SAVVY SEXUALITY – A PILOT EVALUATION OF A SEXUAL ASSERTIVENESS INTERVENTION FOR COLLEGE WOMEN

By

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College is a time of sexual development and exploration for young adults. While this process can be beneficial for both men and women, women experience more negative outcomes related to these experiences. Specifically, as compared to college men, college women face greater stigma from peers for engaging in a number of sexual behaviors, are at an increased risk for STIs and unplanned pregnancies and are at higher risk for experiencing sexual assault and rape. In addition, many heterosexual sexual encounters, such as hook-ups, prioritize male pleasure and largely ignore female pleasure. In response, universities have developed sexual health programming for college students focused on two main areas: disease prevention programming and sexual assault risk reduction. Although these programs are critically important, they often ignore other aspects of sexual development including discussions of consent, communication, and pleasure, collectively referred to as sex positive programming. Although some sex positive programs have been developed for college students, to date, there have been no empirical studies on sex positive programs for college students. Therefore, this dissertation sought to develop a novel sex positive intervention for college women focused on teaching assertive communication

skills related to sexual decision making, desires, and preferences. The intervention was designed as a 3-hour workshop composed of three parts: identification of female sexual behavior norms, introduction to assertive sexual communication skills, and assertive sexual communication skills practice in sexual situations. Participants were recruited through the ECU Psychology department online participant recruitment system. Participants were drawn from a sample of 415 currently sexually active college women who completed an online screening survey about female sexuality. Those that expressed interest in participating in the sex positive intervention were assigned to either the intervention group or a follow-up only group. Forty-five participants enrolled in and completed the intervention. Of those, 21 participants completed the follow-up survey along with 43 participants from the follow-up only group. Results indicated that participants in the intervention demonstrated significant improvements in their knowledge of peer-related sexual norms and sexual communication self-efficacy over time. However, only knowledge improvements were significantly different from those observed in the follow-up only group. These findings suggest that the intervention was effective in improving knowledge of peer-related sexual norms among participants but did not effectively address sexual communication self-efficacy and self-reported use of assertive sexual behaviors. There also was a notable self-selection bias among participants in the intervention group such that participants had high baseline sexual communication self-efficacy and sexual assertiveness. These findings support the need for more research on sex positive programming with college students, including how to make such programming appealing to individuals with low levels of sexual assertiveness and sexual communication self-efficacy.

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I would like to dedicate this dissertation to my family. To my father, who introduced me to the field of psychology and paved the way for my success. To my mother, who helped me cultivate my strengths and pursue my passions. To my stepfather, who has always pushed me to challenge myself. I am forever grateful for their love and support. I would also like to thank all my lab mates, graduate mentor, colleagues, and friends who have made this experience truly memorable.

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College is a time of sexual exploration and identity development for many young adults. With newfound freedom, students are able to explore their sexual identities, experiment with sexual activities, navigate their sexual boundaries, and develop relationships that are both physically and emotionally intimate. Although this is an important developmental task for all students, college women face unique challenges in navigating these experiences. Compared to their male peers, college women face increased stigma related to sexual experimentation (Allison & Risman, 2013; Armstrong, England, & Fogarty, 2012; Olmsted, Norona, & Anders, 2018). Similarly, many of the sexual experiences that occur during college prioritize male sexual pleasure and largely ignore female pleasure leading to less enjoyable sexual experiences for women (Armstrong et al., 2012; Owens, Rhoades, Stanley, & Fincham, 2010). In addition, aspects of the college environment, such as heavy alcohol use, perceived peer norms, and pressures to engage in casual sexual encounters, can lead to increased engagement in risky sexual behavior and higher risk of sexual assault for college women (Brown & Vanable, 2007; Labrie, Hummer, Ghaidorov, Lac & Kenney, 2014). Furthermore, college women are uniquely vulnerable to problems related to their sexual health and sexual development (e.g., lack of orgasm, low desire/arousal, pain during intercourse, risk for sexually transmitted infections (STIs) and unplanned pregnancies; Bradshaw, Kahn, & Saville, 2010; Turchik & Hassija, 2014). Some universities have attempted to address these issues through the development of sexual health related programing; however, the majority of extant programs focus solely on the negative aspects of sexuality and ignore positive aspects of sexual development, leaving many college women with limited support in achieving sexual health.

Sexual Activity in College

College is the first time that many students begin to experiment with sexual activity. Compared to their non-college peers, college students are more likely to delay sexual activity through adolescence and are less likely to engage in some types of risky sexual behavior during high school **(**Bailey, Fleming, Henson, Catalano, & Haggerty, 2008). Yet once in college, most students become sexually active. Currently, it is estimated that 72-84% of college students engaged in sexual activity within the past year (ACHA; 2007; McCave, Chertok, Winter, & Haile, 2013; Oswalt & Wyatt, 2014). The majority of these sexual encounters occur within committed romantic relationships. Indeed, college students in committed relationships are more likely to have had sexual intercourse than non-partnered students (Willoughby & Carroll, 2010) and engage in oral, anal, and vaginal sex more frequently than their non-partnered peers (Oswalt & Wyatt, 2014). As such, college is a crucial time for students to experiment with sexual and romantic relationships and explore aspects of both physical and emotional intimacy.

Hookups

Although the prevalence of sexual activity among college students has remained consistent over the past 30 years (Feigenbaum, Weistein, & Rosen, 1995), the type of romantic and sexual relationships occurring among students has changed. There has been a recent trend toward engaging in more casual sexual relationships often called hookups. The term hookup is used to describe engaging in a wide variety of sexual behaviors, such as deep kissing, intimate touching, and sexual intercourse outside a romantic relationship, and without the expectation of the formation of a relationship after the encounter (Olmstead, Conrad, & Anders, 2017). In general, hookups are becoming more prevalent on college campuses with many scholars arguing that they are becoming as common as or more common than traditional dating relationships. In

one large study of college students from 22 universities across the U.S., over 60% of respondents reported having hooked up since entering college, with similar rates having been on a traditional date (60.9%) and in a long-term romantic relationship (51.3%; Kuperberg & Padgett, 2015). However, consistent with dating trends, respondents had significantly more past hookups than traditional dates since entering college (Kuperberg & Padgett, 2015). Similarly, roughly 70% of college seniors report engaging in a hookup during college (England, Shafer, & Fogarty, 2007) with the majority of hookups occurring in the first year of school (Fielder & Carey, 2010a). Notably, men are more likely to engage in hookups than women, although rates are high across both genders (Kuperberg & Padgett, 2015).

Despite the negative connotations associated with hookups, both men and women generally report positive emotional reactions to them. In one study by Owen and Fincham (2011), both college men and women reported more positive reactions than negative reactions to their most recent hookup; although men had more positive reactions than women. Many college women describe hookups as a way to increase their awareness of, and comfort with, sexual behaviors, increase their comfort talking to their partners about sexual activities, and increase their own ability to confidently engage in various sexual activities (Owen, Quirk, & Fincham, 2014). However, when compared to traditional dating encounters, college women report less enjoyment from hookups and express more regret after engaging in these sexual encounters (Fielder & Carey, 2010b).

Although negative reactions to hookups are less common than positive reactions, approximately 15% of college students regret most or all of their hookups and more than 70% express regret with at least some of their hookups (Eshbaugh & Gute, 2008; Paul & Hayes, 2002; Uecker, Pearce, & Andercheck, 2015). Research suggests that compared to their male peers,

college women are more likely to express regret and emotional distress after a hookup, particularly if it involves vaginal intercourse (Bradshaw et al., 2010; Eshbaugh & Gute, 2008; Uecker & Martinez, 2017). Common negative reactions to hookups cited by college women include feelings of shame, guilt, embarrassment, and emotional distress (e.g., depression; Lewis, Granato, Blayney, Lostutter, & Kilmer 2012; Lewis, Lee, Patrick, & Fossos, 2007). Other negative consequences include losing respect for their partner, feeling judged by peers, breaking up with a steady relationship partner, unwanted pregnancy, and contracting a sexually transmitted infection (STI; Bradshaw et al., 2010). Many college women also report being less sexually satisfied by hookups than their male partners. For example, one study by Armstrong and colleagues (2012) found that both male and female college students indicated that female sexual satisfaction, including orgasm, is not prioritized during hookups, but is considered an important component of sexual intimacy in long-term relationships. These findings indicate that while hookups can be an opportunity for college students to explore their sexual identity, they can also lead to some negative consequences such as shame, guilt, and depression, as well as criticism from peers. This is especially true for college women, who are more likely to experience negative emotional reactions and less satisfaction from these casual sexual encounters.

Traditional Dating Relationships

Although hookups are becoming increasingly prevalent, most students continue pursue traditional dating relationships while in college. England and colleagues (2007) found that 71% of college seniors reported having at least one relationship that lasted six months or longer while in college. Furthermore, sex during college is most likely to occur in the context of a committed relationship. For example, Fielder and colleagues (2013) found that among first year college

women, 25-38% had sex in the context of a relationship during the past month, whereas only 7-18% had sex in the context of a hookup.

While it is clear that traditional dating persists among college students, the pathway to entering relationships has changed. Specifically, hookups are now considered an integral part of the pre-dating ritual (England et al., 2007). In a sample of college students who had a long-term romantic relationship of at least six months, 67% had both hooked up and gone on a traditional date with their partner prior to formalizing the relationship, whereas only 27% reported only dating (and not hooking up) prior to beginning the relationship (England et al., 2007). Additionally, among students who reported both hooking up with and dating their relationship partner, hooking up typically came before a traditional date (England et al., 2007). Although most hookups do not turn into long-term relationships, research suggests that the majority of relationships now begin with a hookup. As a result, college women may engage in hookups with the hope that they will lead to a traditional dating relationship (Bradshaw et al., 2010; Owen & Fincham, 2011).

Long-term romantic relationships are associated with greater psychological well-being among both college men and women (Braithwaite, Delevi, & Fincham, 2010), as well as decreased engagement in traditionally risky sexual behavior (e.g., sex with multiple partners) and associated outcomes (Braithwaite et al., 2010). For college women, there is also the added benefit of having more pleasurable and enjoyable sexual experiences (Armstrong et al., 2012; England et al., 2007; Owen et al., 2010). Long-term relationships provide a safe environment for partners to discuss their sexual desires and explore different sexual activities. By nature of their long-term involvement, couples have more time to disclose sexual preferences and to enact those preferences with one another. Generally, there is a strong relationship between sexual disclosure,

which occurs more frequently in traditional long-term relationships, and sexual satisfaction among couples (Byers, 2005; MacNeil & Byers, 2009). As follows, college women may feel more comfortable talking with their partner about sexual desires and advocating for their sexual pleasure, leading to more satisfying and enjoyable sexual encounters.

Despite the positive aspects of long-term relationships, committed relationships also involve their own associated risks. College women are less likely to require their partners to use a condom in long-term relationships (Civic, 1999; Wildsmith, Manlove, & Stewad-Streng, 2015) and are more likely to participate in anal sex with committed partners than with casual relationship partners (Kaestel & Halpern, 2007). In addition, many college women consent to unwanted sexual activity with a romantic partner in an effort to keep the relationship or to prevent relationship tension (Impett & Peplau, 2002; O'Sullivan & Allgeier, 1998). Katz and Tirone (2009) found that 37% of undergraduate women in exclusive relationships reported sexual compliance, that is acquiescing to an unwanted sexual advance from their partner, for the good of the relationship. Thus, research suggests that women in long-term relationships may be more likely to consent to unwanted sexual activity or engage in certain forms of riskier sexual activity (e.g., anal sex, unprotected sex), in part to maintain their relationship and because they may perceive their risk for negative outcomes (e.g., STIs) as lower.

Social Norms Related to Sexual Activity

Sexual development, including engagement in both short- and long-term romantic and sexual relationships, is shaped by broad cultural norms and social expectations that affect individual attitudes and beliefs about sexuality. Compared to men, women face significantly more barriers when exploring and expressing their sexuality. These barriers are the result of traditional gender roles which emphasize passivity, compliance, and dependence among women

while promoting aggression and dominance among men (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1971). Existing gender roles influence many aspects of sexuality, such as sexual scripts, and have led to the existence of a sexual double standard which privileges male sexuality and chastises female sexuality.

Sexual Scripts and the Sexual Double Standard

Research on sexual relationships in college, including both long-term romantic relationships and hookups, suggest that college women are more likely to experience negative consequences related to these sexual encounters than men. This is likely due to the influence of gender socialization, including sexual scripts. Sexual scripts are internalized messages from the broader culture that dictate expected behaviors for men and women in sexual situations (Simon & Gagnon, 1986; Simon & Gagnon, 2003). Research supports the existence of a traditional sexual script for heterosexual sexual encounters in which sexual encounters that are initiated and dominated by men (Byers, 1999; Littleton, Axsom, & Yoder, 2006; Simon & Gagnon, 1986; Simon & Gagnon, 2003). In the traditional sexual script men use persuasive and coercive methods to initiate sexual encounters, whereas women are expected to act as the "gate keepers" of sex and to initially resist male sexual advances to maintain their reputation (Byers, 1999; Littleton, 2011; Littleton & Axsom, 2003). Additionally, female pleasure is not expected nor prioritized in the traditional sexual script (Armstrong et al., 2012; Littleton, 2011). College women who internalize the traditional sexual script may feel uncomfortable asserting their sexual desires and preferences, whether in the context of a hookup or long-term romantic relationship and may be more likely to prioritize their partners' sexual desire above their own. In addition, college women may feel more guilt and shame after having sex especially if they initiate the encounter because it deviates from the expected sexual behavior of women.

These sexual scripts highlight a larger sexual double standard for men and women. The sexual double standard refers to the different acceptability and consequences associated with sexual behavior for men and women (Allison & Risman, 2013). Men are often rewarded for engaging in sexual behavior; they may be seen as more sexually competent and often receive positive attention from their peers for having sex with multiple partners (Littleton, 2011; Sanchez, Fetterolf, & Rudman, 2012). In comparison, women are negatively perceived for engaging in similar sexual behaviors; they may be viewed as promiscuous, "loose", or slut-shamed (Allison & Risman, 2013). As such, women tend to be judged more harshly by both male and female peers for engaging in sex, particularly casual sexual relationships and unconventional sexual practices (e.g., anal sex). This sexual double standard may in part explain the higher rates of men engaging in hookups as well as the higher rates of distress (e.g., depression, shame) among college women for engaging in casual sexual relationships (Sanchez et al., 2012).

Social Norms Theory

College women are often subjected to judgment by peers both for engaging in sexual activity and for abstaining from it. Indeed, many young adults feel pressure to engage in sexual activity because they perceive their peers as doing so. Social norms theory, originally introduced by Bandura in 1971, suggests that individual behavior is learned through observation of others' behavior. Bandura also suggested that behavior is also influenced by perceptions of how others behave. Within the college environment, social norms theory has been applied to engagement in both heavy drinking and risky sexual behavior (Lewis et al., 2007; Martens et al., 2006; Scholly, Katz, Gascoigne, & Holck, 2005). Indeed, research suggest that college students who engage in risky sexual behavior often overestimate their peers' behavior, believing that they are engaging

in more risky behavior than they actually are (Martens et al., 2006). Scholly and colleagues (2005) found that students reported an average 0-1 sexual partners over the past year but perceived their peers as having at least three sexual partners. Similarly, the authors found misperceptions about condom use, such that participants perceived their peers as using condoms infrequently and having higher rates of STIs, compared to themselves. Another study by Lewis and colleagues (2007) found that college students perceived peers as having more sexual partners, more causal sexual intercourse, and more frequent alcohol-related risky sex, than they reported of themselves. These studies suggest that misperceptions about peers' engagement in risky and casual sex serves to normalize one's own behavior and may lead to increased engagement in risky behavior. Further, college women may feel pressure to engage in sexual activity because they perceive their peers as doing so, despite facing unique negative consequences such as social stigma, emotional distress, and changes to their sexual health. Thus, college women may be more likely to engage in unwanted sexual experiences and may be less likely to assert their needs in sexual and romantic contexts because they feel pressure from others to do so.

The Sexual Health of College Women

College women are not only subjected to more negative social and emotional consequences of engaging in sex, they also face greater risk to their sexual health. Sexual health broadly defined is a state of physical, emotional, mental, and social well-being related to sexuality (WHO, 2006). Sexual health includes both the absence of disease and dysfunction, as well as the ability to have positive and pleasurable sexual experiences that are both safe, respectful, and fulfilling (WHO, 2006). Unfortunately, research suggests that college women

experience significant problems related to their sexual health including difficulty with sexual functioning, low satisfaction, and increased risk for sexual victimization, including rape.

Sexual dysfunction is defined as psycho-physiological difficulties related to aspects of sexual responses (e.g., inadequate lubrication, lack of orgasm, pain during vaginal penetration) as well as decreased desire and/or arousal (Laumann, Paik, & Rosen, 1999). Among college women estimates of the rate of sexual dysfunction vary from 25% to 70% (Garneau-Fourneir, McBain, Torres, & Turchik, 2017; Turchik & Hassija, 2014). The type of sexual problems most commonly reported by college women include lack of orgasm (48.6%), difficulty with lubrication (22.1%), pain during intercourse (21.4%), and lack of sexual desire (18.4%; Garneau-Fourneir et al., 2017). This suggests that sexual dysfunction is relatively common among college women, with lack of orgasm being the most prevalent dysfunction experienced within this group. It is possible that the type of sexual dysfunctions experienced by college women may in part be related to the type of sexual encounters common among college students (e.g., hookups) which prioritize male sexual pleasure and ignore female sexual pleasure and orgasm. It is also possible the high rate of sexual dysfunction among college women is related to the general lack of sexual knowledge and sexual experience typical of individuals during this developmental period.

The sexual health of college women can also be negatively affected by unwanted sexual experiences, including rape, which are relatively common on college campuses. Indeed, rates of sexual victimization have remained consistently high with as many as 1 in 5 college women being sexually assaulted during their time in college, often within their first or second semester (Fedina, Holmes, & Backes, 2018). While sexual assault can occur in both committed and uncommitted relationships, it is most likely to occur with a friend or acquaintance (Fisher, Cullen, & Turner, 2000; Kilpatrick, Resnick, Ruggiero, Conoscenti, & McCauley, 2007) and

often in the context of drinking and at parties where hookups are common (Fisher et al., 2000; Kilpatrick et al., 2007). Indeed, Flack and colleagues (2016) found that 78% of sexual assaults of college women occurred during a hookup. The prevalence of sexual assault is particularly alarming because it can lead to long-term disruptions in sexual and mental health, including disruptions to sexual functioning and sexual satisfaction (Ellis, 1981; Garneau-Fournier et al., 2017; Kelley & Gidycz, 2016), depression, anxiety, and PTSD (Gidycz, Orchowski, King, & Rich, 2008; Messman-Moore, Brown & Koelsch, 2005).

