ABSTRACT

KAMKE, KRISTYN LEIGH. Evaluating a Sexual Health Program in High-risk Girls: Assessing Program Efficacy and Identifying Barriers to Skill Implementation (Under the direction of Dr. Laura Widman)

Negative sexual health outcomes, such as sexually transmitted diseases (STDs)—including HIV—and unplanned pregnancy, are a serious risk for adolescent girls. Girls with emotional and behavioral difficulties, such as delinquent behavior, substance use behavior and mental health problems have a heightened chance of these negative outcomes. In this dissertation, these adolescents are referred to as high-risk girls. Although many evidence-based sexual health interventions are available for adolescents, there are only a few sexual health programs that target high-risk girls. Further, four factors limit the reach and impact of these programs for high-risk girls: 1) lack of a gender-specific focus, 2) lengthy time commitments for completion, 3) inaccessibility, and 4) mixed or limited effects. In this dissertation, I sought to address these limitations by evaluating a new, brief web-based sexual health program called HEART (Health Education and Relationship Training) with a sample of 52 high-risk girls with emotional and behavioral difficulties (EBDs). In Study 1, I administered the HEART program to 52 ethnically/racially diverse (64% Black; 23% Hispanic; 13% Multiracial/Other) participants and compared their outcomes to a matched control sample of 115 adolescent girls who completed an attention-matched web program without sexual health content and who were matched to the intervention participants by propensity scores. Further, in Study 2, I used semi-structured interviews to better understand the factors that serve as barriers and facilitators to girls' implementation of sexual health knowledge and skills learned in sexual health interventions, such as HEART, among girls in the intervention group. Results from Study 1 suggest that HEART is efficacious among high-risk adolescent girls. At post-test, intervention

participants had significantly higher communication intentions, communication skills, condom attitudes and norms, sexual self-efficacy, and STD/HIV knowledge compared to control participants. Further, results suggested the intervention is particularly efficacious for girls who have higher levels of EBDs. Importantly, this evaluation also illuminates the potential for the implementation of HEART into community-based settings, in addition to the school-based settings in which it was initially evaluated. However, in Study 2, I illustrated that girls perceive several salient barriers to adoption of the sexual health knowledge and skills learned in the HEART intervention. Most prominently, participants documented the ways in which societal-level gender norms, societal-level negativity toward adolescent sexuality, community-level condom inaccessibility, and individual-level substance use may serve as barriers to sexual refusal/communication and condom use. These findings highlight the necessity of targeting sexual health interventions beyond the individual-level. Importantly, participants also indicated numerous factors that may facilitate their adoption of safer sex knowledge and skills, including condom accessibility and positive parent communication. The salience of these facilitators indicates that, although sexual health interventions may not address all intervening factors that prevent girls from engaging in safer sex decision-making, girls may already have influences in their lives that may promote safer sex decisions. Importantly, it is promising that this brief program promoted positive outcomes among this high-risk group of adolescent girls. Future evaluations should incorporate longer-term evaluation of the program among this group to better understand whether HEART can impact behavior change. Further, it is important that the barriers and facilitators to implementation of sexual health information and skills uncovered in Study 2 be incorporated into future sexual health programs and sexual health policy, in order to enhance positive sexual health outcomes among adolescents nationwide.

Evaluating a Sexual Health Program in High-risk Girls: Assessing Program Efficacy and Identifying Barriers to Skill Implementation

by
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DEDICATION

To all girls who have been denied the choice of saying no.

BIOGRAPHY

Kristyn Kamke is a native of West Nyack, NY. She graduated from the College of William and Mary in 2013 with a B.A. in Psychology and English. Afterwards, she attended Loyola University Maryland, where she received an M.S. in Clinical Psychology in 2015. She began her doctoral program in the Applied Social and Community Psychology program in 2015. As a student, she served as a research assistant in Dr. Laura Widman's Teen Health lab. Kristyn is particularly interested in the way in which gender and power impact sexual decision-making among adolescent girls. Kristyn plans to pursue a postdoctoral research appointment after graduating with the future aspiration of becoming a tenure-track professor with research focused on improving adolescent sexual health.

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CHAPTER 1

Introduction

Incidence and Prevalence

Adolescent sexual health problems are a substantial public health concern. Each year, 50% of new sexually transmitted diseases (STDs) are diagnosed in youth ages 14 to 25, resulting in almost 10 million new infections (Centers for Disease Control and Prevention [CDC], 2013; CDC, 2016c). For HIV specifically, youth account for 21% of new infections and are unlikely to be tested or treated for HIV (CDC, 2016a; Zanoni & Mayer, 2014). With 75% of youth engaging in sexual intercourse by age 20, sexual health problems are a risk for nearly all youth (Guttmacher Institute, 2014).

Although all sexually active youth risk negative sexual health outcomes if they engage in unsafe sexual practices like unprotected sexual activity, adolescent girls have a pronounced risk. As many as one in four sexually active girls has an STD (Forhan et al., 2009), which can lead to serious consequences including: ectopic pregnancy, pelvic inflammatory disease, infertility, and cervical cancer (CDC, 2009; Haggerty et al., 2010; Monk & Tewari, 2007). In addition, girls face the risk of unplanned pregnancy, with nearly 230,000 babies born to 15- to 19-year-old girls in the United States in 2015 (Martin, 2017), the highest rate in the developed world (Kearney & Levine, 2012).

Several sexual risk behaviors, including early sexual debut, inconsistent use of condoms and other forms of contraception, and sex with multiple sexual partners, contribute to increased rates of STDs/HIV and teenage pregnancy among adolescents. On average, adolescent girls initiate sexual intercourse at age 17, approximately the same time as boys (Finer & Philbin, 2013). However, girls are less likely than boys to report using condoms at their last intercourse

(52% v. 62%; Kann, McManus, et al., 2016). Further, of the 30% of girls who used a non-barrier contraceptive method at last sex (i.e., birth control pill, IUD), less than half used a condom with it (i.e., dual protection; Kann, McManus, et al., 2016). Without the use of condoms, these girls are still at risk of STDs/HIV. Importantly, although female condoms may be as effective as male condoms in protecting against STDs/HIV, they are understudied, rarely used, and may be inaccessible to adolescents (Committee on Adolescence, 2013). Therefore, throughout this dissertation, references to condoms denote male condoms.

Disparities by Race/Ethnicity and Sexual Orientation

Risk of negative sexual outcomes varies by race/ethnicity and sexual orientation. Adolescent girls of color have higher rates of STDs and HIV than White adolescent girls (CDC, 2016b; CDC, 2017). They are also more likely to become pregnant and give birth as teenagers (Kost & Henshaw, 2014). In terms of sexual orientation, there is some indication that girls who engage in sexual relationships with male and female partners are at higher risk of negative outcomes than those who only have sex with boys (Kann, Olsen, et al., 2016; Lindley, Walsemann, & Carter, 2013). One study showed that young women who had two or more female sex partners in addition to male partners were more likely to have had an STD than young women who only had sex with men (Lindley et al., 2013). Sexual minority girls who have relationships with boys and girls are also at a higher risk of unplanned pregnancy than girls who only have sex with boys (Kann, Olsen, et al., 2016).

These disparities are partially attributable to higher levels of engagement in risk behaviors; for example, Black and Hispanic youth tend to initiate sexual activity earlier, have more sexual partners, and use condoms and other forms of birth control less often than White youth (Kann, McManus, et al., 2016). Sexual minority young women, including those who are

"mostly heterosexual" (i.e., identify as heterosexual but engage in sexual relationships with women and/or report sexual attraction to women; Ela & Budnick, 2017), have earlier sexual debuts, more sexual partners, use condoms more inconsistently, and are less likely to use dual birth control methods compared to heterosexual women (Ela & Budnick, 2017; Kann, Olsen, et al., 2016). However, higher risk of negative outcomes for racial and sexual minorities is more aptly tied to a history of oppression based on their marginalized identities, leading to social and economic disadvantage (Carlson, McNulty, Bellair, & Watts, 2014; Pellowski, Kalichman, Matthews, & Adler, 2013). STD infections, including HIV, are most heavily concentrated in individuals of lower socioeconomic status, lower education levels, and lower social capital (Pellowski et al., 2013). These disparities result in lower access to contraception, sexual education, and healthcare resources (World Health Organization, 2015). Both racial/ethnic minority and sexual minority youth are unlikely to receive sexual education that is culturally tailored to or inclusive of their health needs (Guttmacher Institute, 2015). Additionally, social and geographical disparities limit access for racial/ethnic and sexual minority youth to HIV care (Pellowski et al., 2013). Further, these same factors that increase the likelihood of STD/HIV infections among racial/ethnic and sexual minority youth also increase the likelihood that they will give birth as teenagers (Penman-Aguilar, Carter, Snead, & Kourtis, 2013).

Sexual Health Interventions

To reduce the prevalence of negative sexual outcomes among adolescents, many sexual health interventions have been developed (for reviews, see Goesling, Colman, Trenholm, Terzian, & Moore, 2014; B. T. Johnson, Scott-Sheldon, Huedo-Medina, & Carey, 2011). Recent statistics from a nationally representative sample in the United States show that more than 80% of 15- to 19- year old adolescents receive formal sexual health programming (i.e., programming

offered in school, church, youth centers, or other community setting) that covers STDs, HIV, or sexual refusal; however, far less (50-60%) receive formal training on contraceptive use, and these numbers have been declining, especially in rural areas (Lindberg et al., 2016). Many formal settings utilize sexual education interventions with abstinence-only messages, despite research that shows these programs are less effective than comprehensive sexual health programs (i.e., those that cover both abstinence and the use of condoms and other contraceptive methods for prevention of STDs/HIV and unplanned pregnancy), and recommendations that comprehensive sexual health programs be administered to youth (B. T. Johnson et al., 2011; Stanger-Hall & Hall, 2011)

The Office of Adolescent Health [OAH] (2016) specifically identifies and recommends 42 evidence-based pregnancy prevention programs for adolescents designed for diverse populations and settings and that can be utilized by organizations through grant funding. Most of these programs are designed for boys and girls (67%), whereas around 30% are designed specifically for girls. A review of these programs by Goesling et al. (2014) found that most programs are administered in a school setting (55%), are lengthy (multiple, hour-long or more sessions), and are designed for general populations of youth (only 17% of programs target special populations, such as homeless youth or delinquent youth). These sexual health programs for youth include content focused on STD/HIV facts, interpersonal skills training, self-management skills training (e.g., building self-efficacy; WHO, 2003), condom information and/or skills, and safer sex motivation (B. T. Johnson et al., 2011). These topics are consistent with health behavior change models that have been effectively applied to sexual health behavior change such as the Reasoned Action Model (Albarracín, Johnson, Fishbein, & Muellerleile,

2001; Fishbein & Ajzen, 2010) and the Information-Motivation-Behavioral Skills Model (Fisher & Fisher, 1992).

High-Risk Girls and Sexual Risk Behavior

Although many evidence-based programs to reduce the risk of STDs/HIV and unplanned pregnancy among adolescent girls are available, most programs are designed to reach a general population of girls and not "high-risk" girls; by "high-risk," I mean those who are experiencing emotional or behavioral difficulties (EBDs), placing them at increased likelihood of current or future sexual risk behavior (Garner, James, & Julian, 2013; National Research Council & Institute of Medicine, 2004). Importantly, my reference to these girls as "high-risk" is not meant to direct judgment towards girls who have EBDs; rather, my use of "high-risk" is meant to acknowledge that a combination of biopsychosocial factors of adolescent life (i.e., social environment, perceived environment, personality, other behavior, and biology/genetics) have contributed to girls' development of certain characteristics or behaviors that heighten their chances of negative sexual health problems, such as STDs/HIV and unplanned pregnancy (Jessor, 1991).

EBD is an umbrella term that refers to a range of experiences, including mental health problems (e.g., depression, anxiety) and problem behaviors (e.g., substance use, delinquency, conduct problems; Garner et al., 2013; National Research Council & Institute of Medicine, 2009). Emotional and behavioral difficulties share common risk factors, resulting in a tendency for these problems to co-occur (Jessor & Jessor, 1977; National Research Council & Institute of Medicine, 2009). For example, research grounded in Problem Behavior Theory (Jessor & Jessor, 1977) has found that marijuana use, alcohol use, and delinquent behavior are associated with earlier onset of sexual activity (F. M. Costa, Jessor, Donovan, & Fortenberry, 1995), multiple

sexual partners (Aalsma, Tong, Wiehe, & Tu, 2010), and inconsistent condom use (Frances M. Costa, Jessor, Fortenberry, & Donovan, 1996). Empirical research suggests that mental health difficulties are similarly linked to sexual risk behaviors, such as early sexual debut and inconsistent condom use (Geri R. Donenberg, Bryant, Emerson, Wilson, & Pasch, 2003; Schuster, Mermelstein, & Wakschlag, 2013). Knowing that these risk behaviors are linked, it is important to understand the availability and effectiveness of sexual health programming for high-risk girls who have EBDs.

Sexual Health Programs for High-risk Girls

Although most sexual health interventions have focused on general populations of youth, some programs have been developed to meet the needs of high-risk girls (for examples, see Bryan, Schmiege, & Broaddus, 2009; Coyle et al., 2006; Milburn et al., 2012). Importantly, only three of the evidence-based programs recommended by the OAH (2016) are designed to meet the needs of high-risk girls: All4You! (Coyle et al., 2006), Sexual Health and Adolescent Prevention (SHARP; Bryan et al., 2009), and STRIVE (Milburn et al., 2012). These programs show promising effects, but several key issues limit their potential reach and impact. First, although these programs were designed for high-risk youth, they were not specifically designed for high-risk *girls*, despite recommendations from the Office of Juvenile Justice and Delinquency Prevention [OJJDP] (1998) that educational programs for high-risk girls be tailored to their gender. Safer sexual behavior is influenced by gender. For example, girls have less direct behavioral control over condoms, meaning their decision to use condoms is tied to their ability to negotiate this behavior with their partner (Amaro & Raj, 2000; Wingood & DiClemente, 2000). It is necessary that programs provide safer sexual messages that are applicable for girls and boys.

Second, two of the programs, All4You! (14 sessions, 70-140 minutes, 7 weeks) and STRIVE (5 sessions, 90-120 minutes, 5 weeks) are lengthy programs, likely leading to inconsistent program attendance (OAH, 2016). Twenty-four percent of families enrolled in STRIVE did not complete all five sessions (Milburn et al., 2012), and the 24% attrition rate from baseline to follow-up in All4You! suggests similarly poor attendance rates (Coyle et al., 2006).

Third, All4You! and SHARP are administered in a school and a detention center respectively. High-risk youth are likely to miss school (Hallfors et al., 2002) and have short stays in detention centers (OJJDP, 2015), which also may contribute to incompletion rates or missing programming opportunities. Although STRIVE was administered in homes to families, families were difficult to recruit and sessions were still difficult to fit into families' schedules, suggesting problems with full delivery of the program (Milburn et al., 2012). Further, these three programs have shown mixed effects and/or significant effects on only a limited number of outcomes (U.S. Department of Health and Human Services, 2015).

In summary, although sexual health intervention programs for high-risk girls have been developed, these programs are limited by factors including: 1) lack of a gender-specific focus, 2) lengthy time commitments, 3) inaccessibility, and 4) mixed or limited effects. Recently, a new sexual health program was developed that may address the limitations of prior sexual health interventions used with high-risk girls. This program, called HEART (Health Education and Relationship Training), is a brief, web-based program focused on developing assertive communication skills and promoting healthy sexual decision-making in girls (Widman, Golin, Noar, Massey, & Prinstein, 2016). This program was highly acceptable and efficacious among adolescent girls in a school-based sample (Widman, Golin, Kamke, Burnette, & Prinstein, 2018; Widman, Golin, Kamke, Massey, & Prinstein, 2017). Based on the Reasoned Action Model

(RAM; Fishbein & Ajzen, 2010), as shown in Figure 1.1, the program contains five modules that target: 1) safer sex motivation, 2) STD/HIV knowledge, 3) sexual norms/attitudes 4) safer sex self-efficacy, and 5) sexual communication skills. Each module has features such as information, videos, quizzes, games, and skills training (See Table 1.1). Screening quizzes at the start of each module identify girls with deficits in knowledge and/or self-efficacy, and the program provides these girls with additional content. Assertive communication is emphasized throughout the program, but the sexual communication module focuses specifically on skill development, using a role-playing exercise. The program highlights the importance of condom use for sexually active adolescents but can be used by girls regardless of sexual activity status and encourages girls to make independent decisions about engaging in sexual activity.

It is critical to evaluate the HEART program in a new sample of high-risk girls. Replication is often not conducted in intervention studies, but it is an important step for evaluating program efficacy and effectiveness (Catalano et al., 2012; Valentine et al., 2011). Replication of intervention evaluations provides greater evidence of program efficacy in diverse populations, allowing organizations to make better decisions about intervention adoption. Further, several factors suggest that HEART will be effective with high-risk girls.

First, the program has shown to be highly acceptable and efficacious in a diverse, school-based sample of girls. In general, girls liked the program and found it engaging, regardless of race/ethnicity, sexual orientation, or sexual activity status (Widman et al., 2017). In addition, the program significantly improved girls' STD/HIV knowledge, safer sex attitudes and norms, communication intentions, sexual assertiveness skills, and condom self-efficacy at immediate post-test, with effects maintained at 4-month follow-up for STD/HIV knowledge, safer sex attitudes, and condom self-efficacy (Widman et al., 2018). Studies of condom use behavior in

high-risk adolescents show that negative condom attitudes, negative peer norms, and less sexual communication between partners are predictors of unprotected sex in this population, illustrating the importance of improving these outcomes among high-risk girls (L. Brown et al., 2008; Crosby et al., 2003).

Second, because of HEART's design, it can be administered anywhere with Internet access, quickly, with fidelity, and without the influence of facilitator biases. These features are especially valuable for high-risk girls because of the structural barriers that prevent them from receiving evidence-based, comprehensive sexual health programming. For example, in impoverished areas, in which high-risk girls are likely to live, youth are increasingly less likely to receive comprehensive sex education compared to youth in higher resource areas (Lindberg, Maddow-Zimet, & Boonstra, 2016). In addition, a recent study suggests that high-risk youth may be more engaged in their healthcare needs when they are able to access health information through the Internet (Gaskin, Longhurst, & Anoshiravani, 2012).

Third, the program focuses on developing communication skills, training that is vital for high-risk girls, who may have social or communication skill deficits (Cross, 2011; Sanger, 1999). Further, negotiating condom use may be difficult for girls because of cultural norms that dictate that girls should be passive about sexual topics and desires (Gagnon & Simon, 2005). HEART incorporates communication skill development alongside other sexual decision-making training that is necessary for high-risk girls, including information about where to access sexual health resources. Although I acknowledge that high risk girls may have other behavioral (e.g., substance use) or environmental risk factors (e.g., accessibility of health clinics) that impact their sexual behaviors and are not fully addressed in HEART, I believe that HEART will impact several important factors that contribute to safer sexual behavior. In addition, HEART can be

adapted in the future to include more targeted modules for high-risk girls. It is important that I evaluate this promising program in a sample of high-risk girls.

Summary and Study Purpose

Although sexual health intervention programs for high-risk girls have been developed, these programs are limited by factors including: 1) lack of a gender-specific focus, 2) lengthy time commitments, 3) inaccessibility, and 4) mixed or limited effects. There is a need for a brief, accessible sexual health program for high-risk girls that can be tailored to meet their needs. The HEART program can address limitations of prior programs, but it has not yet been evaluated in a sample of high-risk girls. The purpose of this dissertation is to present two studies: 1) a quantitative evaluation of HEART using a sample of high-risk girls compared to a non-equivalent control group of girls who received an attention-matched web program without sexual content; and 2) a qualitative study to identify factors that may serve as barriers to the effective implementation of sexual health knowledge and skills in the lives of high-risk girls.

Overview of Studies

In Study 1, HEART was administered to 52 high-risk girls aged 12 to 19. For the purposes of this study, high-risk was defined as participants who reported having at least one emotional or behavioral difficulty as defined: 1) engaging in at least one delinquent activity in the last 30 days, 2) engaging in substance use in the past three months, or 3) reporting elevated levels of emotional or behavioral problems. This definition of high-risk is consistent with prior research in this area (Farnworth, Thornberry, Lizotte, & Krohn, 1990; Goodwin, Haycraft, & Meyer, 2014). Participant outcomes were compared to those of a control group who completed an alternative web program without sexual content. This control group was matched to the intervention participants by sociodemographic characteristics (i.e., age, race/ethnicity,

socioeconomic status, sexual activity status), as well as other factors statistically related to our outcomes of interest (i.e., pre-test measures of the outcomes variables, such as communication intentions, condom attitudes, etc.). In addition, I evaluated whether program outcomes differed for girls based on the severity of their EBDs (i.e., delinquent behavior, substance use behavior, mental health symptoms).

In Study 2, qualitative interviews were used to understand factors that impede high-risk girls' use of sexual health knowledge and skills in their sexual relationships. It is recommended that qualitative methods accompany quantitative methods when evaluating intervention programs to overcome several limitations of quantitative evaluations (R. B. Johnson & Schoonenboom, 2015). One such limitation is the reliance on immediate post-tests or short-term follow-up (approximately 3-6 month) assessments in initial evaluations, which cannot fully capture behavior change. Instead, these assessments usually evaluate intervention effects on factors that mediate behavioral outcomes (e.g., knowledge, attitudes, intentions); however, even interventions that are efficacious at improving these outcomes may not produce behavioral change if there are intervening factors.

I used the Social Ecological Model (see Figure 1.2; Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002) to understand these intervening factors. According to SEM, behavior occurs within a system of overlapping influences, including individual-level, interpersonal-level, community-level, and societal-level influences. Because health interventions typically are targeted at the individual-level, intervening factors at the outer-levels of the model may inhibit individual behavior change. For example, even if attitudes toward condoms improve (individual-level), this change will not lead to condom use if a person does not have access to condoms (community-level). Intervening factors may not be recognized using only quantitative

assessment measures, and a program that appears to be effective based on immediate outcome assessments may fail to produce behavioral change if these barriers are not addressed. In contrast, long-term outcome assessments with a lack of significant behavioral effects could be attributed to a completely ineffective program, rather than contextual barriers. Adding a qualitative component to health intervention studies allows for a better understanding of the contexts in which information and skills learned in intervention programs can be used successfully, especially contexts that are difficult to measure quantitatively (R. B. Johnson & Schoonenboom, 2015). Many studies of randomized controlled trials have added qualitative components, resulting in adaptations to theoretical models, program content, and facilitator actions (for a review, see R. B. Johnson & Schoonenboom, 2015).

Organization of Dissertation

The remainder of this dissertation is divided into four chapters. Chapter II consists of Study 1 (Introduction, Methods, Results, and Discussion). Chapter III consists of Study 2 (Introduction Methods, Results, and Discussion). Chapter IV is a general discussion of both Study 1 and Study 2 and their contributions to the sexual health intervention literature.

Table 1.1

Five modules of HEART that target areas of the Reasoned Action Model.

