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A Comparative Analysis of Mississippi Rural Schools' Abstinence-Only and Abstinence Plus Programs

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Walden University
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Abstract

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MA, Walden University, 2010

BS, Jackson State University, 2009

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

The predominately rural state of Mississippi responded to high teenage pregnancy rates by enacting a 2011 law requiring school districts to choose between an abstinence-only and an abstinence-plus program for their high schools. However, there is limited extant research on Mississippi's sex education policies, creating a research gap that inhibits developing successful programs to reduce teenage pregnancy rates. There is specifically a need to compare the two types of allowed programs with a focus on rural areas. This study compared programs by examining students' abstinent sexual attitudes, social norms, self-efficacy, sexual abstinence behaviors, and perceived effectiveness of sexual education and decision making to address whether those variables differed by program and if programs and genders interacted. The study was informed by the health belief model, social cognitive theory, and the theory of reasoned action. The study collected data from 366 students who had taken one of the two programs completed 4 surveys: a demographic survey, the Sexual Risk Behavioral Belief and Self-Efficacy scale, the Sexual Abstinence scale, and the Effectiveness of Sexual Education scale. Students who completed the abstinence-plus program had higher levels of abstinent sexual attitudes, abstinent social norms, abstinent self-efficacy, and sexual decision-making self-efficacy when compared to students who completed the abstinence-only program, with a small effect size for abstinent social norms. Sexual abstinence behavior scores did not differ by program and programs and genders did not interact. Future studies should include a pretest and posttest evaluation. Analyzing these programs facilitates social change by informing the design of effective programs that focus on at-risk youth sexual behaviors.

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Dedication

This lifelong journey to the completion of this dissertation would have never been possible without the inspiration of my beautiful mother, Georgia Williams, who retired from the classroom to nurse me back to health. I am thankful for loving parents (Alonzo and Georgia) who provided a legacy of faith, motivation, direction, blessing, strength, and unconditional love. If it had not been for their unwavering support, I would not be here today; I am forever grateful. Thank you to my big sisters, Georgia and Angela, and my brother-in-law (Mark) who stood by my side during my illness. I also dedicate this dissertation to all of my immediate and extended family, Pastor Carson and the South Liberty Church family, and beautiful friends (Kelli, Chris, Freda, LaKechia, and Kevyn) who encouraged me along the way to keep moving forward. I love you all.

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Chapter 1: Introduction to the Study

Sexual education is essential to health education because of public health concerns about high rates of teenage pregnancies, human immunodeficiency virus (HIV) infection, acquired immunodeficiency syndrome (AIDS), and other sexually transmitted infections (STIs) in the United States. Sexual education for adolescents is an important component of modern-day U.S. educational systems (Goldman, 2010). The stated objective of sexual education is to prepare young people for healthy, productive, and responsible lives (Goldman, 2010).

Multiple researchers have argued that schools should add sexual education to their curriculum to accomplish its main objective (Blake, 2008; Czerwiec & Kopańska-Kogut, 2012; Fentahun, Assefa, Alemseged, & Ambaw, 2012; Goldman, 2010). For example, Fentahun et al. (2012) advocated for sexual education in secondary schools (grades 5-12) because adolescents are beginning to have sex too early and accelerated development. Adolescents should be knowledgeable about the problems surrounding risky sexual activities, the role sex plays in life, and the need for self-control over their sexual desires (Czerwiec & Kopańska-Kogut, 2012). Secondary schools can increase their students' sexual knowledge by discussing health issues, gender roles, identity, safety, interpersonal relationships, communication skills, self-esteem, decision-making, and moral values (Blake, 2008; Goldman, 2010).

Schools are the place for teaching sexual health because of their ability to use a trained faculty, collaborative teaching techniques, and various materials (Czerwiec & Kopańska-Kogut, 2012). According to Goldman (2010), schools are an ideal place for

sexual health because they develop students' knowledge, rationality, life skills, and inspire their values, expressions, and choices. According to Blake (2008) and Goldman (2010), mandatory schooling should ensure that students have knowledge of math, science, history, and English as well as sexual health, self-management, and risk avoidance.

The initiation of school-based sexual education in the U.S. came from physicians and moral crusaders such as ministers and activists during the 20th century (Irvine, 2004). From its conception, those ministers and activists did not agree on the content and purpose of sexual education (Irvine, 2004). However, they came together to advocate for public speech against the restrictive measures of activists who wanted to place restrictions on public sexual discourse including sexual education and contraception (Irvine, 2004).

In recent years, debates about sexual education have revolved around the controversy between restrictive (abstinence-only) and unrestrictive (abstinence-plus) public discourse about sex. This controversy has continued into the 21st century. Supporters of unrestrictive sexual public discourse in the classroom generally view sexuality as positive and healthy (Irvine, 2004). These supporters argue that comprehensive approaches to sexual education allow students to discuss sexual attitudes and values in a classroom setting (Irvine, 2004; Lesko, 2010; Masters et al., 2008). Unrestrictive sexual public discourse supporters argue that silence or restricted sexual education has fostered illiteracy, humiliation, and social problems such as HIV, STIs, and

teenage pregnancies (Irvine, 2004; Lesko, 2010). These problems will continue to exist as long as sexual educational programs are restricted.

Opponents of sexual education generally argue that unrestrictive public discourse about sex is irresponsible and misguided, and that there should be limits to public discourse with adolescents. These opponents typically argue that providing information about sex leads to harmful and immoral thoughts and behavior (Blackburn, 2009; Donovan, 1998; Irvine, 2004; Kirby, 2008). These objections include arguments that unrestricted programs make allowances for homosexuality, teach how to have sex, and undermine "parental authority" (Blackburn, 2009; Donovan, 1998; Irvine, 2004; Kirby, 2008). Those opponents have stated that restricting or eliminating dialogue about sex best protects adolescents and preserves sexual morality (Blackburn, 2009; Donovan, 1998; Irvine, 2004; Kirby, 2008). In other words, restricting conversation about sex keeps children from experimenting in homosexual activities, casual sex, pregnancies, and HIV/STIs.

These criticisms of sexual education programs significantly affect the availability of sexual education in different U.S. states. Restrictive (abstinence-only) programs were the only legal options in Mississippi, but they are also available and selected in some other states (Yoo, Johnson, Rice, & Manuel, 2004). However, in 2011 the state of Mississippi adopted a law requiring sex education and giving each school district a choice of teaching either an abstinence-only or an abstinence-plus program. More than 50 percent of the state's public schools have subsequently chosen abstinence-only ("Abstinence-only", 2012). However, effectiveness data for these sexual education

program types is lacking (Erkut et al., 2013; Kantor, Santelli, Teitler, & Balmer, 2008; Kirby, 2008; Masters et al., 2008; Stranger-Hall & Hall, 2011; Trenholm, Devaney, Fortson, & Quay, 2007; Underhill et al., 2009; Yoo et al., 2004).

Stanger-Hall and Hall (2011) used a correlational method to examine the effectiveness of abstinence-only education in decreasing U.S. teen pregnancy rates. Multiple factors, besides abstinence education, such as economic status, race, and religiosity were correlated with teenage pregnancy rates. After considering for those factors, the national data indicated that the occurrence of teenage pregnancies positively correlated with the degree of abstinence education across U.S. States that taught abstinence-plus had the lowest teenage pregnancy rates while states that had abstinence-only education laws were significantly less effective at preventing HIV/STIs and teenage pregnancies.

Despite these findings, previous findings by Bennett and Assefi's (2005), review of three abstinence-only, 12 abstinence-plus, one with both school-based programs, found that some abstinence-only and abstinence-plus programs could change adolescents' sexual behaviors, although the effects were small and sometimes only short-term. They found a delay in starting sexual activity in only one abstinence-only program and two abstinence-plus programs. None of the examined programs decreased students' number of sexual partners (Bennett & Assefi, 2005). Despite these and other mixed findings, it remains unclear whether abstinence-only or abstinence-plus programs are more effective at changing adolescents' sexual behavior. However, Moore, Barr, and Johnson (2013) argued that school health advocates should encourage schools to examine students'

sexual abstinent behaviors by monitoring trends and providing sexual education courses that are appropriate for their geographical location such as rural areas or urban areas, and southern, northern, eastern, or western states.

Sexual education is particularly important for predominately rural southern states like Mississippi that have high rates of sexual risk behaviors (Moore et al., 2013). This study was designed to address these risky sexual behaviors by comparing Mississippi's abstinence-only and abstinence-plus programs in rural public schools.

Background

, The United States ranked first between industrialized countries in teenage pregnancy and STI rates (Stanger-Hall & Hall, 2011). Hundreds of thousands of teenage women give birth to children each year in the U.S., and STI rates continue to rise (Stanger-Hall & Hall, 2011). The Center for Disease Control and Prevention (CDC, 2012) reported that the U.S. teenage pregnancy rate decreased by 9% between 2009 and 2010. However, teenage pregnancy and STI rates have remained high in Mississippi (CDC, 2012). Mississippi has one of the highest teenage pregnancy and STI rates in the United States (CDC, 2011, 2012). The CDC (2011) reported that Mississippi's teen pregnancy rate (ages 15-19) falls between 50.6 and 64.2% between 2008 and 2009. Mississippi also had over 20,000 new cases of STIs among teenagers and young adults (ages 15-24) in 2010 (CDC, 2012). These high rates create a public health problem.

These statistics contributed to the State of Mississippi's 2011 legislative session passing a House Bill that required the state's public school districts to have a sex

education course as a part of their curriculum. This bill allowed each school district to choose between two programs: abstinence-plus or abstinence-only (Mckee, 2011).

There are several extant school-based educational program studies; some have only assessed abstinence-only programs, while others assessed abstinence-plus programs. For example, researchers from Mathematica Policy Research reviewed four abstinence-only programs: Teens in Control, Re-Capturing the Vision, My Choice, My Future, and Families United to Prevent Teen Pregnancy (Kantor, Santelli, Teitler, & Balmer, 2008; Trenholm, Devaney, Fortson, & Quay, 2007). Mathematica Policy Research used random assignments and examined data from 1,207 program participants and 848 members of the control group, finding that these abstinence-only programs were unsuccessful at delaying sexual activity and reducing the number of sexual partners (Kantor et al., 2008; Trenholm et al., 2007). None of these programs had a statistically significant effect on maintaining abstinence or becoming abstinent (Kantor et al., 2008; Trenholm et al., 2007). More than 50% of all of the participating adolescents remained abstinent in both groups. Only 29% in both groups reported using contraceptives. Only 15% (program group) to 16% (control group) reported using contraceptives only some of the time (Kantor et al., 2008; Trenholm et al., 2007). Overall, none of these abstinence-only programs was effective sexual education programs.

Despite the previous review, several researchers examined whether a sixth-grade sex education course might deter students from engaging in sexual behaviors before they reached seventh grade (Erkut et al., 2013). This study found that students who took the school's abstinence-only program were 30% more likely to initiate sex by seventh grade

than students who were exposed to the school's new abstinence-plus program (Erkut et al., 2013).

Although several studies have suggested that abstinence-plus programs are more effective than abstinence-only programs, there are significant differences in opinion regarding teaching abstinence-only versus abstinence-plus. This feud still exists in part because supporters of abstinence-only education believe that they can convey key moral principles through these programs (McCave, 2007). Supporters of abstinence-only education state that abstinence-plus education encourages sexual promiscuity (McCave, 2007). However, abstinence-plus education supporters argue that while delaying sexual activity is best, teenagers should be knowledgeable of ways to protect themselves in case they decide to become sexually active (McCave, 2007).

It is important to study sexual education in Mississippi irrespective of the use of abstinence-only or abstinence-plus programs. There is a strong need to study sexual education in Mississippi because of its large number of cases of HIV and other STIs, and because of its higher teenage pregnancy rates than other U.S. states (CDC, 2011). Some authors have explained these high rates as being consistent with southern culture (Moore et al., 2013). Moore et al. (2003) suggested that more studies focus on factors that affect teens' sexual behaviors across ethnicities, genders, and locations, citing these factors may increase as increasing researchers' knowledge of these behavioral differences (Moore et al., 2013). This recommendation was based on a report indicating that southern states have higher teenage birth rates than other parts of the U.S. (Mathews, Sutton, Hamilton, and Ventura, 2010; Moore et al., 2013). This dissertation study followed this

recommendation by focusing on a circumspect location in order to assess the role of social culture in rural Mississippi and teens' sexual behaviors in rural Mississippi's schools.

Social culture is frequently viewed as a product of several localized factors. These factors create a certain approach to life that consists of artifacts, beliefs, and economic and religious practices (Milstead, 2012; Solot, 1986). Social cultural identification is important because it assists policy-makers and designers of health programs in meeting people's needs and prevents deeper questioning of their social behaviors, or preferences (Milstead, 2012). For example, a portion of Mississippi is rooted in Appalachian culture, and the state is located in a part of this larger region that resists change and movement (Cooke-Jackson & Hansen, 2008; Donaldson, 2012).

Appalachia is a 200,000-square-mile region that follows the spine of the Appalachian Mountains and includes 13 U.S. States, ranging from southern New York to northern Mississippi (Cooke-Jackson & Hansen, 2008). This region accounts for about 20% of the national population; 42 % of its population is rural. People in this region are strongly committed to cultural values such as family, pride, a moral code of ethics, self-reliance, individualism, and religion (Cooke-Jackson & Hansen, 2008).

Social problems in urban areas are often nonexistent in rural areas. This belief is linked to beliefs about this region's geographic isolation, religious influences, closer family and community ties (Blinn-Pike, 2008). However, people in rural areas also experience significant stress due to a shortage of educational opportunities, and high poverty and unemployment rates (Blinn-Pike, 2008). The overall sociocultural context of

the rural environment also present challenges to the health of adolescents. Those challenges include geographic isolation, scarce financial resources, the availability of health care services, and confidentiality concerns because of smaller community sizes (Curtis, Waters, and Brindis, 2011). Meeting those challenges can be stressful for adults and children, which increases the risk of abuse, substance use, and psychological distress that can take place when coping efforts fail (Champion & Kelly, 2002).

There is a shortage of studies on sexual education in rural areas, but some researchers have included rural areas in their study (Blinn-Pike, 2008). For example, Svenson, Varnhagen, Godin, and Salmon (2012) explored sexual risk behaviors in both rural and urban areas, finding no statistically significant difference between rural and urban teenagers with respect to STIs and unprotected sex. However, Atav and Spencer (2002) identified several important differences when comparing a variety of teenagers' health risk behaviors in rural, suburban, and urban areas. Rural teenagers in this study were prone to higher health risk behaviors such as alcohol, drugs, tobacco, and sexual activity, have sexual intercourse, and had more teenage pregnancies than urban and suburban teens (Atav & Spencer, 2002). , suggesting that Health risk behaviors trigger this increase in sexual activity. Rural teenagers in the United States often take part in unsupervised outdoor drinking parties in secluded areas, getting themselves and others intoxicated and providing themselves and others with mood-altering drugs (Atav & Spencer, 2002).

Understanding the efficacy of sexual education and related behavior among rural adolescents in Mississippi is very important because the majority of residents in

Mississippi reside in rural counties (Johnson & Strange, 2007). Those residents in these rural communities are generally considered to have an inadequate sexual education, warranting a need for programs that focus on their sexual health (Johnson & Strange, 2007).

Statement of the Problem

Research on the Mississippi's school-based sex education policies is necessary, comparing programs in rural communities, in order to understand how to develop successful sexual education programs that target the state's teenagers. Studies should be done in rural communities because the majority of sex education programs generally target urban teens (Blinn-Pike, 2008). Researchers have also encountered difficulties working with rural school administrators to conduct studies that were established and tested in ethnically diverse urban communities (Champion & Kelly, 2002). This research adds to the body of research by comparing abstinence-plus and abstinence-only programs, examining the differences in rural area students' sexual abstinence behaviors, abstinence sexual attitudes, self-efficacy, and social norms and perceived effectiveness of the sexual education and decision-making skills. It compared students from both programs after students completed their sexual education course, examining whether there were interactions between programs and genders based on responses to three scales: Effectiveness of Sexual Education Scale, Sexual Abstinence Scale, and Sexual Risk Behavioral Beliefs and Self-efficacy Scale.

The Purpose of the Study

The purpose of this comparative quasi-experimental quantitative study was to compare the effectiveness of two sexual education programs in rural communities in Mississippi. The independent variables were program types (abstinence-only and abstinence-plus) and gender (male and female). The following dependent variables were measured by the Effectiveness of Sexual Education Scale, Sexual Abstinence Scale, and Sexual Risk Behavioral Beliefs and Self-efficacy Scale:

1. Sexual Attitudes – measuring students' abstinent sexual attitudes
2. Social Norms – measuring the extent to which a student thinks others, their peers, practice sexual abstinence.
3. Self-efficacy – measuring students' abstinent refusal skills
4. Sexual abstinence behavior – measuring students' sexual abstinence practices
5. Decision-making Self-efficacy – measuring students' perceived effectiveness of the sex education and sexual decision-making skills

Research Question and Hypotheses

The following research questions and hypotheses were developed after an extensive review of the literature concerning sexual educational programs in schools.

1. Are there significant differences in Mississippi rural students' abstinence attitudes towards sexual intercourse, social norms, and sexual abstinent behaviors by type of sexual education program?

2. Are there significant differences in Mississippi rural students' abstinence self-efficacy, and the perceived effectiveness of his or her sexual education and decision-making skills by type of sexual education program?
3. Is there an interaction between gender by type of sexual education program in terms of Mississippi rural students' abstinence attitudes towards sexual intercourse, social norms, self-efficacy, sexual abstinent behaviors, and the perceived effectiveness of his or her sexual education and decision-making skills?

H_o^{1A}: Participants in the abstinence-only program had scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that were equivalent to participants in the abstinence-plus program.

H_o^{1B}: Participants in the abstinence-only program have scores on the Sexual Abstinence Behavior Scale that are equivalent to student participants in the abstinence-plus program.

H_a^{1A}: Participants in the abstinence-only program have scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that are not equivalent to participants in the abstinence-plus program.

H_a^{1B}: Participants in the abstinence-only program have scores on the Sexual Abstinence Behavior Scale that are not equivalent to participants in the abstinence-plus program.

H_o^{2A}: Participants in the abstinence-only program have scores on the Effectiveness of Sexual Education scale that are equivalent to student participants in the abstinence-plus program.

H_o^{2B}: The abstinence-plus program participants have scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that are equivalent to abstinence-only program participants.

H_a^{2A}: The abstinence-plus program participants have scores on the Effectiveness of Sexual Education scale that are not equivalent to abstinence-only program participants.

H_a^{2B}: The abstinence-plus program participants have scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that are not equivalent to abstinence-only program participants.

H_o^3: Students scores on the three scales (SABS, SRBBS, and ESES) do not interact between genders by type of sexual education program.

H_a^3: Students' gender and program type interact such that abstinence-only males have scores on the three scales (SABS, SRBBS, and ESES) that are not equivalent to abstinence-plus male students and abstinence-only females have scores on the three scales (SABS, SRBBS, and ESES) that are not equivalent to abstinence-plus females.

Nature of the Study

This study utilized a quasi-experimental comparative survey design to compare schools' sexual education programs (abstinence-only and abstinence-plus) by measuring students' sexual abstinence behaviors, abstinent sexual attitudes, self-efficacy, and social norms and perceived effectiveness of the sexual education and decision-making skills. There was no pretest; therefore, this study only includes posttest data. The study population included rural area students from two high schools—one abstinence-only high school and one abstinence-plus high school. The total population consisted of

approximately 1,200 students, with about 600 students in each school. Using systematic randomized cluster sampling, 600 students, who have already completed a sexual education course, were asked to complete several questionnaires. A questionnaire was used to gather brief demographics of the sample. Three other assessments assessed students' sexual abstinence behaviors, attitudes toward sexual intercourse, their perceived effectiveness of sexual education and decision-making, norms toward sexual intercourse, and self-efficacy for refusing sexual intercourse.

Theoretical Base of the Study

According to Rosenstock (1974), health belief model was initially designed to explain and predict health behaviors. This model has provided a foundation for many prevention-centered programs and studies (Downing-Matibag & Geisinger, 2009). HBM'S cognitive model is used to gain knowledge about health risk behavior, includes sexual risk behavior among all ages, genders, and ethnic groups (Downing-Matibag & Geisinger, 2009). In conjunction to HBM, this study used social cognitive theory (SCT) to provide more insight into adolescents' risky sexual behaviors.

SCT came from the social learning theory (SLT) proposed by Miller and Dollard in 1941. In 1986, Bandura renamed SLT and called it SCT (Rosenstock, Strecher, & Becker, 1988). The SCT was designed to describe how behavior patterns are developed and retained, emboding an important opportunity as the foundation for behavioral interventions to improve adolescents' sexual health (Chisholm-Burns & Spivey, 2010).

SCT has provided at least two major contributions to clarifications of health-related behavior that were not incorporated in HBM (Bandura, 1977; Rosenstock et al.,

1988). The first contribution is the emphasis on observational learning and reinforcement (Rosenstock et al., 1988). Observational learning is learning that take place by observing the behavior of others. Observational learning has four stages. The first stage is attention where the observers must pay attention to learn. The second stage is retention where the observers must remember the observed behavior. The third stage is initiation where the observers must be able to act. The fourth stage is motivation where the observers must be motivated to act by positive or negative reinforcements (Rosenstock et al., 1988). Reinforcement can be external (wanting approval from parents, teachers, or peers) or internal (happiness from being approved) and normally lead to behavioral change (Bandura, 1986).

The second most important contribution that SCT provides is the introduction of self-efficacy as separate from outcome expectation (Rosenstock et al., 1988). Self-efficacy is a person's beliefs about their ability to perform a certain behavior (Bandura, 1986). Self-efficacy facilitates the relationship between a person's knowledge and abilities related to carrying out a behavior and their actual performance of the behavior (Rostosky, Dekhtyar, Cupp, & Anderman, 2008).

In conjunction with the SCT and HBM, this study also incorporated the theory of reasoned action (TRA) to provide insight on adolescents' behavioral intentions. The TRA was developed by Fishbein and Ajzen (1980) to insist that behavior is decided by intention to complete that behavior which offers the most precise behavioral prediction. Laboratory studies and area studies that assess contraceptive behavior, education, smoking, and dental hygiene has used this theory (Vallerand, Deshaies, Cuerrier,

Pelletier, & Mongeau, 1992). Consequently, this study combined these three theories (TRA, SCT, & HBM), because they play a pivotal role in the modification and predication of behavior.

Operational Definitions

Sex Education: Education that addresses one or more of the following: values, abstinence, contraception, decision making, relationships, human sexual anatomy, sexual orientation, sexual intercourse, reproductive health, reproductive rights and responsibilities, birth control methods, family planning, HIV/STIs, and how to prevent them (Wilhem, 2011; Fentahun et al., 2012).

Sexual Behaviors: A group of behaviors including both masturbation and behaviors that involve another person such as touching, kissing, mutual masturbation, oral sex, vaginal sex, and anal sex (Halpern-Fisher & Reznik, 2009).