Risk for victimization as well as for difficulties with sexual functioning and satisfaction, are exacerbated by the type of sexual encounters common among college students such as hookups. However, problems related to sexual functioning, satisfaction, and unwanted sexual experiences can and do occur in traditional dating relationships Although there are many factors that contribute to these risks, lack of assertiveness and difficulty communicating one's sexual needs are significant contributors. Indeed, several studies have shown that increased sexual communication and sexual self-disclosure are associated with more intimate and satisfying sexual relationships for both men and women (Auslander et al., 2007; Byers & Demmons, 1999; Mark & Jozkowski, 2013). Yet sexual communication is at odds with the social expectations placed on women which encourage women to resist sexual advances, limit the exploration of their own sexual identities, and suppress feelings of sexual pleasure. In addition, college women receive mixed messages related to their sexual activity wherein they are encouraged both to resist sexual advances and to engage in risky sexual activity, while also facing a host of potential negative outcomes including STIs, unplanned pregnancies, sexual assault, sexual dysfunction, and lack of sexual satisfaction. As a result, many college women feel conflicted and ill-equipped to navigate their sexual relationships.

Intervention Models Addressing Sexual Health Issues of College Students

The high rates of sexual activity and sexual assault among college students have led many colleges and universities to implement specific programming for students' sexual health promotion. The majority of current programming focus on two aspects of sexual health and development: sexual diseases (e.g., STIs) and sexual assault. Although these programs are important, they focus solely on the negative aspects of sexual development and fail to include content on pleasure, intimacy, and sexual communication (deFur, 2012; Fine, 1988; Hirst, 2013). Additionally, the efficacy of these programs in achieving their intended outcomes, (e.g., reduced STI infection, increased condom use, decreased rates of sexual assault), is mixed at best.

Disease Prevention Programs

Disease prevention programs have historically been the most common type of sexual health related programming available to college students (Allen, 2007; Ingham, 2005). A random survey of 736 U.S. colleges and universities revealed that 91% provided some type of disease prevention education to their students (Koumans et al., 2005). Disease prevention programming is designed to increase awareness of the prevalence of, and risk for, STIs and unintended pregnancies while promoting the use of both birth control and prophylactics to prevent STIs and unintended pregnancy. Accordingly, the goal of this programming is three-fold: to increase knowledge of sexual diseases, increase knowledge of safe-sex practices, and to reduce engagement in particular forms of risky sexual behavior (Allen, 2007; Gavin, Catalano, David-Ferdon, Gloppen, & Markham, 2010; Kirby, Laris, & Rolleri, 2007; Zimmer-Gembeck & Helfand, 2008). To increase awareness, most college and universities use posters and flyer campaigns displayed in campus buildings to highlight the rate of STIs among college students accompanied by catchy slogans such as "protect your goods" and "think before you play." Other

education efforts are incorporated into student orientations, lectures, and sexual health fairs promoting STI testing and safe sex practices (Koumans et al., 2005).

Although disease prevention education is important and can provide college students with information regarding ways to reduce their risk of STIs and unplanned pregnancy, research on the efficacy of this programming is limited. Research has found mixed results on the effectiveness of disease education programming, with several studies finding that it increases students' knowledge of sexual health, and others findings that it has no direct effect on sexual behavior (Grunseit, Kippax, Aggleton, Baldo, & Slutkin, 1997; Jaworski & Carey, 2001). For one, these programs often provide limited education in areas where many students lack knowledge, such as risk for STIs associated with oral sex (Kaiser Family Foundation, 2003). Furthermore, disease prevention programs focus on providing factual information (e.g., statistics on the prevalence of STIs) and often do not incorporate discussions on social or relationship barriers that prevent individuals from using prophylactics, such as condoms (e.g., how to assertively ask a partner to use a condom.) This suggests that the content of disease prevention programs may not effectively address the gaps in the sexual health knowledge of college students and may not incorporate enough applicable skill-based knowledge to lead to changes in sexual behavior. Moreover, disease prevention programs are limited by their narrow focus on the negative outcomes of sex. For example, they do not discuss ways to incorporate condom use into foreplay or how safe sex can make sex more enjoyable for both parties. By focusing exclusively on STIs and pregnancy, disease prevention programs ignore other important aspects of sexual health such as desire, satisfaction, and intimacy, which contribute to sexual wellbeing and may affect decisions to use prophylactics, including condoms and dental dams (Amaro, 1995; Ingham & Hirst, 2010).

Sexual Assault Prevention and Risk Reduction Programs

Recently, sexual assault prevention and risk reduction programs have been increasingly added to the sexual health curricula on college campuses. While not replacing disease prevention programs, sexual assault education is being implemented by many colleges as a way to address the high rates of sexual assault on campus. These programs are divided into two categories: sexual assault prevention programs, which are geared toward college men and incorporate education on rape myths, rape awareness, and strategies to reduce sexual violence; and sexual assault risk reduction programs, which target college women and focus on reducing victimization risk through education on assertive communication, self-protective behaviors, and self-defense training (Gidycz et al., 2015). These programs go beyond the content of disease prevention education by examining social and environmental factors that contribute to the high rates of sexual assault, including the impact of gender roles, peer pressure, and alcohol/drug use on sexual behavior (Anderson & Whiston, 2005; Gidycz et al., 2015).

Although there are a few sexual assault prevention programs that have been developed, Gidycz and colleagues have led the way in developing intervention programs specifically targeted toward college women (see Gidycz & Dardis, 2014; Gidycz, Rich, Orchowski, King, & Miller, 2006; Gidycz et al., 2015; Orchowski, Gidycz, & Raffel, 2008). One of the recent programs developed by Gidycz and colleagues (see Orchowski et al., 2008 for full details) teaches college women how to identify potentially dangerous dating and sexual situations and how to respond assertively to reduce the risk for sexual assault. The program also aims to address obstacles that impede recovery from sexual assault by addressing psychological and social barriers that prevent women from responding in the moment, such as gender role socialization and social expectations. The program involves three sessions including an initial

information session, one self-defense training workshop, and a final review session, and has been shown to be effective in increasing both victims' and non-victims' resistance self-efficacy and self-reported use of protective behaviors at 2- and 4-month follow-ups, as well as increasing use of assertive resistance tactics during any additional assaults (Gidycz et al., 2015; Orchowski et al., 2008). Similar risk reduction programs have found comparable changes in resistance self-efficacy, self-confidence, and perceptions of rape-related risk (Gidycz & Dardis, 2014; Senn et al., 2017). However, these skills do not necessarily translate into reduced rates of victimization. Indeed, in a meta-analysis by Anderson and Whiston (2005), the authors found only a small effect in the reduction of sexual victimization (d = .10) compared to the medium to large effects on perceived ability to resist assaults. This suggests that although risk reduction programs are effective in increasing rape-related knowledge and confidence to engage in assertive behaviors, these skills may not effectively translate into actionable behavior. Furthermore, these programs do not address men's perpetration or bystander intervention behaviors. In addition, much like disease prevention programs, risk reduction interventions focus exclusively on resisting non-consensual sexual advances and the negative consequences that result from the failure to do so. Finally, these interventions lack a broader focus on sex and intimacy which can affect sexual experiences and lead to unsatisfactory, uncomfortable, and potentially unwanted sexual encounters.

Sex Positivity Programming

Though extant sexual education programming addresses some aspects of sexual health, these programs provide very limited content and focus solely on the negative aspects of sexuality. What is missing from these programs is a discussion of desire. In her seminal paper, Fine (1988) argues that sex education focuses solely on sexuality as it relates to violence,

victimization, and morality, and ignores positive aspects of sexuality such as desire, pleasure, and intimacy. The lack of a discourse on desire is particularly detrimental to young women because it limits the development of sexual autonomy and can lead to negative sexual experiences. As a response to the lack of desire in sex education, many researchers have argued for the inclusion of sex positivity in current sexual health curriculums. Sex positivity refers to the depathologizing of sexual activity, particularly for women (Fahs, 2014). Sex positive programs include messages promoting sexual pleasure and sexual exploration in ways that benefit both the individual and their partners (Fahs, 2014; Hirst, 2013). For example, Fahs (2014) argues that a sex positive framework includes both the freedom to have sex, embrace sexuality and engage in consensual sexual activities, and the freedom from unwanted sexual experiences, expectations to have sex, and treatment as a sexual object. Thus, sex positive sexual education addresses the gaps of current sexual health programming by discussing positive aspects of sexuality and promoting exploration of one's own sexual identity in a safe, consensual, and mutually satisfying way.

Historically, sexual health programs have shied away from discussing sexual desire and pleasure for fear that it would increase sexual risk-taking behavior. However, research suggests the opposite; sex positive programs increase sexual agency and can lead to increased use of self-protective behaviors as well as decreased engagement in vaginal intercourse. Hirst (2013) argued that sex positive education can introduce a wide range of sexual experiences, such as masturbation or mutual masturbation, which provides women with other options for sexual enjoyment and may lead women to delay sexual intercourse with their partner. Similarly, Philpott, Knerr, and Maher (2006) suggested that sex positive programs can reduce risky sexual behavior, such as sex without a condom, by aligning safe sex practice with young adult values.

For example, by aligning condom use with pleasure (e.g., using condoms may increase length of sexual encounter and therefore enjoyment for both parties), individuals may be more motivated to use condoms. Other studies have found that sexual self-esteem, which is highlighted in sex positive programs, predicts increased communication with sexual partners and that increased sexual communication leads to increased satisfaction and reduced engagement in unwanted sexual experiences (Babin, 2012; Oattes & Offman, 2007).

Reflecting this shifting perspective on sexuality, many colleges and universities have begun to offer sex positive programming to their students. For example, Appalachian State University in North Carolina adopted a "Sex Positive Week" and Lafayette College in Pennsylvania offers sex positive programs throughout the year. As many as 20 other colleges and universities have also begun to incorporate sex positive education into their sexual health programming (Sandoval, 2014). While this shift in rhetoric surrounding sexuality is likely positive for college women, there has yet to be any research examining the efficacy of these programs. Additionally, there is a lack of uniformity across sex positive programs with programs varying in the breadth and type of content covered, making it difficult to make conclusive statements about their effectiveness.

Summary of the Literature

As discussed, college is a time of sexual development for many students. During this time, college men and women are exploring their sexual identities, sexual preferences, and forming meaningful intimate relationships with one another. Many of these sexual experiences are occurring in the context of hookups, casual sexual relationships with non-committed partners, which provide the opportunity for students, particularly young women, to increase their comfort with various sexual activities. However, despite the prevalence of hookups, the majority of

sexual encounters continue to occur in the context of traditional relationships with committed partners.

Compared to college men, women experience more negative consequences for engaging in sex both in and outside of a relationship. College women are more likely to be negatively viewed by their peers, criticized for their sexual exploits, and are more likely to experience affective distress after engaging in these types of sexual encounters. They are also less likely to feel less satisfied by these experiences. Furthermore, college women are at the highest risk for experiencing unwanted sexual experiences including sexual assault and rape. These risks are compounded by the high rates of binge drinking and risky sexual behavior common among college students.

While it is clear that college women face unique challenges during this time of sexual development, they are offered limited support by college administrations. Current sex education curricula focus solely on disease prevention and sexual assault education, which emphasize use of contraception to reduce rates of STIs, pregnancy, and methods to resist unwanted sexual advances, but ignores other aspects of sexual development, such as the importance of pleasure, desire, and intimacy. Additionally, extant programs demonstrate limited efficacy with their intended outcomes (e.g., lower rates of STIs, lower rates of victimization). In response, scholars have argued for the inclusion of sex positive messages into current sex education curriculums. Sex positivity encourages the development of sexual autonomy by promoting sexual exploration and sexual enjoyment specifically for women. Thus, women are encouraged to explore a variety of sexual activities (e.g., masturbation, mutual stimulation) and seek out relationships that are mutually enjoyable to both parties. Scholars have argued that the use of a sex positive framework for sex education may increase students' ability to communicate about their sexual needs and

desires with their partner, and ultimately reduce engagement in risky sexual behavior by aligning safe sex with young adult values (e.g., using condoms can increase pleasure for both partners). Over 20 universities across the U.S. have started to adopt sex positive programming; however, there has yet to be any research examining the efficacy of these programs.

Dissertation Aims and Hypotheses

Therefore, the purpose of this dissertation was to conduct an initial pilot evaluation of a brief sexual assertiveness intervention for college women using a sex positive framework. The proposed intervention focused on teaching assertive communication skills in the context of consensual romantic and sexual relationships with the goal of increasing college women's sexual communication self-efficacy, use of assertive behavior, and overall satisfaction in their sexual relationships. This intervention addressed existing gaps in current sexual health programming by incorporating discussions of the different messages women receive about sexuality and sexual pleasure, as well as differences in the experience of pleasure and satisfaction between men and women. In addition, the proposed intervention incorporated education on the sexual health of college women to correct pervasive misperceptions about sexuality that exist among college students. The goal of the proposed intervention was to increase college women's comfort communicating with their sexual and romantic partners, correct misperceptions of peer-related sexual norms that may perpetuate pressure to engage in sexual activities, and improve relationship and sexual satisfaction among college women.

To achieve these goals, college women were recruited to complete an initial pre-intervention survey that assessed sexual communication self-efficacy, current sexual satisfaction, knowledge of peer-related sexual norms, and recent risky sexual behavior. Participants who were sexually active and indicated interest in attending a workshop on sexual assertiveness were then

invited to complete a three-hour intervention on sexual assertiveness and completed additional assessments immediately following the intervention. Women who completed the intervention (*n* = 45) were asked to complete a follow-up assessment 6-weeks later. Additionally, 53 women were randomized to complete the same follow-up assessment. To determine the efficacy of the intervention, pre- and post-intervention scores were compared within the intervention group and between women who completed the intervention and those who did not. Additional information about the efficacy, feasibility, and satisfaction with intervention was also collected from intervention participants. The specific aims and hypothesis were as follows:

Aim one: Examine the efficacy of the Savvy Sexuality intervention on sexual communication self-efficacy and knowledge of peer-related sexual norms, as well as satisfaction with the intervention.

> ***Sub aim A:*** Examine the extent to which completing the Savvy Sexuality intervention was associated with improved sexual communication self-efficacy.
>
> ***Sub aim B:*** Examine the extent to which completing the Savvy Sexuality intervention was associated with increased knowledge of peer-related sexual norms.
>
> ***Sub aim C:*** Evaluate participant satisfaction with the Savvy Sexuality intervention and facilitators.

Aim two: Examine the effectiveness of the Savvy Sexuality intervention on a host of sexual health-related outcomes at six-week follow-up.

> ***Sub aim A:*** Evaluate differences in sexual communication self-efficacy at follow-up among individuals who completed the Savvy Sexuality intervention compared to those who did not complete the program.

Sub aim B: Evaluate differences in knowledge of peer-related sexual norms at follow-up among individuals who completed the Savvy Sexuality intervention as compared to those who did not.

Sub Aim C: Evaluate differences in engagement in sexual risk behavior at follow-up among individuals who completed the Savvy Sexuality intervention as compared to those who did not complete the program.

Sub aim D: Evaluate differences in sexual assertiveness at follow-up among individuals who completed the Savvy Sexuality intervention as compared to those who did not complete the program.

Sub aim E: Evaluate differences in sexual assault resistance self-efficacy at follow-up among individuals who completed the Savvy Sexuality intervention as compared to those who did not complete the program.

Sub aim F: Evaluate differences in sexual satisfaction at follow-up among individuals who completed the Savvy Sexuality intervention as compared to those who did not complete the program.

Aim three: Refine the content of the Savvy Sexuality intervention based on focused qualitative feedback collected from intervention participants.

Methods

Participants

Participants were drawn from a sample of 415 college women who completed an initial online survey described s as a study of female sexuality. Participants who indicated they were currently sexually active (defined as engaging in vaginal, oral, or anal sex, sexual touching, fondling, or hand-to-genital stimulation within the past six weeks) and that they would like to complete the sexual assertiveness intervention were invited to sign up for the intervention (n = 119) or were randomized to complete a follow-up only assessment after six weeks (n = 52). Of those invited to complete the intervention, 45 (37.8%) enrolled and completed it. Of those who completed the follow-up assessment, 43 (68.2%) were from the follow-up only group and 21 (32.8%) had completed the intervention.

Procedures

IRB approval was obtained from East Carolina University (ECU; Appendix A). Participants were recruited through the ECU Psychology department online participant management system, SONA, which provides students enrolled in introduction to psychology with the opportunity to participate in research studies and other non-research activities for course credit. The study was advertised as an interactive intervention on sexual assertiveness for sexually active college women. Data was collected over two semesters. Participants were informed that the study would consist of three parts: a pre-survey, a 3-hour interactive intervention (for eligible participants), and a follow-up assessment at the end of the semester. Interested participants were instructed to complete the online pre-survey consisting of measures assessing demographics, current alcohol use, current depressive symptoms, sexual victimization history in childhood and adolescence/adulthood, sexual risk behaviors over the past 6 weeks,

current sexual and relationship satisfaction, sexual refusal self-efficacy, sexual communication self-efficacy, sexual assertiveness, and knowledge of peer-related sexual norms. Consent was obtained electronically (Appendix B). The pre-survey took approximately 40 minutes to complete (M = 41.53 minutes) and participants received 0.5 research credits for completing these measures. At the end of the survey, participants were asked to provide their email address and telephone number if they were interested in participating in the 3-hour interactive intervention on sexuality for college women, for which they would receive 3.0 research credits. During the Fall semester, participants who indicate that they were interested in the intervention were randomized using an electronic random number generator to receive an invitation to sign up for the intervention or randomized to complete the follow-up assessment only after 6 weeks, with 58% randomized to receive the invitation to complete the intervention and 42% randomized to complete the follow-up assessment only. Inclusion criteria was self-identifying as female, age 18-24 years, and sexually active within the past 6-weeks. Due to a low rate of enrollment in the intervention during the Fall semester, all participants who met the above criteria were invited to enroll in the intervention during the Spring semester.

Intervention participants were contacted via email (see Appendix C) and text message and informed that they were eligible to sign-up to complete the 3-hour interactive intervention. There were eleven dates offered with twelve available slots in each for participants. Group size for the intervention sessions ranged from two to eight participants (M = 5.7). All intervention groups were held in classrooms in the Department of Psychology and were facilitated by two trained doctoral level psychology students. Participants received 3.0 research credits for completing the intervention which also included completing three brief post-intervention measures. The post-intervention measures included assessments of sexual communication self-

efficacy, knowledge of peer-related sexual norms, and satisfaction with the intervention. After six weeks, participants who completed the intervention were contacted via email and text message to complete the follow-up assessment. Individuals who were randomized to the follow-up only group were contacted via email and notified that they were not currently eligible to participate in the intervention at that time but could complete a follow-up assessment toward the end of the semester. An email reminder was sent after six weeks to prompt follow-up only participants to complete the assessment. All participants received 0.5 research credits for completing the follow-up assessment. To increase the response rate to the follow-up assessment, participants could enter in a raffle to earn one of five $25 Walmart gift cards. Finally, fifteen participants who completed the intervention were randomly selected to provide feedback on the intervention by phone. Of those contacted, four participants agreed to provide feedback. Phone interviews took approximately 10 minutes to complete (See Appendix D). During the Fall semester, participants who completed a phone interview received 0.5 research credits. However, to increase the response rate, participants in the Spring semester were offered the option of 0.5 research credits or a $5 Starbucks gift card. See Appendix E for a complete overview of study flow.

