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The Effect of Sex Education Programs on Rape Culture

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THE EFFECT OF SEX EDUCATION PROGRAMS ON RAPE CULTURE

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Master of Science, Psychology

By

Logan J. Griffin

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ABSTRACT

Although schools in the United States primarily present abstinence only or comprehensive sex education programs, neither of these programs discuss the topic of sexual consent. In addition, these programs reinforce negative ideologies regarding rape-myths and victim blaming. The purpose of the current study is to determine if the prior type of sex education effects participants' beliefs in rape-myth acceptance, sexism, willingness to help, and importance of consent, and if the sex education priming effects the participants' likelihood to victim blame, express victim empathy, and their bystander behavior. The data reflected that those participants who received abstinence only sexual education did report higher rape culture adherence in victim blaming, rape-myth acceptance, and hostile and benevolent sexism ($p < .05$) compared to those students who received comprehensive sex education. These findings have implications for both sex education and rape prevention programming. They also indicate that more research is needed in this area.

KEYWORDS: sexual assault, sex education, victim blaming, rape prevention, consent, religiosity

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INTRODUCTION

Sex education programming is often presented to individuals throughout their formative years, during middle school and high school. These programs may be their first introduction to safe-sex practices and communication; unfortunately, most programs in the United States lack vital information about these subjects. The primary sex education programs taught in the United States are abstinence only and comprehensive sex education (also known as abstinence plus); a total of 35% of school districts reported they implement strict abstinence only until marriage programs in their schools and 65% reported a version of either an abstinence plus or comprehensive sex education program in their schools (Collins et al, 2002; Hoefer & Hoefer, 2017; Landry et al, 1999). Unfortunately, a limitation of both of these programs is that they fail to discuss how to establish sexual consent and navigate open communication in a sexual partnership. This is concerning because it means high school students are entering college without the knowledge of how to appropriately navigate these situations; thus, it is not surprising that college freshmen without this knowledge are at the highest risk of sexual assault (Cadaret et al., 2019; Cantor et al., 2015).

In addition to not preparing students for sexual partnerships, abstinence-only and comprehensive sex education programming may contribute to rape culture. Because these programs lack information about healthy communication and consent, they may strengthen victim blaming and rape-myths through omission or misinformation (Anderson, 2010; Hoefer & Hoefer, 2017; Willis et al., 2019). Further, individuals need educated on what qualifies as rape; for example, researchers Sheldon and Parent (2002) found that although their community sample of participants indicated there was a lack of consent in the sexual assault vignettes they were

presented, they did not always classify these scenarios as rape and often assigned blame to the victims.

It is important that research on this topic be continued to better understand the impact the various type of sex education programming has on individual understandings and perceptions of sexual assault and rape. These programs may be uniquely positioned to promote healthy sexual relationships or, alternatively, promote misunderstandings of what healthy sexual relationships should look like and contribute to the adherence of rape-myths. Thus, the purpose of the current study is twofold: (1) determine if history of sex education programming is related to rape-myth acceptance, victim blaming, victim empathy, and sexual consent; and (2) determine if priming participants for a specific type of sex education program and level of victim religiosity impacts participants' willingness to help and have empathy for a potential sexual assault victim in an experimental vignette.

Abstinence Only Sex Education

Abstinence only sex education is known under several names: sexual risk avoidance education (SRAE), abstinence education, and abstinence only until marriage education (Anderson, 2010; Benson-Gold & Nash, 2001; Birch et al, 2017; Collins et al., 2002; Duffy et al., 2008; Gardner, 2015; Greslé-Favier, 2013; Hauser, 2004; Landry et al, 1999; Walcott et al, 2011). These programs emphasize abstinence as the only or the preferred method of sexual contraception and protection (Anderson, 2010; Benson-Gold & Nash, 2001; Birch et al., 2017; Collins et al., 2002; Gardner, 2015; Greslé-Favier, 2013; Hauser, 2004; Landry et al, 1999; Walcott et al, 2011). Birch and colleagues (2017) identified four overarching goals of this program: to promote a delay in sexual intercourse before marriage, to help students avoid situations that may lead to sex, to ensure students are aware of the potential risks in engaging in premarital sex, and to encourage abstinence as a lifestyle choice.

Proponents of this program believe mentioning contraceptives may give adolescents the idea that engaging in sex is acceptable; thus, if information is included on contraceptives, the focus is often on how ineffective these methods are at preventing negative sexual consequences such as sexually transmitted infections (STIs) and unwanted pregnancies (Greslé-Favier, 2013; Toups & Holmes, 2002). In addition, these programs emphasize that sex outside of the context of marriage may have harmful psychological and physical effects in order to deter students from engaging in any sexual behavior (Collins et al., 2002). Research on the efficacy of abstinence only programming is mixed. Toups and Holmes (2002) found that many of these programs successfully encourage teens to refrain from sexual activity. Birch and colleagues (2017) found

evidence to support each of the goals in abstinence only education; specifically, they found that students were more likely to promote a delay in sexual intercourse, to avoid situations that may lead to sex, to be aware of the risks of engaging in premarital sex, and to encourage abstinence as a lifestyle choice. Although these findings suggest that students are more likely to adhere to abstinence ideals after attending an abstinence only sex education program, several researchers have found abstinence only education has no effect on delaying sexual intercourse, preventing unwanted Sexually Transmitted Infections (STIs), or reducing teen pregnancy (Birch et al, 2017; Kohler et al, 2008; Greslé-Favier, 2013; Landry, et al, 1999). Thus, it may be that as students mature, they no longer hold true to these ideals.

In fact, retrospective interviews with college students who attended abstinence only sex education programming in high school found that some students felt cheated out of important information regarding sex education (Hoefer & Hoefer, 2017). After analyzing the interviews, Hoefer and Hoefer (2017) found participants discussed six themes about their perceptions of abstinence only sex education: lack of information and resources presented on sex, sexist and heterosexist stereotypes, 'adultification' of students of Color, lack of emotional safety and discouragement of LGBTQ+ sexual relationships, curricula and teacher reliance on fear and shame, and lack of educator efforts to offer supplemental resources. Participants viewed these programs as creating a judgmental and hostile conversation regarding safe-sex practices, reinforcing gender stereotypes, and creating an unsafe environment for the LGBTQ+ community (Hoefer & Hoefer, 2017). In an additional study, Gardner (2015) found that several students described their abstinence only education experience as being 'pushed' at them or that they were being 'brainwashed' (p. 130).

Despite the mixed evidence of its ineffectiveness, abstinence education, or SRAE, is supported and funded by both state and federal government and organizations such as Concerned Women for America, National Coalition for Abstinence Education, STOP Planned Parenthood, Focus on the Family, and more (Benson-Gold & Nash, 2001; Collins et al., 2002; Duffy et al, 2008; Greslé-Favier, 2013). This is concerning given evidence that these programs do not always present accurate information. In fact, Duffy and colleagues (2008) found that 80% of SRAE programs present inaccurate or misleading information on contraception and abortion, and inaccurate or incomplete information regarding sexual anatomy. Some researchers argue these programs are a form of childism, discrimination against children, because it denies them the right to make informed decisions regarding their sexual health (Greslé-Favier, 2013).

