

ASSESSING SENIOR BACCALAUREATE NURSING STUDENTS' ATTITUDES
TOWARD SEXUAL HEALTH EDUCATION AS A NURSING RESPONSIBILITY
FOLLOWING A FAMILY LIFE AND SEXUAL HEALTH EDUCATION
INTERVENTION

A DISSERTATION
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BY

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DEDICATION

To my dad. I still remember how proud you were that I had been accepted. I know you are watching and cheering from above! Love you always! This one is for you!

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I would like to thank Dr. Toms, my faculty chair, and my committee members, Dr. Fredland and Dr. Malecha, for their contributions and assistance throughout the planning and implementation of this research work. Your time, guidance, and expertise has been greatly appreciated. Thank you for your support! Dr. Toms, thank you for continuing to push me especially when I didn't want to look at my writing even one more time.

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ABSTRACT

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ASSESSING SENIOR BACCALAUREATE NURSING STUDENTS' ATTITUDES TOWARD SEXUAL HEALTH EDUCATION AS A NURSING RESPONSIBILITY FOLLOWING A FAMILY LIFE AND SEXUAL HEALTH EDUCATION INTERVENTION

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According to the Centers for Disease Control and Prevention, approximately one in four adolescents has a sexually transmitted infection. Early sexual health education provided by specially trained educators has been shown to decrease early sexual debut and lower risk behaviors in adolescents. Approximately 80% of registered nurses feel sexual health education to adolescents is within their role; however, most report feeling uncomfortable or unprepared to provide the education. The purpose of this study was to measure the effectiveness of a one-hour family life and sexual health education intervention called Family Life and Sexual Health (FLASH) provided to senior-level, fourth-semester undergraduate nursing students, enrolled within two baccalaureate schools of nursing in the southeast United States, on improving scores on the Students' Attitudes Towards Addressing Sexual Health Questionnaire (SA-SH).

James' pragmatism, theory of truth, was used to guide this mixed-methods, two-group, pretest-posttest design. Fifty-three participants were randomized into the FLASH education group and 48 participants were randomized into an attention control group who

received a course in stress management for a total of 101 study participants. To prevent potential contamination, both the intervention and attention control groups received their presentations simultaneously in one, 1-hour sessions during the same day, at the same time. The SA-SH was administered as a pretest and posttest for both groups.

The FLASH participants had a statistically significant improvement in total sum scores on the SA-SH Questionnaire ($F(1, 41) = 19, p\text{-value} < 0.01$). The FLASH group also demonstrated significant increases in comfort levels towards providing sexual health education in their future occupations on the questionnaire ($p < 0.001$). No significant differences in the groups were found in role responsibility, future working environment, or fear of negative impacts on future patient relationships. Thematic analysis of the qualitative data showed less perceived barriers in study participants who were randomized into the FLASH education intervention compared to those in the attention control stress management course.

A 1-hour FLASH course presented to senior-level, fourth-semester undergraduate nursing students can improve attitudes, especially comfort levels, toward providing sexual health education to fifth-grade students. Implications for nursing include incorporating sexual health education specific to the adolescent population into Baccalaureate nursing programs. These findings suggest a 1-hour FLASH education intervention improves overall attitudes, comfort, and decreases perceived barriers to providing sexual health education to fifth-grade students.

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CHAPTER I

INTRODUCTION

In a time where one in every four adolescents has a sexually transmitted infection (CDC, 2019a), registered nurses must be prepared to provide medically accurate, developmentally appropriate sexual health information to adolescents in a variety of settings including schools, clinics, and hospitals. In 2020, the Centers for Disease Control and Prevention (CDC) established criteria for an evidence-based approach to sexual health education within school systems to improve the sexual health of the adolescent population as evidence supports early interventions provided to adolescents to decrease early sexual debut and risky health behaviors (CDC, 2020; Lindberg & Maddow-Zimet, 2012; Mueller et al., 2008). One of the criteria of an evidence-based sexual health education program (CDC, 2020) includes the importance of well-qualified, highly trained staff to provide sexual health education to all types of adolescents, including those in the gay, lesbian, bisexual, transgender, and questioning populations. Approximately 80% of nurses agree that sexual health education to adolescents is within the role of the nurse, however, research indicates most nurses and most undergraduate nursing students deny receiving content specific to providing sexual health education to the adolescent population (Aaberg, 2016; Brewin et al., 2014; Johnston, 2009; Jou et al., 2003; Landry et al., 2003; Landry et al., 2000; McFadyen, 2004; Potter & Perry, 2013; Shewikar & Hayter, 2014). Reasons cited included: a lack of knowledge, limited sexual health

education content provided within their nursing programs, comfort, confidence in teaching ability, and personal beliefs and attitudes towards providing sexual health education (Areskoug-Josefsson et al., 2016b; Bal & Sahiner, 2015; Donmez et al., 2019; Jacob et al., 2016; Sharon et al., 2020; Sung et al., 2015; Sung & Lin, 2013; Tsai et al., 2014; Unlu et al., 2016).

The United Nations' Committee on the Rights of the Child (2013) announced sexual and reproductive health care as a universal human right. Individual goals of the convention included the identification and elimination of barriers to health services, including "education and guidance on sexual health, contraception, and safe abortion" (p. 9). Santa Maria et al (2016) stated: "health care providers should have the knowledge and skills to deliver sexual and reproductive health services"(p. 48), and "health care providers should encourage developmentally appropriate communication about sexual and reproductive health" (p. 49). Despite efforts to decrease sexually transmitted infection (STI) rates in the adolescent population by organizations such as the World Health Organization (WHO; 2016), the CDC (CDC, 2020; CDC, 2019a), and the United States Department of Health and Human Services, Office of Adolescent Health (HHS-OAH) (2017), STIs in adolescents continue to rise.

Over 10 million new cases of STIs were identified in 2018 and one in four sexually active adolescents in the United States has been diagnosed with an STI (CDC, 2019a). The CDC also reported a record number of chlamydia, gonorrhea, and syphilis cases among adolescents in 2018. Since 2015, the numbers of adolescents with diagnoses

of chlamydia, gonorrhea, and syphilis have increased every year despite STI awareness campaigns. Teen pregnancy rates have begun to decline at 18.8 per thousand, down from 22.3 per thousand in 2016, however, teen pregnancy rates remain higher in the United States than in most developed countries (CDC, 2019b).

The CDC Middle School Youth Risk Behavior Survey (CDC, 2016b), a self-reported health behavior survey for adolescents ages 10–18, found on average 11.2% of United States' sixth-grade students were participating in sexual intercourse and 12.1% of Houston, Texas, sixth to eighth-grade students reported having sexual intercourse. The CDC (2020) supports the use of quality sexual health education programs within school systems to prevent HIV, STIs, and unintended pregnancy. Research indicates early interventions in sexual health education decrease early sexual debut and decreases risky sexual behaviors including unprotected sex (CDC, 2020; Lindberg & Maddow-Zimet, 2012; Mueller et al., 2008). As registered nurses, we have a social, moral, and ethical duty to assess sexual health and provide sexual health education to adolescent students; however, research indicates that registered nurses list their attitudes toward providing sexual health education as a barrier. Shewikar and Hayter (2009) stated that registered nurses found it within their role to teach sexual health education; yet, nurse participants stated content discussed within sexual health education was based upon personal beliefs and attitudes.

Problem of Study

The World Health Organization (2016) identified early sexual health education for adolescents as an essential intervention to prevent risky sexual behaviors. Also, the 2013 United Nations (UN) *Committee on the Rights of the Child* announced sexual and reproductive health care as a universal human right and challenged health care providers to attain the necessary knowledge and skills to educate, communicate, and provide care regarding sexual health to all, including adolescents. However, many healthcare providers, including registered nurses, note barriers for implementation to include a lack of comfort, personal belief systems, and societal pressures from adolescents' parents and politicians in the states in which the adolescent lives (Brewin et al., 2014; Johnston, 2009; Jou et al., 2003; Landry et al., 2003; Landry et al., 2000; McFadyen, 2004; Shewikar & Hayter, 2014).

In 2012, the National Student Nurses' Association (NSNA) resolutions were in support of "significantly improving sexual health education, sexual health assessment, and awareness in nursing curricula" (p. 12). The Association of Women's Health, Obstetric, and Neonatal Nurses identified 27 core competencies to improve prevention and care surrounding unintended pregnancies (Hewitt & Cappiello, 2015). Each of the 27 competencies was categorized under four sub-headings: attitudes, knowledge, clinical skills, and counseling skills.

Sexuality is listed as one of Maslow's fundamental physiological needs along with air, food, drink, shelter, warmth, and sleep on the five-stage model known as the hierarchy of needs (Maslow, 1943); yet, is rarely assessed by the nurse (Brewin et al., 2014; Johnston, 2009; Jou et al., 2003; Landry et al., 2003; Landry et al., 2000; McFadyen, 2004; Potter & Perry, 2013; Shewikar & Hayter, 2014). Stanhope and Lancaster (2012) stated, "school-based sexual education can come too late or not at all" (p. 773) and cited differences in curriculum and the different stages in which the initiation of sexual education occurred as being factors that lead to riskier behaviors at earlier ages in teens and preteens. There are over four million registered nurses in the United States (American Nurses Association, 2020). Approximately 80% of nurses agree that sexual education is within the role of the nurse, yet most do not assess sexuality citing lack of knowledge, discomfort, and different attitudes and belief systems (Brewin et al., 2014; Johnston, 2009; Jou et al., 2003; Landry et al., 2003; Landry et al., 2000; McFadyen, 2004; Potter & Perry, 2013; Shewikar & Hayter, 2014). There is little research regarding interventions provided to undergraduate nursing students' and the effects on their attitudes towards providing sexual health education to fifth graders as a nursing responsibility.

Rationale for the Study

The purpose of this study was to examine the effects of participation in a FLASH education intervention on the attitudes of senior-level, fourth-semester baccalaureate nursing students toward providing sexual health education to fifth-grade students as

compared to the attitudes of senior-level, fourth-semester baccalaureate nursing students following participation in a stress management education program.

Approximately 12% of sixth to eighth-grade students in Southeast Texas are sexually active (CDC, 2016b). Research supports providing sexual health education before the initiation of intercourse to decrease early sexual debut and decrease risky sexual behaviors (CDC, 2020; Lindberg & Maddow-Zimet, 2012; Mueller et al., 2008). Recent reports from Aaberg (2016) indicate nursing faculty self-reported discomfort in providing sexual health education to nursing students and many do not include sexual health education within lesson planning for baccalaureate programs.

Several studies support providing sexual health education interventions improve attitudes in registered nurses related to assessing sexual health and providing needed sexual health education (Brewin et al., 2014; Johnston, 2009; Jou et al., 2003; Landry et al., 2000; McFadyen, 2004; Santa Maria et al., 2017); however, most sexual health education research involving undergraduate nursing students is limited to descriptive studies on attitudes and perceived barriers related to providing sexual health education (Areskoug-Josefsson et al., 2016b; Bal & Sahiner, 2015; Byrne & Murphy, 1993; Donmez et al., 2019; Magnan & Norris, 2006; Sharon et al., 2020; Unlu et al., 2016). Interventional studies to measure attitudes and self-perceived levels of comfort, confidence, and role responsibility are lacking. The purpose of this study was to measure the effectiveness of participation in FLASH education intervention on senior-level

baccalaureate nursing students' attitudes toward providing sexual health education to fifth-grade students.