Savvy Sexuality Intervention

The Savvy Sexuality intervention consisted of three parts: 1) discussion of social norms relate to sexuality and sexual pleasure; 2) introduction to assertive communication strategies; 3) interactive practice of assertiveness strategies in wanted and unwanted sexual situations (see Appendix F for full description). The intervention was designed to help participants develop skills to negotiate sexual situations with sexual and romantic partners. Therefore, the intervention predominantly focused on using assertive communication strategies in consensual sexual

situations to ensure these experiences are mutually pleasurable, safe, and non-exploitative. The intervention also included discussion of unwanted sexual situations and practice of assertive refusal strategies in these situations.

The intervention began with a discussion of goals and expectations. Participants completed a brief icebreaker activity designed to introduce them to one another. The first portion of the intervention focused on an introduction to social norms related to sexuality and sexual pleasure. Participants completed a series of activities designed to increase their knowledge and understanding of social norms. First, participants completed a brief handout asking them to identify six sources (people, places, cultures, institutions) that have influenced their personal values about sex and sexuality (Appendix G). These handouts were used to facilitate a discussion of positive and negative messages women receive related to sexuality and sexual pleasure. Participants were asked to identify messages they or their peers have received from these sources. Next, participants engaged in a discussion of common misconceptions about female sexuality and sexual pleasure. Participants engaged in a quiz game where they were asked to identify whether fifteen statements are true/false (e.g., "75% of college women engaged in at least three hookups over the last month;" "At least 60% of women typically orgasm through vaginal penetration"). Facilitators discussed the results of the quiz utilizing a handout highlighting statistics on normative sexual behavior among college students with specific examples from studies conducted among ECU students.

The second portion of the intervention focused on an introduction to assertive communication strategies (Appendix H). To begin, participants brainstormed difficult conversations that arise during relationships or sexual encounters (e.g., how to become "exclusive" with someone, how to talk about sexual or dating histories, how to ask for a specific

sexual activity). During this discussion, facilitators reviewed a handout of assertive communication strategies to discuss. Next, participants watched a brief 5-minute video on sexual consent produced by Planned Parenthood where they were be asked to identify assertive communication strategies used in the video. Participants were then asked to brainstorm factors that make it difficult to use assertive communication strategies, such as alcohol/drugs, pressure from partner or peers, and feeling uncomfortable. During this discussion, facilitators briefly reflected on unwanted sexual situations, making sure to emphasize that even when a person uses effective assertiveness strategies they may still experience unwanted sexual situations and that this is not their fault.

The third and final component of the intervention involved a practice of assertive communication in sexual situations. Participants were divided into small groups and presented with one scenario of a potential sexual situation (Appendix I). These scenarios were worded using gender neutral language. Each group was asked to come up with a strategy to negotiate their situation utilizing assertive communication strategies. Each group presented their strategy to the larger group and receive feedback. Lastly, facilitators summarized intervention content, reviewed intervention goals, and discussed the follow-up timeline for survey completion and credits.

Measures

Measures Administered Only at Baseline

Demographics. Participants completed a seven-item demographic questionnaire assessing age, gender, ethnicity, race, academic standing, sexual orientation, sexually active status, and relationship status (Appendix J). The questionnaire included an additional item assessing exposure to sexual education curriculum in high school. Within the current sample,

7.7% (*n* = 32) of participants reported receiving no sexual education in school and 29.9% (*n* = 124) reported receiving abstinence only education. In comparison, 74.0% (*n* = 307) stated that their sex education in school included information on the anatomy and function of reproductive organs, 76.6% (*n* = 318) information on STIs and pregnancy, 56.4% (*n* = 234) information on sexual assault, and 45.5% (*n* = 184) information on dating relationships. Only 16.4% (*n* = 68) stated that their sex education included information on sexual pleasure.

Hazardous alcohol use. Hazardous alcohol use was assessed using the five-item version of the Alcohol Use Disorders Identification Test (AUDIT-5; Barbor, Higgins-Biddle, Saunders, & Monterio, 2001; Miles, Winstock, & Strang, 2001). The AUDIT-5 assesses frequency of alcohol use, number of drinks consumed during drinking episodes, perceived control over drinking behavior, and drinking consequences, all over the past 6-months. Scores on each item can range from 0 to 4 with higher scores indicating hazardous use. The AUDIT-5 has a cutoff score of 5 (Miles et al., 2001). In a large sample of college-aged students, the AUDIT-5 had a 79% sensitivity and 95% specificity for distinguishing individuals who have an alcohol problem from those who do not using the proposed cutoff score (Miles et al., 2001). It has frequently been used and validated with college-aged samples (e.g., Flemming, Barry, & Macdonald, 1991; Kokotalio, Egan, Gangnon, Brown, Mundt, & Flemming, 2006; Littleton, Grills, & Drum, 2014; Zamboanga et al., 2007). For example, Littleton and colleagues (2014) reported good internal consistency among a sample of undergraduate women ($\alpha = .77$). Other studies utilizing college-aged women have found similar internal consistency values (e.g., Meneses-Gaya, Zuardi, Loureiro, & Crippa, 2009; Zamboanga et al., 2007). Cronbach's alpha for the current sample was acceptable, $\alpha = .69$.

Depressive symptoms. Current depressive symptoms were assessed using the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). The CES-D is a 20-item, self-report measure of affective symptoms of depression over the past two-weeks. Sample items include: "I felt depressed" and "I felt that everything I did was an effort." Items are scored on a four-point rating scale bounded by 0 (*Rarely or none of the time*) and 3 (*Most or all of the time*) scale. The CES-D has a possible range of 0-60. A cutoff score of 21 for probable depression is recommended for college samples (Shean & Baldwin, 2008). The CES-D has demonstrated good internal consistency ($\alpha = .85$) and adequate 6-8 week test-rest reliability ($r = .59$) among a large sample of inpatient -psychiatric patients. It demonstrated a similar level of internal consistency ($\alpha = .89$) among a sample of college students (Radloff, 1991). In additional support of the measure's validity, the CES-D demonstrates strong correlations with other measures of depression including both self-report and clinical interviews (e.g., BDI, SCID; Radloff, 1977; Santor, Zuroff, Ramsay, Cervantes, & Palacios, 1995; Weissman, Sholomskas, Pottenger, Prusoff, & Locke, 1997). Cronbach's alpha in the current sample was good ($\alpha = .92$).

Sexual assault experiences. Childhood sexual abuse (CSA) was assessed using two behaviorally specific items drawn from prior research (Littleton et al., 2014; Williams, Siegel, & Pomeroy, 2000). The items were designed to assess childhood experiences (before age 14) of sexual contact perpetrated by a relative or other adult in a position of authority (e.g., doctor, minister, babysitter). The age cutoff was determined by prior research which supports that most CSA experiences are initiated before the age of 14 (Finklehor, Hotaling, Lewis, & Smith, 1990). Prior studies that have utilized these screening questions in a sample of college women found 14.2% of women reported histories of CSA (Littleton et al., 2014).

Sexual assault experiences in adolescence and/or adulthood was assessed using items derived from the Sexual Experience Survey-Revised (SES-R; Koss et al., 2007). The SES-R assesses sexual victimization experiences since the age of 14 using a series of behaviorally specific items such as "Since age 14, have you ever had a man put his penis into your vagina or have someone insert fingers or objects without consent by using physical force, for example holding you down with their body weight, pinning your arms down, or having a weapon?" The items administered assessed experiences of unwanted completed and attempted sex (oral, vaginal, and/or anal intercourse) obtained by force, threat of force, or that occurred while the individual was unable to consent due to incapacitation by substances. Participants who endorsed one or more of the completed rape items were coded as rape victims, while participants who endorsed one or more of the attempted rape items but no completed rape items were coded as attempted rape victims. The SES-R is the most widely used screening measures of sexual assault because of its agreement with both research and legal definitions of sexual assault (Davis et al., 2014; Koss & Gidycz, 1985). It has been used in a variety of populations including college students. The original SES demonstrated acceptable 1-week test-retest reliability (r = .73; Koss Gidycz, & Wisniewski, 1987). The SES-R also demonstrated acceptable consistency in responses over a two-week period (Johnson, Murphy, & Gidycz, 2017) Additionally, in a sample of college women, the SES-R demonstrated acceptable consistency in responses over a 1-4 week follow-up period among victims who endorsed an experience of rape on the initial administration of the SES-R (κ =.60), although attempted rape response consistency was fair (κ =.33; Littleton, Layh, Rudolph, & Haney, 2019). Also supporting the measure's validity, endorsing sexual victimization experiences on the SES-R is associated with symptoms of depression, anxiety,

post-traumatic stress, and sexual problems (Cecil & Maston, 2006; Johnson et al., 2017; Littleton et al., 2019).

Measures Administered at Baseline and Follow-up

Sexual risk behavior. Sexual risk behavior was assessed using four subscales of the Sexual Risk Survey (SRS; Turchik & Garske, 2009). The SRS was modified to assess sexual risk behavior within the past 6-weeks using a series of open-ended questions. The four subscales administered were: impulsive sexual behaviors (e.g., unexpected sexual experiences, leaving a social event with someone), sexual behavior with uncommitted partners (e.g., sex with someone you don't know well, sex with untested partners), risky sex acts (e.g., vaginal sex without a condom, sex under the influence of substances), and intent to engage in risky sexual behavior (e.g., going to a party with the intent of engaging in sex with someone). The SRS was scored using ordinal categories to reduce the variability and skewness associated with open-ended questions. The following guidelines for re-scoring responses were recommended by Turchik and Garske: 1 = bottom 40% of non-zero responses, 2 = the next 30% of non-zero responses, 3 = the next 20% of non-zero responses, and 4 = the final 10% of non-zero responses. Turchik and Garske (2009) provided the following example for Item 1 (number of sexual partners [the original scale refers to partners in the past six months]): 0 for no partners (21.3%), 1 = 1-2 partners (47.1%), 2 = 3-4 partners (17.7%), 3 = 5-9 partners (9.4%), and 4 = 10+ partners (4.5%). The SRS has been used and validated with college-aged samples (Marcus, Fulton, & Turchik, 2011; Turchik & Garske, 2009; Turchik, Walsh, & Marcus, 2015). In a large, diverse sample of college students, the SRS demonstrated good internal consistency both overall (r = .90), and for each subscale: impulsive sexual behaviors (r = .79), sex with uncommitted partners subscales (r = .90), risky sex acts (r = .80), and intent to engage in sexual behavior (r = .89; Turchik et al.,

2015). In addition, the SRS has demonstrated good convergent validity with other measures of sexual behavior and sexual risk taking (Turchik & Garske, 2009; Turchik et al., 2015).

Sexual satisfaction. Sexual satisfaction was assessed using the contentment subscale of the Sexual Satisfaction Scale for Women (SSS-W; Meston & Trapnell, 2005). The SSS-W is a 30-item measure of sexual satisfaction. The contentment subscale contained five items measuring satisfaction with sexual and relational intimacy (e.g., "I feel content with the way my present sex life is"). Items are scored on a 5-point Likert scale bounded by 1 (*strongly disagree)* and 5 (*strongly agree)*. Higher scores indicate greater sexual satisfaction. Supporting the psychometric properties of the contentment subscale, it was correlated with the other subscales of the SSS-W (.52 to .70) and strongly correlated with the overall satisfaction score (r = .90) when assessed in a large sample of sexually active women aged 18-53 with and without clinical diagnoses of sexual dysfunction disorders. In addition, the contentment subscale demonstrated good internal consistency (r = .83) and 4-5-week test-retest reliability (r = .80) in that same study. In addition, the measure demonstrated good convergent validity with other measures of sexual and relationship satisfaction (Meston & Trapnell, 2005). Cronbach's alpha for the contentment scale in the current study was good, α = .88.

Sexual assertiveness. Sexual assertiveness was assessed using the Sexual Assertiveness Questionnaire (SAQ; Loshek & Terrell, 2015). The SAQ is comprised of 18 items derived from existing measures of sexual assertiveness including the Sexual Assertiveness Scale (Morokoff et al., 1997) and the Hulbert Index of Sexual Assertiveness (Pierce & Hulbert, 1999). The SAQ contains three subscales: sexual communication/initiation (e.g., "I let my partner know what I do not like in sex", "I approach my partner for sex when I desire it"), sexual refusal (e.g., "I find myself doing sexual things that I do not like" [reverse-scored]), and sexual risk history (e.g., I

would ask if I want to know if my partner has ever had a STI"). Items are scored on a 7-item Likert scale bounded by 1 (*Strongly disagree*) and 7 (*Strongly agree)*. The SAQ has been used and validated with college-aged women, as well as with a diverse sample of adult women (Loshek, 2014). Among a sample of college-aged women, the SAQ demonstrated good internal consistency, with subscale alphas ranging from .78 to .81 (Loshek & Terrell, 2015). In support of the measure's validity, scores on the SAQ were moderately to strongly correlated with measures of sexual risk perception, depression, and gender roles (Loshek, 2014). Cronbach's alpha for the current sample was good, $\alpha = .84$.

Sexual assault resistance self-efficacy. Sexual assault resistance self-efficacy was assessed using a measure developed by Littleton and Decker (2017). The measure is comprised of 16 items that assess self-efficacy to engage in moderately and strongly assertive resistance strategies in response to a sexual assault attempt. For each item, participants are asked to rate their confidence/certainty that they could implement a variety of strategies to "stop someone you liked from forcing you to have sex when you did not want to." Items are rated on a 5-point scale ranging from 1 (*not at all confident)* to 5 (*completely confident).* Exploratory factor analysis in a sample of college rape victims supported a two-factor structure: self-efficacy to engage in moderately assertive resistance strategies (7 items; e.g., "Tell him nicely that you don't want to have sex") and self-efficacy to engage in strongly assertive strategies (9 items; e.g., "Push him away", "Use strong language"). The measure demonstrated good internal consistency for both subscales (.90 and .93, respectively; Littleton & Decker, 2017). Among college-aged women with a history of rape, the measure has been shown to predict future re-victimization experiences at a 2-month follow-up (Littleton & Decker, 2017). Cronbach's alpha for the current study was good, $\alpha = .94$.

Measures Administered at Baseline, Post-Intervention, and Follow-up.

Sexual communication self-efficacy. To assess sexual communication self-efficacy, the Sexual Communication Self-Efficacy Scale (SCSES; Quinn-Nilas et al., 2016) was administered. The SCSES is a 20-item measure designed to assess five areas of sexual communication self-efficacy: contraceptive communication (e.g., discussing contraception with partner), positive sexual messages (e.g., telling your partner you want to have sex more often), negative sexual messages (e.g., telling your partner that a sexual activity hurt you), sexual history (e.g., asking a partner about other sexual partners), and condom negotiation (e.g., asking to use a condom; Appendix P). Participants were asked to indicate how difficult it would be to engage in a variety of communication activities with their partner on a 4-point scale from 1 (*very difficult*) to 4 (*very easy*). Higher scores indicated greater sexual communication self-efficacy. The SCSES demonstrated high internal consistency in a sample of adolescents/young adults aged 16-22 (α = .82-.89; Quinn-Nilas et al., 2016). Additionally, higher scores on the SCSES were correlated with increased relationship quality, increased condom self-efficacy, increased sexual communication frequency, and decreased sexual pressure and intimate partner abuse (Quinn-Nilas et al., 2016). Cronbach's alpha for the current study was good, α = .94.

Knowledge of peer-related sexual norms. To assess knowledge of peer-related sexual norms, participants completed a brief 15-item sexual norms questionnaire that was created as part of this study. Participants were given 15 statements and asked to indicate whether each statement was true or false. The questionnaire included items assessing knowledge of peer-related sexual behavior and sexual pleasure norms. These items were drawn from literature on common misperceptions related to sexuality, specifically female sexuality, as well as from data collected from college women attending East Carolina University in prior research. Sample items

included: “75% of ECU college freshman women engaged in at least 3 hookups over the past month”; “At least 60% of women typically orgasm through vaginal penetration”. See Appendix K for full measure.

Measures Administered Post-Intervention Only

Satisfaction with the intervention. Participants’ perceptions of the intervention were assessed using a modified version of the Satisfaction with Therapy and Therapist Scale -Revised (STTS-R; Oei & Green, 2008). The original STTS-R is a 12-item self-report measure that assesses an individual’s satisfaction with their therapist and treatment. Participants are asked to indicate how strongly they agree/disagree with a given statement on a 5-item Likert scale ranging from 1 (*strongly disagree)* to 5 (*strongly agree)*. For the purpose of this research, items were changed to reflect participants’ satisfaction with the intervention and facilitators. Example items include “I am satisfied with the quality of the program”, “The facilitator was not negative or critical toward me”, and “I would recommend this program to a friend.” The STTS-R consists of two subscales measuring therapist [facilitator] satisfaction and therapy [program] satisfaction. The measure demonstrated good internal consistency ($\alpha = .93$ and .89, respectively) in a diverse sample of outpatients of a CBT clinic (Oei & Green, 2008). Additionally, in support of the measure’s validity, scores on the STTS-R were correlated with a measure of global improvement and changes in pre- and post-treatment scores among the same outpatient sample (Oei & Green, 2008). The measure has also been successfully used to measure satisfaction with group therapy, online treatment, and clinical interventions in a number of settings and with a wide range of participant populations (e.g., Alfonsson, Olsson, & Hursti, 2015; Hershberg, Smith, Goodson, & Thase, 2018; Littleton, Grills, Kline, Schoemann, & Dodd, 2016; Smith, Norton, & McLean,

2013). Cronbach's alpha for the therapist/facilitator subscale was acceptable, α = .75 Cronbach's alpha for the therapy/program subscale was also acceptable, α = .64.

Participant Enrollment

Participants were drawn from a larger sample (n = 415) of sexually active college women who completed an online survey about female sexuality for course credit. During the initial online survey, participants were asked about their interest in participating in a workshop on sexual assertiveness for additional course credit. Only participants who indicated interest in participating in the workshop (*n* = 171) were contacted for follow-up. During the Fall semester, participants were randomized into an Intervention Group (*n* = 68) or a Follow-up Only Group (*n* = 53). Due to poor enrollment in the intervention, in the Spring semester all participants who expressed interest in the workshop were placed in the Intervention Group (*n* = 51). In total, 119 participants were contacted about enrolling in the intervention. Of those contacted, 45 enrolled in and completed the intervention. After six weeks, participants in both the Intervention Group and Follow-up Only Group were asked to complete a follow-up survey. In total, 64 participants completed the follow-up survey, 21 from the Intervention Group and 43 from the Follow-up Only Group. See Appendix L for more details.