Due to the religious connections of many funding organizations, the push for abstinence only sex education may be due, at least in part, to the religious pressure of maintaining purity and morality. Members from Concerned for Women of America, one of the funding organizations, state that religious beliefs and morals play a large role in an adolescent's decision in whether to engage in sexual activity, so the morals instilled in abstinence only sex education are imperative in protecting our youth (Collins et al., 2002). Although empirical research has not been done to connect sex education programming, religiosity, and perceptions of sexual assault victims, it has been suggested that the likelihood to victim blame and adhere to rape-myths is connected to the ideal of remaining pure (Niemi & Young, 2014). Burt (1980) posited that rape-myth acceptance may be a result of the sexual conservatism ideal that is emphasized in the Christian religion. This is an ideal that is reinforced in abstinence only programs as they emphasize staying abstinent (i.e., "pure") until marriage.

Comprehensive Sex Education

This type of sex education programming is known under multiple names: comprehensive sex education, contraception and sexually transmitted disease (STD) education, and abstinence plus sex education programming (Anderson, 2010; Benson-Gold & Nash, 2001; Collins et al., 2002; Landry et al., 1999; Walcott et al., 2011). Similar to abstinence only sex education, comprehensive sex education presents abstinence as the preferred method of contraception (Anderson, 2010; Benson-Gold & Nash, 2001; Collins et al., 2002; Landry et al., 1999; Walcott et al., 2011). However, although abstinence only programs fail to discuss the benefits of contraception and condoms, comprehensive sex education programs do promote the use of contraceptive methods such as birth control and condoms (Anderson, 2010; Collins et al., 2002; Landry et al., 1999; Walcott et al., 2011). Walcott and colleagues (2011) found that students who received comprehensive sex education had more positive attitudes towards safe-sex practices and knew significantly more about HIV prevention than those who underwent abstinence only sex education programs.

Due to the perception that comprehensive sex education programs contain information that may enable or encourage adolescents to engage in sexual behavior, in many states parents must provide consent for their children to receive education regarding sexually transmitted infections (STIs) and contraception (Benson-Gold & Nash, 2001); thus, even though some schools may offer this program, students may still miss out on this valuable information. Although comprehensive programs are associated with lower rates of unwanted teen pregnancies and STI contraction, the United States still has some the highest rates of teen pregnancies and STI contraction compared to other first world countries (Hauser, 2004; Kohler et al, 2008).

Unfortunately, comprehensive sex education programs are not effective in preventing sexual assault or abuse (Davis, 2008; Kohler et al, 2008). These types of programs are still

missing an arguably valuable component of sex education: sexual consent (Anderson, 2010; Willis et al., 2019). Sexual consent is vital in relationships to provide autonomy and healthy communication between partners. It is common for adolescents and young adults to not discuss consent prior to engaging in sexual activity (Jozkowski et al, 2014; Muehlenhard et al, 2016). This may be concerning as it could lead to discomfort, a lack of mutual consent between sexual partners, and may contribute to the development of sexual assault scripts (Jozkowski & Peterson, 2013).

Comprehensive Plus

Although research on the connection between sex education programming and common variables of interest in the sexual assault literature has not been done to our knowledge, researchers have looked at the efficacy of bystander intervention programming on rape-myth acceptance and willingness to engage in bystander behavior. One such program, the Empowering the Bystander program, includes information regarding how to obtain sexual consent (Cadaret et al., 2019). A study of the efficacy of this program found that the program decreased negative rape culture on campus by evaluating students' endorsement of rape culture. Bystander intervention programming is associated with lower rates of rape-myth acceptance and higher rates of prosocial bystander behavior (Banyard et al, 2007; Cadaret et al., 2019; Coker et al., 2017). Similar to other bystander intervention programs available on college campuses, Empowering the Bystander specifically addresses approaches to increase sexual assault survivor empathy, it leads discussion on prosocial bystander behaviors, and increases awareness of rape culture on campuses; however, the inclusion of dialogue regarding healthy sexual consent makes this program unique (Cadaret et al., 2019). Although bystander intervention programs help to

decrease the prevalence of sexual assault on campuses, this intervention occurs too late to save adolescents from experiencing sexual coercion and assault (DeGue et al, 2014). Approximately 11% of high school-age female students have reported they have been physically forced into sexual intercourse (Davis, 2008). Those rates are similar for undergraduate women completing their freshman year of college, with the Association of American Universities reporting a prevalence rate of 10.35% for the 2014-2015 academic year (Cantor et al., 2015). Further, rates of sexual assault are highest amongst undergraduate females and at-risk populations such as transgender, queer, or gender-nonconforming students (Cantor et al., 2015; Krebs et al, 2016).

A study by Miller and colleagues (2013) indicates the implementation of these types of programs at an earlier age is beneficial. In this study. the researchers examined a program called "Coaching Boys into Men." This program trains coaches to discuss stopping the violence against women with their athletes. They investigated components such as intention to intervene, gender attitudes, recognition of abuse, and abuse perpetration. Each of these indicated positive gains in relation to the control groups at the 3-month and 1-year follow-up.

Willis and colleagues (2019) assessed the standard sex education curriculum of 18 states. They found that of the 18 states, only schools in Oregon require information regarding consent in their sex education programming. Their students are expected to define sexual consent, explain its relevance to sexual decision making, and demonstrate their understanding of consent through communication skills Although the other states they assessed did not contain explicit information on sexual consent, many did contain information similar to consent that falls into each of the following themes: communication skills, decision making, personal space, and interpersonal relationships.

Communication skill programming works to teach students how to effectively express their feelings and emotions as well as practice negotiation and refusal skills with their peers. Decision making skill training focuses on strengthening student autonomy and respect for the autonomy of others. Teaching the concept of personal space helps students understand and identify appropriate and inappropriate forms of touch. Finally, students learn to assess the qualities of their interpersonal relationships with others. Although each of these themes do not explicitly discuss sexual consent, those concepts (i.e., expressing acceptance and refusal, mutual respect, identifying inappropriate touching) are all present in discussions of sexual consent. Walcott and colleagues (2011) found that one of the most significant predictors in safe-sex behaviors was the education of peer negotiation skills. Thus, these components are vital to introduce to students before they become sexually active with the goal of reducing instances of sexual assault and coercion.

RELIGIOSITY

Niemi and Young (2014) found that the tendency to victim blame and accept rape-myths is largely based on sexism and the value of purity. These ideals are commonly noted in religious practices such as Christianity and Catholicism. In the New International Version, 1 Corinthians 6:18 reads, “Flee from sexual immorality. All other sins a person commits are outside the body, but whoever sins sexually, sins against their own body.” This reading is one example of the importance placed on sexual purity illustrated in the Bible. In addition to the emphasis placed on purity, many excerpts from the Bible reinforce traditional gender roles. A study done by Glick et al (2002) focused primarily on the Catholic sect of religion and found that although hostile sexism was not common, benevolent sexism was strongly enforced due to strict gender-role beliefs. Thus, it may be possible that religious ideals may be related to rape-myth adherence and victim blaming behavior if victims are viewed as straying from traditional gender norms or their ideological beliefs. Currently, these religious ideals are presented in the abstinence only and comprehensive sex education programming.