Sexual Decision-Making: An individual's belief in their ability to make a decision in a sexual situation.

Sexual Abstinence Behaviors: A precise set of behaviors and beliefs that are used to avoid sexual activity by unmarried individuals who are interested in a loving relationship with a companion (Norris, Clark, & Magnus, 2003).

Abstinence-Only Program: An educational program that encourages abstinence from sexual activities; builds characters, values, and refusal skills; does not accept that many teenagers will engage in sexual activity; omits discussions about condom use and contraception; and eludes conversations about abortion, STIs, and HIV/AIDS (Fentahun et al., 2012).

Abstinence-Plus Program: An educational program that encourages abstinence from sexual activities; builds characters, values, and refusal skills; and accepts that many teenagers will engage in sexual activity. Consequently, abstinence-plus programs discuss abortion, condom use, contraception, STIs, and HIV/AIDS (Fentahun et al., 2012).

Abstinent Sexual Attitudes: Personal thoughts, feelings, and beliefs about practicing abstinence.

Abstinence Self-Efficacy: An individual's belief in their ability to practice abstinence in a sexual situation.

Rural Schools: Schools located in communities with a small (less than 13,000) population.

Abstinent Social Norms: The degree to which a student thinks their peers practice sexual abstinence.

Assumptions, Limitations, and Scope of the Study

Assumptions

The first assumption made was that all students that participated in this study had taken a sex education class. The second assumption was that students' disposition to agreeing to participate in this study did not compromise the results. The third assumption was that students' answered the questions on the surveys honestly, based on their knowledge and understanding. The fourth assumption was that the instruments used were valid and suitable for measuring the variables in this study. The last assumption was that all students that participated in this study spoke English.

Limitations

The generalizability of this study limited this study because this study did not include a pretest; therefore, it could not honestly assess behavior change. The generalizability of this study also limited this study to students in the central Mississippi area and participants did not represent students who live outside of the central Mississippi area or other states. Another limitation was that each school district only allowed their schools to teach one type of program. Therefore, this study used two schools that were in different districts (1-AP district and 1-AO district), incorporating several teachers that probably used different teaching strategies. Finally, this study only included public high school students from ages 15-19.

Scope and Delimitations

The results of this study might only be beneficial to rural Mississippi areas. The results might only be beneficial to this area because participants were from the central Mississippi area based on their school's geographic location (rural) and sex education program (abstinence-plus or only). Furthermore, since the students who participated in this study came from rural communities, the schools did not present a diverse representation of students.

Significance of the Study

This study comparison of both programs within the same state held two other significant characteristics, this study came after the state's mandate for sex education and these students came from schools in rural areas. Therefore, this study can offer insight on what sex education policies may be better for students in rural communities.

This rural aspect of this study was very important factor because several researchers have alluded to differences between rural and urban teens and adults. For example, Upreti, Regmi, Pant, and Simkhada (2009) argued that sexual activities among rural populations are at a greater danger of teenage pregnancies and STIs than urban populations because of high practice of premarital sex and low practice of contraceptive use. Therefore, this study has major implications for social change because it can serve as a building block for future sexual education programs that could assist Mississippi's efforts, reduce teenage pregnancy, HIV, and STIs.

Summary

The U.S. Department of Health and Human Services (2010) insists that a proper sex education is an important strategy for encouraging safe sexual activities among teenagers and young adults (Lindberg & Maddow-Zimet, 2012). Abstinence-only and abstinence-plus sex education controls the "curricular landscape" and the "educational politics" of sex education in the U.S. (Lesko, 2010). Abstinence-only programs normally relate to conservative religious policies and abstinence-plus programs are associated with scientific accuracy, and freedom to discuss and endorse sexuality (Fields & Hirschman, 2007; Lesko, 2010). Nevertheless, several questions do exist in regards to the effectiveness of these programs (Chin et al., 2012). Therefore, this study compared both programs rural in Mississippi, using the Effectiveness of Sexual Education Scale, Sexual Abstinence Scale, and the Sexual Risk Behavioral Belief and Self-efficacy scale.

Chapter 2: Literature Review

Introduction

The main objective of this quantitative study was to compare the effectiveness of Mississippi's mandatory sex educational programs in rural public high schools. This study specifically compared the abstinence-plus and abstinence-only program by examining students' sexual abstinence behaviors, perceived effectiveness of sexual education and decision-making skills, abstinent sexual attitudes, social norms, and self-efficacy after the completion of their program. In this comparison, higher scores on the Effectiveness of Sexual Education Scale, Sexual Abstinence Scale, and Sexual Risk Behavioral Beliefs and Self-efficacy Scale were interpreted as reflecting a greater endorsement of students' abstinent attitudes, abstinence self-efficacy, abstinent social norms, sexual decision-making skills, and their program.

This literature review establishes the need for continued research concerning the successfulness of sexual educational programs in rural communities. Several recent studies have examined sexual education programs in the United States, and have particularly studied abstinence-only and abstinence-plus programs. However, often these studies are one-sided, meaning that they focus more on abstinence-only rather than abstinence-plus programs (Stranger-Hall & Hall, 2011).

One reason these studies are biased is that most U.S. federal funding opportunities for official sex educational programs go to those organizations that promote abstinence-only policies (Stanger-Hall & Hall, 2011). For example, by 2008, the U.S. federal government had set aside annually $204 million only for abstinence-only programs

(Lindau et al., 2008; Kohler, Manhart, & Lafferty, 2008). However, in 2009, the government enacted the Responsible Education about Life Act (REAL). This act allowed the U.S. government to start allocating $50 million each year for abstinence-plus programs from 2010 to 2014 (Library of Congress, 2009). The allocation of this money gave secondary public schools a chance to provide abstinence-plus education in the United States.

There are also significant gaps in abstinence-related research in the United States. Historically, most abstinence studies have focused more on urban versus rural areas in the United States because of the belief that urban youth face more problems than rural youth (Blinn-Pike, 2008). This focus has resulted from a general perception that adolescents in rural areas are protected from urban city social issues due to their location, religion, small community setting, and a strong family base (Blinn-Pike, 2008).

This chapter reviews the following subjects: sexual education, sexual health, and the following theories and their connection to sex educational programs: health belief model, social learning theory, and theory of reasoned action. This chapter also reviews research relating to abstinence-only programs and its' influence on teenagers' sexual health, abstinence-plus programs and its' influence on teenagers' sexual health, rural areas and its' influence on teenagers' sexual health, gender's influence on sexual behaviors, and religion's influence on sexual education. Furthermore, this chapter reviews sexual abstinence behaviors, sexual attitudes, intention, social norms, self-efficacy, and sexual decision-making

Search Strategy

The following databases were used in order to gather relevant literature: Academic Search Complete, Google Scholar, PsycARTICLES, PsycINFO, PsycTEST, and SAGE Premier.

The following keywords were placed in the search box: abstinence-only, abstinence-plus, adolescents, gender difference, self-efficacy, sexual abstinence behaviors, sexual attitudes, sexual decision-making, sexual education, social norms, religion, rural areas, and teenagers.

Sexual Education: An Overview

The purpose of sexual education is to produce a world of responsible and knowledgeable people that make safe sexual choices, regardless of age, gender, sexual orientation, or socioeconomic status (Haffner, 1992). The extensiveness of sexual education is so massive that almost any discipline can provide prolific instructions that enhance the strength of education in other subjects and the understanding of sociosexual affiliations in human life (Wagner, 2011). Sexual education is also beneficial to adolescents' growth, and it should become a part of our educational rights (Byers, 2011; Gursimsek, 2010). Sexual education can typically guide us through adolescence, maturity, and our sexual life (Matziou et al., 2009). Sexual education provides great benefits to adolescents because adolescents are at risk for undesirable sexual consequences (Auslander, Rosenthal, & Blythe, 2005; DeLamater & Friedrich, 2002; Kumar et al., 2013). Sexual education teaches values, abstinence, decision making, and may discuss contraception, relationships, human sexual anatomy, sexual orientation,

sexual intercourse, reproductive health, reproductive rights and responsibilities, birth control methods, family planning, HIV/STIs, and condoms (Wilhem, 2011; Fentahun et al., 2012).

Several studies have examined the effects of sexual education on adolescents' and you adults' sexual behaviors. For example, Lindberg and Maddow-Zimet (2012) studied 4,691 adolescents and young adults from 15-24 years of age and examined whether there was a connection between sexual education, health behaviors, and health outcomes in the United States; its results showed a connection between sexual education and delays in the initial start of sexual behaviors. Meanwhile, Farnam, Pakgohar, Mirmohamadali, and Mahmoodi (2008) studied two groups consisting of 100 young couples that were applying for marriage licenses, case group participated in three special lectures on reproductive and sexual health, the sexuality response cycle, and sexual communication and control group participated in the traditional lectures on general marriage preparation, centered on personal health and family planning. Farnam et al. (2008) discovered that sexual education does influence sexual health, suggesting that sexual education may lower high-risk behavior, and dismiss conventional sexual beliefs (Farnam et al., 2008). In other words, both studies showed that informative and comprehensive sexual education does positively affect adolescents and young adults' sexual behaviors and outcomes.

Sexual Health

Good sexual health incorporates healthy emotions and the ability to communicate between people (Farnam et al., 2008). The traditional meaning of sexual health in the

United States asserts that sexual health is the assimilation of emotional, logical, social, and somatic features of one's sexual behaviors in positive ways (Farnam et al., 2008). The integrations of these features can improve and increase one's communication, love, and personality (Farnam et al., 2008). However, most public health programs in the United States do not provide integrative approaches to sexual health (Farnam et al., 2008). Sexual health requires a general knowledge of the human body's development, reproductive system, and communication (Swartzendruber & Zenilman, 2010). It consists of social norms that encourage healthy sexual behaviors and provide diagnostic services, disease management, and prevention (Swartzendruber & Zenilman, 2010). Sexual health goes beyond basic education and HIV/STI prevention, and embraces happiness, healthy relationships, sexual satisfaction, and communicative skills between two people (Farnam et al., 2008).

Increasing U.S. teenagers' sexual health through educational programs is very important because statistics shows that teenagers are participating in sexual risk behaviors. For example, the CDC (2008) reported that teenage pregnancies (ages 15-19) decreased by 34% since 1991 but increased by 6% in 2006. Nevertheless, between 2009 and 2010 the CDC reported a 9% decrease (CDC, 2012). The teenage pregnancy birth rate remains high in Mississippi, falling between 50.6% and 64.2% (CDC, 2011).

In addition to those teenage pregnancy statistics, statistics also show that teens are at risk for other diseases and infections. For example, in the United States, about 50% of the 19 million yearly cases of STIs are among adolescents (Masters, Beadnell, Morrison, Hoppe, & Gillmore, 2008). In the United States, diagnoses of HIV increased by 34%

amongst teenagers 15-19 years of age during 2003 to 2006 (CDC, 2008). During 2004 to 2006, gonorrhea infections increased by 8% in the United States (Masters et al., 2008). In particular, Mississippi's 2010 reports showed that there were 20,000 new cases of STIs among teenagers and young adults, 15-24 years of ages (CDC, 2012). This increase in teenage pregnancy and HIV/STIs in Mississippi has started serious debates on which type of sexual education program will be successful in improving teenagers' sexual health.

Theoretical Framework for Sexual Educational Programs

Health belief model (HBM), social cognitive theory (SCT), and theory of reasoned action (TRA) are common in health behaviors studies. According to Montanaro and Bryan (2013), these theories are well established in the literature describing their use for changing and predicting behavior. Together these theories make-up the Integrative Model of Behavior Change, incorporating constructs from each theory (Bleakley, Hennessy, Fishbein, & Jordan, 2009). These models have a precise and well-articulated set of theoretical ideas, enabling effective measurement and intervention content (Montanaro & Bryan, 2013).

Health Belief Model

HBM states that action associated with health hinges on four factors: perceived susceptibility, perceived severity, perceived benefits, and perceived barriers (Rosenstock et al., 1988). The first factor surrounds the existence of health concerns (Rosenstock et al., 1988). The second factor consists of the thought that the individual is vulnerable to a severe health problem or the development of that illness (Rosenstock et al., 1988). The third factor involves the thought that carrying out a specific health plan would be useful

in decreasing the perceived threat at a suitable cost (Rosenstock et al., 1988). Cost refers to perceived barriers, the fourth factor that an individual must overcome to carry out the recommendation (Rosenstock et al., 1988). These factors are instrumental in clarifying, predicting, and influencing health-related behavior, and they have accumulated more investigations than any other theoretical method (Rosenstock et al., 1988).

Though HBM use has produced statistical results, the percentage of variance it explained is often lower than what the researcher expected (Glanz, Rimer, & Viswanath, 2008). This decrease in variability may be reflective of past failure, not integrating the self-efficacy theory (Glanz et al., 2008). Integrating self-efficacy in HBM delimits the barriers dimension and proposes new areas for research and practice (Rosenstock et al., 1988). Therefore, researchers decided to add two other factor: cues to action, cues that motivate an individual to engage in healthy behaviors; and self-efficacy, one's personal belief in their ability to carry out a course of action (Glanz et al., 2008).

With the addition of those two factors, HBM has become a powerful tool for health programs. For example, Downing-Matibag and Geisinger (2009) studied 71 college students and examined factors that had connections to sexual risk behavior to improve sexual educational programs and preventive research; their result showed that students' assessments of their peers and their personal susceptibility to HIV/STIs were not accurate. Downing-Matibag and Geisinger (2009) also learned how situational features such as impulsiveness challenge students' self-efficacy. Their interviews indicated that HBM could serve as a valuable tool for understanding these sexual risk behaviors and offers ideas for sexual educational programs.

Social Cognitive Theory

Bandura's SCT states that expectancies determine behavior: expectancies about environmental cues, consequences, and one's competence to perform the behavior needed to influence outcomes (Rosenstock et al., 1988). Bandura's SCT also states that incentives determine behavior: approval of peers, physical appearance, negative costs and positive rewards, economic gain, or health status (Rosenstock et al., 1988). People who value the perceived effects of the modified lifestyles will try to change if they feel that their present lifestyles pose dangers to their everyday life. People will also try to change if they believe that certain behavioral changes will decrease the threats and that they can carry out the new behaviors.

Although SCT proposes that expectancies and incentives determine behavior, it also states that environmental, personal, and behavioral factors affect those behaviors (Chisholm-Burns & Spivey, 2010). Furthermore, SCT states that the ability to change behavioral and cognitive processes is reliant on five correlated "adaptation and change" capabilities: affective, biological, cognitive, emotional, and physical factors (Chisholm-Burns & Spivey, 2010). How people master each skill may affect their level of self-efficacy (Chisholm-Burns & Spivey, 2010). Therefore, in most behavioral health studies, SCT joins HBM to address an individual's attitude, personal knowledge, environmental influences, skills, and interpersonal relationships.

Although SCT often combines with HBM, several behavioral health studies have used SCT without HBM for many different reasons. For example, Kistler, Rodgers,

Power, Austin, and Hill (2010) used SCT to examine pathways between teenagers' connection to music media, music media consumption, and three areas of self-concept. Whereas, Araújo-Soares, McIntyre, MacLennan, and Sniehotta (2009) used the SCT to design a school-based program to increase levels of physical activity in teenagers.

Teenage sexual health studies also used SCT. For example, Mathews et al. (2009) used the SCT to examine predictors of teenagers' transition to their first sexual intercourse. SCT identified several factors that needed to be explored when developing effective interventions (Mathews et al., 2009). Kaufman (2010) also used SCT to examine whether "Big Sister" advisors could be taught to enhance communication with their "Little Sisters" about sexual health problems. They discovered that the level of self-efficacy for chatting about sex improved within all subjects (Kaufman, 2010).

Theory of Reasoned Action

TRA focuses on attitudes, behavioral beliefs, and norms that affect behaviors (Fishbein & Ajzen, 1980). This theory is founded on the assumption that people will use relevant information to make rational and realistic decisions (Realini et al., 2010). The action is a function of the person's subjective norms and their attitudes toward that behavior (Realini et al., 2010). Therefore, TRA suggest that people absorb the information and make their decisions based on what they have learned and what they believe is right.

TRA also states that there are two thoughts that influence intention: behavioral thoughts that manipulate attitudes and normative thoughts that manipulate subjective

norms (Fishbein & Ajzen, 1980). The first component is a function of the beliefs concerning the perceived consequences of carrying out the behavior and the individual's assessment of these consequences (Vallerand et al., 1992). The second component consists of an individual's perceptions of what a specific group or certain people think they should do (Fishbein & Ajzen, 1980). The relative significance of the normative and attitudinal modules in defining intention is expected to differ based on the individual differences of the actor, the situation, and behavior (Fishbein & Ajzen, 1980). Therefore, TRA makes the following assumption: a positive attitude toward a behavior and a greater subjective norm will increase the intention. Stronger intention increases the likelihood of the person to perform the behavior; people that have a desire to carry out a behavior will carry out the behavior (Chow & Chan, 2008).

Since TRA focuses on a person's attitudes, norms, beliefs, and intentions, studies have used it in many ways. For example, Beadnell et al. (2008) used TRA to predict intentions to use condoms with two steady partners and casual partners. They revealed the facilitated and direct effects of selected interpersonal, intrapersonal, and sociocultural variables on behavior and intentions. Beadnell et al. (2008) discovered that the role of external variables might differ from a particular behavior.

Pai, Lee, and Yen (2012) also used TRA to examine whether normative beliefs would serve as a mediator between sexual intentions and self-concepts. Their results revealed that sexual self-concepts and normative beliefs accounted for 25% of the variance in young females' sexual intentions. Therefore, Pai et al. (2012) suggested that

sexual health programs that attempt to increase behavioral intentions should clarify sexual self-concepts and target normative beliefs.

Motivational Factors Influence on Sexual Behavior

This study addressed several motivational factors: attitudes, attitudes toward sexual intercourse; social norms, norms toward sexual intercourse; self-efficacy, and self-efficacy for refusing sexual intercourse. The influence of these motivational factors is helpful to organizations that are attempting to design successful sexual educational programs. Knowledge of these influences on teenagers' sexual behavior is crucial to the adherence of abstinence and safer sex practices among rural teenagers.

Sexual Attitudes

Hendrick and Hendrick (1987) insisted that sexual attitudes are multidimensional. Sexual attitudes are personal thoughts, feelings, and beliefs about sexual behavior, development, risk-taking, and orientation (Hendrick & Hendrick, 1987). Sexual attitudes are measured by interpretations of the positive and negative outcomes of their sexual choices (Halpern-Felsher & Reznik, 2009). Researchers must become knowledgeable of teenagers' attitudes toward sexual behavior to understand their sexual choices and outcomes experienced during and after these activities (Halpern-Felsher & Reznik, 2009).

Several recent studies have examined teenagers' sexual attitudes towards different types of sex from different perspectives. For example, Halpern-Felsher and colleagues (2009) compared teenagers' attitudes toward vaginal and oral sex and discovered that teenagers' sexual attitudes may fluctuate depending on behavior. Whereas, Dzung, Song,

and Halpern-Felsher (2009) studied racial differences between Asian, Latino, and White youths' attitudes toward vaginal and oral sex; their results showed that Asian and Latino teenagers believed that they were more vulnerable and received fewer benefits from vaginal or oral sex than white teenagers receive. Overall, teenagers that participated in vaginal and oral sex had a lower perception of the risks and received more benefits than those who were virgins (Dzung et al., 2009).

Furthermore, Cuffee, Hallfors, and Waller (2007) studied ethnic and gender differences attitudes toward dangerous social and emotional sex and benefits among African American and White teenagers; their results showed that females perceived less positive benefits from sex and more sex-related remorse and shame than males but had less negative perceptions about pregnancy. They discovered that White males perceived more sex-related remorse and shame than African American males; females did not differ by race. Cuffee et al. (2007) also discovered that African-American females who believed that sex was beneficial were more likely to engage in sexual activities.

Other recent studies also point out that teenagers may also develop attitudes toward not having sex and practicing abstinence. For example, Brady and Halpern-Felsher (2008) discovered that teenagers who did not have sex perceived positive consequences such as feeling proud and responsible, with a good reputation and perceived several negative consequences for not having sex such as an angry partner, feeling left out, disappointed, and having a bad reputation. Whereas, Ott and Pfeiffer (2009) examined younger teenagers' attitudes towards abstinence and discovered that these teenagers' had positive attitudes toward abstinence, perceiving sexual activity as

"nasty" and do not like talking that subject. Nevertheless, understanding teenagers' sexual attitudes is very important. Researchers can design more effective sexual education programs to address students' needs once they have an understanding of their attitudes towards sexual behaviors.

Social Norms

Social norms are a function of social networks that influence several risky health behaviors such as unprotected sex, drug use, and multiple sexual partnerships (Neblett, Davey-Rothwell, Chander, & Latkin, 2011; Tobin & Latkin, 2008). Social norms are likely to be reinforced by social network members as soon as social norms develop (Bettenhausen & Murnighan, 1985; Latkin, Kuramoto, Davey-Rothwell, & Tobin, 2010). Social network members may consist of family, friends, neighbors, or a companion and they are believed to facilitate behavior through social support, influence, and engagement (Neblett et al., 2011; Tobin & Latkin, 2008). The promotion of these new social norms may influence people to change their personal behavior to the perceived social norm (Latkin et al., 2010).

There are three types of social norms: descriptive, injunctive, and personal injunctive norm (Fielder & Carey, 2010; White et al., 2009). Descriptive norms are one's understanding of the social network behaviors practiced, injunctive norms are one's view of how their peers may respond to their behavior, and personal injunctive norms are individuals assumed moral rules (Cialdini, Reno, & Kallgren, 1990; Latkin et al., 2010). Injunctive norms influence behavior by emphasizing the potential rewards and penalties for participating or not participating in the behavior and personal injunctive norms are

reflective of views that participating in the behavior would cause shame or self-disapproval (White, Smith, Terry, Greenslade, & McKimmie, 2009). However, this study focused on descriptive norms because it seeks to understand how students' friends feel about abstinence and sexual activities.

Descriptive norms describe what is standard or common and influence behavior by providing proof as to what is likely to be effective and proper behavior (White et al., 2009). Several recent studies have addressed social norms and their influences on sexual risk behaviors. For example, Martens et al. (2006) compared students' perceived social norms, in areas known for their consumption of alcohol, drugs, and sexual activities, to actual behavior; their results showed that all students had substantial misperceptions of the social norms and that most students overestimated normative behaviors for all behaviors. However, Martens et al. (2006) found a positive connection between their perceived social norms and actual behavior, meaning that students who had those behaviors were more likely to view those behaviors as normative.

Furthermore, Selikow, Ahmed, Flisher, Mathews, and Mukoma (2009) studied the influence of negative peer pressure on sexual risk behavior in African teenagers; their results showed that peer pressure among African teenagers demoralizes positive social norms and HIV prevention programs that promote abstinence, healthy relationship, and contraceptives. Bauermeister, Elkington, Brackis-Cott, Dolezal, and Mellins (2009) explored the relationship between sexual behavior and social norms, HIV status, and the demographic characteristics of minority youths; their results showed that peers who believed that sexually active males were "cool" were more likely to engage in sexual

activities. However, all of these studies concluded that successful sexual health programs should focus more on changing negative social norms into positive norms.