Theoretical Framework

A James' pragmatic approach to evaluate and assess current and post-educational senior-level baccalaureate nursing students' attitudes toward sexual health education for fifth-grade students as a nursing responsibility was used. Pragmatism is a theory of truth. James' stance on truth that, "the true is the name of whatever proves itself to be good in the way of belief, and good, too, for definite assignable reasons" (James, 1907, p. 42). Pragmatism is focused on problem-solving and is outcome-driven (Butts & Rich, 2011; Creswell, 2013; Polifroni & Welch, 1999). James described two primary needs within the search for truth, the first was to obtain truth and the second was to avoid an error. Both of which move on a continuum of constants within the human mind and is an individual journey. The search for truth is masked or distorted by personal beliefs, opinions, and "facts." When challenges are made to personal truths, individuals must choose to alter personal beliefs (personal truth) or accept and incorporate the new truth into practice (Hookway, 2013).

James' pragmatism has four tenets. Pluralism, the first tenet, is open and inclusive to varied sources of knowledge. The first tenet is met by utilizing a mixed-methods design to collect quantitative data measuring current attitudes of providing sexual health education, in addition to, qualitative data on self-perceptions of barriers related to providing sexual health education to fifth-grade students.

The second tenet, truth is imperfect, conditional, and revisable. Technology has improved the availability of information related to sexuality, including images, videos, and other forms. The advancements have moved from books in the library to pornography availability in magazines, now to the internet and smartphone applications which you simply right swipe to show interest in “hooking up” or having sexual intercourse with an individual within a 10-mile radius. Risky behaviors, healthy relationships, boundaries, and communication including the increased availability of sexuality information are all conditional and revisable.

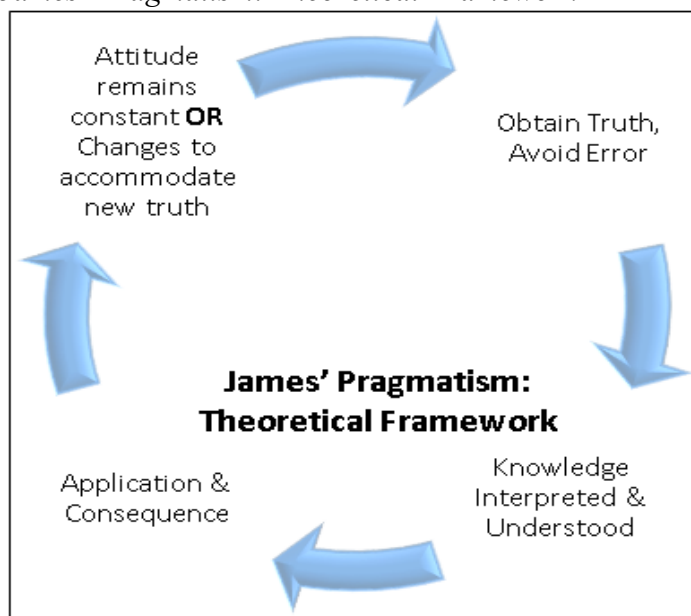
The third tenet, meliorism, is “the belief that the world can be made better by human effort” (Oxford University Press, n.d.). The WHO (2016) and the United Nations’ Committee on the Rights as a Child (2013) recognize adolescent sexual health as a global health risk. Research indicates sexual health education before the onset of sexual activity is instrumental in delaying early sexual debut and decreasing sexual risk behaviors (Lindberg & Maddow-Zimet, 2012; Mueller et al., 2008). Nurses, utilizing human effort, have a social, moral, and ethical duty to assess and provide sexual health education to adolescents.

The fourth and final tenet is the importance of the coexistence of rationalism and empiricism (James, 1907). This relates to the translation of research to practice in a more cohesive way (McCready, 2010). To assist in the attainment of community and global health, nurses must first assess current attitudes and look for ways to improve nurse attitudes toward sexual health education as a nursing responsibility. To translate into

practice more efficiently, nurse educators and nurse researchers must collaborate to provide comprehensive sexual health education to senior level undergraduate nursing students who are on the path to become registered nurses. James' pragmatism indicates that knowledge is interpreted and understood through its application and consequence. Current attitudes are related to senior-level baccalaureate nursing students' truths as they are known to them before and after a FLASH educational intervention were examined.

Figure 1

James' Pragmatism: Theoretical Framework



Note. This figure demonstrates an individual's search for truth by avoiding error. As new knowledge is interpreted and understood, a person's attitude or beliefs may change based on the application or consequence of this new truth.

Assumptions

Assumptions of the study include:

1. Sexual health education is within the role of the nurse.
2. Nursing students can learn how to provide sexual health education.

3. Nursing students can identify barriers to providing sexual health education.

Research Questions

The following research questions were posed for the research:

- 1) What are the attitudes of senior-level baccalaureate nursing students toward providing sexual health education to fifth-grade students?
- 2) Will participation in a FLASH Education Program improve students' attitudes, comfort levels, and role responsibility toward providing sexual health education to fifth-grade students better than participation in an attention control group who receives Stress Management Education?
- 3) Will participation in a FLASH Education program decrease fear of the negative impact on patient relations when providing sexual health education to fifth-grade students better than an attention control group who receives Stress Management Education?
- 4) What barriers do senior-level baccalaureate nursing students perceive toward providing sexual health education to fifth-grade students?

Definition of Terms

Defined in this study are the following terms:

1. Attitude: A settled way of thinking or feeling about someone or something, typically one that is reflected in a person's behavior (Merriam-Webster, n.d.a).
For this study, fourth-semester baccalaureate nursing students' attitudes towards

providing sexual health education to fifth-grade students using the SA-SH, items 1–22 measure overall attitude (See Appendix B)

2. Competency: An expected level of performance that integrates knowledge, skills, abilities, and judgment (American Nurses Association, 2020). For this study, competency was measured by perceived knowledge, skills, and abilities following a FLASH education program, items 1–22 SA-SH (See Appendix B), and qualitative questionnaire (See Appendix C).
3. Sexual health: A state of physical, emotional, mental, and social well-being concerning sexuality (WHO, 2006). For this study, sexual health attitudes and perceived barriers were measured using the SA-SH.
4. Sexuality: A central aspect of being human throughout the lifespan and encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy, and reproduction (WHO, 2006).
5. Senior-level, fourth-semester baccalaureate nursing students: A baccalaureate nursing student enrolled in the last semester coursework.
6. Barriers: something immaterial that impedes or separates (Merriam-Webster, n.d.b). For this study, students' perceptions of barriers to providing sexual health education were measured using the SA-SH, items 9, 11, 13, and 19 (See Appendix B) and qualitative questionnaire (See Appendix C).

Limitations

Limitations of the study included the following:

1. The sample size includes a small convenience sample of senior-level baccalaureate nursing students from two universities in Southeast Texas.
2. All responses reported were based upon self-report, which creates the potential for social bias.
3. The qualitative responses from senior-level nursing students in two Southeast Texas universities may not reflect the same perceived barriers for nursing students in other geographical areas or other types of nursing school programs, such as an associate degree program.

Summary

The WHO (2016), the CDC (2020), and the United States Department of Health and Human Services, Office of Adolescent Health (HHS-OAH, 2015) continue a call for action to improve sexual health access and education for the adolescent population. Research indicates sexual health education before the onset of sexual intercourse, decreases early debut of sexual activity and risky behaviors that subject the adolescent to STIs and unintended pregnancy (CDC, 2020; CDC, 2019a; CDC, 2019b; Lindberg & Maddow-Zimet, 2012; Mueller et al., 2008). There are 3.8 million registered nurses (ANA, 2020). Registered nurses must become proactive and competent in providing sexual health education in the adolescent population. Sexual health education is within

the role of the registered nurse; however, attitudes strongly influence action to provide sexual health education. Nursing students' attitudes must be assessed and interventions to improve attitudes must be explored. The health of our nation's adolescents depends upon it.

CHAPTER II

LITERATURE REVIEW

Introduction

In 2015, the CDC Sexually Transmitted Diseases Surveillance report conveyed one in four adolescents between the ages of 12 and 19 is sexually active and over ten million cases of newly diagnosed sexually transmitted infections are in the adolescent population. An estimated 52% of Texas high school students, ages 15–19, have had or are having sexual intercourse (HHS-OAH, 2017). Data collected in the Houston, Texas, area resulted in a self-report of 12.1% of sixth-grade students are sexually active (CDC, 2016b). The initiation of sexual activity below the sixth-grade level was not noted in the literature. The HHS-OAH (2017) reported sexual health education before the initiation of sexual activity is correlated with decreased sexual risk behaviors and stressed the importance of school-based sexual health education (CDC, 2020; Lindberg & Maddow-Zimet, 2012; Mueller et al., 2008). Additional benefits noted by the CDC (2020) included increased academic performance. There are social, moral, ethical, and political attitudes and beliefs entangled in providing comprehensive sexual health education to fifth-grade students.

Conducting the Literature Search

A systematic search using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA, 2009) Checklist (Moher et al., 2009) was performed

utilizing the OneSearch function at the Texas Medical Center (TMC) Library. OneSearch is a search engine which allows the simultaneous search of books, journals, and articles in one location (University of Houston, Clear Lake, 2017). Databases included within OneSearch at the TMC library include PubMed, CINAHL Plus with Full Text, Scopus, PsycINFO, Nursing Reference Center, and Micromedex. It also searches all the subscribed journals available in BrowZine, a mobile application for tablets and smartphones that allows access to e-journals in one interface (Harvard Kennedy School, 2017). Search terms included: “student nurse, and sexual health, and adolescent.”

A total of 134 articles were written in English and contained all the keywords. Inclusion criteria included: (a) original research, where undergraduate nursing students were the central component of the study, (b) scholarly and peer-reviewed, and (c) printed between 2002 and 2020. Qualitative, quantitative, and mixed methods research were included in the literature review because the primary investigator utilized a mixed-methods, two-group, pretest-posttest interventional design for the study. According to Creswell (2015), mixed-methods, two-group, pretest-posttest interventional design collects qualitative and quantitative data and compares the data within the discussion section of the paper. Through this process, 94 articles were obtained and reviewed. Exclusion criteria were then applied to the remaining articles and secondary sources such as literature reviews, articles regarding specific disease processes, studies with graduate degree nursing students such as Nurse Practitioner and Midwifery, and studies with a patient or parent-focused research was omitted. Thirteen articles met the inclusion

criteria, and one additional article met the criteria through a search of citations of the incorporated articles.

History of Sexual Health Education in the United States

In 1859, Whewell wrote about the moral and social education of the child using role modeling of healthy relationship development within the constitution of marriage in his book titled, *The Elements of Morality, including Polity*. Relationship development was the responsibility of the married couple. In 1916, Maurice Bigelow released his book *Sex-education: A Series of Lectures Concerning Knowledge of Sex in its Relation to Human Life*. Bigelow described not only attitudes that influenced sexual health education, but what types of education should be included in a sexual health education curriculum. Bigelow defined the meaning, need, and scope of sexual health education. Bigelow also addressed individual, social, and organizational barriers associated with sexual health education. Bigelow provided insight on topics to include throughout the lifespan, gender-specific information, and criticisms to the past and future of sexual health education. Bigelow stated in 1916, “that one’s attitude towards sex may be profoundly influenced by reading certain general literature that holds up high ideals of love and sex and life” (p. 98). Bigelow discounted teaching adolescents together and stressed the need to teach adolescent boys solely the scientific and physiology of the male reproductive system and the adolescent girls only the science and physiology of the female reproductive system. Adolescent boys would not receive education regarding the female reproductive system and adolescent girls would not receive education about the

male reproductive system. Both groups were to be taught about immorality regarding sexual health and only adolescent boys were to be taught about venereal disease. Bigelow maintained sexual health educators should be skilled and have a high level of scientific knowledge. He also spoke about the dangers of providing written materials without giving the student a way to ask questions about sexual health. The National Education Association called for the addition of sexual health education in public schools in 1912 (Cuddy, 1993).