Research in regard to correlation between religious and rape-myth adherence is split. Ensz and Jankowski (2020) found that individuals with strict loyalty to their religious beliefs associated with right-wing authoritarianism had a positive correlation with rape-myth acceptance. In addition, Sheldon and Parent (2002) found that the more fundamentalist and sexist a religious body is the more likely they are to victim blame and accept rape-myths. However, Navarro and Tewksbury (2018) found opposing evidence for the association between religion and rape-myth adherence; in their study they found that while Catholics were the most likely to carry higher rape-myth beliefs, it was specifically the Catholics that expressed a moderate level

of religiosity that accepted rape-myths. The Catholics that expressed high adherence to their religiosity typically rejected rape-myths. Jankowski and colleagues (2011) found similar results and concluded that religion is a complex and typically negative predictor of interpersonal violence myth adherence. It is possible that religion may not play a direct role in rape-myth adherence, but the ideals presented in various religions such as gender stereotypes and benevolent sexism may play a larger role in contributing to rape culture (Navarro & Tewksbury, 2018). Because the literature hints that religion plays a role in the tendency to engage in rape culture adherence, it is possible that perhaps religious victims would be subject to greater victim blaming due to the extra pressure to remain pure.

THE CURRENT STUDY

The present study will address current gaps in the literature by determining if there is a relationship between sex education programming history and variables associated with sexual assault (e.g., rape-myth acceptance, sexism). Further, I will determine if presenting positive information about specific sex-education programs changes participant perceptions of a date-rape victim. Finally, I will manipulate the presumed religiosity of a victim and determine whether that plays a role in victim blaming and helping behaviors. Specifically, I propose the following hypotheses:

Hypothesis 1: Participants who previously received either abstinence only or comprehensive sex education programs will be more likely to adhere to rape-myths, less likely to intervene, less likely to consider sexual consent, more likely to report higher sexism beliefs, and more likely to victim blame.

Hypothesis 2: There will be a main effect of sex education priming condition on the outcome variables, such that participants with the Comprehensive Plus priming condition will have higher empathetic concern, be more likely to intervene, and less likely to engage in victim blaming behaviors.

Hypothesis 3: There will be a main effect of religious priming on the outcome variables, such that when the victim is presented to be religious, participants will be less likely to empathize, less likely to intervene, and more likely to victim blame.

Hypothesis 4: There will be an interaction between sex education priming variables and the religion component, such that participants who receive the Abstinence Only priming condition

along with the vignette presenting the religious victim will the most likely to victim blame and the least likely to intervene and empathize with the victim**.**

METHODS

Participants

I recruited undergraduate participants from Missouri State University through an online recruitment system called SONA (n = 177); undergraduate participants recruited through SONA were compensated with course research credit. A community sample of participants was also recruited through an Amazon Mechanical TURK pool (n = 434); each of the Amazon Mechanical TURK participants was compensated with a $1 payment. Between the two pools of participants, I had a total of 611 participants; however, due to missing data and low-quality responses I was only able to analyze a total of 355 of the responses: 150 undergraduate students and 205 Amazon Mechanical TURK participants. This final sample consisted of 43.7% males and 56.3% females; they also identified primarily as White (73.2%) and Christian (73.6%). Additional information on demographics of the participants can be found in Table 1.

Procedure

To begin, participants gave their informed consent to participate. Participants were then asked to complete a series of demographic questions, including age, gender, race, household income, level of education, relationship status, religious beliefs, sexual orientation, the type of sex education programming they received in their adolescent years, and if they have participated in any sexual assault or bystander intervention training. In order to collect their past sex education experience participants were asked to select the education program that most describes their experience, then they were asked to rate their confidence in their answer, next, participants selected any sex education component they received and finally, they were asked to describe

what they remember from their sex-education curriculum. They then completed measures of rape-myth acceptance, bystander behavior, ambivalent sexism, and sexual consent. Next, the participants received one of three priming videos: (1) Abstinence Only Sex Education, (2) Comprehensive Sex Education, or (3) Comprehensive Plus Sex Education. Following the video, participants read one of two vignettes that contain evidence of a sexual assault. These vignettes only differed by the implied religiosity of the victim, represented by a cross necklace. After reading the vignette, participants were asked to complete measures of victim blaming, victim empathy, and willingness to help the victim. At the completion of the study, participants were debriefed with a brief description on the overall research surrounding the efficacy of sex education approaches. The materials and procedures in this study were all approved by the Missouri State University Institutional Review Board (IRB; Appendix A).

Materials

Participant demographic information was collected for gender, age, race, household income, level of education, relationship status, religious affiliation, political affiliation, sexual orientation, prior sex education experience, and bystander intervention experience will be collected from participants.

Rape-Myth Acceptance. The Illinois Rape Myth Acceptance Scale-Short Form (IRMAS) was created to measure rape-myth adherence (Payne et al, 1999). This is measured on a 5-point Likert scale ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). The higher the score, the higher the rape-myth adherence. An example of an item in this questionnaire is, “Men don’t usually intend to force sex on a woman, but sometimes they get too sexually carried away.”

Prior studies obtained a reliable Cronbach's alpha at .89 (Zelin et al, 2018). The present study obtained a Cronbach's alpha of .97.

Willingness to Help. The Intention to Help Scale is a 51-item questionnaire designed to measure the likelihood of helping a victim of sexual assault (Banyard et al, 2005). This scale is measured on a 5-point Likert scale ranging from 0 (*not at all likely*) to 4 (*extremely likely*). An example of an item in this questionnaire is, "Walk a stranger home from a party who has had too much to drink." Past studies have discovered this measure to be reliable with a Cronbach's alpha of .94 (Zelin et al., 2018). The current study obtained a Cronbach's alpha of .97.

Sexism. The Ambivalent Sexism Inventory (ASI) is used to measure participant's adherence to two forms of sexism (Glick & Fiske, 1996). This inventory consists of two subscales (Hostile and Benevolent Sexism) each made of 11 items that are measured on a Likert scale from 0 (disagree strongly) to 5 (agree strongly). An example of an item used to evaluate hostile sexism is, "When women lose to men in a fair competition, they typically complain about being discriminated against"; an example used to evaluate benevolent sexism is, "Every man ought to have a woman whom he adores." Past research has indicated this scale to be reliable with a Cronbach's alpha of .76 for benevolent and of .85 for hostile sexism (Johnson et al, 2019). In the current study I obtained a Cronbach's alpha of .77 for the benevolent sexism subscale and .90 for the hostile sexism subscale.