Estimated Sample Size and Power Considerations

Participants were recruited utilizing the online Psychology department research management system. A total of 415 participants completed the screening survey, 45 participants completed the intervention, and a total of 64 participants completed the follow-up assessment, 43 from the follow-up only group and 21 from the intervention group. Power for a one-way ANOVA with repeated measures with a sample size of 20 with alpha set a .05 is .14 for a medium-sized effect and .29 for a large effect. Power for a 2x2 ANOVA with a total sample size of 64 participants is .19 for a medium-sized effect and .48 for a large-sized effect. Power for a

one-sample *t*-test with a total sample size of 45 for a medium-sized effect is .95 and .99 for a large effect.

Analysis Plan

The first sub aim (Sub Aim 1A), was to examine changes in sexual communication self-efficacy at post-intervention and follow-up among participants who completed the Savvy Sexuality intervention. The second sub aim (Sub Aim 1B), was to examine the extent to which completing the Savvy Sexuality intervention was associated with increased knowledge of peer-related sexual norms at post-intervention and follow-up. The first two sub aims were examined using a repeated measures ANOVA comparing intervention participants' scores at baseline to their post-intervention, and follow-up scores. Pair-wise comparisons were conducted using paired *t*-test with Fisher's LSD given that there were only three levels and omnibus F-tests for all factors was $p < .05$. The third sub aim (Sub aim 1C) was to evaluate participant satisfaction with the Savvy Sexuality intervention and its facilitators. To address this aim, a one-sample *t*-test was conducted comparing participants' mean scores on the satisfaction measure to the midpoint value of the scale.

The second aim was to examine differences between individuals who completed the Savvy Sexuality intervention as compared to those randomized to the follow-up only condition on a host of outcomes. Aim two is divided into six sub aims. The first sub aim (Sub Aim 2A) was to examine differences in sexual communication self-efficacy between the intervention and follow-up only participants. The second sub aim (Sub Aim 2B) was to examine differences in knowledge of peer-related sexual norms between intervention and follow-up only participants. The third sub aim (Sub Aim 2C) was to examine differences in sexual risk behavior between participants who completed the intervention and those that did not. The fourth sub aim (Sub Aim

2D) was to examine differences in sexual assertiveness between intervention and follow-up only participants. The fifth sub aim (Sub Aim 2E) was to examine differences in sexual assault resistance self-efficacy between intervention participants and participants in the follow-up only group. Finally, the sixth sub aim (Sub Aim 2F) was to examine differences in sexual satisfaction between intervention and follow-up only participants. To address these sub aims, a series of mixed ANOVAs were conducted using Time (Initial survey vs. Follow-up) as the within-subjects factor and Group (intervention vs. follow-up only) as the between-subjects factor.

The third aim of this dissertation was to refine the content of the Savvy Sexuality intervention using feedback collected from phone interviews with a random sample of participants. To address this aim, participants' responses were recorded and transcribed. Common themes examining strengths and areas of improvement for the intervention were identified and summarized from transcriptions.

Results

Participant Demographics

Participant enrollment is detailed in Appendix L. Participants were drawn from a larger sample (n = 415) of college women who completed an online survey advertised as being about female sexuality. Participants were recruited from the Psychology department research participant pool over the course of two academic semesters (Fall 2018 and Spring 2019). Only participants who indicated interest in completing the intervention were contacted about enrolling in the intervention (n = 171). Those that indicated no interest were designated the baseline only group (n = 244). There were no significant differences between the baseline only group and those that expressed interest in the intervention on any demographic variables (summarized in Table 1). There were also no differences in demographic variables between participants who enrolled in the study during the Fall semester compared to the Spring semester with the exception of relationship status. Significantly more participants indicated currently being in a dating or romantic relationship during the Spring semester than in the Fall Semester, χ^2 (6, N = 171) = 18.46, p = .01, 54.9% versus 45.4% (see Table 3). In addition to demographic variables, information on participants' alcohol use, depressive symptoms, childhood sexual abuse history and adolescent/adulthood rape history were collected and compared across groups because these factors are known to affect sexual health and behavior among college women. There were no significant differences between baseline only participants and those who expressed interest in the intervention in alcohol use, depressive symptoms, rape history, or CSA history (see Table 2). Similarly, there were no significant differences between participants who completed the study in the Fall compared to the Spring semester on these four variables (see Table 4).

Table 1

Comparison of Baseline Only Participants to Participants Interested in the Intervention on Demographics

	Baseline (n = 244)		Intervention Interest (n = 171)			
	%	(n)	%	(n)	X^2	p
Race/ethnicity					3.75	.29
White/Caucasian	77.9	(190)	70.8	(121)		
Black/African American	10.2	(25)	16.4	(28)		
Multi-ethnic	6.1	(15)	7.0	(12)		
Other	5.7	(14)	5.8	(10)		
Sexuality					4.54	.10
Heterosexual/Mostly Heterosexual	94.7	(231)	90.1	(154)		
Bisexual	4.9	(12)	7.6	(13)		
Gay/Lesbian/Mostly Gay/Lesbian	0.4	(1)	2.3	(4)		
Academic Standing					5.69	.13
Freshman	86.5	(211)	84.8	(145)		
Sophomore	11.1	(27)	8.2	(14)		
Junior	1.2	(3)	3.5	(6)		
Senior or other	1.2	(3)	3.5	(6)		
Relationship Status					2.22	.53
Single	36.5	(89)	38.6	(66)		
Casually dating	8.6	(21)	12.3	(21)		
In a relationship	54.5	(133)	48.5	(83)		
Other	0.4	(1)	0.6	(1)		
CSA					0.79	.37
No history	91.0	(222)	88.3	(151)		
History of CSA	9.0	(22)	11.7	(20)		
Adolescent/Adult Rape					2.29	.13
No history	77.9	(190)	71.3	(122)		
Completed adolescent/adult rape	22.1	(54)	28.7	(49)		
Non-drinkers	14.8	(36)	17.5	(30)	0.59	.44

Note. CSA = childhood sexual abuse.

Table 2

Comparison of Baseline Only Participants to Participants Interested in the Intervention on Potential Covariates

	Baseline (n = 244) M (SD)	Intervention Interest (n = 171) M (SD)	t	p
AUDIT	3.42 (2.24)	3.43 (2.04)	0.01	.99
CES-D	15.05 (11.22)	15.85 (10.81)	0.74	.46

Note. AUDIT = Five Item Alcohol Use Disorder Identification Test; CES-D = Center for Epidemiological Studies Depression Scale.

Table 3

Demographics of Participants Enrolled each Semester

	Fall (n = 119) %	(n)	Spring (n = 51) %	(n)	X^2	p
Race/ethnicity					1.00	.82
White/Caucasian	72.3	(86)	66.7	(34)		
Black/African American	16.0	(19)	17.6	(9)		
Multi-ethnic	5.9	(7)	9.8	(5)		
Other	5.9	(7)	5.9	(3)		
Sexuality					3.36	.19
Heterosexual/Mostly Heterosexual	90.8	(108)	88.2	(45)		
Bisexual	5.9	(7)	11.8	(6)		
Gay/Lesbian/ Mostly Gay/Lesbian	3.4	(4)	0.0	(0)		
Academic Standing					1.69	.64
Freshman	85.7	(102)	82.4	(42)		
Sophomore	6.7	(8)	11.8	(6)		
Junior	3.4	(4)	3.9	(2)		
Senior and above	4.2	(5)	2.0	(1)		
Relationship Status					17.30	.001
Single	47.1	(56)	19.6	(10)		
Casually dating	7.6	(9)	23.5	(12)		
In a relationship	45.4	(54)	54.9	(28)		
Other	0.0	(0)	2.0	(1)		
CSA		‘			1.08	.30
No history	89.9	(107)	84.3	(43)		
History of CSA	10.1	(12)	15.7	(8)		
Adolescent/Adult Rape					2.93	.08
No history	75.6	(90)	62.7	(32)		
Completed adolescent/adult rape	24.4	(29)	37.3	(19)		
Non-drinkers	20.2	(24)	11.8	(6)	1.96	.38

Note. CSA = childhood sexual abuse.

Table 4

Comparison of Participants Enrolled in each Semester on Potential Covariates

	Fall (n = 119)	Spring (n = 51)		
	M (SD)	*M* (SD)	*t*	*p*
AUDIT	3.26 (2.04)	3.76 (2.04)	1.33	.19
CES-D	15.04 (9.94)	17.33 (12.27)	1.28	.20

Note. AUDIT = Five-Item Alcohol Use Disorder Identification Test; CES-D = Center for Epidemiological Studies Depression Scale.

During the Fall semester, participants who indicated interest in participating in the intervention were randomly assigned to either the intervention (n = 119) or to the follow-up assessment only condition (n = 53). During the Spring semester, all participants who indicated interest in the intervention were invited to complete it. A comparison of demographic characteristics between the intervention and follow-up only groups revealed no significant differences in demographics (see Table 5). There were also no significant differences between the intervention and follow-up only group on hazardous alcohol use, depressive symptoms, or CSA history (Table 6). However, participants invited to complete the intervention reported a higher incidence of completed rape in adolescence/adulthood than participants in the follow-up only group, χ^2 (1, N = 171) = 4.71, p = .03. Therefore, adolescence/adult rape was included as a covariate in all comparative analyses discussed below.

Of those invited to complete the intervention, 38.7% enrolled and completed it (n = 45). Participants who completed the intervention were more likely to be Black/African American, χ^2 (7, N = 119) = 23.97, p = .001, and reported less hazardous alcohol use, t (117) = 2.69, p = .01, than those individuals who were invited but did not enroll in the intervention.

Table 5

Comparison of Follow-up Only Group and Invited Intervention Group on Demographics

	Follow-up Only (n = 52)		Intervention Invited (n = 119)			
	%	(n)	%	(n)	X^2	p
Race/ethnicity					2.11	.55
White/Caucasian	73.1	(38)	69.7	(83)		
Black/African American	17.3	(9)	16.9	(19)		
Multi-ethnic	7.7	(4)	6.7	(8)		
Other	1.9	(1)	7.6	(9)		
Sexual Orientation					1.27	.54
Heterosexual/Mostly Heterosexual	86.5	(45)	91.6	(109)		
Bisexual	9.6	(5)	6.7	(13)		
Gay/Lesbian/Mostly Gay/Lesbian	3.8	(2)	1.7	(2)		
Academic Standing					1.17	.76
Freshman	82.7	(43)	85.7	(102)		
Sophomore	7.7	(4)	8.4	(10)		
Junior	3.8	(2)	3.4	(4)		
Senior or other	5.8	(3)	2.5	(3)		
Relationship Status					7.05	.07
Single	51.9	(27)	32.8	(39)		
Casually dating	5.8	(3)	15.1	(18)		
In a relationship	42.3	(22)	51.3	(61)		
Other	0.0	(0)	0.8	(1)		
CSA		‘			0.23	.64
No history	86.5	(45)	89.1	(106)		
History of CSA	13.5	(7)	10.9	(13)		
Adolescent/Adult Rape					4.71	.03
No history	82.7	(43)	66.4	(79)		
Completed adolescent/adult rape	17.3	(9)	33.6	(40)		
Non-drinkers	23.1	(12)	15.1	(18)	1.58	.21

Note. CSA = childhood sexual abuse.

Table 6

Comparison of Follow-up Only and Invited Intervention Group on Potential Covariates

	Follow-up Only (n = 244) M (SD)	Intervention Invited (n = 171) M (SD)	t	p
AUDIT	2.95 (1.63)	3.61 (2.16)	1.75	.08
CES-D	14.12 (9.75)	16.62 (11.2)	1.40	.16

Note. AUDIT = Five-Item Alcohol Use Disorder Identification Test; CES-D = Center for Epidemiological Studies Depression Scale.

Participants who completed the intervention were contacted after 6-weeks to complete the follow-up assessment. Of those who completed the intervention, 21 participants (46.6%) completed the follow-up assessment. There were no differences between participants who completed the follow-up assessment compared to those who did not on all demographic variables. Additionally, there were no differences between completers and non-completers on potential covariates including hazardous alcohol use, depressive symptoms, completed adolescent/adult rape, or CSA history (see Table 7 and Table 8). The final sample at follow-up included 64 participants, 43 from the follow-up only group and 21 participants from the intervention group.

Table 7

Comparison of Demographics among Intervention Participants who Completed the Follow-up Assessment to Participants who Did Not

	Did not complete Follow-up (*n* = 24)		Completed Follow-up (*n* = 21)			
	%	(*n*)	%	(*n*)	X^2	*p*
Race/ethnicity					4.69	.45
White/Caucasian	45.8	(11)	52.4	(11)		
Black/African American	41.7	(10)	23.8	(5)		
Multi-ethnic	8.3	(2)	14.3	(3)		
Other	4.2	(1)	9.6	(2)		
Sexual Orientation					1.11	.27
Heterosexual/Mostly Heterosexual	95.9	(23)	90.9	(19)		
Bisexual	4.2	(1)	9.5	(2)		
Gay/Lesbian/Mostly Gay/Lesbian	0.0	(0)	0.0	(0)		
Academic Standing					1.03	.60
Freshman	83.3	(20)	90.5	(19)		
Sophomore	12.5	(3)	9.5	(2)		
Junior	0.0	(0)	0.0	(0)		
Senior or other	4.2	(1)	0.0	(0)		
Relationship Status					6.65	.08
Single	37.5	(9)	14.3	(3)		
Casually dating	8.3	(2)	33.3	(9)		
In a relationship	50.4	(12)	52.4	(11)		
Other	4.2	(1)	0.0	(0)		
CSA					2.51	.11
No history	95.8	(23)	81.0	(17)		
History of CSA	4.2	(1)	19.0	(4)		
Adolescent/Adult Rape					2.63	.12
No history	83.3	(20)	63.6	(13)		
Completed adolescent/adult rape	16.7	(4)	38.1	(8)		
Non-drinkers	25.01	(6)	19.0	(4)	0.23	.63

Note. CSA = childhood sexual abuse.

Table 8

Comparison of Intervention Participants who Completed the Follow-up Assessment to Participants who Did Not on Potential Covariates

	Did not complete follow-up (n = 24) M (SD)	Completed follow-up (n = 22) M (SD)	t	p
AUDIT	2.17 (1.99)	3.11 (1.74)	0.38	.71
CES-D	16.25 (11.31)	16.28 (12.08)	0.01	.99

Note. AUDIT = Five-Item Alcohol Use Disorder Identification Test; CES-D = Center for Epidemiological Studies Depression Scale.

Aim 1: Efficacy of the Savvy Sexuality Intervention

The first aim of this dissertation was to examine changes in sexual health outcomes among participants who completed the Savvy Sexuality intervention. The first sub aim (Sub Aim 1A) was to examine changes in sexual communication self-efficacy among participants who completed the sexual assertiveness intervention. The second sub aim (Sub Aim 2B) was to examine the extent to which completing the Savvy Sexuality intervention was associated with increased knowledge of peer-related sexual norms. A repeated measures ANOVA was conducted to examine changes in sexual communication self-efficacy and knowledge of peer-related sexual norms. With regards to sexual communication self-efficacy, results indicated that participants had high sexual communication self-efficacy scores at baseline which increased over time. Results of the repeated ANOVA with a Greenhouse-Geisser correction (used because of a violation of the sphericity assumption) indicated that there was a significant effect of time on sexual communication self-efficacy, F (1.41, 28.25) = 7.30, p = .01. Post-hoc comparisons were conducted using paired t-tests with the Fisher's procedure. The results of the paired t-tests supported that participants reported significantly higher self-efficacy at follow-up (Time 3) than

pre-intervention (Time 1) and at follow-up as compared to post-intervention (Time 2; see Table 9. Participant self-efficacy scores did not differ significantly between Time 1 and Time 2.

Table 9

Post-Hoc Comparison of Sexual Communication Self-Efficacy Over Time

		n	Mean	SD	*t*	*df*	*p*	*d*	95% CI
Pair 1	Time 1	45	66.04	7.85	0.08	44	.94	0.02	-0.40, -0.43
	Time 2	45	66.16	6.98					
Pair 2	Time 2	21	65.71	8.16	5.43	20	< .001	0.84	0.21, 1.47
	Time 3	21	71.81	8.47					
Pair 3	Time 1	21	68.52	7.41	2.16	20	.04	0.50	-0.12, 1.11
	Time 3	21	71.81	8.47					

With regards to knowledge of peer-related sexual norms, participants' scores on the knowledge questionnaire fell at the midpoint of the scale at baseline but improved at Time 2 and Time 3. Results supported a significant effect of time on knowledge of peer-related sexual norms, F (2, 40) = 62.88, $p < .001$. Paired samples t -tests with the Fisher's procedure supported that participant knowledge significantly increased from Time 1 to Time 2 but decreased from Time 2 to Time 3. Scores on the knowledge questionnaire were still significantly higher at Time 3 compared to Time 1 (see Table 10).

Table 10

Post-Hoc Comparisons of Knowledge of Peer-Related Sexual Norms Over Time

		n	Mean	SD	*t*	*df*	*p*	*d*	95% CI
Pair 1	Time 1	45	7.22	1.77	16.19	44	< .001	2.23	1.69, 2.74
	Time 2	45	12.40	1.41					
Pair 2	Time 2	21	12.43	1.33	3.94	20	< .001	-0.92	-1.56, -0.29
	Time 3	21	10.81	2.27					
Pair 3	Time 1	21	7.14	2.03	6.52	20	< .001	1.37	0.70, 2.04
	Time 3	21	10.81	2.27					

Finally, participants' satisfaction with the intervention and facilitators was evaluated using one-sample *t*-tests. Participants' mean item satisfaction scores for both subscales,

satisfaction with the program and satisfaction with the facilitators, were compared to the mid-point of the scale to determine whether responses were higher than what would be expected based on chance responding. Overall, participants reported a high level of satisfaction with the intervention and program facilitators. There was a significant difference between participants' mean item satisfaction score for the program satisfaction subscale (M = 4.89, SD = 0.18) and the scale mid-point (mid-point = 3.00), t (46) = 70.53, $p < .001$, d = 10.50. There was also a significant difference between participants' mean item satisfaction score for the facilitator satisfaction subscale (M = 4.96, SD = 0.14) and the scale mid-point (mid-point = 3.00), t (46) = 98.87, $p < .001$, d = 14.00.

Aim 2: Evaluation of the Savvy Sexuality Intervention Compared to the Follow-up Only Condition

The second aim of this dissertation was to examine differences between individuals who completed the Savvy Sexuality intervention, as compared to those randomized to the follow-up only condition, on a host of outcomes including sexual communication self-efficacy, knowledge of peer-related sexual norms, engagement in risky sexual behaviors, use of sexually assertive behavior, sexual assault resistance self-efficacy, and sexual satisfaction. Aim two was divided into six sub aims and will be presented in order. Rape history was included as a covariate in all six sub aim analyses. Means and standard deviations for each variable are presented in Table 11 and discussed below.