Although there is a rich history of advocacy for sexual health education, sexual health education debates have continued to be fueled by religious and cultural beliefs and attitudes (Irvine, 2002). Abstinence-only education is supported and funded at the federal level with an additional \$85 million being invested in 2016 for those programs despite the lack of evidence to support abstinence-only education to prevent pregnancy or the spread of sexually transmitted infections. On this basis, Hall et al. (2016) refute abstinence-only education as a way to decrease sexual risk behaviors and delay early sexual debut maintaining the best approach is to provide a more comprehensive approach to sexual health education. The CDC (2020) encourages the promotion and implementation of well-designed sexual health programs that are “consistent with scientific research and best practices.”

Sexual Health Education in Texas

Sexual health education varies from state to state and can range from abstinence-only to comprehensive sexual health education. The Texas Education Agency is the

regulatory body in Texas that guides school districts on topics that should be included in sexual health education. In June 2020, Texas proposed revisions to sexual health education for the first time in 23 years (Swaby, 2020a). Public hearings were held on June 29, 2020, and September 8, 2020, regarding the proposed revisions to the sexual health education within public schools in Texas. The public hearing live stream is available for both public hearings, however, on September 8, 2020, the meeting allows individuals insight into how extreme differences of opinions regarding sexual health content can be. One participant stated, “Unfortunately I have to withdraw my children from the ... ISD specifically because of the implementation of comprehensive sexual health education and this new ideology of social justice,” “we want local control of sex education,” and “we want abstinence and not abstinence-plus education” while another participant advocated for comprehensive sexual health education inclusive of the lesbian, gay, bisexual, transgender, and questioning communities (Texas Education Agency, 2020). Final revisions to sexual health education are expected to be voted on in November 2020; however, under the current administration, many individuals who are advocating for all-inclusive comprehensive sexual health education for all students including lesbian, gay, bisexual, transgender, and questioning populations feel their voices are not being heard (Swaby, 2020b). It is evident sexual health education in Texas is swayed based upon thoughts, beliefs, and attitudes.

The Texas Education Code 115 (2013) mandates that all children attending public schools should acquire specific health education requirements including those of sexual

health. Texas Health and Safety Code 85.004 (Texas Health and Safety Code, 1991) requires that medically accurate educational programs are developed and available to the public regarding human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS). Texas Education Code 115.7 states sexual health education provided at the fifth-grade level must include the changes of puberty and information on the human immunodeficiency virus. The Texas Education Code 28.004 (Texas Education Code, 1995), sections e-j, empowers local school health advisory councils (SHAC) to recommend and select health education instruction curricula to include human sexuality, sexually transmitted diseases, or HIV and AIDS education. Sexual health education should present abstinence as the preferred choice of behavior. Recommendations to the SHAC are to provide access to the parent or guardian and community regarding sexual health education content curriculum before the education is provided to the student.

Comprehensive Sexual Health Education

The American Medical Association (2009) defined comprehensive-based sexuality education curricula as that which "includes accurate information about contraception and condom use, and that may also encourage abstinence (as the only fully effective way to prevent pregnancy and the transmission of disease), to be the most effective at increasing adolescents' knowledge about pregnancy and disease prevention" (p. 9). According to the Sexuality Information and Education Council of the United States (SIECUS) website (2019), comprehensive sexual education is defined as, "age-appropriate, medically accurate information on a broad set of topics related to sexuality

including human development, relationships, decision making, abstinence, contraception, and disease prevention." Sexual education terms including comprehensive sexual health education do not have a consistent definition and assume the reader knows what is meant by the phrase comprehensive sexual education. More recently, the CDC (2020) established an evidence-based approach to sexual health education within school systems. Characteristics of a quality sexual health education program (CDC, 2020) include: taught by well-qualified, highly-trained school staff, use of engaging strategies, address the sexual health needs of all student populations including those in the lesbian, gay, bisexual, transgender, and questioning, give community resources, and foster positive relationships between adults and adolescents.

With the support of the American Medical Association (2009) and the American Nurses Association (2020), there is a national push for more comprehensive sexual health education curricula throughout the United States, including Texas. Federal funding is available to assist nurses in conducting research that includes the implementation, education, and outcomes related to the development of comprehensive sexual health education curricula (Sexuality Information and Education Council, 2019). Measurable outcomes include short-term outcomes such as knowledge levels of students in which educators measured pre and post-test of the curriculum implementation. Long-term outcomes such as reduction of teenage pregnancy rates and STI rates are also being measured. There is a need to identify sexual health educators that include registered nurses, school nurses, and teachers. These individuals will not only be capable of

teaching the information but also demonstrate comfort in teaching a comprehensive sexual health education curriculum. Identification of barriers, attitudes, and interventions to assist educators in preparation for teaching sexual health education to fifth graders is a matter of population health (HHS-OAH, 2017).

Responsibility for Teaching Sexual Health Education

The American Association of Colleges of Nursing (2008), *The Essentials of Baccalaureate Education for Professional Nursing Practice*, Essential VII: Clinical Prevention and Population Health, requires the inclusion of nursing curricula regarding health promotion and disease prevention. The FLASH program is a valid and reliable program that could be used to support this requirement and to deliver this education. Essential IX: Baccalaureate Generalist Nursing Practice requires future nurses to be educated within their schools of nursing to practice with patients across the lifespan in a variety of environments. One of the goals of *Healthy People 2020* (United States Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2018) is to improve reproductive and sexual health which will assist in the elimination of health disparities, prevention of unintended pregnancies, and a reduction in the rates of sexually transmitted infections and infertility, thereby, increasing educational and professional opportunities (HHS-OAH, 2017). This meets the requirements of the *Essentials of Baccalaureate Education for Professional Nursing Practice* (American Association of Colleges of Nursing, 2008).

Sexual health education is within the role of the nurse, as nurses have increased knowledge of health education by the profession. Nurses in several studies expressed role duties to include sexual health education (Brewin et al., 2014; Johnston, 2009; Jou et al., 2003; Landry et al., 2003; Landry et al., 2000; McFadyen, 2004; Santa Maria et al., 2017; Shewikar & Hayter, 2014). Although most school nurses (approximately 80%) found it within their role to teach sexual health education, the content discussed was based upon personal and societal demands (Jou et al., 2003; Shewikar & Hayter, 2014).

Registered nurses and student nurses feel ill-prepared to provide sexual health education with reported barriers including lack of knowledge, personal belief systems, and a lack of confidence (Areskoug- Josefsson et al., 2016b; Bal & Sahiner, 2015; Jacob et al., 2016; Sung et al., 2015; Sung & Lin, 2013; Tsai et al., 2014; Unlu et al., 2016). Aaberg (2016) found 84% of nursing faculty feel nursing graduates from their programs are not adequately prepared to address sexual health concerns or provide sexual health education.

Nursing Knowledge Regarding Sexual Health Education

Most research that includes undergraduate nursing students utilize a quantitative descriptive design and measure the sexual health knowledge of the student. Knowledge deficiencies identified during these studies included knowledge of the link between human papillomavirus (HPV) and cervical cancer, transmission routes of HIV, sexual healthcare needs by population, and communication with patients about sexual health (Donmez et al., 2019; Jacob et al., 2016; Sharon et al., 2020; Tsai et al., 2014).

Furthermore, students with higher levels of sexual health knowledge reported higher levels of self-efficacy concerning providing sexual health education (Sharon et al., 2020; Tsai et al., 2014). Sharon et al. (2020) also found those who reported higher levels of self-efficacy were more likely to provide sexual health education in their practice than those who reported lower levels of self-efficacy. Conclusions to the studies support strengthening the nursing curricula to include more sexual health education, including assessment, approaches to health care, and communication about sexual health to a variety of patient populations (Donmez et al., 2019; Jacob et al., 2016; Sharon et al., 2020; Tsai et al., 2014; see Table 1).

Table 1*Quantitative Studies*

Author/ Year	Sample/ Setting	Design/ Instrument	Findings	Major Conclusions
Sharon, D., Gonen, A., & Linetsky, I. (2020)	N = 214- nursing students in BSN program in Israel	Descriptive design- Questionnaire developed by I. Brosh- awareness, knowledge, and willingness to deal with sexual education questionnaire	Year of study in the nursing program was significant in its ability to predict knowledge about sex. Those in their first year, often had no exposure in their primary school education. According to their model this knowledge predicts self-efficacy in the study. Those who received sexual education in junior high or nursing students with more years of nursing school knowledge about sex improved their scores of self- efficacy and increased their attitude toward sexual education in practice.	Self-efficacy is the main facilitator between attitudes and intention to practice sexuality education in their future professional work. Self-efficacy is improved with more knowledge.
Donmez, S., Ozturk, R., Kisa, S., Weller, B., & Zeyneloglu, S. (2019)	N = 690 first year female nursing students in 5 state universities in Turkey	Descriptive design Questionnaire- Turkish version- Cervical Cancer and HPV Awareness Questionnaire	More than half (65.1%) answered questions incorrectly and most (82.6%) had not heard of the HPV vaccine.	Nursing students begin the nursing program with little knowledge regarding the HPV and it's relationship to cervical cancer.

Author/ Year	Sample/ Setting	Design/ Instrument	Findings	Major Conclusions
				Nursing students need more awareness and knowledge on vaccines available for the prevention of cervical cancer.
Areskoug-Josefsson, K., Larsson, A., Gard, G., Rolander, B., & Juuso, P. (2016b)	N = 186 (96 nursing students, 46 physiotherapy students, 44 occupational therapy students) in a Swedish university	Descriptive design Questionnaire- Students' Attitudes Towards Addressing Sexual Health 22 items. Under three subheadings- Comfort, future working environment, and fear of the negative influence of patients.	Nursing and OT had higher scores and reported feeling more comfortable regarding sexual health than Physiotherapy students. Significant gender differences regarding the question, "In my education I have been educated about sexual health". Females reported having an education. Males did not. Students reported needing increased sexual health education and increased communication skills about sexual health.	Nursing students, as members of the interdisciplinary team, believe sexual health is within their role; however, they reported needing increased sexual health education and increased communication skills regarding sexual health.
Jacob, C., von Lindeman, K.,	N = 617 nursing students in Germany. First	Descriptive design A standardized self-administered	Nursing students had several gaps in their knowledge of HIV and HIV transmission,	Nursing students are responsible for educating patients

Author/ Year	Sample/ Setting	Design/ Instrument	Findings	Major Conclusions
Klewer, J., & Kugler, J. (2016)	to third-year students.	questionnaire including Sociodemographic data, assessment of HIV transmission risks in different clinical and non-clinical situations, and sexual behavior of the students.	including prevention, infection risk factors, and means of transmission.	regarding HIV transmission, prevention, and risk factors. Sexual health education including HIV should be included in the undergraduate nursing program.
Unlu, H., Buduk, T., & Duyan, V. (2016)	964 nursing students/ three state universities and two private universities in Turkey	Descriptive design A demographic questionnaire developed by the investigators including demographic characteristics, family types, newspaper/ reading habits, participation in social activities, self-description about self and religious education; the ideas and attitudes constructed by family,	Religious affiliations have more negativity toward Lesbians and Gay men than those who do not. Males were more likely to view Lesbians and Gay men negatively than females in the study. Increased age was associated with positive views of Lesbians and Gay men. Most students had not received sexual health education. Those who had higher education levels reported more favorable attitudes toward Lesbians and Gay men.	There is a lack of comprehensive sexual health education within schools of nursing. Courses discussing diverse populations such as the Lesbian, Gay, Bisexual, Transsexual, and Questioning community are usually not integrated into the nursing curriculum at all.