Sexual Consent. The Sexual Consent Scale-Revised was created to measure attitudes regarding sexual consent between romantic partners (Humphreys & Brousseau, 2010). This is a 39-item questionnaire measured on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). This scale consists of five subscales. The first is an 11-item perceived behavior control subscale; an example of a subscale item is, "I am worried that my partner might think I'm

weird or strange if I asked for sexual consent before starting any sexual activity." The second is an 11-item positive attitude toward establishing consent subscale; an example of one of the items is, "Most people that I care about feel that asking consent is something I should do." The third is a six-item indirect consent behaviors subscale; an example of one of these items is, "I always verbally ask for consent before I initiate a sexual encounter." The fourth is a seven-item sexual consent norms subscale; an example of one of these items is, "I believe it is enough to ask for consent at the beginning of a sexual encounter." The fifth is a four-item awareness of consent subscale; an example of one of the subscale items is, "I have not given much thought to the topic of sexual consent." Past studies found this overall questionnaire to be reliable with a total scale Cronbach's alpha of .87, with subscales ranging from .67 to .86 (Humphreys & Brousseau, 2010). The present study obtained a Cronbach's alpha of .81 for the perceived behavior subscale, .91 for positive attitude towards establishing consent subscale, .78 for the indirect consent behaviors subscale, .82 of the sexual consent norms subscale, and .55 for the awareness of consent subscale.

Sex Education History. A brief description was given for each type of sex-education program. The participant was required to select which description best fit their experience of sex education throughout their formative years. These descriptions can be found in Appendix B.

Sex Education Prime. The sex education primes consisted of a brief PowerPoint video (4-7 minutes) that presents participants with empirically-derived information on one of the three types of sex education (abstinence only, comprehensive, and comprehensive plus). Presentation videos discussed the benefits of each of these programs as described by researchers in the extant literature. The scripts for these presentations can be found in Appendix C.

Sexual Assault Vignettes. Vignettes were designed specifically for the purpose of this study to illustrate a date rape scenario where the victim's level of religiosity was manipulated (two levels: presence of a cross necklace, no mention of a cross necklace). One vignette is illustrated below, the other can be found in Appendix D.

> *Emily and Nathan had been exchanging messages through an online dating platform for the month prior to their first date. On their first date, they met for a nice dinner at a local restaurant. Emily arrived promptly at 6 pm wearing her favorite cross necklace and Nathan arrived shortly after. The first half of their date went great, conversation came easy, and they shared a lot in common. As dinner was ending Emily felt comfortable enough with Nathan to invite him back to her house to relax and watch a movie together on Netflix. Emily enjoyed leaning against Nathan and holding his hand throughout the movie. After the movie was over, they spent some more time talking before Nathan leaned into kiss Emily. Although Emily kissed him back, she let him know she was not interested in going any further on their first date. Nathan said he understood and noted that it was getting late so he should leave. Emily walked him to the door. When Nathan leaned in to give her a kiss goodbye, she responded by kissing him back. He took that as a sign she wanted to go further and began walking Emily to her bedroom while he continued to kiss her. Emily immediately felt uncomfortable and scared. She lived alone and Nathan was taller and stronger than she was. She felt frozen and trapped as he walked her backwards into her room while kissing her. Emily became completely unresponsive as Nathan continued to undress them both and progressed with his unwanted sexual advances.*

Victim Blaming. Victim blaming was measured using a 2-item scale designed to establish blame to the victim and perpetrator (Katz et al, 2014). Blame was assigned on a

percentage scale from 0% to 100% for both the victim and perpetrator, the sum of both equaling 100. Higher percentages indicated a higher amount of assigned blame.

Victim Empathy. Empathetic concern was measured using a 2-item scale designed to assess empathy towards the victim of an assault (Katz et al., 2015). It was measured on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Past studies discovered this to be a reliable measure with a Cronbach's alpha of .82 (Zelin et al., 2018). The current study found a Cronbach's alpha of .83.

Bystander Behavior. Supportive bystander behavior was measured with a series of questions pertaining to helping the victim in the vignette. An example of an item in this measure is "I would offer her emotional support." This was measured on a 5-point Likert scale 0 (*not at all likely*) to 4 (*extremely likely*). I obtained a Cronbach's alpha of .95 in the current study. The full version of this measure is included in Appendix E.

Manipulation Check. After completing the surveys on the target variables, participants were asked to correctly identify (a) the type of sex education priming they received and (b) whether or not the victim in the vignette was wearing a cross necklace.

RESULTS

A correlations and descriptive table for each of the study variables can be found in Table 2.

Hypothesis One

To address the first hypothesis, a multivariate analysis of variance (two-way MANOVA) was used to determine if the history of the participants sex education programming impacts the dependent variables (i.e., rape-myth acceptance, sexism, consent to sex, victim blaming, and bystander intervention). The assumption of homogeneity of variances and covariances was violated, as assessed by the Box's M test ($p < .05$). I interpreted the Pillai's criterion, as it is more robust to unequal covariance matrices (Olson, 1976). The MANOVA indicated a significant effect of sex education type on our dependent variables, $F(3, 302) = 2.09$, $p < .01$. The MANOVA also indicated that there was not a significant interaction effect between sex education and gender, $F(3, 302) = 1.24$, $p = .205$. Follow-up analyses of covariance (ANCOVA) were obtained for each dependent variable, while controlling for gender. See Table 3 for the results of these analyses.

An ANCOVA revealed a significant effect of sex education type on rape-myth acceptance $F(3, 350) = 10.11$, $p < .001$, $\eta^2 = .08$. Homogeneity of variances was violated, as assessed by the Levene's test ($p < .05$); thus, the Games-Howell Post-Hoc *t*-tests were interpreted to determine where these significant differences lie. These results indicate that those participants that had abstinence only sex education ($M = 2.96$, $SD = 1.09$) scored significantly higher on the rape-myth acceptance scale than those who had comprehensive sex education ($M = 2.12$, $SD = 0.83$), $t = 5.19$, 95% CI = [0.38, 1.15], $p < .00$, $d = 0.78$. The abstinence only group also scored

significantly higher than those in the abstinence plus group (M = 2.52, SD = 1.08), t = 2.72, 95% CI = [0.02, 0.85], p = .037, d = 0.45. It was also found that the comprehensive sex education group scored significantly lower on rape-myth acceptance than those in the comprehensive plus sex education group (M = 2.80, SD = 1.08), t = 4.28, 95% CI = [-0.99, -0.24], p < .001, d = 0.58. In addition, the ANCOVA indicated the covariate of gender was significant in that males scored higher than females on rape-myth acceptance, p < .05.

An ANCOVA was used to determine if there was a significant difference in the sex education groups and the hostile sexism subscale. The univariate test was significant, $F(3, 350)$ = 5.67, p < .001, η^2 = .04. Participants in the abstinence only sex education group reported significantly higher hostile sexism adherence (M = 2.99, SD = 1.05) than those in the comprehensive sex education group (M = 2.39, SD = 1.16), t = 3.41, 95% CI = [0.14, 0.98], p = .004, d = 0.50. The univariate test also revealed that those in the comprehensive plus sex education group (M = 2.99, SD = 1.12) reported higher levels of hostile sexism than those in the comprehensive sex education group, t = 3.24, 95% CI = [-0.94, -0.11], p = .007, d = 0.46. An ANCOVA indicated there was a significant difference between the types of sex education on the benevolent sexism subscale, $F(3, 350)$ = 5.98, p < .001, η^2 = .05. Follow-up tests indicated that those who described as having abstinence only sex education (M = 3.28, SD = 0.85) reported significantly higher levels of benevolent sexism than those participants in the comprehensive sex education (M = 2.75, SD = 0.93; t = 3.75, 95% CI = [0.16, 0.86], p < .001, d = 0.57) and those in the abstinence plus sex education (M = 2.94, SD = 0.95; t = 2.68, 95% CI = [0.01, 0.73], p = .039, d = 0.41). They also indicated that those in comprehensive sex education reported significantly lower scores in benevolent sexism than those in comprehensive plus sex education (M = 3.21, SD = 0.97; t = 2.99, 95% CI = [-0.75, -0.06], p = .016, d = 0.42). I also found that

the covariate of gender was significant for both hostile and benevolent sexism in that males adhere more to sexist beliefs than females, $p < .05$.

