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A School-Based Sexual Health Education Program

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This doctoral project, directed and approved by the candidate's committee, has been accepted by the College of Graduate and Professional Studies of Abilene Christian University in partial fulfillment of the requirements for the degree

Doctor of Nursing Practice

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by

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Acknowledgments

First and foremost is a sincere thank you to my husband and daughter for supporting me through this project. Their love and support have been unconditional and have guided me through a difficult illness while completing my project. At one point, I did not think I could continue the program, and they pushed me to keep going. Thank you to my chair Dr. Atobajeun, who gave me so much guidance and encouragement when I was panicking about the pressures of this project. I commonly heard her say relax, take a deep breath, and it will be okay. To my committee members Dr. Garner and Dr. McGee, thank you for providing me with respectful and positive feedback during this program. To Ms. Sarah, my sincere gratitude for your patience and flexibility in teaching the sexual health education program. Your commitment to teaching the sexual health program to our youth is admirable. To my classmate Ms. Kathryn, thank you for all the telephone calls to vent or ask questions and for visiting with me during my husband's hospital stay. I have built a friendship with you that will last a lifetime. Dear Lord and Savior, I am truly blessed to be your instrument not only to provide medical expertise to the young ladies I care for but also to minister to them and show them the love of Jesus Christ.

Dedication

My desire for completing this project was to give back to my local community by educating adolescent females on the importance of making positive sexual health choices. I believe there is a need in our society to promote sexual well-being in our adolescent population. Social media has created many fallacies about what healthy sexual behaviors are, especially during the teenage years. In my past position as an occupational health nurse with a federal law enforcement agency, I saw a desperate need to help young females who were victims of sex and human trafficking. In my current position, I continue to see young ladies who are victims of sex trafficking and domestic violence. I hear from teenagers and young adults that they feel a sense of hopelessness and not in control of their own decisions. Many of my patients come from broken homes with no adult role models. I hope to empower young ladies to make healthy choices by educating them through an evidence-based program and giving them the tools to be able to make positive changes in their lives.

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Abstract

A small rural community has high incidence rates of chlamydia (4,751 per 100,000) and gonorrhea (970 per 100,000) in females 15–24 years old. Data obtained from Texas Health and Human Services showed that incidence rates of chlamydia and gonorrhea in females 15–24 years old were higher in Navarro County, Texas, than the state of Texas. Texas schools do not mandate sex health education. There is a gap in school-based sexual health education available to 18- and 19-year-old females residing in this rural community in Texas. The purpose of this research study was to evaluate the impact of school-based sexual health education on young females' knowledge and attitudes for healthy sexual choices. The education program was an evidence-based program called Choosing the Best. The target population was females 18–19 years old living in a rural community in Texas. The main challenge of the study was the lack of participants. Due to a lack of participation and only one student attending the study, statistical analysis could not be conducted. The student evaluated the sexual health class by completing pre- and postsurveys using Barrett's Power as Knowing Participation in Change Tool (PKPCT). Qualitative data received from the one student showed positive comments on the benefits of sexual health education. Recommendations for future research are to perform the study in a school environment and lower the age limits for the target population. Using social media delivery methods for broadcasting the education class may reduce adolescents' fear of attending a sexual health class and would promote attendance. More research needs to be done to evaluate how a school-based sexual health program impacts students' attitudes toward healthy sexual behaviors.

Keywords: sexually transmitted diseases, adolescence, sexual self-concept, sexual risk, avoidance, health education

Chapter 1: Introduction

Sexually transmitted diseases (STDs) in the United States are affecting our healthcare system and creating a heavy financial burden. The Centers for Disease Control and Prevention (CDC) estimates that almost 20 million new reported cases of STDs arise on an annual basis, leading to approximately $16 million in healthcare expenses (Office of Disease Prevention and Health Promotion [ODPHP], 2018). More than two million cases of gonorrhea, chlamydia, and syphilis were reported in the United States in 2016 (CDC, 2017c). Chlamydia and gonorrhea are the two most reported STDs in the world (Jenkins & Botchway, 2016). Many STDs are asymptomatic. Chlamydia and gonorrhea are commonly asymptomatic (CDC, 2017a, 2017b). Bonar et al. (2015) reported sexually transmitted diseases can have severely damaging effects. A woman may develop pelvic inflammatory disease, perinatal complications, ectopic pregnancies or infertility (CDC, 2017a, 2017c). Males can have inflammation of testicles or the urethra and infertility. Kaestle and Waller (2011) reported that STDs can lead to pregnancy complications and infertility. Jenkins and Botchway (2016) reported that a diagnosis of depression among adolescents or young adults increases their risk for acquiring STDs. The age bracket most affected by STDs is 15–24 years old with 19-year-old females having the highest reported incidence rates of chlamydia in 2016 (CDC, 2017d).

Problem of Interest

The local problem of interest is a gap in school-based sexual health education available to 18 and 19-year-old females residing in a rural Texas community. Bonar et al. (2015) and the CDC (2017d) reported individuals 15–24 years old acquire half of all the reported cases of STDs. McNeely and Blanchard (2009) reported that the CDC estimates that more than three million teenage girls in the United States have an STD. The CDC (2017d) reported that adolescent

females who are sexually active have a one in four chance of acquiring an STD. Risk factors for acquiring STDs can be biological, cultural, or behavioral, especially for age groups ranging from 15–19 and 20–24-year-olds. The CDC (2017d) reported that some adolescent females may be at a higher risk of acquiring STDs due to cervical cells found outside of the cervix.

A report by the Texas Health and Human Services (THHS, 2016) displayed incidence rates for chlamydia and gonorrhea in Navarro County, Texas that exceeded the rates for the United States in 2016. The incidence rates for chlamydia (females 15–24 years old) in the state of Texas were 3,480 per 100,000 population, and in Navarro County were 4,590 per 100,000 population. The incidence rates for gonorrhea (females 15–24 years old) in Texas were 587 per 100,000 population, and in Navarro County, Texas were 925 per 100,000 population. I reported the data listed for Texas and Navarro County, Texas because I conducted this study in Navarro County, Texas.

Many adolescents do not discuss sexual health topics with parents or request health care services. Even though the late adolescent may be covered by insurance under the parent's insurance, the fear and embarrassment of STDs may keep the individual from receiving treatment and education. Sexual health education could be a vital primary prevention strategy to prevent or reduce the incidence of STDs among adolescents. Due to time constraints, many healthcare providers are unable to provide adequate time with patients, and most adolescents do not openly discuss sexual health issues with healthcare providers. Adolescents tend to share information with peers instead of healthcare providers. Furthermore, many adolescents do not have a primary care physician and are commonly seen at emergency departments for medical care, resulting in a lack of screenings or preventative health care (Bonar et al., 2015). In rural communities, the number of healthcare providers can be limited. Inyang (2013) stated there is a

need to provide sexual education in schools, communities, and homes. Schools are an excellent setting to provide sexual health education due to the large number of adolescents who attend schools. The sexual education programs within the school need to be well-designed and involve intervention techniques.

Background

The CDC (2017d) statistical reports showed that STD rates in the United States decreased for many years; however, the rates have been increasing in the last few years. The CDC (2017d) reported that syphilis rates in 1941 and 2016 were 368.2 and 27.4, respectively, per 100,000 population. Data collection for syphilis began in 1941, but was not a notifiable disease until 1944. Chlamydia rates in 1984 and 2016 were 6.5 and 497.4, respectively per 100,000 population. Gonorrhea reported rates in 1941 and 2016 were 146.7 and 145.8, respectively, per 100,000 population. In 2016, reported rates of chlamydia among females in the 15–24 age group had 19-year-olds with the highest rate of 4,970.1 per 100,000 population. Reported chlamydia rates within the age and sex group of 20–24-year-olds had females at the highest rate of 3,779.0 per 100,000 population. In 2016, reported rates of gonorrhea in the age and sex group of 20–24-year-olds had males with the highest rate at 616.8 per 100,000 population (CDC, 2017d).

The topic of sex education in US schools continues to be debated. There are many concerns about the lack of proper sexual health education in schools and the relationship of education to teen pregnancy and STD rates. TownCharts (2019) reported that the teenage birth rate of 15–19-year-olds in 2018 for Navarro County, Texas was 18% compared to the teenage birth rates for the United States and Texas, which were 4% and 6%, respectively. The birth rate statistics were taken from the 2018 American Community Survey. Murphy (2011) reported that in 2009, the teen birth rate (ages 13–17) was 22.3% in Navarro County, Texas. Stanger-Hall and

Hall (2011) reported that teachers, educators, and policymakers should have goals to educate our teens on reproductive and sexual health decisions, reduce teen pregnancy and STDs, and continue to maintain an education program throughout the teenage years into adulthood. Furthermore, a school-based sexual health education program may be a significant factor in developing positive sexual behaviors in the adolescent while reducing STD risks (Vivancos et al., 2013).

Kaestle and Waller (2011) stated that for individuals to avoid spreading infectious diseases, they need to understand the potential health risks and their health status. A goal would be to educate the infected individual, so they could obtain treatment and stop the spread of infection. For instance, Kaestle and Waller (2011) found that some female minorities had difficulty expressing their sexual risk behaviors and believed that communication needs to improve with healthcare providers. The healthcare provider should assess the patient's sexual risk factors and not solely rely on self-reported information. A careful evaluation of sexual history should be obtained through verbal discussions to promote safer sex. Kaestle and Waller (2011) stated that some physicians may have difficulty communicating with minorities, but these barriers must come down when counseling with minority women. The healthcare provider plays a vital role in educating the patient on safer sex.

Jenkins and Botchway (2016) reported that the Patient Protection and Affordable Care Act (ACA) increased insurance coverage to allow the benefits of dependent children to remain until 26 years of age. This coverage has allowed millions of individuals to have low-cost primary care. American citizens should be afforded the opportunity to make educated choices leading to improved health and wellness (CDC, 2017d). The passing of the ACA has allowed dependents to remain on their parent's insurance, which will allow individuals to receive treatment and

preventative care later into adulthood. This has increased access to care, but not education on protective health behaviors.

The increase in STDs needs to be addressed by healthcare providers. The CDC (2017c) reported that agencies should commit to using strategies such as reporting cases and providing detailed follow-ups with patients to lower rates of STDs. The CDC gathers information at the national level to detect and respond to issues, provides training to healthcare employees, and submits STD health and prevention literature to state and local health departments. State and local health departments should promote STD investigations and improve clinical communications to quickly detect and treat individuals for STDs, especially in areas of increased STDs rates. Medical providers should screen and treat patients promptly and integrate STD screenings and treatments during prenatal care. The public is recommended to openly discuss STDs, obtain regular screenings, practice safe sex using condoms or stay with one sexual partner (CDC, 2017c). Local community leaders should encourage STD education. Parents should educate themselves on STDs and discuss these diseases and sexual health with their children. Access to healthcare personnel for the treatment, care, education, and prevention of STDs is the key to decreasing STDs (CDC, 2017d).

Purpose

The purpose of this research study was to evaluate the impact of a school-based sexual health education program on females' (ages 18–19) knowledge and attitudes on healthy sexual choices. I intended this education to encourage positive sexual behaviors.

Significance of POI

The Youth Risk Behavior Surveillance System (YRBSS) is a surveillance program designed to monitor six health-related categories among youth and young adults (CDC, 2018).

The categories include unintentional injuries and violence, use of tobacco, drug and alcohol use, sexual behaviors related to pregnancy and STDs, unhealthy dietary habits, and physical inactivity. The CDC (2018) results from the YRBSS and the national school-based Youth Risk Behavior Surveys for 2017 displayed that 45.3% of all high school students nationwide had sexual contact with the opposite sex and 40.6% of females reported having sex with the opposite sex (CDC, 2018).

The CDC (2017d) reported that some of the barriers that prevent individuals from receiving treatment for STDs in the adolescent population are the inability to obtain transportation to the clinic, lack of money, scheduling conflicts due to school or work, fear of privacy, clinic wait times, collection methods, and embarrassment of seeking treatment. Patients' display of fear and distrust of healthcare professionals can affect their experience during a clinic visit. Minorities may have the perception that they have been discriminated against or believe the provider is showing biases. Minority patients may experience a difference in the quality of care received by healthcare professionals especially, women, Hispanics, and African Americans (Bonar et al., 2015). Disproportions in the community and economic settings are evident in the profound inconsistencies seen in the rate of STDs among certain racial and ethnic minorities (CDC, 2017d). Understanding the minority population is important for this research study because many of the patients seen at the pregnancy center in the local community are African American and Hispanic.

Nature of the Project

This project was a program evaluation of an educational intervention using a pre- and postsurvey quantitative evaluation of changes in knowledge and attitudes toward sexual behaviors and sexually transmitted diseases, using a targeted convenience sample of females (18

and 19-year-olds) who attended a local high school in a rural community. The pre- and postevaluation instrument was Dr. Barrett's Power as Knowing Participation in Change Tool (PKPCT). I fully explain the PKPCT in Chapter 3.

The students received sexual education through an evidence-based sexual risk avoidance program (SRA) delivered by an instructor certified as an SRA specialist. Choosing the Best (2015) is a research-based program that uses a teaching approach that guides the student through an intellectual understanding of facts to personal awareness. The goal of the program is to educate students and empower them to make healthy choices in sexual behaviors. The teaching strategy included an SRA-certified instructor who encouraged student interactions and participation in group activities.

The sampling method was a nonprobability sampling consisting of only females ages 18–19 attending a local high school. The justification for using this population is the SRA program called Choosing the Best—Soul Mate is geared toward 11th- and 12th-grade students. Also, this population is important to study due to the vulnerabilities at this age and risky sexual health behaviors. Inyang (2013) reported that most adolescents participate in sexual experimentation, and girls are twice as likely as boys to engage in sexual behaviors before the age of 15. Johnson et al. (2009) reported that the brain of an adolescent continues to mature into their twenties. The prefrontal cortex is still developing in the early 20s and beyond. The prefrontal cortex allows the individual to process higher levels of cognitive functioning. Some of the activities include the ability to plan, respond, and make decisions. This study only focused on females in this age group due to limited financial resources and time constraints. The researcher needed to gather data during the calendar school year when the SRA was teaching the sexual health class. The sexual health classes are not offered to all grades during the school semesters. The curriculum for

the Choosing the Best Soul Mate is designed for 11th- and 12th-grade students (Choosing the Best, 2015).

The independent variable for this study was the sexual health education program. Keele (2011) stated that an independent variable is one that the researcher can manipulate, which can be treatments or interventions. The dependent variable for this study measured the students' change in knowledge and attitudes regarding sexual health behaviors in the adolescent female. The dependent variable can be measured and influenced by the independent variable (Keele, 2011).

Research Question

Does an evidence-based sexual health education program change the attitudes and knowledge of older high school females in a rural community in Texas? The patient population was females between 18 and 19 years old. The intervention was a sexual health education program. The students completed a pre- and postsurvey. The outcomes demonstrated a change in the students' attitudes and knowledge toward sexual health behaviors.

PICOT: Does an evidence-based sexual health education program change the attitudes and knowledge of older high school females in a rural community in Texas?

Population (P). The population were 18–19-year-old females attending a local high school.

Intervention (I)**.** The intervention was a sexual risk-avoidance (SRA) education program.

Comparison (C). The comparisons examined the females' attitudes and knowledge of healthy sexual choices prior to the sexual health education program.

Outcome (O)**.** The proposed outcomes were changes in the females' attitudes and knowledge of healthy sexual choices after participating in the sexual health education program.

Time (T). I conducted the sexual health education program over a five-hour period. The projected time frame for the entire project was two months. The education classes were based on the availability of the instructor.

Hypothesis

Providing an evidence-based sexual health education program has an impact on the attitudes and knowledge of older high school females in a rural community in Texas.

Null Hypothesis

Providing an evidence-based sexual health education program does not have an impact on the attitudes and knowledge of older high school females in a rural community in Texas.