Author/ Year	Sample/ Setting	Design/ Instrument	Findings	Major Conclusions
		social, individual and other factors Attitudes towards Lesbians and Gay men Scale		
Sung, S., Huang, H., & Lin, M. (2015)	N = 190 senior nursing students in Taiwan	Descriptive design Structured questionnaire- 4 sections: demographics, knowledge of sexual health care, Attitudes of sexual health care, and self-efficacy for sexual health care.	Results demonstrated a positive correlation between knowledge of sexual health care and attitude to sexual health care; a positive correlation between knowledge of sexual health care and self-efficacy for sexual health care; and a relationship of attitude to self-efficacy in sexual health care.	Improved knowledge in sexual health care improves self-efficacy and attitudes toward providing sexual health care by nursing students.
Bal, M. & Sahiner, N. (2015)	N = 155 nursing students; 62 were second-year students; 47 in third year; 46 in fourth year at a nursing school in Turkey.	Descriptive design Sexual Attitudes and Beliefs Survey (SABS)- 12 questions designed to measure a nursing student's attitude and beliefs that may impact the ability to provide sexual health counseling to patients.	62% felt discussing sexual health concerns with patients was essential to a patient's health outcomes. 51.6% agreed they needed to know how the patient's disease process might affect their sexual health. 67.7% reported being uncomfortable talking about sexual issues.	More than half of the nursing students reported sexual health as essential to patient outcomes, yet had a lack of preparation to provide sexual health care for their patients.

Author/ Year	Sample/ Setting	Design/ Instrument	Findings	Major Conclusions
Tsai, L., Huang, C., Shih, F., Li, C., & Lai, T. (2014)	N = 195 nursing students; 142 traditional 4 years; 53 RN-BSN undergraduate senior nursing students.	Descriptive design Questionnaire- Learning Needs for Addressing Patient Sexual Health Concerns- 24 item survey divided into three subheadings: Sexual health in health and illness; communication about patients' intimate relationships; and approaches to sexual health care.	<p>More than half of the students reported being conservative, and they did not have enough experience to provide sexual health counseling.</p> <p>Traditional nursing students reported having more needs overall than the RN-BSN students in all three subheading topics. Significant differences existed in sexual health in health and illness; admiration for individual characteristics and body image related to intimacy; and obtaining a comprehensive sexual history; identifying biopsychosocial factors in altered sexual activity and refer patients to another specialist or support group. Nursing students agreed that nursing has a role in sexual health education.</p> <p>Reported having little experience in providing sexual health care to patients.</p>	Nursing students realize that sexual health care is within their role responsibility and identified needs to include: more understanding/ knowledge related to sexual health in health and illness and in their clinical skills to provide a thorough sexual health history, and ability to refer patients for assistance.

Author/ Year	Sample/ Setting	Design/ Instrument	Findings	Major Conclusions
Sung, S. & Lin, Y. (2013)	N = 190 senior nursing students in a school of nursing in Taiwan.	Quasi-experimental, pre- and posttest design measured at 14 and 19 weeks after the educational program to evaluate the effectiveness of a 12-week sexual health education program using the: Demographic information. Knowledge of Sexual Healthcare- 31 items, Attitude to Sexual Healthcare- 18 items, and Self-Efficacy for Sexual Healthcare- 22 items. 95 students in intervention; 95 in the control group	Reported a lack of willingness to provide sexual health care to patients. The sexual health education intervention group showed significant improvements in knowledge, attitude, and self-efficacy than the control group. Statistically significant changes in all three survey instruments were seen in the experimental group with a $p < 0.001$.	Nursing students showed statistically significant improvements in sexual health knowledge, attitude to providing and self-efficacy in sexual health education by being exposed to a sexual health education intervention during their nursing curriculums.
Tsai, L., Huang, C., Liao, W.,	N = 140 senior nursing students	Descriptive design 24 item questionnaire- Learning Needs for	Age, gender, and religion were not significant influences on learning needs	Nursing students agree sexual health care is within the

Author/ Year	Sample/ Setting	Design/ Instrument	Findings	Major Conclusions
Tseng, T., & Lai, T. (2013)	in central Taiwan.	Addressing Patients' Sexual Health Concerns	<p>assessment. Participants expressed learning needs sexual health in health and illness, communication with patients' intimate relationships, and approaches to sexual health care. Five items showed an over 75% response of moderate to strong learning need:</p> <ol style="list-style-type: none"> 1. The influences of treatment on sexuality (82.1%) 2. Sexuality throughout the life cycle (80%) 3. Illness, chronic disease, and sexuality (76.4%) 4. Risk and safety in sexual activity and how to respond (75.7%) 5. Interdependence between patient and sexual partner (77.1%) <p>A statistically significant result in "Agreement on sexual health care as a</p>	<p>role of the nurse but can identify several learning needs such as how treatment affects sexual health, the effects of illness and disease on sexual health, and the need to understand sexual health throughout the life cycle.</p>

Author/ Year	Sample/ Setting	Design/ Instrument	Findings	Major Conclusions
Magnan, M. & Norris, D. (2006)	N = 341 nursing students; 294- Traditional nursing program; 47- seniors in an accelerated second-degree program.	A descriptive, correlational study Sexuality Attitudes and Beliefs Survey (SABS) to measure nursing students' attitudes and beliefs about patient sexual health in nursing practice.	nursing role" with a <i>p</i> -value of < 0.001. Barriers to addressing sexual health concerns gender-specific- male students more barriers than female students. Lower scores indicating fewer barriers to providing sexual health care to patients were reported by students who had received sexual health education in nursing school (<i>p</i> < 0.005) than those who did not receive instruction. 77.6% of students reported discussing sexual health concerns were significant for patient outcomes. 86.1% believe giving patient's permission to talk about sexual health is a nursing responsibility. second-degree students moreover felt discussing sexual health with patients was not a nursing responsibility.- 76.1%	Nursing students view sexual health care as a nursing responsibility; however, identified barriers to included not feeling confident or comfortable in providing sexual health care.

Author/ Year	Sample/ Setting	Design/ Instrument	Findings	Major Conclusions
			<p>compared to 90.1% of traditional students.</p> <p>Only 63.5% of students felt confident in their ability to address a patient's sexual health concerns.</p> <p>36% reported not feeling comfortable in addressing sexual health concerns.</p>	

Qualitative studies using nursing students were not found within the literature; however, a study by Brewin et al. (2014) using school nurses as participants was included in the literature review. The study utilized a semi-structured interview and included the following question: "Were you prepared in your educational process for this kind of education?" Eighteen registered nurses participated. Major themes associated with the research included facilitating factors, internal and external barriers to providing sexual health education. External barriers included items such as administration. Those items are beyond the focus of this study. Facilitating factors included items such as nurse education and experience. Of the 18 registered nurses who participated, none reported having formal education toward providing sexual health education within their schools of nursing and each had to attend continuing education to gain the skills necessary to provide sexual health education to students. All participants agreed that providing sexual health education is within the role of the nurse. Internal barriers noted by the school nurses were lack of time, privacy, and the priority level of other academic content as negatively impacting sexual health education. None of the nurse participants offered formal sexual health education at their schools. Each participant reported only offering informal education to their student populations (see Table 2).

Table 2*Qualitative Studies*

Author/ Year	Sample/ Setting	Design/ Instrument	Findings	Major Conclusions
Brewin, D., Koren, A., Morgan, B., Shipley, S., & Hardy, R. (2014)	N = 18 school nurses from 12 high schools in Massachusetts	Semi-structured interview guide consisting of 18 questions. Included because question 11 asked, "Were you prepared in your educational process for this kind of education?"	Nurse Education and experience varied. None had formal sex education within their nursing programs. Sought out continuing education to learn to provide sexual education. Sexual health education is associated with the role of the school nurse. Comfort and fear and frustration were noted as themes.	School nurses feel sexual health education is within their role responsibilities; however, have not been adequately prepared within their schools of nursing to provide sexual health education.

Nursing Attitudes Toward Providing Sexual Health Education

Attitudes toward providing sexual health education are unique to the individual. Jou et al. (2003) found registered nurses who attended continuing sexual health education courses, seminars, and lectures focused on sexual health education reported being more enthusiastic and applied more teaching strategies than those who did not attend formal training in sexual health education. Attitude is critical because it can "guide thought, behavior, and feelings" (Petty et al., 2003, p. 353).

Most research including undergraduate nursing students' attitudes towards providing sexual health education was quantitative descriptive designs. Higher levels of sexual health knowledge were associated with more positive feelings of providing sexual health education in their future occupations (Areskoug-Josefsson et al., 2016b; Bal & Sahiner, 2015; Sharon et al., 2020; Sung et al., 2015; Unlu et al., 2016). Conclusions of the studies support changes to nursing education to improve sexual health knowledge; thereby, improving attitudes towards providing sexual health education.

Mixed-method, interventional studies involving undergraduate nursing students are limited. Bell and Bray (2014) utilized a two-phase mixed method interventional design to study the knowledge and attitudes of student nurses towards patients with sexually transmitted infections. Their purpose was to explore potential changes to the nursing curriculum. 117 student nurses participated in a survey followed by 12 participants within the qualitative portion. Data collected before the curriculum change indicated that students with higher levels of education and knowledge demonstrated more

positive attitudes towards patients with sexually transmitted infections. Data collected after the curriculum change showed improved attitudes towards patients with an STI. Qualitative themes identified several gaps in knowledge and requests for improving the curriculum to include more sexual health education in phase one, whereas, after the curriculum change, phase two participants reported higher levels of knowledge and improved attitudes toward providing care for patients with sexually transmitted diseases.

Families Talking Together is a parent-based sexual health education program used to decrease teen pregnancy and reduce risk behaviors leading to the spread of sexually transmitted diseases. Santa Maria et al. (2016) designed an intervention mixed-methods study to assess the impact of the program on nursing students' attitudes towards providing sexual health education. Thirty-one baccalaureate nursing students participated in a 16-hour facilitator training intervention implemented in a Boys and Girls Club. Major themes from the exit interviews indicated overall, nursing students identified gaps in educational preparation within their schools of nursing and indicated a need for more experiences to provide sexual health education. Statistically significant, $p < 0.01$, improvements were noted in the nursing student attitudes following the intervention in items such as parental strategies, reduction in barriers and improved self-efficacy for sexual health communication, and experience in providing sexual health education within their school of nursing (see Table 3).