Lastly, an ANCOVA indicated a significant difference between the sex education groups and victim blaming, $F(3, 306) = 7.42$, $p < .001$, $\eta^2 = .07$. Follow-up tests reveal that those in the abstinence only group reported significantly higher victim blaming tendencies ($M = 52.17$, $SD = 30.93$) than those in the comprehensive sex education ($M = 34.00$, $SD = 29.32$; $t = 3.58$, 95% CI = [4.93, 30.40], $p = .002$, $d = 0.59$) and in the abstinence plus sex education ($M = 37.82$, $SD = 32.47$; $t = 2.99$, 95% CI = [2.00, 27.67], $p = .016$, $d = 0.47$). These follow-up tests also indicated that the comprehensive plus sex education group ($M = 52.92$, $SD = 31.21$) reported significantly higher victim blaming than those in the comprehensive sex education group, $t = 3.62$, 95% CI = [-30.21, -5.05], $p = .002$, $d = 0.58$. Again, I found that the covariate of gender was significant in that males assigned more blame to the victim than females, $p < .05$.

Hypothesis Two

To address the second hypothesis on whether there was a main effect of sex education priming to victim blaming, victim empathy, and helping behaviors we used a series of ANCOVAs, so that I could also control for gender effects. The ANCOVAs indicated there was not a main effect of sex education priming on victim blaming, $F(2, 304) = 1.54$, $p = .216$, $\eta^2 = .01$, victim empathy $F(2, 347) = 0.06$, $p = .943$, $\eta^2 < .00$, or helping behaviors, $F(2, 348) = 0.18$, $p = .836$, $\eta^2 = .00$. For each ANCOVA I found gender to be a significant covariate, such that males scored lower in victim empathy and helping behaviors and assigned more blame to the victim than females, $p < .05$. See Table 4 for results.

Hypothesis Three

A series of ANCOVAs were also obtained to determine if there was a main effect of presumed religion of the victim on victim blaming, victim empathy, and helping behaviors. These ANCOVAs indicated there was not a main effect of presumed religion on the victim on victim blaming, $F(1, 304) = 0.40$, $p = .528$, $\eta^2 = .001$, victim empathy, $F(1, 347) < .001$, $p = 1.0$, $\eta^2 < .00$, or on helping behaviors, $F(1, 348) = 0.62$, $p = .431$, $\eta^2 = .00$. See Table 4 for results.

Hypothesis Four

Finally, a series of ANCOVAs were run to determine if there was an interaction effect of the sex education priming and presumed religion on the victim on victim blaming, victim empathy, and helping behaviors. These tests indicated there was not a significant interaction effect on victim empathy, $F(2, 347) = 0.46$, $p = .633$, $\eta^2 = .003$, or helping behaviors, $F(2, 348) = 1.560$, $p = .204$, $\eta^2 = .01$. There was a significant interaction effect on victim blaming, $F(2, 304) = 3.37$, $p = .036$, $\eta^2 = .021$; however, there were no significant post hoc Tukey tests, $p > .05$.

DISCUSSION

I found that our first hypothesis was mostly supported. Our results indicate that those who previously received abstinence only sex education did report higher levels of rape-myth adherence, higher benevolent and hostile sexism, and higher victim blaming tendencies than those who previously received comprehensive sex education. I believe this is due to the goals that are outlined in abstinence only sex education: to encourage abstinence from sexual intercourse until marriage, teach students to avoid situations that may lead to sex, ensure students are aware of the many risks pertaining to premarital sex, and to instill abstinence as a lifestyle choice (Birch et al., 2017). This push for abstinence leaves the youth uneducated on how to maintain or establish a healthy sexual relationship and as a result these individuals may tend to have higher adherence to rape culture.

However, I also found that those who indicated that they had received comprehensive plus sex education also reported significantly higher in rape-myth acceptance, hostile and benevolent sexism, and victim blaming than the comprehensive sex education group. This is striking because those who truly received comprehensive plus sex education should have received more education on sexual consent and communication and thus, have lower rape culture adherence tendencies than those in comprehensive sex education. Upon reviewing the qualitative responses in our survey, it was evident the participants may not have understood what exactly was included in a comprehensive plus program by the description. I received many qualitative responses such as, “the only way to 100% prevent things like pregnancy or STDs is not having sex at all” and “abstinence was the biggest push forward” which do not reflect a comprehensive-plus sex education. When considering these descriptions, it is likely that these participants did

not actually receive a comprehensive plus sex education. Comprehensive plus sex education is not commonly taught throughout the United States, it is likely that most participants had not ever heard of this type of sex education (Anderson, 2010).

For the second and third hypotheses, I did not find a significant difference as a result of our manipulations. Thus, the sex education and religious priming did not have a significant effect on how much participants blamed the victim, how much they empathized with the victim, or how willing they would be to help the victim in the scenario. This may be due to the priming not being strong enough to overcome their prior sex education experience or their current beliefs surrounding rape culture as well as the religious priming just being too subtle for participants to notice.

Our study does indicate that more research is needed to understand the negative effects abstinence only sex education may have on our youth, as well as more research on the benefits of a comprehensive plus sex education program.

Practical Implications

When considering the results of this study it is evident that sex education is linked to known indicators of rape culture such as victim blaming, rape-myth acceptance, victim empathy, sexism, intention to help, need for consent, and bystander behaviors. Notably, this is the first study to our knowledge that illustrates this relationship. Not only are these factors linked, but there are significant differences in these outcomes depending on the type of sex education program participants reported receiving. Specifically, I found that when participants underwent a comprehensive sex education program, they reported significantly lower rape-myth acceptance, victim blaming, and benevolent and hostile sexism.

The primary difference between abstinence only and comprehensive sex education is the introduction of contraceptive methods such as birth control and condoms for unwanted pregnancy and STI prevention (Anderson, 2010; Collins et al., 2002; Landry et al., 1999; Walcott et al., 2011). Remarkably, the addition of how to have safe sex seems to lessen rape culture ideation and adherence in individuals. This presents a unique opportunity for intervention. If I can change the content of the sex education that is currently being offered to youth and adolescents, I may have the opportunity to reduce rape culture ideals that later result in problematic behavior. Continuing to utilize outdated sex education programming cheats our children out of a beneficial and effective sex education program (Hoefer & Hoefer, 2017; Duffy et al, 2008). However, even if comprehensive sex education may lessen the adherence to rape culture, I know it does not help to prevent sexual assaults, so it important to continue to research in this area (Davis, 2008; Kohler et al, 2008).

Limitations and Future Directions

There are several limitations throughout this study and many opportunities for further research in this area. First, it is important to note that the results were obtained from two separate samples: a community sample and a university sample. In future studies, it may be important to gather enough participants conduct several analyses for the two individual samples. Unfortunately, recruitment efforts were hindered due to the COVID-19 pandemic. It was difficult to recruit student participants for this online study.

Next, it is clear from the results that the priming for both sex education and religion were not strong enough to elicit significant results. In future studies, the researcher may create materials with more obvious priming conditions in attempt to better influence the participant. It is also possible that a sex education priming will not ever be strong enough to overcome the participants past sex education experience or their current ideations surrounding rape culture.

Finally, there is a lot more that may be done when analyzing the data of the present study to work to overcome the issues with participant self-reporting of their previous sex education experiences. It is priorly noted that it was clear that participants did not always accurately self-describe their sex education program. In the survey I also asked participants to select each component of sex education they experience individually as well as qualitatively describe what they remember from their sex education experience. It is possible that if I regrouped participants based on those variables, I may yield more expected results. In the future it would be beneficial to examine those variables more carefully.

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Table 1

Demographic Characteristics of Participants

Variable	Study Frequency (%)
Gender	
Female	200(56.3)
Male	155(43.7)
Sexual Orientation	
Heterosexual	256(72.1)
Bisexual	86(24.2)
Homosexual	9(2.5)
Other	3(0.85)
Race	
White	260(73.2)
Black	17(4.8)
Hispanic/Latino	11(.3.1)
American Indian/Alaskan Native	2(0.56)
Asian/Pacific Islander	46(12.9)
Multiracial	18(5.1)
Household Income	
Less than US$10,000	62(17.5)
US$10,000-US$19,999	29(8.2)
US$20,000-US$29,999	28(7.9)
US$30,000-US$39,999	25(7.0)
US$40,000-US$49,999	21(5.9)
US$50,000-US$69,999	70(19.7)
More than US$70,000	117(33.0)
Religious Affiliation	
Christianity	261(73.5)
Judaism	6(1.7)
Islam	2(0.56)
Buddhism	3(0.85)
Hinduism	18(5.1)
Taoism	0(0.0)
Confucianism	0(0.0)
Unitarianism	0(0.0)
Paganism	2(0.56)
Agnostic	21(5.9)
Atheist	27(7.6)
Other	15(4.2)

Table 1 continued

Variable	Frequency (%)
Relationship Status	
Single	136(38.3)
Widowed	0(0.0)
Married	157(44.2)
Divorced	2(0.56)
Separated	1(0.28)
Unmarried Partners	57(16.1)
Other	2(0.56)
Education Level	
Grade School (grades 1-6)	0(0.0)
Middle School (grades 7-9)	0(0.0)
High School (grades 10-12)	39(11.0)
Vocational Education	3(0.84)
Some College	136(38.3)
College Degree	144(40.6)
Post College Professional Degree	32(9.0)
Medical or Law Degree	1(0.28)

Table 2

Descriptive Statistics and Correlations for Study Variables

Measures	1	2	3	4	5	6	7	8
1. IRMAS								
2. ASI- Hostile	.74***							
3. ASI-Benevolent	.63***	.68***						
4. Willingness	.38***	.33***	.15***					
5. VB	.66***	.60***	.53***	.37***				
6. Empathy	-.11*	.22***	-.12*	.40***	.24***			
7. Bystander	.45***	.42***	-.29**	.59***	.43***	.47***		
8. Consent	.50***	.42***	.45***	.09	.24***	.12*	.08	
M	2.59	2.72	3.02	4.08	43.60	5.83	3.31	4.66
SD	1.03	1.15	0.95	0.67	31.97	1.32	0.67	0.61

Note: The asterisk (*) indicates a significant ($p < .05$) correlation, (**) is significant ($p < .01$) correlation, and (***) is significant ($p < .001$) correlation.

Table 3

Multivariate Analysis of Variance Between Groups with Different Ties to Sexual Assault

	Past Sex Education Group						
	Abstinence Only	Abstinence Plus	Comprehensive	Comprehensive Plus			
	n = 78	n = 103	n = 91	n = 83		ANCOVAs	
	M (SD)	M (SD)	M (SD)	M (SD)	F (df)	p	η^2
Rape-Myth Acceptance	2.96 (1.09)$_a$	2.19 (0.83)$_b$	2.52 (0.98)$_b$	2.80 (1.08)$_a$	10.11 (3,350)	< .001	0.08
Willingness to Help	4.00 (0.66)$_a$	4.15 (0.66)$_a$	4.15 (0.60)$_a$	4.00 (0.74)$_a$	13.94 (3,350)	.27	0.01
Hostile Sexism	2.99 (1.05)$_a$	2.39 (1.16)$_b$	2.63 (1.18)$_{a,b}$	2.99 (1.12)$_a$	5.67 (3,350)	< .001	0.07
Benevolent Sexism	3.28 (0.85)$_a$	2.75 (0.93)$_b$	2.94 (0.95)$_{a,b}$	3.21 (0.97)$_a$	5.98 (3,350)	< .001	0.05
Sexual Consent	4.69 (0.68)$_a$	4.53 (0.57)$_a$	4.69 (0.51)$_a$	4.77 (0.65)$_a$	2.52 (3,350)	.06	0.02
Victim Blaming	52.17 (30.93)$_a$	34.00 (29.32)$_b$	37.82 (32.47)$_b$	52.92 (31.21)$_a$	7.42 (3,306)	< .001	0.07
Empathy	5.97 (1.29)$_a$	5.75 (1.40)$_a$	5.85 (1.33)$_a$	5.76 (1.23)$_a$	0.64 (3,349)	.59	0.01
Bystander Behavior	3.25 (0.65)$_a$	3.41 (0.67)$_a$	3.31 (0.66)$_a$	3.26 (0.69)$_a$	0.65 (3,350)	.58	0.01

Note. Means with differing subscripts among the three prime groups across a row are significantly different at the $p < .05$ based on post hoc pairwise comparisons. Games-Howell post hoc tests were conducted if homogeneity of variances was violated. Gender was a significant covariate in all analyses.

Table 4

Multivariate Analysis of Variance Between Groups with Different Ties to Sexual Assault and Religiosity

	Sex Education Priming Condition				
	Abstinence Only Sex Education $n = 115$	Comprehensive Sex Education $n = 115$	Comprehensive Plus Sex Education $n = 125$	ANCOVAs	
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	*F* (*df*)	ω^2
Rape-Myth Acceptance					
Religious Prime	2.64 (1.00)$_a$	2.54 (1.05)$_a$	2.61 (1.01)$_a$	0.64 (2, 348)	0.00
No Religious Prime	2.61 (1.07)$_a$	2.67 (1.02)$_a$	2.45 (1.04)$_a$		
Willingness to Help					
Religious Prime	3.23 (0.71)$_a$	3.33 (0.70)$_a$	3.23 (0.63)$_a$	1.60 (2, 348)	0.003
No Religious Prime	3.45 (0.59)$_a$	3.22 (0.75)$_a$	3.30 (0.66)$_a$		
Hostile Sexism					
Religious Prime	2.92 (1.01)$_a$	2.69 (1.23)$_a$	2.73 (1.17)$_a$	0.84 (2, 348)	0.00
No Religious Prime	2.70 (1.23)$_a$	2.83 (0.99)$_a$	2.54 (1.30)$_a$		
Benevolent Sexism					
Religious Prime	3.13 (0.91)$_a$	2.96 (1.03)$_a$	3.13 (0.89)$_a$	1.32 (2, 348)	0.002
No Religious Prime	2.99 (1.00)$_a$	3.08 (0.74)$_a$	2.86 (1.07)$_a$		

Table 4 continued

	Sex Education Priming Condition				
	Abstinence Only Sex Education $n = 115$	Comprehensive Sex Education $n = 115$	Comprehensive Plus Sex Education $n = 125$	ANCOVAs	
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	*F* (*df*)	ω^2
Sexual Consent					
Religious Prime	4.66 (0.65)$_a$	4.74 (0.58)$_a$	4.61 (0.64)$_a$	1.17 (2, 348)	< 0.00
No Religious Prime	4.67 (0.59)$_a$	4.59 (0.59)$_a$	4.69 (0.60)$_a$		
Victim Blaming					
Religious Prime	43.83 (31.58)$_a$	38.48 (30.72)$_a$	44.66 (31.61)$_a$	3.37* (2, 304)	0.015
No Religious Prime	50.37 (33.17)$_a$	49.70 (35.47)$_a$	34.52 (27.45)$_a$		
Empathy					
Religious Prime	5.76 (1.28)$_a$	5.85 (1.39)$_a$	5.85 (1.34)$_a$	0.46 (2, 347)	0.00
No Religious Prime	5.94 (1.22)$_a$	5.69 (1.41)$_a$	5.79 (1.31)$_a$		
Bystander Behavior					
Religious Prime	3.23 (0.71)$_a$	3.33 (0.70)$_a$	3.30 (0.63)$_a$	1.60 (2, 348)	0.003
No Religious Prime	3.45 (0.59)$_a$	3.22 (0.75)$_a$	3.30 (0.66)$_a$		

Note. * $p < .05$. Means with differing subscripts among the three prime groups across a row are significantly different at the $p < .05$ based on post hoc pairwise comparisons. Gender was a significant covariate in all analyses.

APPENDICES

Appendix A: Institutional Review Board Approval Letter

Date: 5-7-2021

IRB #: IRB-FY2020-652
Title: The Effect of Sex Education Programs on the Ideology Surrounding Sexual Assault
Creation Date: 4-13-2020
End Date:
Status: Approved
Principal Investigator: Melissa Fallone
Review Board: MSU
Sponsor:

Study History

Submission Type	Review Type	Decision
Initial	Expedited	Approved

Key Study Contacts

Member Ruth Walker	Role Co-Principal Investigator	Contact rwalker@missouristate.edu
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Appendix B: Sex Education History Descriptions

Abstinence Only Program: taught me that abstinence from sex (not having sex) is the only morally acceptable option, and the only safe and effective way to prevent unintended pregnancy and STIs. Did not discuss contraceptive methods or condoms, or only mentioned them to emphasize their failure rates.
Abstinence Plus Program: taught me that abstinence (not having sex) is the best way to prevent pregnancy and STIs. They also included information on contraception and condoms.
Comprehensive Program: taught me medically accurate, evidence-based information about both contraception and abstinence, as well as condoms to prevent STI transmission.
Comprehensive Plus Program: taught me medically accurate, evidence-based information about both contraceptives and condoms. Also discussed what sexual consent and healthy communication in sexual relationships looks like.

Appendix C: Sex Education Presentation Scripts

Abstinence Only Presentation:

Slide 1: Hello everyone! Today I will be giving you a brief overview of abstinence only sex education and what researchers have found to be effective about this type of sex education programming.

Before we begin, we first have to answer the question, what is abstinence only sex education?

Slide 2: The goal of abstinence only sex education is to teach students to not have sex until they are married to protect them from negative psychological and physical consequences that could result from sexual intercourse.

Now that you understand the purpose of Abstinence Only Sex Education, I am going to discuss what researchers studying how effective abstinence only education programs are have found.

Slide 3: Why promote abstinence only sex education programs?

The biggest reason cited in the research is that abstinence is the ONLY way to avoid unwanted consequences such as unwanted pregnancies and sexually transmitted diseases. The reality is that condoms and other contraceptives can fail. Sex increases the risk of contracting a sexually transmitted infection such a chlamydia or gonorrhea and heterosexual couples risk pregnancy.

Slide 4: According to Birch and colleagues, abstinence only sex education promotes 4 overarching goals:

1. Encourage students to delay sex until marriage
2. Help students avoid situations that may lead to sex
3. Make students aware of the risks of engaging in premarital sex
4. Promote abstinence as a lifestyle choice

Slide 5: Abstinence only sex education teaches the importance of delaying sex until you are married. Researchers have found that when programs teach students that waiting until marriage allows them the ability to develop a safe and intimate relationship based on more than sex, they are able to significantly decrease the number of students who have sex.

Slide 6: Abstinence only sex education teaches the importance of avoiding situations that may lead to premarital sex. These situations may include, but are not limited to, avoiding alcohol, drugs, parties, and unsupervised time with your partner. By avoiding these situations, students may avoid the social pressure of engaging in sexual activity. In their large study of abstinence only sex education programs, Birch and colleagues found students were more likely to want to avoid potentially risky situations after attending the program.

Slide 7: Researchers have found that abstinence only sex education programs have been able to successfully help students understand the risks associated with premarital sex; specifically, the risk of getting a sexually transmitted infection and developing an unwanted pregnancy.

For example, 1 in 4 sexually active students will get a sexually transmitted infection before they graduate high school. Additionally, teenage pregnancies have elevated risks of low birth weight, preeclampsia, and anemia.

Some researchers credit the push for abstinence with the low rate of teenage pregnancies. According to the CDC, in 2017 teen pregnancies were at an all-time low of 19 pregnancies for every 1000 girls aged 15-19.

Slide 8: Abstinence only sex education programs promote abstinence as a lifestyle choice and encourage students to view waiting until marriage to have sex as a value they believe is important. Researchers have found students who have completed abstinence only sex education programs were more likely to adhere to and advocate for these values and lifestyle ideals.

Slide 9: In conclusion, researchers at the Chicago School of Professional Psychology have found evidence that abstinence only sex education programs have been successful at encouraging students to adopt abstinence as a lifestyle, to delay sex until marriage, and to avoid situations that may lead to sex.

Comprehensive Presentation:

Slide 1: Hello everyone! Today I will be giving you a very brief overview of comprehensive sex education and what researchers have found to be effective

about this type of sex education programming. Before we begin, we first have to answer the question, what is comprehensive sex education?

Slide 2: The goal of comprehensive sex education is to teach students is to promote abstinence from sexual activity and to discuss safe options for students who decide not to wait to have sex. Now that you understand the purpose of Comprehensive Sex Education, I am going to discuss what researchers studying the efficacy of comprehensive sex education programs have found.

Slide 3: Comprehensive Sex education teaches that while there are other options to protect yourself from Sexually Transmitted Infections and pregnancy, the only way to 100% prevent those unwanted risks is to remain abstinent from sexual activity. In a study done by Birch and colleagues, they found that students are more likely to decide to remain abstinent or to not have sex directly following the abstinence education presentations.