Theoretical Framework and Conceptual Model

Our society is part of a complex and dynamic world. Human beings are a small component of our continually evolving planet. Understanding how individuals interact with the universe to create harmony or conflict can be a challenge. Nursing theorists who develop theoretical frameworks and conceptual models are an important part of the continuing evolution of the nursing profession and play a role in understanding human beings. Doctor of Nursing Practice (DNP) students should be able to identify clinical problems, utilize theory-based assessments and interventions, and measure outcomes using theoretical perspectives (Chism, 2016).

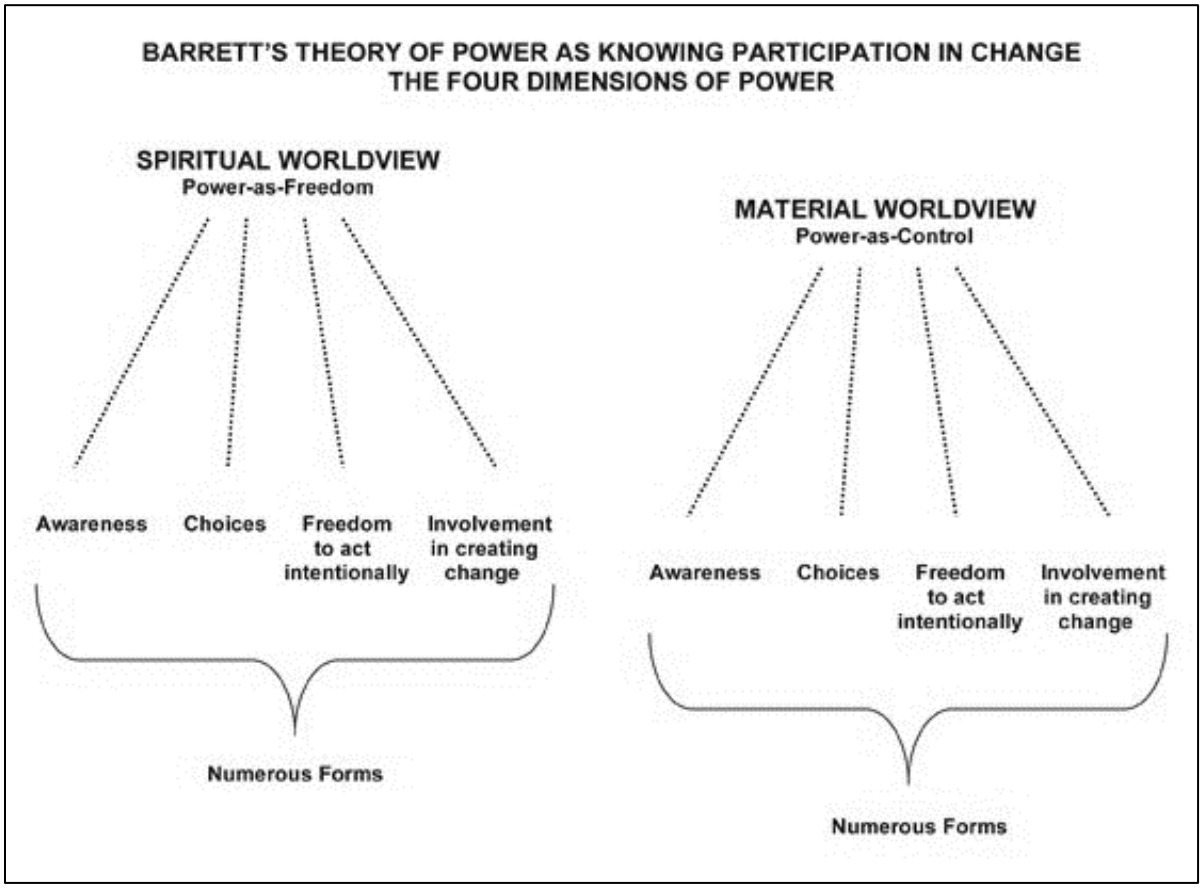
During the initial thoughts of conceptual models related to the adolescent female population and the ability to make changes in behaviors, I determined that the concepts of powerlessness, empowerment, and willingness to change warranted examining. The theoretical framework of Rogers's science of unitary human beings has evolved over time and generally reflects the principles of homeodynamics where individuals experience changes throughout life

but develop the abilities to meet these ever-changing circumstances (Hastings-Tolsma, 2006). According to Phillips (2016), "Rogers coined the word homeodynamics to posit a new view of the relation of humans with their environments, the dynamics of change in human beings' patterns, and the flowing energy of the changing life process" (p. 41). Our environments (technology, healthcare, medicine, nursing) are changing at an accelerated pace. Rogers's theory demonstrated the need to keep up with the ever-changing needs of humans and the universe. Understanding the science of unitary human beings relating to their environment through fields of energy is always changing and infinite (Phillips, 2016).

Rogers's theoretical framework is an important concept to study. Rogers believed that all nurses should understand theories and participate in the change process and diversities of nursing science (Phillips, 2016). I completed a literature review of Barrett's theory of power as knowing participation in change. Barrett's conceptual model of power relates to Rogers's theory in that individuals have the power to make changes in their health or lifestyle (see Figure 1). A review of Barrett's theory of power reveals that individuals utilize awareness, choices, involvement, and freedom to act intentionally in creating change (Caroselli & Barrett, 1998; Kim, 2009; Reyes, 2013; Wright, 2010). Shearer and Reed (2004) stated that Barrett's theory of power reflects that changes are ongoing between the individual and the nurse. The individual's awareness and beliefs that change can happen are reflected in the outcomes of their health. The nurse should build a partnership which will assist the patient's participation in change.

Figure 1

Barrett's Theory of Power as Knowing Participation in Change Model



Note. The types of power are power-as-freedom and power-as-control with four dimensions: awareness, choices, freedom to act intentionally, and involvement in creating change. From *The Power of Knowing Participation in Change Theory* by E. A. M. Barrett, 2009 (https://www.drelizabethbarrett.com/background/power-knowing-participation-change-theory). In the public domain.

Rationale for Conceptual Model

I carefully chose the conceptual model of Barrett's theory of power to examine the philosophy as it related to the nursing profession and the ability of individuals to make changes in their health and lifestyle. For individuals to make changes, they need to be aware of choices

with the ability to act freely, deliberately, and be involved in their change. Shearer (2004) stated that health empowerment is needed for females to actively participate in their own health care choices. Increased self-worth, self-esteem, confidence, and well-being are generally associated with empowerment. Shearer and Reed (2004) argued that Barrett's theory of power is directly related to Rogers's theory that individuals want to actively participate in the process of change.

Operational Definitions

Adolescence. Kachur et al. (2013) reported that adolescence is a period of development that has physical, psychological, and social changes. During the stage of adolescence, there is increased individuality and the experimenting of new behaviors. The age range of adolescence is from eight to 19 years old. Also, during the adolescent phase, there is an increase in mental development, moving from concrete to abstract thinking. Abstract thinking allows the person to problem solve, investigate the future, and set goals. Research has shown that individuals with less coherent identities are likely to exhibit problematic behaviors. The social and environmental factors of peers, family, and school influence adolescent development. During the adolescent stage, experimenting with new and different behaviors is normal (Kachur et al., 2013).

McNeely and Blanchard (2009) reported that adolescence is broken down into stages. The stages are pre-adolescence (6–10 years old), early adolescence (11–13 years old), middle adolescence (14–16 years old), and late adolescence (17–19 years old). The late adolescent may be experiencing new social situations like work, college, and romantic sexual relationships. A discussion of sexual health and how it can define identity among social groups and peers may help the late adolescent understand their feelings toward sexual health.

Curtis (2015) reported that the definition of adolescence varies from authors and organizations. The World Health Organization (WHO) reported that individuals between the

ages of 10 and 19 are adolescents, 15–24-year-olds are considered youth, and 10–24-year-olds are called young people. The US Census Bureau defines adolescence from 12–17 or 15–19 years old, depending on different topics. The US Department of Health and Human Services (DHHS) defines the adolescent period between 10 and 19 years old and young adults between 20 and 24 years old. The CDC's YRBSS is based on grades 9–2 instead of age. The American Academy of Pediatrics identifies adolescent patients as between the ages of 11 and 21 years old. Curtis (2015) reported that early adolescence is between 11 and 13 years, adolescence is between 14 and 17 years old, and young adulthood is between 15 and 18 years old. Defining adolescence can be a challenge as stated by Curtis (2015), "There is not necessarily one correct construction of the developmental transition of adolescence and any proposed definition is understood as a highly variable continuum dependent on context and subject to culture and temporal influences" (p. 26).

Sexual risk avoidance health education. The SRA approach is an abstinence-centered program that promotes healthy choices and encourages delaying sexual activity until marriage. The program has been determined to be medically accurate and evidence-based using sources such as CDC publications and peer-reviewed and published journals (Choosing the Best, 2015). Birch et al. (2017) reported that SRA education consists of providing individuals with information on how to make choices on delaying sexual activity until marriage.

Sexual self-concept. Rostosky et al. (2008) reported that sexual self-concept is a construct that is multidimensional and refers to the individual's positive and negative perceptions of their sexuality. Based on the Bandura's cognitive theory, an individual's behavior relates to their knowledge and skills of performing the behavior. The development of the individual's sexual self-concept is an evolving process during adolescence.

Sexually transmitted diseases. Sexually transmitted infections (STI) and STDs are often referred to and used interchangeably. STI represents a viral infection, and STD represents disease that has a cure and treatment. The CDC (2014) reported that STDs are transmitted from one person to another through sexual contact. Some of the STD/STIs include genital herpes, syphilis, gonorrhea, chlamydia, human papillomavirus (HPV), and human immunodeficiency virus (HIV). Many STDs do not have symptoms and can be transmitted through skin-to-skin contact.

Scope and Limitations

The scope of the DNP project was to determine if older, high-school female students 18–19 years old receiving an SRA education program demonstrated a change in their knowledge and attitude on healthy sexual choices. Choosing the Best (2015) stated that one goal of the SRA program is to educate early adolescents before sexual behaviors are initiated, which could ultimately decrease the incidence of STDs among this population. Another goal of the SRA program is to educate late adolescents on positive sexual behaviors and to encourage delaying sexual behaviors which may help with decreasing the incidence of STDS among the late adolescent female. The four concepts that I evaluated using the Power as Knowing Participation in Change Tool (PKPCT) were awareness, choices, involvement, and freedom to act intentionally in creating change based on Dr. Barrett's theory of power (Caroselli & Barrett, 1998; Kim, 2009; Reyes, 2013; Wright, 2010).

The female participating in the study was between 18–19 years old, resided in a rural community and attended a local high school. A certified SRA instructor taught the SRA education program in a classroom setting. The participant was only one female. Females were selected as the population due to the increased number of reported cases of STDs among

adolescent females and the increases of risky sexual behaviors. The study was limited to one rural school in Texas and the results may not be transferrable to other rural or urban populations because of regional, cultural norms. Another limitation of the study was time constraints for completion of the DNP project. I collected the data during the school year.

Chapter Summary

The local problem of interest is a gap in school-based sexual health education available to 18–19-year-old females residing in a rural Texas community. The purpose of this research study was to evaluate the impact of a school-based sexual health education program on the students' knowledge and attitudes on healthy sexual choices. This education was intended to encourage positive sexual behaviors. The intervention was an evidence-based sexual health education program. The evaluation tool was Dr. Barrett's PKPCT. Educating our youth on sexual health is a primary prevention technique that healthcare providers, teachers, and community leaders can use to reduce the spread of STDs. The education program should encourage decision and problem-solving techniques which will promote health empowerment and encourage healthy sexual behaviors. Examining Dr. Barrett's theory of power and how the theory relates to the adolescent's awareness to make changes will give researchers the ability to evaluate the student's perceptions on the sexual health education program.

Chapter 2: Literature Review

Purpose

The purpose of this chapter is to provide a synthesis of literature that is relevant to the topic of the DNP project. The topics discussed in this chapter will be the problem of interest, research parameters, prevalence of STDs, the impact of sexual health education, a theoretical framework with rationale, the importance of providing education by the healthcare provider, and a summary.

Research Parameters

Some of the databases used in during my research included Cochrane Collection Plus (EBSCO), Psychology Behavioral Sciences Collection, SocINDEX, Medline, Cochrane Collection Plus (EBSCO), and CINAHL. I retrieved these databases using the Abilene Christian University (ACU) library. I used the CDC as a search engine (2019). At the beginning stages of my searches, I found over 6,000 articles. Using search limiters such as language preference, peer-reviewed journals, and a time frame of less than 10 years, narrowed my search results. Creating additional keywords assisted with narrowing the results. Key words used that related to my PICOT question were *adolescents*, *sexually transmitted diseases* (*STDs*), *school-based education*, *prevention*, and *females*. I reduced the number of research articles to approximately 50 articles by eliminating unnecessary articles and using the search parameters. Five research articles were related to STDs, adolescent females, and a school-based sexual health education program. A number of research articles were irrelevant to my research question. The following is my PICOT: Does an evidence-based sexual health education program change the attitudes and knowledge of older, high-school females in a rural community in Texas.

Critiques of Research Articles

I reviewed and evaluated research studies using the 10-step process (Keele, 2011). I used the American Association of Critical-Care Nurses (AACN) grading system to evaluate the level of evidence (Armola et al., 2009). I compiled a list of the research articles and placed them in an evidence-based table (see Appendix A and B). Most of the studies listed their weaknesses. Study design, online survey tools, and self-reporting instruments were weaknesses noted in some studies. Other weaknesses included an inability to generalize the study's findings and match casual differences, and a small amount of information on sexual health formats. Some of the strengths noted in the studies included the reliability and validity of the instrument and the use of multivariate models. A few studies did not list weaknesses or strengths. Large sample sizes were listed for all the studies. Concepts of age, gender, STD information, contraception knowledge, sexual behaviors, and school-based education were common variables examined during the studies.

Prevalence of STDs

The target population for the DNP project was females 18–19 years old. The selection of the target population was justified by the high incidence rates of STDs among this age bracket and gender. THHS (2018) reported that "it is estimated that 1 in 20 sexually active females aged 14–24 years has chlamydia" (p. 5). I live in a rural community in the lower northern part of Texas. The residents of this community have limited access to healthcare providers. I compared STD cases reported to Navarro County and the state of Texas. Due to limited time constraints to complete the DNP project, the researcher narrowed the target population to only females 18–19 years old.

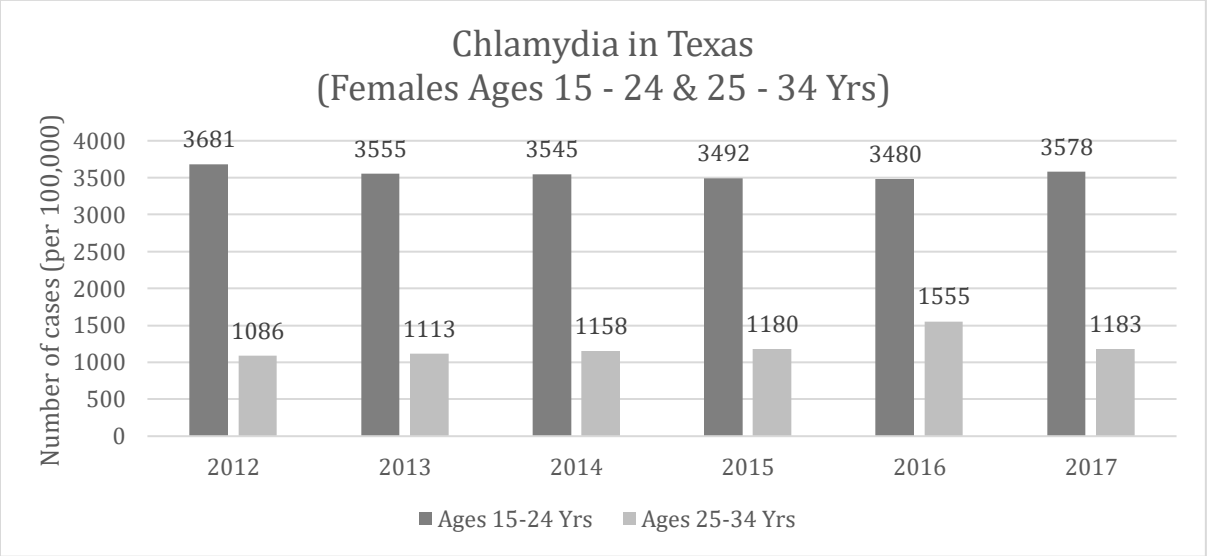
I examined statistical data from THHS for rates of chlamydia reported in the state of Texas from 2012 through 2017. The disaggregated data reported by THHS were similar and consistent for all reported years, therefore only the most recent 2017 statistics are relevant. THHS (2017) disclosed the following:

- A total of 101,134 (710.1 per 100,000) female cases of chlamydia were reported for the state of Texas. More than 92.5% (93,614) of those cases were attributed to females between 15 and 34 years old.
- Females 15–24 years old accounted for 69,436 cases (3,578.4 per 100,000).
- Females 25–34 years old accounted for 24,178 cases (1,182.6 per 100,000).

The data gathered from THHS (2017) showed that adolescent and young adult females, 15–24 years old, living in Texas experience significantly higher incidence rates for chlamydia when compared to the age bracket of 25–34 years old (see Figure 2).

Figure 2

Incidence Rates of Chlamydia in Texas (Females Ages 15–24 and 25–34)



Note. Statistical data are from *Texas Health Data. Sexually Transmitted Diseases*, by Texas Health and Human Services, 2017 (http://healthdata.dshs.texas.gov/dashboard/diseases/sexually-transmitted-diseases). In the public domain.

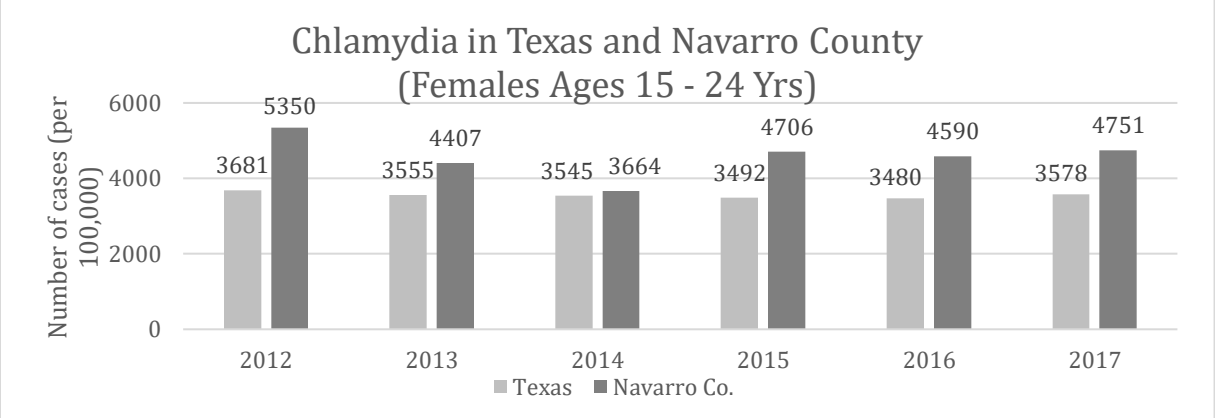
I further disaggregated THHS (2017) data of female chlamydia cases reported in 2017 to compare statewide statistics to statistics reported for Navarro County, Texas. The analysis revealed the following:

- A total of 190 (766.2 per 100,000) female cases of chlamydia were reported for Navarro County in 2017 versus 101,134 (710.1 per 100,000) reported statewide.
- Females 15–24 years old accounted for 142 (4,750.8 per 100,000) cases in Navarro County. Statewide the same group accounted for 69,436 cases (3,578.4 per 100,000).
- Females 25–34 years old accounted for 37 (1,245.0 per 100,000) cases in Navarro County. Statewide the same group accounted for 24,178 cases (1,182.6 per 100,000).

Comparison of reported chlamydia cases in females 15–24 years old for Texas versus Navarro County, Texas showed the incidence rates for chlamydia were higher in the county than the state of Texas every year since 2012 (see Figure 3).

Figure 3

Incidence Rates of Chlamydia in Texas and Navarro County (Females Ages 15–24)



Note. Statistical data are from *Texas Health Data. Sexually Transmitted Diseases*, by Texas Health and Human Services, 2017 (http://healthdata.dshs.texas.gov/dashboard/diseases/sexually-transmitted-diseases). In the public domain.

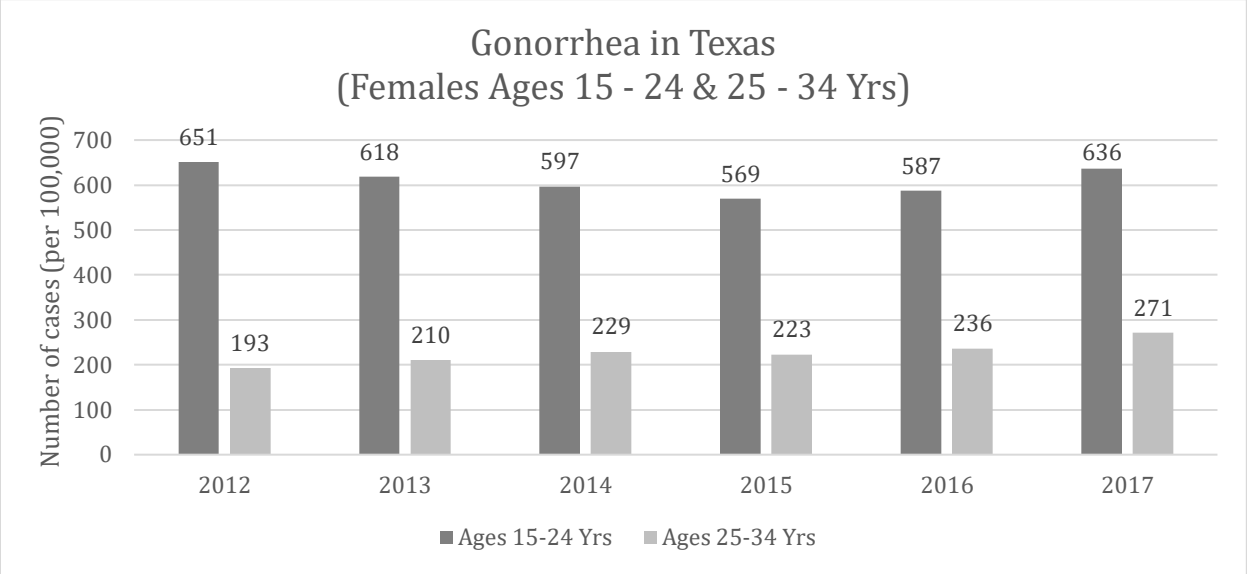
I examined statistical data from THHS for rates of gonorrhea reported in the state of Texas for the years 2012 through 2017. The disaggregated data reported by THHS was similar and consistent for all reported years, therefore only the most recent 2017 statistics are relevant. In 2017, THHS (2017) disclosed the following:

- A total of 20,116 (141.2 per 100,000) female cases of gonorrhea were reported for the state of Texas. Over 88.9% (17,889) of those cases were attributed to females between 15 and 34 years old.
- Females 15–24 years old accounted for 12,349 (636.4 per 100,000) cases.
- Females 25–34 years old accounted for 5,540 (271.0 per 100,000) cases.

The data gathered from the THHS (2017) showed that adolescent and young adult females in Texas, 15–24-years-old, experience significantly higher incidence rates for gonorrhea when compared to the age bracket of 25–34 years old (see Figure 4).

Figure 4

Incidence Rates of Gonorrhea in Texas (Females Ages 15–24 and 25–34)



Note. Statistical data are from *Texas Health Data. Sexually Transmitted Diseases,* by Texas Health and Human Services, 2017 (http://healthdata.dshs.texas.gov/dashboard/diseases/sexually-transmitted-diseases). In the public domain.

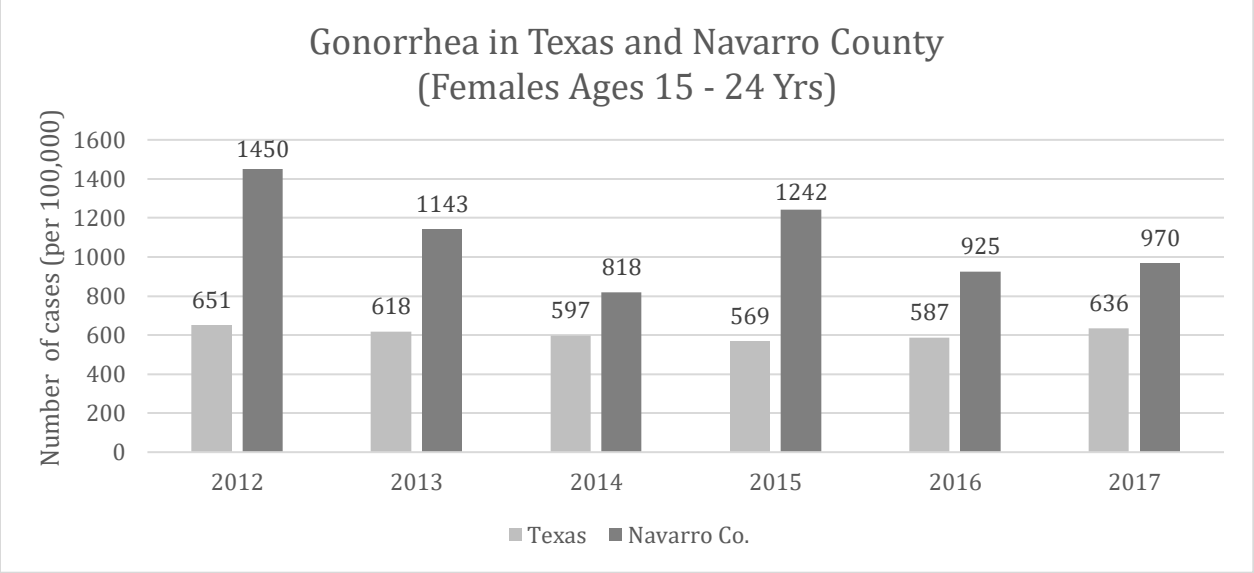
I further disaggregated THHS (2017) data of female chlamydia cases reported in 2017 to compare statewide statistics to statistics reported for Navarro County, Texas. The analysis revealed:

- A total of 39 (157.3 per 100,000) female cases of gonorrhea were reported for Navarro County, Texas in 2017 versus 20,116 (141.2 per 100,000) reported statewide.
- Females 15–24 years old accounted for 29 (970.2 per 100,000) cases in Navarro County. Statewide the same group accounted for 12,349 cases (636.4 per 100,000).
- Females 25–34 years old accounted for 9 (302.8 per 100,000) cases in Navarro County. Statewide the same group accounted for 5,540 cases (271.0 per 100,000).

Comparison of reported gonorrhea cases in females 15–24-years-old for the state of Texas versus Navarro County, Texas showed the incidence rates for gonorrhea were higher in the county than the state of Texas every year since 2012 (see Figure 5).

Figure 5

Incidence Rates of Gonorrhea in Texas and Navarro County (Females Ages 15–24)



Note. Statistical data are from *Texas Health Data. Sexually Transmitted Diseases*, by Texas Health and Human Services, 2017 (http://healthdata.dshs.texas.gov/dashboard/diseases/sexually-transmitted-diseases). In the public domain.

I reported that the statistics reported by THHS clearly show that female adolescents and young adults (15–24 years of age) suffer the greatest impact of chlamydia and gonorrhea. The incidence rates of chlamydia and gonorrhea are higher for Navarro County, Texas than the incidence rates for the state of Texas (T. Kendall, personal communication, February 18, 2019).

Impact of Sexual Health Education

I reviewed current trends about sexual education in Texas schools. Sexual health education is not mandated in Texas (Guttmacher Institute, 2018; Texas Education Code, 1995;

The Texas Campaign to Prevent Teen Pregnancy, n.d.). The Texas Freedom Network Education Fund (TFNEF) undertook a massive survey of Texas schools that included urban, rural, and nonmetropolitan districts. Wiley et al. (2017) reported findings from the TFNEF survey that 25% of Texas schools did not provide sexual health education. Wiley et al. (2017) reported that "students attending urban/suburban schools appeared far more likely to have access to sex education materials that include information on condoms/contraception or to any sex education at all compared to rural schools" (p. 12). The percentages of rural schools in Texas providing abstinence-only programs was 59%, abstinence-plus was 4.9%, and no sex education was 31.6%.

Hall et al. (2016) reported that there is a need to increase our research, learning, and policy programs to examine ways of getting more sexual health programs into our classrooms. Many adolescents find out sexual health information through the Internet. The idea is that school-based sexual education can be an avenue to meet the needs of more comprehensive medically accurate sexual education with the proposed elimination of abstinence only until marriage (AOUM), and also provide education on contraceptives, and STI testing and treatment (Hall et al., 2016). The key to Choosing the Best program is to empower students by encouraging active participation (Choosing the Best Publishing, 2015). Hall et al. (2016) reported that programs using content that is rights-based, messages geared toward youth, being positive, interactive, and participation-focused are showing ways to empower adolescents with the tools and knowledge to make healthy sexual decisions.

Bogani et al. (2015) reported that a school-based sexual education program might improve the adolescents' sexual knowledge. However, sexual health education does not necessarily reduce high-risk sexual behaviors. Their study design was a qualitative questionnaire and examined the knowledge and behaviors of 664 students. The ages ranged from 13–19 years

old with an average of 14. The median age for sexual intercourse was 15 years old, and 25% of the adolescents had sexual intercourse at least once. There was a significant finding ($p < .05$) that students had increased knowledge of conception and STDs after sexual health education. There was not a significant difference in sexual behaviors (contraceptive techniques) between the students with and without education. An increase in the knowledge of STDs did not always reflect that there would be a change in sexual behaviors (T. Kendall, personal communication, February 18, 2019).

I reviewed a study by Vivancos et al. (2013) that examined sexual behaviors and school-based education. The study design was an online survey that college students took documenting their sexual behaviors and education received around the age of 14 years. The sample consisted of 219 males and 492 females. Findings from the survey showed that 47% of the sample did not discuss sex with parents, 14% learned about sex through school, 0.42% learned from a healthcare professional, and 32% learned about sex from a friend. The results showed that the median age for sexual activity was 17 years old with no significant differences in gender.

Vivancos et al. (2013) reported that adolescence is a time of risk-taking behaviors, which include experimenting with alcohol, smoking, and increased risky sexual behaviors. Some of the evidence shows that the most effective ways of addressing interventions to reduce risk behaviors involve promoting family interactions and the school environment. More research needs to be done to show that sexual health education in schools may influence sexual behaviors. There need to be more studies on the long-term effects of sexual health education.

Lindberg and Maddow-Zimet (2012) stated that three previous analyses of the 2002 National Survey of Family Growth (NSFG) involving sex education of the adolescent population and sexual behaviors had various outcomes. Two of these studies did not look at specific

education (abstinence-only or comprehensive sex education). Lindberg and Maddow-Zimet's (2012) study design was a survey of 2,505 females and 2,186 males 15–24 years old. The participants were asked at what grade the education was received and categorized the education into 'saying no' to sex and birth control methods. T. Kendall (personal communication, February 20, 2019) noted that the study had significant findings ($p < .05$) that students were more likely to use contraception after sexual health education than those students not receiving any education (Lindberg & Maddow-Zimet, 2012).

Lindberg et al. (2016) performed additional surveys and collected data from the NSFG during 2006–2010 and 2011–2013. The data collected involved determining if adolescents had received formal or informal sexual health education. The researchers limited the analyses to females and males between the ages 15 and 19 at the time of the interview. The female sample population consisted of 2,284 in 2006–2010 and 1,037 in 2011–2013. The male sample population consisted of 2,284 in 2006–2010 and 1,088 in 2011– 2013. In addition to gender, the researchers gathered data on race, religious attendance, household poverty, and residence.

Lindberg et al. (2016) reported several significant findings from the NSFG surveys. One important finding from this study was that there was a significant decline between the years of 2006–2010 and 2011–2013 in female adolescents receiving formal sexual health education topics of birth control, STDs, HIV, and 'saying no' to sex. Another finding was that males and females residing in nonmetropolitan areas had significant declines in receiving sexual health education. Lindberg et al. (2016) reported that "rural adolescents are a particularly vulnerable group, with higher rates of teen childbearing, lower rates of contraceptive use, and less access to sexual and reproductive health care services than their nonrural peers" (p. 625). This information was relevant to this DNP project because I conducted the study in a rural community.

Campa et al. (2018) reported that school-based sexual health programs may be viewed as the most advantageous site to supply this education, but possibly does not reach high-need individuals (homeless or foster care settings). Expanding sexual health education from traditional schools to targeted prevention settings may be warranted to meet the needs of high-need individuals. Campa et al. (2018) reported concerns that young people living in foster care or homeless environments are not receiving the necessary sexual health education. The research study examined sexual health and knowledge of 747 high-need adolescents that had received sexual health education. The participants received sexual health education in target prevention settings, traditional schools, and alternative schools. Target prevention settings included foster care, shelters, clinics, or mental health treatment centers. I found that the researchers reported significant findings that males in a sexual health program of a targeted-prevention setting were more likely to ask questions and less likely to engage in sexual activity in the future than males in a traditional school setting. The limitations to this study were noted as unmatched entry and exit surveys, the living conditions of participants were not defined, and the inability to make causal implications. The implications of this study for this DNP project may be future research studies involving other environments for teaching sexual health education than traditional schools.

Inyang (2013) examined sexual behaviors and characteristics of 2,010 adolescent females from secondary schools in Nigeria. The main purpose of this research study was to examine the sexual health behaviors of adolescent females who were attending secondary schools and received HIV/AIDS school-based education. Inyang reported concerns that birth rates among Nigerian adolescents are the highest in the world. The ages ranged from 10–19 years old. The age percentages represented were 22% for 10–13-year-olds, 62% for 14–17-year-olds, and 15%

for 18–19-year-olds. The researchers of the study determined through descriptive analysis that 89% of the study's participants were sexually active and the first sexual encounter was commonly around 16 years of age. A sexual health program was not evaluated during this study. The authors of the study determined through a qualitative analysis that HIV/AIDS health education was missing in the schools (T. Kendall, personal communication, February 20, 2019). Inyang (2013) reported that individuals between the ages of 15 and 29 account for half of new cases of HIV infections in the world. Sexual health education in schools, communities, and homes is needed.

Jayalakshmi (2016) reported that adolescents are more susceptible to the spread of HIV/AIDs than older adults because of risk-taking behaviors, attitudes, poverty, inexperience, social norms, and unemployment. Education is the key to preventing HIV/AIDs, but knowledge alone is not enough to protect adolescents. Adolescents need to acquire attitudes and skills to combat peer pressures, decrease harmful behaviors, and make healthy lifestyle choices.

Jayalakshmi (2016) performed a quasi-experimental study with one group in a pretest and posttest design. A structured teaching program was the independent variable. Knowledge and attitudes of HIV/AIDs were the dependent variables. The sample population consisted of 640 males and females ranging in ages from 16–18 years old. Females represented 55.8% of the population. The highest number of individuals was aged 16 at 51.2%. Significant findings ($p <$ .001) showed that adolescents had improved knowledge and positive attitudes toward lifestyle changes to prevent HIV/AIDs.

Theoretical Framework

Barrett (2010) reported that "power is the capacity to participate knowingly in change" (p. 48). Individuals are always participating in change; however, many do not understand how or

why one changes. The key to Dr. Barrett's theory of power is to know the manner in which we participate in change. Dr. Barrett's power theory has four dimensions: awareness, choices, freedom to act intentionally, and involvement in creating change.

Review of the literature looking for evidence-based studies found that numerous studies were influenced by Rogers's theory of unitary human beings and Barrett's theory of power. Caroselli and Barrett (1998) reviewed studies during the first 15 years since the inception of Barrett's theory of power and the Power as Knowing Participation in Change Tool (PKPCT). Caroselli and Barrett determined that 39 studies had used the PKPCT and Barrett's theory of power. Quantitative and qualitative studies that used PKPCT were noted at the master's, doctoral, and postdoctoral levels. Other studies that used the PKPCT were practical projects and pedagogical research.

Falk-Rafael et al. (2004) used Barrett's conceptual model of the theory of power and PKPCT to examine empowerment among nursing students taught with feminist ideas. This study explored the relationship between power and empowerment.

Kim (2009) used surveys and literature searches to quantify the use of the PKPCT. Dr. Kim's article presented an updated review of the literature from Caroselli and Barrett's review in 1998. The PKPCT was reported to be used in the following 36 studies: 15 at the doctoral level, five at the master's level, seven not related to a degree, six for other purposes, and three studies at the master's level that were not available. The concepts measured during the studies were power, pain, therapeutic touch as an intervention, exercise, meditation, computer-based terms, empowerment, magnetic field therapy, music, and support groups (Kim, 2009).

Kim et al. (2012) used Barrett's theory of power and the PKPCT in a study to examine the effects of a breast health education program to determine if it would encourage women to

participate in mammogram screenings. Also, the study examined participation in the educational program as it was related to power. This study is relevant to the DNP project because the focus was how to empower individuals to participate in a health screening after receiving an educational program.

Reyes (2013) performed a case study of a woman with HIV using Barrett's theory of power to understand the woman's experiences of sexual abuse and drug addiction. The nurse practitioner (NP) used the nursing diagnosis of readiness for enhanced power, which related to the theory of power. The woman in the study acknowledged that she had the power to act intentionally and the freedom of choices to move from power as control to power of freedom. The woman expressed readiness to participate in change by intentionally making choices about her health. Many of the changes that the woman in the study made reflected Dr. Barrett's theory of power in real life situations.

Relevance of Theory to DNP Project

The conceptual model of Barrett's theory of power and the final research project of providing a sexual health education program to adolescent females is significant. Adolescence is a vulnerable age range where many girls do not feel like they have the power to make decisions. Temin et al. (2010) stated most girls between the ages of 10 and 14 can be reached and educated through institutions (schools, families, workplaces) to affect and shape their sexual health behaviors to protect their future health. Wight (1999) stated individuals should be able to recognize what is important to them and actively participate in problem-solving and decision-making.

An important part of an educational program is to empower students to see their own perceived needs and encourage them to engage in problem solving and decision making. Reyes

(2013) stated that Barrett's theory of power can be used to establish mutual goal setting between the patient and nurse. Using Barrett's theory to set mutual goals can result in the patient's ability to participate in change, freedom to act intentionally, expressing a sense of power as freedom, and evolving toward a better outcome in health. Understanding Barrett's theory of power as part of the DNP project, I examined the adolescent female's attitudes toward sexual health behaviors by looking at awareness, choices, freedom to act intentionally, and involvement in creating change.

Access to Healthcare and Education

I found that Bonar et al. (2015) and the CDC (2017d) reported that half of all STDs are acquired by individuals between the ages of 15 and 24. Also, the CDC (2017d) reported that adolescent females who are sexually active have one in four chances of acquiring an STD. In 2016, the CDC reported the rates of chlamydia among women in the 15–24-year-old age group had the age of 19 as the highest rate of 4,970 per 100,000 population. The key to decreasing STDs is providing treatment and prevention of STDs. Individuals need to have access to educators or healthcare providers. Educating our patients on the topics of abstinence and safe sex is an essential part of the healthcare provider's role. The adolescent and young adult female can experience many barriers while securing health care. Some of these barriers include conflicts with school schedules, no money, lack of transportation, privacy concerns, and distrust of the healthcare provider (CDC, 2017d).

Educating the adolescent and young adult female on choices through a school-based sexual health program can be one way to reduce and prevent STD cases. Receiving parental consents, sufficient funding, time constraints, and lack of teaching strategies to teachers and healthcare providers are various barriers that may reduce the ability to have an effective school-

based sexual health program. An important feature I examined while executing this research was to determine if a school-based program increased the females' attitudes and knowledge of healthy sexual choices. Based on my clinical expertise at a pregnancy center, adolescent females need more education than what can be provided during a routine clinic visit or medical screening for STDs (T. Kendall, personal communication, February 21, 2019).

Chapter Summary

The problem of interest is adolescent females and the lack of sexual health education. I have reviewed the literature using keywords to gain data for the PICOT question: Does an evidence-based sexual health education program change the attitudes and knowledge of older high school females in a rural community in Texas? T. Kendall (personal communication, February 20, 2019) reported that more research studies are needed to concentrate on adolescent females and the effects of a sexual health education program. Some of the reviewed studies involved females and males. After reviewing the research studies, I determined that none of the results of the studies noted a positive correlation between sexual health education and reducing the number of STD cases. The studies did, however, show positive correlations that school-based sexual health education programs enhanced student's knowledge of STDs and how to use contraceptives.

Based on the review of the literature and significant findings in the research, the planned project and PICOT question should be supported to continue more research on the effects of a school-based sexual health education program and to examine the female students' knowledge and attitudes on healthy sexual choices.

Chapter 3: Research Method

In the methodology chapter, I discuss the design, methodological appropriateness, the type of intervention, the measurement tool, the setting, the target population, data collection, data analysis, feasibility, and interprofessional collaborations. Also, I discuss ethical considerations, which include risks and benefits, the Institutional Review Board (IRB) process, and the protection of participants.

Project Design

This project was a program evaluation of an educational intervention using a pre- and postsurvey quantitative evaluation of changes in knowledge and attitudes toward sexual behaviors and STDs. I used a targeted convenience sample of females (18- and 19-year-olds) who attended a local high school in a rural community. The sample size was approximately 60 females. I used the pre- and postsurveys to evaluate the participants' attitudes and knowledge of healthy sexual choices before and after an SRA sexual health education program.

Identification of the Measurement Tool

I chose to use the Power as Knowing Participation in Change Tool (PKPCT) as the measurement tool because it is directly related to Barrett's theory of power and can be utilized to show where a patient is leaning toward making choices for improved health. When reviewing the results of the PKPCT, a nurse should be able to assist the patient in improving the outcomes of health care. One goal of the nurse should be to encourage the patient to demonstrate an ability to change by altering one's situation (Shearer, 2004; Shearer & Reed, 2004). As a result of the literature review, Barrett's theory of power and the PKPCT are relevant to the DNP project and directly related to the nursing profession.

Dr. Barrett developed the PKPCT and the scoring guide (see Appendix C - I). Shearer (2004) reported that the "PKPCT is a 48-item, semantic differential scale, 1- to 7-point interval rating anchored by bipolar adjectives reflecting feelings about awareness, freedom to act intentionally, and involvement in creating change" (p. 363). Dr. Barrett reported that the PKPCT, also known as Power Meter, has 52 items looking at awareness, choices, freedom to act intentionally, and involvement in creating changes, which all assess dimensions of power (Barrett, 2009). The PKPCT is relevant to Barrett's theory of power and has been utilized by many researchers over the years. Caroselli and Barrett (1998) stated that power is the ability to choose freely and intentionally and having awareness and freedom to actively make choices leads to positive changes.

Advantages and Disadvantages of the Instrument Tool

The literature was reviewed looking for the advantages and disadvantages of the PKPCT. Kim (2009) reported its strengths as high reliability and validity scores. The PKPCT has a strong theoretical foundation in Dr. Barrett's theory of power. Barrett (2009) reported that completion of the tool is done by using pencil and paper and takes approximately 10–15 minutes. Kim et al. (2012) reconfigured the PKPCT to be administered via computer and believed this was the first time for the computer format. Other advantages for the PKPCT are that it is easy to use and understand, there are no charges to use the tool, and all have the ability to contact the author who developed the tool.

Weaknesses of the PKPCT, as reported by Kim (2009), are its use of abstract words. Additional weaknesses of the tool were not found in other literature reviews. One disadvantage of the tool may be the lack of current studies using the tool. During my literature review, the most recent study I found that used the PKPCT was 2012.

I contacted Dr. Barrett requesting permission to use the PKPCT. I received permission to use it (E. A. M. Barrett, personal communication, February 13, 2018). Dr. Barrett referred me to Dr. Malinski to obtain the PKPCT. I contacted Dr. Malinski requesting the PKPCT (see Appendix J). Dr. Malinski forwarded the PKPCT Version II without any charges. Dr. Malinski stated that I could contact her with any questions about the PKPCT (V. Malinski, personal communication, February 14, 2018).

The PKPCT Version II survey and the scoring guide are included for readers to visualize the tool (see Appendix C - I). This paragraph will describe the PKPCT. The PKPCT Version II has four sections with headings (indicators) of awareness, choices, freedom to act intentionally, and involvement in creating change. Under each indicator are 13 lines with words at both ends. The words listed on each end have opposite meanings with seven spaces between the pairs of words. The instructions for completing the survey tool is printed on the first page. The participants will place an "X" in one of the spaces between the words that best describe how they are feeling at the given time. Printed on the PKPCT is an example of how to place an "X" on the form. Included in the instructions are the following: no right or wrong answers, record first impression for each pair of words, the "X" can go in any space along the line, and mark only one "X." The participant needs to place an "X" for every pair of words. The time frame for completing this tool is approximately 10 minutes. More information for the pre- and postsurvey tool is explained in the data collection section of this paper.

Consents

I wrote the participant consent form using a consent builder template. I obtained written consents from all participants before the study. I delivered and explained the consents to each participant upon arrival to the research site. All participants had the right to withdraw or refuse to

participate in the study. There was no coercion to participate in the study. There was a private room at the facility that was used to provide and receive consents from the participants. I collected and maintained all the consents.

Written permission to conduct the DNP project was received from the Executive Director (ED) of the pregnancy center (see Appendix K). I used the pregnancy center because it is a large classroom. The classroom is commonly used to host a variety of educational programs. I am currently an employee of the pregnancy center. Written consent to participate in the DNP project was received from the Education Services Director (ESD) at the pregnancy center (see Appendix L). The ESD was the individual teaching the sexual health education program. I did not teach the sexual health education class but was available to assist the ESD with administrative duties involved in the classroom. Some of these duties included distributing student manuals and providing refreshments and lunch.

Data Collection

The pre- and postsurvey tools (PKPCT) were identical. The particpant completed the PKPCT using a pencil and paper. Each survey took approximately 10 minutes to complete. The participant was given ample time to complete the surveys. I disseminated the PKPCT to the participant after receiving the signed consent and before the beginning of the sexual health education program. I assigned the participant a random identification (ID) number. The ID number was written on the top of the survey. I wrote 1A on the top of the presurvey and 1B for postsurvey. This eliminated any confusion of the surveys.

At the end of the sexual health education program, I gave the PKPCT again to the participant. Before completing it, the participant made sure a 1B was on the top of the survey. The participant returned the completed survey to me. I used the ID numbers to verify that a pre-

and postsurvey were received. I placed the completed surveys and consents in an envelope and placed them in a locked drawer. I am the only person who had access to surveys and consents.

The student received a demographics information sheet that was optional to complete. The demographic sheet was stapled to the presurvey. Stapling the sheets together helped keep the information together. I used this information to gather descriptive data about age, race, ethnicity, family household type, and sexual orientation (see Appendix M). Choosing the Best Publishing (2015) program does not directly reference sexual preferences or gender identity. The program focuses on healthier sexual choices regardless of the sexual orientation. All genders regardless of sexual orientation are at an increased risk of STDs if they are sexually active.

Data Management and Analysis

I collected information from the instrument survey tool. The raw data consisted of recording the participants' responses and translating those into a quantifiable number based on Dr. Barrett's PKPCT scoring guide. The numbers recorded were scale data. I used Excel spreadsheets to record data from the instrument tool. Moran et al. (2017) reported that data entry can be tedious, time-consuming, complex, and challenging. I verified that all the data entries were accurate before performing the data analysis. I have had experience in Excel spreadsheets and data entry; however, my experience is limited on using the specific format that is needed to input data into SPSS. I reviewed lecture notes and YouTube videos from Dr. Landry to correctly enter data into the spreadsheets that were in a format compatible with SPSS.

Landry (personal communication, June 6, 2018) reported that choosing the right statistical test is related to the research question. I used Dr. Landry's algorithm to identify the most accurate statistical analysis. The PICOT is as follows: Does an evidence-based sexual health education program change the attitudes and knowledge of older high school females in a

rural community in Texas? The question is looking at a change in attitudes and knowledge. The survey tool is a seven-point semantic scale using scale data. The appropriate statistical test is the paired *t* test. I utilized an Excel spreadsheet to compile the data. I intended to use SPSS to run statistical tests and generate findings; however, due to a lack of participation, I was unable to use SPSS.

Target Population

The target population was females (all races and ethnicities) between 18–19 years old. I used a nonprobability sampling of participants. The inclusion criteria for the females was the ability to read and write English, and that they were a current student at a local high school. The justifications for the participant to be a high school student is that the sexual health education program is geared toward 11th- and 12th-grade students. The student needed to read and write English because a translator was not be available. The female student resided in the rural community of Navarro County, Texas. There were no males in attendance during the sexual health program.

The students participated in a sexual health education program. The projected number of participants was estimated to be 80 females to compensate for withdrawals from the study. For a paired *t* test, I wanted a sample size of 64 (M. Landry, personal communication, January 25, 2019). The sample size may vary depending on consents received from participants and dropout rates. Because the sample size did not reach 64, I had to document the limitations of the study and the inability to generalize to the study population. Keele (2011) stated that nonprobability sampling may not represent the study population but is done in many nursing research studies because of time and financial constraints.

The ESD and I used word of mouth to announce and recruit participants in the research study. A flyer was designed and disseminated to local youth pastors, school counselors, and businesses. Flyers were also be placed at the front office of the of the pregnancy center (see Appendix N). The female participants were recruited through local churches, schools, businesses, and the pregnancy center.

Setting

The setting of the study was at a local pregnancy center in a rural community located in the lower section of northern Texas. The pregnancy center has a designated classroom that can house 30 students at one time. The classroom has tables and chairs for the students. The entrance to the classroom is located at the opposite side of the building and not connected to the front of the pregnancy center. The personnel in the classroom consisted of the participants, instructor teaching the sexual health program, and me.

Intervention

The intervention was a sexual health education program. The program is called Choosing the Best and is considered an abstinence-centered SRA curriculum. Choosing the Best is research-based, peer-reviewed and considered medically accurate by the U.S. DHHS, Administration for Children, Youth and Families (ACYF; Choosing the Best Publishing, 2015). Choosing the Best Soul Mate curriculum is for 11th- and 12th-graders:

> Created for upper high school students, this five-lesson curriculum provides older students with the interpersonal skills essential for successful relationships of all kinds and ultimately, for a successful marriage. A logical sequel to Choosing the Best abstinence-centered programs for young teens, SOUL MATE continues to emphasize that delaying

sex is a critical step to prepare for a lifelong relationship. (Choosing the Best Publishing, 2015, p. 2)

An instructor certified as an SRA Specialist taught the education classes. The SRA instructor was the ESD of the pregnancy center. The ESD was experienced in providing sexual health education and has been teaching sexual health education in the local schools for the past four years. Each participant received a student manual (see Appendix O). The SRA education program was purchased and used by the pregnancy center. Permission to use this program has been approved by the ED of the pregnancy center (see Appendix K).

Timeline of Project

The curriculum had five lessons. Each lesson took approximately 40–45 minutes per session. All five sessions were taught on a Saturday morning and lasted approximately five hours. The student received all five lessons in one day. Due to the length of the training, I provided the participant with refreshments and lunch. At the end of the day, I offered a token of appreciation by giving the participant a $5.00 gift card to Starbucks.

The agenda for the Choosing the Best educational program started with introductions. The planned start time was 10:00 a.m. The student completed the consents, presurvey, and demographics information sheet. The sessions' topics included finding the right one, being the right one, developing relational skills, dating to discover, and marking marriage work. Each session took approximately 50 minutes with a 10-minute break given after each session. A 30-minute lunch break was provided. Lunch was free and brought into the student. At the end of the last session, the student received the postsurvey to complete (see Appendix P).

The sexual health education classes were scheduled on another Saturday because the classroom could only accommodate 30 students. There was a possibility of holding three

separate classes on different Saturdays depending on the level of participation. The anticipated timeline to commence the DNP project was September 2019. This timeline varied depending on the availability of SRA instructor and other conflicting local events.

I completed a timeline of the project to illustrate steps taken during the initial, middle, and final stages of the study (Table 1). The initial phases of the study involved obtaining permission from the ED to perform the study at the pregnancy center. Approval was also granted to use the PKPCT survey tool. Throughout all phases of the study, I coordinated with key stakeholders and my DNP committee chair. In October 2019, I completed the proposal defense, and in December 2019, the IRB approved the study (see Appendix Q). During January and February 2020, I advertised, recruited participants, and held three different study dates. In March 2020, I met with a statistician to discuss and analyze the data. My DNP final defense was approved in May 2020.

Table 1

DNP Project Timeline

Date	Task Description
February–October 2018	Permission from facility to conduct study Permission to use PKPCT survey tool Literature review Bimonthly meetings with key stakeholders
January–August 2019	Continued literature reviews Project consultations with Chair and ESD
October 2019	Proposal defense completed and approved
November–December 2019	Completed IRB application Created design for study flyer Prepared study consent IRB approval
January–February 2020	Coordinated study dates with ESD Finalized flyer with local printing company Advertised study Recruited participants Research study held on three Saturdays Consent and pre- and postsurvey given to participant
March 2020	Meetings with statistician and Chair Analyzed data
April 2020	Submitted survey results to ED and ESD Prepared for final defense
May 2020	Final defense approved Submitted paper to private editor
August 2020	Submit paper for publishing

Feasibility and Appropriateness

I conducted the DNP project at a local pregnancy center. Coordination and meetings with the ESD of the pregnancy center took place. The ESD was the instructor and an SRA Specialist. The ESD has been teaching this program in the schools for four years. The ESD is an employee of the local pregnancy center. The ESD taught the sexual health program. The DNP project has been approved by the executive director (ED) of the pregnancy center.

I conducted the research study at the pregnancy center and not at a local school because of the complexities of meeting the requirements of the Family Educational Rights and Privacy Act (FERPA). FERPA protects students from "improper disclosure of personally identifiable information derived from educational records" (Department of Education, 2011, p. 1). I made arrangements for the classes with the ED of the pregnancy center. The pregnancy facility hosts many educational classes for the general public. The facilities at the pregnancy center were appropriate with a large classroom environment. There is a lobby area next to the classroom where individuals were greeted. The facility was easy to locate, and parking was free. There were no charges to use this facility. The classes were held on Saturdays, so no other clients were affected. The pregnancy center was closed on the weekends.

The total cost of the project was approximately $400. The main cost to me was printing supplies, food, gas for an automobile, and gift cards. I incurred the cost of gift cards, which was $150. The cost of the gift cards was estimated at $320 –$400, depending on the number of participants. The cost of the student manuals was $5 each and was paid for by the pregnancy center.

Interprofessional Collaboration

I collaborated with the ESD of the pregnancy center during the development of the project. I am currently an employee at the pregnancy center. The ESD of the pregnancy center informed me that the pregnancy center purchased the sexual health education program and student manuals with grant funds. The pregnancy center offers the sexual health education program to local schools free of charge. The ED and ESD are key stakeholders in the development, coordination, and findings of this DNP project. The results of the DNP project

could be used for future sexual health education grant proposals submitted by the ED of the pregnancy center.

IRB Approval and Process

I followed all the necessary steps in the IRB process. I obtained permission from Abilene Christian University's (ACU's) Institutional Review Board (IRB) to conduct the DNP project. The pregnancy center did not have an IRB.

Protection of Participants

I did not consider the participants to be in a vulnerable population. I protected the rights of the participants in many ways. First, I received approval by the IRB before I inititated any research activities. Upon approval of the IRB, I provided and explained the written consents. Secondly, to protect anonymity, the female participant provided only her randomly assigned ID number on the surveys. I assigned the random ID number. I used the ID number to compare the completed pre- and postsurveys. I obtained no other demographics. Finally, I maintained all information received securely and confidentially. There are no FERPA or Health Insurance Portability and Accountability Act (HIPAA) related concerns involved with this project.

Risks

The three basic ethical principles in research should be to provide respect, beneficence, and fair treatment to all participants (Keele, 2011). Participation in the study was voluntary and free from coercion. I ensured the privacy, confidentiality, and anonymity of all participants. The consents were written at an eighth-grade level and covered all required elements of informed consent. There were minimal known risks or potential harm anticipated to the participants involved in the research study.

Benefits

The benefits of this study were to determine the sexual behavior attitudes of the participants before and after receiving a sexual health education program. The results of this study could help researchers in developing other sexual health education programs. Also, the ED of the pregnancy center may use study results for future grant applications.

Summary

The purpose of this study was to examine females' (18–19 years old) attitude and knowledge toward healthy sexual choices before and after receiving a sexual health education program. The intervention was an SRA health education program. The outcome measurement was examining the females' attitude and knowledge toward healthy sexual choices.

The project consisted of a sexual health education program with a pre- and postsurvey design. The research study was a program evaluation using a one group pre- and postsurvey design. The method of data collection was a semantic differential scale using scale data. The PKPCT instrument is considered reliable and valid. Permission has been granted to use the PKPCT. There were no financial fees to use the PKPCT.

The sexual health education program was held at a local pregnancy center in Navarro County, Texas. I followed all the guidelines for ACU's IRB process and approval. There were no known risks or potential harm anticipated to participants. There were no HIPAA related concerns. I estimated the timeline for completion of this project at two months.

Chapter 4: Analysis

This chapter includes discussion on the purpose of the project, coordination, implementation, participant demographics, data collection techniques, interpretation and inferences of findings, and strengths and limitations of the study. It also explains the challenges experienced during the recruitment and implementation phase of the study and future strategies that might be used to improve student participation and obtain a sufficient number of subjects to evaluate the education program.

Purpose of the Project

The purpose of this study was to examine 18–19-year-old females' attitudes and knowledge toward healthy sexual choices before and after receiving an SRA sexual health education program.

Project Coordination and Implementation

I coordinated study dates with the ESD of the pregnancy center. Two separate Saturdays (January 25, 2020, and February 1, 2020) were scheduled based on the ESD's availability. Due to poor participant turnout, an additional Saturday (February 22, 2020) was scheduled. In total, I attempted data collection on three separate Saturdays.

I created a recruitment flyer (see Appendix N) and had it duplicated using a local printing company, paying for the printing services. Study documents (consents, surveys, demographic sheets) were printed off at my home. I printed 30 copies of each form for Day 1 of the study. I also purchased refreshments, snacks, and 30 Starbucks gift cards ($5 each) in preparation for the study.

In an attempt to contact and distribute flyers to as many schools as possible, I used the Texas Education Agency (TEA) search tool to locate high schools in Navarro County, Texas. I

used the TEA (2019) school district locator map to get a more detailed look at public high schools in the county. I was able to identify seven public high schools within the county. I utilized a Google search to locate two private high schools in the local area. Internet searches and word-of-mouth were used to find local churches.

To advertise the research study, I went to every high school website and obtained telephone numbers or email addresses for counselors, principals, or superintendents. I scheduled appointments to meet and discuss the research study through phone calls or emails. I drove to most of the local schools to hand-deliver flyers to school officials and discuss the research study. Flyers were also distributed through emails. A school superintendent asked and received permission to send out a mass email (with the flyer attached) to all school districts in Navarro County. I drove to numerous churches within the community and hand-delivered the flyers and explained the research study, meeting with associate pastors, youth pastors, and clerical workers. I also dropped off flyers at local establishments within the community. I placed reminder calls and wrote emails to encourage participation.

On the first day of the study, only one participant showed up. The participant was eager to stay and attend the study. I explained the consent process, and gave the participant opportunities to ask questions. The participant signed the consent. I then provided the demographic sheet and presurvey, which the participant then completed. The ESD gave the student appropriate breaks in between each education session. I supplied the participant with refreshments, snacks, and lunch. The participant mentioned that her friends were going to attend the study; however, she explained that her friends had other obligations and were going to attend the next scheduled study on the following Saturday. At the end of the class, the ESD and I thanked the participant for attending the study, and then I gave her the Starbucks gift card. The

consent, demographic sheet, and pre- and postsurvey were paper clipped together and placed in an envelope maintained in my possession. On the subsequent scheduled study days, no other participants showed up for the sexual health education program.

I recontacted school personnel and church officials to inform them of a third attempt at the study to gain more participants. I revised the flyer to reflect the new date for the study. The local printing company printed additional flyers, which were either emailed or dropped off at the schools, churches, and business locations in the community. I discussed the study with individuals attending a local School Health Advisory Council (SHAC) meeting in an attempt to promote the project and obtain more participation.

Participants

The target population was 18–19-year-old females who attended a high school in Navarro County, Texas. Unfortunately, the sample size consisted of just one participant. After receiving a signed consent to participate in the study, the participant completed a demographic sheet. The demographic information can be reviewed in Table 2.

Table 2

Demographics for Sample Population

Demographics	*f*
Age	
18	1
19	
Race	
Asian	
American Indian	
Black/African American	1
Caucasian/White	
Pacific Islander	
Two or more races	
Other	
Prefer not to answer	
Ethnicity	
Hispanic or Latino	
Non-Hispanic	1
Prefer not to answer	
Family Household	
Single parent	
Two-parent	1
Legal guardian	
Independent (live on my own)	
Other	
Prefer not to answer	
Sexual Orientation	
Heterosexual	1
Homosexual	
Bi-Sexual	
Undecided	
Other	
Prefer not to answer	

Data Collection

The instrument tool used for the study was Barrett's PKPCT Version II survey and scoring guide (see Appendix C - I). The participant completed the same survey before and after the sexual health education class. The survey was administered and completed by pen and paper.

The tool is a seven-point semantic differential scale. The measurement tool has four sections that are scored independently.

I compiled the surveys and entered the raw data into an Excel spreadsheet. The raw data consisted of recording the participant's responses and translating them into a quantifiable number based on Barrett's PKPCT scoring guide (see Appendix F-I). I entered the data using the required format to run and generate statistical reports using SPSS. Due to my inexperience using SPSS, I hired a PhD-prepared statistician (Spaulding) to run the statistical analysis. I emailed the Excel spreadsheets, surveys, and demographic sheets to Spaulding for review. None of the documents displayed any personal identifiers. Spaulding notified me that a paired sample *t* test could not be completed through SPSS with a sample of less than five matched pre- and postsurveys (D. Spaulding, personal communication, March 4, 2020).

Interpretation of Findings

Spaulding made the recommendation to create a table to visualize and compare the results of the pre- and postsurvey semantic differential scales for the one participant. Each section (awareness, choices, freedom to act intentionally, involvement in creating change) of the tool was placed into a table to visually compare pre- and postsurvey results.

The presurvey results of the participant's feelings of awareness and sexual health behavior before attending sexual health class was directly in the middle for each of the opposite adjectives (Table 3).

Table 3

Awareness - Semantic Differential Table of Presurvey Results for Barrett PKPCT, Version II

My Awareness Is		
Profound	X	Superficial
Avoiding	X	Seeking
Valuable	X	Worthless
Unintentional	X	Intentional
Timid	X	Assertive
Leading	X	Following
Chaotic	X	Orderly
Expanding	X	Shrinking
Pleasant	X	Unpleasant
Uninformed	X	Informed
Free	X	Constrained
Unimportant	X	Important
Unpleasant	X	Pleasant

The participant's feelings of awareness and sexual health behaviors after attending the sexual health class changed in all areas except for the two adjectives, *chaotic* and *orderly*, which were still marked directly between these two opposite adjectives. The participant seemed to value the adjectives *informed*, *important*, *leading*, and *expanding* (Table 4).

Table 4

Awareness - Semantic Differential Table of Postsurvey Results for Barrett PKPCT, Version II

My Awareness Is							
Profound			X				Superficial
Avoiding					X		Seeking
Valuable		X					Worthless
Unintentional					X		Intentional
Timid					X		Assertive
Leading	X						Following
Chaotic				X			Orderly
Expanding	X						Shrinking
Pleasant		X					Unpleasant
Uninformed						X	Informed
Free		X					Constrained
Unimportant						X	Important
Unpleasant					X		Pleasant

The presurvey semantic differential table for the concept of choices and sexual health behaviors revealed similar findings to the concept of awareness. The participant marked Xs directly in the middle of the semantic scale in all areas except for the opposite adjectives *shrinking* and *expanding* (Table 5).

Table 5

Choices - Semantic Differential Table of Presurvey Results for Barrett PKPCT, Version II

My Choices Are		
Shrinking	X	Expanding
Seeking	X	Avoiding
Assertive	X	Timid
Important	X	Unimportant
Orderly	X	Chaotic
Intentional	X	Unintentional
Unpleasant	X	Pleasant
Constrained	X	Free
Worthless	X	Valuable
Following	X	Leading
Superficial	X	Profound
Informed	X	Uninformed

The results noted on the postsurvey of the semantic differential table for the concept of choices showed that the participant did not enter any Xs in the middle of the scale (Table 6). The participant seemed to value the adjectives of *expanding*, *pleasant*, *informed*, and *important*.

Table 6

Choices - Semantic Differential Table of Postsurvey Results for Barrett PKPCT, Version II

	My Choices Are						
Shrinking						X	Expanding
Seeking			X				Avoiding
Assertive		X					Timid
Important	X						Unimportant
Orderly		X					Chaotic
Intentional		X					Unintentional
Unpleasant						X	Pleasant
Constrained					X		Free
Worthless					X		Valuable
Following				X			Leading
Superficial					X		Profound
Informed	X						Uninformed

The results displayed on the presurvey semantic differential table for the topic of freedom to act intentionally and sexual health behaviors showed a cluster of Xs in the middle of the scale (Table 7). The participant seemed to value the concepts of *intentional* and *important.* The participant marked an X closer to the adjective *constrained* versus the opposite adjective *free*.

Table 7

Freedom - Semantic Differential Table of Presurvey Results for Barrett PKPCT, Version II

My Freedom to Act Intentionally Is						
Timid				X		Assertive
Uninformed		X				Informed
Leading			X			Following
Profound			X			Superficial
Expanding		X				Shrinking
Unimportant					X	Important
Valuable	X					Worthless
Chaotic				X		Orderly
Avoiding			X			Seeking
Free				X		Constrained
Unintentional					X	Intentional
Pleasant	X					Unpleasant

The results of the postsurvey semantic differential table for the topic of freedom to act intentionally showed that the participant did not mark Xs in the middle, but instead, some of the Xs were closer to the positive adjectives (Table 8). Some of the Xs placed by participant did not change much except for the concepts of *free* and *constrained*. The participant put an X closer to the adjective *free*.

Table 8

Freedom - Semantic Differential Table of Postsurvey Results for Barrett PKPCT, Version II

My Freedom to Act Intentionally Is						
Timid				X		Assertive
Uninformed				X		Informed
Leading	X					Following
Profound		X				Superficial
Expanding		X				Shrinking
Unimportant					X	Important
Valuable	X					Worthless
Chaotic				X		Orderly
Avoiding				X		Seeking
Free		X				Constrained
Unintentional				X		Intentional
Pleasant	X					Unpleasant

The results of the presurvey semantic differential table for the concept of creating change and sexual health behaviors showed that the participant marked Xs near the middle of the scale in seven different adjectives (Table 9). The participant seemed to value the adjectives *important* and *leading*.

Table 9

Involvement - Semantic Differential Table of Presurvey Results for Barrett PKPCT, Version II

My Involvement in Creating Change Is							
Unintentional					X		Intentional
Expanding			X				Shrinking
Profound				X			Superficial
Chaotic					X		Orderly
Free				X			Constrained
Valuable		X					Worthless
Uninformed				X			Informed
Avoiding				X			Seeking
Leading	X						Following
Unimportant						X	Important
Timid				X			Assertive
Pleasant				X			Unpleasant

The results of the postsurvey semantic differential table for the concept of creating change showed that the participant placed Xs toward the middle of the scale in three different adjectives (Table 10). The participant marked directly in the middle of the scale for the adjectives *avoiding* and *seeking* as she did on the presurvey. The most notable change was the results for the adjectives *pleasant* and *unpleasant*. The participant placed an X closer to the adjective *pleasant* on the postsurvey.

Table 10

Involvement - Semantic Differential Table of Postsurvey Results for Barrett PKPCT, Version II

My Involvement in Creating Change Is							
Unintentional						X	Intentional
Expanding	X						Shrinking
Profound		X					Superficial
Chaotic					X		Orderly
Free		X					Constrained
Valuable	X						Worthless
Uninformed						X	Informed
Avoiding				X			Seeking
Leading			X				Following
Unimportant						X	Important
Timid					X		Assertive
Pleasant	X						Unpleasant

Inferences of Findings

The ESD taught the education and was an SRA instructor and a certified teacher in the state of Texas. The education content, called Choosing the Best, is a research-based and medically accurate program that uses case studies, discussions, presentations, personal applications, and activities to move a student from a cognitive understanding to personal awareness (Choosing the Best Publishing, 2015). The interactions between the student and the ESD were positive. Teaching sexual health education can present many challenges for the teacher and the student. Hogan et al. (2003) stated one of the most important aspects of teaching is to manage a classroom effectively. The ESD handled the student's learning environment effectively with comfort and compassion. The one-to-one type of environment could have been an uncomfortable situation for the student. The visual findings of the pre- and postsurvey data seem to show that the participant had a change in her perceptions of sexual health behaviors after the education program.

Strengths of the Project

Some of the strengths of the study included being well-prepared for the study, flexible, and maintaining open communications while coordinating the project with the ESD of the pregnancy center. On the first day of the research project, everything went smoothly. I organized all the appropriate documents, equipment, and materials needed for the project. The ESD and the one participant were interactive, but just as important, seemed comfortable with the intimate setting. The participant reported that she enjoyed the class. She was given a choice to leave and not participate because she was the only student. The participant stated she wanted to stay for the research project. The student relayed positive feedback of the sexual health education class. The participant made the following paraphrased statements:

- The sexual health class was great and full of information.
- The class should be offered at our school.
- The class was fun and wished that friends were here.
- There are a lot of young folks at my school who need to take this class.

Another strength of the study was hiring a professional statistician to perform statistical analysis and depict the results of the measurement tool—the PKPCT. The statistician assisted with the data collection and reporting the results. The PKPCT has been reported to have high reliability and validity scores and have a strong connection to the chosen theoretical framework of Barrett's theory of power (Kim, 2009).

Limitations of the Project

Common weaknesses in studies include sample bias, generalizability, and instrument reliability and validity (Roush, 2015). The main weakness of the study was the lack of participants. I used a nonprobability sampling method to obtain participants. The target

population were 18–19-year-old females attending a rural high school. The setting was a rural community with only a sample size of one, so there is a bias from the sample. The results of the data cannot determine if the rural community population represented other community (urban, metropolitan) samples. For the paired *t* test, I aimed to obtain 64 participants. Unfortunately, only one student participated in the study. Due to the lack of participation, I was unable to generalize the findings. Also, I was unable to run any statistical tests using SPSS because there was only one participant. The reliability and validity of the measurement tool cannot be demonstrated due to a small sample population.

Challenges of the Project

The biggest challenge of the study was getting 18–19-year-old females to attend a class on a Saturday. The length of the session (five hours) is a significant amount of time for an individual to agree to participate in a study, especially a late adolescent or young adult. Students attending local schools Monday through Friday were not eager to come to a class on a Saturday.

I experienced numerous challenges during the implementation phase of the study. I spent many hours contacting school officials to set up meetings and distribute flyers. Some of the schools' websites were difficult to navigate to find the right counselor or principal. I wrote multiple emails and made many calls, but many emails and phone calls were not returned. In an attempt to promote my study and reach more students, I drove to most of the schools in Navarro County, Texas. Many high school counselors, principals, or superintendents seemed eager to assist with the project but stated that they did not believe the female students would show up for the study that was on Saturday. A couple of the school counselors said that they only had a few females in the age range of 18–19 years-old. Many of the counselors stated that most of the females did not have automobiles, so finding transportation would be difficult.

Additional challenges included the lack of participation from the church members within the community. I spoke to youth and associate pastors in the community. Many of the youth pastors stated that the number of 18–19-year-old females who actively attended church and youth programs was limited. A youth pastor from one of the largest churches in the community indicated that he did not have any 18–19-year-old females attending their youth group programs. The youth pastor stated that at this time, he had only 18–19-year-old males. I met with the youth pastor of my church and was informed that there were no females ages 18–19 years old and that the closest age group of 17-year-olds consisted of only two females who were in the youth group.

Another challenge experienced was using word-of-mouth to advertise the project. Advertising the project throughout a county is difficult and time-consuming when using word-of-mouth. I did not have control if the person was passing on or providing accurate information to other individuals. Along with word-of-mouth, I emailed or hand-delivered the flyers to promote the project.

The offered compensations for participating in the study were food and a $5 Starbucks gift card. In my opinion, raising the gift card value to $10 would have made a difference in obtaining more participation. Also, raising the value of the gift card any higher would have caused a financial burden.

Recommendations for Future Studies

One recommendation for future studies is to perform the research project in the school environment while the students are receiving sexual health education. I recommend lowering the participants' age to 15–16 years of age (freshmen or sophomore students). This could take many months of preparation due to obtaining parental consent and meeting the requirements of

FERPA. I believe the participation rate would improve because the students would receive the education during school hours, which is built into their school day. This idea was my original plan, but due to time constraints of finishing the project during the DNP program, this was not feasible.

Another recommendation would be to advertise the study on social media. I did not have a social media platform that would have reached the sample population. Using the pregnancy center's social media website as a way to promote the study and reach more participants would be another option because the school-based program is offered by the ED and many of these students are followers of the website.

Providing the sexual health education program and study through a live social media event is another proposal. The students would be able to attend the class using their electronic devices. I would need to design a plan to get the participants' consent and surveys. The consents could be sent through a platform such as HelloSign.com, and the surveys could be sent through SurveyMonkey.com. I would need to take measures so that the pre- and postsurveys would match up with the same student.

Chapter Summary

The purpose of the study was to evaluate the impact of a sexual health education program. Word-of-mouth and distributing flyers were the strategies I used to promote the study. I offered the sexual health education on three separate Saturdays, with only one participant showing up for the study. I collected the participant's demographics. Data collection consisted of using Barrett's PKPCT as a pre- and postsurvey. I analyzed the data by visualizing the results because I had only one participant and the inability to run a paired *t* test. The postsurvey results seem to indicate that the student had a change in sexual health perceptions. The strengths of the

study included my preparedness, open communications, guidance from a statistician, and positive remarks from the participant. Limitations of the study include the inability to run internal consistency measures, generalize findings, and possible bias. The challenges of the project include promoting the project and obtaining study participants. Future recommendations include performing the study in the school environment, advertising on social media, and hosting the project and education class through a live social media event.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this study was to examine the impact of a sexual health education program on 18–19-year-old females' attitudes and knowledge toward healthy sexual behaviors. In this chapter, I discuss the implications of the study's analysis for nurse leaders. I also discuss the evidence-based findings and how the research study can be related to the DNP Essentials. Finally, I provide recommendations for future research and clinical practice.

Implications for Nurse Leaders

The project's implications are divided into the four domains: practice, education, policy, and research as recommended by Roush (2015).

Practice

The research project did not focus on my standard of care in the clinical setting. Although, in my current position at the pregnancy center, there are standards of practice related to the screening and treatment of STDs, there are no standards on what guidelines should be used to educate the adolescent or young adults on STDs. My primary focus at the pregnancy center is caring for women with unplanned pregnancies and STDs. This is important because sexually active adolescent females are estimated to have a one in four chance of acquiring an STD (CDC, 2017d). The poor participation rate for this study suggests that nurse leaders in rural communities should promote sexual health education initiatives as a primary prevention strategy to reduce STDs in the adolescent population.

Education

The CDC (2017d) reported that having access to healthcare professionals for education and treatment are key to preventing and decreasing STDs. Therefore, healthcare providers should educate themselves on STDs to provide education to the adolescent population. The findings of

the study did not examine the level of education among healthcare providers. The results of the study cannot demonstrate if there is a gap in nursing education related to sexual health. The study's low participation rate in this rural community may indicate a lack of motivation by the late adolescent to learn about the consequences of sexual health behaviors.

Policy

Currently in Texas, sexual health education is not mandated in the school systems (Guttmacher Institute, 2018; Texas Education Code, 1995; Texas Campaign to Prevent Teen Pregnancy, n.d.). Students attending rural schools, when compared to students in urban or suburban areas, are less likely to have access to sexual health education materials (Wiley et al., 2017). As a result, nurse leaders can have a vital impact on the local and state levels by participating in legislation or local organizations that promote sexual health education in the classroom. One way a nurse leader can contribute to a school's policies is by serving as a member of the school's SHAC. As such, SHAC teams assist school districts in supporting local communities' values of health education in the schools by strengthening connections between health and learning (THHS, 2019).

Research

Based on the findings of the DNP project, more research is needed to examine and obtain a larger sample population. I recommend replicating the study in the school environment. Lieberman and Su (2012) reported that in a quantitative study that examined ninth-graders' perceptions on abstinence, intentions to remain abstinent, and sexual behaviors after receiving the Choosing the Best program, the students were 1.5 times likely to delay sexual activity by the end of ninth grade. There were limitations to this study, which included self-reported measures, limited school participation, and timing of the sexual health programs, which affected follow up

data. Lieberman and Su's (2012) study only measured a single year of intervention and the short-term impact on ninth graders. As a student in the DNP program, I am interested in this type of study and would like to see similar studies in the future.

EBP Findings and DNP Essentials

The American Association of Colleges of Nursing (AACN, 2006) recommends eight essentials of doctoral education for the advanced practice of nursing. I will review how the eight DNP essentials are related to my study.

Essential I - Scientific Underpinnings for Practice

The AACN (2006) states that the DNP program prepares a nurse leader to use science-based theories to assist with providing advanced strategies in promoting and evaluating healthcare outcomes. I used Barrett's theory of power as the theoretical framework for the study. I examined the late adolescent female's attitude toward sexual health behaviors through the concepts of awareness, choices, freedom to act intentionally, and involvement in creating change. I used Barrett's PKPCT to evaluate the student's perceptions (awareness, choices, freedom to act intentionally, involvement in creating change) before and after the sexual health education. In addition, I used science-based concepts to evaluate the intervention and to improve the student's outcomes of learning about sexual health choices.

Essential II - Organizational and Systems Leadership for Quality Improvement

According to the AACN (2006), the DNP should be able to use effective communications to ensure quality improvement in the healthcare system and be able to address ethical dilemmas when providing patient care. I used an evidence-based sexual health education intervention. Even though this intervention is not designed for the nurse's clinical practice, it can be used in the

schools as a way to assist the clinical nurse in educating adolescents on sexual health behavior. I evaluated and translated the results of the study to be used in future nursing studies.

Essential III - Clinical Scholarship and Analytical Methods for EBP

The AACN (2006) states that this DNP essential focuses on quality care, patient safety, ethical dilemmas, and interactions with government officials to assist with health care initiatives. The reported problems of increased STDs among adolescents while Texas schools do not mandate sexual health education can have health implications that should be addressed by nurse leaders. Sexual health education is vital to our youth's well-being. The study's major finding—a lack of participation—validate the need to promote more sexual health education of our adolescent population within our community.

Essential IV - Information Systems/Technology and Patient Care Technology for Improvement and Transformation of Health Care

I utilized information and patient care technologies to support leadership, analyze data, evaluate the program, and make clinical decisions. Modern technology is crucial in today's healthcare system. According to the AACN (2006), the DNP should be able to use technical skills to evaluate and execute a plan where data can be extracted from databases. I was able to extract raw data from the study and compile findings into an Excel database that evaluated the results of the project. I analyzed statistical data for STD prevalence rates in the United States, Texas, and Navarro County.

Essential V - Health Care Policy for Advocacy in Health Care

The AACN (2006) states that the DNP should be able to educate individuals and policymakers on health policies, nursing, and patient outcomes. I educated executive leaders, staff members, teachers, school officials (non-teaching positions), nurses, and community leaders

on the importance of providing sexual health education to our youth. Furthermore, I participated in local community meetings to advocate for providing sexual health education to our youth.

Essential VI - Interprofessional Collaboration for Improving Patient and Population Health Outcomes

According to the AACN (2006), the DNP should utilize effective communication and collaborative skills to implement practice guidelines, health policies, and improve standards of care. The DNP should lead a team to address organizational issues. I coordinated with multiple personnel during the entire phase of the study. I created an environment that was supportive and open, which allowed all parties to stay abreast of the study.

Essential VII - Clinical Prevention and Population Health for Improving the Nation's Health

The AACN (2006) states that the DNP should focus on clinical prevention and public health activities that promote healthy living for individuals in our nation. By reviewing the literature, I found the incidence rates of chlamydia and gonorrhea are higher in Navarro County, Texas than in Texas as a whole. Females 15–24 years old suffer the greatest impact of chlamydia and gonorrhea. The focus of my study was to evaluate the impact of a sexual health education intervention to educate our youth on sexual health behaviors.

Essential VIII - Advanced Nursing Practice

According to the AACN (2006), the DNP should be able to perform a comprehensive assessment of health and illness, educate individuals on complex health issues, mentor other nurses, use therapeutic techniques to sustain relationships, and have the analytical skills to evaluate practices. I performed a thorough review of the incidence rates of STDs and how they have affected the female population in our county, along with the lack of sexual health education in the schools. The goal of the study was to educate and guide young females through complex

health issues related to sexual health behaviors, such as unplanned pregnancies and STDs. I used an EBP, peer-reviewed SRA health education program to provide medically accurate information to the female population.

Recommendations for Future Research and Clinical Practice

Obtaining enough participants for the study was the most significant challenge for this study. That only one female student participated in the study needs to be addressed in future studies. I recommend conducting future studies in the school classroom environment during the school year. The ESD of the school offers the SRA sexual health program lasting 5–6 weeks during the school year. The study could take many months to obtain the required number of participants. If the age requirements were lowered, researchers would need to address ways to obtain parental consent. One strategy that could be used to obtain parental consent would be to send the consents to the parents electronically. This strategy would be time-consuming and would have to meet the requirements of FERPA. Researchers would need to coordinate and receive support from each school that is participating in the study.

Chapter Summary

STDs in the adolescent population are a public health concern that requires nurse leaders coordinate and implement strategies to educate youth on positive sexual health behaviors. The challenges of obtaining participants for the study were not surprising due to the age bracket that was used for the target population. Because sexual health education is not mandated or a priority in Texas schools, nurse practitioners and nurse leaders should take other approaches to teach patients. Also, due to limited time during a clinical visit, the nurse is unable to adequately provide necessary sexual health education. A school-based teaching strategy should be used to reach more students.

The outcomes of the study did give a positive outlook on the sexual health program even though the data were limited. The participant was excited and stated that the study was useful. The participant also stated that a sexual health program was needed at her school and that many of her friends could benefit from attending the sexual health class.

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Appendix A: Evidence-Based Table

Citation	Purpose and Question	Design	Sample Size	Independent Variables	Dependent Variables	Statistical Tests	Results	Strengths	Weakness	Clinical Outcomes	AACN Level of Evidence
Bogani, G. Cromi, A., Serati, M., Monti, Z., Apolloni, C., & Nardelli. (2015). Impact of school-based educational programs on sexual behaviors among adolescents in northern Italy. *Journal of Sex & Marital Therapy*, *41*(2), 121 – 125. doi: 10.1080/0092623X.2014.958791	Does school-based educational program influence high-risk sexual behaviors?	Qualitative	664	School-based education, students age, gender	Knowledge – STDs; Knowledge – contraception methods; Contraception Used; Sexual intercourse w/o contraception	Fischer's; D'Agostino; Pearson's;T-test; Mann-Whitney U	Significant findings (p <.05) that students had increased knowledge of STD and contraception after education.	Not listed	Study design; unable to generalize findings.	Sexual health education is needed for adolescents.	C
Campa, M. I., Leff, S. Z., & Tufts, M. (2018). Reaching high-need youth populations with evidence-based sexual health education in California. *American Journal of Public Health, 108*(1), 32 – 37. doi: 10.2105/AJPH.2017.304127	To examine how sexual health education affected high-need adolescents in targeted-prevention settings, traditional schools & alternative schools.	Quantitative	747	Gender, age, race, implementation setting (targeted-prevention, traditional school, alternative school)	Contraceptive knowledge; sexual behavior intentions	Logistic Regression	Significant findings (p<.05) between gender and implementation setting.	Not listed	Exit surveys not designed to be matched; living conditions of participants not defined. Unable to match causal differences.	A targeted setting population may be valuable for sexual health education.	C
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*, 332 – 338. doi: 10.1016/j.jadohealth.2011.12.028	Is sexual health education associated with sexual health behaviors?	Quantitative	4691	Gender, age, race, living arrangements, religious attendances	Sex education; sexual behaviors	Logistic Regression	Significant findings (p<.05) that students receiving sex education were more likely to use contraception.	Use of multivariate models.	Lack of receipt of what type of sex education; self-reported measures; challenges of showing causality.	Access to medical accurate sex education is vital for positive sexual behavior.	C

Appendix B: Evidence-Based Table

Citation	Purpose and Question	Design	Sample Size	Independent Variables	Dependent Variables	Statistical Tests	Results	Strengths	Weakness	Clinical Outcomes	AACN Level of Evidence
Inyang, M. P. (2013). Female secondary school adolescents' sexual behavior and school based HIV/AIDS education program. *ICHPER -- SD Journal of Research In Health, Physical Education, Recreation, Sport & Dance, 8*(2), 55-61	To examine sexual behaviors on female adolescents and is sex education provided.	Quantitative and Qualitative	2010	Age, ethnicity, class, religion, sexual behavior, types of contraception used	Sex and HIV/AIDS education	Descriptive analysis, questionnaires	89% of participants were sexually active.	Instrument Reliability and validity acceptable	Not listed	Sexual health education may delay the initiation of sexual encounters.	C
Jayalakshmi, L. S. (2016). Effectiveness of structured teaching programme on the knowledge and attitude towards the life style changes for preventing spread of HIV/AIDS among adolescents. International *Journal of Nursing Education, 8*(4), 210 – 216. doi: 10.5958/0974-9357.2016.00154.9	To examine a teaching program and level of knowledge and attitude changes	Quasi-experimental	640	Teaching program on lifestyle changes to prevent spread of HIV/AIDS	Knowledge and Attitude	Paired t-test Spearman's correlation	Correlation between pre & post-test of knowledge and attitude. Significant finding ($p<.05$) that knowledge and attitude after teaching program	Instrument reliability and validity acceptable	Not listed	Teaching program is effective in improving knowledge and attitudes of adolescents toward HIV/AIDs.	C
Vivancos, R., Abubakar, I., Phillips-Howard, P., & Hunter, P. R. (2013). School-based sex education is associated with reduced risky sexual behaviour and sexually transmitted infections in young adults. *Public Health, 127*(1), 53 – 57. doi.org/10.1016/j.puhe.2012.09.016	To examine effectiveness of school-based sex education and sexual behavior and STDs.	Quantitative	711	Gender, age at sexual encounter, learning about sex	Sex education	Logistic Regression	Median age of sexual activity was 17 yrs with no significance between genders.	Not listed	On-line survey tool, components of sex education not examined.	Sexual health education in schools may help adolescents with sexual behaviors and STDS.	C

Appendix C: Power as Knowing Participation in Change Tool (PKPCT)

INTRODUCTION TO BARRETT'S PKPCT
Version II

The PKPCT is designed to help you describe the meaning of day-to-day change in your life. Four indicators of experiencing change are:

AWARENESS
CHOICES
FREEDOM TO ACT INTENTIONALLY
INVOLVEMENT IN CREATING CHANGE

It takes about 10 minutes to complete the PKPCT.

INSTRUCTIONS FOR COMPLETING BARRETT'S PKPCT

For each indicator, there are 13 lines. There are words at both ends of each line. The meaning of the words are opposite to each other. There are 7 spaces between each pair of words which provide a range of possible responses. Place an "X" in the space along the line that best describes the meaning of the indicator **(AWARNESS, CHOICES, FREEDOM TO ACT INTENTIONALLY, OR INVOLVEMENT IN CREATING CHANGE)** for you at this time.

For example:

Under the indicator CHOICES, if your CHOICES are quite closely described as "informed," your answer might look like this:

informed ___ | _X_ | ___ | ___ | ___ | ___ | ___ uninformed

If your CHOICES are quite closely described as "uninformed," your answer might look like this:

informed ___ | ___ | ___ | ___ | ___ | _X_ | ___ uninformed

If your CHOICES are equally "informed" and "uninformed," place an "X" in the middle space on the line. Your answer might look like this:

informed ___ | ___ | ___ | _X_ | ___ | ___ | ___ uninformed

REMEMBER:

- There are no right or wrong answers.
- Record your first impression for **each** pair of words.
- You can place an "X" in any space along the line that best describes the meaning the indicator has for you at this time.
- Mark only one "X" for each pair of words.
- Mark an "X" for every pair of words.

PLEASE BEGIN TO MARK YOUR X'S ON BARRETT'S PKPCT

(Please go to NEXT PAGE and continue)

Appendix D: Power as Knowing Participation in Change Tool (PKPCT)

BARRETT PKPCT, Version II

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY AWARENESS IS

profound	____	____	____	____	____	____	____ superficial
avoiding	____	____	____	____	____	____	____ seeking
valuable	____	____	____	____	____	____	____ worthless
unintentional	____	____	____	____	____	____	____ intentional
timid	____	____	____	____	____	____	____ assertive
leading	____	____	____	____	____	____	____ following
chaotic	____	____	____	____	____	____	____ orderly
expanding	____	____	____	____	____	____	____ shrinking
pleasant	____	____	____	____	____	____	____ unpleasant
uninformed	____	____	____	____	____	____	____ informed
free	____	____	____	____	____	____	____ constrained
unimportant	____	____	____	____	____	____	____ important
unpleasant	____	____	____	____	____	____	____ pleasant

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY CHOICES ARE

shrinking	____	____	____	____	____	____	____ expanding
seeking	____	____	____	____	____	____	____ avoiding
assertive	____	____	____	____	____	____	____ timid
important	____	____	____	____	____	____	____ unimportant
orderly	____	____	____	____	____	____	____ chaotic
intentional	____	____	____	____	____	____	____ unintentional
unpleasant	____	____	____	____	____	____	____ pleasant
constrained	____	____	____	____	____	____	____ free
worthless	____	____	____	____	____	____	____ valuable
following	____	____	____	____	____	____	____ leading
superficial	____	____	____	____	____	____	____ profound
informed	____	____	____	____	____	____	____ uninformed
timid	____	____	____	____	____	____	____ assertive

(Please go to NEXT PAGE and continue)

Appendix E: Power as Knowing Participation in Change Tool (PKPCT)

BARRETT PKPCT, Version II, PART 2

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY FREEDOM TO ACT INTENTIONALLY IS

timid	____	____	____	____	____	____	____ assertive
uninformed	____	____	____	____	____	____	____ informed
leading	____	____	____	____	____	____	____ following
profound	____	____	____	____	____	____	____ superficial
expanding	____	____	____	____	____	____	____ shrinking
unimportant	____	____	____	____	____	____	____ important
valuable	____	____	____	____	____	____	____ worthless
chaotic	____	____	____	____	____	____	____ orderly
avoiding	____	____	____	____	____	____	____ seeking
free	____	____	____	____	____	____	____ constrained
unintentional	____	____	____	____	____	____	____ intentional
pleasant	____	____	____	____	____	____	____ unpleasant
orderly	____	____	____	____	____	____	____ chaotic

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY INVOLVEMENT IN CREATING CHANGE IS

unintentional	____	____	____	____	____	____	____ intentional
expanding	____	____	____	____	____	____	____ shrinking
profound	____	____	____	____	____	____	____ superficial
chaotic	____	____	____	____	____	____	____ orderly
free	____	____	____	____	____	____	____ constrained
valuable	____	____	____	____	____	____	____ worthless
uninformed	____	____	____	____	____	____	____ informed
avoiding	____	____	____	____	____	____	____ seeking
leading	____	____	____	____	____	____	____ following
unimportant	____	____	____	____	____	____	____ important
timid	____	____	____	____	____	____	____ assertive
pleasant	____	____	____	____	____	____	____ unpleasant
superficial	____	____	____	____	____	____	____ profound

THANK YOU

Appendix F: PKPCT Scoring Guide

SCORING GUIDE

Scores are computed by assigning numbers from the scoring guide that correspond to participants' responses on the instrument.

BARRETT PKPCT, Version II

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY AWARENESS IS

profound	7	6	5	4	3	2	1	superficial
avoiding	1	2	3	4	5	6	7	seeking
valuable	7	6	5	4	3	2	1	worthless
unintentional	1	2	3	4	5	6	7	intentional
timid	1	2	3	4	5	6	7	assertive
leading	7	6	5	4	3	2	1	following
chaotic	1	2	3	4	5	6	7	orderly
expanding	7	6	5	4	3	2	1	shrinking
pleasant	7	6	5	4	3	2	1	unpleasant
uninformed	1	2	3	4	5	6	7	informed
free	7	6	5	4	3	2	1	constrained
unimportant	1	2	3	4	5	6	7	important
unpleasant	1	2	3	4	5	6	7	pleasant

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY CHOICES ARE

shrinking	1	2	3	4	5	6	7	expanding
seeking	7	6	5	4	3	2	1	avoiding
assertive	7	6	5	4	3	2	1	timid
important	7	6	5	4	3	2	1	unimportant
orderly	7	6	5	4	3	2	1	chaotic
intentional	7	6	5	4	3	2	1	unintentional
unpleasant	1	2	3	4	5	6	7	pleasant
constrained	1	2	3	4	5	6	7	free
worthless	1	2	3	4	5	6	7	valuable
following	1	2	3	4	5	6	7	leading
superficial	1	2	3	4	5	6	7	profound
informed	7	6	5	4	3	2	1	uninformed
timid								assertive

Appendix G: PKPCT Scoring Guide

SCORING GUIDE

BARRETT PKPCT, Version II, PART 2

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY FREEDOM TO ACT INTENTIONALLY IS

timid	1	2	3	4	5	6	7	assertive
uninformed	1	2	3	4	5	6	7	informed
leading	7	6	5	4	3	2	1	following
profound	7	6	5	4	3	2	1	superficial
expanding	7	6	5	4	3	2	1	shrinking
unimportant	1	2	3	4	5	6	7	important
valuable	7	6	5	4	3	2	1	worthless
chaotic	1	2	3	4	5	6	7	orderly
avoiding	1	2	3	4	5	6	7	seeking
free	7	6	5	4	3	2	1	constrained
unintentional	1	2	3	4	5	6	7	intentional
pleasant	7	6	5	4	3	2	1	unpleasant
orderly								chaotic

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY INVOLVEMENT IN CREATING CHANGE IS

unintentional	1	2	3	4	5	6	7	intentional
expanding	7	6	5	4	3	2	1	shrinking
profound	7	6	5	4	3	2	1	superficial
chaotic	1	2	3	4	5	6	7	orderly
free	7	6	5	4	3	2	1	constrained
valuable	7	6	5	4	3	2	1	worthless
uninformed	1	2	3	4	5	6	7	informed
avoiding	1	2	3	4	5	6	7	seeking
leading	7	6	5	4	3	2	1	following
unimportant	1	2	3	4	5	6	7	important
timid	1	2	3	4	5	6	7	assertive
pleasant	7	6	5	4	3	2	1	unpleasant
superficial								profound

Appendix H: PKPCT Scoring Guide

The scores are summed. The last adjective score is a test-retest ITEM. It is not included in the score.
Scoring provides a score for each of the 4 concepts as well as a total score of all 4 concepts.