Table 3*Mixed Methods Studies*

Author/ Year	Sample/ Setting	Design/ Instrument	Findings	Major Conclusions
Santa Maria, D., Markham, C., Crandall, S., & Guilamo-Ramos, V. (2016)	N = 31 senior level baccalaureate nursing students/ large metropolitan area- Pilot study	Pretest posttest design with a qualitative exit interview Adapted parent survey Families Talking Together Post-intervention exit interview	Statistically significant improvements in student outcomes of parenting strategies, barriers to communication regarding sexual health, self-efficacy, and sexual health counseling experience. Exit Interviews- 3 themes emerged: 1) A need for increased sexual and reproductive health preparation 2) A desire for more research experience and opportunity for involvement in nursing research 3) Educational gaps in family-focused public health nursing	Nursing students are underprepared to provide sexual health education to adolescents. Educational interventions show increased competency in role responsibilities, knowledge, comfort, and confidence in providing sexual health education to the adolescent population.
Bell, A., & Bray, L. (2014)	N = 117 quantitative; N = 12 qualitative group data student	Two-phase mixed methods study design	Nursing students with increased sexual health education reported higher	Nursing students can learn sexual health information if it is

Author/ Year	Sample/ Setting	Design/ Instrument	Findings	Major Conclusions
	nurses in the United Kingdom.	First phase collected current attitudes and knowledge related to the care of a patient with a sexually transmitted infection. Second phase examined the change in curriculum to a subsequent group of students' reported knowledge and attitudes. A structured questionnaire adapted from Nurses' Attitudes about HIV/ AIDS scale. Qualitative data- aimed to explore students' experiences of the curriculum relating to sexual health issues, to discuss within a Graffiti group format.	knowledge levels and demonstrated more positive attitudes toward patients with sexually transmitted infections. Both cohorts of students identified educational needs in sexual health education as essential to challenge negative attitudes and positively impact patient care. Only 31% of students felt they had enough knowledge in Phase 1. 61% felt they had enough knowledge in Phase 2. Qualitative data theme: Even though the quantitative data showed an increase in knowledge; nursing students reported needing more education on signs and symptoms, more sessions on sexual health to benefit them; how to deal with patient questions or to give advice.	provided during their nursing programs. Education also improves attitudes toward patients with sexually transmitted infections. Themes indicate even with exposure, students wanted more education and knowledge regarding sexually transmitted infections.

Family Life and Sexual Health Education Curriculum

The FLASH curriculum, developed by the Seattle/ King County-Washington Public Department of Health, is a one-hour comprehensive sexual health education program. The program was last updated in 2016 (Public Health- Seattle and King County, 2017). The authors and contributors to the curriculum included physicians, researchers, public health officials, and healthcare and education professionals. The curriculum design used the theory of planned behaviors (Public Health- Seattle and King County, 2017) to create a science-based, medically accurate sexual health information to reduce unintended pregnancies, teen pregnancy, STI rates, and sexual violence at developmentally appropriate increments. Topics included within the curriculum are the reproductive system, puberty, decision making, communication, sexual health and hygiene, sexually transmitted infections, HIV/AIDS, pregnancy, touch and abstinence, sexual health laws, sexual abuse- recognizing and reporting, and resource people and agencies. FLASH is a science-based program, not an evidence-based program. The authors have maintained the characteristics of an effective health education curriculum by aligning content with the CDC's National Health Education Standards for Sexual Health and the National Sexuality Education Standards (CDC, 2020). The curriculum's topics and theoretical base coincide with the Texas Health and Safety Code 85.004, Texas Education Code 115.7, and Texas Education Code 28.004. The FLASH curriculum for fourth, fifth, and sixth-grade students is being utilized as the education intervention for the fourth semester, senior-level nursing students. This allows the future nurses an

opportunity to see how to provide education at a developmentally appropriate level to meet the standards and education codes as instructed by the state of Texas. The fifth-grade curriculum has been utilized in two charter schools in southeast Texas in the last 6 years by the principal investigator. Since implementation at the two charter schools, fifth-grade student participants demonstrated an increase in sexual health knowledge and reported fewer barriers to learning about sexual health education from pretest to the posttest. This is the same curriculum being utilized as the educational intervention for the fourth-semester, senior-level nursing students (Cupit & Kuntz, 2016).

Conclusion

Most research involving undergraduate nursing students is descriptive. Santa Maria et al. study (2016) and Bell and Bray (2014) used educational interventions for nursing students. Santa Maria et al. (2016) post educational intervention found statistically significant improvements in nursing student knowledge, a decrease in perceived barriers, improved communication skills, and self-efficacy in sexual health education. Bell and Bray (2014) found more positive attitudes were noted post educational intervention toward patients with STIs than the students had pre-intervention. Quantitative descriptive research supports education in sexual health and is associated with improved attitudes towards providing sexual health education to adolescents (Areskoug-Josefsson et al., 2016b; Bal & Sahiner, 2015; Donmez et al., 2019; Jacob et al., 2016; Sharon et al., 2020; Sung et al., 2015; Sung & Lin, 2013; Tsai et al., 2014; Unlu et al., 2016).

Attitude is important because it “guides thoughts, behavior, and feelings” (Petty et al., 2003, p. 353). Sexual health education is within the role of the nurse (Brewin et al., 2014; Johnston, 2009; Jou et al., 2003; Landry et al., 2003; Landry et al., 2000; McFadyen, 2004; Shewikar & Hayter, 2014). Education and experience guide patient teaching, comfort, and self-efficacy in undergraduate nursing students (Bell & Bray, 2014; Donmez et al., 2019; Santa Maria et al., 2016; Sharon et al., 2020). Exposure to sexual health education, knowledge, training, and skills development toward sexual health education is essential in the educational preparation of nursing students (American Association of Colleges of Nursing, 2008; Bell & Bray, 2014; Donmez et al., 2019; Santa Maria et al., 2016; Sharon et al., 2020). A self-identified barrier to providing sexual health education to adolescents included personal belief systems. There are studies to support sexual health education interventions to improve attitudes in registered nurses (Brewin et al., 2014; Johnston, 2009; Jou et al., 2003; Landry et al., 2000; McFadyen, 2004); however, again, most research involving nursing students are limited to quantitative descriptive studies (Sharon et al., 2020; Donmez et al., 2019; Bal & Sahiner, 2015; Byrne & Murphy, 1993; Magnan & Norris, 2006; Unlu et al., 2016).

Interventional studies to measure attitudes and self- perceived levels of comfort, confidence, and role responsibility are lacking. Statistics show one in four adolescents has a STI and 12.1% of sixth graders are sexually active (CDC, 2020). There is a need to prepare qualified sexual health educators, including registered nurses and school nurses. Additional research is needed to identify barriers, attitudes, and interventions to assist

undergraduate nursing students in preparation for teaching sexual health education to fifth graders. It is a matter of population health.

CHAPTER III METHODOLOGY

Research Questions

The following research questions guided this research study:

- 1) What are the attitudes of senior-level baccalaureate nursing students toward providing sexual health education to fifth-grade students?
- 2) Will participation in a FLASH Education Program improve students' attitudes, comfort levels, and role responsibility toward providing sexual health education to fifth-grade students as compared to those who participate in an attention control group who receive a course on stress management?
- 3) Will participation in a FLASH Education Program decrease fear of the negative impact on patient relations when providing sexual health education to fifth-grade students better than an attention control group who receive Stress Management education?
- 4) What barriers do senior-level baccalaureate nursing students perceive toward providing sexual health education to fifth-grade students?

Research Design

The research design was a mixed-methods, two-group, pretest-posttest interventional design, utilizing random assignment to an educational intervention or an attention control group. This design allowed the researcher to study a problem using an

instrument for quantitative data and provide a more well-rounded understanding by incorporating qualitative data into it (Creswell, 2015).

The two groups, pretest-posttest interventional mixed methods design evaluated the effects of the FLASH Education Intervention with the fourth semester, senior-level nursing students compared to an attention control group of the same level. As described in Chapter 2, the FLASH curriculum for fourth, fifth, and sixth-grade students is being utilized as the education intervention for the fourth semester, senior-level nursing students provided in a PowerPoint presentation. The objectives for the FLASH curriculum were to identify why FLASH are crucial to community health, key aspects of how to teach sexual health education to fifth-grade students, and the fifth-grade program. FLASH topics at the fifth-grade level include families, self-esteem, gender roles, friendship, decision making, sexual exploitation, puberty, reproductive system, pregnancy, and HIV/ AIDs (Public Health- Seattle & King County, 2017; see Appendix E).

The stress management course provided to the senior nursing students was based on high-level evidence (including systematic reviews and randomized controlled trials) supporting the utilization of a set of multimodal interventions to decrease the incidence of stress and anxiety. Topics for stress management were presented by a doctorally prepared nurse researcher via PowerPoint presentation and included time management, assertive communication, problem-solving, relaxation, and support by active listeners (Labrague et al., 2017; Turner & McCarthy, 2017; see Appendix F).

Participants were randomly assigned either into the intervention or attention control group using Research Randomizer (Urbaniak & Plous, 2017). Research Randomizer is a free resource to allow the generation of quick random numbers to assign participants. The randomized number was associated with the intervention or the attention control group. After the pretest and demographic information was collected, students with numbers associated with the attention control group reported to one room, while those with numbers associated with the educational intervention group remained in the other room. No names were collected. The intervention group attended a 1-hour FLASH education intervention for fifth-grade education, while the attention control group attended a 1-hour stress management lecture. The dependent variables were the students' attitudes, comfort levels, role responsibility toward providing sexual health education to fifth-grade students, and fear of negatively impacting patient relations. Demographics and participants' attitudes toward competency in teaching sexual health education in their future occupations were measured quantitatively. Qualitative data were solicited from the fourth semester, senior-level nursing students as perceived barriers to providing sexual health education to fifth-grade students. The description of the procedure for the collection and treatment of data follows.

Setting

The setting for this study occurred within two baccalaureate schools of nursing located in the southeast United States. Fourth-semester, senior-level nursing students participated in the educational intervention or in the attention control group that occurred

simultaneously in two separate classrooms. Participants were surveyed pretest and posttest during a regularly scheduled break immediately before and immediately post education and control group sessions.

The educational intervention group received a 1-hour FLASH Education Program while the attention control group received a 1-hour stress management lecture. Both programs occurred simultaneously to prevent cross-contamination of the data. Participants in both groups were asked to complete a demographic questionnaire before the pretest. The posttest was given to participants after the education intervention or attention control course. Following the completion of the posttest quantitative questionnaire, participants in both groups received seven open-ended qualitative questions asking about perceived barriers towards providing sexual health education to fifth-grade students. A place for additional comments was also offered (see Appendix A, Appendix B, and Appendix C). Based on the pilot study, participants were able to complete the demographics and pretest questionnaire in 15 minutes and the posttest questionnaire with qualitative questions in 30 minutes.

Population and Sample

The study population included fourth-year, senior-level baccalaureate nursing students at two universities in Southeast Texas.

Inclusion criteria were as follows:

1. All fourth-semester, senior-level baccalaureate nursing students, as these students have completed the majority of their coursework containing health assessment, community nursing, child and maternal health, and pediatrics.
2. Students must also speak, read, write, and comprehend English as the primary investigator is not fluent in any other language.

Exclusion criteria were as follows:

1. Junior level or third-semester senior-level baccalaureate nursing students due to not being introduced to classwork including pediatrics, community, and child and maternal health nursing.
2. Fourth-semester, senior-level baccalaureate nursing students repeating the fourth semester due to the likelihood of previous participation in the pilot study. These students were identified through a question on the survey to prevent potential embarrassment by student participants.