Self-efficacy

Self-efficacy is an individual's belief in their ability to carry out a course of action to deal with life's problems (Bandura, 1994; Waaktaar & Torgersen, 2013). Self-efficacy is very fundamental to behavior because it affects the way people behave and it assists people every day in decisions such as the time spent on a task, their persistence during difficult times, and resistance during harmful situations (Bandura, 1977; van Dinther, Dochy, & Segers, 2011). Self-efficacy principles also influence peoples' views and feelings. People with low levels of self-efficacy are persuaded to believe that tasks are too difficult and people with high levels of self-efficacy produce feelings of serenity during difficult tasks because they like being challenged (van Dinther et al., 2011). Therefore, increasing self-efficacy can be beneficial to sexual health programs that address issues like abstinence, HIV/STIs, and contraceptives use (Chatterjee, Bhanot, Frank, Murphy, & Power, 2009).

Self-efficacy requires a self-assurance in the power to carry out the behavior and it facilitates the connection between a person's knowledge and abilities to carry out a behavior and their actual performance (Casey, Timmermann, Allen, Krahn, & Turkiewicz, 2009; Chisholm-Burns & Spivey, 2010). For example, Sieving, Bearinger, Resnick, Pettingell, and Skay (2007) studied relationships between teenagers' contraceptive-related beliefs and the use of dual methods in the areas of risky sexual behavior; their results showed that contraceptive self-efficacy was connected to actual

contraceptive use. Kalichman and colleagues (2002) also found a connection between condom use self-efficacy and actual condom use. However, Mitchell, Kaufman, Beals, Choice, and Team (2005) found a connection between resistive self-efficacy and having fewer sexual partners.

Rostosky et al. (2008) argued that there are not enough studies examining a sexual situation and resistive self-efficacy. Resistive self-efficacy is relevant because it plays a very important part in sexual interactions of all teenagers (Rostosky et al., 2008). It is necessary for all youths to have a positive sexual self-concept and self-efficacy to reject risky sexual situations, promoting sexual health, and decreasing HIV/STIs and teenage pregnancies (Rostosky et al., 2008). Therefore, Rostosky et al. (2008) examined the relationships between sexual self-concept and sexual self-efficacy (resistive and situational) in 388 high school students; their results showed that females had higher sexual esteem and sexual self-efficacy than males and those males had higher sexual anxiety and lowered resistive self-efficacy than females. Those results may be suggestive of a male characteristic that males cannot or should not resist sexual desire or arousal, especially if he has a willing partner (Rostosky et al., 2008). They believed that their results might mirror the developmental stage of adolescents' first sexual experience and lack of confidence and security that may arise in males who are expected to be aggressive and show dominance in all interactions. These results indicated that there is a need for more educational programs designed to promote male sexual self-efficacy and esteem.

Rostosky et al. (2008) also discovered that all Caucasians had lower levels of sexual anxiety and higher levels of resistive self-efficacy than African Americans. There

were no significant interactive or main effects for race in the regression models. Therefore, research on how sociocultural contexts shape the development of adolescents' self-efficacy and behaviors may help scholars identify factors and procedures that facilitate the development of healthy sexuality and deter risky sexual behaviors.

Sexual Abstinence Behavior

Sexual abstinence is a behavioral strategy; it is believed to be the best way to prevent HIV/STIs and teenage pregnancy (Wang, Cheng, & Chou, 2009). However, some researchers believe that the meaning of abstinence lacks clarity and debate about whether sexual abstinence is a health protective behavior or something more inclusive (Koffi & Kawahara, 2008).

Scholars that define abstinence from a public health perspective believe that abstinence means that you only avoid vaginal, anal, and oral sex (Haignere, God, & MacDanel, 2000). Scholars that define abstinence from a more inclusive perspective believe that abstinence include religious and moral beliefs, attitudes, and daily life choices into their definition (Koffi & Kawahara, 2008). Goodson, Suther, Pruitt, and Wilson (2003) examined how Texas' youth, instructors, and program directors define abstinence. They discovered that adults defined abstinence in behavioral terms: no vaginal, anal, or oral intercourse. Goodson et al. (2003) also found out that young people listed the use of cigarettes, alcohol, pornography, and drugs as being incompatible with an abstinent lifestyle. Nevertheless, regardless of how you define abstinence behavior, adolescents' sexual abstinence behaviors are influenced by attitudes, intention, social norms, and self-efficacy. These factors should be considered when designing sexual

educational programs and determining the effectiveness of those programs (Oladepo & Fayemi, 2011).

Abstinence-Only Programs

The United States' legislative branch organized and introduced Title V section 510 of the Personal Responsibility and Work Opportunity Reconciliation Act in 1996 and they decided to combine this act with the Adolescent Family Life Act of 1981 and an Abstinence Education Grant Program (Blackburn, 2009; Lindau, Tetteh, Kasza, & Gilliam, 2008). According to Title V Section 510, all sex educational programs that receive government funds in the United States must comply with their definition of abstinence (Blackburn, 2009; Lindau et al., 2008). These programs are also required to promote abstinence-only-until-marriage and omit all discussions related to contraception (Blackburn, 2009; Lindau et al., 2008).

Abstinence is the act of refraining from any sexual activity (Underhill, Operario, & Montgomery, 2009). Abstinence-only education programs promote abstinence from sexual activities until marriage, and discuss the failure rates of condoms and contraceptives (Masters et al., 2008). Either these programs exclude discussions about contraception, or they highlight the limitations of using them to protect against pregnancies and STIs, encouraging sexual abstinence as the only way to avoid HIV/STIs (Underhill et al., 2009).

Abstinence-only supporters argue that being knowledgeable about contraceptives and pregnancy will encourage promiscuous sexual activity among adolescents, insisting that programs that only teach abstinence can decrease sexual activities (Blackburn, 2009).

Therefore, during the early 1990's, the Southern Baptist Church organized the concept of virginity pledges in response to a social movement, promoting abstinence (Bearman & Brückner, 2001). Virginity pledges are promises to abstain from sex until marriage (Bearman & Brückner, 2001). Abstinence-only programs have used the virginity pledges as an approach to promote abstinence behaviors (Blackburn, 2009).

Bersamin, Walker, Waiters, Fisher, and Grube (2005) designed a study that analyzed the relationship between formal and informal virginity pledges and those pledges influence on sexual behavior; their study results showed that there was significant evidence to support claims that formal virginity pledges can increase the likelihood of abstaining from sexual activities. However, Brückner and Bearman (2005) discovered that students who took virginity pledges did not differ from those −pledgers. They also discovered that students who made pledges were less likely to use contraceptives. Brückner and Bearman (2005) findings concluded that virginity pledges might not be the best method to improve sexual health, because students that break their pledge may lack protective knowledge, increasing risky sexual behaviors.

Abstinence-only Programs' Influence on Sexual Health in Teenagers

Many methodical analyses have evaluated the influence of abstinence-only programs on teenagers' sexual health. For example, the CDC (2009) reviewed 21 studies in community or school settings. Kirby (2008) reviewed eight studies that were also curriculum and group-based programs. Underhill et al. (2009) reviewed 13 randomized and quasi-randomized controlled trials in high-income countries that included seven school-based programs, two community-based programs, and one home-based program.

These reviews did not show any significant evidence of abstinence-only programs decreasing the occurrence of sexual activities, sexual initiation, or the number of sexual partners.

Despite the reviews that did not show any significant evidence of abstinence-only programs decreasing sexual behaviors, Jemmott, Jemmott, and Fong (2010) studied 662 middle school students that participated in their school's abstinence-only program; their results showed that a one theory-based abstinence-only program was successful at decreasing sexual initiation among sixth and seventh-grade students. Masters et al. (2008) also studied adolescents and the influence of abstinence-only programs and they discovered that students with positive attitudes and intentions towards abstinence were less likely to participate in sexual activities. Those students with positive attitudes and intentions towards sex were more likely to engage in sexual activities. Their results are consistent with the theory of reasoned action and planned behavior that suggests that behaviors are predicted by a person's intention to engage in the behavior (Fishbein & Ajzen, 1980).

Masters et al. (2008) also found significant interaction effects among adolescents with reduced levels of sex intention. More abstinence intention had little relationship to the predicted probability of having sex. However, among adolescents with elevated levels of sexual intention, more abstinence intention was associated with increases in the predicted probability of having sex (Masters et al., 2008). They discovered that many adolescents believed that the subject of abstinence and sexual activity is very challenging.

Masters et al. (2008) concluded that imparting positive attitudes and intentions about abstinence might not prevent students' sexual activity.

Although studies on the effectiveness of abstinence-only program are inconclusive, advocates for abstinence-only programs argue that being abstinent is the only way that adolescents can completely avoid the risks of pregnancies and HIV/STIs. Abstinence advocates refer to abstinence-only programs' curricula as risk-prevention or risk-eradication programs and abstinence-plus curricula as risk-reduction programs (Kirby, 2008). They also believe that if abstinence-only programs can prevent teenagers from having sex, those programs will have more influence on teenage pregnancies, HIV, and STIs rates than abstinence-plus programs (Kirby, 2008).

Abstinence-Plus Programs

Abstinence-plus education programs promote abstinence from sexual activities as the best preventative approach, but it also includes material on pregnancy, HIV, STIs, and contraceptives (Masters et al., 2008). These programs may vary with respect to the kind of information they provide and their emphasis on abstinence as the safest choice (Realini, Buzi, Smith, & Martinez, 2010).

The world of science is always generating new groundbreaking information and abstinence-plus programs are most notable for their inclusion of this scientific and evidence-based information (Lesko, 2010). These programs appear to be modern in which scientific knowledge and open forums may eliminate the inaccuracies of traditional sexual education (Lesko, 2010). While opponents accuse abstinence-plus

programs of being value-neutral, its' standards consist of prioritizing scientifically certifiable facts (Lesko, 2010).

Advocates of abstinence-plus programs are always reminding their constituents of their obligation to accuracy, arguing that abstinence-only programs neglect critical information (Lesko, 2010). Helmich (2009) reinforced young peoples' need for accurate information by arguing that teenagers receive a countless amount of diverse, vague, and contradictory messages concerning sexuality, and they receive inadequate information from parents or other adults (Helmich, 2009). Helmich (2009) emphasized that abstinence-plus programs must consist of the following nine principles: client-centered, broad, skills-based, values-based, research and theory based, long term, integrated, collaborative, and positive.

Several surveys showed support among parents for offering abstinence-plus educational programs. In particular, between 2006 and 2007, Eisenberg, Bernat, Bearinger, and Resnick (2008) used the telephone to survey 1,605 parents. They discovered that 0.9% of those parents felt that sex education was inappropriate for schools. Almost 10% of those parents favored abstinence-only education. The majority of those parents (89.3%) favored abstinence-plus programs. Nevertheless, due to the incompatibility between federal policies and parents, teachers, and students' opinions, administrators often perceive including information about contraceptives too controversial for school-based programs (Realini et al., 2010).

Abstinence-plus Programs' Influence on Sexual Health in Teenagers

Several researchers have recently studied the influence of abstinence-only programs on teenagers' sexual health. For example, Kohler et al. (2008) studied the impact of abstinence-only and abstinence-plus programs on teen pregnancy, HIV/STIs, and the initiation of sexual activities. Their study revealed that abstinence-only programs were unsuccessful in preventing young people from engaging in sexual activities or delaying the initiation sexual behaviors as compared to abstinence-plus programs (Kohler et al., 2008). Kohler et al. (2008) also saw a reduction of 50 % in pregnancies among those young people who took the abstinence-plus programs. However, there was no significant difference in HIV/STIs rates in either program.

Kirby (2008) reviewed 48 studies on abstinence-plus programs in the United States and reported that 47% of those programs were effective in delaying the initiation of sexual activities. However, none of those programs accelerated the initiation of sexual activities, meaning that although students learned about sex, the program did not cause them to experiment in sexual activities. Kirby (2008) found out that 29% of those programs were successful in decreasing the occurrence of sex, and none of them increased the occurrence of sex. Kirby also discovered a 46% reduction in the number of sexual partners. However, Kirby (2008) found one program that increased by 4% in the number of sexual partners, a 47% increase in the usage of condoms, and a 44% increase in the usage of contraceptives. Finally, Kirby discovered a 62% reduction in sexual risk behaviors. Kirby (2008) concluded that those studies of abstinence-plus programs

establish the possibility that this type of program can delay the initiation of sexual activities and increase use of all forms of contraceptives among teenagers.

Realini et al. (2010) studied the effectiveness of an abstinence-plus program called “Big Decisions." This study examined 788 urban city ninth-grade students from low-income communities; 78.4% of the study population was Hispanic. The results from the comparisons between the pretest and posttest surveys revealed a statistically significant improvement in the mean scores for each item. The results showed changes in 11 out of the 12 items measured (Realini et al., 2010). These items measured students’ attitudes by seven items about abstinence, contraceptives, STDs, being tested, and self-efficacy; intentions by three items about abstinence, STDs, and pregnancy; and two self-efficacy items. Realini et al. (2010) also discovered that the male participants had higher pretest scores than their female counterparts. That discovery indicated that male participants sexual risk status were higher than female participants. During the posttest, this program received a rating of “great” or “good” from 87.8% of the study’s participants (Realini et al., 2010). The results from their study suggested that the Big Decisions abstinence-plus program is a successful sexual educational program that positively influences minority teenagers’ sexual health.

Since some studies on the effectiveness of abstinence-plus program have shown some positive results, their advocates believe that this program can delay teenagers’ initiation of sexual activities and increase contraceptive use (Kirby, 2008). Those advocates believe that abstinence-plus programs are effective more often than abstinence-only programs (Kirby, 2008). Nevertheless, even though several abstinence-plus

programs have been effective, most schools continue to use abstinence-only programs (Lindberg, Santelli, & Singh, 2006; Realini et al., 2010).

Rural areas' Influence on Sexual Health in Teenagers

Most rural communities often seem to be sheltered from the daily trials of an urban community (Blinn-Pike, 2008). Their cultural, religious, and societal values influence this belief as well as geographic isolation (Blinn-Pike, 2008). Rural societies also have a tendency to be more traditional and exhibit a greater investment in old-fashioned beliefs such as gender roles, interpersonal relationships, and sexual behaviors (Curtis et al., 2011). However, rural communities are not as wholesome as people may think (Cherry, Huggins, & Gilmore, 2007).

Particularly, rural youths lack more opportunities for supervised activities than urban youths. Lack of opportunities has been cited as a leading cause of increases in their risky sexual behaviors (Adimora et al., 2001; Milhausen et al., 2003). Rural adolescents as compared to urban adolescents also have better access to transportation. Access to that transportation gives them the freedom to meet without being seen (Milhausen et al., 2003; Oetting, Edwards, Kelly, & Beauvais, 1997).

Several studies have suggested that rural teens as compared to urban teens were more prone to engage in risky sexual activities (Crosby, Yarber, Ding, DiClemente, & Dodge, 2000; Curtis et al., 2011; DiClemente, Brown, Beausoleil, & Lodico, 1993; Young & Vazsonyi, 2011). Furthermore, rural females as compared to urban females were more prone to have engaged in sexual activity before age 15. These females are

prone to engage in sex with three or more lifetime partners and engage in sex with more than one partner in the past three months (Milhausen, Yarber, & Crosby, 2003).

A significant difference between rural and urban teens may be that many rural teens as compared to urban teens believe that they are less likely to become infected with STIs/HIV (Yarber & Sanders, 1998). Studies of rural communities suggest that people in a rural population may engage in a less protective behavior. These people engage in un-protective sex because they know their sex partner or do not believe that HIV/AIDS is a rural issue (Crosby, Yarber, DiClemente Wingood, & Meyerson, 2002; Thomas, Lanky, Weiner, Earp, & Schoenbach, 1999).

Rural teenagers may be at a greater risk of becoming pregnant because they are more likely to use ineffective birth control method such as condoms (Young & Vazsonyi, 2011). However, urban teenagers are more likely to use a hormonal approach such as the birth control medication. Rural teenagers are more inconsistent with their birth control method than urban teenagers are (Young & Vazsonyi, 2011). Because of rural teenager inconsistency, these teenagers have higher birthrates than urban teenagers (Young & Vazsonyi, 2011).

Studies have discovered that rural teenagers in the U.S. southern states accounted for 36.2% of all –marital births, compared to urban teenagers' 29.2% (Stauss, Boyas, & Murphy-Erby, 2012). Reports also showed that teenagers (ages 15–19) had a birth rate of 52.4 per 1000 females in all regions (Stauss et al., 2012). However, rural communities had a higher birth rate, 57.9 births per 1000 females (National Center for Health Statistics, 2001; Stauss et al., 2012). These statistics demonstrated that there are some

discrepancies in the locale of teenage pregnancies. This gap between rural and urban teenage pregnancy may draw attention to prospective circumstantial differences between the two populations that can dictate the success or failure of sexual educational programs.

To understand rural communities sexual behaviors, McIntosh et al. (2009) studied 410 rural and urban adolescent who registered in a school-based health center. They surveyed possible predisposing factors that may influence rural teenagers' sexual behavior. McIntosh et al. (2009) discovered that rural adolescents who had been abused had a higher risk of participating in early sexual activities than the urban adolescent who experienced abuse.

Previous studies have made connections between sexual abused adolescents and the initiation of risky sexual behaviors (Patel et al., 2001; Senn, Carey, & Vanable, 2008; Young, Deardorff, Ozer, & Lahiff, 2011). However, McIntosh et al. (2009) discovery was quite interesting because this study saw a difference between rural and urban adolescents who had been abused, but they did not have an explanation for their findings.

While McIntosh et al. (2009) studied predisposing factors, Rew et al. (2011) identified psychosocial variables that had a connection to sexual risk behaviors in 255 rural teenagers. They discovered that there were no differences in teenagers' sexual risks between genders and socioeconomic statuses. However, Rew et al. (2011) discovered that sexual risk-taking youths had lower parental monitoring, religiosity, social connectedness, and higher levels of peer influence than those who participated in no sexual risk behaviors. They also discovered that sexual risk-taking youths participated in other health-risk behaviors such as drinking and smoking.

Despite several research studies, experimental data on rural teenagers' sexual health remain limited. Limited data may add to rising health inequalities and social problems experienced by at-risk teenagers in rural communities (Curtis et al., 2011). In particular, this is true in traditional rural societies where preventive health programs may receive criticism, and the social realism of teenagers is underappreciated (Curtis et al., 2011). Insufficient data can also prevent legislators from receiving substantiate finances on preventive services for at-risk youth in rural areas (Knopf, Park, Brindis, Mulye, & Jr, 2007). Marginalized youths in these communities such as minorities or the poor are particularly susceptible to underrepresentation and negligence in the designing of programs and policies that help all populations (Knopf et al., 2007).

Genders' Influence on Sexual Behaviors

Several studies have alluded to a relationship between gender and adolescents' attitudes toward sexual activities (Anderson et al., 2011; De Gaston, Weed, & Jensen, 1996; Forehand et al., 2005; Werner-Wilson, 1998). Most of these studies suggest that there is a difference in adolescents' behavior when it comes to participating in risky sexual activities. Males tend to become more sexually active earlier than females (Oliver & Hyde, 1993; Romero-Estudillo, González-Jiménez, Mesa-Franco, & García-García, 2014). Males also have more casual sex partners than females. Females tend only to engage in sexual activities during a steady relationship. Females tend to value their faithfulness and condemn casual sex because of the sexual risks (De Gaston, Weed, & Jensen, 1996; Petersen & Hyde, 2010; Romero-Estudillo et al., 2014; Vega, Robledo, Fernández, & Fernández, 2010).

In response to the gender-based differences in risky sexual behavior, Romero-Estudillo et al. (2014) sought to provide evidence for this association. They studied 900 participants (from age 15-29): 524 males and 376 females. Romero-Estudillo et al. (2014) found significant gender differences for sexual intercourse, some sexual partners, and sexual activities with casual partners. For all these variables, male participants had a higher percentage than female participants. Both males and females encountered different risky sexual behaviors. However, they discovered that the motives for male participants having sex with casual partners were opportunity and interest in a person. These incentives were more important to males than they were to female participants (Romero-Estudillo et al., 2014).

Considering there is gender differences in sexual attitudes, behaviors, and the environment, genders would be an important factor to consider when designing a sex education program. It is an important factor because females may show more change after abstinence education than males (Smith, Steen, Schwendinger, Spaulding-Givens, & Brooks, 2005). However, studies show that males experience more peer pressure to have sex, but receive less parental guidance than females (De Gaston et al., 1996; DiIorio, Kelley, & Hockenberry-Eaton, 1999). This combination may cause males to be receptive to abstinence education (Smith et al., 2005).

Religion's Influence on Sex Education

To understand the cultural, political, and economic southern state of Mississippi, one needs to acknowledge the role of religion (Brunn, Webster, & Archer, 2011). Religion is a significant identifier of southern culture. It is a feature that continues to be

important, regardless of whether citizens reside in a city or suburb that is dominated Baptist (Brunn et al., 2011).

Some religious scholars and organizations often support their beliefs about sexual morality with an unquestionable group of shared beliefs that are used to validate a social institution, unsupported by history or most Americans (Francoeur, 2001). For decades, religious leaders and scholars have adopted a set of worldviews from which they have derived a system of morals and an approach to dealing with changes that the society poses (Francoeur, 2001). The manifestation of conflicts between these religious and societal views of the world and their place in it are present in intense debates about abortion, teenage pregnancies, sexual abstinence, and marriage (Francoeur, 2001).

In particular, Mississippi is a very religious Southern state and is often referred to as a ‘‘Bible Belt” state. In the United States, the term ‘‘Bible Belt’’ frequently refer to southern regions that have connections to fundamentalist Protestantism. These regions typically have strict morals, filled with people that believe in a factual interpretation of the Bible (Brunn et al., 2011). The American Heritage Dictionary of Idioms defines the “Bible Belt” as a region of religious conservatism in the South and Midwest (Ammer, 1997; Brunn et al., 2011). As a result, many people would not even think about selling a sex manual or talk about implementing sexual educational programs in a “Bible Belt” state (Brunn et al., 2011).

One may discover in the religious backgrounds of rural and urban South examples of new and old expressions, aspects where religious traditions remain sturdy, and faith changes are slow (Brunn et al., 2011). Due to unique features of the area and the level of

enthusiasm that co-exist in several places, geographic research on the role of religion is developing. More research needs to focus on the local, urban, and regional levels (Southeastern Geographer 2000).

Sexual Decision-Making

Sexual decision-making is the process of selecting and identifying the best choice based on sexual values, beliefs, and preferences (Allen et al., 2008). Adolescents are at an important developmental stage of sexual decision-making (Black, Sun, Rohrbach, & Sussman, 2011). Most of them have the neurocognitive ability to make decisions but often lack the ability to make knowledgeable decisions (Black et al., 2011). Because adolescents have to make sexual decisions, sexual educational programs and STI/HIV prevention research should consider their decision-making abilities (Black et al., 2011).