BARRETT PKPCT, Version II

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY AWARENESS IS

profound		x					superficial	6
avoiding			x				seeking	3
valuable				x			worthless	4
unintentional				x			intentional	4
timid			x				assertive	3
leading					x		following	3
chaotic						x	orderly	6
expanding							x	shrinking	1
pleasant						x		unpleasant	2
uninformed						x		informed	6
free					x			constrained	3
unimportant			x					important	3	44
unpleasant								pleasant	

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY CHOICES ARE

shrinking		x					expanding	2
seeking			x				avoiding	5
assertive				x			timid	4
important			x				unimportant	5
orderly		x					chaotic	6
intentional	x						unintentional	7
unpleasant				x			pleasant	4
constrained						x	free	6
worthless							x	valuable	7
following					x			leading	5
superficial			x					profound	3
informed				x				uninformed	4	58
timid								assertive	

Appendix I: PKPCT Scoring Guide

BARRETT PKPCT, Version II, PART 2

MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY FREEDOM TO ACT INTENTIONALLY IS

timid		x						assertive	2
uninformed			x					informed	3
leading				x				following	4
profound					x			superficial	3
expanding							x	shrinking	1
unimportant				x				important	4
valuable					x			worthless	3
chaotic						x		orderly	6
avoiding					x			seeking	5
free				x				constrained	4
unintentional		x						intentional	2
pleasant				x				unpleasant	4
orderly								chaotic	

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MARK AN "X" AS DESCRIBED IN THE INSTRUCTIONS

MY INVOLVEMENT IN CREATING CHANGE IS

unintentional							x	intentional	7
expanding						x		shrinking	2
profound					x			superficial	3
chaotic				x				orderly	4
free					x			constrained	3
valuable				x				worthless	4
uninformed			x					informed	3
avoiding				x				seeking	4
leading			x					following	5
unimportant			x					important	3
timid			x					assertive	3
pleasant						x		unpleasant	2
superficial								profound	

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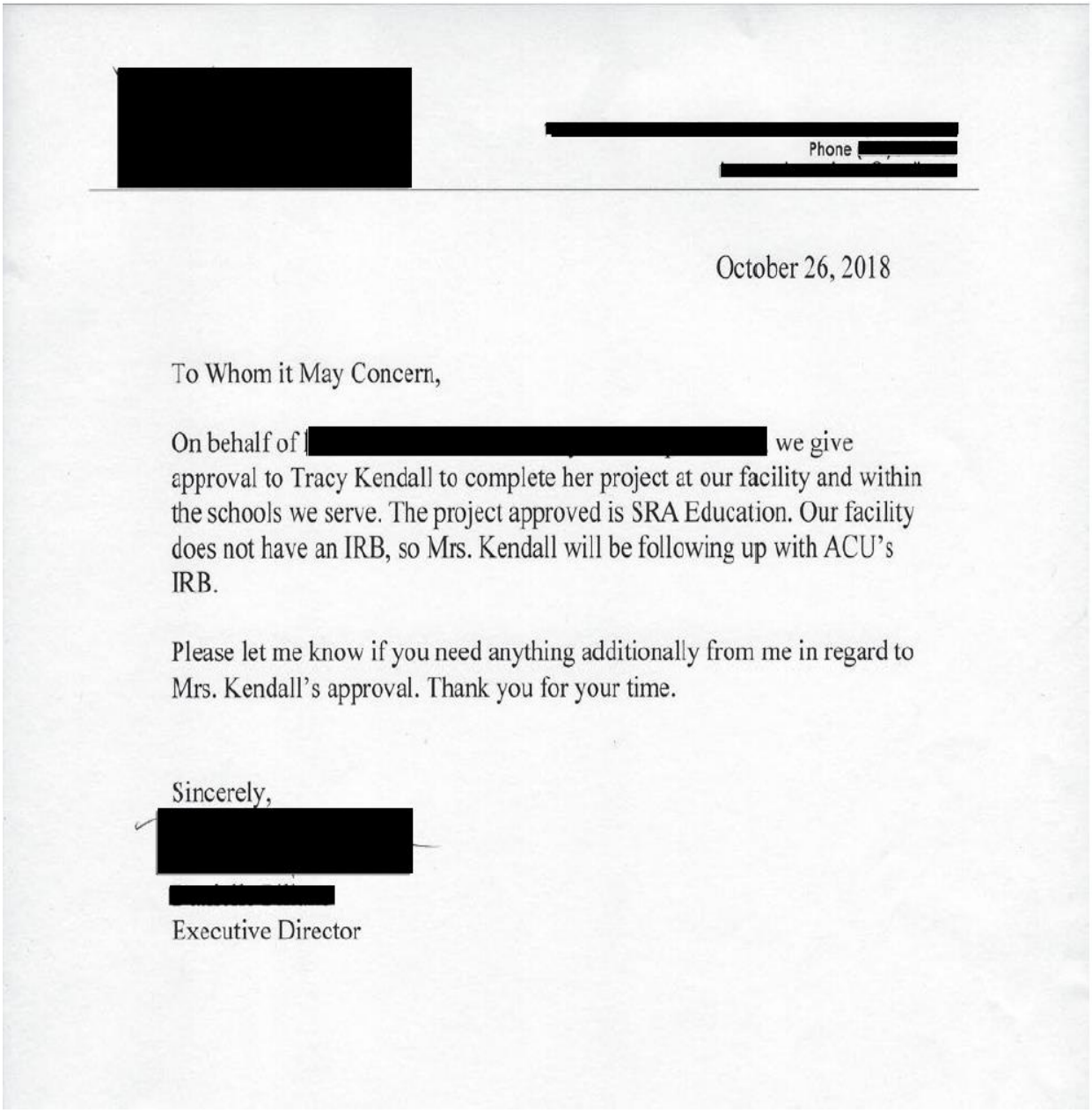
Appendix J: Measurement Tool Permission Letter

Re: The Power as Knowing Participation in Change Tool (PKPCT)
Violet Malinski <[redacted]
Wed 2/14/2018 9:55 AM
To: Tracy1 Kendall [redacted]
Cc: Violet Malinski [redacted]
2 attachments (196 KB)
PKPCT Version II 4-11-13[1].pdf; PKPCT - Scoring Guide 4-11-13.pdf;
I have attached the tool and scoring guide. Good luck, and please send me an abstract of the completed work for our files.
Dr. Malinski

On Feb 13, 2018, at 6:32 PM, Tracy1 Kendall <[redacted] wrote:
Good Evening Dr. Malinski,
I received your name from Dr. Barrett. Below is an email that I sent to Dr. Barrett about using the PKPCT.
I am a Doctor of Nursing Practice (DNP) student at Abilene Christian University (ACU), Abilene/Dallas, Texas. I am doing my Capstone project on Adolescent females and sexually transmitted diseases (STDS). I will be looking at an educational sexual health program to see if educating the adolescent female will decrease or eliminate STDs. My theoretical framework plans to be Your Theory of Power as Knowing Participation in Change. I would like permission to possibly use your instrument of Power as Knowing Participation in Change Test (PKPCT). How do I go about getting permission to use and the ability to obtain the tool?
Can you help me out with the tool?
Thanks so much,
Tracy Kendall, MSN, RN
DNP Student at Abilene Christian University
Personal email [redacted]
Student email [redacted]
[redacted]

From: Dr. Elizabeth Barrett <[redacted]
Sent: Tuesday, February 13, 2018 10:01 AM
To: Tracy1 Kendall
Subject: Re: The Power as Knowing Participation in Change Tool (PKPCT)
Dear Tracy,
Thank you for your request and I wish you well in your Capstone project.
Violet Malinski, PhD, RN has taken over the Power as Knowing Participation in Change "work." You can contact her at vmalinski@optimum.net.
Thank you so much for your interest. Keep it going!
Elizabeth
--
Elizabeth Ann Manhart Barrett, RN, LMHC, PhD, FAAN
Professor Emerita, Hunter College, CUNY
Psychotherapist, Private Practice
[redacted]
TEL [redacted]
CELL [redacted]
[redacted]
Dr. Elizabeth Barrett
"When you change the way you look at things, the things you look at change."
-Max Planck

Appendix K: Letter of Support From the ED of Facility



[redacted]

[redacted]
Phone [redacted]

October 26, 2018

To Whom it May Concern,

On behalf of [redacted] we give approval to Tracy Kendall to complete her project at our facility and within the schools we serve. The project approved is SRA Education. Our facility does not have an IRB, so Mrs. Kendall will be following up with ACU's IRB.

Please let me know if you need anything additionally from me in regard to Mrs. Kendall's approval. Thank you for your time.

Sincerely,

[redacted]

[redacted]
Executive Director

Appendix L: Letter of Participation Approval From ESD of Facility

[redacted]

[redacted]

Phone [redacted]

February 1, 2019

To Whom it May Concern,

On behalf of [redacted], I agree to participate in Tracy Kendall's DNP project at our facility. I will be the Sexual Risk Avoidance (SRA) certified instructor for the education program.

Please let me know if you need anything additionally from me in regard to Mrs. Kendall's DNP project.

Sincerely,

[redacted]

Education Services Director

Appendix M: Demographics Information Sheet

Demographics Information Sheet (optional to complete)

1. My age :

   ☐ 18 years
   ☐ 19 years

2. I identify my race as:

   ☐ Asian
   ☐ American Indian
   ☐ Black/African American
   ☐ Caucasian/White
   ☐ Pacific Islander
   ☐ Two or more races_____
   ☐ Other _____
   ☐ Prefer not to answer

3. I identify my ethnicity as:

   ☐ Hispanic or Latino
   ☐ Non-Hispanic
   ☐ Prefer not to answer

4. My family household type is:

   ☐ Single parent
   ☐ Two-parent
   ☐ A legal guardian
   ☐ Independent (live on my own)
   ☐ Other_____
   ☐ Prefer not to answer

5. My sexual orientation is:

   ☐ Heterosexual
   ☐ Homosexual
   ☐ Bi-sexual
   ☐ Undecided
   ☐ Other_____
   ☐ Prefer not to answer

Appendix N: Flyer to Recruit Participants

Let Your Voice be Heard - Your Opinion Matters!

Give us your thoughts about a school-based sexual health program

The study is being conducted to see if attending a sexual health class will change your thoughts on sexual health choices. You will need to sign a consent to participate in the study. You will need to complete a survey before and after the class. The surveys will not require any personal information.

You will receive:

- Educational instruction in a group setting with other 18-19-year-old females
- Student manual
- Snacks, refreshments, and lunch
- $5 Starbucks gift card

Location:

[redacted]

The education class will be held on a Saturday and last approximately 5 hours. There will be breaks during the class.

Are you eligible?

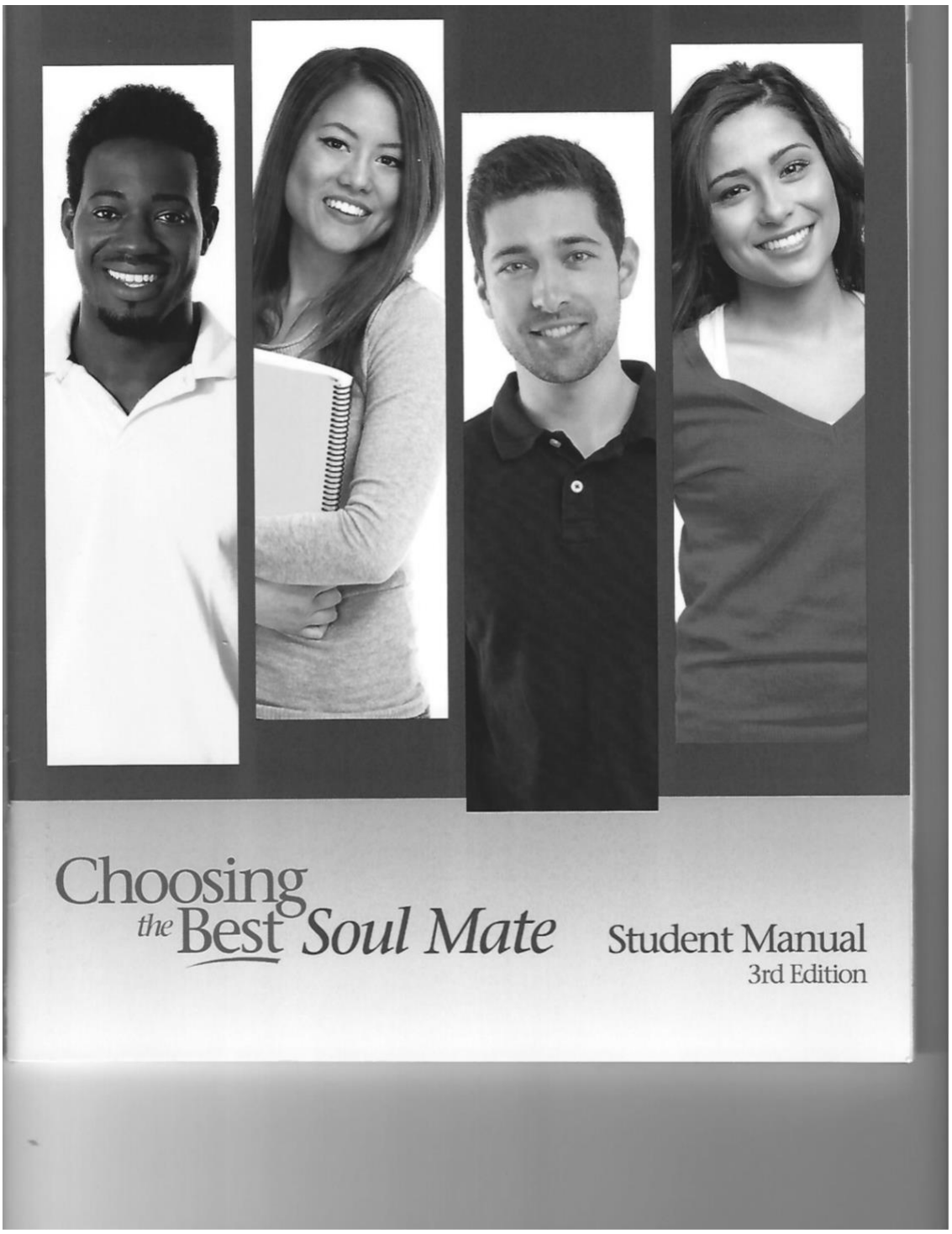
- Females, ages 18 or 19 years old
- Attending a local high school
- Read and write English

Please email or call researcher if you are interested or have questions:

- Tracy Kendall, MSN, RN (Principal Investigator)
- Doctor of Nursing Practice (DNP) student at ACU
- Email: [redacted]
- [redacted]

ABILENE CHRISTIAN UNIVERSITY

Appendix O: Choosing the Best Soul Mate – Student Manual



Appendix P: Agenda "Choosing the Best" Education Program

Agenda

"Choosing the Best" Education Program

Date: To Be Determined

Time: 10:00 AM

Introduction/complete consents & survey	10-20 minutes
Session One - Finding the Right One	50 minutes
Break	10 minutes
Session Two - Being the Right One	50 minutes
Lunch	30 minutes
Session Three - Developing Relational Skills	50 minutes
Break	10 minutes
Session Four - Dating to Discover	50 minutes
Break	10 minutes
Session Five - Making Marriage Work	50 minutes
Complete post-survey	10-15 minutes

Appendix Q: IRB Approval Letter

ABILENE CHRISTIAN UNIVERSITY
Educating Students for Christian Service and Leadership Throughout the World

Office of Research and Sponsored Programs
320 Hardin Administration Building, ACU Box 29103, Abilene, Texas 79699-9103
325-674-2885

December 10, 2019

Tracy L. Kendall
Department of Nursing
Abilene Christian University

Dear Tracy,

On behalf of the Institutional Review Board, I am pleased to inform you that your project titled "A School-Based Sexual Health Education Program",

(IRB# 19-152)is exempt from review under Federal Policy for the Protection of Human Subjects.

If at any time the details of this project change, please resubmit to the IRB so the committee can determine whether or not the exempt status is still applicable.

I wish you well with your work.

Sincerely,

Megan Roth

Megan Roth, Ph.D.
Director of Research and Sponsored Programs