Most nursing research has a small to moderate effect size (Polit & Beck, 2012). The sample size was approximated utilizing a power of 0.80 and an effect size of 0.25 (f) for repeated measures multivariate analysis of covariance (RM MANCOVA). Using RM MANCOVA with two groups and two-time points, each group should have 64 participants for a total of 128. With the consideration of a 15% potential invalid data, the total sample size recruited was 148. A power analysis was performed using G*Power 3.1.9, a statistical power analysis software (Faul et al., 2009). There were approximately 150 fourth semester, senior-level nursing students on one campus, and approximately 90 fourth-semester,

senior-level students on the other campus. Data collection occurred during one session on a regularly scheduled class date during their lunch break and between classes.

Protections of Human Subjects

Approval for this study was granted by the University of Texas Medical Branch Institutional Review Board and Texas Woman's University Institutional Review Board through an interagency agreement. A statement at the beginning of the pretest and posttest regarding the decision to participate in the surveys implied consent, as a consent form would be the only record linking the subject and the research data. No direct or indirect identifiers were collected. Only anonymous survey responses were captured via the Psychdata website, which is a password-protected site, and data was only accessed through the Principal Investigator's (PI) password-protected computer in the PI's office, which was only accessible via the PI's badge access.

Instruments

Eight demographic data questions requested information about the age, gender, marital status, education, religion, previous coursework in sexual health, religious affiliation, and if they were a teen parent. Additional demographic questions ensured that participants met the inclusion criteria (see Appendix A). Demographic questions were chosen related to previous research indicating correlations between age, gender, marital status, education, and previous coursework in human sexuality affecting student attitudes toward providing sexual health education.

The pretest and posttest quantitative instrument used was the SA-SH. Permission to use the SA-SH was received from the developer, Areskoug-Josefsson et al., (2016a). Per the research development team, the purpose of the questionnaire was to measure attitudes pre and post educational interventions that may improve students' perceptions of comfort, responsibility in their future working environment and decrease fear of negatively impacting patient relations. The questionnaire consists of 22 statements related to present feelings of comfort, future working environment, and fear of negative impacts to the nurse-patient relationship. Each statement is measured utilizing a Likert scale ranging from strongly disagree to strongly agree (see Appendix B). The calculated total sum of scores is associated with student attitudes' of comfort and preparedness to address sexual health in their future occupations. A total sum score of 22–56 correlates with students who feel uncomfortable and unprepared, a total sum score of 57–79 correlates with students who feel comfortable and somewhat prepared in certain situations, and a total sum score of 80–110 correlates with students who feel comfortable and well prepared (Areskoug-Josefsson et al., 2016a).

A test-retest format measured the validity and reliability of the tool in students enrolled in a health occupations curriculum. During the initial test of the SA-SH questionnaire, the questionnaire was sent to 419 nursing students, 193 physiotherapy students, and 136 occupational therapy students. Of the 186 respondents, 96 were nursing students. There were 53 participants in the retest group (Areskoug-Josefsson et al., 2016a). Results from the validity and reliability are discussed below.

Validity

Face validity occurred using two different student groups for a total of ten students. The student acknowledged sexual health to be a new construct but found the themes important. Construct validity using explorative factor analysis resulted in three meaningful factors of Factor 1: present feelings of comfortableness, Factor 2: future working environment, and Factor 3: fear of negative influence on future patient relations (Areskoug-Josefsson et al., 2016a).

Reliability

The Cronbach's alpha for Factor 1 was 0.90, Factor 2 was 0.73, and Factor 3 was 0.74 (Areskoug-Josefsson et al., 2016a). A summative score was obtained utilizing the factors measured within the instrument to obtain an overall score rating the nursing students' comfort and confidence in providing FLASH education to fifth-grade students in their future occupations as registered nurses. The Cronbach's alpha of the overall instrument ranges from 0.67–0.71 with high relevance in item content validity index of 0.82–1.0. Factors 1, 2, and 3 scores were also obtained to measure differences pretest to posttest scores in each factor as well as the overall sum score changes (Areskoug-Josefsson et al., 2016a).

Reliability statistics from the current study using 101 fourth-semester, senior-level nursing students found an overall instrument Cronbach's alpha of 0.75. The Cronbach's alpha for Factor 1 was 0.94, Factor 2 was 0.64, and Factor 3 was 0.61. This is comparable to previous studies.

In addition to the quantitative questions on the SA-SH, seven qualitative questions were asked of all study participants during the posttest. This allowed nursing students to further discuss perceived barriers for providing sexual health education to fifth-grade students. An additional question allows the students to comment on anything further they would like the researcher to know (see Appendix C).

Data Collection

A randomized two-group, mixed methods, pretest-posttest interventional design with random assignment to an educational intervention or an attention control group was used. An email invitation was sent to all senior-level, fourth-semester baccalaureate nursing students with an active university email address discussing the purpose and requirements of participation including the pretest survey, 1-hour FLASH Educational Program, and a posttest survey (see Appendix D). The pretest and posttest questionnaire was the SA-SH. The total time required for participation was approximately 1–2 hours for the incentive, pretest, study intervention, and posttest surveys. The incentive for participation was a meal during the course offering on a scheduled lunch break during one of the regular campus course days.

Pilot Study

A feasibility study was conducted to test the study methods. Before data collection, Institutional Review Board approval was obtained. Using Research Randomizer, students were randomly assigned to the educational intervention or the attention control group. A sample size of $N = 11$ fourth semester, senior-level nursing

baccalaureate students were randomly assigned to the intervention ($n = 6$) and attention control ($n = 5$) groups. The intervention group attended an hour-long education session presented by the primary investigator using a PowerPoint slide show and lecture format entitled, “FLASH for Registered Nurses and Undergraduate Nursing Students” while simultaneously, the attention control group attended an hour-long education session, “Stress Management Techniques”. To decrease the chance of cross-contamination, the study was conducted in one session. The pretest, education session, and posttest occurred on October 25, 2017.

Both groups were surveyed together during the pretest and then divided into their prospective groups. Completion of the pretest survey implied consent. There was no identification of the participant other than the randomized number given to the participant upon entry into the study room. Participants’ unique identifier numbers were maintained to indicate assignment into the intervention or attention control group. There was not an attrition rate.

Demographics frequencies reflected all study participants were enrolled in the Baccalaureate of Science in Nursing (BSN) program. Participants varied in age from 18–45 years old. One participant was male, 10 were female. Nine of the students were never married or considered themselves single, two were married or partnered. Four participants had a high school diploma, one had an associate degree, four had a baccalaureate degree, and two had a master’s degree.

Preliminary results from quantitative data analysis showed student participants within the FLASH education intervention had total score sum ranges 65–77 in the pretest with a mean score of 69.5 with a standard deviation of 4.59. Student participants randomized to the attention control group had pretest total sum scores ranges 66–79 with a mean score of 71.25 with a standard deviation of 3.59. All participants fell within the comfortable and prepared in some situations to provide sexual health education to fifth-grade students before participation in the educational intervention or the attention control education. Post-test total sum scores in the FLASH educational intervention group ranged 66–79 with a mean score of 73.67 with a standard deviation of 4.76, those in the attention control group for stress management ranged 66–80 with a mean score of 72.2 with a standard deviation of 4.35. All individual participants in the FLASH educational intervention group showed an increase in total sum scores in the SA-SH.

A one-way between-groups analysis of covariance was conducted to compare the effectiveness of the FLASH education intervention and the attention control group stress management course on students' attitudes of comfort and preparedness towards providing sexual health education to fifth-grade students. The independent variable was the type of intervention (e.g., family life sexual health education, stress management), and the dependent variable consisted of the total sums scores on the SA-SH administered after the intervention was completed. Fourth semester, senior-level baccalaureate nursing students' scores on the pre-intervention administration on the SA-SH were used as the covariate in this analysis.

Initial inspection of the assumptions of normality, linearity, homogeneity of variances, homogeneity of regression slopes, and reliable measurement of the covariate was conducted to ensure no violations were found. There were no significant differences between the intervention and attention control groups after adjusting for the pre-intervention scores. There were no significant differences between the two groups on post-intervention total sum scores on the SA-SH $F(1,7) = 0.35, p = 0.57, \text{partial eta squared} = 0.05$. There was a strong relationship between pre-intervention and post-intervention scores on the SA-SH, as indicated by *partial eta squared value* of 0.70.

Preliminary qualitative match themes identified in the literature search regarding identified barriers such as a lack of knowledge, parental concerns, lack of confidence, and self-efficacy in teaching sexual health education. Comments such as, “I would be nervous they wouldn’t understand my point” and “I would worry about the accuracy of my knowledge and I would find it difficult to talk to the opposite gender”. Other comments included, “the lack of parental consent might be a barrier as they can impede a student from receiving sexual education” and, “I think the biggest barrier would be me being afraid to say something and parents getting upset at me,” were captured via the online quantitative and qualitative questionnaires.

The pilot study was offered at the end of a regularly scheduled class day. As a result in lack of participation during the pilot study, only 11 of 122 eligible students participated. The principal investigator collaborated with the nursing faculty at both schools to choose times between classes when all students would be required to be on

campus. The PI also moved locations to be more conveniently located for student participants.

Treatment of Data

Quantitative Analysis

Quantitative data were analyzed using Statistical Package for the Social Sciences (SPSS) Version 25.0. Frequencies and percentages were used for categorical demographic data. Means and standard deviations were obtained from continuous demographic data. Preliminary analyses were first performed to find key demographic variables that were controlled for in the primary analyses. Specifically, a one-way analysis of variance (ANOVA) was used to assess the differences of dependent variables by demographic categorical variables. Crosstabulations using Pearson's chi-square was conducted between demographic categorical variables and groups. Pearson's correlation was used between demographic continuous variables and dependent variables. In primary analyses, repeated measures analysis of covariance (ANCOVA) with two groups and two-time points was utilized to examine overall total sum score changes on the SA-SH. Repeated measures multivariate analysis of covariance (MANCOVA) with two groups and two-time points were utilized to examine the differences between the three factors between the intervention group and the control group pretest and posttest. Significance was calculated at $\alpha = 0.05$.

Qualitative Analysis

A qualitative descriptive design assisted the primary investigator in understanding the quantitative data more holistically. The qualitative questions allowed the study participants to expand on barriers to providing sexual health education to fifth-grade students including comfort levels, role responsibility, and fear of negative impacts on patient relationships. Qualitative data from participants were analyzed using qualitative content analysis methodology by Graneheim and Lundman (2004).

The PI read survey data several times, highlighted phrases, and assigned codes based on themes provided in previous literature. A reflective process and the review of literature allowed for a collection of sub-themes on the phenomena which allowed for thematic interpretation and identification. Credibility, dependability, and transferability were established to attain the trustworthiness of the qualitative data (Creswell, 2013; Graneheim & Lundman, 2004). Credibility depended on three distinct elements: rigorous techniques and methods for gathering high-quality data, the credibility of the researcher, and the philosophical belief in the value of the qualitative inquiry (Patton, 1999). The first was met through the study participants' written collection of data. Study participants were given the questions via a written questionnaire and completed during the study process. The second was met by utilizing the expertise of an experienced qualitative researcher's feedback via an independent thematic analysis before meeting to discuss interpretations of the qualitative data. The second researcher is a published, doctoral-

prepared (Ph.D.) qualitative researcher and a member of the institutional review board for a local university. The third was to provide a more holistic view of students' attitudes towards providing sexual health education by sharing both negative and positive examples of the participants' viewpoints towards providing sexual health education to fifth-grade students. Dependability was maintained by the collection methods being the same for all study participants via a written survey with open-ended questions. Transferability was obtained by the description of data, study guidelines, and the variations of characteristics of study participants.