Sexual educational programs often focus on prevention of HIV/STIs and unplanned pregnancies, but the decision to participate in sexual behaviors is also important. Learning why and how adolescents make sexual decisions—their expectations from sex and the level of logic they apply—is an important phase (Oswalt, 2010).

Because of the importance of sexual decision-making, Oswalt (2010) examined the decisions of 422 college students to participate in sexual activities. Oswalt (2010) discovered that physical gratification was a consistent predictor of a decision to participate in sexual behaviors; however, fear of risks was a predictor for only one decision.

Previous Methodologies

Several approaches have been used to explore adolescents' sexual behaviors and sexual educational programs. However, this study focused on a quantitative approach. In a quantitative study, the researchers mainly use post-positivist statements for generating knowledge by way of surveys and experiments and gather data on prearranged instruments that produce statistical data (Creswell, 2009). Quantitative approaches are used in several studies to gather information about the sexual risk behaviors of adolescents, providing quantifiable variables. For example, Jacobs, Viljoen, and van der Walt (2012) examined the relationship between adolescents' spirituality and lifestyle choices by incorporating two self-report surveys that measured adolescents' risk behaviors and spiritual well-being. Whereas, Kontula (2010) examined sexual education by including national self-report surveys that measured adolescents' sexual knowledge.

This study compared Mississippi's sexual educational programs in rural area schools by assessing students' sexual abstinence behaviors, abstinent sexual attitudes, social norms, and self-efficacy, and perceived effectiveness of sex education and decision-making skills. Based on a quantitative design, this study used three instruments: the Sexual Abstinence Behavior Scale, the Effectiveness of Sexual Education Scale, and the Sexual Risk Behavior Belief and Self-Efficacy Scale.

Summary

This chapter analyzed important and recent literature linked to adolescents' sexual risk behaviors, sexual education programs, rural areas, and their effects on teenagers' sexual health. This chapter also gave a detailed explanation of the HBM in conjunction

with the SCT and the TRA. Therefore, an integrative model of behavior change theories provided the framework for this comparison of Mississippi's sexual educational programs.

Chapter 3: Research Method

The purpose of this quantitative study was to compare Mississippi's sex educational programs in rural area high schools. Programs were compared by examining students' sexual abstinence behaviors, perceived effectiveness of sexual education and decision-making skills, abstinent sexual attitudes, social norms, and self-efficacy after the completion of their school's sex education program. In this comparison, higher scores on the Effectiveness of Sexual Education Scale, Sexual Abstinence Scale, and Sexual Risk Behavioral Beliefs and Self-efficacy Scale were interpreted as reflecting a greater endorsement of students' abstinent attitudes, abstinence self-efficacy, abstinent social norms, sexual decision-making skills, and their program. This chapter includes a description of the study design, sample size, and characteristics, a description of the instrumentation and materials for data collection and analysis, and a discussion of ethical considerations.

Research Design and Approach

This study used a quantitative, quasi-experimental comparative survey design to examine and compare Mississippi's sexual education policies in rural area schools. The quantitative approach employs a method to examine and draw comparisons between two or more variables (Creswell, 2009). The quantitative method is the best way to assess a large number of variables (Creswell, 2009). Using quantitative data collected via anonymous survey was an appropriate design decision because this permitted a more anonymous or confidential assessment of participants than a qualitative approach, especially due to the sensitive nature of the data being collected.

The choice of a survey design aligns with previous studies that used survey designs to evaluate specific factors and assess various sexual educational programs. For example, Walcott et al. (2011) used questionnaires to examine the relationships among perceptions of previous school-based sexual education and current knowledge, attitudes, and sexual behaviors of 1,878 undergraduate students. Wilson, Smith, Rosen, and Wiley (2012) used questionnaires to analyze characteristics of 436 individuals in school districts that either implemented or failed to implement an abstinence-plus sex education curriculum. Fentahun et al. (2012) used questionnaires to assess 10 parents, 94 teachers, and 366 students' attitude towards school sex education.

I considered and rejected several other methods and approaches, including a qualitative methodology and grounded theory and phenomenological research designs. However, these would not have provided the data needed to address the impact of Mississippi's sexual education programs on teenagers' sexual health. For example, a qualitative approach would use open-ended questions to gather data from which themes develop (Creswell, 2009). Similarly, grounded theory would be used to develop a theory based on a process or experience of the participants (Creswell, 2009). Likewise, the phenomenological approach place emphases on the lived experiences of participants instead of cause and effect (Creswell, 2013). Although each approach would provide information concerning the influence of Mississippi sexual education programs on teenagers' sexual health, the quantitative method allowed me to study a large number of participants anonymously.

This study employed a cross-sectional survey design, with a focus on drawing a comparison between abstinence-only and abstinence-plus programs. A cross-sectional design indicates that the data was relevant to only one period. The researcher selected a survey approach in order to provide a numeric description of the sample population's behaviors and views, as suggested by Creswell (2009). This study compared both programs based on three scales: Effectiveness of Sexual Education Scale, Sexual Abstinence Scale, and Sexual Risk Behavioral Beliefs and Self-efficacy Scale. These three questionnaires assessed students' sexual abstinence behaviors, abstinent sexual attitudes, social norms, and self-efficacy, and perceived effectiveness of his or her sexual education and decision-making skills.

1. The Sexual Risk Behavioral Beliefs and Self-efficacy scale (SRBBS) measured students' sexual attitudes (abstinent attitudes toward sexual behavior), social norms (the degree student thinks others, their peers, practice sexual abstinence), and self-efficacy (abstinent refusal skills).
2. The Sexual Abstinence Behavior scale (SABS) measured the degree to which a person has been sexually abstinent.
3. The Effectiveness of Sexual Education scale (ESES) measured students' perceived effectiveness of the sexual education and sexual decision-making skills.

Setting and Sample

Participants

The participants of this study consisted of high school students living in Mississippi's rural areas who were fluent in the English language (for reading purposes). The participants consisted of teenagers ranging from 15 to 19 years of age. Participants were solicited from two rural high schools, one of which had implemented an abstinence-plus curriculum and the other one of which had implemented an abstinence-only curriculum.

Sample

This study included 366 students from two different schools in two different rural area towns. The 2012–2013 school year was the first year that schools were required to teach a sexual education course. Therefore, these students consisted of men and women who had completed a course in sexual education during the 2012–2013, 2013–014, or 2014–2015 school years. This study included 10th, 11th, and 12th graders. African-Americans made up 94% of the students' population and 6% of the students' population consisted of Native Americans, Whites, Asians, and Hispanics.

Procedures

Participants were recruited based on their completion of a sexual education class. After meeting with each school's principal to address any concerns that they may have had, the principal informed their faculty about the study. I supplied all mailed materials

and postage at my own expense. The schools mailed all materials to the parents of students who had taken some form of sex education at their schools.

The consent form included a description, purpose of study, risks and benefits, ethical concerns, the amount of time needed to complete surveys, and a statement concerning voluntary participation and confidentiality (Appendix A). The parents' consent was implied giving their child the assent form and survey. Student assent was implied by their completing the survey and returning it to the school in the sealed clasp envelope. Students who chose to participate delivered this envelope to a locked drop box in the school foyer, right outside the administrative office. I was the only one that had the key to this drop box. I left the drop box out for 5 weeks, and then collected the completed surveys from the locked drop box.

I estimate that it took approximately 30 minutes for each participant to complete the four surveys provided:

1. Brief Demographic Questionnaire (Appendix C)
2. Effectiveness of Sex Education Scale (ESES) (Appendix D)
3. Sexual Abstinence Behavior Scale (SABS) (Appendix F)
4. Sexual Risk Behavioral Belief and Self-Efficacy Scale (SRBBS) (Appendix H)

The completed questionnaires were each assigned a Respondent ID Number to ensure participants anonymity and confidentiality. This Respondent ID Number provided me with a way to keep an accurate record of students' participation without revealing their identity. Walden University Institutional Review Boards approved the procedures,

approval number 02-23-15-0172914. A detailed description of the two programs, survey instruments, analytical tools, and data analysis procedures are in the following sections.

Programs

Abstinence-Only

Abstinence-only programs endorse the benefits of abstaining from sexual activity and the negative effects of not abstaining (Masters et al., 2008). These programs discuss the negative consequences, including educational, financial, and health problems that sexually active people will likely face (Shaw, 2012). They also typically teach how to reject sexual advances and show how alcohol and drug use increases vulnerability to engage in sexual activities.

These programs teach that abstinence from sexual activity before marriage and fidelity within marriage are the only ways to avoid unplanned pregnancies, HIV/STIs, and other related health problems (Underhill et al., 2009).Discussion of contraceptives is generally limited to their risks and failure rates. These programs also discuss current state laws related to sexual conduct (rape and child support) and teach that marriage is the only appropriate setting for sexual intercourse (Shaw, 2012). Abstinence-only programs do not necessarily include all of these components, but by design, no abstinence-only program includes anything that contradicts the overall message of abstinence.

Abstinence-plus

Abstinence-plus programs generally present everything that abstinence-only programs discuss (Masters et al., 2008). However, these programs vary with respect to the kind of information provided and their emphasis on abstinence as the safest choice.

Abstinence-plus programs may discuss contraceptives and HIV/STIs or the prevention HIV/STIs, along with a factual presentation of the risks and failure rates (Realini et al., 2010). Nevertheless, neither abstinence-only nor abstinence-plus programs can teach that abortion can be used to terminate pregnancies (Shaw, 2012).

The schools in this study implement both programs through a contemporary health course. Each student (9-12th grade) must complete one semester of this course to meet graduation requirements.

Instrumentation and Materials

Demographics Questionnaire

I used a brief demographic questionnaire (see Appendix B) to collect information about each participant's age, grade level, gender, sexual orientation, ethnicity, and religious affiliation. This questionnaire was also designed to obtain information on the impact of the sex education program on the students.

Effectiveness of Sexual Education Scale

The ESES (see Appendix C) is a 7-item self-report scale, which uses a 5-point Likert responses ranging from 0 to 4 (Pittman & Gahungu, 2006). The ESES was designed to measure the effectiveness of sexual educational programs by assessing students' attitude toward their sexual behaviors and decision-making.

The ESES contains seven items. The scores of each program are calculated collectively and individually.

Pittman and Gahungu (2006) obtained normative data for 125 participants. However, only 104 met their criteria. Only 5% (n = 5) had received both type of

programs while 18% (*n* = 19) had received abstinence-only sexuality education and 76% (n = 79) had received abstinence-plus education. Based on Pittman and Gahungu (2006) study, the ESES internal consistency was acceptable: Cronbach's $\alpha = .85$. The data imply that the scale measure distinct characteristics of sexual behaviors and decision making with strong consistency. Furthermore, construct validity had fairly strong and positive correlations with sexual behavior decision-making ($r = 0.53$, $P < .01$).

Sexual Abstinence Behavior Scale

The SABS (see Appendix E) is a 4-item self-report scale, which uses a 5-point Likert responses ranging from 0 to 4 (Norris et al., 2003). The SABS was designed to measure sexual abstinence. Sexual abstinence refers to a precise set of behaviors and beliefs that are used to avoid sexual activity by unmarried individuals who are interested in a loving relationship with a companion (Norris et al., 2003).

Since the main objective of most school-based sexual educational programs is to promote abstinence, it is important to measure abstinence and this measure has good properties. According to Norris et al. (2003), individuals who are practicing abstinence should include the following set of behaviors: thinking, acting, and interacting. The SABS assesses these three behaviors.

The SABS contains four items. For the purposes of this study, the total score derived from the SABS provided an overview of the participants' sexual abstinence behaviors. High scores gave an indication that the participant engaged more in sexual abstinence (Norris et al., 2003).

Norris et al. (2003) obtained normative data for 113 African American, middle school students who completed the SABS along with items assessing sexual behavior, psychosocial variables related to sexual behavior, and demographics. According to Norris et al. (2003), the SABS internal consistency was acceptable: Cronbach's $\alpha = .73$. The data imply that the scale measure distinct characteristics of sexual abstinence behaviors with strong consistency. The SABS ($M = 10.4$, $SD = 4.3$) scores ranged from 4 to 20. Furthermore, Norris et al. (2003) found support for construct validity in fairly strong and positive correlations with sexual abstinence self-efficacy ($r = 0.48$, $P < .001$) and perceived negative consequences ($r = 0.38$, $P < .001$).

Sexual Risk Behavioral Belief and Self-Efficacy Scales

The SRBBS (see Appendix G) is a 22-item self-report scale (Fisher, Davis, Yarber, & Davis, 2011). However, I am only using 7 of those items.

The SRBBS was designed to measure psychosocial variables that influence sexual risk-taking and protective behavior. Therefore, the SRBBS compares two factors: sexual risk-taking behavior and protective behaviors.

Since the SRBBS scale compares two factors, the SRBBS consists of seven subscales. Three of the subscales address sexual risk-taking behavior: attitudes toward sexual intercourse (ASI), self-efficacy for refusing sexual intercourse (SER), and norms toward sexual intercourse (NSI). Five of the subscales address protective behavior: attitudes toward condom use (ACU), norms toward condom use (NCU), barriers to condom use (BCU), self-efficacy in communicating about condom use (SECM), and self-efficacy in buying or using condoms (SECU). Therefore, the SRBBS scale is intended to

measure and examine attitudes, norms, self-efficacy, and barriers to condom use. The theoretical framework of the SRBBS incorporates the main components of those psychosocial variables that affect sexual risk-taking and protective behavior (Fisher et al., 2011). Nevertheless, this study only used the sexual risk-taking behavioral factor because the protective behavior factor includes a conversation about using some form of contraception, creating an issue for programs that strictly teach abstinence. The SRBBS scales are suitable for measuring psychosocial changes in students that participate in sexual education programs. They are very appropriate for measuring theory-based programs that teach refusal and condom negotiation skills (Basen-Engquist et al., 1999). These scales can also evaluate programs that use social influences to correct or change perceived norms concerning sexual risk-taking behavior (Basen-Engquist et al., 1999; Fisher et al., 2011).

The SRBBS contains 22 items. The scores of each item in the subscales are calculated and then divided by the number of items in the scale. According to Fisher et al. (2011), this ensures that the range of the scale scores will be equivalent to response values. Using this method of scoring, allows the researcher to compare the scale scores to original response categories without any problems. Furthermore, the ASI, ACU, NSI, NCU, and BCU subscales use 4-point Likert responses with scores ranging from 1 to 4. However, the SER, SECM, and SECU subscales use 3-point Likert responses with scores ranging from 1 to 3.

Basen-Engquist et al. (1999) obtained normative data from a multiethnic sample of 6,213 high school students who completed the SRBBS. According to Basen-Enquist

et al. (1999), each subscale was measured by Cronbach's alpha and the internal consistency were as follows: ASI, .78; NSI, .78; SER, .70; ACU, .87; NCU, .84; SECM, .66; SECU, .61; and BCU, .73. The data imply that the subscales measure distinct characteristics of sexual risk-taking and protective behaviors with generally adequate consistency.

Basen-Enquist et al. (1999) did a factor analysis to evaluate a two-factor model (sexual risk-taking behaviors and protective behaviors) with each subscale loading on the respective factors. They discovered that attitude and norm items that were grammatically similar to obtain a model that fit the data required correlated error terms. Nevertheless, the fit indices showed that the final data fit both model, x^2 (76, N = 1000) = 70.56, p = .65.

Concurrent validity was also assessed through the examination of specific relationships between the scales of the student's sexual experience (Basen-Engquist et al., 1999). The results showed that attitudes (d = 1.09) and perceived norms (d = .90) of students' who were not sexually active were less supportive of having sexual intercourse than those that were sexually active. Furthermore, sexually active students had lower self-efficacy for refusing sex (d = .57) than those students who were not sexually active. Basen-Engquist et al. (1999) also studied students' condom use and their related attitudes and norms. They found that consistent condom users had more positive attitudes toward condom use (d = .78) and more favorable perceived norms about condom use (d = .56) than inconsistent users. Basen-Engquist et al. (1999) also found that self-efficacy for

communicating about condom use with partners (d = .47) and using and buying condoms (d = .23) were higher for the consistent condom users.

Data Analysis

To examine these research questions, the two-way ANOVA (Analysis of Variation) determined if there were any significant differences between the independent variables on multiple dependent variables. The two-way ANOVA also determined whether there were interactions between programs and genders. The researcher used .05 as the cutoff for statistical significance.

In this study, the independent variables were program types (abstinence-only and abstinence-plus) and gender (males and females); the dependent variables were abstinence behaviors, abstinent sexual attitudes, social norms, and self-efficacy, and perceived effectiveness of sexual education and decision-making skills. The research questions and hypotheses are listed again:

1. Are there significant differences in Mississippi rural students' abstinent attitudes towards sexual intercourse, social norms, and sexual abstinent behaviors by type of sexual education program?
2. Are there significant differences in Mississippi rural students' abstinent self-efficacy, and the perceived effectiveness of his or her sexual education and decision-making skills by type of sexual education program?
3. Is there an interaction between gender by type of sexual education program in terms of Mississippi rural students' abstinent attitudes towards sexual intercourse,

social norms, self-efficacy, sexual abstinent behaviors, and the perceived effectiveness of his or her sexual education and decision-making skills?

H_o^{1A}: Participants in the abstinence-only program have scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that are equivalent to participants in the abstinence-plus program.

H_o^{1B}: Participants in the abstinence-only program have scores on the Sexual Abstinence Behavior Scale that are equivalent to student participants in the abstinence-plus program.

H_a^{1A}: Participants in the abstinence-only program have scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that are not equivalent to participants in the abstinence-plus program.

H_a^{1B}: Participants in the abstinence-only program have scores on the Sexual Abstinence Behavior Scale that are not equivalent to participants in the abstinence-plus program.

H_o^{2A}: Participants in the abstinence-only program have scores on the Effectiveness of Sexual Education scale that are equivalent to student participants in the abstinence-plus program.

H_o^{2B}: The abstinence-plus program participants have scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that are equivalent to abstinence-only program participants.

H_a^{2A}: The abstinence-plus program participants have scores on the Effectiveness of Sexual Education scale that are not equivalent to abstinence-only program participants.

H_a^{2B}: The abstinence-plus program participants have scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that are not equivalent to abstinence-only program participants.

H_o^3: Students scores on the three scales (SABS, SRBBS, and ESES) do not interact between genders by type of sexual education program.

H_a^3: Students' gender and program type interact such that abstinence-only males have scores on the three scales (SABS, SRBBS, and ESES) that are not equivalent to abstinence-plus male students and abstinence-only females have scores on the three scales (SABS, SRBBS, and ESES) that are not equivalent to abstinence-plus females.

Analytical Tools

The Statistical Package for Social Science (SPSS) 20.0 was used to analyze data for this study and conduct several two-way ANOVA tests. ANOVA is a statistical analysis that approximates the differences between different population reactions to determine differences in means (George & Mallery, 2012). A two-way ANOVA assesses the variance of one dependent variable by several independent variables and if there is any interaction between independent variables.

Comparisons of the independent variables (program type and gender) were made by examining the dependent variables (abstinence behaviors, abstinent sexual attitudes, social norms, and self-efficacy, and perceived effectiveness of sexual education and decision-making skills). The F-test assessed whether or not the variance of the two independent samples was equal. The value obtained for the F-ratio helped in determining whether any program effects existed. There was no need to conduct a Post Hoc test

because both independent variables consisted of only two categories. The SABS, ESES and the SRBBS (using only one factor) scales were used to measure the dependent variables.

The assumptions of ANOVA—normality, homogeneity of variance, and independence—were assessed. Normality assumes that each variable is normally distributed (Gravetter & Wallnau, 2009). The Shapiro-Wilks test was used to test univariate normality for each dependent variable, which provided insight to the multivariate normality assumption. Homogeneity of variance assumes that variances for each group are equal (Gravetter & Wallnau, 2009). Therefore, the Levene's Test was used to test the Null Hypothesis that the error variances of the dependent variable were equal across groups. Independence assumes that each participant's scores are independent of every other participant's scores (Gravetter & Wallnau, 2009).

Ethical Procedures

Much consideration was given to the nature of this study to fulfill the requirement of the American Psychological Association (APA) Code of Ethics (APA, 2002) and Walden University guidelines for ethical research.

The amount of risk involved for participants was small because of the confidential nature of the questionnaires that each student received, which consisted of specific instructions for completion of each survey. Consent forms were given to the participants a week before the study to obtain students' parents or legal guardian consent. This consent form informed parents or guardians as well as students of the voluntary nature of

the study and assured them that they could withdraw from the study at any time without any consequences.

The consent form consisted of a complete description of the study, with a statement concerning the risks and benefits. The students' actions implied assent. Specific steps were taken to protect participants from any threat or discomfort associated with the research process. The data collected from this survey was stored on a password-protected computer. Each survey was anonymous, marked by Respondent ID number (independent of their identity). Furthermore, only the researcher had access to collected data. All data was filed and kept in a locked file cabinet for five years.

Chapter 4: Results

Introduction

The study collected data from 366 students who had taken one of the two programs completed 4 surveys: a demographic survey, the Sexual Risk Behavioral Belief and Self-Efficacy scale, the Sexual Abstinence scale, and the Effectiveness of Sexual Education scale. Students who completed the abstinence-plus program had higher levels of abstinent sexual attitudes, abstinent social norms, abstinent self-efficacy, and sexual decision-making self-efficacy when compared to students who completed the abstinence-only program, with a small effect size for abstinent social norms. Sexual abstinence behavior scores did not differ by program and programs and genders did not interact. Furthermore, this chapter presents a detailed description of the demographic characteristics of the sample, summarizes the data collection process, and presents the results of data analysis (individual responses to the three surveys).

Restatement of Research Question and Hypotheses

The research questions and hypotheses are listed again for review:

1.) Are there significant differences in Mississippi rural students' abstinent attitudes towards sexual intercourse, social norms, and sexual abstinent behaviors by type of sexual education program?

H_o^{1A}: Participants in the abstinence-only program have scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that are equivalent to participants in the abstinence-plus program.

H_o^{1B}: Participants in the abstinence-only program have scores on the Sexual Abstinence Behavior Scale that are equivalent to student participants in the abstinence-plus program.

H_a^{1A}: Participants in the abstinence-only program have scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that are not equivalent to participants in the abstinence-plus program.

H_a^{1B}: Participants in the abstinence-only program have scores on the Sexual Abstinence Behavior Scale that are not equivalent to participants in the abstinence-plus program.

2.) Are there significant differences in Mississippi rural students' abstinent self-efficacy, and the perceived effectiveness of his or her sexual education and decision-making skills by type of sexual education program?

H_o^{2A}: Participants in the abstinence-only program have scores on the Effectiveness of Sexual Education scale that are equivalent to student participants in the abstinence-plus program.