Theoretical Construct	Content of Module	Sample Methods
Motivation	- Importance of making informed decisions about abstinence and condoms - Potential medical and emotional consequences of HIV/STDs and having sex - Empower girls to make healthy decisions that fit within their own values	- Values clarification task - STD risk game - Video clips
Knowledge	- General HIV/STD facts - Identify methods of contraception, including abstinence - Increased understanding of healthy relationships	- STD quiz - Didactic Information - Myths and Facts
Attitudes & Social Norms	- Challenge negative norms about abstinence and condom use - Challenge negative attitudes about condom use - Encourage critical thinking about peer messages of sexual behavior	- Q & A - Myths and Facts - Video clips
Self-Efficacy	- Increase confidence in proper condom use - Increase ability to locate local sexual health services - Stress importance of routine STD screening if sexually active	- Condom demo video and game - Sexual health services locator
Sexual Communication	- Sexual communication and refusal skills - Negotiating abstinence and condom use with a partner - General sexual assertiveness training	- Assertiveness Skills Training - Audio clips modeling skills - Audio task w/ self-feedback

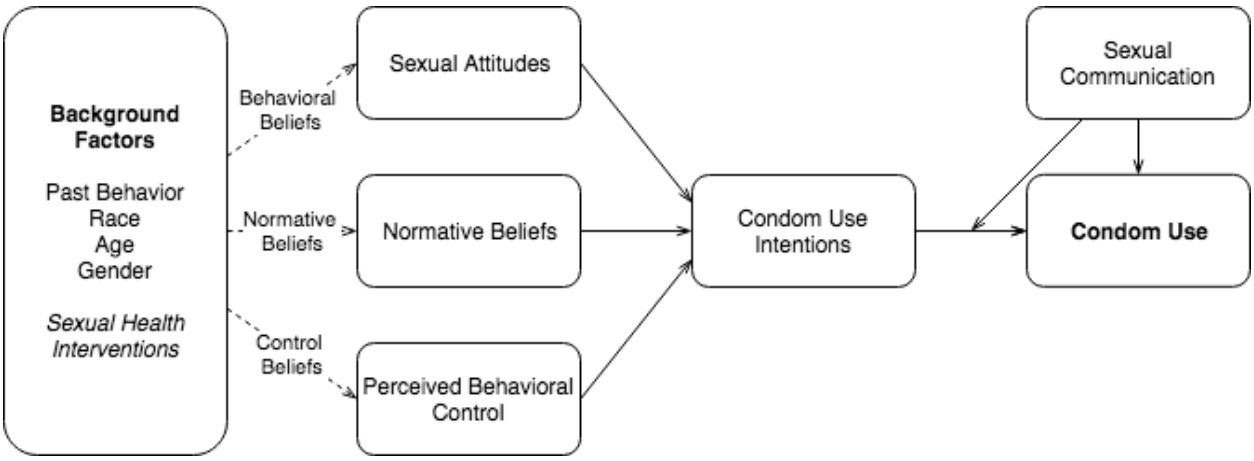

Figure 1.1. Extended version of Reasoned Action Model with communication skills.

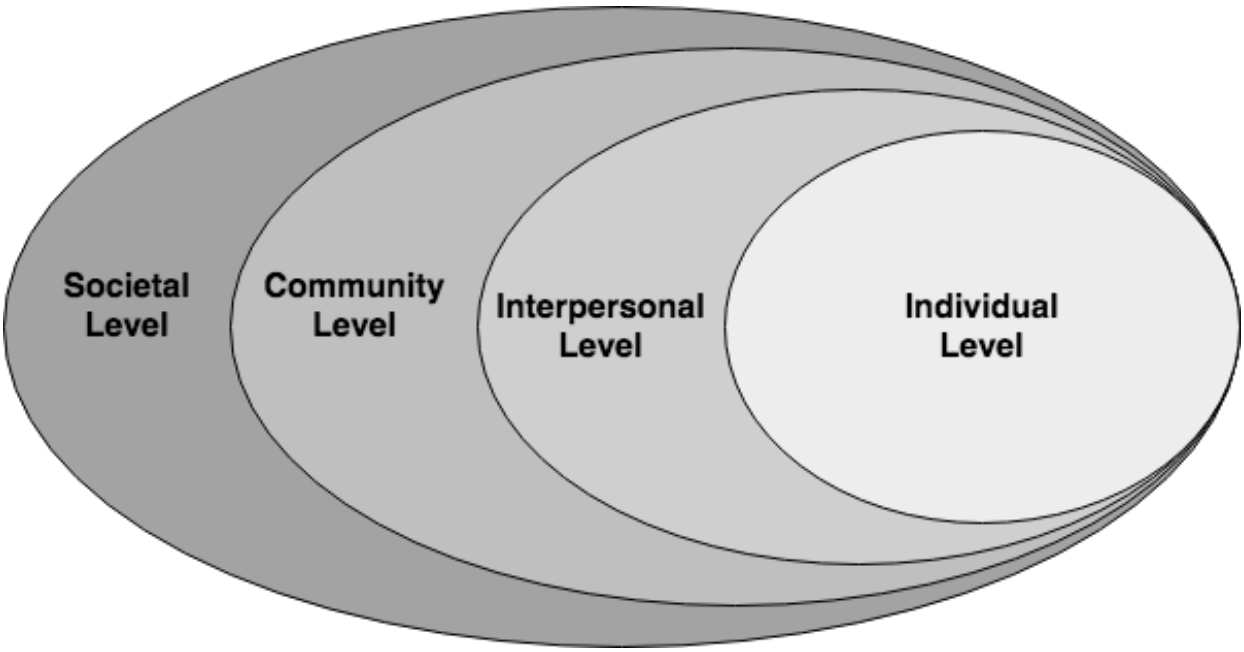

Figure 1.2. Social Ecological Model.

CHAPTER 2

Study 1

Adolescent sexual health is a public health concern. Each year, youth account for 50% of new sexually transmitted disease (STD) diagnoses and 21% of new HIV diagnoses (CDC, 2016a; CDC, 2016c). Adolescent girls have a pronounced risk of negative sexual health outcomes. As many as one in four sexually active girls has an STD (Forhan et al., 2009), which can lead to serious complications, such as ectopic pregnancy, pelvic inflammatory disease, infertility, and cervical cancer (CDC, 2009). Unplanned pregnancy is also a serious risk facing teenage girls, with 230,000 babies born to 15- to 19-year-olds in 2015 (Martin, 2017).

For sexually active adolescents, male condoms are a cost-effective and accessible means to prevent negative sexual health outcomes (Trussell, 2011). When used consistently and correctly, condoms are highly effective at preventing pregnancy, HIV, and other STDs, regardless of whether a teen is engaging in other risky behaviors, such as having sex with multiple partners. However, adolescents, especially adolescent girls, often use condoms inconsistently (Kann, McManus, et al., 2016). Although 97% of sexually active girls have used a condom at least once (Martinez & Abma, 2015), only about half used them the last time they had sex (Abma & Martinez, 2017; Kann, McManus, et al., 2016). Additionally, although 54% of girls used some form of contraception in their last sexual encounter (Kann, McManus, et al., 2016), without a barrier method, such as condoms, these girls are not protected from STDs/HIV (Abma & Martinez, 2017). Importantly, although female condoms may be as effective as male condoms in protecting against HIV/STDs and allow for greater female control, they are understudied, rarely used, and may be inaccessible to adolescents (Committee on Adolescence, 2013).

Adolescent girls with emotional and behavioral difficulties (EBDs) are especially at risk of negative sexual health outcomes, including unplanned pregnancy, HIV, and other sexually transmitted diseases. EBDs refer to a range of experiences including mental health problems (e.g., depression, anxiety) and problem behaviors (e.g., substance use, delinquency, conduct problems) that place adolescents at greater likelihood of engaging in sexual risk behavior (Garner et al., 2013; National Research Council & Institute of Medicine, 2009). Past research grounded in Problem Behavior Theory (Jessor & Jessor, 1977) has found that marijuana use, alcohol use, and delinquent behavior are associated with earlier onset of sexual activity (F. M. Costa et al., 1995), multiple sexual partners (Aalsma et al., 2010), and inconsistent condom use (Frances M. Costa et al., 1996). Empirical research also suggests that mental health difficulties are similarly linked to sexual risk behaviors, such as earlier sexual debut and inconsistent condom use (Geri R. Donenberg et al., 2003; Schuster et al., 2013).

Importantly, despite the heightened risk of STDs/HIV and unplanned pregnancy among girls with EBDs, most sexual health interventions are designed to reach a general population of girls and not girls with EBDs. Of the current programs designated as evidence-based by the OAH (2016), no programs are specifically targeted at youth with EBDs, and only three target other high-risk youth, including youth in alternative schools, homeless or runaway youth, and incarcerated youth. There is a need for additional research into efficacious sexual health interventions to serve adolescent girls with emotional and behavioral difficulties.

A brief, web-based sexual health program called HEART (Health Education and Relationship Training) was recently developed and may be efficacious among adolescent girls with EBDs. This program focuses on developing assertive communication skills and improving sexual health outcomes for adolescent girls (Widman, Golin, et al., 2016) and was found to be

highly acceptable and efficacious with adolescent girls in a school-based sample (Widman et al., 2018; Widman et al., 2017). This program is based on an extended version of the Reasoned Action Model (RAM; Fishbein & Ajzen, 2010), a health behavior model that has been used to predict condom use (Albarracín et al., 2001). Specifically, this extended RAM acknowledges the role of sexual communication in predicting adolescent condom use (see Figure 1.1).

It is critical to evaluate the HEART program in a sample of girls with EBDs. As the array of efficacious sexual health interventions has expanded, the need to implement and evaluate these programs in varied populations and real-world settings has been made evident (Bull, 2018; Valentine et al., 2011). This process, referred to as implementation science, provides greater evidence of program efficacy in diverse populations, allowing for more informed decisions about widespread program dissemination and intervention adoption by organizations (Schackman, 2010). An efficacy replication study of HEART contributes to the burgeoning field of implementation science and provides greater understanding as to whether HEART is efficacious among girls with EBDs.

Several factors suggest that HEART may be efficacious among girls with EBDs. First, intervention participants in the initial evaluation of HEART liked the program and found it engaging (Widman et al., 2017). Further, HEART participants showed improvements in several safer sex outcomes, including STD/HIV knowledge, safer sex attitudes and norms, communication intentions, sexual assertiveness skills, and condom self-efficacy (Widman et al., 2018). Prior studies have shown that these factors are important for preventing unprotected sex in high-risk adolescents (L. Brown et al., 2008; Crosby et al., 2003). Second, the program is brief (45 minutes) meaning it does not necessitate intense resources or a lengthy commitment for its completion. Third, it is web-based. There is a growing literature on the utility of technology-

based interventions for adolescents (Lenhart et al., 2015). Further, research suggests that high-risk youth may be more engaged in their healthcare needs when they are able to access health information through the Internet (Gaskin et al., 2012). Fourth, HEART focuses specifically on communication skills, which are a strong predictor of condom use (Widman, Noar, Choukas-Bradley, & Francis, 2014). Communication skill practice is also vital for girls with emotional and behavioral difficulties because they tend to have social skill deficits (Cross, 2011). Fifth, the program is sex-positive, meaning that this program focuses on more than the absence of poor sexual outcomes, emphasizing the importance of girls' personal values in making healthy choices about sexual activity (WHO, 2006).

The purpose of this study was to determine whether HEART is an efficacious sexual health program for adolescent girls with emotional and behavioral difficulties. Because the primary objectives of the HEART program are to improve sexual communication skills and promote condom use, the primary outcomes of this study were sexual communication intentions, sexual assertiveness skills, and condom use intentions. It was hypothesized that participants who completed the HEART program would show greater improvement in communication intentions, sexual assertiveness skills, and condom intentions compared to a non-equivalent control group, who completed an attention-matched web program without sexual content, matched to intervention participants by propensity scores. Further, several secondary outcomes were assessed that correspond with predictors of condom use intentions according to RAM, including HIV/STD knowledge, condom attitudes and norms, and sexual self-efficacy. It was hypothesized that intervention participants would also show greater improvement on these outcomes compared to the control group. Lastly, this study examined the moderating effects of girls' emotional and

behavioral difficulties, specifically their delinquency, substance use, and mental health symptoms, on the primary outcomes, although no predictions were made for these analyses.

Method

Study Design

Through discussion with community partners, I decided that a sample of 50 participants was reasonable for recruitment over the 13-month evaluation period, given the difficulty in reaching adolescents with emotional and behavioral difficulties in the community. Due to the constraints of conducting an experimental evaluation with this sample size, a decision was made to conduct this evaluation using a non-equivalent control group design. The control group consisted of 115 control participants recruited from four high schools in the southeastern U.S., who completed an attention-matched web program during the initial evaluation of HEART. To mimic an experimental design and approximate equivalence between intervention and control participants, propensity score analysis was used to match intervention participants to control participants. A power analysis showed that with these 115 control participants, 50 was an adequate sample size to achieve 80% power at a .05 significant level (Total *N* needed = 150; Control group *N* = 115; Intervention *N* needed = 35). Our total recruitment exceeded this number (*N* = 52); however, five participants were excluded from outcome analyses because they did not meet pre-specified criteria for emotional and behavioral difficulties. Descriptions of intervention and control participants, as well as the propensity score analysis, are detailed below.

Participants and Procedure

Intervention participants and procedure. Fifty-two participants were recruited through seven community-based organizations that provide services to adolescents who demonstrate several needs including: homelessness, court involvement, and behavioral or emotional

problems. These organizations were located in a metropolitan area in the southeast United States. Several methods were used to recruit participants for the study, including referrals from organization staff, face-to-face contact with parents or adolescents, and recruitment flyers hung on organization billboards. In all recruitment materials, I indicated that I was recruiting adolescent girls; therefore, agency staff, parents, or participants determined whether participated identified as girls and were eligible for participation. When asked to report their gender identity in a demographic survey during the study, no participants indicated they identified as transgender.

Participants were adolescent girls between the ages of 12 and 19 (*M* age = 15.60). They were racially/ethnically diverse (64% Black; 23% Hispanic; 13% Multiracial/Other). Most participants were heterosexual (77%; 4% Lesbian, 17% Bisexual), and 58% were sexually active (i.e., had engaged in sexual touching, oral sex, or sexual intercourse). Emotional and behavioral difficulties were not assessed prior to the beginning of the study, so no participants were excluded from participating based on this factor; however, because the focus of this project was to determine intervention efficacy among girls with EBDs, five intervention participants were excluded from data analysis because they did not meet pre-specified criteria for having emotional or behavioral problems (see measure section below).

All girls who were under 18 years old were asked to return a parent/guardian consent form prior to meeting with research staff for data collection. These girls also completed a participant assent form prior to beginning the study. Girls who were 18 or older completed a consent form during the scheduled data collection meeting. After consent/assent had been obtained, participants completed a short survey through Qualtrics.com that assessed baseline levels of the variables of interest. Participants then completed the HEART program via laptop

computer in a private room. Immediately following the program, participants completed a two-minute audio task to measure their sexual assertiveness skills (procedure described in detail below). Lastly, participants completed a post-test survey. Participants took 29-95 minutes to complete the program (*M* = 47 minutes); however, five participants experienced technological problems, which resulted in a longer completion time. Participants received $20 in gift cards for their participation in this study.

Control participants and procedure. Our comparison group was a sample of 115 girls who completed an attention-matched control web-program called Growing Minds (Burnette, Russell, Hoyt, Orvidas, & Widman, 2017). This program focuses on cultivating academic growth mindsets (Burnette & Finkel, 2012). These participants were recruited from four low-income high schools in the southeastern United States as part of the initial evaluation of HEART (Widman et al., 2018). Participants ranged from 14 to 17 years old (*M* age = 15.22) and were racially/ethnically diverse (39% White, 22% Black, 30% Hispanic). Most participants identified as heterosexual (80%; Lesbian = 4%, Bisexual = 13%), and 42% indicated they were sexually active (i.e., had engaged in sexual touching, oral sex, or sexual intercourse).

All tenth-grade girls in the four high schools were recruited using active parental consent and student assent. Of the 78% of students who returned parent consent forms, 79% of parents granted consent. After consent and assent were obtained, participants first completed a computerized pre-test survey in a group-based classroom setting. Next, participants were randomly assigned to either HEART or Growing Minds. In total, 222 participants were randomized, 115 of whom completed Growing Minds. Approximately 6 weeks after the pre-test assessment, participants completed the intervention and immediate post-test assessment during school time during individual sessions in private rooms. Participants also completed the two-

minute sexual assertiveness skills assessment. Participants received $10 for returning their parental consent form, regardless of whether consent was granted. In addition, participants received $10 for the pre-test and $30 for the intervention and immediate post-test. For a detailed description of study procedures, see prior studies (Burnette et al., 2017; Widman et al., 2018).

Intervention Program Description

A full description of the HEART program is available elsewhere (Widman, Golin, et al., 2016). Based on RAM, the HEART program contains five modules that target 1) safer sex motivation, 2) STD/HIV knowledge, 3) sexual norms/attitudes 4) safer sex self-efficacy, and 5) sexual communication skills. Screening quizzes at the start of each module identify girls with deficits in knowledge, skills, or self-efficacy, and HEART provides them with added program content. All modules incorporate features such as information, videos, quizzes, games, and skills training with self-feedback. The importance of assertive communication is emphasized throughout the program, but the sexual communication skills module focuses specifically on assertiveness skill development, using a role-playing exercise. Although the program highlights the importance of condom use during sexual activity, the program can be used by both sexually active and non-sexually active girls and encourages girls to make independent decisions about engaging in sexual activity (see Table 1.1 for detailed program information).

Control Program Description

A full description of the Growing Minds program is available elsewhere (Burnette et al., 2017). This program focuses on cultivating academic and social growth mindsets. Similar to HEART, Growing Minds includes five modules that are comparable in format and materials. This program is compatible with previous mindset work but also provides two unique components: 1) teaching about growth mindsets and 2) incorporating role models to reinforce

growth mindsets. Both HEART and Growing Minds require active participation and include similarly engaging content, such as videos and quizzes. Further, both programs take approximately the same amount of time.

Measures

The main variables of interest are detailed below. These variables were consistently administered to both the intervention and control groups unless otherwise noted (see Appendix A for full questionnaire).

Demographic and background characteristic questionnaire. This questionnaire was administered as part of the pre-test assessment. It assessed variables such as: age, race/ethnicity, sexual orientation, and parent education level. In addition, it assessed romantic and sexual behavior with questions adapted from the AIDS Risk Behavior Assessment (ARBA; G. R. Donenberg, Emerson, Bryant, Wilson, & Weber-Shifrin, 2001). These questions included: relationship status, sexual activity, condom use, history of sexual communication with a partner, and other questions related to romantic or sexual relationships.

Acceptability questionnaire. Intervention participants received a questionnaire to assess the acceptability of the intervention, based on previous measures (Bauermeister et al., 2015; Jemmott, Jemmott, Braverman, & Fong, 2005; Paiva, Lipschitz, Fernandez, Redding, & Prochaska, 2014). Participants responded to questions that assessed six aspects of acceptability, including, 1) intent to return to the website again, 2) whether one would recommend the website to a friend, 3) whether one would use the information from the program in the future, 4) how much one liked the program, 5) how much one learned from the program, and 6) how much the program kept one's attention. The first three questions were dichotomously scored (0 = "No/Not Sure," 1 = "Yes"), whereas the last three questions were scored a four-point Likert-type scale (1

= “Not at all,” 4 = “A lot”). Participants were also asked to report the people they intended to talk to about the program in the next three months (e.g., best friend, dating partner, mother).

Emotional and behavioral difficulties. Intervention participants had to meet criteria for at least one of the emotional or behavioral difficulties described below to be included in analyses for this study.

Delinquency. Thirteen items from the delinquency behavior scale of The Rochester Youth Development Study assessed antisocial and delinquent behavior (Thornberry, Krohn, Lizotte, Smith, & Tobin, 2003). Participants responded to items such as, “In the past 30 days, have you tried to buy or sell things that are stolen” with either “Yes” (scored as 1) or “No” (scored as 0). Participants who had engaged in at least one of the delinquent behaviors in the past 30 days (i.e., had a score of 1 or more) were eligible for inclusion in analyses. Delinquency was also used as a moderator variable. For these analyses, items were summed with higher scores indicating greater delinquency.

Substance use. These three items assessed how many days in the past three months participants have used alcohol, marijuana, or other illegal drugs (e.g., opioids; Kann, McManus, et al., 2016), with options ranging from “0” to “9 days or more.” For youth, initiating substance use prior to neurobiological adulthood is risky, given the extensive brain development that occurs during adolescence and young adulthood (Bava & Tapert, 2010; Silveri, 2012). Therefore, adolescents who had engaged in any substance use in the past three months (i.e., had a score of one or more) were eligible for inclusion in analyses. Substance use was also used as a moderator variable. For these analyses, substance use frequency scores were averaged to create a severity score, consistent with previous studies (e.g., Elkington, Bauermeister, & Zimmerman, 2010; Sarver, McCart, Sheidow, & Letourneau, 2014).

Mental health symptoms. The Strengths and Difficulties questionnaire (Goodman, Meltzer, & Bailey, 1998) was used to assess the presence of emotional or behavioral mental health symptoms. The questionnaire has four subscales: emotional symptoms, conduct problems, hyperactivity/inattention, and peer relationship problems. Participants responded on a scale from "Not True" to "Certainly True" for a maximum score of five on each scale. Scores on this subscale are categorized as "Normal," "Borderline," or "Abnormal" based on normed data (Goodman et al., 1998), with 20% of the population being classified as "Borderline" or "Abnormal." Participants in this study who scored "Borderline" or above on any of the subscales (cut-off scores: Emotional Problems = 6; Conduct Problems = 4; Hyperactivity/Inattention = 6; Peer Problems = 4) were eligible for inclusion in analyses. Internalizing and externalizing symptoms were also used as a moderator variable. For these analyses, the Total Problems Score was generated by computing a sum score of all four subscales for a maximum score of 20 (Goodman et al., 1998).

Communication intentions. Three items were used to assess the likelihood of communicating with a dating partner about the following sexual topics: 1) sexual limits and boundaries, 2) STDs/pregnancy, and 3) condom use. These items were adapted from the ARBA (G. R. Donenberg et al., 2001). Participants selected a response from 0% to 100% indicating the likelihood they would communicate about each sexual topic with a dating partner in the next three months. Scores were averaged to create a composite score, with higher scores indicating greater likelihood of communicating with a dating partner (Intervention: α = .83; Control: α = .83).

Condom intentions. One item from the ARBA (G. R. Donenberg et al., 2001) was used to assess the degree to which participants planned to use condoms if they had sex in the next

three months. Participants selected a response from 0% to 100% to indicate how often they would use condoms in the next three months if they had sex, with higher scores indicating condom use in a greater percentage of sexual encounters.

STD/HIV knowledge. Twelve items were used to assess participants' knowledge of STDs and HIV. In response to each item (e.g., "Most people know when they have an STD"), participants responded "Yes," "No," or "I don't know." Items answered correctly were coded "1," and incorrect or "I don't know" responses were coded "0." Scores were summed to create a composite knowledge score, with higher scores indicating greater knowledge of STDs/HIV (possible range = 0-12).

Sexual self-efficacy. The self-efficacy for HIV Prevention scale (L. Brown et al., 2014) was used to measure confidence using HIV preventative behaviors (e.g., communicating with a partner about sex, using condoms). Example items included: "How sure are you that you could talk to your partner about safer sex?" and "How sure are you that you could have condoms available when you need them?" Participants responded on a 4-point scale from 1 (*Couldn't do it*) to 4 (*Very sure*). Scores were averaged to create a composite score with higher scores representing greater confidence in HIV prevention skills (Intervention: $\alpha = .73$; Control: $\alpha = .70$).

Condom attitudes. Participants' beliefs about condom use (e.g., "Condoms create a sense of safety") were measured using the Safety subscale and Effect on Sexual Experiences subscale of the Condom Attitudes Scale – Adolescent Version (St. Lawrence et al., 1994). Participants indicated their attitudes on a scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Item scores were averaged to create a composite score with higher scores indicating more positive attitudes toward condoms (Intervention: $\alpha = .51$; Control: $\alpha = .52$).

Condom norms. Three items from Basen-Engquist et al. (1999) were used to evaluate participants' perceptions of their peers' opinions on condoms (e.g., "Most teenagers believe condoms should always be used if a person my age has sex"). Item responses ranged from 1 (*Strongly Disagree* to 5 (*Strongly Agree*). Scores on the three items were averaged to create a composite score with higher scores indicating views that peers' condom attitudes are positive (Intervention: $\alpha = .86$; Control: $\alpha = .91$).

Sexual assertiveness. Self-reported sexual assertiveness was assessed using 3-items from the Multidimensional Sexual Self-Concept Scale (Snell, 1998). Participants responded to items such as, "I'm very assertive about the sexual aspects of my life," on a scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Item scores were averaged to create a composite score of sexual assertiveness, with higher number indicating greater sexual assertiveness (Intervention: $\alpha = .76$; Control: $\alpha = .67$).

Sexual assertiveness skills assessment. Participants' skills at refusing unwanted sexual activity and negotiating condom use were assessed with an audio recoded role-play task (adapted from Forsyth, Lai, & Kielhofner, 1999). Participants listened and responded out-loud to three role-play situations involving: 1) pressured intercourse from a steady romantic partner, 2) pressured intercourse from a casual partner, and 3) pressured unprotected intercourse from a partner (see Appendix 1 for instructions, scenario wording, scoring, and validity information). Responses were audio recorded, transcribed by trained research assistants, and rated based on three facets from an established coding system (Forsyth et al., 1999): 1) refusal of behavior, 2) giving a reason for the refusal, and 3) verbal assertiveness (range for each code: 0 = absent, 1 = moderate, 2 = high). For the control group, four trained coders blinded to study condition coded the responses (interrater reliability = 84%). For the intervention group, two of the same coders

coded the responses (interrater reliability = 79%). Scores were averaged to obtain an index of sexual assertiveness skills. Data from 22 participants were excluded because participants did not follow directions (n = 1 intervention; n = 21 control).

Analytic Approach

Missing data. First, the dataset of intervention participants was merged with the dataset of the control group participants. To account for missing data and the non-equivalent control group design, both multiple imputation and propensity score analysis (PSA) were performed on this merged dataset. The data were analyzed with the SPSS Missing Values package in SPSS Version 24 (IBM Corp., 2016). However, scores from the communication skills assessment were not included in missing data analyses because a large proportion of control participants failed to follow directions for the task during at least one scenario (n = 48) resulting in over 20% missing data that was Not Missing Completely at Random (MCAR). Therefore, for the purposes of calculating communication skills scores, all participants who did not follow directions for all scenarios (*n* = 1 intervention*; n* = 21 control) were excluded; mean scores were calculated for the remaining participants.

For the remaining data, approximately 0.60% of data points were missing across the dataset from 54 participants. Data were missing on 21 variables, including 15 pre-intervention variables (SES, sexual orientation, gender egalitarianism, sexual assertiveness, delinquency, emotion regulation, mental/behavioral health, impulsivity, STD/HIV knowledge, condom attitudes, condom norms, sexual self-efficacy, communication intentions, condom intentions) and six outcome variables (HIV/STD knowledge, sexual self-efficacy, condom attitudes, condom norms, condom intentions, communication intentions). No variable had more than 8% missing data points.

Little's chi-square test (Little, 1988) was conducted, and it was determined that the data was MCAR, for both the control group, ($\chi^2[3401] = 3345.83$, $p = .75$) and the intervention group ($\chi^2[195] = 0.00$, $p = .99$). Therefore, multiple imputation was conducted on the dataset for $N = 10$ imputations, consistent with guidelines from Graham, Olchowski, and Gilreath (2007). For all variables, values were imputed at the item level. All variables were constrained based on available values within the dataset. Variables were set to both predict imputed values and be imputed, except for the dependent variables that were set to be imputed only.

Propensity score analysis. Following imputation, PSA was conducted to match intervention and control participants to mimic a randomized, experimental design. To determine variables to include in the PSA, first, bivariate analyses were conducted. Based on suggestions from Brookhart et al. (2006), variables related to group (intervention or comparison) or the dependent outcomes at a $p<.15$ level were included in propensity score analysis, which included age, White race (0 = "Non-White," 1 = "White"), Black race (0 = "Non- Black," 1 = "Black"), parent education (0 = "high school degree or less," 1 = "some college or more"), sexual activity status (0 = "not sexually active," 1 = "sexually active"), sexual assertiveness, pre-test communication intentions, pre-test condom intentions, pre-test condom attitudes, pre-test condom norms, pre-test sexual self-efficacy, and pre-test STD/HIV knowledge. The PSA was conducted using the MatchIt package (Ho, Kosuke, King, Stuart, & Whitworth, 2011) in R version 3.4.3 (R Core Team, 2017). Due to the inequivalent sample sizes and dissimilarity between the intervention and control group, a full matching procedure was conducted (Rosenbaum, 1991). Whereas many matching procedures eliminate participants for which a close enough match cannot be found, full matching overcomes this limitation by creating matched sets that include at least one intervention participant and at last one control participant (Rosenbaum,

1991; Stuart & Green, 2008). Further, while other matching techniques using subclassification require equal sized groups, the full matching procedure is done in an optimal manner so subclasses are smaller in circumstances in which fewer comparison participants are similar to intervention participants (Stuart & Green, 2008). Following propensity score analysis, balance diagnostics showed an improvement in balance across eight of the twelve variables (Rubin, 2001). However, the percent balance improvement across all covariates was 95%. See Table 2.1 for standardized mean differences between groups before and after matching.

Hypothesis testing. Weighted linear regression analyses were conducted for the primary study outcomes (sexual communication intentions, sexual assertiveness skills, and condom intentions) and the secondary study outcomes (STD/HIV knowledge, condom attitudes, condom norms, and sexual self-efficacy). Although it is recommended to control for all covariates used in PSA to reduce possible remaining bias (Rubin & Thomas, 2000; Schafer & Kang, 2008), this would have resulted in inadequate power to detect differences between the intervention and control groups with the current sample size. Instead, for each analysis, the baseline measurement of each variable was included as a covariate. The one exception was for the analysis of sexual assertiveness skills, which were only measured at post-test. Further, post-matching, participants in the intervention were still significantly older than participants in the control group ($p = .03$). therefore, age was controlled for in all analyses.

Subsequent linear regression analyses were conducted to assess moderation effects of delinquency, substance use, and mental health symptoms on each outcome. To assess delinquency as a moderator, delinquency and the intervention by delinquency interaction term were added to the models for each outcome. Then, to assess substance use as a moderator, substance use and the intervention by substance use interaction term were added to the models

for each outcome. Lastly, to assess mental health symptoms as a moderator, mental health symptoms and the intervention by mental health symptoms interaction term were added to the models for each outcome.

Results

Descriptive Statistics

First, the acceptability of the HEART program among intervention participants is reported. The majority of intervention participants liked the program "some" or "a lot" (96%), learned "some" or "a lot" (94%), felt the program held their attention "some" or "a lot" (98%), said they would return to the website again (77%), would recommend the program to a friend (92%), and would use what they learned in the future (98%). Further, participants indicated they would talk about the program in the next three months with people in their lives, including their best friend (85%), their dating partner (81%), other friends/classmates (58%), their mother (54%), someone else (54%), their father (25%), or their teacher (19%).

As mentioned above, after matching, a few differences were still apparent between intervention and control group (see Table 2.2). Specifically, intervention participants were older, had higher communication intentions, had higher condom use intentions, and had more positive attitudes toward condoms.

Primary Outcomes

At post-test, intervention participants improved in their communication intentions and sexual assertiveness skills based on the behavioral assessment (see Table 2.3). Because sexual assertiveness skills were measured at post-test only, a sensitivity test was conducted with a self-report measure of sexual assertiveness as a covariate in the regression analyses. The results

remained significant. There were no differences between intervention and control group on condom intentions. Effect sizes ranged from small to large (0.10-1.13).

Secondary Outcomes

At post-test, intervention participants significantly improved in their condom attitudes, condoms norms, sexual self-efficacy, and STD/HIV knowledge (See Table 2.3). Effect sizes ranged from medium to large (0.53-1.65).

Exploratory Moderation Analyses

Follow-up moderation analyses revealed several interactive effects between EBDs and the intervention on the primary outcomes.

Communication intentions. There was a significant interaction between the intervention and delinquency on communication intentions (see Table 2.4). Specifically, intervention participants who reported engaging in higher levels of delinquency ($b = 23.32$, $p < .001$) had greater communication intentions at post-test compared to control participants who engaged in higher levels of delinquency; however, there were no differences in communication intentions at post-test between intervention and control participants who engaged in lower levels of delinquency ($b = 2.551$, $p = .481$; see Figure 2.1). Further, there was a significant interaction between the intervention and substance use on communication intentions (see Table 2.1). Participants who engaged in higher levels of substance use had significantly greater communication intentions compared to control participants with higher levels of substance use ($b = 14.00$, $p < .001$) at post-test; however, there were no differences in communication intentions at post-test between intervention and control participants for those who engaged in lower levels of substance use ($b = 4.54$, $p = .20$; see Figure 2.1).

Communication skills. There was a significant interaction between the intervention and substance use on communication skills (See Table 2.4). Specifically, the intervention group had greater communication skills at post-test compared to the control group among participants with higher substance use engagement (b = 0.86, p < .001) and lesser substance use engagement (b = 0.29, p < .001; see Figure 2.2); however, the relationship between the intervention and communication skills was stronger for those who engaged in higher levels of substance use.

Condom use intentions. There was a significant interaction between the intervention and delinquency on condom use intentions (see Table 2.4). However, although intervention participants who engaged in higher levels of delinquency had greater condom use intentions than control participants who engaged in higher levels of delinquency, this trend was marginally significant (b = 7.19, p = .08). There were no differences in condom use intentions between intervention participants and control participants with lower levels of delinquency (b = -4.83, p = .31; see Figure 2.3). Further, there was an interaction between the intervention and mental health symptoms on condom use intentions. Specifically, the intervention group had greater condom use intentions at post-test compared to the control group for participants with greater mental health symptoms (b = 18.90, p<.001) and lesser mental health symptoms (b = 2.76, p<.001; see Figure 2.3); however, the relationship was stronger for those with greater mental health symptoms.

Discussion

Negative sexual health outcomes, such as STDs/HIV and unplanned pregnancy, are a significant problem among youth in the United States, especially girls. Girls with emotional and behavioral difficulties are at increased risk of negative sexual outcomes, but interventions to reduce this risk are limited. The current study addressed this gap in the current sexual health

intervention literature by evaluating the potential of a new, web-based intervention called HEART to reduce the risk of negative sexual health outcomes among a unique sample of adolescent girls with EBDs recruited from community-based agencies in the southeastern United States.

First, it is important to note that intervention participants had positive reactions to the HEART program. An overwhelming majority of girls liked the program, thought it was helpful, were engaged with the program, would recommend it to a friend, and would use the information in the future. Further, most participants reported they would return to the website again. These findings are promising given the difficulty in engaging adolescents in educational programming (National Research Council & Institute of Medicine, 2004).

Further, this study showed that HEART is efficacious in improving outcomes for girls with emotional and behavioral difficulties in several areas that are key to safer sexual decision-making. Girls who received the HEART program improved significantly in their communication intentions and communication skills compared to the control group. Further, intervention participants also improved in their condom attitudes, condom norms, sexual self-efficacy, and STD/HIV knowledge compared to the control group. Notably, the effect sizes in this study were comparable to those found in the original evaluation of HEART (Widman et al., 2018).

Further, the effects of the program were moderated by severity of girls' EBDs. Specifically, the main effect of the intervention on communication intentions was moderated by both delinquency and substance use, with only intervention participants who engaged in higher levels of delinquency and substance use showing greater communication intentions at post-test compared to control participants. In addition, effects of the intervention on communication skills were moderated by substance use: although girls who engaged in higher and lower levels of

substance use both improved in their communication skills, the effect of the intervention was stronger for participants with greater substance use behavior. Lastly, delinquency and mental health symptoms moderated the effect of the intervention on condom use intentions. Intervention participants who reported higher levels of delinquency had marginally greater condom use intentions compared to the control group. Further, intervention participants with a greater number of mental health symptoms had greater condom use intentions at post-test compared to control participants with equivalent mental health symptoms. Intervention participants with a lesser number of mental health symptoms also had greater condom use intentions at post-test compared to control participants with equivalent mental health symptoms, but this relationship was weaker. These findings suggest that the HEART program may be especially useful for girls at the highest risk of negative outcomes. Importantly, girls with lower levels of the EBDs tended to have higher mean scores on the pre-test measures of the outcome variables, accounting for the reduced impact of the program on their scores at post-test. However, girls with higher levels of the EBDs had lower mean scores on the pre-test measures of outcomes variables and improved at post-test to scores similar to those of the participants with lower levels of EBDs

Further, this evaluation is part of an important process in replicating previously evaluated interventions so to ensure program efficacy across unique populations (Bull, 2018). This evaluation, along with that done by Widman et al. (2018), provides support for the efficacy of the HEART program across diverse groups of girls based on risk status, racial/ethnic background, sexual orientation, and sexual activity status. In addition, this evaluation provides evidence of the feasibility of program implementation in community-based settings in addition to school-based settings. Many participants in the current study completed the program during their typically scheduled time in their community organization, which suggests that HEART could be

incorporated into programming currently offered by community-based organizations with minimal staff training necessary.

However, although many of the findings of this study are promising, there were some limitations. First, because of the difficulty of recruiting girls with emotional and behavioral difficulties, the sample included only 52 girls who received the HEART intervention. Although HEART participants were matched to a control group who received an attention-matched intervention for outcome analyses, there were still mean differences on four covariates after matching that could not be controlled for in all analyses. In addition, participants were recruited from several different sites that were distinct from the control group. It was not possible to control for recruitment site because this would have substantially reduced statistical power. In future evaluations of HEART with high-risk girls, it will be important to use a randomized, experimental design.

Second, intervention participants completed the pre-test assessment, intervention, and post-test assessment in the same day without any longer-term follow-up assessments. Although this design removed the possibility of participant attrition, it prohibited examining program effects for girls with EBDs in the long-term. Although it is promising that such a brief program has immediate effects, examining program effects among high-risk girls in the long-term will provide additional evidence of HEART's utility for this vulnerable group.

Third, this sample was recruited from the southeastern United States, and the results may not be generalizable to other parts of the country. Further, although unintended, this sample only included racial/ethnic minority girls. The reason for this demographic composition cannot be definitively determined, but it is possibly a result of systemic bias against girls of color in the United States. Historically, girls of color have been criminalized and considered to be of higher

risk than White girls (Chesney-Lind & Eliason, 2006), which could have contributed to their involvement in community-based services or their likelihood of being referred to this study by staff at their organization. However, given the sexual health disparities among girls of color, it is important that these girls were reached by the intervention.

Fourth, there were two issues with the assessment measures in this study. First, the condom attitudes measure had a low internal consistency. The measure was included in the outcome assessment of this study to keep the analyses as consistent with the original evaluation as possible; however, in future evaluations of the HEART program, a new condom attitudes scale should be utilized. Second, the behavioral communication skills assessment, although novel, was only administered at post-test; therefore, analyses could not control for pre-intervention sexual assertiveness skills. In the future, it will be important to assess communication skills at pre-test to control for differences between groups. In addition, a greater proportion of control participants were excluded from communication skills analyses because they failed to follow directions. This discrepancy is likely because intervention participants had already practiced communication skills in the intervention and were more familiar with the task. In the future, it will be necessary to provide more detailed instructions regarding the communication skills task to ensure participants fully understand it prior to assessment.

With these limitations in mind, the potential for this brief, web-based program to improve sexual health outcomes among high-risk girls and the general population of girls is noteworthy. Further, this efficacy replication study is just one of many that are planned for the HEART program. Specifically, an evaluation of HEART with adolescent girls and boys is currently ongoing. In the long term, it will also be useful to perform effectiveness evaluations of HEART and understand how it can be implemented and used in real world settings.

Table 2.1.

Standardized differences between groups before and after matching.

	Before Matching	After Matching
Sociodemographics		
Age	0.33*	0.27*
White[a]	-0.39*	-0.02
Black	0.81*	-0.001
Sexually Active	0.45*	-0.19
HS Education or Less	0.31*	0.21
Sexual Assertiveness	0.47*	0.10
Outcomes		
Communication Intentions	0.32*	0.44*
Condom Intentions	-0.32*	0.38*
Condom Attitudes	0.27*	0.32*
Condom Norms	0.01*	-0.02
Sexual Self-Efficacy	0.29*	0.10
STD/HIV Knowledge	-0.39*	0.001

[a]Standardized mean difference could not be calculated because Intervention $n = 0$.

Unstandardized mean difference is reported

Table 2.2.

Sociodemographic characteristics of intervention group and control group after matching.

	Intervention % or *M* (*SD)*	Control % or *M* (*SD)*
Sociodemographics		
Age	15.79 (1.71)	15.33 (0.50)
White	00.00%	1.73%
Black	61.70%	71.01%
Hispanic	23.40%	25.59%
Sexually Active	63.83%	62.78%
HS Education or Less	40.43%	58.74%
Sexual Assertiveness		
Outcomes		
Communication Intentions	79.57 (28.00)	67.21 (25.50)
Condom Intentions	79.09 (34.23)	66.02 (30.54)
Condom Attitudes	3.77 (0.55)	3.59 (0.38)
Condom Norms	3.55 (1.16)	3.57 (0.80)
Sexual Self-Efficacy	3.02 (0.60)	2.96 (0.41)
STD/HIV Knowledge	6.15 (2.43)	6.15 (1.68)

Table 2.3.

Primary and secondary outcomes of HEART.

	B (SE)	*p*	*d*
Primary Outcomes			
Communication Intentions	10.42 (3.46)	.003	.38
Communication Skills	0.21 (0.04)	<.001	1.13
Condom Intentions	2.61 (4.46)	.56	.10
Secondary Outcomes			
Condom Attitudes	0.44 (0.09)	<.001	.83
Condom Norms	0.47 (.14)	<.001	.53
Sexual Self-Efficacy	0.44 (0.09)	<.001	.87
STD/HIV Knowledge	3.75 (0.35)	<.001	1.65

Table 2.3.

Interactions between the intervention and EBDs on the primary outcomes.

Communication Intentions			
Moderator	*B* (*SE*)	*p*	*d*
Delinquency	4.73 (1.57)	.003	.33
Substance Use	2.08 (0.60)	.001	.40
Mental Health	0.63 (0.59)	.29	.13
Communication Skills			
Moderator	*B* (*SE*)	*p*	*d*
Delinquency	0.03 (.04)	.43	.15
Substance Use	0.06 (0.2)	<.001	.63
Mental Health	-.02 (.02)	.12	.25
Condom Use			
Moderator	*B* (*SE*)	*p*	*d*
Delinquency	6.01 (2.12)	.005	.43
Substance Use	1.19 (1.02)	.25	.27
Mental Health	2.31 (0.93)	.02	.45

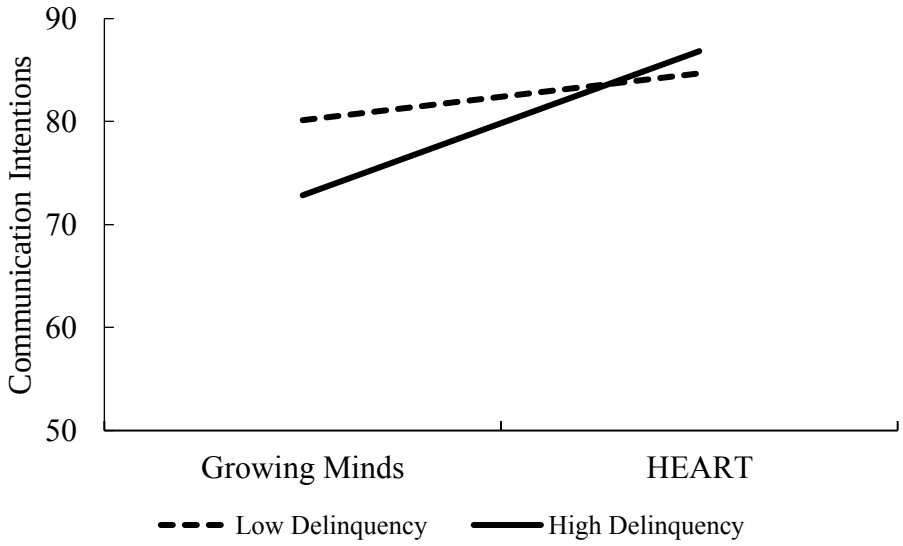

Figure 2.1. Interaction between delinquency and intervention group on communication intentions.

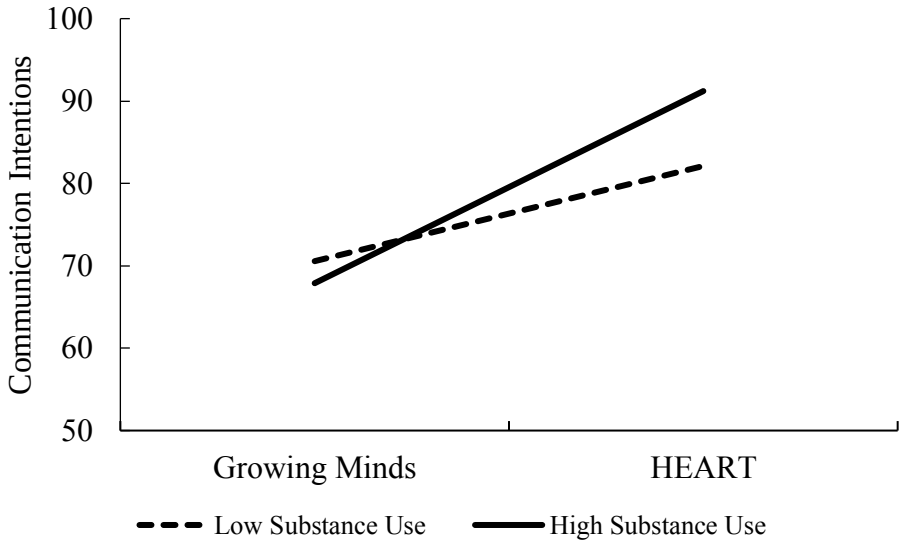

Figure 2.2. Interaction between substance use and intervention group on communication intentions.

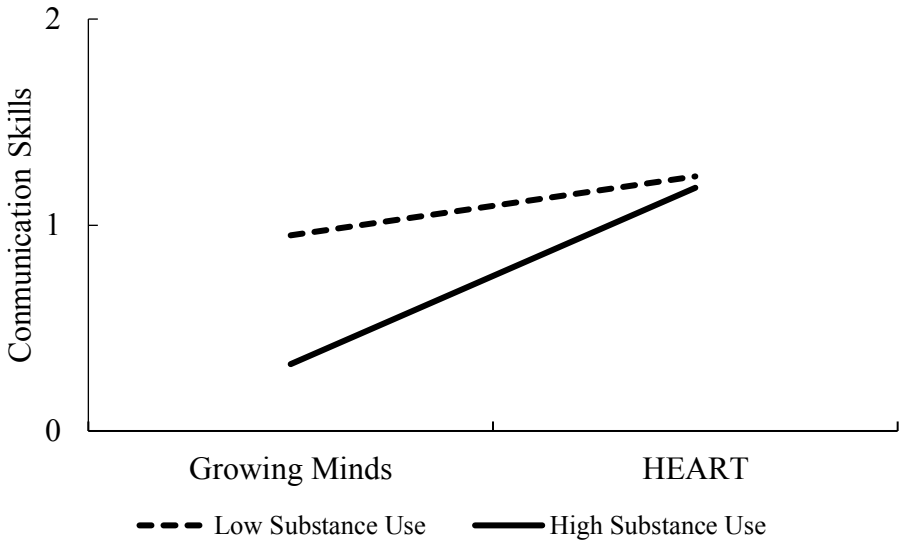

Figure 2.3. Interaction between substance use and intervention group on communication skills.

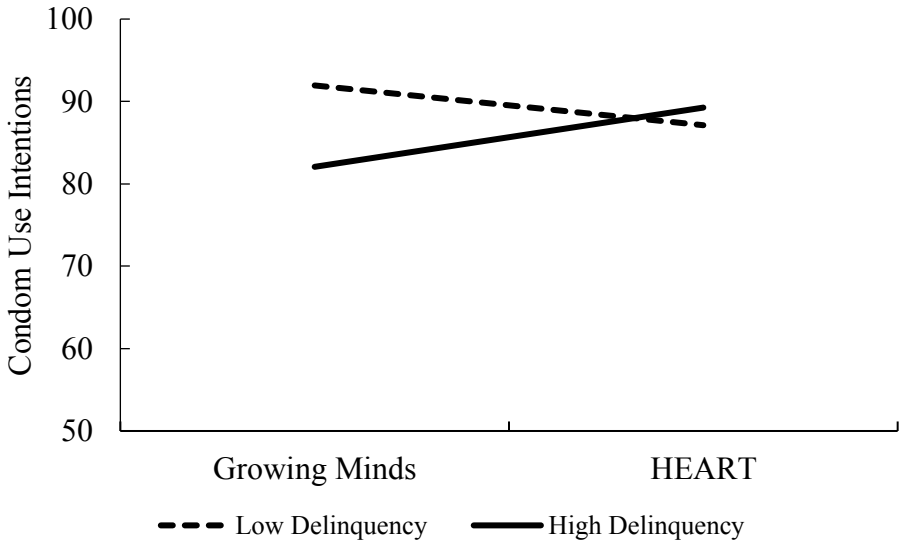

Figure 2.4. Interaction between delinquency and intervention group on condom use intentions.

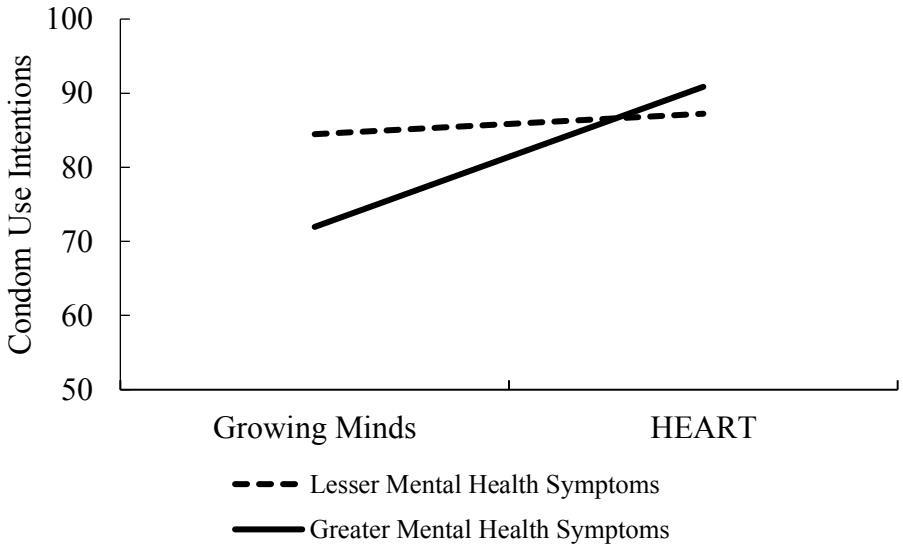

Figure 2.5. Interaction between mental health symptoms and intervention group on condom use intentions.

CHAPTER 3

Study 2

Adolescent girls are at heightened risk of negative sexual health outcomes. As many as one in four girls has a sexually transmitted disease (STD; Forhan et al., 2009), and over 5% of girls under 20 years old become pregnant each year (Kost & Henshaw, 2014). For sexually active girls, condom use is the most cost effective method to protect against pregnancy and STDs, but only 51% of girls report using a condom at their last sexual intercourse (Kann, McManus, et al., 2016). Unlike boys who can directly apply a condom themselves, girls do not have direct behavioral control over condom use and cannot guarantee that condoms are used without some form of negotiation with a partner (Amaro & Raj, 2000; Wingood & DiClemente, 2000). In addition, for girls, both sexual communication and acquisition of condoms are contrary to traditional sexual scripts, or cultural norms surrounding gender and sexuality that dictate girls should be passive in sexual relationships (Gagnon & Simon, 2005). Although girls have behavioral control over several other birth control methods (e.g., contraceptive pills, intrauterine devices [IUDs]), these do not protect against STDs.

To address adolescent girls' sexual risk, a wide array of sexual health interventions have been developed. However, most initial intervention evaluations only include immediate post-tests or short-term follow-up (approximately 3-6 month) assessments, which cannot fully capture behavior change. Instead, these assessments usually evaluate intervention effects on factors that mediate behavioral outcomes (e.g., knowledge, attitudes, intentions). Unfortunately, even interventions that are efficacious at improving these outcomes may not produce behavioral change if there are intervening factors. According to the Social Ecological Model (SEM), behavior occurs within a system of overlapping influences, including individual-level,

interpersonal-level, community-level, and societal-level influences (see Figure 3.1). Because health interventions typically are targeted at the individual-level, intervening factors at the outer-levels of the model may inhibit individual behavior change. For example, even if attitudes toward condoms are improved (individual-level), this change will not lead to condom use if a person does not have access to condoms (community-level). These intervening factors may not be recognized using only quantitative assessment measures, and a program that appears to be effective based on immediate outcome assessments may fail to produce behavioral change if these barriers are not addressed. To build more impactful interventions, it is necessary to better understand the intervening factors that may serve as barriers to healthy sexual decision-making.

Study Purpose

The purpose of this study is to understand the specific factors that impede the adoption of safer sexual behaviors among adolescent girls following sexual health interventions. Although sexual health interventions can provide information, motivation enhancement, and skills training that increase the likelihood of behavior change, changing behavior is a difficult process. There is a strong potential that intervening factors will impede implementation of safer sexual behavior even when knowledge, motivation, and behavioral skills have been improved. Evaluating the factors that continue to serve as barriers to healthy sexual behavior even after sexual health intervention has occurred is vital for ensuring all youth can make safer sexual decisions. Thus, our primary research question was: What are the barriers to safer sex knowledge and skill implementation that girls anticipate encountering following a sexual health intervention?

Method

Participants

Participants were 50 adolescent girls recruited from community-based organizations in a metropolitan area of the southeastern United States that provide services to youth with pronounced needs such as: homelessness, emotional and behavioral problems, and court involvement. These participants were recruited as part of a larger study evaluating a web-based sexual health intervention. This intervention focuses on improving sexual communication skills and promoting safer sex decision-making among adolescent girls. All girls who participated in this evaluation study were eligible to participate in the current study, although they were able to decline participation. Although no participants declined to participate in the current study, two participants from the larger study did not complete the current study procedures because of time constraints. Participants received a $20 gift card for participation. Participants were between the ages of 12 and 19 (*M* age = 15.60) and were primarily Black (58%; 18% Hispanic; 4% Asian; and 20% Multiracial/Other). Most participants were heterosexual (76%; 4% Lesbian; 20% Bisexual/Pansexual), and 58% were sexually active (i.e., had engaged in sexual touching, oral sex, or sexual intercourse). For characteristics of individual participants, see Appendix C.

Study Procedure

Following the quantitative evaluation procedures of the larger study, an hour and a half long process that included pre-test, the intervention program, and a post-test, a qualitative interview was conducted with participants from which data for the current study were generated. All participants completed the interview on the same day as the quantitative assessments.

Interviews were semi-structured and focused on girls' identified barriers to utilizing sexual health information and skills learned in sexual health programs (See Appendix B for the

full interview guide). The interviews took 14 minutes on average to complete (Range = 5-31 minutes). My colleague, J.L.S., and I performed all interviews, except for one that was performed by a trained research assistant because both of us were unavailable. The primary question that guided interview responses was: "What would make it harder for you to use the information and skills you learned in the program?" Follow-up prompts asked participants to elaborate on what might prevent them from communicating with a partner about sexual activity, obtaining condoms, or using condoms. Interviews occurred in a private research office or in a private office of the community-based organization from which the participant was recruited. Interviews were audio-recorded and transcribed verbatim to facilitate analyses. Each interview transcript was checked to ensure accurate transcription. All participants were assigned a pseudonym during data analysis.

Analysis Plan

I used constant comparative analysis to examine the qualitative interviews (Boeije, 2002; Glaser & Strauss, 1967). This process was facilitated by importing all transcribed interviews into Dedoose version 8.0.44 (SocioCultural Research Consultants, 2018). To allow all participants in the larger evaluation study to participate in the interview portion of the study, I assessed saturation during the data analysis process. I achieved code saturation after 31 participants; however, I reviewed the remaining 29 transcripts so to gain richer descriptions of each code and exclude the possibility of discrepant accounts occurring in later interviews (Hennink, Kaiser, & Marconi, 2016).

First, J.L.S. and I met to discuss the research questions of the study and identify preliminary categories for coding. In line with our study purpose, we identified barriers to implementation of safer sex knowledge and skills as a primary category. Further, we identified

facilitators of implementation of safer sex information and skills as another primary category. It was determined that all identified excerpts would be coded with one or both primary categories. Further, the coders identified additional secondary categories based on the adolescent sexual health literature and their experiences in interviews with participants to describe the types of barriers (e.g., negative attitudes toward condoms) and facilitators (e.g., communication with a romantic partner) experienced by participants.

Next, the coders independently read each transcript, identified relevant segments, and categorized them. Each segment was assigned one or more primary category and one or more secondary category. Segments that could not be categorized based on one of the identified secondary categories were coded as "other." Periodically, coders met to discuss their categorizations, resolve conflicts, and identify new secondary categories as needed. Once all transcripts were coded, the coders created a master list of primary and secondary categories, merging overlapping categories as necessary (see Appendix D for sample codes). Then, the coders each read a separate half of the transcripts to ensure all segments were consistently coded in comparison to other coded segments. Unfortunately, because of the hard-to-reach sample, we were unable to elicit feedback from participants in regard to the accuracy of their interview transcript (i.e., member checking; Krefting, 1991); however, each transcript was analyzed by both researchers to reduce the impact of individual bias. In addition, if researchers doubted their ability to interpret a participant's meaning, a decision was made to not categorize that segment to reduce researcher bias in interpretation.

Results and Discussion

The analyses focus on the barriers and facilitators to implementation of safer sex knowledge and skills, which I define as the knowledge and skills to make sexual decisions that

optimize safety, including refusing unwanted sex, using condoms, engaging in sexual communication with a partner, and accessing sexual and reproductive health resources (e.g. contraception, STD/HIV testing). Overall, we identified 24 unique barriers and 12 unique facilitators to implementing safer sex knowledge and skills. All participants (n = 50) described at least one barrier to implementation of safer sex knowledge and skills, and most (n = 47) also described at least one facilitator to utilizing safer sex knowledge and skills.

After identifying these barriers and facilitators, I used the Social Ecological Model (Krug et al., 2002) to categorize these themes and better understand how influences at the societal, community, interpersonal, and individual level overlap to shape behavior. I begin my analysis at the societal level to illustrate how influences at the outer-levels trickle down to impact inner-levels of the model, which all impact behavior.

Societal Level

Four themes were evident at the societal level: *cultural messages about adolescent sexuality, cultural messages about condoms, gender norms, and sexual and reproductive healthcare policy* (See Table 3.1). All themes identified at this level were barriers to safer sex knowledge and skill utilization, and no societal-level facilitators were identified in the current data. In this section, I discuss barriers and facilitators to sexual refusal, condom use, and sexual and reproductive healthcare.

Sexual refusal and abstinence. First, I illustrate how societal-level factors may be barriers to refusing unwanted sex. The most prominent barrier to sexual refusal was *gender norms*, or cultural messages about normative behavior based on gender. Gender norms within sexual relationships are typically referred to as sexual scripts, referring to the sexual behaviors that are considered acceptable or normative in sexual relationships based on gender. One

prominent sexual script is that girls are responsible for "gatekeeping," or ensuring sexual activity does not occur, at least in the early stages of a relationship (Gagnon & Simon, 2005); however, this script was not explicitly discussed by participants. Instead, participants focused on the sexual script that dictates boys should desire sex and grants them the right to challenge girls' sexual refusals. As Charity explained: "It's basically 'Oh I'm not going to take your no and here's my reasons for why I should have sex.' And they think those reasons overpower yours." Societal messages suggest that boys' sexual decisions have priority over girls' decisions in sexual relationships, granting boys' permission to pressure girls into sex. Further, because gender norms suggest girls should please their partners, girls' ability to refuse may be compromised in response to pressure (Sanchez, Crocker, & Boike, 2005).

Condom use. Next, I discuss participants' barriers to condom use. Several participants discussed *cultural messages about adolescent sexuality* that suggested it is deviant and undesirable, creating barriers to condom use. Although these messages may be harbored by girls as individual attitudes, participants discussed them in a manner that suggested these are views they consider to be widespread and characteristic of the wider culture, which has been documented in previous literature (Fine & McClelland, 2006; Harden, 2014). Specifically, several participants suggested that negative sexual messages would prevent girls from accessing condoms. Unity explained, "Teens might not want people to judge because they're trying to get condoms at their age." Because of these negative cultural messages and the possibility of public rebuke, girls may be compelled to keep their sexual activity hidden, preventing them from buying condoms, or even taking free condoms from a public place (Bell, 2009; Hillier, Harrison, & Warr, 1998).

Although some participants indicated that teen sexuality was viewed negatively in general, others recognized that societal sexual attitudes are different for girls than they are for boys, a gender norm referred to as the sexual double standard (Crawford & Popp, 2003; Reiss, 1960). Specifically, several participants discussed how gender role ideals shape public perceptions of female sexuality. Malika described how these perceptions may prevent girls from accessing condoms:

> I just feel like in general like society is more open to like boys being more free like with their sexuality and that kind of thing and girls are more like condemned about it and you know, like, 'Don't do it, don't have sex.' So, I feel like that's why it's [getting condoms] easier for boys and it's kind of just like, "Here's protection." But girls it's just like "No don't have sex," which is backwards.

Bianca further substantiated this view, suggesting that whereas a girl buying condoms may be viewed in "a negative way," a boy buying condoms would be perceived as "being safe." Although negative views of adolescent sexuality can inhibit condom access for both boys and girls, participants suggested that cultural norms permit or even reward boys' sexuality, whereas they condemn girls' sexuality. Therefore, girls, in particular, may avoid purchasing condoms to avoid public defiance of the sexual double standard.

Further, the sexual double standard may inhibit a girl's ability to have condoms available when she is planning to have sex. Natalia explained that girls may be shamed for being perceived as sexually active, known as slut-shaming (Armstrong, Hamilton, Armstrong, & Seeley, 2014): "Girls feel like if they, if people find out that they're carrying condoms they're gonna, like, call them that they're hoes…That they just like to sleep around." If a girl takes responsibility for obtaining and carrying condoms, she can ensure that condoms are available during a sexual

interaction; however, the social consequences resulting from the fear of the sexual double standard may impede girls from carrying condoms, in line with previous research (Hillier et al., 1998; Marston & King, 2006; Ross-Bailey, Moring, Angiola, & Bowen, 2014). In response to these perceptions of judgment, many girls indicated that they viewed boys as primarily responsible for obtaining condoms. For example, Macie said:

> Actually, I think us, we're [girls], more insecure about getting condoms because we're like, 'Well I mainly don't use condoms, it's just the guys that do.' So, we'll just go, like, nobody, like, usually if a female is ready to have sex they'll be like, 'Well, go to the store and go get condoms.' That's what they'll say to the guy.

Adela reiterated the norm that girls are not responsible for having condoms available and added that "girls need to make sure that there's always one [a condom] like...that is used." This apparent paradox that boys are responsible for obtaining condoms, but girls must ensure they are used has been documented in previous research (Marston & King, 2006). This distribution of responsibility may be framed as a facet of sexual scripts, whereby boys obtain the necessary tools prior to a sexual encounter and girls are "gatekeepers," in this case, by ensuring the encounter is safe (i.e., telling the boy to wear a condom). However, forgoing responsibility for condom acquisition increases the possibility that a condom is unavailable during a sexual encounter, and additional barriers to sexual refusal may increase the possibility of unprotected sex in such encounters (Williamson, Buston, & Sweeting, 2009).

Negative cultural messages regarding condoms were also evident, another barrier to condom use. Participants discussed a widespread belief that teenagers do not want to use condoms, and this message was salient even for girls who had not engaged in sexual activity, such as Payton who said: "Well, in this generation now, like, they don't like wearing condoms."

Further, participants suggested dislike for condoms was due to the perception that sex without a condom feels better than sex with a condom, particularly among boys—an negative attitude that is commonly targeted in sexual health programming (Randolph, Pinkerton, Bogart, Cecil, & Abramson, 2007). According to Macie, "You're not supposed to use a condom anymore because guys they say, 'I can't feel nothing.'" Josephina suggested that adolescents may see these messages promoted through "forbidden websites" and "late night TV shows" watched by boys that make sex "[look] better without a condom." These quotations suggest that adolescents are receiving messages that condoms make sex less enjoyable, which may reduce their interest in using condoms. Further, because cultural norms suggest boys' pleasure should be prioritized, even if girls desire to use condoms, they may forgo them to increase their partners' pleasure (Teitelman, Tennille, Bohinski, Jemmott, & Jemmott, 2011).

Other sexual and reproductive healthcare. Lastly, I discuss barriers to other forms of sexual and reproductive healthcare. A few participants mentioned that lack of money or health insurance would make it more difficult to access contraception, which is particularly relevant to adolescents who may have no personal income, be uninsured, or be hesitant to use a parent's insurance for sexual health needs (Ralph & Brindis, 2010). Without access to free or reduced cost sexual and reproductive healthcare services, adolescents may be unable to obtain contraception and other care, such as STD/HIV testing.

Community Level

At the community-level, seven themes emerged—five barriers (i.e., *abstinence-focused sexual education, pressure to be sexually active, perception of peers as risky, slut-shaming,* and *inaccessibility of sexual/reproductive healthcare*) and two facilitators (i.e., *perception of peers as safe* and *accessibility of sexual/reproductive healthcare*). Themes are presented in Table 3.2. At

this level, I discuss barriers and facilitators to sexual refusal, condom use, and partner communication.

Sexual refusal and abstinence. Regarding the refusal of unwanted sex, only barriers emerged. One barrier to refusing unsafe or unwanted sex at the community-level was *pressure to be sexually active*, resulting from perceptions that school-based peers are sexually active. Several girls mentioned that it seemed like most people in their school were having sex, including Payton who said: "It's probably like a 90% chance that a lot of people are sexually active." Girls also mentioned that there was sometimes shame attached to not being sexually active. When asked about the type of sexual pressure that girls receive at school, Malika said: "boys like teasing girls about like being virgins…being like inexperienced, that kinda thing, I feel like is, like, the biggest pressure like, 'Oh everybody's, ya know, like doing it and you're not doing it.'" A meta-analysis investigated the link between peer influence and sexual activity, finding that perceptions that peers are sexually active and direct peer pressure are associated with increased likelihood of sexual activity (van de Bongardt, Reitz, Sandfort, & Deković, 2014). It is likely that girls who perceive that everyone else around them is sexually active, or experience pressure to initiate sexual activity, may find it more difficult to refuse sex, even if it is unwanted.

In contrast, participants also mentioned girls being shamed at school for being sexually active or perceived as sexually active, known as *slut-shaming*. Bailey told a story about her friend's ex-boyfriend, who spread a rumor at school that they had had sex:

> He was basically telling the whole school that she did have sex with him when she really didn't, well she said she didn't. And then most of the people from school made fun of her for it since I were in like seventh grade. So, then everybody thought she was like doing stuff like that.

Bailey's friend, although she refused sex with her boyfriend, was subject to slut-shaming from her peers because her boyfriend spread a rumor that they had had sex. This quotation from Bailey illustrates that even if girls do refuse sex, they may be subjected to the same shame as if they agree to sex. The inevitability of slut-shaming may sway girls to agree to sex because "even after you say no, they [a partner] could still like start a rumor."

Importantly, these juxtaposed accounts from Malika and Bailey highlight what is referred to as the "virgin-slut continuum" (Bay-Cheng, 2015), which positions girls who are not sexually active as "prudes" who are not sexual enough, but positions girls who are openly sexually active as "sluts" who are overly sexual. Participant experiences suggest that girls must make sexual decisions in acknowledgement that their choice will always be marred by social consequences (Summit, Kalmuss, DeAtley, & Levack, 2016).

Condom use. Next, I highlight factors that serve as barriers and facilitators to condom use. One commonly discussed barrier was experiences with abstinence-focused sexual education. Notably, for a few girls, lack of *any* sexual education was discussed as a barrier. For example, Alana received sexual education for the first time after her sexual debut and indicated that she did not use condoms in this encounter, highlighting that, for sexual education to be impactful, it must occur *prior* to sexual debut. Importantly, sexual health researchers and parents have indicated support for earlier sexual education (Eisenberg, Bernat, Bearinger, & Resnick, 2008; Igras, Macieira, Murphy, & Lundgren, 2014), consistent with practices in the Netherlands and other countries in which negative sexual health outcomes are much lower among adolescents than in the United States (Currie et al., 2012)

For participants who received sex education, it was mostly viewed as inadequate. Shelley explained that when sex was talked about in her school, it was presented as something "that's

reproductive and not as something people do for fun," resulting in the exclusion of pregnancy and STD/HIV prevention information. Curriculum that highlights sex for its reproductive function only is consistent with an abstinence-only style of sexual education that teaches adolescents to avoid sexual risks by waiting until marriage to have sex (Santelli et al., 2017; Stanger-Hall & Hall, 2011). Discussions of sexual protection, such as condoms, are excluded from abstinence-only education, based on a false belief that discussing contraception increases the likelihood that adolescents will engage in sexual activity. Importantly, there is a large body of literature indicating that abstinence-only messaging is ineffective and does not reduce the likelihood of adolescents having sex (Santelli et al., 2017; Stanger-Hall & Hall, 2011). Instead, abstinence-only sexual education serves to leave girls unprepared to avoid sexual risks if they choose to engage in sexual activity.

Comprehensive sexual education that includes discussions of both abstinence and contraception as methods of reducing sexual risk has been shown to be more effective than abstinence-only education (Chin et al., 2012; Kohler, Manhart, & Lafferty, 2008). However, as suggested by participant experiences, even comprehensive sexual education programs may not adequately educate adolescents about engaging in safer sexual activity, likely due to sexual education policies. For example, Dana said: "It [sexual education] was kinda like the basics. I didn't get as like detailed. I learned about like condoms, like as safe, but I didn't learn about how it could help." Further, Devin indicated that sexual education teachers may not be educated or might transmit false information. She said that her teacher, "didn't even know that condoms are useful." These quotations from Dana and Devin suggest that even if condoms are covered in sexual education classes, girls may not receive information on their effectiveness or how they can be used correctly. Indeed, even when sexual education policies require discussion of

contraception, they may also be required to emphasize abstinence and may permit transmission of medically inaccurate information to adolescents (Guttmacher Institute, 2015), reducing the utility of the education.

Another factor that influenced condom use among participants was peer norms about condom use—*perceiving peers as risky* may be a barrier to condom use, whereas *perceiving peers as safe* may be a facilitator of condom use (van de Bongardt et al., 2014). Perceived peer norms varied widely across participants. Some participants thought condoms were rarely used, such as Macie: "Well actually, now, nobody uses a condom anymore. And that's almost like, by fact. Especially in high school, nobody uses condoms anymore." Other participants indicated that many girls at their school were pregnant, making them suspect that condoms were not being used. Several participants believed the "pull out method" was commonly used among their peers. Tabitha suspected that this method was common because her peers were focused on preventing pregnancy, rather than HIV or other STDs: "They're [peers] not so much worried as for the diseases, it's just that obviously they don't want kids at our age." For some adolescents, unprotected sex may seem normative and acceptable, which could result in forgoing condoms in sexual interactions. Further, prioritizing pregnancy prevention over HIV/STD prevention may result in reliance on birth control methods other than condoms, leaving adolescents vulnerable to STD/HIV infection (Civic, 2000; Milhausen et al., 2013).

In contrast, some participants believed that condoms were commonly used by their peers, possibly because of increased knowledge about sexually transmitted diseases. Bailey said: "…more people probably use condoms now that like, the um, the term of STDs and like other things that are being talked about. STDs are coming up now and, like, more kids are scared of getting STDs now." Further, Alana described peers using social media to promote the

importance of condom use: “Like on social media the girls they always like, ‘Use protection. These boys be messin’ with everybody’ and stuff” These participants contradict the previous norm that teenagers are not worried about STDs. Adolescents may be more likely to engage in condom use if they recognize STDs as a substantial risk (Reid & Aiken, 2011). Further, if condom use is perceived as a norm among peers, girls may be more likely to use condoms (van de Bongardt et al., 2014).

Another factor that influenced condom use was the percevied *accessibility of sexual and reproductive healthcare*. For some, sexual and reproductive healthcare, including condoms, were viewed as accessible and easy to obtain. Kristina discussed how condoms were available in many locations in her community:

> I see condoms in the store all the time and they’re like in the front. And sometimes like…people give them for free. Like, in courtrooms. Like, I was in court and they was giving out free condoms. And even the barber shop sells, I mean, not sells but gives away free condoms.

Further, Charity indicated that condoms were available at her high school. For both Kristina and Charity, condoms were available in locations that they could easily access. However, others suggested that these locations were unavailable or unknown to them, at least to access privately. Several participants explained that because adolescents may lack transportation other than their parents, it would be difficult to get to a location to purchase or obtain free condoms. These varied perspectives from participants regarding the ease of accessing sexual or reproductive health resources suggests that even within a similar geographic area, these resources may be widely dispersed and not universally accessible. Condom distribution programs in high schools and other community locations increase adolescents’ access to condoms and may reduce

negative sexual health outcomes among adolescents (Wretzel, Visintainer, & Pinkston Koenigs, 2011); however, it is important to note that proper education and training regarding use of condoms must accompany distribution to optimize the likelihood that condoms are used and used correctly (Charania et al., 2011; De Rosa et al., 2012).

Partner communication. Lastly, slut-shaming was a barrier to sexual communication with a partner, specifically regarding communication through technology. Macie said, "Some girls are paranoid of texting people that [sexual health] stuff because now you can screenshot and send it to other people." Girls may be unwilling to talk to their partner about sexuality because they fear their viewpoints could be shared with peers, resulting in sexual shame. Previous research has found that many adolescents use texting to engage in conversations about sexual health topics, and this method may increase comfort in discussing sexual health (Broaddus & Dickson-Gomez, 2013; Widman, Nesi, Choukas-Bradley, & Prinstein, 2014). However, as smartphones that allow users to "screenshot" messages and pictures they receive become more ubiquitous, communication through texting may be repurposed as a method of shaming girls for sexual activity.

Interpersonal Level

At the interpersonal level, participants discussed barriers and facilitators related to romantic and sexual partners, friends, parents, and healthcare providers (see Table 3.3). Barriers and facilitators related to romantic and sexual partners were most often discussed, by 47 participants. Partner-related barriers included *use of manipulation tactics* and *violence*, whereas *positive sexual communication* was a partner-related facilitator. Barriers and facilitators related to friends included *sexual pressure* as a barrier and *shared values* and *condom access* as facilitators. Parent-related barriers included *lack of privacy* and *interference with sexual*

autonomy, whereas *positive sexual communication* and *promotion of sexual/reproductive healthcare* were facilitators. Lastly, *positive sexual communication* with healthcare providers was discussed as a facilitator to accessing other reproductive and sexual health services.

Sexual refusal and abstinence. The most common barrier to sexual refusal at the interpersonal level was the use of *manipulation tactics* by romantic or sexual partners. Girls described many manipulation tactics, but most prominently, participants discussed that the threat of a breakup may impede girls' ability to refuse unwanted sex. For example, Josephina said: "Relationships nowadays, it's three months and you have to give it up. And at that particular point in time if that person's not ready, then that's when they break their hearts and break up with them." Participants described other manipulation tactics as well, including a partner saying, "'I'll tell everyone I did it,'" "'it makes [me] feel closer to [you],'" and "'if you really loved me you would do it;'" however, these tactics also typically revolved around the expectation that lack of compliance would result in a breakup. By using these manipulation tactics, male partners may convince a girl to agree to unwanted sex; however, the reason that these manipulation tactics may be effective is because they are linked to societal-level gender norms and sexual scripts (described on page 53). These quotations from participants suggest that girls are valued for being desirable romantic and sexual partners and are therefore expected to provide sex to a partner after a certain amount of "gatekeeping" has passed (Sanchez et al., 2005). If they do not comply, they may face a breakup.

Participants suggested that sexual pressure from a partner was expected, in line with sexual scripts that condone boys' use of sexual pressure. For example, Sabrina said:

> I think I was just lucky with the guys I choose. Because I know some guys can get like upset and like pressure you or not talk to you anymore, but the guys I choose usually are just like 'okay I'll wait if that's not what you want to do.'

Sabrina views herself as "lucky" for having boyfriends who were understanding of her sexual decisions, suggesting girls, due to sexual scripts, expect pressure in sexual relationships rather than recognizing it as a sign of an unhealthy relationship (Hlavka, 2014; Weiss, 2009) Therefore, girls may believe it is normative to acquiesce to pressure from partners.

Importantly, participants did not ignore the possibility that girls could pressure boys into sexual activity; however, they felt it happened less often than boys pressuring girls. Further, Payton, who identified as a lesbian, said she had never received sexual pressure from a girl, although her open identification as a lesbian did not preclude sexual pressure from boys: "I'm not attracted to boys but they're still you know attracted to me. But yeah, they still ask me about it and stuff like they be like 'I can make you change my mind,' you know." Although sexual pressure from a girl was considered possible, sexual scripts suggest that sexual pressure from boys is normative, making it specifically difficult for girls to refuse sexual activity from male partners.

Additionally, some girls indicated that manipulation techniques could expand to threats of violence, making it unlikely that girls can refuse unwanted sex. When asked to describe the pressure that male partners exert on girls, Mariposa said: "Mmm, like asking them or like pushing them to do it with them or trying to abuse them for it to happen." Experiences of dating violence may make it impossible for girls to refuse unwanted sex (Teitelman et al., 2011; Wingood & DiClemente, 2000)

In contrast, for some, partners were seen as facilitators to sexual refusal, as a result of *positive sexual communication experiences.* Aisha's partners were all supportive of her sexual decisions:

> When I first started talking about sex with my partners, it definitely felt uncomfortable like 'Oh my gosh, are I really talking about this? I never thought I would do this.' You know, but a lot of my partners were very like, you know, 'If you're not comfortable with it then I don't have to do it.'

Aisha engaged in sexual communication with her partners, which, although uncomfortable at first, allowed her and her partners to discuss sexual limits. She recognized through these conversations that her partner was respectful of her sexual decisions, making it easier to convey her desire to wait longer before having sex. Further, Jordie indicated that openness and comfort in her relationship made it easier to refuse sex with her partner: "Um well we're really open. So, I just like, if I'm not in the mood, or I'll, I'll tell him like I don't want to have sex…. We're really open about it, and I'm really comfortable with him." Through open communication, participants were able to negotiate the initiation of sexual activity.

Several participants also discussed barriers to sexual refusal related to friends. Gabrielle was persuaded to have sex for the first time because her friends were already sexually active: "Well with the first guy I had sex with, I was, like, I strongly disagreed about it…and then I was like, oh my friends are doing it, I should just do it." Gabrielle's quotation suggests that girls who have friends that are already sexually active may disregard their personal values to conform to the norms of their friend group. Further, Bryony discussed that friends could directly pressure a girl to agree to have sex that she is unsure about:

> Sometimes their, they, they might have a conversation with their friend like 'Oh just this boy want to have sex with me, blah di blah.' He might be cute and their friends might tell them to go ahead and do it. And like your friends is on one end and your conscience…you got more friends telling you one thing, so it's kinda weighing out, so you just go with what your friends say

These quotations illustrate how norms within girls' friend groups or even direct messages from friends may be viewed as more important than personal values when making sexual decisions (Sieving, Eisenberg, Pettingell, & Skay, 2006), leading girls to engage in sexual encounters that are not clearly desired.

However, having close friends with *shared values* may help girls refuse sex. For Lara, who wants to be abstinent until marriage, her friends at the beginning of high school were all sexually active, which led to attempts to "fit in" by carrying condoms. However, later in high school, she became friends with a new group of people:

> I have a balance and the best part of…about making abstinence easier for me was balance of friends. So, like tenth grade I was really bad, I was my worst I was doing a lot of really bad stuff and then rolling around junior years and I had more religious friends that I created a balance.

Lara built new friendships with peers who had similar values to juxtapose her sexually active friends, which facilitated her acting in accordance with her values and remaining abstinent.

Parents were also mentioned as facilitators of sexual refusal among girls, through *positive sexual communication* that emphasized their daughters' sexual autonomy, exemplified by Aisha:

> Yes, my parents always sit down and talk with me. And they said 'I know this conversation is going to be uncomfortable, but I are going to have it anyway. You

> need to know what you want in a relationship. Don't ever let anyone force you to do anything that you're not comfortable with.'

Aisha's parents highlighted that her sexual decisions should be respected by a partner, counteracting the gender norms mentioned above. In response, Aisha may be more prepared and encouraged to refuse unwanted sex. Indeed, adolescents who engage in sexual communication with their parents are more likely to delay sex (Longmore, Eng, Giordano, & Manning, 2009).

Condom use. Next, I review barriers and facilitators to condom use at the interpersonal level. The use of manipulation tactics by a partner was also linked to difficulty in girls' condom use. Queenie said:

> I guess like, with any like crush that you have or guy that you like, you want to be liked by them like you want to come off as like "Oh yeah…" I don't know, not perfect but like I guess attracted to them and if they see you, I guess as like a…not wanting to be experimental or whatever, they'll be like, 'I can find another girl that'd be willing to do it without [a condom]'

Queenie addresses the societal-level gender norm that girls must please their partner by being desirable and sexually open and highlights that if girls do not conform to these norms—in this instance, engaging in condomless sex—they risk a breakup.

Additionally, boys may harbor a dislike of condoms, consistent with societal-level messages about condoms (discussed on page 56), and use this dislike in their *manipulation tactics* to convince girls to have unprotected sex. According to participants, boys may lie about being allergic to condoms or emphasize that condoms reduce their pleasure, as described by Josephina:

> ’Cause they, they understand the uses of a condom and everything, but they don’t they don’t use them because the guy suggested that they don’t want to use them because they don’t feel the same amount of pleasure as the girl does…So they just let them get it off.

This manipulation tactic is similarly linked to societal-level gender norms that girls must please their romantic partner, leading girls to agree to unprotected sex as to prioritize a partners’ sexual pleasure (Teitelman et al., 2011; Wingood & DiClemente, 2000).

Another manipulation tactic described by several participants was boys telling girls that “nothing bad will happen” if they have sex. Queenie said:

> I know like two of my closest friends like one of them, she was in a long-term relationship, and he kind of like was just like the dominant I guess because he was older and like she was kind of like this naive person I guess. I mean, she’s not naïve, but she was new to it, and so he kinda told her that like you can’t get pregnant…she was kinda pressured into like doing it like without a condom. And she ended up pregnant.

Queenie’s quotation illustrates that boys, especially those who are significantly older than their partners, may take advantage of girls who have low sexual health knowledge, convincing them they will not get pregnant. This experience is supported by research suggesting that, in a relationship, the partner with lower power has less input into sexual decision-making (Amaro & Raj, 2000; Wingood & DiClemente, 2000). In the case of Queenie’s friend, this manipulation tactic resulted in a pregnancy.

As with barriers to sexual refusal, participants discussed how violence can increase the likelihood of condomless sex for girls. When asked why a girl may have sex without a condom,

Gabrielle said: “She didn’t want to make him [her partner] mad…sometimes the man or the boy can be abusive, and she didn’t want to get hit, so she didn’t use a condom.” In situations in which violence is imminent, it would be difficult or impossible for a girl to negotiate condom use (Teitelman et al., 2011; Wingood & DiClemente, 2000). Further, another more covert method of violence that amounts to a form of rape is the possibility of “boys just taking off the condom” (Shelley), after the couple has agreed to use one. If a boy engages in this non-consensual, concealed removal of a condom (also known as stealthing; Brodsky, 2016), girls who have advocated for condom use may unknowingly engage in unprotected sex. These girls are denied the choice to use condoms by their partners.

However, some factors may increase likelihood of condom use, including sexual communication between partners (Widman, Noar, et al., 2014). Sexual communication allows partners to develop shared values and goals, as discussed by Jordie:

> Obviously neither of us are ready to have kids anytime soon. So, I talk about that a lot, like, oh, like I ask, like he says like, ‘Oh I don’t want to have kids until I’m like 25 like older.’ And I’m not ready [to be a parent] so I just talk about that. But I have talked about STDs like um after I first started like talking before I started dating I talked about that and like I both got tested and I were both clean and we’ve only had sex with each other.

Further, Bianca highlighted the importance of sexual communication prior to sexual encounters in facilitating condom use. When asked if she had communicated with her partner directly prior to a sexual encounter, Bianca laughed and said, “Well no, no it just started with like kissing and…it wasn’t planned.” However, Bianca and her partner had previously discussed condom use, and she indicated that her partner “did have condoms available just in case.” Because Bianca

and her boyfriend had discussed the importance of protection prior to their sexual encounter, they were prepared with condoms despite the situation being unplanned, in line with research showing that sexual communication with a partner increases condom use. Importantly, Bianca's indication that her boyfriend was the one who had condoms available highlights the previously described sexual script that boys are responsible for obtaining condoms and ensuring they are available (described on page 56). In Bianca's circumstance, her partner facilitated condom use, but it should be noted that conforming to this sexual script could also be a barrier to condom use if one's partner does not make an effort to obtain condoms.

Further, whereas communication facilitates condom use, lack of communication often prevents condoms use. Jordie discussed how lack of communication in a casual sexual encounter led to unprotected sex: "I've had like one-night stands or whatever, and I wasn't comfortable telling them, like, they didn't even ask or, like, they don't ask if you're on birth control or if you have to use a condom." Because of the societal norm that boys are responsible for bringing condoms to a sexual encounter, girls may expect boys to initiate conversations about condoms. If they do not, girls may feel uncomfortable broaching the topic themselves because of this perception that the partner is in control (Crosby et al., 2000).

Participants also described how friends could be influential in whether girls engaged in condom use. Specifically, they described how friends could facilitate *condom access*. Although Devin had not engaged in sexual intercourse, she was aware of several places to obtain condoms for free and indicated that she had gotten condoms for her friends in the past. Further, Adela, who said that she felt uncomfortable with the idea of buying condoms, said that going to the store to purchase condoms with her friend who had done it before would make it easier.

In contrast, parents were typically mentioned as barriers to condom use. *Privacy* was a large concern for girls. Because many adolescents rely on their parents to transport them to stores, participants stated that they could not acquire condoms without admitting their sexual activity to their parents, which girls were unwilling to do. Others discussed their fear of parents finding condoms that they had acquired. Both of these privacy concerns were perceived to prevent girls from accessing condoms. Further, Natalia's mother directly *interfered with her sexual autonomy* by confiscating condoms: "She takes them away from me just so she can think she'll prevent from me from having sex." This misguided attempt at preventing Natalia from having sex places her at greater risk of pregnancy or an STD.

However, a few girls indicated that parents facilitated condom use. Although no girls mentioned that their parents provided condoms to them, several indicated that their parents *communicated* the importance of using condoms to protect against pregnancy and STDs, and some also said they would be comfortable talking about condoms with a parent if they planned to become sexually active. Conversations such as these have been shown to increase condom use among adolescents (Widman, Choukas-Bradley, Noar, Nesi, & Garrett, 2016).

Partner communication. A few girls discussed how partners may make it harder or easier to engage in sexual communication. Lupita thought that discussing sex with a partner might make him "think you're ready for something." Further, although Sabrina had talked to partners about sex before, she thought it would be more difficult to initiate sexual communication herself:

> …I feel like if the female initiates it [sexual communication], I don't know. I'm just used to the guy doing it because you know the guy is usually the one who wants it more…But if I do it, it's more like I want it more.

Both Lupita and Sabrina feared that broaching sexual topics with a partner might suggest that they desire sex, which is contrary to sexual scripts (Muehlenhard & McCoy, 1991); therefore, girls may be apprehensive to initiate these discussions.

Other sexual and reproductive healthcare. Lastly, I discuss barriers and facilitators to other forms of sexual and reproductive healthcare. Charity indicated how a sense of joint responsibility with her boyfriend has made it easier to prevent pregnancy. She said that she and her boyfriend "used condoms for a very long time," but after she went on birth control they stopped. She indicated that both she and her boyfriend contributed to this decision and made plans to ensure pregnancy prevention: "if there's ever a need for emergency contraception, we're willing to buy it…I also have made him travel with my birth control so I don't lose it." Although birth control pills can be used without the aid of a male partner, Charity and her boyfriend discussed pregnancy prevention and took joint responsibility to ensure that Charity took her birth control pills. Further, they had an established backup plan for if the pills were taken incorrectly. Shared responsibility for contraception may aid in consistent contraception use and pregnancy prevention (Cox, Posner, & Sangi-Haghpeykar, 2010; Harvey, Henderson, & Casillas, 2006).

A few participants also discussed how parents or guardians may facilitate *access to* contraception, such as Macie: "[The] first thing that came out of my mom's mouth before I even said anything about sex, 'Yeah I'm putting you on birth control.' For some girls, their parents approached them about taking birth control prior to sexual activity as a precaution, although others indicated it was done after parents or guardians learned they were sexually active. In addition, Shelley specified that her mother wanted her to be on birth control not only to prevent pregnancy in consensual sexual encounters but also in case of sexual assault. Support from parents in regard to accessing reproductive healthcare increases the likelihood that adolescent

girls feel comfortable accessing contraception and other reproductive health services, as fear of parental notification has been noted as a barrier to reproductive healthcare access (Jones, Purcell, Singh, & Finer, 2005). Similarly, parents could also be facilitators of STD/HIV testing. Some participants mentioned that their parents suggested that they receive testing after learning about their sexual activity status.

However, for others, parents were perceived as a barrier to healthcare services. Monica specifically talked about how it was difficult to talk to a healthcare provider about sexual activity because of *lack of privacy*: "Like you can tell your doctor all day about things that you've done. And they can go back and tell your momma like this." Concerns about the confidentiality of sexual health discussions with a provider is well documented in the literature on adolescent sexual health (Bender & Fulbright, 2013; Jones et al., 2005).

Further, Charity discussed an incident in which her mother directly *interfered with her sexual autonomy* and prevented her from accessing the Gardasil vaccine for HPV prevention:

> …when I would go to the doctor and they would ask if I wanted the HPV shot, my mom would be like, 'No, because she doesn't need to be having sex anyway'…And as I got older, it kind of bothered me because I was like my brother got the HPV shot and I 'shouldn't be having sex anyways'

Because of sexual attitudes driven by the sexual double standard mentioned above, Charity's mother viewed her daughter's sexuality as unacceptable and therefore limited Charity's access to an important method of STD prevention.

A few girls also discussed that *positive experiences communicating with healthcare providers* facilitated their access to contraception and other healthcare services. Shelly described her experience accessing a clinic: "I know that you can definitely go there and like people will be

willing to like help you and guide you and like tell you everything you need to know and like it's all confidential as well." Importantly, Adela and Charity indicated that although they were nervous about attending reproductive healthcare appointments, after they were over, they felt much more comfortable. Charity indicated that although she told her provider she was not using condoms, her provider was non-judgmental and instead only offered suggestions for how to be safe. If girls encounter knowledgeable, helpful, and non-judgmental healthcare providers, they may feel more comfortable accessing sexual and reproductive healthcare services, allowing them to better protect themselves in the future. Unfortunately, conversations between adolescents and healthcare providers about sexuality tend to occur rarely, and healthcare providers require additional training to adequately address adolescents' sexual health needs (Fuzzell, Shields, Alexander, & Fortenberry, 2017).

Individual Level

Finally, individual factors also have a role in sexual decision-making for adolescent girls. Fourteen themes emerged at the individual level, including 10 barriers (i.e., *romantic relationships as a representation of self-worth, unclear sexual values, present time orientation, substance use, contraceptive use, ambiguous pregnancy attitudes, lack of knowledge, embarrassment or discomfort, STD stigma,* and *concerns about physical appearance*) and 4 facilitators (i.e., *future orientation, valuing personal safety and autonomy, defined sexual values,* and *perceived pregnancy responsibility*). Themes are reported in Table 3.4.

Sexual refusal and abstinence. The most common barrier to sexual refusal for girls was viewing *romantic relationships as a representation of self-worth,* which is tied to the societal-level gender norm that girls and women are supposed to be good romantic partners (discussed on

page 54). Girls with this belief may rely on attention and affection from partners, as Monica described:

> I feel like when somebody who you really like is like talking to you. Like you first of all probably got their attention. That's one. And two, it makes you feel like you're wanted…So, because you got who you wanted. So that now that that is being said, they're asking you for something that like you know that you might want, but you know that you don't need to be doing it because you don't need to be doing it because you don't wanna have all those other consequences.

To continue their romantic relationships, girls may feel pressure to acquiesce to their partners' desires (Corbett, Dickson-Gómez, Hilario, & Weeks, 2009). Further, for participants who identify with this belief, breakups are viewed as devastating. As discussed by Jamilla, girls may agree to have sex because: "they don't want that person to leave them or to let them go and then…they'll be lonely for the rest of their life." Further, Josephina described the potential cascading effects of a breakup: "their grades might drop and then they can't get into the college that they want." These quotations suggest that, for some girls, having successful romantic relationships is strongly attached to their happiness. Girls may fear damage to their future if they experience a breakup, heightening internal pressure to agree to their partners' sexual desires.

Further, several participants suggested that girls do not often reflect on their own *sexual values*, limiting their abilities to make confident decisions about sexual refusal. For example, Malika said:

> I don't really think they do sometimes because I feel like they just, like, feel like, I guess, like, you keep getting, like, pressured or like, 'Oh I'm supposed to do

> this' so they don't really stop and think, 'Oh, you know, like do I truly want to do this? Do I feel safe doing this? Do I like, know what I am doing?'

Further, when asked whether teenagers have opportunities to consider their own sexual values, Charity said:

> Uh no. Not at all. A lot of times it's what your parents say and have ingrained in you for the past 15 years or whatever and um you have like peers who are lying about their sex, sexual activity

These quotations form Malika and Charity suggest that because girls do not reflect on their *sexual values*, they may rely more strongly on other's values when making sexual decisions, precluding them from making fully autonomous decisions about having sex. The noted lack of opportunities to consider one's own sexual values as a girl may relate back to societal-level gender norms, in which girls are expected to *not* desire sex and refuse sexual activity (described on page 54).

However, participants also discussed several facilitators of sexual refusal. The primary facilitator mentioned by girls was having a *future orientation*, or considering how current sexual decisions would impact their future selves (Lindstrom Johnson, Blum, & Cheng, 2014). Some girls were concerned primarily with avoiding negative sexual consequences in the immediate future. For example, when Monica discussed her hesitancy to have sex for the first time she said: "I didn't want, like I don't wanna be pregnant, I cannot be pregnant, I don't wanna catch anything, I don't, I don't like any of that." However, other girls were mindful of how negative sexual consequences in the near future could affect them long-term. Lara said: "I want to go to college, and I have all these dreams, and I don't wanna have a baby right now, so I want to wait [to have sex] a little bit." Some girls also considered what the consequences would be for a baby

born to a teenage parent: “Because if I do [have sex] and something happens after it, I cannot take care of my child” (Jordyn). By considering how engaging in sexual activity can affect their futures, girls may be motivated to delay sex.

Another facilitator of refusing unwanted sex was valuing one’s *personal safety and bodily autonomy.* Aisha said:

> It’s okay to say no, it’s okay to know what you want, because at the end of the day it’s your body, it’s not theirs. They can go on living. It’s your body. If you consent to something that you didn’t want to consent to, you’re going to be feeling bad about it.

Aisha highlights the importance of respecting one’s own body and not agreeing to unwanted sex. Further, she mentions “know[ing] what you want,” which suggests a strong sense of one’s *sexual values.* Payton described how these values can facilitate sexual refusal:

> Some females, they know what they want, and they stick to what that is, and I’m one of them. They [boys] can’t manipulate me and, like, I know what I want, and I want to stick to what I want. But, like, they get mad and stuff like that and they have an attitude

Payton is acutely aware of what she wants sexually, which provides her with the self-efficacy to ensure she acts in accordance with her values and refuses boys’ sexual advances, even if boys react negatively.

Importantly, although most participants, even those who felt personally efficacious to refuse unwanted sex, thought that it may be difficult for some girls to do so, Natalia refuted the idea that refusing sex is difficult. When asked directly, Natalia indicated that she had never refused sex or wanted to refuse sex. Further, Natalia believed that: “Most of the girls know it,

like, if they don't want to have sex, I think they will know what to do." It appears that, because Natalia had clear sexual values, she expected that other girls would have the same experiences.

Condom use. The most commonly discussed barrier to condom use was being "in the moment," or having a *present time orientation.* Being "in the moment" is commonly cited as a reason for engaging in unintended or unprotected sexual activity (S. Brown & Guthrie, 2010; Kennedy & Roberts, 2009). For example, Natalia said: "I feel worried about not using one [a condom], but like at the same time I don't, cause when I'm doing it, I just don't think about what I'm doing…I just get right to it." Although Natalia has concerns about unprotected sex, when the act occurs, she loses focus of those concerns and has sex without a condom. Other participants who described being "in the moment" linked it specifically to feelings of attraction or desire. Josephina discussed, how even if a girl is committed to using condoms, she may be persuaded to have sex without one because desire takes over: "I feel like at that point in time, if you're in that type of mood, you don't really care as much. You just wanna go ahead and get it over with. Not over with, but get your needs settled." Notably, past literature suggests that these circumstances of being "in the moment" may be one of few times girls feel comfortable expressing sexual desire (S. Brown & Guthrie, 2010; Tolman, 2005). *Substance use* may enhance feelings of being "in the moment," resulting in unprotected sex. Jordie discussed how she had "partied" a lot in the past and engaged in sexual activity when drunk and/or high. When asked if she had used condoms, she said: "I didn't even think about [condoms]. You don't think about the risks or getting pregnant." These quotations illustrate that some girls may experience difficulties sacrificing sexual desire in the moment to protect their future health.

Another barrier to condom use was using other forms of contraception, such as birth control pills or IUDs. For example, Shelley said:

> I guess sometimes it would be like, so like for me personally it's like, if I find someone I'm like, I really want to have sex with them, umm, but like I don't know if they have sexually transmitted diseases or not. Another part of me is like sometimes I don't really want to use a condom because I am, I have like an IUD, and I'm using birth control and even though I know like it's really important and it's just like kinda hard."

Shelley admits that, because she has an IUD, it is difficult for her to make the choice to use condoms, although she knows about the risk of sexually transmitted diseases. This lack of condom use when using contraception is connected to the attitude that pregnancy prevention is more important that STD/HIV prevention, described on page 61. Some participants suggested this belief as a reason that condoms were devalued. For example, Alana said: "…the girls that use birth control they don't use condoms… I think nobody thinks about STDs anymore it's just about being getting pregnant." In situations in which pregnancy prevention is ensured, girls who prioritize pregnancy prevention may have sex without a condom, despite the risks of STDs. Although it is important that contraception empowers girls to protect themselves against pregnancy, it is also important that girls take steps to ensure protection about STDs.

Another factor that participants indicated could serve as a barrier to condom use was *ambiguous attitudes about teenage pregnancy*, resulting in indifference about utilizing condoms. For example, Malika said:

> I feel like a lot of girls like, kind of fantasize about pregnancy in a way, but then they like do like nothing to prevent it. But then they're also like, 'Oh, like, I don't want a baby right now.' But they're not taking any like steps or like precautions not to have a baby.

Malika's quotation illustrates that fantasies about having babies in the future may lead to an ambiguous desire for getting pregnant in the present, lessening girls' commitment to using condoms. Further, Natalia indicated that, although she did not want to become pregnant, pregnancy may not be a wholly negative experience for her:

> But I feel like, one of the guys, he's gonna take care of me and his child, 'cause he was my old partner, the one that I just ended our relationship, two year relationship with him. He will probably just say 'Okay alright fine. I'll help take care of you and the baby and stuff. I can move in together.

Natalia believed that her former boyfriend would support her if she became pregnant, which made the risk of pregnancy seem less threatening and lessened her commitment to condom use.

In contrast to Natalia's view, several girls discussed their belief that if girls become pregnant, they will be primarily *responsible for caring for the child.* This belief served as a facilitator to their safer sex behavior. For example, Queenie said:

> Honestly, it really, pregnancy affects the girl. Like, the guy can just like leave. But like, you're the one stuck with like the big belly, so I feel like if I use that angle kind of with, like, people I know, I feel like, that's, they'll be like, 'You're right, maybe I should just take precaution'

According to Queenie, girls may be motivated to use condoms because of a perception that boys will not participate in teen parenthood. Indeed, the majority of teen fathers do not marry or cohabitate with the mother of their child (Scott, Steward-Streng, Manlove, & Moore, 2012), and as with mothers generally, girls may be tasked with the majority of the burden of parenting.

Lack of knowledge about using and accessing condoms was another barrier to condom use. Several girls believed that condoms could only be purchased by people who were 18 years

old or older. Further, a few girls mentioned being confused about the right size of condoms, which they indicated would prevent them from buying condoms. These remaining questions from participants indicate that sexual health interventions often cannot address all adolescents' concerns and highlight the need for safe spaces in which adolescents can ask questions about their sexual health and receive accurate responses, a need that has recently been served through technology-based sexual health resources (Jones & Biddlecom, 2011; Selkie, Benson, & Moreno, 2011).

Further, several girls lacked self-efficacy for obtaining condoms, often because of feelings of *embarrassment or discomfort.* For example, when asked about whether it would be hard to obtain condoms, Alicia said: "I don't know. I wouldn't, I'm not very comfortable, in taking that step. Further, Macie said that she did not think that most girls would be comfortable obtaining condoms unless they were freely available without the risk of public attention:

> But us females, I have, I don't think I have ever gone to the store to get condoms unless the condoms were free at like the, um, this one doctor that I went to, there was just a box of condoms there and you just grab them, whatever. Yeah, I feel like that's the only really place a girl would feel comfortable with just grabbing the condoms and going.

Even after receiving training on accessing condoms, girls may continue to experience embarrassment at the thought of obtaining them. This embarrassment likely connects back to societal-level negativity toward adolescent sexuality, specifically girls' sexuality (discussed on page 55). Attempting to obtain condoms may expose girls to judgment and social consequences, heightening feelings of discomfort during the process (Bell, 2009).

However, as with refusing unwanted sex, *valuing safety and bodily autonomy* may facilitate condom use among girls. Aisha said:

> I'm comfortable you know, I can walk into a store, you know, and go buy some condoms. It's just that, you know, if you want to be safe, you know, that's what you do. You have to do it. But, if you want to take that risk, then go ahead, but it's better safe than sorry I would say.

Aisha views the acquisition of condoms as a necessary step to her own safety, giving her the self-efficacy to obtain condoms. Queenie also displayed values of *personal safety and bodily autonomy*, facilitating her condom use:

> I think it's better now that I like, know [how to use a condom] whenever I do decide to do it. Because like, I would feel more confident about it, and I mean you know, I don't, I also don't like gender roles kinda like 'the boy should take care of that, and the girl should take care of that'…I feel more confident, I guess, now knowing like, 'Oh I know how to.' Because like, I know some people like look down upon I guess girls carrying condom, but, if anything, now I would be like 'No I'm going to carry condoms' because you just never know.

Girls who have strong motivations to protect their health seemed capable of viewing the embarrassment or judgment associated with obtaining or carrying condoms as a temporary consequence that was far less than the long-term consequences of engaging in sex without a condom.

Partner communication. Some participants also mentioned barriers to engaging in sexual communication with a partner, namely feeling *embarrassed or uncomfortable.* In fact, a few girls explicitly mentioned being embarrassed or nervous to discuss sex with the interviewer

(n = 3), despite assurances that their answers were confidential. In fact, one participant was too embarrassed to say the word "condom." These feelings of embarrassment from participants highlights that sex continues to be a taboo subject to discuss, especially among girls (Montemurro, Bartasavich, & Wintermute, 2015). When asked about what would prevent teenagers from communicating with a partner about sex, Nikola said: "Um, they might think it's awkward to bring up the conversation…or…they might not want to do it, they might not want to talk about it ever." Feelings of discomfort, such as Nikola's, may be driven by feelings of not being ready to have sex. Unity indicated: "I think it would just be a little bit embarrassing for them [teenagers] because usually, people my age shouldn't really be having sex, so it would just be really weird to have the conversation." Unity indicated that conversations about sex would be uncomfortable specifically because she views herself and those her age as too young to be having sex. Further, Ramona, who also indicated that communication with a partner would be uncomfortable, indicated that "when [she's] older and mature," she may be more willing to have these conversations. Although it is understandable that girls who are younger and not yet interested in sexual activity would feel uncomfortable with discussions about sexuality, sexual communication in advance of sexual activity is important for ensuring that sexual boundaries are respected (Byers, 2011) and is one of the strongest predictors of contraceptive use (Widman, Nesi, et al., 2014).

Other sexual and reproductive healthcare. Many girls also discussed individual-level factors that may present as barriers to sexual and reproductive healthcare. Specifically, several girls mentioned *STD stigma* as a barrier to HIV/STD testing. Alana described having unprotected sex as "basically…giving a killer a gun to shoot me" and thought that if she contracted an STD it would be "the end of [her] life." Although most STDs (if detected early) are curable, Alana

perceived that getting an STD would destroy her life. These attitudes about STDs, although potential motivation for using condoms, can also be a significant barrier to girls' health. STD-related stigma is associated with avoidance of STD/HIV testing and can induce feelings of shame among girls if they discover they have an STD (Cunningham, Kerrigan, Jennings, & Ellen, 2009). For example, Monica said about testing: "I feel like I was I'm questioning my own body when I go and get tested…so I feel like if I was to know and something came back wrong I, I would be stuck." Monica suggested that having an STD would induce negative feelings about her body, making it difficult for her to seek out testing.

A few girls also discussed barriers to utilization of contraception. Three girls mentioned concerns about physical appearance, indicating that the possibility of getting "fat" from taking birth control pills made them avoid this form of contraception. Further, a few girls mentioned that there was a lack of knowledge among girls about different contraceptive options. For example, Shelley, who has an IUD, discussed conversations she has had with friends: "so many of my friends are like, 'Yeah, I wanna, like, have birth control and stuff and, like, use the pill, but that's just like hard to remember every day' and stuff like that.' And I'm just like, if only you knew." Shelley suggests that some girls are only aware of contraceptive methods such as birth control pills, and because those methods seem unmanageable, they do not attempt to acquire contraception.

Conclusion

Adolescent sexual behavior occurs within the context of overlapping influences at the societal, community, interpersonal, and individual levels (Krug et al., 2002). However, the interventions typically used to promote safer sex decision-making among adolescents typically operate at the individual-level alone. The results of this study suggest that adolescent girls must

face a complicated array of influences to successfully implement safer sex knowledge and skills learned in sexual health programming. Participants discussed 24 unique barriers to safer sex skill implementation; however, these barriers were sometimes evident at multiple levels of the Social Ecological Model (Krug et al., 2002). For example, the gender norms that influenced adolescent girls at the societal-level also influenced those around them, opening girls up to slut-shaming in school and manipulation from sexual partners. This study supports the notion that to truly support adolescent sexual health in the United States, it is necessary to go beyond individual-level intervention (DiClemente & Wingood, 2000). Below, I offer several recommendations for addressing adolescents' sexual health in the United States.

First, it is important that researchers continue to engage with policy-makers to develop law that reflects research on adolescent sexuality. Unfortunately, despite substantial evidence that providing adolescents with the tools to engage in safer sex does not increase the likelihood that they will become sexually active (Santelli et al., 2017; Wang, Lurie, Govindasamy, & Mathews, 2018) and that sexual activity among adolescents is normative and often positive (Harden, 2014), sexual health policy in the U.S. is largely based on the idea that sexual activity among adolescents is deviant. For example, abstinence-only sexual education is still prominent (Guttmacher Institute, 2015), and low-cost access to condoms, contraception, and other sexual/reproductive healthcare services is not prioritized (Guttmacher Institute, 2017, 2018; The Society for Adolescent Health and Medicine, 2017). These policies remain prevalent even as countries with more progressive sexual health policy report substantially lower levels of adolescent STD/HIV infection and teenage pregnancy (Currie et al., 2012). Further, it is clear from this study that adolescents are affected by negative cultural messages about adolescent sexuality, lack of condom access, and insufficient sexual health education. Without addressing

these factors, it is unlikely that the heightened rates of negative sexual health outcomes among adolescents will change.

As adolescent sexual health advocates continue to struggle for satisfactory sexual health policy, there are ways in which outer-level influences may be incorporated into sexual health intervention for adolescents. For example, Haberland (2015) found that sexual health interventions that address gender and power are more effective than those that do not. The programs analyzed in her review addressed gender through developing critical thinking among adolescents, which helps adolescents to deconstruct societal-level messages they receive. Therefore, there may be ways to lessen the influence of societal-level messages on adolescents without immediately changing society. Given the prevalence of gender norms in adolescents' discussions of sexual decision-making, girls clearly need more guidance as to deconstructing gender norms and understanding healthy dynamics in sexual relationships. Further, it is important that the burden of promoting safer sex behavior does not fall solely on girls and that boys are made to recognize sexual pressure as unacceptable (Drake & Gahagan, 2015). Importantly, adolescents also noted several facilitators to safer sex decision-making, including safety-conscious friends and supportive parents. Better incorporating girls' pre-existing sexual health facilitators may also be important for prompting adolescent sexual health.

Lastly, the growing field of technology-based interventions and sexual health services may allow adolescents to access resources previously impossible. Nearly all adolescents have access to a smartphone, and so nearly all adolescents can access web-based sexual health resources (Lenhart et al., 2015). Web-based sexual health interventions, such as the HEART program that was evaluated in the larger study, can be made accessible to adolescents to explore at their convenience in a private setting (Rapoff, 2013). Further, other technology-based services

can provide real-time answers to adolescents' sexual health questions (Jones & Biddlecom, 2011; Selkie et al., 2011) or allow them to look up nearby locations for accessing free condoms or STD/HIV testing (e.g., GetTested; CDC, 2018). Recent technological advances may also allow girls to receive contraception prescriptions via video chat (e.g., Nurx). Technology may provide a method of increasing girls' access to necessary sexual health resources as work continues to be done to change sexual health policy.

Importantly, although this study provided substantial insight into factors that may serve as barriers and facilitators to adolescent girls' safer sexual decision-making, it does have limitations. First, this sample only includes participants from the southeastern United States, and the same barriers and facilitators may not be as salient in other areas of the country. The Southern U.S. is known for having restrictive sexual health policies and the highest rates of teenage pregnancy and STDs/HIV in the country (Jozkowski & Crawford, 2016); therefore, barriers to implementation of sexual health information and skills may be more pronounced in this area. Still, this study unquestionably highlights the necessity of sexual health policy change in the southeastern United States. In addition, this study examined participants' anticipated barriers following the administration of a single sexual health intervention that is not currently being disseminated. Based on participant responses, it is possible that girls who receive traditional school-based sexual health interventions may perceive additional barriers that were not captured through this study. Understanding the specific factors that adolescents believe are missing from their current sexual education will be important for offering specific changes to sexual education policy. Despite these limitations, this study offers a multifaceted examination of factors that may prevent girls from translating information and skills learned in sexual health programming into behaviors.

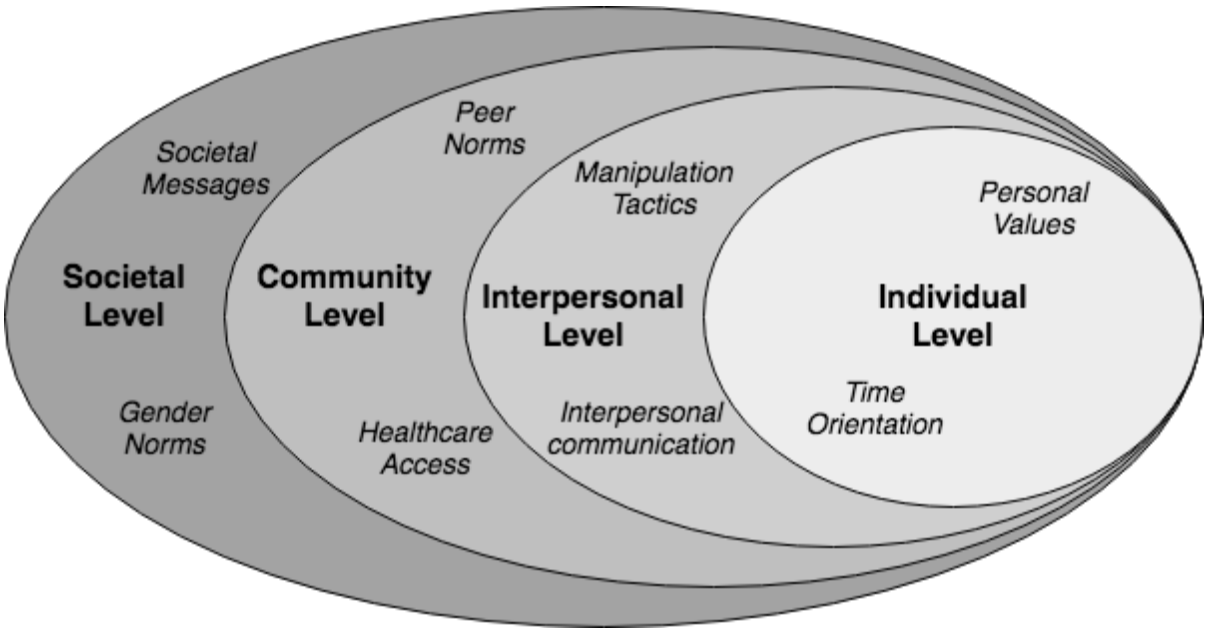

Figure 3.1. Social Ecological Model with example influences

Table 3.1.

Barriers and facilitators to implementing sexual health information and skills at the societal level.

Societal Level Barriers
1. **Gender norms**: cultural messages about normative behavior based on gender, specifically those related to sexuality such as *sexual scripts* and the *sexual double standard* - *For most girls, their mind is so focused on keeping the boy happy…that they lose focus* (Josephina)
2. **Cultural messages about adolescent sexuality**: cultural norms that suggest sex among adolescents is deviant and/or problematic - *You're supposed to be married before you have sex* (Serenity)
3. **Cultural messages about condoms**: cultural norms that suggest using condoms is undesirable - *You're not supposed to use a condom anymore because guys they say, 'I can't feel nothing,' 'I can't do this,' 'I can't do that.'* (Macie)
4. **Sexual and reproductive healthcare policy:** lack of availability of sexual and reproductive healthcare services for low-income or uninsured people - *It's much easier if you have health insurance or you can get to the [free health clinic]* (Charity)
Societal Level Facilitators
No facilitators were identified at this level

Table 3.2.

Barriers and facilitators to implementation of sexual health knowledge and skills at the community level

Community Level Barriers
1. **Abstinence-focused sexual education**: sexual education that highlights abstinence as the *only* method of preventing negative sexual outcomes - *[Sex is something] that's reproductive and not as something people do for fun* (Shelley)
2. **Pressure to be sexually active:** views that most peers are sexually active and to be abstinence is deviant, resulting in pressure to engage in sex - *The biggest pressure [is] like 'Oh everybody's… doing it, and you're not doing it'* (Malika)
3. **Perception of peers as risky:** views that most peers are engaging in risky sexual behavior, such as unprotected sex - *Especially in high school, nobody uses condoms anymore* (Payton)
1. **Slut-shaming:** the experience of being shamed for real or presumed sexual activity - *Then most of the people from school made fun of her for [having sex]* (Bailey)
2. **Inaccessibility of sexual/reproductive healthcare:** aspects of sexual and reproductive healthcare or products that make them difficult to access, such as lack of transportation - *I feel like condoms wouldn't be like at my reach* (Bianca)

Table 3.2. (continued)

Community Level Facilitators
1. **Perception of peer safety:** views that most peers are engaging in safer sex - *More people probably use condoms now that like the um the term of STDs and like other things that are being talked about* (Bailey)
2. **Access to sexual/reproductive healthcare:** Easily accessible sexual/reproductive healthcare within the community, such as through one's school or free condom distribution sites - *I see condoms in the store all the time and they're like in the front. And sometimes like…people give them for free* (Kristina)

Table 3.3.

Barriers and facilitators to implementation of sexual health knowledge and skills at the interpersonal level.

Interpersonal Level Barriers
Romantic and/or Sexual Partners
1. Manipulation or pressure: tactics, such as threatening breakup, used to convince one's partner to engage in unwanted sexual activity - *Relationships nowadays, it's three months and you have to give it up. And at that particular point in time if that person's not ready then that's when they…break up with them* (Josephina)
2. Violence: using violent or abusive tactics to convince a partner to engage in unwanted sexual activity - *Sometimes the man or the boy can be abusive, and she didn't want to get hit, so she didn't use a condom* (Gabrielle)
Friends
3. Sexual pressure: Pressure to engage in sex because friends are sexually active; may be indirect or direct - *Well with the first guy I had sex with, I was, like, I strongly disagreed about it…and then I was like, oh, my friends are doing it, I should just do it* (Gabrielle)

Table 3.3. (continued)

Parents

4. **Lack of privacy:** Concerns about parents learning of one's sexual activity
    - *if you're out with your parents and you're shopping…you might be really embarrassed to get caught [buying condoms] if they don't already know that you're sexually active* (Sharlene)
5. **Interference with sexual autonomy:** parents making sexual or reproductive decisions for their child

She takes [condoms] away from me just so she can think she'll prevent from me from having sex (Natalia)

Interpersonal Level Facilitators

Partners

1. **Positive sexual communication:** open, respectful discussions about sexual health with a partner
    - *I have talked about STDs…and like I both got tested and I were both clean and we've only had sex with each other* (Jordie)

Friends

2. **Shared values:** having friends with similar values related to sex
    - *I have a balance and the best part of…about making abstinence easier for me was balance of friends* (Lara)
3. **Condom access:** ways in which friends may facilitate access to condoms
    - *I've gotten condoms before and gave them to my friends* (Devin)

Table 3.3. (continued)

Parents

4. **Positive sexual communication:** sexual communication characterized by parents' acknowledgment of their child's right to make their own sexual choices and inclusion of comprehensive risk prevention messages
   - *Like my mom always tells me [to always use condoms] all the time. And like the choice is always mine and my partners, like I have to agree on it* (Adela)
5. **Promotion of sexual/reproductive healthcare:** advocating for and enabling daughters' utilization of sexual and reproductive healthcare services
   - *First thing that came out of my mom's mouth before I even said anything about sex: "Yeah I'm putting you on birth control"* (Macie)

Healthcare providers

6. **Positive sexual communication:** providing open, non-judgmental, and honest communication to patients about sexual and reproductive healthcare

She seemed more open and genuinely concerned about my health versus 'Oh I think you should do this' or 'I think you should do that.' (Charity)

Table 3.4.

Barriers and facilitators to implementation of sexual health knowledge and skills at the individual level

Individual Level Barriers
1. **Romantic relationships as a representation of self-worth**: reliance on romantic relationships for self-esteem or happiness - *They don't want that person to leave them or to let them go and then…they'll be lonely for the rest of their life* (Jamilla)
2. **Unclear sexual values:** lack of clarity regarding one's sexual limits or desires - *I guess like you keep getting like pressured or like 'Oh I'm supposed to do this,' so they don't really stop and think 'Oh, you know, like do I truly want to do this?* (Malika)
3. **Present time orientation**: a focus on wanting to have sex "in the moment" without considering future consequences - I feel like at that point in time if you're in that type of mood you don't really care as much (Josephina)
4. **Substance use:** engaging with drugs or alcohol during sexual encounters - *When you're drunk or under the influence, you don't really think straight, and you don't really think things through as you would if you were, like, sober* (Bibiana)
5. **Contraceptive use**: utilization of contraceptive methods other than condoms - *Sometimes I don't really want to use a condom because…I have like an IUD, and I'm using birth control and even though I know [STD prevention is] really important and it's just like kinda hard* (Shelley)

Table 3.4. (continued)

6. **Ambiguous pregnancy attitudes*:*** feelings of ambiguity about becoming pregnancy due to fantasies about having a baby or family life
   - *Because I feel like a lot of girls like kind of fantasize about pregnancy in a way but then they like do like nothing to prevent it* (Malika)
7. **Lack of knowledge:** deficient information about sexual health topics
   - *I think the only problem might be is which [condom to get] because there's so many. Uh what style you use and stuff like that* (Leanna)
8. **Embarrassment or discomfort:** feelings of embarrassment surrounding sexual topics
   - *I think it would just be a little bit embarrassing for them [teenagers] because usually, people my age shouldn't really be having sex, so it would just be really weird to have the conversation* (Unity)
9. **STD stigma:** excessively negative attitudes regarding the consequences of having a sexually transmitted disease
   - *I feel like I was I'm questioning my own body when I go and get tested…so I feel like if I was to know and something came back wrong I, I would be stuck* (Monica)
10. **Concerns about physical appearance:** beliefs about how contraception may affect one's physical appearance
    - *We've already talked about that…also birth control thing. But I don't think that it's the best thing for me because I don't like how it makes you fat.* (Monica)

Table 3.4. (continued)

Individual-Level Facilitators
1. **Future orientation:** consideration of one's future when making sexual decisions - *I want to go to college, and I have all these dreams, and I don't wanna have a baby right now, so I want to wait [to have sex] a little bit* (Lara)
2. **Valuing personal safety and bodily autonomy:** desire to protect one's health and ensure sexual choice - *At the end of the day it's your body, it's not theirs. They can go on living. It's your body.* (Aisha)
3. **Defined sexual values:** conviction about one's sexual limits and desires - *Some females they know what they want and they stick to what that is, and I'm one of them. They [boys] can't manipulate me and like I know what I want, and I want to stick to what I want* (Payton)
4. **Perceived pregnancy responsibility**: belief that teenage mothers usually take primary responsibility for childcare with little help from the father - *Honestly, it really, pregnancy affects the girl. Like, the guy can just like leave* (Queenie)

CHAPTER IV

Discussion

High-risk girls, or girls who have a history of emotional and behavioral difficulties, are at enhanced risk of negative sexual health outcomes; however, currently available sexual health interventions for high-risk girls have been limited by several factors: 1) lack of a gender-specific focus, 2) lengthy time commitments, 3) inaccessibility, and 4) mixed or limited effects. In this dissertation, I aimed to address these limitations by evaluating a brief, web-based sexual health intervention called HEART among a sample of high-risk girls. The results of these two studies not only contribute to current knowledge of efficacious sexual health interventions for high-risk adolescent girls but also provide insight into the factors that should ideally be addressed to enhance translation of safer sex behavioral intentions into actions.

The results of Study 1 suggest that HEART is an efficacious program for high-risk adolescent girls. In line with hypotheses, girls who completed the HEART program showed significant increases in communication intentions, sexual assertiveness skills, sexual self-efficacy, sexual attitudes, sexual norms, and STD/HIV knowledge. Further, there were several interactions between the intervention and emotional and behavioral difficulties (i.e., delinquency, substance use, and mental health symptoms) on the primary outcomes, including intervention by delinquency and intervention by substance use interactions on communication intentions, an intervention by substance use interaction on communication skills, and intervention by delinquency and intervention by mental health symptoms interactions on condom use. These interactions suggested that the intervention was particularly impactful for girls who had higher levels of the three EBDs. Importantly, girls with lower levels of the EBDs tended to have higher mean scores on the pre-test measures of the outcome variables, accounting for reduced impact of

the program on their scores at post-test. However, girls with higher levels of the EBDs had lower mean scores on the pre-test measures of outcome variables and improved at post-test to scores similar to those of the participants with lower levels of EBDs.

Our results support HEART's efficacy as a sexual health program for girls with emotional and behavioral difficulties. Given the limited array of interventions available for girls with EBDs, this evaluation is an important contribution towards reducing sexual risk among this population. Several facets of HEART's content and design also suggest it is an optimal program for use with girls with emotional and behavioral difficulties. HEART specifically aims to improve safer sex decision-making among girls by targeting sexual communication, meaning that it targets a skills area in which girls with EBDs often have pre-existing deficits (Cross, 2011). Further, the brief, web-based design allows this program to be accessed easily and completed quickly, addressing common barriers to intervention completion among high-risk girls in the past (Coyle et al., 2006; Milburn et al., 2012). Most participants in the current study completed the program during their typically scheduled time in their community organization, suggesting that HEART can be incorporated into programming currently offered by community-based organizations with minimal staff training necessary. This efficacy replication trial not only illustrates HEART's efficacy with a new population but also illustrates that it can be implemented in community-based settings in addition to the school-based setting in which it was previously evaluated.

Although it is promising that this brief program promoted positive outcomes among girls with emotional and behavioral difficulties, it is important to note that this evaluation measured intervention effects at post-test only, and it is unclear whether receiving HEART has impacts on actual behavior, such as sexual communication with a partner, abstinence, or condom use.

Although the measured outcomes are strongly to safer sex behavior (Albarracín et al., 2001; Fishbein & Ajzen, 2010; Widman, Noar, et al., 2014), as noted in the Introduction to this dissertation, there may be intervening factors that serve as barriers from translating sexual health knowledge and skills into safer sex behaviors. Therefore, in Study 2, I examined these barriers at the four levels of the Social Ecological Model (Krug et al., 2002), elucidating the overlapping influences of societal factors, community factors, interpersonal factors, and individual factors on behavior.

This study revealed 24 barriers to implementation of safer sex knowledge and skills. Here, I highlight a few specific intervening factors that may impact the intended study outcomes: sexual refusal/communication and condom use. In addition, I specifically focus on factors that are not already addressed through the HEART program.

At the societal-level, *gender norms*, or cultural messages about normative behavior based on gender, were revealed as a barrier to refusal of unwanted sex and condom use. Specifically, participants discussed a societal-level sexual script that boys' sexual interests are prioritized over girls', granting boys permission to pressure partners into unwanted or unprotected sexual activity. This pressure compromises girls' ability to refuse sex because of the expectation that girls fulfill partners' desires (Sanchez et al., 2005). Further, girls indicated the presence of a sexual double standard (Crawford & Popp, 2003; Reiss, 1960) that permits boys greater liberty to explore their sexuality than girls and even condemns girls for their sexuality. In response, participants indicated a reluctance to obtain or carry condoms in fear of being shamed. The influence of gender norms was also evident at the inner-levels of the model. For example, at the community-level, girls reported experiencing shame for real or perceived sexual activity. At the interpersonal-level, participants reported the possibility of being manipulated by partners using

tactics informed by gender norms. For example, girls indicated that partners may threaten a breakup if girls refused sexual activity or wanted to use a condom. Further, if boys are given more power in sexual relationships, threats of violence to ensure girls' compliance with boys' sexual desires may occur (Wingood & DiClemente, 2000). Lastly, gender norms could be absorbed at the individual-level. For girls who align strongly with sexual scripts, there may be a strong desire for attention and affection from a romantic partner, and these girls may be particularly likely to prioritize their partners' needs over their own. This selection of barriers related to gender norms is not unexpected and is documented in past research (Amaro & Raj, 2000; Wingood & DiClemente, 2000). In addition, a meta-analysis showed that addressing gender norms in sexual health interventions results in significantly more effective interventions (Haberland, 2015). Addressing these gender norms in an intervention may help adolescents recognize the unequal power that characterizes them as facets of an unhealthy relationship. Further, a burden must be placed on educating boys that this behavior is unhealthy, coercive, or even abusive (Drake & Gahagan, 2015).

Participants also indicated that negative cultural norms about adolescent sexuality exist at the societal level, which may impact condom use. Participants stated that it would be difficult to obtain condoms due to fear of societal judgment about their sexual activity status. Participants also indicated that, at the interpersonal-level, many parents harbor these negative attitudes, reducing girls' comfort in communicating with parents about sexual activity. As a result, girls may face barriers to obtaining condoms, specifically lacking privacy in a store to buy condoms. Further, one participant had her condoms confiscated by her mother. In such cases, even if intentions to use condoms are high, access to condoms may prevent actual use. Importantly, negative cultural norms regarding adolescent sexuality may be a factor in lack of condom

accessibility at the community-level. Although some participants described numerous locations in which they could obtain condoms, even within their schools, condom accessibility is often limited for adolescents. Importantly, this limited access is driven by policies that view teenage sexuality as something to be avoided. However, reducing condom access for adolescents does not result in less sexual activity among adolescents and only increases the likelihood that adolescents will engage in *unprotected sex.*

Lastly, I highlight one important individual level factor not explicitly addressed in HEART: substance use. Particularly given the increased risk status of the participants in this study, addressing substance use may be important, and a few girls mentioned specifically that it would be important to address these issues more directly. Sexual activity that occurs during substance use is more likely to be unplanned (Klein, Geaghan, & MacDonald, 2007) and may involve less communication with partners, factors that may increase the likelihood that sex will be unprotected. Participants indicated that when they engaged in substance use, it was more difficult to focus on the potential negative consequences of sexual activity. Future interventions should address ways in which girls may enhance their ability to make safer sex decisions even when substance use is a factor.

Notably, although not detailed here, participants also discussed factors that would facilitate their use of the sexual health knowledge and skills learned in HEART, including high condom accessibility and positive sexual communication with parents. These facilitators were acknowledged by participants even when interviewers did not explicitly ask. The salience of these facilitators indicates that although sexual health interventions may not address all intervening factors that prevent girls from engaging in safer sex behavior, girls may already have influences in their lives prior to sexual health interventions that may promote safer sex behavior.

Although HEART has the potential to be an efficacious intervention among adolescent girls with EBDs, these studies also highlight that widespread change in adolescent sexual health throughout the country cannot be enacted without intervention beyond the individual-level. Not only must sexual health researchers continue to advocate for sexual health policy that is in line with sexual health research, but they must also develop programming that specifically addresses factors that influence sexual health at the outer-levels of the Social Ecological Model. In particular, condom distribution programs in schools may increase access to condoms and incorporation of critical thinking training in sexual health interventions may allow adolescents to dissect the sexual health messages they are receiving at the societal-level and make sexual decisions more autonomously. Further, researchers should consider incorporating the factors in adolescents' lives that already serve as facilitators, including parents, into sexual health interventions.

Limitations

This study provides substantial insight into both the utility of HEART as a sexual health intervention for girls and the factors that should be addressed at multiple levels of adolescents' lives to ensure more widespread sexual behavior change among adolescents. However, there are some limitations that must be addressed. First, the sample is representative of only 52 adolescent girls living in the southeastern United States. Regarding Study 1, this sample size did not allow for a randomized, experimental design of the evaluation. Further, this study only evaluated changes from pre- to post-test, and a longer evaluation of HEART among girls with emotional and behavioral difficulties is needed. Regarding Study 2, it is unclear whether these barriers are salient nationwide. The southeastern United States is known for more conservative policy and viewpoints regarding adolescent sexuality (Jozkowski & Crawford, 2016). In other areas of the

country, cultural norms may be more progressive, and adolescents may experience lesser barriers to safer sex decision-making. For example, larger cities often have greater condom accessibility, due to free condom distribution programs (Renaud et al., 2009). Second, participants received all aspects of Study 1 and Study 2 in the same two-hour period, providing little time for participants to consider factors that might make it difficult for them to utilize the safer sex knowledge and skills they learned in HEART. Interviewing adolescents who participated in a sexual health intervention weeks or months prior about their experienced barriers may provide greater insight into the *actual* barriers girls experience rather than barriers they anticipate will exist. Nevertheless, these studies provide novel, rich data regarding sexual risk prevention for girls with emotional and behavioral difficulties and provide key areas of future direction for improving adolescent sexual health nationwide.

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APPENDICES

Appendix A
Questionnaire Packet for Girls

Thank you for participating in this study! We'll ask you to complete several surveys on the computer to find out more about YOU. There are no right or wrong answers. Please answer how you honestly feel right now. It is ok to take your best guess if you are not sure of an answer.

Although there are a lot of questions, most teens tell us they have fun answering questions about themselves.

Also, some of the questions are about very private attitudes and behaviors. Remember, everything you tell us is COMPLETELY CONFIDENTIAL. This means I will not tell ANYONE how you respond. I won't tell your parents, teachers, or friends.

Please answer all questions honestly.

Demographics (DEM)

1. How old are you?

   _____

2. What is your race/ethnicity? (If you are of mixed race, check each racial group that you identify with. For example, if you identify as white and black, circle "A" and "B" below.)
   1) Caucasian/White
   2) African-American/Black
   3) Hispanic/Latina
   4) Asian/Pacific Islander
   5) Other: _____

3. Transgender is an umbrella term that refers to people whose gender identity, expression or behavior is different from those typically associated with their assigned sex at birth. Other identities considered to fall under this umbrella can include non-binary, gender fluid, and genderqueer – as well as many more.

   Do you identify as transgender?
   1) Yes (specify)
   2) No

4. How do you describe your sexual orientation?
   1) Heterosexual (Straight)
   2) Homosexual (Gay, Lesbian)
   3) Bisexual
   4) Questioning/Not Sure
   5) Other _____

5. People are different in their sexual attraction to other people, meaning the people they might want to be sexually active with. Which best describes your feelings? Are you:
   1) Only attracted to girls
   2) Mostly attracted to girls
   3) Equally attracted to girls and boys
   4) Mostly attracted to boys
   5) Only attracted to boys
   6) Not sure

6. Do you have a mother or someone who is like a mother (e.g., step-mother or female guardian who cares for you)?
   0) No (*skip next question)*
   1) Yes

7. What is the highest level of education your mother received? (*if this question is answered, skip Question 8)*
   1) Some high school, but did not graduate
   2) High school graduate or GED
   3) Some college, no degree
   4) Associate's degree or Technical/Vocational School
   5) Bachelor's degree
   6) Graduate degree (MA, JD, PhD, MD)

8. Do you have a father or someone who is like a father (e.g., step-father or male guardian who cares for you)?
   0) No (*skip next question)*
   1) Yes

9. What is the highest level of education your father received?
   1) Some high school, but did not graduate
   2) High school graduate or GED
   3) Some college, no degree
   4) Associate's degree or Technical/Vocational School
   5) Bachelor's degree
   6) Graduate degree (MA, JD, PhD, MD)

10. During the past 30 days, where did you usually sleep?
    1) In my parent's or guardian's home
    2) In the home of a friend, family member, or other person because I had to leave my home or my parent or guardian cannot afford housing
    3) In a shelter or emergency housing
    4) In a motel or hotel
    5) In a car, park, campground, or other public place
    6) I do not have a usual place to sleep
    7) Somewhere else

11. During the past 30 days, did you ever sleep away from your parents or guardians because you were kicked out, ran
    away, or abandoned?
    1) Yes
    2) No

12. Do you speak more than one language?
    0) No, I only speak English *(skip to IMP section)*
    1) Yes, I speak English and: _____

13. Is English the first language you learned?
    0) Yes
    1) No

Impulsivity (IMP)

		Strongly Disagree	***Disagree***	***Half and Half***	***Agree***	***Strongly Agree***
1	I'm the kind of person who will try anything once, even if it's not that safe.	1	2	3	4	5
2	I should try harder to control myself when I'm having fun.	1	2	3	4	5
3	I do things without giving them enough thought.	1	2	3	4	5
4	I become "wild and crazy" and do things other people might not like.	1	2	3	4	5
5	When I'm doing something for fun (for example: partying, acting silly), I tend to get carried away and go too far.	1	2	3	4	5
6	I like to do new and different things that many people would consider weird or not really safe.	1	2	3	4	5
7	I say the first thing that comes into my mind without thinking enough about it.	1	2	3	4	5
8	I stop and think things through before I act.	1	2	3	4	5

Emotion Regulation (ER)

		Strongly Disagree	***Disagree***	***Half and Half***	***Agree***	***Strongly Agree***
1	When I want to feel happier, I think about something different.	1	2	3	4	5
2	I keep my feelings to myself.	1	2	3	4	5
3	When I want to feel less bad (e.g., sad, angry, or worried), I think about something different.	1	2	3	4	5
4	When I am feeling happy, I am careful not to show it.	1	2	3	4	5
5	When I'm worried about something, I make myself think about it in a way that helps me feel better.	1	2	3	4	5
6	I control my feelings by not showing them.	1	2	3	4	5
7	When I want to feel happier about something, I change the way I'm thinking about it.	1	2	3	4	5
8	I control my feelings about things by changing the way I think about them	1	2	3	4	5
9	When I'm feeling bad (e.g., sad, angry, or worried), I'm careful not to show it.	1	2	3	4	5
10	When I want to feel less bad (e.g. sad, angry, or worried) about something, I change the way I'm thinking about it.	1	2	3	4	5

Sexual Behavior Questionnaire (SBQ)

The next questions ask about your past relationships and sexual experiences. When I ask about sexual experiences, I are interested in activities that you choose to do with your consent. I are not asking about forced or abusive sexual experiences. You do not need to report these experiences on this survey.

Remember that the information you share is completely **confidential and private**. I will not tell your parents, teachers, or anyone else how you answer these questions!

1. Have you ever had a dating partner? When I say dating partner, I mean a boyfriend/girlfriend, someone you've gone on a date with or "hung out with" as more than friends, or someone you've engaged in sexual activity with.
   0) No *(skip questions 16-24)*
   1) Yes

2. What is your current relationship status (pick the option that fits best)?
   1) I have a boyfriend/girlfriend
   2) I am dating or seeing one person, but it is not very serious
   3) I am in a sexual relationship with someone (e.g., friends with benefits, hook-up partner, casual sex)
   4) I am not in any kind of romantic or sexual relationship with anyone right now
   5) Other: _____

3. In the past 3 months, did you ever refuse or avoid having sex?
   1) No
   2) Yes

4. Have you ever engaged in sexual activity (like sexual touching, oral sex, or sexual intercourse)?
   1) No
   2) Yes

5. In your lifetime, who have you engaged in sexual activity with?
   1) Boys only
   2) Girls only
   3) Both boys and girls

6. 6. Have you ever had vaginal sex? (By "vaginal sex", I mean when a boy puts his penis in a girl's vagina.)
   1) No *(skip to question 25)*
   2) Yes

7. The very last time you had sex did you use a condom?
   1) No
   2) Yes

8. Have you had vaginal sex during the past 3 months?
   1) No
   2) Yes

9. How often did you use condoms when you had sex in the past 3 months?
   1) Never
   2) Sometimes
   3) About half the time
   4) Most times
   5) Every time

10. In the past 3 months, which of these methods have you used to prevent pregnancy? (Choose all that apply.)
   1) Condoms
   2) The Pill
   3) A diaphragm
   4) A cervical cap
   5) Gels, creams, suppositories, or foams
   6) Depo Provera
   7) Other
   8) No birth control methods in the past 3 months

11. In the past 3 months, have you had an STD test?
   1) No
   2) Yes

In your lifetime, have you ever…

12. Been pregnant?	**NO**	**YES**
13. Been told by a doctor or nurse that you had Gonorrhea (clap), Syphilis (syph), Chlamydia, or Trichomonas (trich?	**NO**	**YES**
14. Been told by a doctor or nurse that you had HPV, Genital Warts, or Genital Herpes?	**NO**	**YES**
15. Been told by a doctor or nurse that you had HIV/AIDS?	**NO**	**YES**

How often have you ever talked to your dating partner(s) about the following sexual topics:

	Never	**1-2 times**	**A few or many times**
16. How to use condoms	1	2	3
17. How to prevent STDs and HIV	1	2	3
18. The risk of pregnancy	1	2	3
19. Abstinence or sexual limits (what you will or will not do)	1	2	3
19. Your partner's sexual history	1	2	3
20. Sexual Pleasure	1	2	3

21. Think about the times you've talked to your partner about sexual topics. Would you say these talks were:
    1) Very uncomfortable
    2) A little bit uncomfortable
    3) A little bit comfortable
    4) Very comfortable

In your lifetime how many times has a dating partner:

	Never	**1-2 times**	**3 or more times**
22. Spoke to you in a hostile or mean tone of voice.	1	2	3
23. Hurt you physically (kicked, hit, punched, or slapped you; threw something at you, etc.)	1	2	3
24. Touched you sexually when you didn't want them to.	1	2	3

For the next questions, please choose any number from 0 to 100.

25. If you have sex in the next 3 months, how often will you use a condom? Please enter any number from 0 to 100. _____

    0 = I will not use a condom
    50 = I will use a condom 50% of the time
    100 = I will use a condom all the time

26. In the next 3 months, how likely are you to discuss sexual limits and boundaries with your dating partner? (If you do not currently have a dating partner, imagine how likely you will be to discuss sexual limits if you get into a relationship.) Please enter any number from 0 to 100. _____

    0 = I do not think I will discuss sexual limits and boundaries with my partner
    50 = I have a 50% chance of discussing sexual limits and boundaries with my partner
    100 = I think I will definitely discuss sexual limits and boundaries with my partner

27. In the next 3 months, how likely are you to discuss STDs or pregnancy with your dating partner? (If you do not currently have a dating partner, imagine how likely you will be to discuss STDs or pregnancy if you get into a relationship.) Please enter any number from 0 to 100. _____

    0 = I do not think I will discuss STDs or pregnancy with my partner
    50 = I have a 50% chance of discussing STDs or pregnancy with my partner
    100 = I think I will definitely discuss STDs or pregnancy with my partner

28. In the next 3 months, how likely are you to discuss condoms with your dating partner? (If you do not currently have a dating partner, imagine how likely you would be to discuss condoms if you get into a relationship.) Please enter any number from 0 to 100. ____

    0 = I do not think I will discuss condoms with my partner
    50 = I have a 50% chance of discussing condoms with my partner
    100 = I think I will definitely discuss condoms with my partner

Consent (CONS)

These questions are about situations where boys or girls might ask their partner if it is ok to engage in sexual activity. How much do you agree or disagree with each statement?

	Strongly Disagree	**Moderately Disagree**	**Disagree**	**Neutral**	**Agree**	**Moderately Agree**	**Strongly Agree**
You should ask your partner if it's ok before you start any sexual activity, even kissing.	1	2	3	4	5	6	7
You should ask your partner if it's ok before you have sex for the first time.	1	2	3	4	5	6	7
Even if you have had sex before, you should ask your partner if it is ok every time you have sex.	1	2	3	4	5	6	7

STD/HIV Knowledge Questionnaire (STD)

These questions test your knowledge about STDs. For each statement, you can say "true", "false", or "I don't know".

1. Girls have to be 18 years old before they can get a test for STDs or pregnancy without parent permission.	**True**	**False**	**I Don't Know**
2. STDs usually have noticeable symptoms, like itching or burning.	**True**	**False**	**I Don't Know**
3. Most bacterial STDs (like chlamydia and gonorrhea) can be cured with medicine.	**True**	**False**	**I Don't Know**
4. Most viral STDs (like HIV and herpes) can be cured with medicine.	**True**	**False**	**I Don't Know**
5. Some STDs can make women physically unable to have babies.	**True**	**False**	**I Don't Know**
6. Most people know when they have an STD.	**True**	**False**	**I Don't Know**
7. About 5% of girls between the ages of 13-19 get an STD each year.	**True**	**False**	**I Don't Know**
8. Not having sex is the most effective way to avoid STDs and pregnancy.	**True**	**False**	**I Don't Know**
9. The tip of the condom should be pinched while rolling it on the penis.	**True**	**False**	**I Don't Know**
10. Condoms have an expiration date.	**True**	**False**	**I Don't Know**
11. Latex condoms are the best condoms to prevent HIV and other STDs.	**True**	**False**	**I Don't Know**
12. Condoms can be used more than once.	**True**	**False**	**I Don't Know**

Condom Attitudes and Norms (CAN)

The next questions ask about your attitudes and beliefs about condoms. Please answer these questions how you honestly feel right now even if you have never had sex.

		Strongly Disagree	***Disagree***	***Half and Half***	***Agree***	***Strongly Agree***
1	Condoms create a sense of safety.	1	2	3	4	5
2	If my partner suggested using a condom, I would think he/she was only being cautious.	1	2	3	4	5
3	Condoms protect against sexually transmitted diseases.	1	2	3	4	5
4	Using a condom takes the "wonder" out of sex.	1	2	3	4	5
5	Condoms are messy.	1	2	3	4	5
6	Condoms take away the pleasure of sex	1	2	3	4	5
7	Most teenagers believe condoms should always be used if a person my age has sex.	1	2	3	4	5
8	Most teenagers believe condoms should be used if a person my age has sex, even if a girl uses birth control pills.	1	2	3	4	5
9	Most teenagers believe condoms should always be used if a person my age has sex, even if the two people know each other well.	1	2	3	4	5

Self-efficacy (SE)

For these questions, try to imagine yourself in each of the situations described. Many of these things are difficult to do. Please think carefully before answering how sure or unsure you are that you would be able to do them.

		Couldn't do it	***Unsure***	***Sure***	***Very Sure***
	If you decided to have sexual intercourse…				
1	How sure are you that you could walk into a drugstore and ask the pharmacist where the condoms (rubbers) are located?	1	2	3	4

2	How sure are you that you could pick up free condoms if they were available to you?	1	2	3	4
3	How sure are you that you could have condoms available when you need them?	1	2	3	4
4	How sure are you that you could talk to your partner about safer sex?	1	2	3	4
5	How sure are you that you could ask your partner to use a condom each time you had sexual intercourse?	1	2	3	4
6	How sure are you that you could ask your partner how many people he/she has had sex with before you?	1	2	3	4
7	How sure are you that you could tell your partner how many people you had sex with before him/her?	1	2	3	4
8	How sure are you that could tell your partner that you will not have intercourse unless a condom is used?	1	2	3	4
		Couldn't do it	***Unsure***	***Sure***	***Very Sure***
	If you decided not to have sexual intercourse…				
9	How sure are you that you could tell your partner that you will not have sexual intercourse?	1	2	3	4
10	How sure are you that you could tell your partner to wait until you feel more comfortable before having sexual intercourse?	1	2	3	4

Strengths and Difficulties Questionnaire (SDQ)

		Not True	***Somewhat true***	***Certainly True***
1	I am restless, I cannot stay still for long.	1	2	3
2	I get a lot of headaches, stomach-aches or sickness.	1	2	3
3	I get very angry and often lose my temper.	1	2	3
4	I would rather be alone than with people of my age.	1	2	3
5	I usually do as I am told.	1	2	3

6	I worry a lot. EP	1	2	3
7	I am constantly fidgeting or squirming.	1	2	3
8	I have one good friend or more.	1	2	3
9	I fight a lot. I can make other people do what I want.	1	2	3
10	I am often unhappy, depressed or tearful.	1	2	3
11	Other people my age generally like me.	1	2	3
12	I am easily distracted. I find it difficult to concentrate.	1	2	3
13	I am nervous in new situations. I easily lose confidence.	1	2	3
14	I am often accused of lying or cheating.	1	2	3
15	Other children or young people pick on me or bully me.	1	2	3
16	I think before I do things.	1	2	3
17	I take things that are not mine from home, school or elsewhere.	1	2	3
18	I get along better with adults than with people my own age.	1	2	3
19	I have many fears. I am easily scared.	1	2	3
20	I finish the work I'm doing. My attention is good.	1	2	3

Sexual Assertiveness (SAS)

		Strongly Disagree	***Disagree***	***Half and Half***	***Agree***	***Strongly Agree***
1	I'm very assertive about the sexual aspects of my life.	1	2	3	4	5
2	I do not hesitate to ask for what I want in a sexual relationship.	1	2	3	4	5
3	When it comes to sex, I usually ask for what I want.	1	2	3	4	5

Attitudes toward Women Scale for Adolescents (ATWS)

The next questions ask about your attitudes about boys and girls. There are no right answers. Just answer how you believe right now.

		Agree Strongly	***Agree***	***Disagree***	***Disagree Strongly***
1	Swearing is worse for a girl than for a boy.	1	2	3	4
2	On a date, the boy should be expected to pay all expenses.	1	2	3	4
3	On average, girls are as smart as boys.	1	2	3	4
4	More encouragement in a family should be given to sons than daughters to go to college.	1	2	3	4
5	It is all right for a girl to want to play rough sports like football.	1	2	3	4
6	In general, the father should have greater authority than the mother in making family decisions	1	2	3	4
7	It is all right for a girl to ask a boy out on a date.	1	2	3	4
8	It is more important for boys than girls to do well in school.	1	2	3	4
9	If both husband and wife have jobs, the husband should do a share of the housework such as washing dishes and doing the laundry.	1	2	3	4
10	Boys are better leaders than girls.	1	2	3	4
11	Girls should be more concerned with becoming good wives and mothers than desiring a professional or business career.	1	2	3	4
12	Girls should have the same freedom as boys.	1	2	3	4

Health Risk Behavior (HRB)

Please indicate your <u>best guess</u> for how often you have engaged in each behavior.

In the last 3 months, on how many days have you had at least one drink of alcohol?	0	1	2	3	4	5	6	7	8	9 or more

In the past 3 months, how many times did use marijuana?	0	1	2	3	4	5	6	7	8	9 or more
In the past 3 months, how many times did you use illegal drugs, like meth, cocaine, heroin, ecstasy, or someone else's prescription pills?	0	1	2	3	4	5	6	7	8	9 or more

Delinquency (DEL)

In the past 30 days, have you …

1. Run away from home?	**No**	**Yes**
2. Skipped classes without an excuse?	**No**	**Yes**
3. Been loud or rowdy in a public place where somebody complained and you got in trouble?	**No**	**Yes**
4. Been drunk in a public place?	**No**	**Yes**
5. Damaged, destroyed or marked up somebody else's property on purpose?	**No**	**Yes**
6. Tried to steal or actually stolen money or things?	**No**	**Yes**
7. Tried to buy or sell things that were stolen?	**No**	**Yes**
8. Attacked someone with a weapon or with the idea of seriously hurting or killing them?	**No**	**Yes**
9. Hit someone with the idea of hurting them (other than what you have already mentioned)?	**No**	**Yes**
10. Thrown objects such as rocks or bottles at people (other than what you have already mentioned)?	**No**	**Yes**
11. Used a weapon or force to make someone give you money or things?	**No**	**Yes**
12. Sold illegal drugs or prescription medication?	**No**	**Yes**
13. Been arrested?	**No**	**Yes**

Sexual Communication Skills Assessment

Instructions: For the next task, you will hear several brief audio recordings of a boy talking to a girl. These people will be describing sexual situations that girls your age might find themselves in, like a situation where a partner pressures you into sexual activity or a situation where you want to use a condom but your partner does not.

For example, in the first audio clip, a girl will describe a situation where you have been dating someone for a while but you are not ready to have sex. Then the boy will say something to convince you to have sex anyway.

After each scenario is played, the tape will pause. I would like you to respond out loud **as if you were in the situation**. Imagine you are in the room. What would you say in each of these situations? Our goal is to get a sense of the kinds of things girls might say when they get sexual pressure from a partner.

There will be a 15 second pause between each scenario. Please give your response and then listen closely for the next scenario to start.

Communication Scenarios (Responses will be audio recorded and coded based on refusal and assertiveness skills):
You've been with your boyfriend for several months. He wants to have sex but you're not ready. He says, "I know you want to wait to have sex, but haven't I waited long enough? It will make our relationship stronger."

You really like this guy and he finally asks you out. After a couple dates, he starts pressuring you to have sex. You are not ready to have sex with him. He says, "Come on, I know you want it. I could just do it for a minute."

You have been dating your boyfriend for quite a while, and both decide you're ready to have sex. You ask if he has a condom. He agrees that safety is a big priority, but he doesn't have a condom with him. He says, "Let's just do it without a condom this one time and then we'll start using them next time."

Intervention Acceptability (Post-test Only)

These questions are about the Project HEART web program that you just completed.

1. How much did you <u>like</u> the program?	**Not at all**	**A little**	**Some**	**A lot**
2. How much did you <u>learn</u> from the program?	**Not at all**	**A little**	**Some**	**A lot**
3. How much did the program keep your attention?	**Not at all**	**A little**	**Some**	**A lot**

4. Would you come back to look at the Project HEART website again?	**No**	**Yes**	**Not sure**
5. Would you recommend the Project HEART program to a friend?	**No**	**Yes**	**Not sure**
6. Do you plan to use what you have learned during the program in the future?	**No**	**Yes**	**Not sure**

7. In the next 3 months, who do you think you'll talk to about the information you learned in the Project HEART program? Check all that apply:
   1) Best friend
   2) Other friends/classmates
   3) Dating partner (e.g., boyfriend/girlfriend, sexual partner)
   4) Mother or someone like a mother to you
   5) Father or someone like a father to you
   6) Teacher
   7) Someone else (e.g., sibling, neighbor, pastor)
   8) I don't think I'll talk to anyone about information in the program

8. Do you think the program should include less, the same, or more of these topics:

	The program should have LESS of this	**The program should keep this THE SAME**	**The program should have MORE of this**
Information about HIV and STDs	**0**	**1**	**2**
Information about pregnancy	**0**	**1**	**2**
Information about abstinence	**0**	**1**	**2**
Tips about how to talk about sexual issues with dating partners	**0**	**1**	**2**

Real examples of how to deal with sexual pressure from a partner	**0**	**1**	**2**
Real examples of how to talk about things like STDs or condoms	**0**	**1**	**2**
Time to practice how to deal with sexual pressure from a partner	**0**	**1**	**2**
Time to practice how to bring up sexual topics (like STDs/condoms)	**0**	**1**	**2**
Time to think about your own sexual values or beliefs	**0**	**1**	**2**

9. I want to know how I could make the program better. For example, I know this program didn't apply equally to all girls. If you've never had a dating relationship or if you don't date boys, the program might not have been as useful to you. Please tell us anything I could change to improve the website.

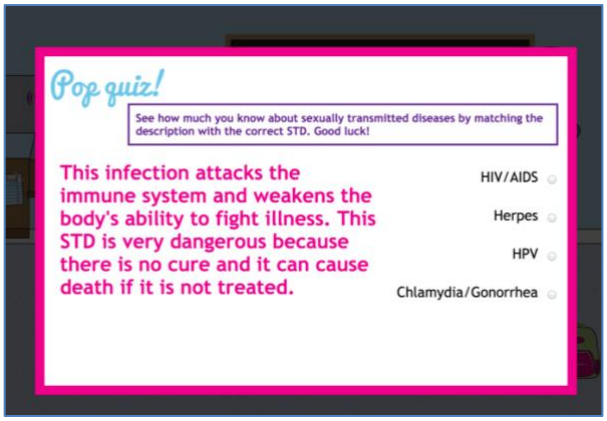
Appendix B

Introduction

Thank you for agreeing to talk to me today and for helping us make Project HEART better. As a reminder, everything you tell me is confidential and I won't tell anyone what you tell me. But, there are three exceptions. If you tell me that you may be in danger of hurting yourself or someone else, or if you tell me that someone (such as a caretaker or teacher) may be hurting you, I will contact someone to make sure that you are safe. I have my questions on this sheet here, and I may take notes during our session. If at any time you feel uncomfortable with a question, you don't have to answer and I can end the interview at any time. But, your opinions are very important to me, and I really want to hear about what you think of the program and how I can make it better for girls like you. Don't worry about hurting my feelings. I just want to know what you honestly think. I will be recording you so I can remember what you tell me. These recordings will be erased when the study is done. Is it okay if I start the recorders now?

If the participant is doing the interview on a different day than they did the program, you may add the following:

As a reminder, Project HEART gave you information about sex and romantic relationships. Here are a few pictures of the program to remind you of what it was like taking the program.



1. *I'm interested in understanding the kinds of things you learned from Project HEART. Please tell me as many things as you remember from the program.*

   Possible Probes

   a. One of the building was a school where I taught you some information about HIV/STDs. Do you remember any of those facts?
   b. One of the building was a clinic where you learned about using condoms. Do you remember any of those facts or skills?
   c. One of the building was a house where you practiced some communication skills. Do you remember any of the things you practiced?

2. *I know sometimes it can be hard to use the things you learn. Do you think you will use the information in Project HEART?*

   a. *If no,* what reasons do you have for not using the program?
   b. *If yes,* what would make it harder for you to use what you learned in this program?
3. *I'm interested specifically in how dating or sexual partners can make it hard to use the information girls learn in the program.*

If they mentioned a dating/sexual partner

You mentioned a [boyfriend/girlfriend/partner]. What would your partner think about [insert topic participant mentioned]

Possible Probes

a. Would your partner make it easier or harder to use the skills from this program?
b. What things has your partner said about (STDs/HIV, pregnancy, condoms) before?
c. Tell me about a time where your partner [did thing participant mentioned]
d. How do you think your experience with your partner compares to the experiences of other girls your age?

If they don't mention a dating/sexual partner

Do you have anyone like that in your life?

e. *If yes,* use response c
f. *If no say:* Have you ever had a dating partner?
   i. *If yes,* move to response g
   ii. *If no,* you can probe more about other types of barriers that may be salient to them. Once done, move on to next section of questions. You can ask more about these topics if the interview has been short.
g. What do you think he/she (most recent partner) would think about *[insert topic participant mentioned]*

The last thing I'd like to know is how I can make it better.

1. What ways could I change the program to make it better (topics/design/etc)?

Possible Probes

a. What kind of follow-up could I provide to this program?
b. If this program was available for you to access over the internet, what parts of the program might you return to?
c. If this program was available as a mobile app, in what ways might it be useful to you?

2. Is there anything else you'd like to tell me before I end the interview?

Appendix C

Name	Age	Race	Sexual Orientation	Sexual Activity Status	Relationship Status	Site
Laine	Early Adolescent (12-14)	Hispanic/White	Lesbian	Some sexual activity	Has been in a relationship but not currently	HH
Nikola	Early Adolescent (12-14)	Black only	Heterosexual	None	Has been in a relationship but not currently	HH
Monica	Middle Adolescent (15-17)	Black only	Heterosexual	Sexual intercourse	In a relationship currently	HH
Gabrielle	Middle Adolescent (15-17)	Black only	Heterosexual	Sexual intercourse	In a relationship currently	HH
Melisa	Middle Adolescent (15-17)	Black only	Heterosexual	Sexual intercourse	In a relationship currently	HH
Sia	Early Adolescent (12-14)	Black only	Heterosexual	None	In a relationship currently	HH
Lara	Late Adolescent (18-19)	Asian only	Bisexual/Pansexual	None	In a relationship currently	HH
Mila	Middle Adolescent (15-17)	Asian only	Heterosexual	Some sexual activity	In a relationship currently	HH
Estrella	Middle Adolescent (15-17)	Hispanic only	Heterosexual	Sexual intercourse	Has been in a relationship but not currently	HH
Kristina	Middle Adolescent (15-17)	Black only	Bisexual/Pansexual	Some sexual activity	Has been in a relationship but not currently	Angel
Catarina	Early Adolescent (12-14)	Black only	Bisexual/Pansexual	Sexual intercourse	In a relationship currently	Angel
Macie	Early Adolescent (12-14)	Multiracial	Heterosexual	Sexual intercourse	Has been in a relationship but not	Angel

					currently	
Marina	Early Adolescent (12-14)	Black/White	Heterosexual	Sexual intercourse	In a relationship currently	Angel
Jordie	Late Adolescent (18-19)	Hispanic/White	Heterosexual	Sexual intercourse	In a relationship currently	HH
Lupita	Early Adolescent (12-14)	Hispanic only	Heterosexual	None	Never been in a relationship	HH
Faith	Middle Adolescent (15-17)	Black/White	Heterosexual	None	Never been in a relationship	HH
Zaniyah	Early Adolescent (12-14)	Black only	Bisexual/Pansexual	None	Has been in a relationship but not currently	HH
Shelley	Middle Adolescent (15-17)	Hispanic/White	Bisexual/Pansexual	Sexual intercourse	Has been in a relationship but not currently	HH
Alana	Middle Adolescent (15-17)	Black/Hispanic	Heterosexual	Sexual intercourse	Has been in a relationship but not currently	GR
Queenie	Late Adolescent (18-19)	Hispanic only	Heterosexual	Sexual intercourse	In a relationship currently	GR
Bianca	Middle Adolescent (15-17)	Hispanic only	Bisexual/Pansexual	Some sexual activity	Has been in a relationship but not currently	GR
Josephina	Middle Adolescent (15-17)	Black only	Heterosexual	None	Never been in a relationship	GR
Jordyn	Early Adolescent (12-14)	Black only	Heterosexual	Some sexual activity	In a relationship currently	GR
Bryony	Middle Adolescent (15-17)	Black only	Heterosexual	Sexual intercourse	Has been in a relationship but not currently	GR
Devin	Middle Adolescent (15-17)	Multiracial	Heterosexual	Some sexual activity	Has been in a relationship but not currently	GR

Brooklyn	Middle Adolescent (15-17)	Black/Hispanic	Heterosexual	Sexual intercourse	In a relationship currently	GR
Bailey	Early Adolescent (12-14)	Hispanic only	Heterosexual	None	Never been in a relationship	GR
Jamilla	Late Adolescent (18-19)	Black only	Heterosexual	Some sexual activity	In a relationship currently	GR
Bibiana	Middle Adolescent (15-17)	Hispanic only	Heterosexual	Sexual intercourse	In a relationship currently	GR
Mariposa	Early Adolescent (12-14)	Hispanic only	Heterosexual	None	Never been in a relationship	GR
Cece	Late Adolescent (18-19)	Hispanic only	Heterosexual	None	Never been in a relationship	GR
Sunshine	Middle Adolescent (15-17)	Hispanic only	Heterosexual	Sexual intercourse	In a relationship currently	GR
Sabrina	Middle Adolescent (15-17)	Black only	Heterosexual	Some sexual activity	Has been in a relationship but not currently	GR
Celeste	Middle Adolescent (15-17)	Black only	Heterosexual	Some sexual activity	Has been in a relationship but not currently	GR
Serenity	Middle Adolescent (15-17)	Black only	Heterosexual	None	In a relationship currently	GR
Payton	Middle Adolescent (15-17)	Black only	Lesbian	None	In a relationship currently	GR
Tabatha	Middle Adolescent (15-17)	Black only	Heterosexual	None	In a relationship currently	Double N
Aisha	Late Adolescent (18-19)	Black only	Heterosexual	Sexual intercourse	In a relationship currently	Other
Ramona	Middle Adolescent (15-17)	Black only	Heterosexual	None	In a relationship currently	Double N
Alicia	Middle Adolescent (15-17)	Black only	Bisexual/Pansexual	Some sexual activity	Has been in a relationship but not currently	Double N

Dana	Middle Adolescent (15-17)	Black only	Bisexual/Pansexual	None	Never been in a relationship	Double N
Leanna	Middle Adolescent (15-17)	Black only	Heterosexual	None	Never been in a relationship	FRC
Kirsten	Middle Adolescent (15-17)	Black only	Heterosexual	None	Never been in a relationship	FRC
Sharlene	Middle Adolescent (15-17)	Black only	Heterosexual	None	Never been in a relationship	FRC
Unity	Early Adolescent (12-14)	Black only	Heterosexual	None	Never been in a relationship	FRC
Ashanti	Early Adolescent (12-14)	Black/White	Heterosexual	None	Never been in a relationship	Other
Charity	Late Adolescent (18-19)	Black only	Bisexual/Pansexual	Sexual intercourse	In a relationship currently	Other
Malika	Late Adolescent (18-19)	Black only	Bisexual/Pansexual	Sexual intercourse	In a relationship currently	Other
Hazel	Early Adolescent (12-14)	Black only	Heterosexual	None	Never been in a relationship	Double N
Adela	Middle Adolescent (15-17)	Black only	Heterosexual	Sexual intercourse	In a relationship currently	Other

Appendix D

Code Number	Type of Code	Name of code	Description of Code	Example of code
7	Parent Code	Communication	Mention of communication about sex with another person	-
7.1	Sub Code	Doctor/provider	Communication with doctors/providers	7039: "Umm, well I'm comfortable doing that too. I can just you know go ask my doctor, you know what type of birth control is good for me, and I'm comfortable, you know, like I know what I need and what I want."
7.2	Sub Code	Father	Communication with father	7058: "I think a lot of girls...because our parents grew up in times where they were even more misogynistic probably than they are now um a lot of times like our fathers, fathers of daughters at least will be saying "don't ever have sex, don't ever talk to a man, don't ever do this"
7.3	Sub Code	Mother	Communication with mother	7022: "They're good. My mom's pretty much like stays open with us because she said that she's young like she understands so she like gives us a chance to tell her stuff and she tells us stuff. But I can make our own decisions but she can still have...like guide us."
7.4	Sub Code	Other	Communication with other sources (will list later)	-
7.5	Sub Code	Parent Unspecified	Communication with "parents" generally	7018: "Yeah cause it's sorta hard to talk to parents when you don't really know what to say so like how to start a conversation with your parents. Cause a lot of parents aren't willing to already start it for you."
7.6	Sub Code	Partner	Communication with partner	7013: "Um well we're really open. So I just like... If I'm not in the mood or I'll- I'll tell him like I don't want to have sex or like you need to use a condom and yeah. I

				like... We're really open about it and I'm really comfortable with him"
7.7	Sub Code	Peers	Communication with peers	7023: "I guess um peer press- peer pressure and whatever they friends might think. Sometimes their-they they might have a conversation with their friend like oh just this boy want to have sex with me blah di blah...he might be cute and their friends might tell them to go ahead and do it and like your friends is on one end and your conscience that you got more friends telling you one thing so it's kinda weighing out so you just go with what your friends say"
8	Parent Code	Consent	Discussions of sexual consent (explicit or implicit)	7000: "In that kind of way so like, they just taught me just like basically not to let anybody touch you unless you say yes, that's your permission."
9	Parent Code	Contraceptive Access	Access to contraception (barrier and non-barrier)	7013: "So if you're like 13 years old and you- your parents have to drive you everywhere or your whoever has to drive you everywhere and you don't have... Like you can't just go into the store with everybody and buy condoms because they're going to ask questions if they don't know that's going to cause problems. So if you're not at the age where you can just go by yourself I feel like that's more... It's harder..."
9.1	Sub Code	Economic Factors	Economic factors as a barrier to contraceptive access	7049: "Yeah, because a lot of girl's um, that I know and like even like older girls they'll like have babies or you know are pregnant now like they'll struggle with knowing how to get help, where to get help um where to go. Um, you know like not having money, not knowing about like insurance and that kind of thing. Um, yeah and then I guess like birth control too. Because that's like one big thing I feel like I haven't really learned at all about so."
10	Parent Code	Emotions or Cognitions	Parent code for emotions/cognitions	-

10.3	Sub Code	Apathy/Indifference	Lack of caring about sexual health	7034: "I: Okay, um, do you know whether um, it's like the girls don't want to use condoms or that the guys don't want to use condoms? P: Um, sometimes it's the girls, they're just like whatever, like they don't really care about it. Like they're just like, "he'll pull out"
10.4	Sub Code	Carelessness		7039: "I: What do you think, like what reasons do you think there are that girls get pregnant, like obviously they aren't using some form of protection, but like what is causing them to not use protection you think? P: They just aren't thinking. Umm, yeah I think that's it."