CHAPTER IV

RESULTS

The purpose of this study was to examine the overall effectiveness of participation in a FLASH education intervention on the attitudes of senior-level, fourth-semester BSN students as compared to an attention control group. Patient education is within the role of the registered nurse, including sexual health education. There is a need for all nurses to be able to discuss sexual health education within all populations, but especially adolescents. Research supports sexual health education before adolescents become sexually active to reduce early initiation of sex and reduce risk behaviors that expose them to sexually transmitted infections and teen pregnancy. Senior-level, fourth-semester nursing students will soon enter the workforce in a variety of settings, including those who work directly with adolescents. Educational interventions in nurses have shown statistically significant improvements overall attitude including preparation, knowledge, decreased perceptions of barriers to providing sexual health education, and improved self-efficacy. Intervention research regarding overall attitudes, including levels of comfort, confidence, and role responsibility towards providing sexual health education to fifth-grade students using undergraduate nursing students is limited.

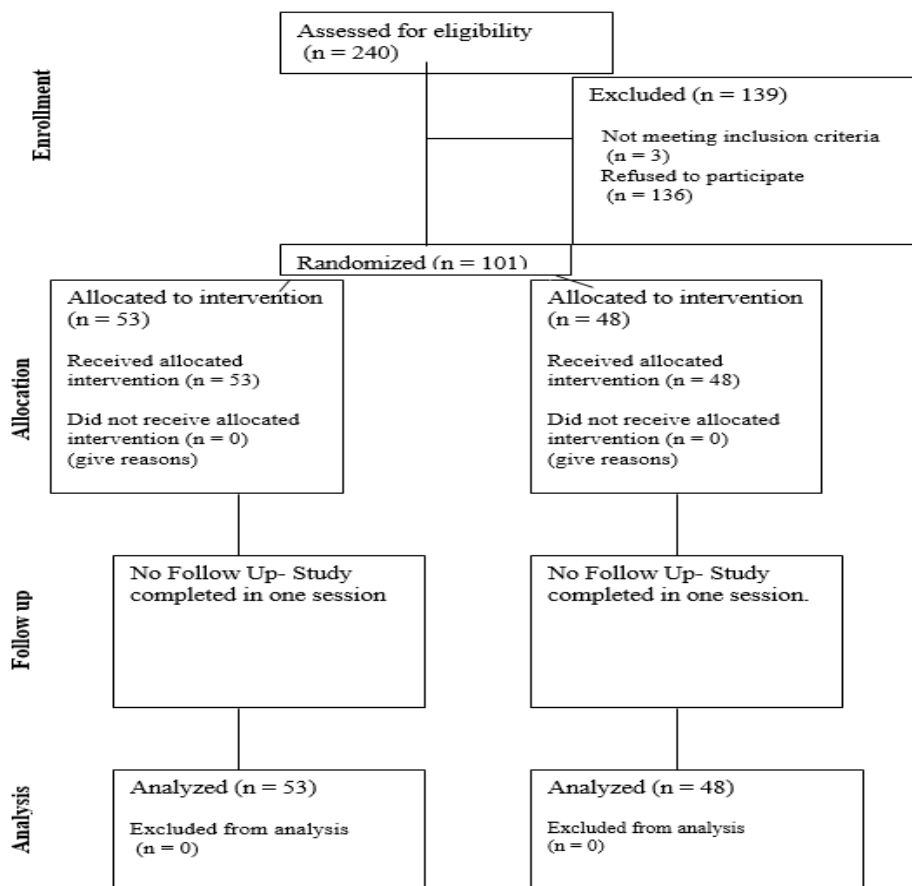
Description of the Sample

A total of 104 individuals attended the 1-hour sessions with one participant excluded for not being a BSN student and two others excluded due to not being a senior-

level, fourth-semester nursing student. Of the remaining 101 study participants, 53 were randomly assigned to the FLASH education intervention group, and 48 were randomly assigned to the stress management attention control group. Ten participants were missing answers to three of the sociodemographic questions. These were recoded as “no answer”. (see Figure 2).

Figure 2

CONSORT diagram of a 2-group randomized mixed-methods study



Note. This figure demonstrates the total number of participants invited to participate, excluded, and randomized into either the attention control group or the educational intervention group.

Quantitative data analysis was performed using SPSS (Version 25.0). Categorical data were reported using frequencies and percentages. Crosstabulations using the likelihood ratio were obtained to assess for differences in study participants assigned to the attention control group and the study participants assigned to the educational interventional group.

Data analysis showed the majority of participants had not attended any advanced sexual health education courses ($n = 58$, 57.4%); participants who had previously attended a human sexuality course ($n = 24$, 23.8%); 5.9% had participated in a mother-baby bonding initiative; 3% ($n = 3$) had participated in both the mother-baby bonding initiative and human sexuality education and 9.9% ($n = 10$) did not answer the question. There were no significant differences between the attention control and educational intervention groups (see Table 4).

Table 4*Previous Sexual Health Education Course*

	Total		Attention Control		Intervention Group		Likelihood Ratio
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Previous Sexual Health Education							
Yes, Human Sexuality	24	23.8	12	25	12	22.6	0.95
Yes, Baby Mother Bonding	6	5.9	3	6.3	3	5.7	
Yes, Human Sexuality and Baby Mother Bonding	3	3	2	4.2	1	1.9	
No	58	57.4	26	54.2	32	60.4	
No Answer	10	9.9	5	10.4	5	9.4	

Frequency statistics for the demographic data indicated the majority of the participants were between the ages of 18–24 ($n = 77$, 76.3%); 15.8% ($n = 16$) were 25–30; 4% ($n = 4$) were 31–35; 3% ($n = 3$) were in the 41–45 age range, and 1% ($n = 1$) in the 46–50 age range. Most of the senior-level, fourth-semester students were female at 91.1% ($n = 92$) with 6.9% ($n = 7$) males and 2% answering to others. Most participants were single/never married ($n = 89$, 88.1%), 8.9% were married/ partnered, and 3% were divorced/ separated. Most participants stated having completed a more than a high school diploma or GED. Participants reported having a Baccalaureate degree 44.6% ($n = 45$), followed by 29.7% ($n = 30$) reporting a high school or equivalent diploma, 20.8% ($n = 21$) had an associate's degree, and 5% ($n = 5$) reported having completed a previous Master's Degree program. Most participants reported being Christian at 82.2% ($n = 83$), followed by no religious affiliation at 8.9% ($n = 9$), other at 7.9% ($n = 8$) and Jewish 1% ($n = 1$). Only one of the participants identified as a teen parent. There were no significant differences between the educational intervention group and the attention control group in the sociodemographic data sets (see Table 5).

Table 5*Demographics of Study Population*

Demographic		Total		Attention Control		Intervention Group		Likelihood Ratio
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Age (in years)	18–24	77	76.2	38	79.2	39	73.6	0.64
	25–30	16	15.8	6	12.5	10	18.9	
	31–35	4	4	2	4.2	2	3.8	
	41–45	3	3	2	4.2	1	1.9	
	46–50	1	1	0	0.0	1	1.9	
Gender	Female	92	91.1	43	89.6	49	92.5	0.12
	Male	7	6.9	5	10.4	2	3.8	
	Other	2	2	0	0.0	2	3.8	
Marital Status	Single/Never Married	89	88.1	43	89.6	46	86.8	0.13
	Married/Partnered	9	8.9	5	10.4	4	7.5	
	Divorced/Separated	3	3	0	0.0	3	5.7	
Highest Education	High School/GED	30	29.7	11	22.9	19	35.8	0.46
	Associate Degree	21	20.8	12	25	9	17	
	Bachelor's degree	45	44.6	23	47.9	22	41.5	
	Master's degree	5	5	2	4.2	3	5.7	
Religion	Christian	83	82.2	38	79.2	45	84.9	0.54
	No Religious Affiliation	9	8.9	5	10.4	4	7.5	
	Other	8	7.9	5	10.4	3	5.7	

Demographic	Total	Attention Control	Intervention Group	Likelihood Ratio
Jewish	1	0	1	1.9

Findings of the Study

The next sections present the study findings. Quantitative analysis of the pretest and posttest was conducted to measure differences between the attention control and educational intervention groups on total sum scores on the SA-SH and the three factors of present feelings of comfort, future working environment, and perceived fear of negative impacts on future patient relationships. Qualitative analysis was conducted to provide more insight into senior-level, fourth-semester nursing students' perceptions of present feelings of comfort, role responsibility, and perceived barriers to providing sexual health education to fifth-grade students.

Quantitative Analysis

Quantitative data were analyzed using SPSS (Version 25). The following research questions guided quantitative data analysis.

- 1) What are the attitudes of senior-level baccalaureate nursing students toward providing sexual health education to fifth-grade students?
- 2) Will participation in a FLASH Education Program improve students' attitudes, comfort levels, and role responsibility toward providing sexual health education to fifth-grade students as compared to those who do not participate in the FLASH Education Program?
- 3) Will participation in a FLASH Education Program decrease fear of the negative impact on patient relations when providing sexual health education to fifth-grade students better than a Stress Management Program?

A one-way ANCOVA was utilized to compare the effectiveness of the FLASH educational intervention to an attention control group who received stress management. The independent variable was the group in which the student participants were assigned. The dependent variable was the total score changes on the SA-SH. Student participant scores on the pre-test administration of the SA-SH were used as the covariate. No violation of the assumptions of normality, linearity, homogeneity of variances, homogeneity of regression of slopes, and the reliable measure was found in the preliminary analysis of data (see Table 6).

Table 6*Reliability Statistics*

	Cronbach's Alpha	N of Items
Total Score	.754	22
Factor 1: Present Feelings of Comfort	.938	8
Factor 2: Future Working Environment	.644	3
Factor 3: Fear of Negative Impacts to Patient Relationships	.607	3

Note. Construct validity by the author of the tool found the three major factors. The remaining items address additional educational needs.

Quantitative Results

After adjusting for the pretest scores on the SA-SH using the one-way ANCOVA, there was a significant difference between the two groups on the post-intervention scores on the SA-SH, $F(1, 41) = 19.00, p < 0.001, \text{partial } \eta^2 = 0.18$. There was a strong relationship between the pre-intervention and post-intervention scores on the SA-SH, as indicated by a *partial eta squared* value of 0.42. The mean score on the SA-SH for the education intervention was 78.24 with a standard deviation (*SD*) of 8.01. The attention control group's pretest mean score was 78.96 with an *SD* of 8.76. The posttest scores at time 2 show the FLASH education intervention group's mean score increased from 78.24 to 85.4 with ranges of 83.07 to 87.74. Participants in the attention control group who attended a stress management course given at the same time did not significantly increase at time 2 revealing a total mean score of 79.67 and ranges from 77.11 to 82.22 (see Table 7).