In general, participants in both groups reported high scores on all sexual health measures and low engagement in risky sexual behaviors. Scores on the sexual communication self-efficacy scale fell above the midpoint of the scale at baseline in both groups indicating all participants reported fairly high sexual communication self-efficacy at the start of the study. Notably,

participants in the intervention group reported scores that were half a standard deviation higher than those in the follow-up only group. This trend was reflected in other sexual health variables including sexual assertiveness and sexual satisfaction. Across groups, participants reported scores on the sexual assertiveness measure that fell well-above the midpoint of the scale. At baseline, participants in the intervention group reported scores that were half a standard deviation higher than those in the follow-up only group. With regards to sexual satisfaction, both groups reported high levels of sexual satisfaction which did not change over time, indicating a possible ceiling effect. With regards to sexual assault resistance self-efficacy, both groups of participants reported moderately high sexual assault resistance self-efficacy with similar scores across groups. Finally, participants in both groups endorsed engaging in relatively few sexual risk behaviors at baseline and even fewer at follow-up. There was a drop in reports of engagement in risky sexual acts by both groups at follow-up. Participants' response on the knowledge questionnaire fell close to the midpoint of the scale at baseline and, for the follow-up only group, remained there at Time 3.

Table 11

Comparison of Participants' Means and Standard Deviations of Sexual Health Outcome Variables Across Time

		Intervention Participants $n = 21$		Follow-up Only Participants $n = 42$	
		M	(*SD*)	*M*	(*SD*)
Sexual Communication	Time 1	68.52	(7.41)	64.83	(8.90)
	Time 3	71.81	(8.47)	69.12	(9.64)
Knowledge	Time 1	7.10	(2.39)	6.83	(1.66)
	Time 3	10.81	(2.27)	7.31	(2.27)
Impulsive Sexual Behaviors	Time 1	3.95	(2.60)	4.38	(4.34)
	Time 3	2.48	(2.67)	2.55	(2.38)
Uncommitted Sex	Time 1	6.86	(3.86)	6.77	(4.17)
	Time 3	5.19	(3.94)	4.67	(3.74)
Risky Sex Acts	Time 1	8.19	(7.33)	5.45	(5.40)
	Time 3	3.71	(3.10)	3.53	(4.03)
Intent for Risky Sex	Time 1	0.52	(1.03)	0.67	(1.52)
	Time 3	0.23	(0.77)	0.79	(1.77)
Sexual Assertiveness	Time 1	106.76	(9.21)	98.24	(14.00)
	Time 3	104.05	(12.60)	99.12	(13.90)
Sexual Assault Resistance	Time 1	64.89	(11.47)	65.45	(12.33)
	Time 3	67.74	(11.73)	66.79	(11.93)
Sexual Satisfaction	Time 1	24.38	(4.41)	22.48	(5.35)
	Time 3	24.95	(4.50)	22.29	(5.47)

Note. Communication = Sexual Communication Self Efficacy Scale; Knowledge = knowledge of peer-related sexual norms questionnaire; Impulsive Sexual Behavior = impulsive sexual behaviors subscale of the Sexual Risk Survey (SRS); Uncommitted Sex = sexual behaviors with uncommitted partners subscale of the SRS; Risky Sex Acts = risky sexual acts subscale of the SRS; Intent for Risky Sex = intent to engage in risky sexual behaviors subscale of the SRS; Sexual Assertiveness = Sexual Assertiveness Questionnaire; Sexual Assault Resistance = sexual assault resistance self-efficacy questionnaire; Sexual Satisfaction = Sexual Satisfaction Scale for Women – contentment subscale.

The first sub aim (Sub Aim 2A) was to examine differences in sexual communication self-efficacy between individuals who participated in the Savvy Sexuality intervention compared to the follow-up only group. Results supported that there was a significant main effect of Time; however, there was no main effect of group and no significant interaction between Time and

Group on sexual communication self-efficacy (see Table 12). Thus, regardless of group, participants reported greater sexual communication self-efficacy at follow-up than baseline. An examination of effect sizes indicates that there was a small effect for Group and a medium effect size for Time.

Table 12

Mixed ANOVA Examining the Interaction Between Group and Time on Sexual Communication Self-Efficacy

	Sum of Squares	df	Mean Square	*F*	*p*	η_p^2
Group	268.74	1	268.74	2.14	.15	.034
Time	207.99	1	207.99	6.30	.02	.097
Group x Time	8.39	1	8.39	0.25	.62	.004
Error	1980.47	60	33.01			

Note. Adolescence/adult rape was included as a covariate.

The second sub aim (Sub Aim 2B) was to examine differences in knowledge of peer-related sexual norms between individuals who participated in the Savvy Sexuality intervention compared to the follow-up only group. Results supported there was a significant main effect of Time and Group on knowledge of peer-related sexual norms (see Table 13). Additionally, there was a significant interaction between Time and Group on knowledge of peer-related sexual norms. Pairwise comparisons revealed that the knowledge scores of participants in the intervention group improved significantly more over time than those in the follow-up only group (see Figure 1). Effect size estimates indicate there was a large effect for the Group x Time interaction in addition to the large main effects of Group and Time.

Table 13

Mixed ANOVA Examining the Interaction Between Group and Time on Knowledge of Peer-Related Sexual Norms

	Sum of Squares	df	Mean Square	*F*	*p*	η_p^2
Group	95.12	1	95.12	18.62	<.001	.237
Time	67.95	1	67.95	17.96	<.001	.230
Group x Time	71.16	1	71.16	18.81	<.001	.239
Error	227.03	60	3.78			

Note. Adolescence/adult rape was included as a covariate.

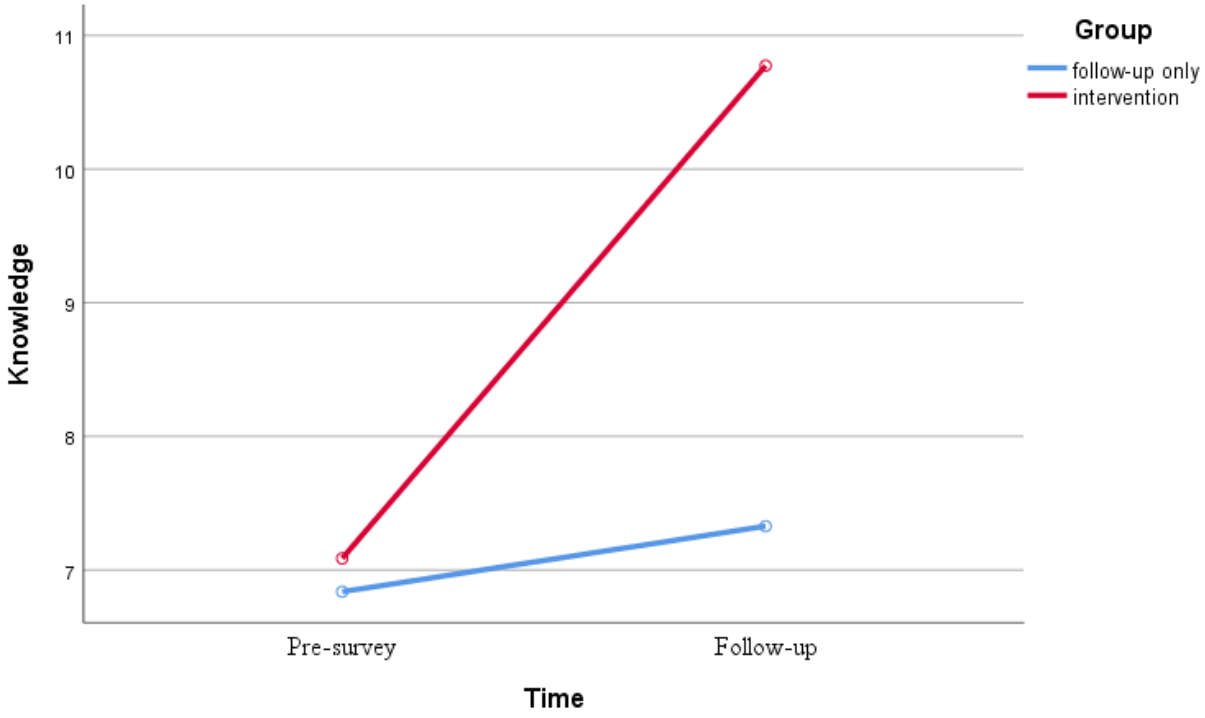

Figure 1. The interaction between Time and Group on knowledge of peer-related sexual norms

The third sub aim (Sub Aim 2C) was to examine differences in sexual risk behavior between participants who completed the Savvy Sexuality intervention compared to those

randomized to the follow-up only condition. With regards to impulsive sexual behaviors, there was no significant main effect of Time or Group, or significant interaction between Time and Group. With regards to sex with uncommitted partners, there was no significant main effect of Time or Group or significant interaction between Time and Group. With regards to engaging in risky sexual acts, there was a significant main effect of Time on engagement in risky sexual acts indicating that regardless of group, participants reported engaging in fewer risky sexual acts at follow-up than at the prescreen survey. However, there was no significant main effect of Group or significant interaction between Time and Group. Finally, with regards to the intent to engage in risky sexual acts, there was no significant main effect of Time or Group, or significant interaction between Time and Group. See Table 14 for description of results of these ANOVAs. Effect size estimates indicate that there was a large effect of Time.

Table 14

Mixed ANOVA Examining the Interaction Between Group and Time on Sexual Risk Behaviors

	Sum of Squares	df	Mean Square	*F*	*p*	η_p^2
Impulsive Sexual Behaviors						
Group	2.73	1	2.73	0.23	.63	.004
Time	22.93	1	22.93	2.60	.11	.041
Group x Time	1.55	1	1.55	0.16	.67	.003
Error	530.59	60	8.84			
Uncommitted Sex						
Group	3.52	1	3.52	0.24	.63	.004
Time	25.21	1	25.21	1.56	.22	.027
Group x Time	2.34	1	2.34	0.15	.71	.003
Error	920.75	57	16.15			
Risky Sex Acts						
Group	23.85	1	23.85	0.86	.36	.015
Time	268.63	1	268.63	10.95	.002	.159
Group x Time	16.94	1	16.94	0.69	.41	.012
Error	1423.16	58	24.54			
Intent for Risky Sex						
Group	3.99	1	3.99	1.90	.17	.031
Time	5.68	1	5.68	3.02	.09	.048
Group x Time	1.75	1	1.75	0.93	.34	.015
Error	112.74	60	1.88			

Note. Adolescence/adult rape was included as a covariate; Uncommitted Sex = sexual behaviors with uncommitted partners subscale; Intent for Risky Sex = intent to engage in risky sexual behavior subscale.

The fourth sub aim (Sub Aim 2D) examined differences in sexual assertiveness between individuals who completed the Savvy Sexuality intervention compared to individuals who did not. There was no significant main effect on Time, but a significant main effect of Group indicating that individuals in the intervention group reported higher sexual assertiveness than the follow-up only group with a medium effect size. There was no interaction between Time and Group on sexual assertiveness. The fifth sub aim (Sub Aim 2E) examined differences in sexual assault resistance self-efficacy between individuals who completed the Savvy Sexuality intervention compared to individuals who did not. There was no significant main effect of Time

or Group or significant interaction between Time and Group. Finally, the sixth sub aim (Sub Aim 2F) was to examine differences in sexual satisfaction between individuals who completed the Savvy Sexuality intervention compared to individuals who did not. There was no significant main effect of Time and no significant main effect of Group on sexual satisfaction; however, effect size estimates suggest there was a medium effect of group. There was no significant interaction between Time and Group on sexual satisfaction. See Table 15 for a full description of results of the ANOVAs related to these sub-aims.

Table 15

Mixed ANOVA Examining the Interaction Between Group and Time on Sexual Health Outcomes

	Sum of Squares	df	Mean Square	*F*	*p*	η_p^2
Sexual Assertiveness						
Group	1291.35	1	1291.35	4.75	.03	.074
Time	62.39	1	62.39	0.84	.36	.014
Group x Time	99.57	1	99.57	1.33	.25	.022
Error	4475.14	60	74.59			
Sexual Assault Resistance						
Group	1.94	1	1.94	0.01	.93	<.000
Time	37.22	1	37.22	0.69	.41	.012
Group x Time	12.70	1	12.70	0.23	.63	.004
Error	3144.14	58	54.21			
Sexual Satisfaction						
Group	130.77	1	130.77	3.86	.05	.060
Time	7.40	1	7.40	0.43	.52	.007
Group x Time	2.45	1	2.45	0.14	.71	.002
Error	1043.94	60	17.40			

Note. Adolescence/adult rape was included as a covariate; Sexual Assertiveness = Sexual Assertiveness Questionnaire; Sexual Assault Resistance = sexual assault resistance self-efficacy scale; Sexual Satisfaction = the Sexual Satisfaction Scale for Women contentment subscale.

Aim 3: Refine the Savvy Sexuality Intervention

The third aim of this study was to refine the content of the Savvy Sexuality intervention based on qualitative feedback collected from participants. Twenty participants were randomly selected from the intervention group and contacted via email to complete a follow-up interview

by phone. A total of four participants completed follow-up interviews. Interviews lasted an average of 10-15 minutes. Overall, participants reported that they enjoyed taking part in the intervention. Several participants indicated that they enjoyed the discussion format of the intervention and the ability to hear about their peers' experiences with sexual development and sexuality. For example, both Participant #1 and Participant #4 described how easy it was to talk with the other participants and how they found it helpful to hear the perspectives of their peers.

Participant #1: "*I liked how really easy it was. The girls were really open and it was easy to talk about things, it just felt like people were really understanding and easy to talk to. I like how we talked about how society views sex because it's not something that gets talked about a lot, but yeah… it made me think. Just like talking about it made me change my opinions on some things because I hadn't really thought about it before but just talking about how society says things made me realize and made me think about things different."*

Participant #4: *"I liked that it was like a bunch of different girls, I thought that was really interesting because I had never seen any of them before and I liked that I was more informal and we just got to talk about our experiences…I liked that because there were things that like other people or other pairs would like talk about and like my pair hadn't talked about or I hadn't even thought of it so I liked that too."*

All four of the participants stated that the intervention helped them learn different strategies to communicate with their partners. For example, Participant #1 and Participant #2 described how they learned to speak differently to their partners and to be more assertive if they were feeling pressured.

Participant #1: "*I think it just empowered me to think differently and not just about other people but about myself… I haven't been in many situations where someone pressured me to do*

something, but I know there's been times when I knew I didn't really want to do something but I felt bad about it and now I don't have to feel bad about it you know."

Participant #2: *"[I learned] how to address fights with significant others and just like I felt like when people get into fights they tend to use words and sentences that blame the other person and we were taught to go about it differently and bring up what's going on and like how we are feeling without accusing the other person."*

Two of the participants also reported that they learned information about sexual health and sexual development. For example, Participant #4 stated that she was surprised by some of the statistics on sexual health presented in the intervention.

Participant #4: *"I think there was a lot of facts and things I learned and when we did the activity that was like 'what has influenced people's thoughts on… sexual activity', I think it was really eye opening because I hadn't really thought about some of the things they were saying… when we did the activity where like…do we think this fact is true or not, a lot of them I thought weren't going to be true but they were true and the one's I thought were true, weren't true."*

The main area for improvement discussed by the participants was the length of the intervention. All four participants identified the length of the intervention as their primary concern. Several participants suggested breaking the intervention up into two separate sessions.

Participant #2: *" If they split it up into shorter bits for two times or something more people would probably do it because that's something that I was thinking like that does seem like a long time and I feel like other girls didn't sign up because they didn't want to have to do something for three hours."*

Participant #4: *"Maybe if it could have been broken up into two different sessions and like the first one could have been the first two modules…and the next one be the third section. Because if I remember correct, it was two or three hours long and I think that was a lot."*

Findings from the participant interviews suggest that participants generally enjoyed taking part in the intervention. Participants identified two salient themes of the intervention – communication skills and knowledge of peer-related sexual norms. These themes were consistent with the aims and goals of the intervention. Participants responses indicated that they felt empowered to discuss aspects of female sexuality with their peers and that these discussions encouraged them to feel more comfortable addressing their sexual and romantic needs with their partners. Two participants commented on their surprise upon learning many of the sexual health facts presented during the intervention. Areas for improvement identified by participants include shortening the intervention or breaking up the intervention into two separate sessions.

Discussion

Research suggests that women face unique challenges navigating their sexual development in college. Many face stigma related to engaging in sexual exploration, difficulties with sexual functioning, low satisfaction, heightened risk of sexual assault, and high STI infection rates (Allison & Risman, 2013; Armstrong et al., 2012; Bradshaw et al., 2010; Turchik & Hassija, 2014). Colleges and universities have attempted to address the sexual health needs of their students by providing sexual health programming and access to contraceptives and STI testing. However, extant sexual health programming is limited to disease prevention programs and sexual assault risk reduction programs (Allen, 2007; Anderson & Whiston, 2005; Kousmans et al., 2005; Gidycz et al., 2015). Although these programs address necessary and important aspects of sexual health, they include much of the same information students cover in middle/junior and high school and they largely ignore positive aspects of sexual development such as sexual exploration, sexual agency, sexual pleasure, and the formation of consensual, meaningful intimate relationships (Fine, 1988; Hirst 2013).

To address this programming gap, some colleges and universities have started offering sex positive programing for students which focuses on normalizing sexual experiences and depathologizing sexual exploration (Fahs, 2014; Hirst, 2013; Sandoval, 2014). These programs strengthen existing sexual health education by addressing novel topics such as consent, pleasure, and sexual communication. They are designed to empower students, particularly college women, to embrace their sexuality and develop confidence in their sexuality. Thus, while the development of sex positive programs indicates an improvement in sexual health education, the efficacy of these programs is unknown. Similarly, the availability of these programs differs

drastically between universities as does their content and structure making them difficult to compare.

Therefore, the purpose of this dissertation was to conduct a pilot evaluation of a brief sexual assertiveness intervention for college women from within a sex positive framework. The goals of the intervention were to increase college women's sexual communication self-efficacy and use of assertive behaviors in sexual and romantic situations, increase sexual satisfaction, reduce engagement in risky sexual behavior, and correct misconceptions about female sexuality and the sexual behavior of college women. Information on the feasibility, structure, and participants' experiences with the intervention was also collected to inform refinement of the intervention.