H_o^{2B}: The abstinence-plus program participants have scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that are equivalent to abstinence-only program participants.

H_a^{2A}: The abstinence-plus program participants have scores on the Effectiveness of Sexual Education scale that are not equivalent to abstinence-only program participants.

H_a^{2B}: The abstinence-plus program participants have scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that are not equivalent to abstinence-only program participants.

3.) Is there an interaction between gender by type of sexual education program in terms of Mississippi rural students' abstinent attitudes towards sexual intercourse, social norms, self-efficacy, sexual abstinent behaviors, and the perceived effectiveness of his or her sexual education and decision-making skills?

H_o^3: Students scores on the three scales (SABS, SRBBS, and ESES) do not interact between genders by type of sexual education program.

H_a^3: Students' gender and program type interact such that abstinence-only males have scores on the three scales (SABS, SRBBS, and ESES) that are not equivalent to abstinence-plus male students and abstinence-only females have scores on the three scales (SABS, SRBBS, and ESES) that are not equivalent to abstinence-plus females.

Data Collection Process

I recruited participants using data from the databases of two public high schools in Mississippi. This recruitment took place from March 2015 through May 2015; the participating schools' counselors mailed out materials (consent form, assent form, survey, and clasp envelope) on my behalf. These materials were sent to the parents of students who completed a sex education course during the 2012–2013, 2013–014, or 2014–2015 school years. Students who chose to participate delivered this envelope to a locked drop box in the school foyer and I returned 5 weeks and collected the completed surveys from the locked drop box.

Demographic Characteristics of the Sample

Six hundred surveys were mailed out to students who had taken the sexual education course at the two participating high schools. Only 366 completed surveys were returned, with a response rate of 61%. According to several researchers, a 50% response rate or higher is acceptable in social research postal surveys (Babbie, 1973; Kidder, 1981; Richardson, 2005). Since the response rate for my study was significantly higher than this, the response rate was adequate.

Of those 366 surveys, 186 were abstinence-only education recipients and 180 were abstinence-plus education recipients. The mean age of the study sample was 16.1 years (SD = 1), and participants ranged in age from 15 to 19 years. The average age among abstinence-only students was 16.1 years (SD = 1). The average age of abstinence-plus students was 16.2 years (SD =.99). Table 1 summarizes the demographics of the study sample.

Table 1

*Demographic Characteristics of the Study Sample (*N=*366)*

	Abstinence-only (*n* = 186)			Abstinence-plus (*n* =180)		
Characteristics	*n*	%	*M* (*SD*)	*n*	%	*M* (*SD*)
Age			16.06 (1)			16.2 (.99)
15	60	32.3		47	26.1	
16	77	41.4		74	41.1	
17	28	15.1		38	21.1	
18	18	9.7		18	10	
19	3	1.6		3	1.7	
Gender			1.54 (.50)			1.51 (.50)
Male	86	46.2		89	49.4	
Female	100	53.8		91	50.6	
Race/Ethnicity			1.14 (.52)			1.05 (.29)
Black/ African American	171	91.9		173	96.1	
White/ Caucasian	7	3.8		6	3.3	
Hispanic/Latino	5	2.7		0	0	
Other	3	1.6		1	.6	
Grade level			1.94 (.77)			1.98 (.77)
10th	60	32.3		55	30.6	
11th	77	41.4		74	48.1	
12th	49	26.3		51	28.3	

(continued)

Table 1 (continued)
Demographic Characteristics of the Study Sample (N=366)

	Abstinence-only (*n* = 186)			Abstinence-plus (*n* =180)		
Characteristics	*n*	%	*M* (*SD*)	*n*	%	*M* (*SD*)
Sexual Orientation			1.08 (.35)			1.12 (.44)
Heterosexual	176	94.6		167	92.8	
Bisexual	7	3.8		5	2.8	
Homosexual	2	1.1		8	4.4	
None of the Above	1	.5		0	0	
Religious Affiliation			1.08 (.27)			1.08 (.27)
Have an Affiliation	171	91.9		166	92.2	
No Affiliation	15	8.1		14	7.8	

There were slightly more women than men among the participants of the abstinence-only and abstinence-plus programs. Of those abstinence-only participants, 53.8% were women and 46.2% were men. Of those abstinence-plus participants, 50.6% were women and 49.4% were men. This group consisted of students from different racial backgrounds but the majority of those participants in both programs identified themselves as Black or African American. Among the abstinence-only study participants, 91.9% identified as Black or African-American, 3.8% Caucasian/White, 2.7% Hispanic or Latino, and 1.6% chose other. Among the abstinence-plus study participants, 96.1% identified as Black or African-American, 3.3% Caucasian/White, and .6% chose other.

Both study participant programs indicated three grade levels (10th, 11th, and 12th). Of abstinence-only participants, 32.3% were in 10th grade, 41.4% were in 11th

grade, and 26% were in 12th grade. Of abstinence-plus participants, 30.6% were in 10th grade, 41.1% were in 11th grade, and 28.3% were in 12th grade.

Participants in both programs answered questions related to his or her sexual orientation and religious affiliation. Of the abstinence-only participants, 94.6% of students primarily reported their sexual orientation as heterosexual; only 3.8% of those students reported as bisexual and 1.1% as homosexual. Only one of these students (.5%) did not describe themselves in these general terms, choosing instead to report none of the above. Of the abstinence-plus participants, 92.8% of students primarily reported his or her sexual orientation as heterosexual; only 2.8% of these students reported as bisexual and 4.4% as homosexual. Of the abstinence-only participants, 91.9% indicated that they had some religious affiliation and 8.1% indicated that they had no religious affiliation. Of the abstinence-plus participants, 92.2% indicated that they had some religious affiliation and 7.8% indicated that they had no religious affiliation.

Data Analysis

This study primarily used IBM's Statistical Package for Social Science (SPSS) to execute several tests and report answers to the research questions. Originally, I planned to use the Multivariate Analysis of Variance (MANOVA) test because there were several dependent variables, but the dependent variables were not correlated. MANOVA testing assumes that there is a linear relationship between the dependent variables, and this study violates that assumption (see Table 2).

Table 2

Correlation Matrix

Variables	1	2	3	4	5
1 Sexual Attitudes	_	.03	.03	.12	-.03
2 Social Norms	.02	_	-.10	.09	.13
3 Self-efficacy	.44*	-.04	_	.04	.03
4 Decision-making	-.01	-.02	-.09	_	-.04
5 Sexual Abstinence	.03	-.00	.06	-.13	_

Note. Inter-correlations for abstinence-only participants (*n=186*) are presented below the diagonal, and inter-correlations for abstinence-plus participants (*n*=180) are presented above the diagonal.. **p* < *.01*.

Since the study failed to meet the assumptions of MANOVA, the researcher used the Univariate Analysis of Variance (ANOVA) test. The ANOVA test is appropriate when the reaction variable is metric and the independent variable is categorical. Furthermore, a two-way ANOVA design can assess whether there is any interaction between independent variables. The ANOVA test investigated the *F* test statistic to compare the means of the two independent groups. Two-way ANOVAs were performed to determine if there were significant differences between sexual education programs based on the five psychosocial variables presented in this study. The two-way ANOVAs were also performed to examine whether there were any interactions between programs and genders. The researcher used .05 as the cutoff for statistical significance.

This study analysis focused on the comparison of abstinence-only and abstinence-plus programs in rural area schools by examining students' abstinence behaviors, abstinent sexual attitudes, social norms, self-efficacy, and perceive effectiveness of sexual education and decision-making skills. The total scores from the dependent variables were obtained from the SRBBS, SABS, and ESES, respectively. Furthermore, the scores for all the response variables were ordinal. Since the abstinence-only scores were measured from one group of participants and abstinence-plus scores were measured from another group of participants, the use of ANOVA was justified. A two-way ANOVA is appropriate for analyzing dependent variables separately, meaning a separate ANOVA was done for each dependent variable.

Testing the Assumptions

Normal Distribution

Assumption testing for normality of distribution of scores was conducted to determine the skewness and kurtosis coefficients of the five main variables—abstinence behaviors, abstinent sexual attitudes, social norms, and self-efficacy, and perceived effectiveness of sexual education and decision-making skills. The skewness and kurtosis for those variables were between ± 1.0, thus, satisfying the assumption of normally distributed scores. According to George and Mallery (2012), a skew and kurtosis value between ± 1.0 is measured as an excellent value for most psychometric purposes. Table 3 shows the standardized skew and kurtosis coefficients.

Table 3

*Mean (*M*), Standard Deviation (*SD*), Skew, and Kurtosis*

		Abstinence-only (n = 186)			Abstinence-plus (n =180)		
Scales	Variables	*M* (*SD*)	Skewness	Kurtosis	*M* (*SD*)	Skewness	Kurtosis
SRBBS							
ASI	Sexual	2.84 (.36)	.02	-.3	3.21 (.28)	-.28	-.81
Attitudes							
NSI	Social Norms	2.81 (.44)	-.16	-.64	2.99 (.48)	-.29	.40
SER	Self-efficacy	2.06 (.23)	.05	-.36	2.52 (1.99)	-.91	-.16
SABS	Sexual Abstinence	6.2 (1.9)	.01	-.75	6.28 (2.04)	-.23	-.78
ESES	Decision-making	2.19 (.26)	-.24	-.35	3.46 (.23)	-.22	-.66

Note. N = 366.

Homogeneity of Variances

Levene's test was used to determine whether the error variance of the dependent variables is homogeneous across groups. Levene's test reported a p-value greater than .05 for all tests. This test results means that we cannot reject the null hypothesis that the error variance of the dependent variables are equal across groups, satisfying the assumption of homogeneity of variance.

Main Analysis

To test the five hypotheses of the study, the researcher examined the difference between program types and the interaction between programs and genders. This analysis consisted of a series of two-way ANOVAs in a combination of five dependent

variables—abstinent sexual attitudes, social norms, self-efficacy, perceived effectiveness of sexual education and decision-making skills, and abstinence behaviors. Tables 4, 5, and 6 summarize the results of the ANOVA analysis.

Table 4

Mean Comparisons of Program Types –Two-way ANOVA Test

	Abstinence-Only $n = 186$	Abstinence-Plus $n = 180$				Effect Size
Variables	*M* (*SD*)	*M* (*SD*)	*F*	*Df*	*P*	η^2
Sexual Attitudes	2.84 (.35)	3.2 (.28)	117.21	(1, 362)	.00*	.25
Social Norms	2.81 (.44)	2.99 (.48)	14.12	(1, 362)	.00*	.04
Self-efficacy	2.06 (.23)	2.52 (.19)	426.38	(1, 362)	.00*	.54
Sexual Abstinence	6.2 (1.99)	6.3 (2.04)	.25	(1, 362)	.61	.00
Decision-making	2.19 (.26)	3.46 (.23)	2451.76	(1, 362)	.00*	.87

Note. $*p < .05$

Table 5

Mean Comparisons by Gender – Two-way ANOVA Test

	Male $n = 175$	Female $n = 191$				Effect Size
Variables	*M* (*SD*)	*M* (*SD*)	*F*	*Df*	*P*	η^2
Sexual Attitudes	3.03 (.36)	3 (.38)	.43	(1, 362)	.51	.00
Social Norms	2.81 (.48)	3 (.44)	15.11	(1, 362)	.00*	.04
Self-efficacy	2.28 (.32)	2.29 (.31)	.88	(1, 362)	.35	.00
Sexual Abstinence	5.79 (1.98)	6.64 (1.96)	17.03	(1, 362)	.00*	.05
Decision-making	2.83 (.66)	2.80 (.70)	.33	(1, 362)	.56	.00

Note. $*p < .05$

Table 6

Interaction between Gender and Program types – Two-way ANOVA Test

Variables	Abstinence-Only n = 186		Abstinence-Plus n = 180					
	Male n = 86	*Female* n =100	*Male* n = 89	*Female* n = 91				
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*F*	*Df*	*P*	Effect Size η^2
Sexual Attitudes	2.87(.35) 3.21(.28)	2.81(.36)	3.2 (.29)		1.03	(1,362)	.31	.00
Social Norms	2.76(.46)	2.86(.42)	2.85(.49)	3.12(.44)	2.8	(1, 362)	.09	.01
Self-efficacy	2.04(.23)	2.07(.23)	2.51(.20)	2.53(.19)	.02	(1, 362)	.89	.00
Sexual Abstinence	5.78(1.89)	6.56(2.02)	5.81(2.08)	6.74(1.91)	.13	(1, 362)	.72	.00
Decision-making	2.21(.27)	2.17(.25)	3.43(.25)	3.49(.21)	4.22	(1, 362)	.06	.01

Note. $*p < .05$

Results of Study

Several two-way ANOVAs tested for differences between programs and interactions between genders and programs by measuring students' abstinence behaviors, abstinent sexual attitudes, social norms, and self-efficacy, and perceived effectiveness of sexual education and decision-making skills. As shown above in Table 4, the two-way ANOVA reported significant differences between programs in mean scores for the scales measuring abstinent sexual attitudes, social norms, and self-efficacy, and perceived effectiveness of sexual education and decision-making skills. There was no statistically significant difference between groups in mean scores for the scale measuring sexual abstinence.

Table 5 also shows the main effects of gender. The two-way ANOVA only reported significant differences between genders in mean scores for the scales measuring abstinent social norms and sexual abstinence. There were no statistically significant

differences between genders in mean scores for the scales measuring abstinent sexual attitudes, and self-efficacy, and perceived effectiveness of sexual education and decision-making skills. However, this study focused on the main effects of program types and the interaction of program types and gender. As shown above in Table 6, the two-way ANOVA did not report significant interactions between genders and program types on the dependent variables.

Hypothesis 1

It was hypothesized that participants in the abstinence-only program have scores on the Sexual Risk-Taking Behavioral factor of the Sexual Risk Behavioral Belief and Self-Efficacy (SRBBS) scale that were equivalent to participants in the abstinence-plus program. A two-way analysis of variance yielded a main effect for programs, measuring abstinent sexual attitudes, F (1, 362) = 117.21, $p < .05$, $\eta^2 = .25$, such that the students' average score were significantly higher for the abstinence-plus program ($M = 3.2$, $SD = .28$) than for the abstinence-only program ($M = 2.84$, $SD = .35$). A higher average score on the assessments of abstinent sexual attitudes mean that more students who had taken the abstinence-plus course believed that they should wait to have sex and that it is not okay to sex with a steady partner. Higher scores reflect greater endorsement of abstinent sexual attitudes. It also yielded a main effect for programs, measuring abstinent social norms, F (1, 362) = 14.12, $p < .05$, $\eta^2 = .04$, such that the students' average score were significantly higher for the abstinence-plus program ($M = 2.99$, $SD = .48$) than for the abstinence-only program ($M = 2.81$, $SD = .44$). A higher average score on the assessments of abstinent social norms mean that more students who had taken the

abstinence-plus course believed that their peers thought that teenagers should wait to have sex and that it is not okay to sex with a steady partner. Higher scores reflect greater endorsement of the extent to which a student thinks others, their peers, practice sexual abstinence. There was a very small effect size for social norms between the two groups. Nevertheless, the null hypothesis was rejected because there were significant differences.

Hypothesis 2

It was hypothesized that participants in the abstinence-only program have scores on the Sexual Abstinence Behavior Scale (SABS) that were equivalent to participants in the abstinence-plus program. The two-way analysis of variance main effect for programs was –significant, F (1, 362) = .25, $p > .05$, $\eta^2 = .00$. Therefore, the null hypothesis could not be rejected because there was no significant difference.

Hypothesis 3

It was hypothesized that participants in the abstinence-plus program have scores on the Effectiveness of Sexual Education scale (ESES that were equivalent to participants in the abstinence-only program. A two-way analysis of variance yielded a main effect for programs, measuring perceived effectiveness of his or her sexual education and decision-making skills, F (1, 362) = 2451.76, $p < .05$, $\eta^2 = .87$, such that the students' average score were significantly higher for the abstinence-plus program ($M = 3.46$, $SD = .23$) than for the abstinence-only program ($M = 2.19$, $SD = .26$). A higher average score on the assessments of perceived effectiveness of sexual education and decision-making mean that students who completed the abstinence-plus program rated their sex education as more effective than abstinence-only program and they had higher sexual decision-making

self-efficacy. High scores reflect greater endorsement of abstinent attitudes, abstinence self-efficacy, abstinent social norms, sexual decision-making skills, and their program. Therefore, the null hypothesis was rejected because there was a significant difference.

Hypothesis 4

It was hypothesized that participants in the abstinence-plus program have scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that were equivalent to participant in the abstinence-only program. A two-way analysis of variance yielded a main effect for programs, measuring abstinence self-efficacy, F (1, 362) = 426.38, $p <$ .05, $\eta^2 = .54$, such that the students' average score were significantly higher for the abstinence-plus program ($M = 2.52$, $SD = .19$) than for the abstinence-only program ($M =$ 2.06, $SD = .23$). A higher average score on the assessments of abstinent self-efficacy mean that more students who had taken the abstinence-plus course believed that they were able to abstain from having sex until they were ready. Higher scores reflect greater endorsement of abstinence refusal skills. Therefore, the null hypothesis was rejected because there was a significant difference.

Hypothesis 5

It was hypothesized that students' scores on the three scales (SABS, SRBBS, and ESES do not interact between genders by type of sexual education program. A two-way analysis of variance yielded a main effect for gender, measuring abstinent social norms, F (1, 362) = 15.11, $p < .05$, $\eta^2 = .04$. The two-way ANOVA indicated that the programs had more effects on females' abstinent social norms ($M = 3$, $SD = .44$) than males ($M =$ 2.81, $SD = .48$). It also yielded a main effect for gender, measuring sexual abstinence, F (1, 362) = 17.03, $p < .05$, $\eta^2 = .05$. The two-way ANOVA indicated that the programs

had more effects on females' sexual abstinence behaviors ($M = 6.64$, $SD = 1.96$) than males ($M = 5.79$, $SD = 1.98$). The two-way analysis of variance main effect for gender, measuring abstinent sexual attitudes, was –significant, F (1, 362) = .43, p >.05, η^2 = .00. The two-way analysis of variance main effect for gender, measuring abstinent self-efficacy, was –significant, F (1, 362) = .88, p >.05, η^2 = .00. The two-way analysis of variance main effect for gender, measuring perceived effectiveness of his or her sexual education and decision-making skills, was –significant, F (1, 362) = .33, p >.05, η^2 = .00. The interaction effect between genders and programs, measuring sexual attitudes, was –significant, F (1, 362) = 1.03, p >.05, η^2 = .00; measuring abstinent social norms, was –significant, F (1, 362) = 2.8, p >.05, η^2 = .01; and measuring abstinent self-efficacy, was –significant, F (1, 362) = .02, p >.05, η^2 = .00. The interaction effect for gender by programs, measuring sexual abstinence, was also –significant, F (1,362) = .13, p >.05, η^2 = .00 and measuring perceived effectiveness of his or her sexual education and decision-making skills, was –significant, F (1, 362) = 4.22, p >.05, η^2 = .01. Therefore, the null hypothesis could not be rejected because there were no interactions between genders and programs on the dependent variables.

Summary

Several two-way ANOVAs were conducted to examine the research questions; Are there significant differences in Mississippi rural students' abstinent attitudes towards sexual intercourse, social norms, and sexual abstinence behaviors by type of sexual education program? Are there significant differences in Mississippi rural students' abstinent self-efficacy, and the perceived effectiveness of their sexual education and

decision-making skills by type of sexual education program? Is there an interaction between gender by type of sexual education program in terms of Mississippi rural students' abstinent attitudes towards sexual intercourse, social norms, self-efficacy, sexual abstinent behaviors, and the perceived effectiveness of his or her sexual education and decision-making skills?

Several two-way ANOVAs tested the null and alternative hypotheses, testing each dependent variable separately. Each null and alternative hypotheses examined whether program types (abstinence-only and abstinence-plus) and genders (male and female) by program type differ based on student's average score on the SRBBS, SABS, and ESES. Each score on the SRBBS, SABS, and ESES would be indicative of students' abstinent attitudes and social norms toward sexual intercourse, self-efficacy for refusal of sex, and perceived effectiveness of sexual education and decision-making skills, at .05 level of significance.

The Univariate ANOVA test did not support *H*2 (no significant differences between programs by sexual abstinence scores) and did not support H5 (no interactive effects between genders by programs based on abstinent sexual attitudes, self-efficacy, social norms, sexual abstinence, and perceived effectiveness of sexual education and decision-making scores). Thus, the independent variable (program) did differ significantly based on the other four dependent variables—abstinent sexual attitudes, social norms, self-efficacy, and perceived effectiveness of his or her sexual education and decision-making skills. The independent variable (genders and programs) did differ significantly based on one dependent variable, sexual abstinence.

Chapter 5: Discussion, Conclusion, and Implications

Introduction

Advocates for abstinence-plus believe that comprehensive sexual education provides opportunities for students to discuss their sexual attitudes and values in a classroom setting. Those in opposition to abstinence believe that abstinence-only is best because it restricts dialogue about sex to protect students and preserves sexual morality (Blackburn, 2009; Donovan, 1998; Irvine, 2004; Kirby, 2008; Lesko, 2010; Masters et al., 2008). Although studies show that abstinence-only programs ineffective (Mckave, 2007; Kantor et al., 2008; Santelli et al., 2006; Trenholm et al., 2007; Yoo et al., 2004), Because many of the State of Mississippi's school districts have adopted abstinence-only curriculums, this study was designed to compare abstinence-only and abstinence-plus programs in Mississippi's rural area public schools.

This program comparison was conducted by examining students' sexual abstinence behaviors, perceived effectiveness of sexual education and decision-making, abstinent sexual attitudes, social norms, and self-efficacy after the completion of their program. In this comparison, higher scores on the Effectiveness of Sexual Education Scale, Sexual Abstinence Scale, and Sexual Risk Behavioral Beliefs and Self-efficacy Scale were interpreted as reflecting a greater endorsement of students' abstinent attitudes, abstinence self-efficacy, abstinent social norms, sexual decision-making skills, and their program. A cross-sectional, survey design was used to examine the quantitative data collected from 186 participants in an abstinence-only program and 180 participants in an abstinence-plus program via three questionnaires.

Summary of Key Findings

This study focused on five key variables: sexual attitudes, social norms, self-efficacy, sexual abstinence, and perceived effectiveness of sexual education and decision-making. Those variables were very important because the three psychosocial variables (abstinence sexual attitudes, social norms, and self-efficacy) influence the other two variables (sexual abstinence behaviors and decision-making). Therefore, I sought to discover through careful analysis of the programs whether measurements of those five treatment variables would differ by program and whether these programs would interact with genders.

The following evaluation tools were used to assess the sample population for this study: the Sexual Risk Behavioral Belief and Self-efficacy Scale (SRBBS; see Appendix H), the Sexual Abstinence Scale (SABS; see Appendix F), and the Effectiveness of Sexual Education Scale (ESES; see Appendix D). As part of the data collection, 600 surveys were mailed out to students who had taken their school's sexual educational program; 366 surveys were completed and returned.