Table 7*Means, Standard Deviations, and Significance for Time 1 and Time 2*

Group	Scale	Time 1		Time 2		<i>p</i>
		Mean	<i>SD</i>	Mean	<i>SD</i>	
Family Life and Sexual Health	Total Score	78.37	8.77	85.00	7.94	< 0.001
	Factor 1	32.04	6.82	37.23	3.90	< 0.001
	Factor 2	8.08	2.76	7.29	3.14	0.014
	Factor 3	10.25	1.89	10.25	1.89	0.842
Stress Management	Total Score	79.07	8.74	79.61	8.78	0.301
	Factor 1	32.27	5.72	33.24	6.23	0.111
	Factor 2	8.45	2.59	7.83	2.85	0.005
	Factor 3	10.17	2.28	10.17	2.28	0.842

Higher total scores indicated improved attitudes and overall comfort, perceptions on future working environment, and decreased thoughts of negative impacts on future patient relationships in the education intervention group. According to the SA-SH, a total score of 22–56 correlates with students who feel uncomfortable and unprepared, total sum scores of 57–79 correlate with students who feel comfortable and somewhat prepared in certain situations, and a total sum score of 80–110 correlates with students who feel comfortable and well prepared. All study participants fell within the comfortable and somewhat prepared in certain situations pretest. Posttest all study participants in the FLASH intervention group were comfortable and well prepared according to the SA-SH as compared to the attention control group who had a slight increase in overall mean, but most scores maintained the comfortable and somewhat prepared in certain situations.

A one-way repeated measures ANOVA was conducted to examine the differences of the three factors of present feelings of comfort, future working environment, and perceived negative impacts on future patient relations between the intervention and attention control groups pretest and post-test. On Factor 1, present feelings of comfort, there was a significant effect from time 1 and time 2 in the education intervention group, $F(1, 95) = 49.8, p < 0.001$. Participants reported better present feelings of comfort after the educational intervention as compared to their pre-intervention scores. There was no significant effect for time in the attention control group, $F(1, 95) = 2.00, p = 0.16$. The possible maximum score for present feelings of comfort is 45 and is most consistent with

students who are very comfortable in providing sexual health education in their future occupations.

On Factor 2, future working environment, there was a significant effect for time between time 1 and time 2 for the education intervention group, $F(1, 94) = 8.19, p = 0.005$. There was also a significant effect for time for the attention control group, $F(1, 94) = 6.25, p = 0.014$. A maximum score of 15 is most consistent with students who plan to address the sexual health of adolescents in their future working environments. Both the education intervention group and the attention control group reported a decrease in the likeliness they would address the sexual health of adolescents in their future working environment. On Factor 3, perceived negative impacts on future patient relationships, no significant difference was found in the intervention or attention control group with a $p = 0.842$ for both groups pre- and post-intervention.

Qualitative Analysis

A qualitative descriptive data was collected to provide a more holistic view of the quantitative data. The qualitative questions found in Appendix C allowed the study participants to expand on perceived challenges, role responsibility, self-efficacy, and preparation within the baccalaureate nursing program to teach sexual health education to fifth-grade students in a written format. Qualitative data were analyzed using qualitative analysis methodology by Graneheim and Lundman (2004) and Word Cloud software. All responses were collected in written form via the written survey. The principal investigator read the responses and highlighted phrases. Review of the literature provided

identification and interpretation of sub-themes related to attitudes towards providing sexual health education to adolescent students. Credibility was established through the collection of written responses of study participants and the utilization of an experienced qualitative researcher who is a published, doctoral-prepared nurse researcher.

Dependability was maintained by using the same collection method for all study participants using a written survey of open-ended questions. Transferability was obtained by the description of data, study guidelines, and the inclusion of all study participants in the qualitative data collection. An additional research question was added for inquiry about perceived barriers.

- 1) What barriers do senior-level baccalaureate nursing students perceive toward providing sexual health education to fifth-grade students?

Qualitative Results

Thematic analysis indicated student participants self-reported barriers to teaching sexual health education to fifth-grade students included the ability to teach at the student's level of understanding, perceptions of fifth-grade student engagement in the content, parental involvement, and the maturity levels of the fifth-grade students being provided the sexual health education. Statements from study participants included, "lack of attention or the laughing," "Overbearing parents. How much info is too much?," "talking to them at the appropriate level" and "using the correct words to explain sexual health". Thematic analysis regarding gender differences in content provided to boy or girl fifth-graders, most nursing student participants agreed there should be no difference in

the sexual health education being provided, however, found there may be differences in maturity levels of boys versus girls at the fifth-grade level and may have trouble explaining details to the opposite sex. Statements within the data included the above themes like, “boys are more immature than girls” and “have to talk more in-depth about the different body parts with the different sexes.”

Sixty-nine of the participants felt positive towards offering sexual health education to fifth-grade students and towards providing a comprehensive sexual health curriculum at the fifth-grade level; however, some voiced concern about the ability to provide the education. Statements included, “Positively. They should understand what is going to happen to their bodies before it happens.” and “I believe comprehensive is very important because of the statistics prove that it works.” Seventy-four participants also agreed that it was within the role of the registered nurse to provide sexual health education to fifth-grade students.

Ability and preparation themes included most study participants who were willing to learn how to teach sexual health education but would like more training. Overall, the study participants felt they did receive within their baccalaureate school of nursing the education to provide sexual health education; however, most felt they were not prepared to teach at the fifth-grade level. “I feel confident I could explain sex ed with proper training.” And “Not fully. I have been provided some but not all I need to confidently do so. I need to learn more about topics brought down to their level.”

Summary of the Findings

The purpose of this study was to examine the effectiveness of a 1-hour FLASH education intervention provided to senior-level, fourth-semester nursing students as compared to an attention control group of senior-level, fourth-semester nursing students who received a 1-hour course in stress management. This chapter described the study sample and provided a statistical analysis of the research questions. Findings suggest a FLASH education intervention does improve overall attitude and comfort in providing sexual health education to fifth-grade students but does not impact perceptions of future working environment or perceived negative impacts on future patient relationships. Further inquiry regarding perceived barriers was explored using qualitative thematic analysis. Most participants felt positive towards providing sexual health education, however, those who participated in the 1-hour FLASH education intervention self-reported fewer perceived barriers to providing sexual health education to fifth-grade students than participants randomized into the attention control stress management group.

CHAPTER V

IMPLICATIONS, RECOMMENDATIONS, AND CONCLUSIONS

The purpose of this mixed-methods, two-group, pretest, posttest interventional design using random assignment into a FLASH education intervention or an attention control group of stress management was to measure the effectiveness of an educational intervention on senior-level, fourth-semester nursing students' attitudes and comfort in providing sexual health education to fifth-grade students. Also, perceptions of role responsibility and negative impacts on future patient relationships were explored and a thematic analysis of perceived barriers was collected. This chapter will discuss the findings, limitations, conclusions, implications for practice, and recommendations for further study.

Discussion of the Findings

Sharon et al. (2020) found a strong correlation between attitude and intention to practice sexuality education in student nurses. Research indicates interventions to improve knowledge, skills, practice, and self-confidence improves attitudes and intention to provide sexual health education in practice (Brewin et al., 2014; Johnston, 2009; Jou et al., 2003; Landry et al., 2000; McFadyen, 2004; Santa Maria et al., 2017). In the current study, 101 of the study participants were randomized into intervention and control groups ($n = 53$ intervention, $n = 48$ attention control). Fifty-three participants had participated in the FLASH education intervention. Forty-eight participants participated in the attention

control course on stress management. James' pragmatism tenet one, pluralism, was met by incorporating various types of knowledge. Knowledge was interpreted and understood more holistically using a mixed-methods approach as the study design. Both groups completed a demographic questionnaire, pretest, posttest, and qualitative questionnaire during one, 1-hour sessions offered on one day during the semester simultaneously in separate rooms on the same campus to prevent contamination of the sample.

The second tenet of James' pragmatism of truth is imperfect, conditional, and revisable is incorporated within the interpretation of data. The overall mean score on the SA-SH for the education intervention and attention control group pretest indicated a slightly higher score in the attention control group overall. Posttest scores at time 2 show the FLASH education intervention group's total sum scores on the SA-SH improved and moved all study participants into the comfortable and well-prepared range of scores. The total sum score on the SA-SH for most of the study participants in the attention control group who received stress management maintained the comfortable and somewhat prepared in certain situations.

On Factor 1, present feelings of comfort, the attention control stress management group self-reported slightly higher feelings of comfort during the pretest questionnaire than the FLASH group self-reported. During Time 2, participants within the FLASH education intervention group increased their present feelings of comfort score into the comfortable and most prepared range. The qualitative data from those in the education intervention group reinforced the quantitative data with statements such as, "I feel pretty

confident” and “I feel competent and comfortable.” Several participants from the attention control group had qualitative statements such as, “I don't think I have enough knowledge to teach. However, with enough training, I'll be able to do it.” And “not good” and “need more training.”

Factor 2 measured study participants’ perceptions of sexual health education concerning impacting their future working environments negatively. Items rated by study participants in Factor 2 included statements regarding perceived lack of time, future colleagues’ feelings of discomfort in providing sexual health education, and colleagues’ reluctance to discuss sexual health education with future patients. Post-intervention scores decreased for both groups of participants. Qualitative data did not reveal perceived barriers or student participants’ thoughts about their future working environments; however, some themes related to future working environments were found within the data. Perceptions from those within the FLASH education intervention group included positive statements such as, “We are supposed to educate our patients on their overall health.” and “Yes, because they have enough training/ education to inform them”. Qualitative statements from those in the attention control group related to the future working environment were more negative and descriptive in the types of nurses who should or should not provide education to the fifth-grade students. Statements from the attention control stress management group included, “if you're a pediatric nurse” and “Yes, school nurses can be trained on how to best educate the students about this topic.” Other statements from the attention control stress management group regarding future

working environment included, “It depends on the context. If they come in with a broken arm to the ED (emergency department), it might not be appropriate.” Other thoughts, “No, because kids should learn about this from their parents and in school. Nurses should just reinforce the learning.”

In Factor 3, negative impacts on future patient relationships showed no change in mean scores from Time 1 to Time 2 in either group of study participants. There were no qualitative questions specific to future patient relationships; however, in both the attention control and education intervention group, there were statements regarding parental consent and partnering with parents. Statements included, “if the parent's consent to it, some explanation can be helpful.” And “the nurse should not be the only person. The parents of the child should provide knowledge as well. However, the nurse will most likely provide accurate information.”

Through quantitative and qualitative analysis, the study participants randomly assigned to the FLASH education intervention expanded their truths to feeling more comfortable and prepared to provide sexual health education to fifth-grade students. Previous research supports sexual health education interventions for registered nurses to improve attitude (Brewin et al., 2014; Johnston, 2009; Jou et al., 2003; Landry et al., 2000; McFadyen, 2004; Santa Maria et al., 2017). Registered nurses, who report feeling comfortable and well-prepared to address sexual health, do so in practice. Study participants randomized into the educational intervention group scored higher on the SA-SH and reported fewer barriers to implementing sexual health education into their future

practice than those randomized into the attention control group. This study provides support for changes to the current programs of nursing to incorporate developmentally appropriate patient education in sexual health education for adolescents for nursing students to implement into practice. James' pragmatism indicates knowledge is interpreted and understood through application and consequences. Tenets 3 and 4, meliorism, and the coexistence of rationalism and empiricism are discussed in more detail within the implications for practice, education, and research sections below.

Limitations

Limitations of this study include the small convenience sample from two universities in Southeast Texas. The study findings are not generalizable to all populations of senior-level, fourth-semester nursing students. The second limitation is the potential for social bias based on participants' self-report for all data collection. A third limitation was the sample size was insufficient for some statistical measurement. