how and why individuals intervene, or do not intervene, in aggressive or violent situations where they are neither the aggressor nor the victim. Some studies have indicated that, for example, teaching and training individuals (via bystander intervention trainings) how to safely intervene when they witness a violent situation that their consequential behavior will change. This is a relatively new area of research, however, and psychologists have not examined the effects of these types of trainings over time. Our experiment is concerned with how effective these training programs are and how we can improve them. Our study addresses this issue.

Our study is addressing how effective a bystander program is at Old Dominion University. More specifically, we are investigating whether this bystander program increases actual bystander behavior over time. Additionally, some research suggests that social norms influence our decisions as to whether to intervene or not. For example, if we believe our peers are more likely to approve of our behavior, we are more likely to behave in that manner, as opposed to if we believe our peers do not approve. We also looked at if previous experiences influenced current bystander behavior. Previous research is severely lacking in this area. We do not know if previous violent and aggressive experiences will influence current bystander behavior, which is why we are examining it in this study. The question of interest is what predicts bystander behavior in the Old Dominion student body and how can we use that information to improve campus safety? We want to make Old Dominion a safe and happy place where students feel free to learn and express themselves without fear.

All the information we collected in this study will be confidential. We are not interested in any one individual's responses; we want to look at the general patterns that emerge when the data are aggregated together.

Your participation is appreciated and will help psychologists discover more ways of promoting prosocial behavior. We ask that you do not discuss the nature of the study with others who may later participate in it, as this could affect the validity of our research conclusions. If you have any questions or concerns, you are welcome to talk with Brittany Hollis at bholl019@odu.edu in the Old Dominion University Psychology Department. If you have any other questions about your rights as a participant in this research project, you should contact (anonymously, if you wish) Old Dominion University Office of Research Protection at 757-683-3460.

**THANK YOU AGAIN FOR YOUR PARTICIPATION.**

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<sup>4</sup> Modeled after: Smith, Jane (1990). *Emotions, arousal, and judgments: A model of affect and stereotyping.*

## APPENDIX M

### TRAINER FIDELITY CHECKLIST

Fidelity

Assessment

Pre-module

Introduction

personal introduction (instructor)

is engaging from the start

builds a relationship with the audience (e.g., uses authenticity, humor, vulnerability, or emotional connection)

connects the audience to the issue

Training basics & icebreakers

clickers are introduced

teams are created

icebreakers are engaging and fun

Definitions & scope of the issue

power-based personal violence is defined in inclusive terms

stats are relevant to the audience

impact of PBPV clicker questions

instructor's emotional response reflects the anonymous disclosures of violence

Personal connection activity

instructor has shared a personal connection of their own (may have been earlier in the content)

instructor creates an open, comfortable space for students to write and reflect

Green Dot summary & Practice

map is highlighted

red dots defined with examples

proactive green dots defined with examples

reactive green dots defined with examples

green dot in 30 seconds or less activity & practice

MODULE 1: introducing the bystander

Understanding the role of bystander

bystander activity (pick at least one activity, helps students connect to their role and personal line as a bystander)

bystander choice (Do something or do nothing) explained

personal creed activity

MODULE 2: recognizing red dots

Connection slips read

instructor creates a comfortable space for connections  
 instructor is emotional connected

#### Recognizing red dots

instructor uses the bystander lens  
 warning signs reflect both behaviors of person exhibiting red dot behaviors  
 and person on receiving end  
 instructor uses gender inclusive language (and does not use  
 victim/perpetrator language)  
 each form of violence is defined  
 red dot activity (pick at least one activity, students understand relevant  
 behaviors they might recognize)  
 take a second look activity  
 bystander reminders are clear (take a second look, check-in, what if it were  
 someone I love?)

#### MODULE 3: reactive green dots

##### Connection slips read

instructor creates a comfortable space for connections  
 instructor is emotionally connected

##### Barriers to action

bystander clicker questions  
 team scramble activity  
 types of barriers defined (personal, relationship, general)  
 barrier activity (pick at least one activity)  
 students are connected to their own barriers

##### Reactive green dot solutions: 3 d's

direct, delegate and distract are defined with examples  
 bystander safety is clearly noted  
 3D clicker questions  
 role play speed round activity  
 reactive green dot activity (pick at least one activity)  
 students are equipped with reactive solutions

#### MODULE 4: proactive green dots

##### Connection slips read

instructor creates a comfortable space for connections  
 instructor is emotionally connected

##### Proactive green dots

two new norms defined (violence will not be tolerated, AND everyone  
 needs to do their part)  
 map is highlighted again with connection to reactive and proactive  
 setting campus norms activity  
 communicating norms activity  
 lots of proactive green dot examples given

barriers to proactive green dots explained  
proactive options defined with examples  
proactive green dot activity (pick at least one activity)  
students are equipped with proactive options  
peer influence clearly defined  
students connected to their own ability to influence others  
commitment activity (pick at least one activity)  
soapbox activity  
chip speed round

## VITA

Brittany F. Hollis, M.S., Doctoral Candidate

### Education

- Ph.D. Old Dominion University, Norfolk, VA  
Applied Experimental Psychology  
Advisor: Dr. Michelle Kelley  
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- M.S. Old Dominion University, Norfolk, VA  
Applied Experimental Psychology  
December, 2015
- B.S. Old Dominion University, Norfolk, VA  
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Double Minor: Criminal Justice & Women's Studies  
May 2013

### Manuscripts

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2. Hollis, B. F., Kelley, M. L., & Bravo, A. J. (2017). Pre-military abuse, mental health, and hazardous alcohol use among military personnel. *Journal of Substance Use*, 22, 187-191.
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10. Linden, A. N., Lau-Barraco, C., & Hollis, B. F. (2013). Associations between psychological distress and alcohol outcomes as mediated by time perspective orientation among college students. *Mental Health and Substance Use*, 7(2), 134-143.