The Savvy Sexuality Pilot Intervention

The first aim of this dissertation was to examine whether participation in the Savvy Sexuality pilot intervention would lead to changes in participants' perceptions of their sexual communication self-efficacy and knowledge of peer-related sexual norms, and whether these changes would be sustained over time. Results of initial analyses revealed significant improvements in both sexual communication self-efficacy and knowledge of peer-related sexual norms. Results indicated that participants' perceptions of their sexual communication skills did not change between Time 1 and Time 2, indicating that participating in the intervention did not result in immediate changes in sexual communication self-efficacy. However, there was a significant improvement in participants' sexual communication self-efficacy between Time 2 and Time 3, demonstrating that participants' perceptions of their ability to communicate about their sexuality improved 6-weeks post-intervention. It should be noted that participants who enrolled in the intervention endorsed high sexual communication self-efficacy at baseline which was

maintained and even increased across timepoints. Thus, it is possible that the increase in participants' self-efficacy scores seen at the follow-up assessment may reflect a general trend of sexual development seen among all college students. Indeed, college women may develop greater self-efficacy naturally during their time in college simply because they experience more opportunities to practice and enact these sexual communication skills. However, it is also possible that this improvement in scores seen at follow-up may be due to participants' learning and practicing communication skills in their sexual relationships. Thus, this change in self-efficacy may not have immediately occurred after participating in the intervention because participants, who already had a high degree of self-efficacy related to their sexual communication, required time to enact these skills and develop greater self-efficacy around their behavior.

Results also revealed large improvement in participants' knowledge of peer-related sexual norms following completion of the intervention. At baseline, participants correctly answered less than half of the knowledge-related questions, whereas post-completion of the intervention participants correctly answered more than two thirds of questions. At the 6-week follow-up, participants maintained improvements in their knowledge of peer-related sexual norms, correctly answering about two-thirds of the questions, but had significantly lower scores than those immediately following the intervention. This finding is consistent with a normative learning curve and suggests that while participants knowledge of peer-related sexual norms was highest immediately following their participation in the intervention, they were able to retain most of this information over the follow-up period.

These findings provide encouraging results for the efficacy of the Savvy Sexuality intervention. Participants who took part in the intervention reported high self-efficacy of their

sexual communication skills at baseline which were maintained and even improved at the 6-week follow-up. This suggests that, although participants already endorsed relatively high confidence in their sexual communication skills, they continued to improve these skills over the course of the semester, possibly due to their participation. Similarly, participants demonstrated generally poor knowledge of peer-related sexual norms prior to their enrollment in the intervention. This is unsurprising given that only 16.6% of students reported that the sex education they received in school covered topics related to sexuality and sexual pleasure. When compared to their initial scores at baseline, participants' knowledge significantly improved immediately following the intervention and at the 6-week follow-up. This suggests that a brief one-time sex positive intervention may be an effective introductory point for sexual health programming that addresses positive aspects of sexual development.

A Comparison of the Savvy Sexuality Intervention to Normative Young Adult Development

Although the initial results of the Savvy Sexuality intervention were promising, it is important to examine how intervention participants compared to their peers with regards to sexual behavior and outcomes. The second aim of this dissertation was to examine differences in sexual health outcomes between participants who took part in the intervention and those assigned to a follow-up only condition. It is important to note that these statistical analyses were significantly underpowered due to poor enrollment and participant attrition (discussed below) and therefore had limited power to detect all but very large differences between groups.

With regards to sexual communication self-efficacy, results of this study found that participants' scores in both groups (intervention vs. follow-up only) improved over time. Thus, all participants reported their sexual communication self-efficacy was higher at the end of the

semester than at the beginning. However, there were no significant differences found in sexual communication self-efficacy between participants who completed the intervention compared to those in the follow-up only condition. This finding suggests that college women's perceptions of their sexual communication skills improved over time. It is possible that this finding relates to the high sexual communication self-efficacy reported by all participants at the onset of this study. Indeed, all participants reported moderately high confidence in their sexual communication skills at baseline and showed small improvements in their self-efficacy over time. It is possible that sexually active first year college women enter college already confident in their sexual communication skills because many have already experienced monogamous relationships where they have been able to practice their sexual communication skills in a supportive and safe environment. This confidence may improve through college as women continue to gain more experience through sexual encounters and continue to form romantic relationships.

Given that there was no significant difference in sexual communication self-efficacy scores between intervention participants and those in the follow-up only group, it is possible that this intervention did not effectively address assertive communication skills in a way that was understandable for college women. It may be that the intervention was not powerful enough, possibly indicating that a longer protocol could have led to greater effects, or that the delivery of these materials was not done in a meaningful way. It is also possible that there was a self-selection bias among participants who enrolled in the study such that participants who had greater self-efficacy related to their sexual communication skills were more likely to enroll in the intervention. Thus, the intervention may have covered topics and skills that were already known

to them and may not have included participants who could have benefited most from the intervention.

Differences in knowledge of peer-related sexual norms was also examined as part of this dissertation. Research suggests that due to poor coverage of female sexual health in most sexual heath curricula, many college women have poor general knowledge of normative female sexuality and sexual functioning (Fine, 1988; Hirst, 2013). Results of this study were consistent with prior research and indicated that both participants in the intervention group and follow-up only group had poor knowledge of female sexuality and peer related sexual norms. For example, at Time 1 participants answered less than 50% of the questions on the knowledge questionnaire correct. Results of this study found that participants in both groups showed significant improvements in their knowledge over time. However, participants in the intervention group showed a significant improvement above and beyond the changes seen in the follow-up only group, getting 70% of the items correct on average at follow-up as compared to 50% in the follow-up only group. Although these changes could reflect a practice effect whereby participants scores increased due to multiple exposures to the questionnaire and questions, it is more likely that these improvements were the result of participants' experience in the intervention. This finding suggests that a brief one-time intervention like the Savvy Sexuality intervention is an effective way to address existing gaps in knowledge of female sexuality and peer-related sexual norms. However, as discussed, changes to knowledge do not always translate into changed behavior. Therefore, as part of this dissertation, other sexual health behaviors were examined to determine whether participation in the intervention led to changes in sexual behavior.

A Comparison of Sexual Risk Behaviors, Sexual Assertiveness, Sexual Assault Resistance Self-efficacy, and Sexual Satisfaction

As part of the second aim of this dissertation, a number of sexual health outcomes including sexual risk behaviors, sexual assertiveness, sexual assault resistance self-efficacy, and sexual satisfaction, were examined to determine whether there were any differences between participants who took part in the Savvy Sexuality intervention and those assigned to the follow-up only group. The sexual risk behaviors examined in this study included impulsive sexual behaviors (e.g., leaving a party with someone you just met), sex with uncommitted partners (e.g., sex with untested partners), risky sexual acts (e.g., sex under the influence of alcohol or other drugs), and the intent to engage in risky sexual acts (e.g., going to a party with the intent of engaging in sex with someone). Results of the study found no differences in any sexual risk behaviors between participants in the intervention group and those in the follow-up only group. However, there were changes in sexual risk behavior seen among both groups such that all participants reported engaging in fewer risky sexual acts at follow-up than at pre-intervention. Participants in both groups reported engaging in few risk behaviors at baseline and even fewer at follow-up across all sexual risk behaviors. This finding mirrors findings from prior research that found college women report engaging in fewer risk behaviors over their college career (Vail-Smith, Maguire, Brinkley, & Burke, 2010). Indeed, college women report engaging in less risky sexual behaviors in their senior year of college compared to their freshman year of college (Fielder & Carey, 2010a). This is often directly related to the formation of romantic relationships which acts as a protective factor for engaging in some types of risk behavior (Kuperberg & Padgett, 2015).

The lack of difference in sexual risk behavior seen between the two groups may be the result of the shortened follow-up period of the study. The measure used to assess sexual risk behavior for this study traditionally uses a 6-month recall period for risk behaviors. Due to the constraints of this study, participants were asked to recall sexual risk behaviors within a 6-week period instead of the 6-month period. An examination of participant scores also suggests a possible floor effect whereby participants were reporting engaging in very few, if any, risk behaviors during this six-week follow-up period. Thus, it is possible that this 6-week period was not enough time to see significant changes in sexual risk behaviors possibly because participants were engaging in very few risk behaviors across groups. It is also possible, however, that participating in the intervention did not lead to changes in risky sexual behavior because engagement in these behaviors is affected by a variety of factors and may not be directly related to the type of assertive communication discussed in the intervention.

In addition, differences in both sexual assertiveness (e.g., "I let my partner know if I want to have sex", "I refuse to have sex if I don't want to") and sexual assault resistance self-efficacy, defined as confidence in one's ability to refuse an unwanted sexual advance using moderately and strongly assertive refusal strategies (e.g., telling the person that you like them but are not ready for sex, pushing the person away from you, asking the person to leave), were evaluated between intervention participants and those assigned to the follow-up only condition. Although this intervention was designed to teach sexual assertiveness skills from a positive perspective and emphasized topics such as talking with your partner about pleasurable sexual stimulation and other areas of sexual enjoyment, it is possible that these assertiveness skills could be translatable to other areas of sexual communication. Some examples could include saying "no" to unwanted sexual advances, resisting coercive sexual behavior, and resisting sexual assault. However,

results of these analyses showed that there was no significant interaction between group and time on sexual assertive behavior or on sexual assault resistance self-efficacy. There was a significant main effect of group on sexual assertive behaviors such that participants in the intervention reported more confidence in using sexual assertive behaviors overall compared to the follow-up only group). This suggests a self-selection bias for individuals who chose to enroll in and complete the intervention such that participants with higher confidence in their ability to use assertive behavior were more likely to complete the intervention. This bias is further noteworthy given that all participants endorsed engaging in a high degree of assertive behavior at baseline and follow-up. Thus, it is possible that the intervention appealed more to women who already perceive themselves as engaging in more assertive behaviors than their peers and the intervention did not contain information or skills that were new to these participants and therefore resulted in no meaningful change in assertive behavior.

Finally, differences in sexual satisfaction between intervention and follow-up participants were examined. There was a trend for participants in the intervention group to report greater satisfaction with their sexual relationships than participants in the follow-up only group. However, it should be noted that all participants reported high sexual satisfaction at baseline. Much like sexual assertiveness, it is possible that there was a self-selection bias such that participants with greater sexual assertiveness and more sexual satisfaction were more likely to choose to participate in the intervention. Given the already high degree of sexual satisfaction reported in this study, it is likely there was a ceiling effect, limiting any changes that could result from participation in the intervention.

The results of the analyses presented above found no significant differences between participants who completed the intervention compared to those in the follow-up only group on all

sexual health outcomes. It is hard to determine whether these findings are truly reflective of a lack of efficacy of the intervention given evidence for a self-selection bias of participants that enrolled. It seems likely that participants who chose to participate in the research study may not represent the experiences of sexually active college women as a whole. In addition, given the limitations with data collection and the lack of power for analyses, it is hard to make generalizations about the lack of differences found. There is some evidence to suggest that there were changes to knowledge and sexual communication self-efficacy among participants who took part in the intervention which may present an initial argument for continued exploration of this intervention through a larger randomized controlled trial (RCT). Therefore, suggestions for improvements to the intervention, collected from participant follow-up interviews and investigator insight, will be discussed in the following sections. In addition, suggestions for improving recruitment and retention of participants to allow for a fully powered RCT will be discussed below.

Refining and Reimagining the Savvy Sexuality Intervention

As part of the third aim of this dissertation, participant feedback on their experience with the intervention and suggestions for improvements were collected. Immediately following the intervention, participants were asked to complete a questionnaire assessing their satisfaction with the intervention and with the facilitators. Results supported that all participants reported high satisfaction with the intervention and facilitators. Findings indicated that participants' scores were significantly higher than the midpoint of the scale. Upon examination of individual items, 87.2% (n = 41) of participants reported that they "strongly agreed" they felt they could express themselves freely. Similarly, 89.4% of participants (n = 42) indicated that they "strongly agreed" they would recommend the program to a friend. Additionally, 91.5% (n = 43) indicated that they

"strongly agreed" they were satisfied with the quality of the program. These sentiments were reflected in the follow-up interviews conducted with four participants.

Within the follow-up interviews, participants were asked to comment on the strengths and weaknesses of the program, information that they learned as part of the intervention, and suggestions for ways to improve the program. Findings from the participant interviews suggested that the main strengths of the program were the discussion format and having other peers, especially unknown peers, participate in the intervention. These aspects seemed to empower the participants to feel comfortable discussing their thoughts and opinions related to sexual behavior in a way that destigmatized these conversations. This is consistent with the sexual empowerment design of the intervention and suggests that it was effective in promoting themes of sex positivity including depathologizing sexual behavior, destigmatizing female sexuality, and encouraging open communication about sexuality. With regards to information learned from the intervention, participants primarily described learning new communication skills to use with their sexual partners and facts related to peer sexual norms. This too is in line with the aims of the intervention and suggests that the Savvy Sexuality intervention was effective in addressing the primary topics, namely strategies to assertively communicate in sexual situations and knowledge of female sexuality and peer-related sexual norms. This finding provides evidence for the face validity of the study – participants appeared to take away the intended information and retain this information over time.

The main limitation discussed by participants was the structure of the intervention. The intervention was designed to be a one-time brief intervention to maximize its efficacy in a college-based setting. The structure of the intervention was chosen with the hope that a one-time workshop would appeal to more college women, would allow for delivery of the intervention to a

broad audience, and would be minimally burdensome to college administrators who may incorporate the intervention into their sexual health curricula. However, feedback from participants suggested that the length of the intervention (3-hours) was burdensome and may have been a limiting factor for recruitment of participants. All four participants suggested alternative structuring of the intervention including breaking the intervention into two separate components. This multi-session structured intervention has been modeled in the sexual assault risk reduction programs (see Gidycz et al., 2015; Orchowski et al., 2008) with some success. For example, one intervention conducted by Gidycz and colleagues (2015) used a three-session format that included an introductory session, one self-defense training workshop, and one final review session. Using this model, the study authors found improvements in sexual assault resistance self-efficacy and the use of assertive behaviors in subsequent assaults at 2-month and 4-month follow-ups.

In line with this model, this intervention could be broken down into two session with the first focusing on a discussion of sexual messages and misinformation related to female sexuality and the second focused on an introduction and practice of sexual assertive communication. The benefit of this approach could include having more time to dedicate to each topic and to the practice of assertive communication. Additionally, this type of approach may appeal to more students who may find it difficult to schedule time to participate in a 3-hour workshop but who may have more flexibility if the intervention was 1.5 hours. However, there are a number of drawbacks to consider with a multi-session intervention. It is possible that there would be greater attrition among participants if asked to attend two separate workshops as opposed to one extended workshop. Additionally, a multi-session intervention may be harder to deliver within a college setting because it would require finding available space for multiple sessions, instructors

who could attend multiple sessions, and could be more difficult to organize. Therefore, although a multi-session intervention may have certain benefits, it does not fit within the goals of the current intervention.

The feedback collected from participants shed light on some of the strengths and limitations of the current intervention. The high rate of satisfaction reported by participants suggests that using a sex positive framework for discussing sexuality was well-received. The type of conversations that occurred during the intervention were reflective of the tenants of sex positivity and highlighted topics such as policing of female bodies and sexual behavior, differing sexual expectations for men and women, and unique aspects of female sexuality and female sexual pleasure. These discussions emphasize the need for spaces where emerging adult women are able to explore their sexual experiences among peers in safe, supportive environments. The lack of knowledge related to female sexuality and sexual behavior evident among participants fits with growing awareness that female sexuality is largely excluded from sexual health programming and is ignored in greater social contexts such as within media representation. This underscores the continued need for programming that focuses exclusively on female sexuality in a way that targets and corrects misinformation and empowers women to advocate for their sexual needs.

Limitations and Recommendations for Future Sex Positive Intervention Research

There were a number of limitations to this study that should be acknowledged. The sample used for this study included college women from one Southeastern U.S. university who were enrolled in an introduction to psychology course. When considering research on sexual behavior and sexual norms, the location and cultural norms of the region can influence the way sexuality is discussed and enacted. Therefore, results of this dissertation may not be

generalizable to other samples of college women from varying regions of the United States or in other countries due to differing norms and expectations of sexual behavior. Similarly, although this study was open to participants of all sexual backgrounds, it cannot be ignored that the sampled consisted of predominantly heterosexual women. While the study material and language used during the intervention included gender neutral partner pronouns, it is unclear whether this type of intervention would be effective among participants with differing sexual identities.

Additionally, this study excluded participants who were not sexually active as well as those who indicated that they were not interested in attending a workshop on sexual assertiveness. Keeping this in mind, there was likely a self-selection bias among both groups of participants – those in the intervention group and those in the follow-up only group. In addition, the results suggest a clear self-selection bias among participants in the intervention group such that women with higher sexual self-efficacy and sexual satisfaction were more likely to complete the intervention. It is possible that this intervention was more appealing to women who already value sex positive themes such as consent, sexual empowerment, and communication, leading to group differences at the onset of the study. Furthermore, the exclusion of non-sexually active women may have contributed to higher sexual self-efficacy and use of sexually assertive behaviors at baseline. Given these findings, it is possible that this intervention may have been more effective for women with lower sexual communication self-efficacy, including at-risk groups of college women such as members of Greek organizations or those with sexual violence histories. Similarly, it is possible that participants who are not sexually active may benefit from this intervention or similar programming because it incorporates skills related to sexual and relationship communication that could be beneficial to learn prior to engaging in sexual relationships.

There were also several limitations related to the study design. The intervention was designed as a 3-hour single session program for college women. As discussed, the use of a single session design compared to a multi-session design may have limited the efficacy of the intervention because it did not allow participants enough time to practice the skills. Similarly, the length of the intervention session may have deterred some interested participants from signing-up for the study further limiting the participant pool and the generalizability of the sample. In addition, the study utilized a 6-week follow-up period which was chosen due the structure of the academic semester and need to capture students while they were enrolled in their introductory psychology course. It is possible this timeframe may not have been long enough to effectively determine whether participants experienced any changes in their sexual behavior.

Finally, it is important to note that this study was significantly limited by participant enrollment and attrition issues which affected the ability to make meaningful comparisons between groups. Due to low enrollment in the intervention, participant recruitment was adjusted between the first half and second half of data collection. Initial data collection focused on randomizing participants into a follow-up only group and an intervention group; however, only approximately 30% of participants randomized to the intervention enrolled and of those participants, only 30% completed the follow-up assessment. As a result, several measures were taken to increase recruitment and reduce attrition of participants including opening enrollment to all interested participants, offering extra incentives for participation (i.e., raffle entry for a $25 gift card), and sending more frequent reminder emails/texts about follow-up. These changes resulted in an increase in participation in the intervention (50% of participants who were eligible to enroll did so) and a significant increase in completion of the follow-up assessment (88% of participants completed). Although these changes were helpful in improving participant

recruitment and retention, they added additional limitations to this study. By allowing all participants to enroll in the study during the second half of data collection, there is more likely a self-selection bias among participants who enrolled in and completed the intervention. Similarly, given the high rate of attrition, it is possible that only individuals who believed the intervention was very helpful, or conversely believed it was very unhelpful, may have been motivated to complete the follow-up questionnaire. With the changes made to data collection, it is hard to conduct valid comparisons between the two study groups given that they no longer represent distinct randomized groups. Finally, the current sample sizes of each group are too small to make meaningful or generalizable comparisons.

Although these changes to data collection may have added additional limitations to this study, they were successful in increasing recruitment of participants. Therefore, future sex positive research should consider the following strategies for increasing participant retention in future sex positive research. First, researchers should consider including incentives for participation at each phase of the intervention. Participants appeared more motivated to complete the final assessment when they were offered the opportunity to enter into a raffle for a $25 gift card. Chances of winning the raffle in this study were higher than average given the expected follow-up rate, which may suggest that greater odds of winning, regardless of the size of the prize, may be more motivating to participants. In addition, researchers should consider establishing a follow-up protocol for contacting participants at later time points. Completion of the follow-up assessment in this study improved greatly when participants were contacted both by text message and by email at least three times. These emails and text reminders included language thanking the participants for their continued participation in the study and providing reminders about the incentives. Additional considerations for future sex positive research include

using campus-wide recruitment efforts to gain a larger sample pool, partnering with other campus organizations to pull from diverse campus communities (e.g., LGBT centers, sororities, athletic teams), and offering intervention sessions during weekend hours, as these were the most well-attended groups.

Implication and Future Directions

This study represents the first attempt to empirically examine the effectiveness of a sex positive sexual health program for college women. Sex positive programming has become increasingly more common on college campuses, with many universities offering workshops and lecture series addressing topics such as female sexual pleasure, orgasms, and sexual kink behavior. Although these programs represent an innovative approach of incorporating important and traditionally ignored aspects of sexuality, it is unclear how this type of programming is received by students. The results of this study suggest that using a brief single-session intervention model may be sufficient in increasing students' knowledge of sexuality and may help to improve students' confidence navigating difficult aspects of sexual development, although this latter finding needs to be further investigated. This suggests that this type of intervention could be easily adapted to other settings such as student health centers, community group organizations (e.g., youth leadership/empowerment groups, girl scouts, etc.), and within other educational contexts. For example, it is possible this program could be adapted to a student health center setting and offered as an informational session for young women seeking birth control or who are experiencing relationship or sexual functioning difficulties.

Given this study is a pilot study, future research should consider conducting a full model RCT to examine how participation in this type of programming relates to student sexual development. Future RCTs should consider partnering with various university organizations such

as campus clubs, sororities, or athletic teams to increase the diversity of their participant pool and to capture students with a range of sexual communication skills. Using incentives and frequent reminder emails/texts may also help to increase participant retention. Additionally, future research studies may want to consider comparing different program structures such as comparing a single-session intervention to a multi-session intervention or comparing participation in a lecture series to an interactive workshop. Similarly, future studies may consider using a longer follow-up period (e.g., 6-months or longer) to fully capture changes in sexual behavior. Finally, future studies may want to examine objective measures of sexual behavior such as reported use of assertive behaviors in sexual relationships, role-play observations of assertive communication skills, or reported experiences of coercive sexual experiences. Doing so may provider greater insight into the effects of sex positive sexual health programming for college women.

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Appendix A: IRB Approval

Notification of Initial Approval: Expedited

From: Social/Behavioral IRB

To: Marlee Layh

CC:
Heather Littleton

Date: 8/14/2018

Re: UMCIRB 18-001616
Savvy Sexuality - A Pilot Evaluation of a Sexual Assertiveness Program for College Women

I am pleased to inform you that your Expedited Application was approved. Approval of the study and any consent form(s) is for the period of 8/9/2018 to 8/8/2019. The research study is eligible for review under expedited category #7. The Chairperson (or designee) deemed this study no more than minimal risk.
Changes to this approved research may not be initiated without UMCIRB review except when necessary to eliminate an apparent immediate hazard to the participant. All unanticipated problems involving risks to participants and others must be promptly reported to the UMCIRB. The investigator must submit a continuing review/closure application to the UMCIRB prior to the date of study expiration. The Investigator must adhere to all reporting requirements for this study.

Approved consent documents with the IRB approval date stamped on the document should be used to consent participants (consent documents with the IRB approval date stamp are found under the Documents tab in the study workspace).
The approval includes the following items:

Name	Description
Consent Form	Consent Forms
Feedback Questions	Interview/Focus Group Scripts/Questions
Materials_Email Scripts.docx	Recruitment Documents/Scripts
Materials_Sona Recruitment Info.docx	Recruitment Documents/Scripts
Measures Packet	Surveys and Questionnaires
Part 1 Survey Question	Additional Items
Part 2 Consent Script	Additional Items
Part 3 consent paragraph	Additional Items
Study Protocol	Study Protocol or Grant Application

Appendix B: Consent Form

Informed Consent to Participate in Research

Information to consider before taking part in research that has no more than minimal risk.

Title of Research Study: Savvy Sexuality – A Pilot Evaluation of a Sexual Assertiveness Program for College Women.

Principal Investigator: Marlee Layh, M.A.
Faculty Sponsor: Heather Littleton, Ph.D.
Institution, Department or Division: Department of Psychology, ECU
Address: RAWL 305
Telephone #: (252) 328-6488

Researchers at East Carolina University (ECU) study issues related to society, health problems, environmental problems, behavior problems and the human condition. To do this, we need the help of volunteers who are willing to take part in research.

Why am I being invited to take part in this research?

The purpose of this research is to evaluate the effectiveness of a brief sexual assertiveness program for college women on improving sexual satisfaction, sexual assertiveness, sexual self-efficacy, and knowledge of peer-related sexual behaviors. You are being invited to take part in this research because you are a sexually active female student who is between the ages of 18-24 years old and enrolled in Introduction to Psychology. The decision to take part in this research is yours to make. By doing this research, we hope to learn how assertiveness training affects women's sexual behavior and sexual self-efficacy.

If you volunteer to take part in this research, you will be one of about 400 people to do so.

Are there reasons I should not take part in this research?

You should not volunteer for this research study if you are not between the ages of 18 and 24 years, identify as a male, are not sexually active, or if you are not enrolled in an Introduction to Psychology course.

What other choices do I have if I do not take part in this research?

You can choose not to participate in this research. You can choose to complete other research studies and non-research activities available in the ECU Sona system.

Where is the research going to take place and how long will it last?

The research will be conducted online and at the Rawl Building located on the ECU main Campus. If you qualify for Part 2 of the research study, you will need to come to Room 301b in Rawl at a time designed by the research team. The total amount of time you will be asked to volunteer for this study is 30 minutes for Part 1, 3 hours for Part 2 and 30 minutes for Part 3.

What will I be asked to do?

You will be asked to complete a number of online questionnaires. These will include questionnaires assessing your current adjustment, including feelings of depression, recent alcohol use, and any unwanted sexual experiences you may have had, including questions about unwanted sexual experiences in childhood. You will also be asked to complete online questionnaires about your sexual behaviors, sexual satisfaction, and knowledge of sexual behaviors. If you are interested and eligible, you may be asked to complete the second part (Part 2) of the study. For the second part of the study, you will be asked to attend a 3-hour assertiveness training program that will take place in the ECU Rawl Building. As part of the program, you will be asked to discuss your thoughts and opinions related to sexuality, and will be provided with information on assertiveness skills. You will be asked to complete questionnaires assessing your knowledge of peer-related sexual norms, sexual communication, and satisfaction with the program. Finally, if you complete the third part of this study (Part 3), you will be asked to complete several similar measures about your sexual behavior and satisfaction over the past six weeks.

What might I experience if I take part in the research?

We don't know of any risks (the chance of harm) associated with this research. Any risks that may occur with this research are no more than what you would experience in everyday life. We don't know if you will benefit from taking part in this study. There may not be any personal benefit to you but the information gained by doing this research may help others in the future.

If you find participating in this research to be personally upsetting, or would like to discuss your personal experience with someone, the following resources are available to you for free or low cost.

ECU Center for Counseling and Student Development
(252) 328-6661
137 Umstead building
Office hours 8-5 M-F

All ECU students can be seen for free; call the center to schedule an appointment. The ECU Center for Counseling and Student Development provides services for a variety of mental health and substance use issues.

Emergency walk-ins are seen on first come, first serve basis M-F 10-4.

After regular business hours, you can reach the On-Call Counselor by contacting the ECU Police Department at 328-6150. The on-call counselor is available 365 days/year.

REAL Crisis Intervention, Inc
600 E 11th Street
The REAL Crisis center provides several types of services:
A 24-hour free and confidential hotline offering crisis counseling: **252 758 HELP**
A six-week support group for survivors of sexual assault and support services for other mental health problems including depression, suicidality, loneliness, and interpersonal issues.

Center for Family Violence Prevention
823 S. Evans Street
252-758-4400
Office hours: 830-5pm M-F
24-hour emergency line at FVP: **252-752-3811**

The Adult Counseling Program provides free individual and group counseling for victims of abuse.

ECU PASS Clinic
311 Rawl building
252-737-4180
Office hours: 10-7pm M-Th; 10-4pm F

The ECU PASS clinic provides counseling for a variety of mental health and substance use issues on a sliding scale fee based on financial need.

Navigate Counseling Clinic
4410 Health Sciences Building
252-744-0328
Fourth floor, Allied Health Sciences Building, Brody School of Medicine
The Navigate Counseling Clinic provides substance use services on a sliding scale fee based on financial need.

Will I be paid for taking part in this research?

We will not be able to pay you for the time you volunteer while being in this study. You will receive 0.5 research credits for completing the initial online survey. If you complete Part 2 of this study, you will receive an addition 3.0 hours of research credit for completing that portion of the study. If you complete Part 3 of this study, you will receive an additional 0.5 research credits. Additionally, you may qualify to earn an additional 0.5 credits by answering a phone survey.

Will it cost me to take part in this research?

It will not cost you any money to be part of the research.

Who will know that I took part in this research and learn personal information about me?

ECU and the people and organizations listed below may know that you took part in this research and may see information about you that is normally kept private. With your permission, these people may use your private information to do this research:

- The University & Medical Center Institutional Review Board (UMCIRB) and its staff have responsibility for overseeing your welfare during this research and may need to see research records that identify you.

How will you keep the information you collect about me secure? How long will you keep it?

All identifying information collected as part of this study (Sona id, email address, telephone number) will be removed from the database upon completion of the study. De-identified study information will be kept on a password protected computer and secure server for seven years following completion of the study.

What if I decide I don't want to continue in this research?

You can stop at any time after it has already started. There will be no consequences if you stop and you will not be criticized. You will not lose any benefits that you normally receive. You can close the browser at any time. You can choose not to complete any study items.

Who should I contact if I have questions?

The people conducting this study will be able to answer any questions concerning this research, now or in the future. You may contact the Faculty Sponsor, Dr. Heather Littleton, at 252-328-6488 (M-F, between 9:00am and 5:00pm).

If you have questions about your rights as someone taking part in research, you may call the Office of Research Integrity & Compliance (ORIC) at phone number 252-744-2914 (days, 8:00 am-5:00 pm). If you would like to report a complaint or concern about this research study, you may call the Director of the ORIC, at 252-744-1971.

Is there anything else I should know?

Most people outside the research team will not see your name on your research record. This includes people who try to get your information using a court order. One exception is if you agree that we can give out research information with your name on it. Other exceptions are information about child abuse or neglect and harm to yourself or others.

I have decided I want to take part in this research. What should I do now?

The person obtaining informed consent will ask you to read the following and if you agree, you should sign this form:

- I have read all of the above information.
- I have had an opportunity to ask questions about things in this research I did not understand and have received satisfactory answers.
- I know that I can stop taking part in this study at any time.
- By indicating my consent, I am not giving up any of my rights.
- I have been given a copy of this consent document, and it is mine to keep (please print this form for your records).

☐ I consent to participate in this research

Appendix C: Email Recruitment Scripts

Intervention Group:

Hello! You are being contacted because you recently completed Part 1 of a research study entitled "Savvy Sexuality – A Pilot Evaluation of a Sexual Assertiveness Program for College Women". You are eligible to enroll in Part 2 of the research study. As a reminder, Part 2 will involve attending a 3-hour workshop on sexual assertiveness that will take place in the Rawl Building on ECU's main campus. You will receive 3.0 research credits for participating in Part 2 of the study.

If you are interested in participating in Part 2 of the research study, please click on the link below and sign-up a date and time to attend!

LINK TO DATES/TIMES

If you have any questions you can email the Principal Investigator, Marlee Layh, at layhm15@students.ecu.edu.

Thank you!

Wait-list group:

Hello! You are being contacted because you recently completed Part 1 of a research study entitled "Savvy Sexuality – A Pilot Evaluation of a Sexual Assertiveness Program for College Women". Unfortunately, you are not eligible to participate in Part 2 of the research study at this time. However, you are still eligible to complete an additional survey at the end of the semester. You will receive 0.5 research credits for participating in this additional survey. You will receive an email in six weeks to remind you to sign-up for this additional survey. You will also have the option to participate in the sexual assertiveness program during the Spring semester if you are interested.

If you have any questions you can email the Principal Investigator, Marlee Layh, at layhm15@students.ecu.edu.

Thank you for your interest in this study.

Follow-up assessment Intervention Group:

Hello! You are being contacted because you completed Part 2 of a research study entitled "Savvy Sexuality – A Pilot Evaluation of a Sexual Assertiveness Program for College Women". You are being contacted because you are eligible to enroll in Part 3 of the research study. As a reminder, Part 3 of the study involves completing an online survey which will take approximately 30 minutes. You will receive 0.5 research credits for participating in Part 3 of the study.

If you are interested in participating in Part 3 of the research study, please click on the following survey link below.

LINK TO SURVEY

If you have any questions you can email the Principal Investigator, Marlee Layh, at layhm15@students.ecu.edu.

Thank you!

Follow-up assessment – Waitlist Group

Hello! You are being contacted because you completed Part 1 of a research study entitled "Savvy Sexuality – A Pilot Evaluation of a Sexual Assertiveness Program for College Women" at the beginning of the semester. You are being contacted because you are eligible to complete an additional follow-up online research survey which will take approximately 30 minutes to complete. You will receive 0.5 research credits for completing the follow-up assessment.

If you are interested in completing the follow-up assessment, please click on the following survey link below.

LINK TO SURVEY

If you have any questions you can email the Principal Investigator, Marlee Layh, at layhm15@students.ecu.edu.

Thank you!

Appendix D: Intervention Evaluation Questions

1. What did you like the most about the program?

2. What did you like the least about the program?

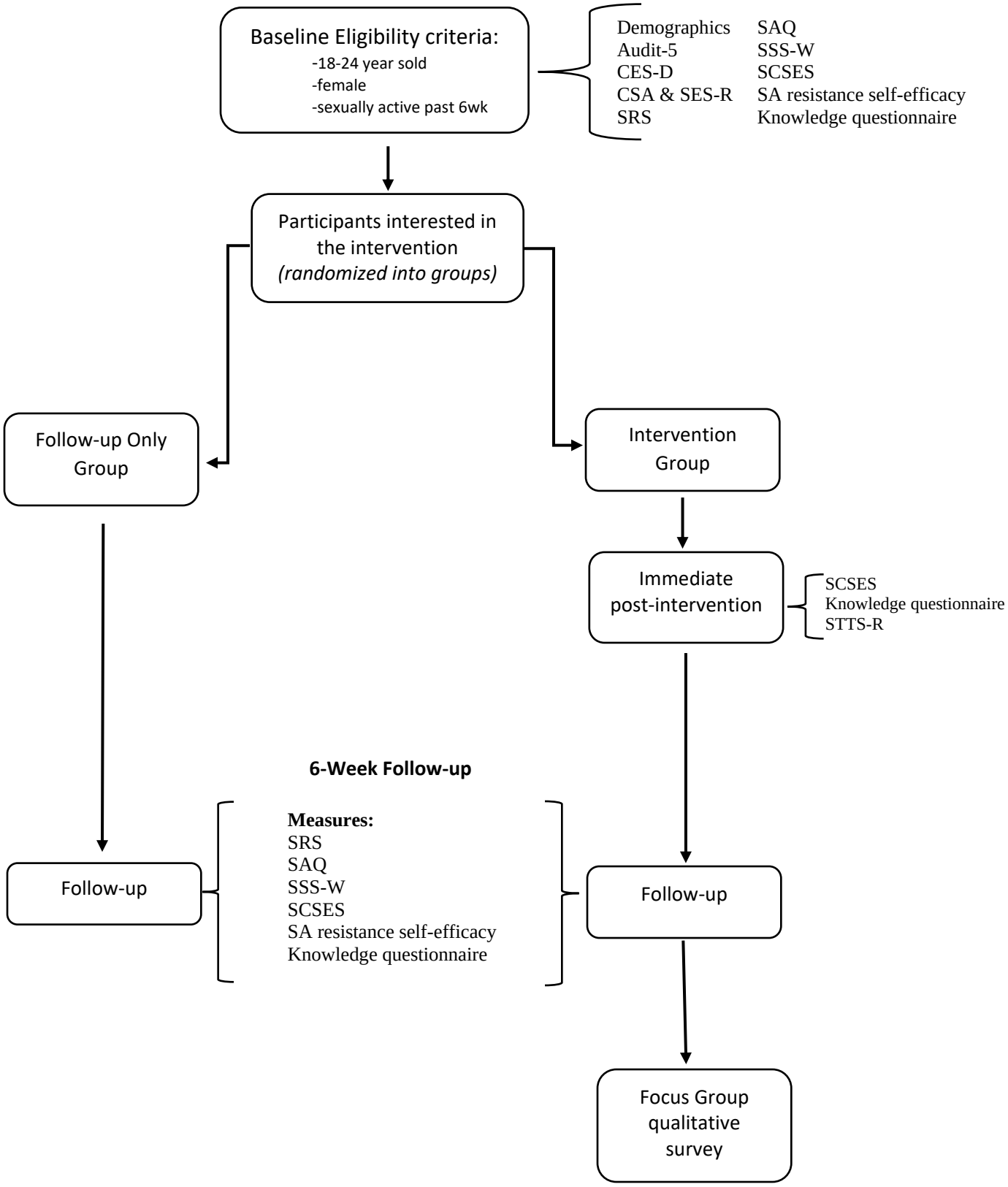
3. What did you learn from the program?

4. Would you recommend this program to other college women? Why or why not?

5. If you could change anything about the program, what would that be?

6. Overall, what information did you get from the program that you will use in your personal life?

Appendix E: Study Flow



Appendix F: Intervention Script

Introduction Script:

Hello, welcome to the Savvy Sexuality workshop. This workshop is designed to teach sexual assertiveness communication skills to college women. As part of the workshop today, we will be discussing aspects of sexuality including things such as messages we receive about sex, sexual norms, sexual pleasure, conversations that may arise with intimate partners, etc. The workshop is designed to be a safe environment for everyone. You will not be required to share any personal information as part of the workshop, but you are encouraged to participate in discussions we have and share your thoughts and opinions with the group. If you're uncomfortable sharing information about yourself you can still participate by speaking in generalities (e.g., women in general experience X) or by sharing information you've heard from others (e.g., friends of mine have said X). We hope that all participants will be respectful of one another which means respectfully listening to the thoughts and opinions shared by others, reserving judgement, and being respectful in the way you share your ideas. We recognize that we will be discussing some uncomfortable topics today so it's ok to giggle or laugh; however, we want to make sure that everyone is being respectful of one another. If any activity makes you too uncomfortable, you may choose not to participate in it.