Of the 366 participants, 186 students indicated that they attended a school that teaches abstinence-only and 180 students indicated that they attended a school that teaches abstinence-plus. These participants consisted of 191 self-identified female students and 175 self-identified male students. This group consisted of students from different racial backgrounds, but the majority of students identified themselves as African Americans in 10th, 11th, or 12th grade.

This nonexperimental study provided an effective method for examining Mississippi's rural public schools sexual educational programs. The study's main objective was to become knowledgeable about the different effects that these programs had on rural students' sexual abstinence behaviors, abstinent sexual attitudes, social norms, and self-efficacy and perceived effectiveness of sexual education and decision-making skills. The two-way ANOVA analysis revealed statistically significant differences between the two programs on four out of five dependent variables studied and no interaction exist between genders and programs on the five dependent variables. Table 7 summarizes the results of this study.

Table 7

*Summary of Results (*N = *366)*

Group	Hypothesis	Results
AO (*n* = 186) AP (*n* = 180)	H^a 1: Participants in the abstinence-only program have scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that are not equivalent to participants in the abstinence-plus program.	Statistically Significant difference
AO (*n* = 186) AP (*n* = 180)	H^a 2: Participants in the abstinence-only program have scores on the Sexual Abstinence Behavior Scale that are not equivalent to participants in the abstinence-plus program.	Not Statistically Significant difference
AO (*n* = 186) AP (*n* = 180)	H^a 3: Abstinence-plus program participants have scores on the Effectiveness of Sexual Education scale that are not equivalent to abstinence-only program participants.	Statistically Significant difference
AO (*n* = 186) AP (*n* = 180)	H^a 4: Abstinence-plus program participants have scores on the Sexual Risk-Taking Behavioral factor of the SRBBS scale that are not equivalent to abstinence-only program participants.	Statistically Significant difference
M (*n* = 175) F (*n* =191)	H^a 5: Students' gender and program type interact such that abstinence-only males have scores on the three scales (SABS, SRBBS, and ESES) that are not equivalent to abstinence-plus male students and abstinence-only females have scores on the three scales (SABS, SRBBS, and ESES) that are not equivalent to abstinence-plus females.	**No Interaction

Note. AO = abstinence-only, AP =abstinence-plus, M = male, F = female. **There was no interaction between genders and programs; but the two-way ANOVAs yielded a main effect for gender on the SABS and SRBBS's subscale (NSI).

Interpretation of Key Findings

This study showed several significant differences between abstinence-only and abstinence-plus sexual education programs. The findings suggested that abstinence-plus students' average scores differed significantly from the average abstinence-only students' scores, measuring abstinence sexual attitudes, social norms, self-efficacy, and perceived effectiveness of sexual education and decision-making skills. Some people may not find

this difference between abstinence-only and abstinence-plus students' scores surprising because although both programs taught abstinence, one program could vary with respect to the kind of information it provided. Abstinence-plus programs not only teach abstinence, but these programs include material on pregnancy, HIV, STIs, and contraceptives (Masters et al., 2008). Furthermore, several previous studies (Kirby, 2008; Lindberg & Maddow-Zimet, 2012; Masters et al. 2008; Realini's et al., 2010) have reported results that were consistent with the current findings.

The abstinence-plus students' average score differed significantly (p=.00) from the average abstinence-only students' score, measuring perceived effectiveness of his or her sexual education and decision-making skills, with a large effect size. This difference may reflect that the abstinence-plus program provided more information than the abstinence-only program because it acknowledged that students are different and provide ways for students to protect themselves (i.e. condoms and contraception) in case they decide to explore their sexuality or in case they are pressured by peers to engage in such activities. It also talked about abortion, STIs, and HIV/AIDS. By acknowledging that everyone is different, shows respect to students and students consciously or unconsciously know this. Feeling respected--which includes feeling that their sense of autonomy-- allows students to form their own values and make their decisions. This helps their confidence (self-efficacy), attitudes, decision-making, and can influence their perception of the sex education program, thus allowing them to make informed decisions. Arguably, abstinence-plus programs accept and respect such possibilities among adolescents. Therefore, if they do decide to have sex, at least it would be safer sex.

According to Lesko (2010), abstinence-plus programs include scientific and evidence-based information on sexuality. Abstinence-plus supporters often criticize abstinence-only programs for omitting important information about condom and contraception use and eluding conversations about abortion, STIs and HIV/AIDS (Lesko, 2010). By acknowledging that everyone is different, shows respect to students and students consciously or unconsciously know this. Feeling respected--which includes feeling that their sense of autonomy-- allows students to form their own values and make their decisions. This helps their confidence (self-efficacy), attitudes, decision-making, and can influence their perception of the sex education program, thus allowing them to make informed decisions.

Although this inclusive could account for the difference in students' average scores measuring perceived effectiveness of sexual education and decision-making skills between programs, the design or teaching strategy could have played a legitimate role in this difference and the difference between students' average scores measuring abstinent sexual attitudes and social norms (very small effect size). The design or teaching strategy could have played a role in this difference, because this study used two schools from different districts (one abstinence-plus and one abstinence-only). The school district's superintendent decided on the best strategy for implementing their program in their schools and the strategy may have differed between two schools in different districts. For example, one school may have used visual aids, took field trips to the health department, or perhaps invited guest that may have experienced health problems that are reflective of risky sexual behaviors. The other school may have only used the textbooks that gave

vague information and the teacher lectured to informed students. Sexual education programs should be client-centered, broad, skills-based, values-based, research and theory based, long term, integrated, collaborative, and positive (Helmich, 2009).

Abstinence-plus and abstinence-only programs encouraged abstinence and both programs taught self-efficacy skills by building students' character, values, and refusal skills (Fentahum et al., 2012). In particular, social cognitive theory's (SCT) self-efficacy construct has been known to predict behavior change (Bandura, 1977; Ip, Sin, & Chan, 2009). SCT's self-efficacy construct may be beneficial to sexual education programs that are trying to prevent HIV/STIs and unplanned pregnancies (Ip, Sin, & Chan, 2009). SCT provides ways to enhance necessary skills to carry out the desired behavior (Zhang, Jemmott, & Jemmott, 2015). These skills include guided practice with positive reinforcements and observational learning through role-playing and observing role-playing that can increase self-efficacy (Zhang et al., 2015). One must believe that they have a sense of control over the situation in order to develop or increase self-efficacy (Bandura, 1977). Nevertheless, a significant difference (p=.00) between students' average scores, measuring self-efficacy to refuse sex, by programs still existed with a moderate effect size.

The abstinence-plus and abstinence-only programs encouraged abstinence and both programs taught self-efficacy skills by building students' character, values, and refusal skills (Fentahun, Assefa, Alemseged, & Ambaw, 2012). These skills include guided practice with positive reinforcements and observational learning through role-playing and observing role-playing that can increase self-efficacy (Zhang, Jemmott, &

Jemmott, 2015). Nevertheless, a difference between students' average scores, measuring self-efficacy to refuse sex, by programs still existed with a moderate effect size. This difference existed by programs because abstinence-plus programs accept the fact that some students will engage in sexual activity and present students other options, allowing them an opportunity to take charge of his or her sexual health. This self-control or autonomy enhances self-efficacy. Therefore, it is believed that students, with a high self-efficacy score have confidence in their abilities and have accepted that they are in control would be able to carry out the desired behavior. Students with a low self-efficacy score lack confidence in their abilities and will be apprehensive because they have not reconciled their desire to explore with the message of "do not explore?"

The findings suggested that the abstinence-plus students' average score on the scale measuring sexual abstinence did not differ significantly (p=.61) from the abstinence-only students' average score. Students in both programs sexual abstinence behaviors are similar, having low average scores. According to the Health Belief Model (HBM), improvements to students' sexual abstinence behaviors hinges on his or her perceived susceptibility, severity, benefits, and barriers (Rosenstock et al., 1988). Students must believe that by participating in sexual activities, they increase his or her health risks, and these risks can have severe consequences. Awareness of the threat and personal engagement are the first two stages that one must go through before they consider the benefits of abstinence and protective action (Crosby et al., 2002). Students must also believe that practicing sexual abstinence is beneficial to them or else they will

not be inclined to practice abstinence. Students must overcome barriers such as peer pressure and developmental issues in order to be inclined to practice abstinence.

One explanation for the lack of significant difference in students' average sexual abstinence scores between programs may be reflective of focusing on too many things in a short amount of time. Most schools have implemented short-term sexual education courses that usually have a small effect on students' behaviors (Kirby, 2001; Sabia, 2006). In other words, maybe the abstinence-plus program or perhaps both programs focus were too broad. In a past review of school-based programs, Kirby et al. (1994) discovered that narrowly focused programs were more effective at reducing sexual risk-taking behaviors than broadly focused programs. Successful programs fixated on specific behavioral goals such as postponing sexual intercourse and the use of contraceptives, and spent less time on other sexuality issues such as dating, gender roles, and parenthood (Kirby et al., 1994). The lack of difference in students' average sexual abstinence scores between programs may also be reflective of the programs' foundation, lacking a theoretical base. Kirby et al. (1994) discovered that social learning theory-driven programs were effective at influencing health-risk behaviors. SCTs insist that sexual behaviors are affected by a knowledge of what one must do to avoid sex, believe in the benefit of abstinence, and believe that practicing abstinence is the most effective and achievable goal.

Some critics might argue that sexual abstinence is the most important dependent variable. Based on this study's findings, these critics may argue that the abstinence-plus program was no better or worse than the abstinence-only program because the programs

were not significantly different on the sexual abstinence variable. However, these results should not be interpreted to suggest that neither program could influence students' sexual abstinence behaviors. Rather, the results propose that normal short-term school-based sexual education programs that are not theory-driven tend to have similar measurable health effects on students' sexual abstinence behaviors (Sabia, 2006). It is difficult to measure the effectiveness of educational programs that promote abstinence because of weak designs, the heterogeneity of programs' curriculum, and the implementation of these programs (Chin et al., 2012). Different programs such as long-term follow-up, long-term interventions, and theory-based abstinence-only or abstinence-plus programs may have different results (Sabia, 2006).

Critics also need to understand that the scale, measuring sexual abstinence, may not have been the best method for measuring abstinence. The scale only focused on four main questions within the past three months: Did you tell yourself that you were making the right decision by waiting to have sex? Did you say "No" to sex? Did you tell them that you wanted to wait to have sex? Did you avoid being pressured to have sex? This scale cannot accurately assess students' actual abstinence behaviors. Just because students do not remind themselves on a daily basis that they are making the right choice by waiting to have sex, does not mean that students are not practicing abstinence. Furthermore, the other subsequent questions assume that everyone has been approached or asked to participate in sexual activity, not considering those who may not. The scale does not assess the actual number of times that students had a sexual opportunity, the period in which the opportunity occurred, and the type of sexual behavior opportunity

(e.g., giving oral sex or receiving oral sex versus penile-vaginal intercourse). Revisions to this scale might need to include questions that address those concerns and become more reflective of all experiences. Future findings may be different with this inclusion.

Students' average score, measuring perceived effectiveness of his or her sexual education and decision-making, were not significantly different (p=.56) between genders. Students' average scores, measuring attitude and self-efficacy, were not significantly different (p=.51, p=.35) between genders. Those findings were not consistent with previous studies that have found relationships between gender and adolescents' attitudes (Anderson et al., 2011; De Gaston, Weed, & Jensen, 1996; Forehand et al., 2005; Werner-Wilson, 1998). Gender differences on these assessments may not have been found because of discrepancies in scores on the assessments within the populations or groups lowered the overall average score on the assessments. Furthermore, this study was focused on the interactive effect between programs and genders. There were no interactive effects between genders and programs, meaning that both programs were equally effective for women and men.

Further Observations

Although this study does not focus on the main effect of gender, a significant difference (p=.00) was shown between male and female students' average scores, measuring sexual abstinence behaviors, and social norms. The students' average scores were significantly higher for women than men for both variables, with a very small effect size. Justifications for differences between genders in risky health behaviors consist of differences in parenting of boys and girls, physiological factors, and the cultural

socialization of boys into dangerous manly behaviors and girls into harmless womanly behaviors (Mahalik et al., 2013). For instance, boys are perceived as having greater levels of neurodevelopmental risk factors than girls (Mahalik et al., 2013). These neurodevelopmental risk factors contribute to antisocial behaviors and sensation seeking that encourages several risky health behaviors (Mahalik et al., 2013).

Studies that analyzed parenting methods discovered that parents monitor their daughters' activities more than their sons' activities and friends (Mahalik et al., 2013; van der Vorst et al., 2006). Using this parenting method, allows more opportunities for boys to engage in risky health behaviors than girls (Mahalik et al., 2013; van der Vorst et al., 2006). Girls and boys also experience diverse messages concerning the acceptability of risky health behaviors. In particular, premarital sex is accepted for males, but females are expected to delay the initiation of intercourse until marriage (Gorgen, Yansane, Marrx, & Millimounou, 1998). This perception can be the reason females' average scores were significantly higher than males. Both men and women receive and adopt societal messages concerning suitable behaviors for each gender (Zuo et al., 2012). This socialization procedure may support attitudes, roles, behaviors, and norms that are unequal, and may promote behaviors that put the people holding them at risk (Zuo et al., 2012).

Limitations of Study

This study has several limitations. The teaching method between the two schools' teachers may have influenced the students' perceived effectiveness of their program. The sample size was not a representative of each schools' total population and it only

included 10th, 11th, and 12th grader, aged 15-19, in public high schools. This study did not include a pre-test and it could not assess behavior change. Furthermore, the study only included students in the central Mississippi area so participants might not represent students from other areas of the state. The majority of students in both schools were African American. This study is descriptive and not causal, so one cannot make cause and effect statements based on this research. Finally, it is possible that students completed the measures under their parents' eyes; the way that they responded to the questions (e.g., increased social desirability).

Recommendations for Further Study

This study presented a comparison of abstinence-only and abstinence-plus based on students' abstinent sexual attitudes, social norms, self-efficacy, sexual abstinence behaviors, and perceived effectiveness of his or her sexual education and decision-making skills. It is recommended that more longitudinal studies are done to assess students prior to taking a sexual education class and after they have completed the course. A follow-up test will increase internal validity. Future studies should not only focus on rural area schools in central Mississippi. They should cover several regional areas of the state because a part of the state is a part of the Appalachian region. Future studies should also look into other factors such sexual orientation, ethnicity, or religious beliefs and the influences these factors have on students' sexual attitudes and sexual decision-making.

Implications for Social Change

This study focused on Mississippi's public schools sexual education policy. Interestingly, sexual education starts at birth, and it plays a major role in social change,

providing lifelong skills that can assist adolescents in making sound decisions and in the development of self-confidence. The implications for positive change based on this study could contribute to understanding the benefits of abstinence-only and abstinence-plus programs and the influence they have on students' abstinence behaviors, abstinent sexual attitudes, self-efficacy, and social norms and sexual decision-making skills. Understanding the effects these programs have on those psychosocial variables can be instrumental to the invention of new successful sexual education programs in Mississippi and other neighboring states. In return, these programs could assist in the state's efforts to reduce teenage pregnancy, HIV, and STIs.

Conclusion

One must examine the pre-existing programs in order to build successful sexual educational programs. Sexual educational programs have had positive effects on children's sexual knowledge, but they sometimes fail to influence their sexual attitudes, sexual decision-making, self-efficacy, norms, or abstinence behaviors. This study contributes to understanding the benefits of abstinence-only and abstinence-plus programs and the influence they have on students' abstinence behaviors, abstinent sexual attitudes, self-efficacy, and social norms and sexual decision-making skills. The results of this study can be used to develop successful sexual education programs in Mississippi, which could also help other predominately-rural area southern states.

As the preponderance of literature suggests, abstinence-only programs have shown some positive results but abstinence-plus programs are often more effective than abstinence-only programs. Abstinence-plus programs not only can delay the initiation of

sexual activities, but they can increase use of all forms contraceptives among teenagers, giving teenagers the opportunity to become more responsible for their sexual health. Nevertheless, sexuality education is probably going to remain a contentious topic, and with controversy often comes misinformed information.

Sexual education starts at birth, and it plays a major role in social change, providing lifelong skills that can assist adolescents in making sound decisions and in the development of self-confidence. Regardless of how much research has been done, no one will probably ever resolve the moral and religious arguments that surround most sexual education debate. However, society must not turn a deaf ear and face the reality that sexual educational programs will not disengage the social pressures and natural hormonal urges that youth experience. Therefore, for social change to occur, scholars must develop and maintain these programs because some schools may not feel the need to implement sexual educational programs while others do not want to be perceived as promoting sexual activity.

References

Abraham, C., Sheeran, P., & Johnston, M. (1998). From health beliefs to self-regulation: Theoretical advances in the psychology of action control. *Psychology and Health, 13*(4), 569–591.

Abstinence-only is the choice for many Mississippi schools. (2012). *Capitol Ideas, 55*(5), 7–7.

Adimora, A. A., Schoenbach, V. J., Martinson, F. E., Donaldson, K. H., Fullilove, R. E., & Aral, S. O. (2001). Social context of sexual relationships among rural African Americans. *Sexually Transmitted Diseases, 28*(2), 69–76.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211.

Allen, K. R., Husser, E. K., Stone, D. J., & Jordal, C. E. (2008). Agency and error in young adults' stories of sexual decision making. *Family Relations, 57*(4), 517–529.

American Psychological Association. (2002). Ethical principles of psychologists and code ofconduct. *American Psychologist, 57*(12), 1060–1073. doi:10.1037/0003066X.57.12.1060

Ammer, C. (1997). *American heritage dictionary of idioms*. Retrieved from http://dictionary.reference.com/browse/Bible%20Belt

Anderson, K., Koo, H., Jenkins, R., Walker, L., Davis, M., Yao, Q., & Nabil El-Khorazaty, M. (2011). Attitudes, experience, and anticipation of sex among 5th

graders in an urban setting: Does gender matter? *Maternal & Child Health Journal, 15*(S1), 54–64. http://doi.org/10.1007/s10995-011-0879-5

Araújo-Soares, V., McIntyre, T., MacLennan, G., & Sniehotta, F. F. (2009). Development and exploratory cluster-randomised opportunistic trial of a theory-based intervention to enhance physical activity among adolescents. *Psychology & Health, 24*(7), 805–822. doi:10.1080/08870440802040707

Atav, S., & Spencer, G. A. (2002). Health risk behaviors among adolescents attending rural, suburban, and urban schools: A comparative study. *Family & Community Health: The Journal of Health Promotion & Maintenance, 25*(2), 53–64.

Auslander, B., Rosenthal, S., & Blythe, M. (2005). Sexual development and behaviours of adolescents. *Pediatric Annual, 34*(10), 785–793.

Babbie, E.R. (1973). *Survey research methods.* Belmont, CA: Wadsworth.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191–215.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Upper Saddle River, NJ: Prentice Hall.

Basen-Engquist, K., Mâsse, L. C., Coyle, K., Kirby, D., Parcel, G. S., Banspach, S., & Nodora, J. (1999). Validity of scales measuring the psychosocial determinants of HIV/STD-related risk behavior in adolescents. *Health Education Research, 14*(1), 25–38. doi:10.1093/her/14.1.25

Bauermeister, J. A., Elkington, K., Brackis-Cott, E., Dolezal, C., & Mellins, C. A. (2009). Sexual behavior and perceived peer norms: Comparing perinatally HIV-infected

and HIV-affected youth. *Journal of Youth and Adolescence, 38*(8), 1110–1122. doi:10.1007/s10964-008-9315-6

Beadnell, B., Baker, S. A., Gillmore, M. R., Morrison, D. M., Huang, B., & Stielstra, S. (2008). The theory of reasoned action and the role of external factors on heterosexual men's monogamy and condom use. *Journal of Applied Social Psychology, 38*(1), 97–134. doi:10.1111/j.1559-1816.2008.00298.x

Bearman, P. S., & Brückner, H. (2001). Promising the future: Virginity pledges and first intercourse. *American Journal of Sociology, 106*(4), 859–912.

Bennett, S. E., & Assefi, N. P. (2005). School-based teenage pregnancy prevention programs: A systematic review of randomized controlled trials. *Journal of Adolescent Health, 36*(1), 72–81.

Bersamin, M. M., Walker, S., Waiters, E. D., Fisher, D. A., & Grube, J. W. (2005). Promising to wait: Virginity pledges and adolescent sexual behavior. *Journal of Adolescent Health, 36*(5), 428–436.

Bettenhausen, K., & Murnighan, J. K. (1985). The emergence of norms in competitive decision-making groups. *Administrative Science Quarterly, 30*(3). doi: 10.2307/2392667

Black, D. S., Sun, P., Rohrbach, L. A., & Sussman, S. (2011). Decision-making style and gender moderation of the self-efficacy-condom use link among adolescents and young adults. *Archives of Pediatrics & Adolescent Medicine, 165*(4), 320–325. http://doi.org/10.1001/archpediatrics.2011.17

Blackburn, T. (2009). The influence of sex education on adolescent health: abstinence-only vs. comprehensive programs. Retrieved from http://archie.kumc.edu/handle/2271/744

Bleakley, A., Hennessy, M., Fishbein, M., & Jordan, A. (2009). How sources of sexual information relate to adolescents' beliefs about sex. *American Journal of Health Behavior, 33*(1), 37–48.

Blinn-Pike, L. (2008). Sex education in rural schools in the United States: Impact of rural educators' community identities. *Sex Education, 8*(1), 77–92. doi:10.1080/14681810701811845

Brady, S. S., & Halpern-Felsher, B. L. (2008). Social and emotional consequences of refraining from sexual activity among sexually experienced and inexperienced youths in California. *American Journal of Public Health, 98*(1), 162–168. doi:10.2105/AJPH.2006.097923

Brückner, H., & Bearman, P. (2005). After the promise: The STD consequences of adolescent virginity pledges. *Journal of Adolescent Health, 36*(4), 271–278.

Brunn, S. D., Webster, G. R., & Archer, J. C. (2011). The Bible Belt in a changing south: Shrinking, relocating, and multiple buckles. *Southeastern Geographer, 51*(4), 513–549.

Byers, E. S. (2011). Beyond the birds and the bees and was it good for you?: Thirty years of research on sexual communication. *Canadian Psychology, 52*(1), 20–28. doi:10.1037/a0022048

Casey, M. K., Timmermann, L., Allen, M., Krahn, S., & Turkiewicz, K. L. (2009). Response and self-efficacy of condom use: A meta-analysis of this important element of AIDS education and prevention. *Southern Communication Journal, 74*(1), 57–78. doi:10.1080/10417940802335953

Center for Disease Control and Prevention. (2011). QuickStats: Birth rates for teens aged 1519 years, by state United States, 2009. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6006a6.htm?s_cid=mm6006a6_e%0d%0a

Center for Disease Control and Prevention. (2012). Rates of reportable STDs among young people 15–24 years of age Mississippi. Retrieved from http://www.cdc.gov/std/stats/by-age/15-24-all-STDs/state/2010/MS10.pdf

Center of Disease Control and Prevention. (2008). Trends in HIV- and STD-related risk behaviors among high school students –United States, 1991–2007. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5730a1.htm

Center of Disease Control and Prevention. (2012). Birth rates for U.S. teenagers reach historic lows for all age and ethnic groups. Retrieved from http://www.cdc.gov/nchs/data/databriefs/db89.htm

Champion, J. D., & Kelly, P. (2002). Protective and risk behaviors of rural minority adolescent women. *Issues in Mental Health Nursing, 23*(3), 191–207. doi:10.1080/016128402753542965

Chatterjee, J. S., Bhanot, A., Frank, L. B., Murphy, S. T., & Power, G. (2009). The importance of interpersonal discussion and self-efficacy in knowledge, attitude and practice models. *International Journal of Communication, 3*, 607–634.

Cherry, D. C., Huggins, B., & Gilmore, K. (2007). Children's health in the rural environment. *Pediatric Clinics of North America, 54*(1), 121–133, ix. doi:10.1016/j.pcl.2006.11.008

Chin, H. B., Sipe, T. A., Elder, R., Mercer, S. L., Chattopadhyay, S. K., Jacob, V., … Santelli, J. (2012). The effectiveness of group-based comprehensive risk-reduction and abstinence education interventions to prevent or reduce the risk of adolescent pregnancy, human immunodeficiency virus, and sexually transmitted infections: Two systematic reviews for the guide to community preventive services. *American Journal of Preventive Medicine, 42*(3), 272–294. doi:10.1016/j.amepre.2011.11.006

Chisholm-Burns, M., & Spivey, C. (2010). Use of social cognitive theory to guide a medical treatment adherence intervention. *International Journal of Interdisciplinary Social Sciences, 5*(7), 97–107.

Chow, W. S., & Chan, L. S. (2008). Social network, social trust and shared goals in organizational knowledge sharing. *Information & Managemen*t, *45*(7), 458–465.

Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology, 58*(6), 1015–1026. doi:10.1037/0022-3514.58.6.1015

Cooke-Jackson, A., & Hansen, E. K. (2008). Appalachian culture and reality TV: The ethical dilemma of stereotyping others. *Journal of Mass Media Ethics, 23*(3), 183–200. doi:10.1080/08900520802221946

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage.

Crosby, R. A., Yarber, W. L., DiClemente, R. J., Wingood, G. M., & Meyerson, B. (2002). HIV-associated histories, perceptions, and practices among low-income African American women: Does rural residence matter? *American Journal of Public Health, 92*(4), 655–659.

Cuffee, J. J., Hallfors, D. D., & Waller, M. W. (2007). Racial and gender differences in adolescent sexual attitudes and longitudinal associations with coital debut. *The Journal of Adolescent Health : Official Publication of the Society for Adolescent Medicine, 41*(1), 19–26. doi:10.1016/j.jadohealth.2007.02.012

Curtis, A. C., Waters, C. M., & Brindis, C. (2011). Rural adolescent health: the importance of prevention services in the rural community. *The Journal of Rural Health: Official Journal of the American Rural Health Association And The National Rural Health Care Association, 27*(1), 60–71. doi:10.1111/j.1748-0361.2010.00319.x

Czerwiec, K., & Kopańska-Kogut, M. (2012). Research on sex education at different levels of education curricular, social and ethical contexts. *Journal of Turkish Science Education (TUSED)*, *9*(4), 35–43.

De Gaston, J. F., Weed, S., & Jensen, L. (1996). Understanding gender differences in adolescent sexuality. *Adolescence*, *31*(121), 217–231.

DeLamater, J., & Friedrich, W. N. (2002). Human sexual development. *Journal of Sex Research*, *39*(1), 10–14.

DiIorio, C., Kelley, M., & Hockenberry-Eaton, M. (1999). Communication about sexual issues; mothers, fathers, and friends. *Journal of Adolescent Health*, *24*, 181–189.

Donovan, P. (1998). School-based sexuality education: The issues and challenges. *Family Planning Perspectives*, *30*(4), 188–193.

Downing-Matibag, T. M., & Geisinger, B. (2009). Hooking up and sexual risk taking among college students: A health belief model perspective. *Qualitative Health Research*, *19*(9), 1196–1209. doi:10.1177/1049732309344206

Dzung, V. X., Song, A. V., & Halpern-Felsher, B. L. (2009). Role of race/ethnicity on adolescents' perceptions of sex-related risks and benefits. *The Journal of Adolescent Health*, (44). doi:10.1016/j.jadohealth.2008.10.010

Erkut, S., Grossman, J. M., Frye, A. A., Ceder, I., Charmaraman, L., & Tracy, A. J. (2013). Can sex education delay early sexual debut? *The Journal of Early Adolescence*, *33*(4), 482–497. doi:10.1177/0272431612449386

Farnam, F., Pakgohar, M., Mirmohamadali, M., & Mahmoodi, M. (2008). Effect of sexual education on sexual health in Iran. *Sex Education*, *8*(2), 159–168. doi:10.1080/14681810801981043

Fentahun, N., Assefa, T., Alemseged, F., & Ambaw, F. (2012). Parents' perception, students' and teachers' attitude towards school sex education. *Ethiopian Journal*

of Health Sciences, *22*(2). Retrieved from http://www.ajol.info/index.php/ejhs/article/view/79271

Fielder, R. L., & Carey, M. P. (2010). Predictors and consequences of sexual "hookups" among college students: A short-term prospective study. *Archives of Sexual Behavior*, *39*(5), 1105–1119. doi:10.1007/s10508-008-9448-4

Fields, J., & Hirschman, C. (2007). Citizenship lessons in abstinence-only sexuality education. *American Journal of Sexuality Education*, *2*(2), 3–25.

Fishbein, M., & Ajzen, I. (1980). *Understanding attitudes and predicting social behavior*. New York, NY: Prentice Hall.

Fisher, T. D., Davis, C. M., Yarber, W. W. L., & Davis, S. L. (2011). *Handbook of sexuality-related measures*. New York, NY: Routledge.

Forehand, R., Gound, M., Kotchick, B. A., Armistead, L., Long, N., & Miller, K. S. (2005). Sexual intentions of black preadolescents: Associations with risk and adaptive behaviors. *Perspectives on Sexual and Reproductive Health*, *37*(1), 13–18.

Francoeur, R. T. (2001). Challenging collective religious/social beliefs about sex, marriage, and family. *Journal of Sex Education & Therapy*, *26*(4).

Geographies of religion in a changing South. (2000). *Southeastern Geographer, 40*(1), 1–74

George, D., & Mallery, P. (2012). *Ibm spss statistics 19 step by step: A simple guide and reference* (12th ed.). Boston, MA: Pearson Education.

Glanz, K., Rimer, B. K., & Viswanath, K. (2008). *Health behavior and health education: theory, research, and practice*. Jossey-Bass Inc Pub.

Goldman, J. D. (2010). The new sexuality education curriculum for Queensland primary schools. *Sex Education*, *10*(1), 47–66.

Goodson, P., Suther, S., Pruitt, B. E., & Wilson, K. (2003). Defining abstinence: Views of directors, instructors, and participants in abstinence-only-until-marriage programs in Texas. *The Journal of School Health*, *73*(3), 91–96.

Gorgen, R., Yansane, M. L., Marrx, M., & Millimounou, D. (1998). Sexual behavior and attitudes among unmarried urban youths in Guinea. *International Family Planning Perspectives*, *24*(2).

Gravetter, F. J., & Wallnau, L. B. (2009). *Statistic for the behavioral sciences* (8th ed.). Belmont, CA: Wadsworth, Cengage Learning.

Gursimsek, I. (2010). Sexual education and teacher candidates' attitudes towards sexuality. *Australian Journal of Guidance & Counselling*, *20*(1), 81–90. doi:10.1375/ajgc.20.1.81

Haffner, D. W. (1992). *Sexuality education in policy and practice*. (J. T. Sears, Ed.). New York: Teachers College Press.

Haignere, C. S., God, R., & MacDanel, H. I. (2000). Adolescent abstinence and condom use: Are we sure we are really teaching what is safe. *Health Education & Behavior*, (26), 43–54.

Halpern-Fisher, B., & Reznik, Y. (2009). Adolescent sexual attitudes and behaviors: a developmental perspective. *Prevention Researcher*, *16*(4), 3–6.

Helmich, J. (2009). What is comprehensive sexuality education? Going way beyond abstinence and condoms. *American Journal of Sexuality Education*, *4*(1), 10–15. doi:10.1080/15546120902870315

Hendrick, S. & Hendrick, C. (1987) Multidimensionality of sexual attitudes. *Journal of Sex Research, 23*(4), 502-526.

Ip, W.-Y., Sin, L. L., & Chan, D. S. (2009). Contraceptive self-efficacy and contraceptive knowledge of Hong Kong Chinese women with unplanned pregnancy. *Journal of Clinical Nursing*, *18*(17), 2416–2425.

Irvine, J. M. (2004). *Talk about sex: The battles over sex education in the United States*. University of California Press.

Jacobs, A. C., Viljoen, C. T., & van der Walt, J. L. (2012). Spiritual well-being and lifestyle choices in adolescents: A quantitative study among Afrikaans-speaking learners in the North West Province of South Africa. *Journal of Child & Adolescent Mental Health*, *24*(1), 89–98. doi:10.2989/17280583.2012.673493

Jemmott, J. B., Jemmott, L. S., & Fong, G. T. (2010). Efficacy of a theory-based abstinence-only intervention over 24 months: A randomized controlled trial with young adolescents. *Archives of Pediatrics & Adolescent Medicine*, *164*(2), 152.

Johnson, J., & Strange, M. (2007). Why rural matters 2007: The realities of rural education growth. *Rural School and Community Trust*. Retrieved from http://eric.ed.gov/?id=ED498859

Kalichman, S., Stein, J. A., Malow, R., Averhart, C., Dévieux, J., Jennings, T., … Feaster, D. J. (2002). Predicting protected sexual behaviour using the

Information-Motivation-Behaviour skills model among adolescent substance abusers in court-ordered treatment. *Psychology, Health & Medicine*, *7*(3), 327–338. doi:10.1080/13548500220139368

Kantor, L. M., Santelli, J. S., Teitler, J., & Balmer, R. (2008). Abstinence-only policies and programs: An overview. *Sexuality Research & Social Policy*, *5*(3), 6–17. doi:10.1525/srsp.2008.5.3.6

Kaufman, M. R. (2010). Testing of the healthy "little" lives project: A training program for big sister mentors. *American Journal of Sexuality Education*, *5*(4), 305–327. doi:10.1080/15546128.2010.527234

Kidder, L.H. (1981). *Research methods in social relations.* New York, Holt: Rinehart & Winston.

Kirby, D. B. (2008). The impact of abstinence and comprehensive sex and STD/HIV education programs on adolescent sexual behavior. *Sexuality Research & Social Policy*, *5*(3), 18–27.

Kirby, D. (2001). Emerging answers: Research findings on programs to reduce teen pregnancy. *American Journal of Health Education*, *32*(6), 348–355.

Kirby, D., Short, L., Collins, J., Rugg, D., Kolbe, L., Howard, M., … Zabin, L. S. (1994). School-based programs to reduce sexual risk behaviors: a review of effectiveness. *Public Health Reports*, *109*(3), 339–360.

Kistler, M., Rodgers, K. B., Power, T., Austin, E. W., & Hill, L. G. (2010). Adolescents and music media: Toward an involvement-mediational model of consumption and

self-concept. *Journal of Research on Adolescence, 20*(3), 616–630. doi:10.1111/j.1532-7795.2010.00651.x

Knopf, D. K., Park, M. J., Brindis, C. D., Mulye, T. P., & Jr, C. E. (2007). What gets measured gets done: Assessing data availability for adolescent populations. *Maternal and Child Health Journal*, *11*(4), 335–345. doi:10.1007/s10995-007-0179-2

Koffi, A. K., & Kawahara, K. (2008). Sexual abstinence behavior among never-married youths in a generalized HIV epidemic country: Evidence from the 2005 Côte d'Ivoire AIDS indicator survey. *BMC Public Health*, *8*(1), 408. doi:10.1186/1471-2458-8-408

Kohler, P. K., Manhart, L. E., & Lafferty, W. E. (2008). Abstinence-only and comprehensive sex education and the initiation of sexual activity and teen pregnancy. *Journal of Adolescent Health*, *42*(4), 344–351. doi:10.1016/j.jadohealth.2007.08.026

Kontula, O. (2010). The evolution of sex education and students' sexual knowledge in Finland in the 2000s. *Sex Education*, *10*(4), 373–386. doi:10.1080/14681811.2010.515095

Kumar, M. M., Lim, R., Langford, C., Seabrook, J. A., Speechley, K. N., & Lynch, T. (2013). Sexual knowledge of Canadian adolescents after completion of high school sexual education requirements. *Pediatric Child Health, 18*(2), 74–80.

Latkin, C. A., Kuramoto, S. J., Davey-Rothwell, M. A., & Tobin, K. E. (2010). Social norms, social networks, and HIV risk behavior among injection drug users. *AIDS and Behavior*, *14*(5), 1159–1168. doi:10.1007/s10461-009-9576-4

Lesko, N. (2010). Feeling abstinent? Feeling comprehensive? Touching the affects of sexuality curricula. *Sex Education*, *10*(3), 281–297.

Library of Congress. (2009). Bill text - 111th congress (2009-2010) - Thomas. Retrieved April 9, 2014, from http://thomas.loc.gov/cgi-bin/query/z?c111:S.611:

Lindau, S. T., Tetteh, A. S., Kasza, K., & Gilliam, M. (2008). What schools teach our patients about sex: Content, quality, and influences on sex education. *Obstetrics & Gynecology*, *111*,256–266.

Lindberg, L. D., & Maddow-Zimet, I. (2012). Consequences of sex education on teen and young adult sexual behaviors and outcomes. *Journal of Adolescent Health*, *51*(4), 332–338. doi:10.1016/j.jadohealth.2011.12.028

Lindberg, L. D., Santelli, J. S., & Singh, S. (2006). Changes in formal sex education: 1995–2002. *Perspectives on Sexual and Reproductive Health*, *38*, 182–189.

Martens, M. P., Page, J. C., Mowry, E. S., Damann, K. M., Taylor, K. K., & Cimini, M. D. (2006). Differences between actual and perceived student norms: An examination of alcohol use, drug use, and sexual behavior. *Journal of American College Health*, *54*(5), 295–300. doi:10.3200/JACH.54.5.295-300

Masters, N. T., Beadnell, B. A., Morrison, D. M., Hoppe, M. J., & Gillmore, M. R. (2008). The opposite of sex? Adolescents' thoughts about abstinence and sex, and

their sexual behavior. *Perspectives on Sexual and Reproductive Health*, *40*(2), 87–93. doi:10.1363/4008708

Mahalik, J. R., Levine Coley, R., McPherran Lombardi, C., Doyle Lynch, A., Markowitz, A. J., & Jaffee, S. R. (2013). Changes in health risk behaviors for males and females from early adolescence through early adulthood. *Health Psychology*, *32*(6), 685.

Mathews, C., Aarø, L. E., Flisher, A. J., Mukoma, W., Wubs, A. G., & Schaalma, H. (2009). Predictors of early first sexual intercourse among adolescents in Cape Town, South Africa. *Health Education Research*, *24*(1), 1–10. doi:10.1093/her/cym079

Mathews, T., Sutton, P. D., Hamilton, B. E., & Ventura, S. J. (2010). State disparities in teenage birth rates in the United States. *NCHS Data Brief*, (46), 1–8.

Matziou, V., Perdikaris, P., Petsios, K., Gymnopoulou, E., Galanis, P., & Brokalaki, H. (2009). Greek students' knowledge and sources of information regarding sex education. *International Nursing Review*, *56*(3), 354–360. doi:10.1111/j.1466-7657.2009.00727.x

McCave, E. L. (2007). Comprehensive sexuality education vs. abstinence-only sexuality education: The need for evidence-based research and practice. *School Social Work Journal*, *32*(1), 14.

McIntosh, K. H., Moore, J. B., & Elci, O. C. (2009). Predisposing factors related to adolescent sexuality among students in rural and urban school-based health

centers in eastern North Carolina.*Journal of Public Health Management and Practice*, *15*(3), E16–E22. doi:10.1097/01.PHH.0000349746.57479.13

Mckee, C. (2011). Parental survey on sex education in Mississippi: Implications of house bill 999. *The Center for Mississippi Health Policy.* Retrieved from www. mshealthpolicy. com/Sex-EdFinalReportMSU11-8-11/pdf

Milhausen, R. R., Crosby, R., Yarber, W. L., DiClemente, R. J., Wingood, G. M., & Ding, K. (2003). Rural and non-rural African American high school students and STD/HIV sexual-risk behaviors. *American Journal of Health Behavior*, *27*(4), 373–379.

Milhausen, R. R., Yarber, W. L., & Crosby, R. (2003). Self-reported depression and sexual risk behaviors among a national sample of rural high school students. *Health Education Monograph Series*, *20*(2), 33–39.

Miller, E. N., & Dollard, J. (1941). *Social learning and imitation* (Vol. 14). New Haven, CT: Yale University Press.

Milstead, T. (2012). Housing and heritage: Perceptions of "culture" and its Influence among policy-makers and housing professionals in southern and central Appalachia. *Housing, Theory and Society,* 29(1), 92–113. doi:10.1080/14036096.2011.604096

Mitchell, C. M., Kaufman, C. E., Beals, J., Choice, P., & Team, H. W. (2005). Resistive efficacy and multiple sexual partners among American Indian young adults: A parallel-process latent growth curve model. *Applied Developmental Science*, *9*(3), 160–171. doi:10.1207/s1532480xads0903_3

Montanaro, E. A., & Bryan, A. D. (2013). Comparing theory-based condom interventions: Health belief model versus theory of planned behavior. *Health Psychology*. doi:10.1037/a0033969

Moore, M. J., Barr, E. M., & Johnson, T. M. (2013). Sexual behaviors of middle school students: 2009 youth risk behavior survey results from 16 locations. *Journal of School Health*, *83*(1), 61–68. doi:10.1111/j.1746-1561.2012.00748.x

Neblett, R. C., Davey-Rothwell, M., Chander, G., & Latkin, C. A. (2011). Social network characteristics and HIV sexual risk behavior among urban African American women. *Journal of Urban Health : Bulletin of the New York Academy of Medicine*, *88*(1), 54–65. doi:10.1007/s11524-010-9513-x

Norris, A. E., Clark, L. F., & Magnus, S. (2003). Sexual abstinence and the sexual abstinence behavior scale. *Journal of Pediatric Health Care*, *17*(3), 140–144. doi:10.1067/mph.2003.12

Oetting, E. R., Edwards, R. W., Kelly, K., & Beauvais, F. (1997). Risk and protective factors for drug use among rural American youth. *NIDA Research Monograph*, *168*, 90–130.

Oladepo, O., & Fayemi, M. M. (2011). Perceptions about sexual abstinence and knowledge of HIV/AIDS prevention among in school adolescents in a western Nigerian city. *BMC Public Health*, *11*(4), 304–313. doi:10.1186/1471-2458-11-304

Oliver, M. B., & Hyde, J. S. (1993). Gender differences in sexuality: A meta-analysis. *Psychological Bulletin*, *114*(1), 29.

Oswalt, S. B. (2010). Beyond risk: Examining college students' sexual decision-making. *American Journal of Sexuality Education*, *5*(3), 217–239. http://doi.org/10.1080/15546128.2010.503859

Ott, M. A., & Pfeiffer, E. J. (2009). "That's nasty" to curiosity: Early adolescent cognitions about sexual abstinence. *Journal of Adolescent Health*, *44*(6), 575–581. doi:10.1016/j.jadohealth.2008.10.139

Parker, D., Manstead, A. S. R., & Stradling, S. G. (1995). Extending the theory of planned behaviour: The role of personal norm. *British Journal of Social Psychology*, *34*(2), 127–138. doi:10.1111/j.2044-8309.1995.tb01053.x

Patel, V., Andrew, G., Orrett, F. A., Shurland, S. M., Eloundou-Enyegue, P., DaVanzo, J., … Magnani, R. (2001). Gender sexual abuse and risk behaviours in adolescents: A cross-sectional survey in schools in Goa. *National Medical Journal of India*, *14*(5), 263–267.

Petersen, J. L., & Hyde, J. S. (2010). A meta-analytic review of research on gender differences in sexuality, 1993–2007. *Psychological Bulletin*, *136*(1), 21.

Pittman, V., & Gahungu, A. (2006). Comprehensive sexuality education or abstinence-only education: Which is more effective? *Journal of Research for Educational Leaders*, *3*, 60–91.

Realini, J. P., Buzi, R. S., Smith, P. B., & Martinez, M. (2010). Evaluation of "big decisions": An abstinence-plus sexuality curriculum. *Journal of Sex & Marital Therapy*, *36*(4), 313–326.

Rew, L., Carver, T., & Li, C. C. (2011). Early and risky sexual behavior in a sample of rural adolescents. *Issues in Comprehensive Pediatric Nursing*, *34*(4), 189–204. doi:10.3109/01460862.2011.619861

Richardson, J.T.E. (2005). Instruments for obtaining student feedback: A review of the literature. *Assessment & Evaluation in Higher Education*, *30*(4): 387–415.

Romero-Estudillo, E., González-Jiménez, E., Mesa-Franco, M. C., & García-García, I. (2014). Gender-based differences in the high-risk sexual behaviours of young people aged 15-29 in Melilla (Spain): A cross-sectional study. *BMC Public Health*, *14*(1), 745.

Rosenstock, I. M. (1974). The health belief model and preventive health behavior. *Health Education & Behavior*, *2*(4), 354–386. doi:10.1177/109019817400200405

Rosenstock, I. M., Strecher, V. J., & Becker, M. H. (1988). Social learning theory and the health belief model. *Health Education & Behavior*, *15*(2), 175–183.

Rostosky, S. S., Dekhtyar, O., Cupp, P. K., & Anderman, E. M. (2008). Sexual self-concept and sexual self-efficacy in adolescents: Apossible clue to promoting sexual health? *Journal of Sex Research*, *45*(3), 277–286. doi:10.1080/00224490802204480

Sabia, J. J. (2006). Does sex education affect adolescent sexual behaviors and health? *Journal of Policy Analysis and Management*, *25*(4), 783–802.

Santelli, J., Ott, M. A., Lyon, M., Rogers, J., Summers, D., & Schleifer, R. (2006). Abstinence and abstinence-only education: A review of US policies and programs. *Journal of Adolescent Health*, *38*(1), 72–81.

Selikow, T. A., Ahmed, N., Flisher, A. J., Mathews, C., & Mukoma, W. (2009). I am not ``umqwayito'': A qualitative study of peer pressure and sexual risk behavior among young adolescents in Cape Town, South Africa. *Scandinavian Journal of Public Health*, *37*(2), 107–112. doi:10.1177/1403494809103903

Senn, T. E., Carey, M. P., & Vanable, P. A. (2008). Childhood and adolescent sexual abuse and subsequent sexual risk behavior: Evidence from controlled studies, methodological critique, and suggestions for research. *Clinical Psychology Review*, *28*(5), 711–735. doi:10.1016/j.cpr.2007.10.002

Sieving, R. E., Bearinger, L. H., Resnick, M. D., Pettingell, S., & Skay, C. (2007). Adolescent dual method use: Relevant attitudes, normative beliefs and self-efficacy. *The Journal of Adolescent Health : Official Publication of the Society for Adolescent Medicine*, *40*(3), 275.e15–275.e22. doi:10.1016/j.jadohealth.2006.10.003

Smith, T., Steen, J., Schwendinger, A., Spaulding-Givens, J., & Brooks, R. (2005). Gender differences in adolescent attitudes and receptivity to sexual abstinence education. *Children & Schools*, *27*(1), 45–50.

Solot, M. (1986). Carl Sauer and cultural evolution. *Annals of the Association of American Geographers, 76*(4), 508–520. doi:10.1111/j.1467-8306.1986.tb00133.x

Stanger-Hall, K. F., & Hall, D. W. (2011). Abstinence-only education and teen pregnancy rates: Why we need comprehensive sex education in the U.S. *PLoS ONE*, *6*(10), e24658. doi:10.1371/journal.pone.0024658

Stauss, K., Boyas, J., & Murphy-Erby, Y. (2012). Implementing and evaluating a rural community-based sexual abstinence program: Challenges and solutions. *Sex Education*, *12*(1), 47–63.

Svenson, L. W., Varnhagen, C. K., Godin, A. M., & Salmon, T. L. (1992). Rural high school students' knowledge, attitudes and behaviours related to sexually transmitted diseases. *Canadian Journal of Public Health, 83*(4), 260–263.

Swartzendruber, A., & Zenilman, J. M. (2010). A national strategy to improve sexual health. *JAMA*, *304*(9), 1005–1006. doi:10.1001/jama.2010.1252

Trenholm, C., Devaney, B., Fortson, K., & Quay, L. (2007). *Impacts of four Title V, Section 510 abstinence education programs: Final report.* Trenton, NJ: Mathematica Policy Research.

Thomas, J. C., Lansky, A., Weiner, D. H., Earp, J. A., & Schoenbach, V. J. (1999). Behaviors that facilitate sexual transmission of HIV and STDs in a rural community. *AIDS and Behavior*, *3*(4), 257–267.

Tobin, K. E., & Latkin, C. A. (2008). An examination of social network characteristics of men who have sex with men who use drugs. *Sexually Transmitted Infections*, *84*(6), 420–424. doi:10.1136/sti.2008.031591

U.S. Department of Health and Human Services. (2010). Healthy people 2010: Understanding and improving health. *Center for Disease and Prevention*. Retrieved from http://www.cdc.gov/nchs/data/hpdata2010/hp2010_general_data_issues.pdf

Underhill, K., Operario, D., & Montgomery, P. (2009). Abstinence-only programs for HIV infection prevention in high-income countries. *Cochrane Database System Review*, *4*(4). Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD005421.pub2/pdf/standard

Upreti, D., Regmi, P., Pant, P., & Simkhada, P. (2009). Young people's knowledge, attitude, and behaviour on STI/HIV/AIDS in the context of Nepal: A systematic review. *Kathmandu University Medical Journal*, *7*(4), 383–391. doi:10.3126/kumj.v7i4.2759

Vallerand, R. J., Deshaies, P., Cuerrier, J. P., Pelletier, L. G., & Mongeau, C. (1992). Ajzen and Fishbein's theory of reasoned action as applied to moral behavior: A confirmatory analysis. *Journal of Personality and Social Psychology*, *62*(1), 98–109. doi:10.1037/0022-3514.62.1.98

van der Vorst, H., Engels, R. C. M. E., Meeus, W., Dekovic, M., & Vermulst, A. (2006). Parental attachment, parental control, and early development of alcohol use: A longitudinal study. *Psychology of Addictive Behaviors*, 20, 107–116. doi:10.1037/0893-164X.20.2.107

Van Dinther, M., Dochy, F., & Segers, M. (2011). Factors affecting students' self-efficacy in higher education. *Educational Research Review*, *6*(2), 95–108. doi:10.1016/j.edurev.2010.10.003

Vega, E. G., Robledo, E. M., Fernández, P. G., & Fernández, R. R. (2010). Influence of sex and gender in the sexual behavior of an adolescent population. *Psicothema*, *22*(4), 606–612.

Waaktaar, T., & Torgersen, S. (2013). Self-efficacy is mainly genetic, not learned: a multiple-rater twin study on the causal structure of general self-efficacy in young people. *Twin Research and Human Genetics: The Official Journal of the International Society for Twin Studies*, *16*(3), 651–660. doi:10.1017/thg.2013.25

Wagner, P. A. (2011). Socio-sexual education: Apractical study in formal thinking and teachable moments. *Sex Education*, *11*(2), 193–211. doi:10.1080/14681811.2011.558427

Walcott, C. M., Chenneville, T., & Tarquini, S. (2011). Relationship between recall of sex education and college students' sexual attitudes and behavior. *Psychology in the Schools*, *48*(8), 828–842.

Wang, R. H., Cheng, C. P., & Chou, F. H. (2009). Predictors of sexual abstinence behaviour in Taiwanese adolescents: A longitudinal application of the transtheoretical model. *Journal of Clinical Nursing*, *18*(7), 1010–1017. doi:10.1111/j.1365-2702.2008.02509.x

Webb, T. L., & Sheeran, P. (2006). Does changing behavioral intentions engender behavior change? A meta-analysis of the experimental evidence. *Psychological Bulletin*, *132*(2), 249.

Werner-Wilson, R. J. (1998). Gender differences in adolescent sexual attitudes: The influence of individual and family factors. *Adolescence*. Retrieved from http://psycnet.apa.org/psycinfo/1998-11525-002

White, K. M., Smith, J. R., Terry, D. J., Greenslade, J. H., & McKimmie, B. M. (2009). Social influence in the theory of planned behaviour: The role of descriptive, injunctive, and in-group norms. *British Journal of Social Psychology*, *48*(1), 135–158. doi:10.1348/014466608X295207

White, S., Park, Y., Israel, T., & Cordero, E. (2009). Longitudinal valuation of peer health education on a college campus: Impact on health behaviors. *Journal of American College Health*, *57*(5), 497–506. doi:10.3200/JACH.57.5.497-506

Wilson, K. L., Smith, M. L., Rosen, B. L., & Wiley, D. C. (2012). Adoption and implementation characteristics for abstinence-plus curriculum. *American Journal of Health Studies*, *27*(2). Yarber, W. L., & Sanders, S. A. (1998). Rural adolescent views of HIV prevention: Focus groups at two Indiana rural 4-H clubs. *The Education Health Monograph*, *16*(2), 1–6.

Yoo, S., Johnson, C. C., Rice, J., & Manuel, P. (2004). A qualitative evaluation of the students of service (SOS) program for sexual abstinence in Louisiana. *Journal of School Health*, *74*(8), 329–334.

Young, M. A., & Vazsonyi, A. T. (2011). Parents, peers, and risky sexual behaviors in rural African American adolescents. *The Journal of Genetic Psychology*, *172*(1), 84–93.

Young, M., Deardorff, J., Ozer, E., & Lahiff, M. (2011). Sexual abuse in childhood and adolescence and the risk of early pregnancy among women ages 18–22. *Journal of Adolescent Health*, *49*(3), 287–293. doi:10.1016/j.jadohealth.2010.12.019

Zhang, J., Jemmott, J. B., & Jemmott, L. S. (2015). Mediation and moderation of an efficacious theory-based abstinence-only intervention for African American adolescents. *Health Psychology*. http://doi.org/10.1037/hea0000244

Zuo, X., Lou, C., Gao, E., Cheng, Y., Niu, H., & Zabin, L. S. (2012). Gender differences in adolescent premarital sexual permissiveness in three Asian cities: Effects of gender-role attitudes. *Journal of Adolescent Health*, *50*(3), S18–S25.

Appendix A: Parental Consent

Hello, you have the option of having your child or teen join a research study of Mississippi public schools' sex education programs. This is a parental permission form. It provides a summary of the study. This study is being done by a researcher named *Alonzo J. Williams*, who is a doctoral student at Walden University. Mr. Williams is inviting those [redacted] students who have taken some form of sex education (abstinence-only or abstinence-plus) to complete a short survey.

Background Information: The overall objective of this study is to compare sexual educational programs (abstinence-only and abstinence-plus) in Mississippi rural (population less than 13, 000) area schools.

Procedures: If you agree to allow your child to be in this study, your child will have a choice of participating in the study and completing a short multiple-choice survey at home. This survey will take about 20-30 minutes to complete. Your child will only take this survey once. Students will NOT get in any trouble for choosing to participate or choosing not to participate in this study.

Here are some sample questions:

1. Did you tell yourself you were making the right decision by waiting to have sex?
2. I believe people my age should wait until they are older before they have sex.
3. I am a more responsible person today regarding my sexual health because of the sexuality education I received in school.
4. I would recommend that all students receive the same type of sexuality education I received in school.

It is Your Choice: You don't have to allow your child to be in this study if you don't want to. Of course, your child's decision is also important. After obtaining your permission, your child will also be given a choice in this matter. No one will treat you or your child differently based on his or her choice. If you decide now that you want to join the project, you or your child can still change their mind later. Any children who feel stressed during the study may stop at any time.

Potential harm and/or Benefits of Being in the Study: Being in this project might make your child tired or stressed because their sexuality is a sensitive subject, but it would not cause any harm to your child's health. We are hoping this project can serve as a building block for future sexual education programs, addressing the needs of Mississippi's students. Therefore, these programs could assist in the state's efforts to reduce teenage pregnancy, Human Immunodeficiency Virus (HIV), and Sexually Transmitted Infections (STIs).

Payment: There is no payment for this study.

Privacy: Everything you tell me during this project will be kept private. That means that no one else will know your name or what answers you gave. However, there is an ID number, in case you or your child decide to withdraw from the study later on. This information will be kept secure by Mr. Williams in a locked file cabinet. The information will be kept for a period of 5 years, as required by the university.

Contacts and Questions: If you think of any questions, please email me at alonzo.williams@waldenu.edu or telephone at 662-822-1773. If there are any questions my university, you can call Dr. Leilani Endicott. Her phone number is 612-312-1210. Walden University's approval number for this study is **02-23-15-0172914** and it expires on **February 22, 2016**.

To protect your family's privacy, no consent signature is requested. Instead, please give the assent form and survey to your child if you want to permit your child to be in this study, and that action will document your consent.

Appendix B: Consent Form

Hello, my name is Alonzo Williams and I am doing a research project to compare abstinence-only and abstinence-plus programs in rural (population less than 13, 000) area schools. I am inviting you to join my project. I am inviting all [redacted] students who have completed a course in their school's sex education class to be in the study. I want you to learn about the project before you decide if you want to be in it.

WHO I AM:
I am a student at Walden University. I am working on my doctoral degree.

ABOUT THE PROJECT:
If you agree to be in this project, you can complete a multiple choice questionnaire at home and return them to the locked box at the school.. The questionnaire will take approximately 20- 30 minutes to complete. Data will only be collected once. Students will NOT be penalized for participating or not participating in this study. Students will be asked about the following: their attitudes towards sexual behavior, the perception of their friends' attitudes, their degree of abstinence, the impact of their sex education course, and their ability to abstain from sexual activity and protect themselves.

Here are some sample questions:

1. Did you tell yourself you were making the right decision by waiting to have sex?
2. I believe people my age should wait until they are older before they have sex.
3. I am a more responsible person today regarding my sexual health because of the sexuality education I received in school.
4. I would recommend that all students receive the same type of sexuality education I received in school.

IT'S YOUR CHOICE:
You don't have to be in this project if you don't want to. If you decide now that you want to join the project, you can still change your mind later. If you want to stop, you can.

Being in this project might make you tired or stressed because your sexuality is a sensitive subject. But we are hoping this project can serve as a building block for future sexual education programs, addressing the needs of Mississippi's students. Therefore, these programs could assist in the state's efforts to reduce teenage pregnancy, HIV, and STIs.

PAYMENT:
There is no payment for this study.

PRIVACY:
Everything you tell me during this project will be kept private. That means that no one else will know your name or what answers you gave. . However, there is an ID number, in case you decide to withdraw from the study later on.This information will be kept secure by Mr. Williams in a locked file cabinet. The information will be kept for a period of 5 years, as required by the university.

ASKING QUESTIONS:
You can ask me any questions you want now. If you think of a question later, you or your parents can reach me via email at alonzo.williams@waldenu.edu or by telephone at 662-822-1773. If you or your parents would like to ask my university a question, you can call Dr. Leilani Endicott. Her phone number is 612-312-1210..

To protect your privacy, I am not asking for your name at any time. If you want to be in the study please complete the following survey and return it to school, placing the material in the locked drop box located in the foyer right outside the administrative office.

Appendix C: Brief Demographic Questionnaire

This demographic questionnaire is for determining the influence of a variety of factors on the results of this study and the effectiveness of participants' sex education program. All of these records will remain confidential.

Please answer the following questions: (When appropriate, Please circle your answer to the question.)

1. How old are you? _____

2. Gender:
   (1) Male
   (2) Female

3. Sexual Orientation:
   (1) Heterosexual
   (2) Bisexual
   (3) Homosexual
   (4) None of the above

4. Race/ethnicity:
How do you describe yourself? (Please check the one option that best describes you)
   (1) American Indian or Alaska Native
   (2) Asian or Asian American
   (3) Black or African-American
   (4) Caucasian/White
   (5) Hispanic or Latino
   (6) Other_____

5. Grade Level:
   (1) 9th grade
   (2) 10th grade
   (3) 11th grade
   (4) 12th grade

6. Religious Affiliation:
Are you affiliated with any religious organization? (If yes, please indicate your affiliation)
   (1) I am affiliated with some form of religious organization
   (2) No religious affiliation

Appendix D: Effectiveness of Sexual Education Scale

The following statements are deals with attitude and decision-making. *Please respond to the following statements by placing an **X** over the appropriate number:*

1.) The sexuality education I received in school helped me to delay becoming sexually active.

(4) Strongly agree (3) agree (2) not sure (1) disagree (0) strongly disagree

2.) The sexuality education I received in school helped me to become better aware of the dangers of sexually transmitted diseases.

(4) Strongly agree (3) agree (2) not sure (1) disagree (0) strongly disagree

3.) The sexuality education I received in school helped me to realize that should I ever decide to become sexually active, I will need to protect against unwanted pregnancy, HIV and other sexually transmitted diseases.

(4) Strongly agree (3) agree (2) not sure (1) disagree (0) strongly disagree

4.) The sexuality education I received in school made me aware that I am responsible for making my own sexual decisions.

(4) Strongly agree (3) agree (2) not sure (1) disagree (0) strongly disagree

5.) I am a more responsible person today regarding my sexual health because of the sexuality education I received in school.

(4) Strongly agree (3) agree (2) not sure (1) disagree (0) strongly disagree

6.) I have been able to share important information with my friends regarding sexual responsibility because of the sexuality education I received in school.

(4) Strongly agree (3) agree (2) not sure (1) disagree (0) strongly disagree

7.) I would recommend that all students receive the same type of sexuality education I received in school.

(4) Strongly agree (3) agree (2) not sure (1) disagree (0) strongly disagree

Appendix E: Permission to Use the Effectiveness of Sexual Education Scale

Subject: Re: Permission for use of Effectiveness of Sexual Education Scale

Date : June 10, 2014 02:50 PM CDT

From : Athanase Gahungu <agahungu@csu.edu >

To : alonzo.williams@waldenu.edu

Hello Alonzo

I am sorry for not getting back to you very soon. We did pilot-test the questionnaire. However, I cannot find the results of the pilot-test. I will ask my co-researcher, Vickie. Meanwhile, please feel free to use, reproduce, and modify the questionnaire, and do you own pilot-testing. Have a great day!

Dr. Athanase Gahungu, Program Facilitator

Graduate Programs in Education

Chicago State University

9501 South King Drive/ED 319

Chicago, Illinois 60628-1598

Tel (773) 995-2086

Appendix F: Sexual Abstinence Behavior Scale

The following set of questions deals with the frequency of abstinence behaviors. Please read each question carefully and circle the number of times that best describe your behavior.

How often in the past 3 months:

1.) Did you tell yourself you were making the right decision by waiting to have sex?

(0) never
(1) once a month
(2) 2 or 3 times a month
(3) once a week
(4) more than once a week

2.) Did you say "No" to sex?

(0) never
(1) once a month
(2) 2 or 3 times a month
(3) once a week
(4) more than once a week

3.) Did you tell her (him) that you wanted to wait to have sex?

(0) never
(1) once a month
(2) 2 or 3 times a month
(3) once a week
(4) more than once a week

4.) Did you avoid being pressured to have sex by making sure you are out with a group of people?

(0) never
(1) once a month
(2) 2 or 3 times a month
(3) once a week
(4) more than once a week

Appendix G: Permission to Use Sexual Abstinence Behavior Scale

Subject: Re: Permission for use of Sexual Abstinence Behavior Scale

Date: Mar 11, 2014 07:53 PM CDT

From: Anne Norris <Anne.Norris@ucf.edu>

To: alonzo.williams@waldenu.edu

Hi Alonzo,

The scale is publically available – items and response options are described in the article cited below. Feel free to use/ reproduce the scale and good luck to you with your research.

Norris, A.E., Clark, L.F., & Magnus, S. (2003). Sexual abstinence and the Sexual Abstinence Behavior Scale. Journal of Pediatric Health Care, 17, 140-144.

Anne E. Norris, PhD, RN, FAAN

College of Nursing

University of Central Florida

12201 Research Parkway, Rm 475

Orlando, FL 32826-3265

407-823-4185 (office)

407-823-5675 (College Fax)

Appendix H: Sexual Risk Behavior Belief and Self-efficacy Scale

The following set of questions deals with participants' belief about sexual behaviors. Please read each question carefully. **Circle the word that best describes your answer.**

1.) I believe people my age should wait until they are older before they have sex.

(4) Definitely Yes (3) Probably Yes (2) Probably No (1) Definitely No

2.) I believe it is OK for people my age to have sex with a steady boyfriend or girlfriend.

(1) Definitely Yes (2) Probably Yes (3) Probably No (4) Definitely No

3.) Most of my friends believe people my age should wait until they are older before they have sex.

(4) Definitely Yes (3) Probably Yes (2) Probably No (1) Definitely No

4.) Most of my friends believe it is OK for people my age to have sex with a steady boyfriend or girlfriend.

(1) Definitely Yes (2) Probably Yes (3) Probably No (4) Definitely No

5.) Imagine that you met someone at a party. He or she wants to have sex with you. Even though you are very attracted to each other, you are not ready to have sex. *How sure are you that you could keep from having sex?*

(1) Not Sure at All (2) Kind of Sure (3) Totally Sure

6.) Imagine that you and your boyfriend or girlfriend has been going together, but you have not had sex. He or she really wants to have sex. Still, you do not feel ready. *How sure are you that you could keep from having sex until you feel ready?*

(1) Not Sure at All (2) Kind of Sure (3) Totally Sure

7.) Imagine that you and your boyfriend or girlfriend decide to have sex, but he or she will not use a condom. You do not want to have sex without a condom. *How sure are you that you could keep from having sex, until your partner agrees it is OK to use a condom?*

(1) Not Sure at All (2) Kind of Sure (3) Totally Sure

Appendix I: Permission to Use Sexual Risk Behavioral Belief and Self-Efficacy

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Portion	chapter/article
Number of pages in chapter/article	4
Title or numeric reference of the portion(s)	NA
Title of the article or chapter the portion is from	Sexual Risk Behavior Belief and Self-Efficacy Scales
Editor of portion(s)	NA
Author of portion(s)	Karen Basen-Engquist, Louise Masse, Karin Coyle, Douglas Kirby, Guy Parcel, Stephen Banspach, Jesse Nodora
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Appendix J: Permission to Use [redacted]

[redacted]

"Building an Academic Dynasty"

[redacted], Ed.D., Superintendent
Post Office Box 127
[redacted], Mississippi [redacted]

Telephone [redacted] ~ ~ Telefax ([redacted]

~ ~ ~ ~

To: Alonzo Williams
From: [redacted], Administrative Assistant
Date: December 16, 2013
RE: Site Permission Request Granted by [redacted], Ed.D., Superintendent

[redacted], Superintendent of the [redacted], has granted permission for you to survey the [redacted].

If you have any questions, please contact this office at the number above.

[redacted]

Home of the Indians

"Building an Academic Dynasty"

[redacted], Principal

[redacted]. Drive

[redacted], MS [redacted]

Phone: [redacted]

Email: [redacted]

To: Alonzo Williams

From: [redacted]

Date: January 29, 2015

RE: Requested Information

Dear Mr. Williams,

We are elated to be of an assistance to you. On behalf of myself, [redacted], and the entire staff at [redacted], I would like to welcome you to conduct your study at our School. It's with great pleasure that I grant you permission to meet with our students to discuss your study and to obtain the proper consent. I authorize our administrative staff to assist Mr. Williams in the following ways: discovering those students who have participated in our abstinence-plus program and by sending out literature on behalf.

Thank you for your interest in our school and good luck on your dissertation!

Sincerely Yours,

[redacted] ED.s

Appendix K: Permission to Use [redacted]

CANTON PUBLIC SCHOOL DISTRICT
Dwight J. Luckett, Sr., **Ed. S.,** ***Superintendent***

May 15, 2014

Alonzo Williams
[redacted], MS [redacted]

RE: Permission to Conduct Survey at [redacted]

Dear Mr. Williams:

Please accept this letter as official correspondence that your request to conduct a survey regarding the comparison of abstinence only and abstinence plus programs at [redacted] for the 2014-2015 school year has been approved. Please be mindful that the dissemination of this information must be coordinated with the Principal of [redacted] in order to avoid interruptions that will affect instructional time. I sincerely hope that this communication will provide the chair of your department with the required information.

Respectfully,

[redacted]

[redacted] MS [redacted] Phone: [redacted] • Fax: [redacted]
www. [redacted] net

[redacted]
[redacted] Principal

[redacted] Road | [redacted] MS [redacted]
Phone: [redacted] | Fax: [redacted] | [redacted]schools.net

May 15, 2014

Alonzo Williams
[redacted]
[redacted] MS [redacted]

RE: AUTHORIZATION TO CONDUCT STUDY

Dear Mr. Williams,

Thank you for your interest in our school. This letter hereby serve as a letter of authorization granting you permission to conduct your study at Canton High School. I, [redacted], hereby allow Alonzo Williams to meet with students to discuss the ramifications of the study and obtain the students' and their parents' permission. I request and authorize the school faculty to provide assistance to you in order to determine those students who have completed the abstinence-only program. Furthermore, I authorize the faculty to send out important information on behalf of Mr. Williams.

Wishing You Much Success,

[redacted]
Chambers