Slide 4: This program works to teach students that when they decide to engage in sexual activity there is a chance they might contract STIs, or sexually transmitted infections, such as chlamydia, gonorrhea, or HIV. The CDC estimates that 20 million of the newly diagnosed STIs each year are in young people aged 15-24. Unfortunately, abstinence only sex education programs do not discuss protection against STIs. However, Walcott and his colleagues found that students who receive comprehensive sex education have more positive attitudes towards safe-sex practices than those who underwent an abstinence only program.

Slide 5: Another difference between abstinence only sex education programs and comprehensive sex education programs is the discussing how to prevent and reduce unwanted pregnancies by using contraceptives and condoms. The increased awareness of contraceptive methods in comprehensive sex education programs have helped contribute to the decrease in teen pregnancy rates over the last few decades. The teen pregnancy rate was at an all-time low at 19 pregnancies for every 1000 girls aged 15-19 according to the CDC in 2017.

Slide 6: Comprehensive Sex education programs discuss how to properly use condoms and contraceptive methods as well as the benefits of condoms and contraceptive methods. Comprehensive sex educations programs teach students

that if condoms are used correctly, they are 98% effective at preventing STIs. These programs also teach students that contraceptives help prevent pregnancy, regulate menstrual cycles, reduce the risk of developing reproductive cancers, and can be used to treat many menstrual-related symptoms and disorders. Providing this information to students helps to decrease rates of STIs and unwanted pregnancies in those students that do not choose to remain abstinent. As mentioned previously, Walcott and colleagues found that students are more likely to use safe-sex practices following comprehensive sex education programs.

Slide 7: Including information about how to prevent sexually transmitted infections and unwanted pregnancies has been shown by researchers to increase safe-sex practices, reducing rates of STIs and teen pregnancies. Thus, when teachings such as contraceptives and condoms are included in the curriculum, students are more likely to engage in healthier and safer sexual activity.

Comprehensive Plus Presentation:

Slide 1: Hello everyone! Today I will be giving you a brief overview of comprehensive plus sex education and what researchers have found to be effective about this type of sex education programming. Before we begin, we first have to answer the question, what is comprehensive plus sex education?

Slide 2: Comprehensive Plus Sex Education is different from other types of sex education programs such as abstinence only programs because it discusses safe options for students who do not select to remain abstinent. Additionally, it builds off of comprehensive sex education programs by emphasizing the importance of communication and consent in sexual relationships. Now that you understand the purpose of Comprehensive Plus Sex Education, I am going to discuss what researchers studying the efficacy of comprehensive plus sex education programs have found.

Slide 3: Comprehensive Plus Sex education teaches that while there are other options to protect yourself from Sexually Transmitted Infections and pregnancy, the only way to 100% prevent those unwanted risks is to remain abstinent from sexual activity. In a study done by Birch and colleagues, they found that students

are more likely to decide to remain abstinent or to not have sex directly following the abstinence education presentations.

Slide 4: This program works to teach students that when they decide to engage in sexual activity there is a chance they might contract STIs, or sexually transmitted infections, such as chlamydia, gonorrhea, or HIV. The CDC estimates that 20 million of the newly diagnosed STIs each year are in young people aged 15-24. Unfortunately, abstinence only sex education programs do not discuss protection against STIs. However, Walcott and his colleagues found that students who receive comprehensive sex education have more positive attitudes towards safe-sex practices than those who underwent an abstinence only program.

Slide 5: Comprehensive Plus Sex education programs discuss how to properly use condoms and contraceptive methods as well as the benefits of condoms and contraceptive methods. Comprehensive sex educations programs teach students that if condoms are used correctly, they are 98% effective at preventing STIs. These programs also teach students that contraceptives help prevent pregnancy, regulate menstrual cycles, reduce the risk of developing reproductive cancers, and can be used to treat many menstrual-related symptoms and disorders. Providing this information to students helps to decrease rates of STIs and unwanted pregnancies in those students that do not choose to remain abstinent. As mentioned previously, Walcott and colleagues found that students are more likely to use safe-sex practices following comprehensive sex education programs.

Slide 6: What sets Comprehensive Plus Sex Education Programs apart from other types of sex education programs is the inclusion of a discussion about sexual consent. Teaching students about sexual consent and how partners can communicate with one another to let them know what they want and are comfortable with sexually is an important component of sexual education. This allows sex education programming to go beyond simply preventing STIs and unwanted pregnancies to gaining a greater understanding of how to combat the rising number of sexual assaults in teenagers and college students by ensuring all sexual activities include ongoing, open communication, mutual agreement, and respect. Researchers estimate that between 10-11% of teenage girls and

undergraduate women report experiencing a sexual assault. Researchers such as Miller and Walcott have found that programs that contain information regarding sexual consent decrease negative beliefs that contribute to sexual assaults.

Slide 7: In conclusion, teaching students about sexual consent, as well as the prevention of STIs and unwanted pregnancies has been shown by researchers to increase safe-sex practices, reduce rates of STIs and teen pregnancies, and decrease negative beliefs that contribute to sexual assaults.

Appendix D: Vignettes

VIGNETTE 1:

Emily and Nathan had been exchanging messages through an online dating platform for the month prior to their first date. On their first date, they met for a nice dinner at a local restaurant. Emily arrived promptly at 6 pm wearing her favorite cross necklace. Nathan arrived shortly after. The first half of their date went great, conversation came easy and they shared a lot in common. Emily briefly excused herself to the restroom right before dessert. During this time Nathan slipped some pills in her drink. Immediately after dessert Emily was feeling extremely drowsy and concluded that she had too much to drink, so Nathan offered her a ride home. Instead of taking her home, he took her back to his house where he sexually assaulted her.

VIGNETTE 2:

Emily and Nathan had been exchanging messages through an online dating platform for the month prior to their first date. On their first date, they met for a nice dinner at a local restaurant. Emily arrived promptly at 6 pm. Nathan arrived shortly after. The first half of their date went great, conversation came easy and they shared a lot in common. Emily briefly excused herself to the restroom right before dessert. During this time Nathan slipped some pills in her drink. Immediately after dessert Emily was feeling extremely drowsy and concluded that she had too much to drink, so Nathan offered her a ride home. Instead of taking her home, he took her back to his house where he sexually assaulted her.

Appendix E: Bystander Behavior Questionnaire

Bystander Behavior Questionnaire

Please indicate how likely you would be to engage in the following behaviors if you witnessed the above scenario from 0 (*not likely at all*) to 3 (*very likely*).

If the victim told me about her assault…

1. I would let her know I am available to listen if she wants to someone to talk to.
2. I would offer her emotional support.
3. I would tell her it wasn't her fault.
4. I would tell her I believe her.
5. I would let her know she's not alone.
6. I would let her know she did nothing to deserve this.
7. I would offer to go with her to report her assault to the police if she wanted to.
8. I would offer to go with her to the local rape crisis center.
9. I would offer to help her schedule her an appointment with a psychologist or a counselor.
10. I would ask her what she needs to be supported.
11. I would continue to check in with her over time to let her know I am here for her.