The Savvy Sexuality workshop is a confidential space, which means that the thoughts and opinions you may share today will not be shared with others. We expect that each member of the group today also respects the group's confidentiality, which means not sharing specifics of what was discussed today with others such as friends or relationship partners. As always there are exceptions to confidentiality, which were described in the informed consent that you signed but include any indications of harm to yourself or others or the ongoing abuse of others like children or older adults. Does anyone have any questions about this?

Today's workshop will be divided into three parts. During the first part, we will discuss messages women receive about sexuality, including messages you or others have received related to sexuality and sexual pleasure. We will also discuss the sexual norms of college students including any "myths" about sex in college. The second part will include an introduction to assertive communication skills and a discussion of situations that may warrant these skills. Finally, we will end by practicing how to use assertive communication in difficult situations. At the end of the workshop, you will be asked to complete a few brief measures. You will receive 3.0 research credits for your participation today. We will take breaks throughout the workshop but if you need to use the bathroom or get a drink of water just excuse yourself as needed.

Before we begin are there any questions about what we will be doing today or about anything I covered so far?

Icebreaker Activity:

Because we will be discussing topics that may make us uncomfortable, I want us to get to know one another a bit. First, I'd like us each to go around the room and give your name, your favorite animal, and what career or hobby you would have if money and talent didn't matter.

Next, we're going to play a quick icebreaker game. I'm going to say several statements and I want you to raise your hand if you agree with the statement. This will give us all a quick way to know some interesting information about one another.

[Icebreaker Activity]

Introduction to Sources of Sexuality:

The first activity we will be doing today is called *Six Sources of Sexuality.* Growing up, we all heard different messages about sexuality and sexual pleasure that came from a variety of places. These places are our sources of sexual knowledge. The information we've got from these places have shaped our individual understanding of norms and expectations related to our sexuality. I will be handing out a worksheet with six boxes on it. In each box, I want you to identify one source that shaped your understanding of sexuality and sexual pleasure. Sources can be people, places, institutions, or cultures. [Handout worksheet]. For example, in one box you may write parents; however, you could just write mom or dad, if you feel like only one of your parents really communicated messages about sex/sexuality. You may have other people in your life, family, friends, other authority figures, who have also influenced you, or larger institutions like church, school, clubs, etc. Take a few moments to fill it out and then we will discuss together.

- What sources did you identify?

It seems like we all identified a variety of sources, some that are the same and some that are different. Next, I want each of you to identify some of the messages you received about sex, sexuality and sexual pleasure from each of these sources. Try to identify a few from each source. These messages do not simply have to be that sex is good or bad, although that may be a type of message you received. They may also be messages about ways you should or should not behave in a romantic relationship or during a sexual encounter, expectations, or information about what is normal. Take a moment to think about these messages and write them down under each source. We'll discuss as a group once you're done.

- What messages did you identify?
- Are these messages positive/negative?
- Are these messages the same for men and women? Why or why not? If some are the same, which ones? If some are different, which ones?
- How have these messages shaped your understanding about female sexuality and female sexual pleasure?

The messages that we've identified have likely shaped each of our individual understandings of our sexual identity and have affected the ways we act in our romantic and sexual relationships. Often, the messages that we receive are not always accurate and lead to misconceptions or myths that we internalize as facts or truths. These misconceptions may affect the way we behave in our romantic and sexual relationships. Keeping this in mind, I'm going to handout a quiz about sexuality. Some questions relate to women in general, while others are related specifically to college women at ECU. You may recognize this quiz as something you took during your survey. I want you to answer it and we will review it together.

[Provide normative data]

Hopefully, you're beginning to see how the messages we hear from others affect our own understanding of our sexuality and how these messages and can lead to misconceptions about sexual expectations. I want us to keep this in mind as we move forward and begin discussing assertive strategies.

[Break]

Introduction to assertive communication strategies:

Now we'll be moving on to discuss assertive communication strategies. So far, we've discussed the different messages we all have received about sexuality, sexual pleasure and sexual norms. As we discussed, these messages can affect our behavior in romantic and sexual situations. Keeping this in mind, we're going to brainstorm difficult conversations that arise during romantic relationships, sexual encounters, or with romantic/sexual partners as a group. I will be writing them on the board as we brainstorm.

- Examples: How to become exclusive with someone you're romantically interested in; how to talk about sexual or dating histories; how to ask for specific sexual activities; how to discuss condom use/use of protection.

It's clear there are lots of difficult conversations that can arise as we try to navigate relationships with romantic and sexual partners. When we encounter these situations, we all have different approaches to addressing them. Some strategies we choose to use may be effective, while others may not, and sometimes which strategy we choose may depend on the situation. While everyone has their own approach to managing their relationships, I'm going to introduce some strategies that can be helpful to use when these difficult conversations arise. These strategies are called assertive communication strategies.

- What is assertiveness?
- How does it differ from passiveness/aggressiveness/passive-aggressiveness?
- Why is assertive communication important?

Ideally, we would all like to communicate in an assertive way because it combines aspects of being a good listener and communicating your needs, but we don't always use assertive communication.

- What makes it difficult to use assertive communication, particularly in intimate relationships?
- Examples: Don't want to hurt the other person's feelings, because we're taught not to (internalized messages of sexuality), intoxication, situational factors, fear.

While there are many reasons why it may be difficult to use assertive communication strategies, a big reason people don't use them is because they're not sure what they look like or how to effectively use them. I will be passing out a handout on assertive communication strategies. I want us to review this together and discuss it.

[Provide handout & review]

- Is anyone familiar with any of these strategies?
- Which strategies seem easy? Which seem hard?
- How might you use these strategies to address some of the topics we previously discussed?

[Pick examples from the board and have participants discuss how they would use assertive communication strategies in these conversations]

One area that it is particularly important to use assertive communication is that of consent.

- What is sexual consent?
- What does consent look like?

We're going to watch a brief video of interaction between a couple. While we're watching the video, I want you to pay attention to the assertive communication strategies that were used by both people involved.

- What assertive communication strategies did you observe in the video?

It's important to note that there are many factors that affect our ability to communicate assertively. There are times when someone might use assertive communication and still feel unheard by their partner, there are also times where someone might not use assertive communication strategies at all for a variety of reasons, such as fear, intoxication, etc. Assertive communication strategies are one tool that can be used in these situations but it should be noted that even when someone is assertive or may want to be assertive but can't, problems can still arise in a relationship. In addition, there are times when someone may experience an unwanted sexual situation regardless of their use of assertive communication and this is not the fault of that person.

[Break]

Introduction to practicing assertive communication strategies:

We are entering the last part of the workshop where we are going to practice using the assertive communication skills we've discussed. For this part of the workshop I'd like you to divide up

into groups of 3-4 [depending on group size]. Each group will be presented with four scenarios of potential situations with a romantic or sexual partner. As a group, I want you to use the assertive communication strategies we've discussed to navigate these situations. This means you will be thinking up ways to assert what you want in these situations. Rather than thinking of one assertive statement, I want your group to think about several different strategies or things you might say in each situation. Then you will present your scenario and solution to the group. As the group, our job will be to provide feedback. Do we think their strategy will work? Is there something else we may have done to make it more effective? Does anyone have any questions about this?

[Breakout groups & handout scenarios]

[Review scenarios & solutions as a group]

- What did we like about their strategies?
- Is there anything we might suggest to make it more effective?

Summary of the program, survey, and timeline:

It's time to wrap-up the workshop. I want to thank all of you for participating in the activities we presented today. We spent a lot of time today talking about the different messages we receive about sex and sexuality and how these messages affect our behavior with sexual and romantic partners. We specifically talked about the role of assertive communication in these relationships. As we mentioned, there are many reasons it can be hard to use assertive communication strategies and yet it is important to use these strategies when discussing difficult and important things with our romantic and sexual relationships because they help to ensure that we are communicating our needs and wants with our partner. I hope each of you took something beneficial away from this workshop today.

Before we end for today I'd like you to complete three brief questionnaires.

[Pass out questionnaires]

As we mentioned, you will be receiving 3.0 research credits for your participation today. Additionally, all of you will be eligible to complete a follow-up assessment in 6-weeks for an additional 0.5 research credits. You will receive an email notifying you to sign-up for Part 3 of this study if you are interested.

Again, we thank you for participating in the workshop today and hope you enjoyed it.

Appendix G: Intervention Materials – Six Sources of Sexuality Handout

Six Sources of Sexuality

In each of the spaces below list one source that has influenced your personal values about sex and sexuality. Sources can be people, places, institutions, cultures.

Appendix H: Intervention Materials – Assertive Communication Strategies Handout

What is Assertiveness?

Assertiveness is a style of communication. It involves what you say, think, and how you behave in various social situations. Assertive communication means communicating your needs, wants, desires in an open and honest manner in a way that respects the rights of the other person(s) involved.

What does assertive communication look like?

Verbal Assertiveness	Assertive Body Language
• Firm, relaxed voice • Fluent with few hesitations • Warm tone • Clear speech • Volume is not too loud or too quiet • Use of "I" statements • Focus on personal experience • Collaborative • Feedback without blame • Willingness to explore other solutions	• Face the other person • Direct eye contact • Open body stance • Nodding along • Relaxed jaw • Steady facial features

Building Blocks of Assertive Communication

Starting with "I"

"I" statements are the foundation of assertive communication. They allow you to communicate your thoughts, feelings, wants, and needs without introducing blame. "I" statements can be used effectively in a variety of situations.

Often, "I" statements are paired with a feelings statement, also called a ***self-disclosure*****.** For example, "I feel _____ when ____". Self-disclosures help to communicate your personal experience or provide context for a specific request you want to make.

Examples of "I" statements:

- "I feel hurt when you don't call"
- "I find it difficult to talk about my sexual history"
- "I really love when you kiss my neck"

Be Specific

Assertive communication requires you to be specific. You will need to decide what you want or how you feel, and say so specifically and directly. You may be making a specific request from your partner or maybe you're trying to communication how a specific behavior or action makes you feel. Either way, describe it clearly and in a way that your partner will understand.

Simple is always better

When discussing difficult topics, it's natural to want to add a little *padding* to what you say because you don't want to hurt your partner's feelings. However, too much padding can cause confusion and may make it more difficult for your partner to understand what you're asking of them. It is better to keep your statements simple and brief.

Assertive Communication Strategies

There are many different ways to be assertive. Sometimes, a simple clear "I" statement is enough to communicate your thoughts and feelings assertively, while other times, you may need to try a more complex assertive strategy. Different situations are going to require you to use different strategies. You may even find yourself using multiple strategies at one time.

Compassionate Assertions

Compassionate assertions are designed to help communicate understanding of your partner's thoughts and feelings, while asserting your own needs, wants, and/or desires. In this type of assertion, you will acknowledge how the other person may be feelings, or what they may be thinking, and assert what you need from the situation.

Examples of compassionate assertions:

- "I know you really enjoy hanging out with your friends on the weekend, but I'd like to spend at least one evening with you".
- "I appreciate how attracted you are to me, but I'm not in the mood for sex tonight".

Negative Assertion

Negative assertions are used when you want to communicate negative feelings related to something your partner is doing. Often, communicating negative feelings can lead to angry outburst or arguments. Using negative assertions can help you express your feelings in a calm manner and to draw attention to a behavior that is hurtful or upsetting.

Negative assertions involve four steps:

1. Describe the upsetting behavior.
2. Describe the impact of the behavior on you.
3. Describe your feelings.
4. State how you would like the behavior changed.

Examples of negative assertions:

- “When you make plans with our friends without asking me I means I have to rearrange my schedule, which makes me feel overwhelmed and annoyed. In the future, I’d appreciate if you check in with me first before making plans”
- “When you watch tv while I’m talking to you, it makes me feel unimportant and unheard. I would like you to turn off the tv or turn off the volume when I’m trying to tell you about my day”.

Broken Record

The broken record technique works well in situations where your partner may be trying to persuade you to do something that goes against your wishes or needs. It is also useful in situations where you feel like your partner is not listening to what you are saying. The goal of the broken record technique is to communicate your needs without escalating the situation or giving into something that makes you uncomfortable. The broken record technique is simple. It involves repeating yourself, calmly and firmly.

Examples of the broken record technique:

- “I want you to wear a condom...I realize you don’t want to, but I want you to use a condom...If we have sex, I want you to use a condom”.
- “I don’t want to try that... I’m not interested in trying that with you... I know you would like to try it, but I’m not interested.”

Agree with a Twist

When addressing a conflict in your relationship, it is equally important to listen to your partner in a way that allows your partner to feel head. You can do this by showing agreement in three different ways:

- **Agree with the truth:** This involves agreeing with a truthful statement your partner made.

  Example.

  “You’re right, I don’t always listen closely to what you say”.

  “Yes, I was a half hour late to our date”.

- **Agree with the odds:** This involves agreeing with the possibility of a statement your partner makes that you may or may not agree with.

  Example.

  “Yes, it’s possible that I’ve been spending a lot of time with my friends”.

  “Yes, it’s possible that I overreacted last night”.

- **Agree with the principle:** This involves agreeing with the general truth or logic in a statement your partner makes.

  Example.

  “Yes, that makes sense”

  “Yes, I see how that could be hurtful”.

Just say “No”

Saying “No” to friends, romantic and sexual partners can be difficult. We may fear hurting the person’s feelings or retaliation against for saying no. However, it’s important to remember that “No” can be an effective, necessary strategy in some situations.

Remember:

- You have a right to say “no”, no matter who is making the request of you.
- Saying “no” does not mean you are rejecting the person.
- You do not have to give reasons for saying no.

Appendix I: Intervention Materials – Sexual Scenarios Activity

Scenario #1

You've been seeing the same person for several months. It started with just a few hookups here and there, but recently you've started hanging out more consistently and texting frequently. When you've approached the subject of dating in the past, they've told you "why ruin a good thing" and "we're just having fun". You haven't been pursuing other relationships because you're hoping this will turn into something more. However, you're unsure if they are doing the same. The next time you two are hanging out, you'd like to talk to them about being exclusive but you're unsure how to start.

Using some of the assertiveness strategies we've discussed, consider how you would approach this situation and what you might say during this conversation. Try to consider how your partner might respond and what strategies you might use, depending on the response.

Scenario #2

You and your partner have been having sex for some time. Although there are aspects of sex that you enjoy, your partner tends to be rougher than you like. Additionally, they seem to use too much pressure and don't seem to respond when you say "not like that" in the moment. You don't want to hurt your partner's feelings, but you're beginning to be turned off by sex because it's not as enjoyable as you would like it to be. You're considering talking to your partner about this issue but aren't sure how to start.

Using some of the assertiveness strategies we've discussed, consider how you would approach this situation and what you might say during this conversation. Try to consider how your partner might respond and what strategies you might use, depending on the response.

Scenario #3

You've casually hooked up with your partner a couple of times but the two of you are not exclusive. When the subject of protection comes up during each hookup, your partner has seemed resistant and repeatedly stated that using protection is "uncomfortable" and "unnecessary". Although they typically give in to your requests, it feels like a battle every time you have sex. You're considering talking to your partner about this issue but aren't sure how to start.

Using some of the assertiveness strategies we've discussed, consider how you would approach this situation and what you might say during this conversation. Try to consider how your partner might respond and what strategies you might use, depending on the response.

Scenario #4

You and your partner have been casually dating for the past three months. You've slept together on numerous occasions but don't consider it to be a serious relationship. Every time you sleep together, the sex is brief and usually involves your partner orgasming but not you. You'd like to ask your partner to pleasure you during these encounters but feel uncomfortable approaching the subject especially because the two of you aren't serious.

Using some of the assertiveness strategies we've discussed, consider how you would approach this situation and what you might say during this conversation. Try to consider how your partner might respond and what strategies you might use, depending on the response.

Scenario #5:

You've recently started a new relationship with your partner. Prior to beginning a romantic relationship, the two of you have been friends for a while. As a friend, you're aware that your partner has slept with other people and hasn't always used protection. Now that you and your partner are getting serious, you're concerned about their sexual history and whether they have any sexually transmitted diseases. You'd like to start a conversation about their sexual history and ask them to get tested for STIs, but you're unsure how to do this.

Using some of the assertiveness strategies we've discussed, consider how you would approach this situation and what you might say during this conversation. Try to consider how your partner might respond and what strategies you might use, depending on the response.

Appendix J: Demographics Questionnaire

Now we would like to know a little bit more about you. Please answer these questions to the best of your ability.

1. How old are you? ____ years

2. What is your gender?
___ Female
___ Other _____

3. Please describe your ethnicity.
___ Hispanic/Latino/a
___ Non-Hispanic/Latino/a

4. Tell us what you consider yourself (Mark all that apply).
___ White (Caucasian/ European or European American)
___ Asian/Asian American
___ Middle Eastern/ North African
___ Black/African American
___ Caribbean Islander
___ Native American/ Alaskan Native
___ Pacific Islander
___ Multi-ethnic
___ Other

5. What is your current academic standing?
___ Freshman
___ Sophomore
___ Junior
___ Senior
___ Masters student
___ Doctoral student
___ Other

6. Please describe your sexual orientation.
___ Heterosexual/straight
___ Mostly heterosexual/straight
___ Bisexual
___ Mostly homosexual/gay/lesbian
___ Homosexual/gay/lesbian

7. Have you been sexually active in the past six-weeks?

8. What is your relationship status?
___ Single
___ Casually dating
___ In a relationship
___ Other: _____

9. What type of sexual education did your high school offer? (Mark all that apply)
___ None
___ Abstinence Only
___ Information on reproductive health
___ Information on sexual pleasure
____ Information on dating relationships
____ Information on sexual assault/dating violence
____ Information on STIs/Pregnancy
____ Information on healthy sexual relationships

Appendix I: Knowledge Questionnaire

1. On average it takes women 10-20 minutes of sexual stimulation to achieve orgasm. **T**
2. Approximately 15% of women masturbate at least once per month. **F**
3. A typical sexual encounter lasts for 30 minutes. **F**
4. At least 60% of women typically orgasm through vaginal penetration alone. **F**
5. Only 6-10% of college students have been tested for STIs. **T**
6. Women are more likely to fantasize about their current sexual partner than men. **T**
7. Over half of ECU college women have had sex with three or more sexual partners over the past 6 months. **F**
8. For college women, hooking up almost always leads to sex. **F**
9. Most college women don't need to use lubricants for sexual intercourse. **F**
10. Most women find hookups to be sexually satisfying. **F**
11. More than 50% of college women have sex while under the influence of alcohol. **T**
12. College women are just as likely to use condoms while drinking as they are sober. **T**
13. College students are engaging in more hookups now compared to 20 years ago. **F**
14. At least 75% of ECU college women have had sex with a casual partner (i.e. "fuck buddy"; friend-with-benefits) in the last 6-months. **F**
15. Female sexual desire is more dependent on environmental and situational factors (e.g., stress, peer opinions) then male desire. **T**

Appendix L: Participant Enrollment and Attrition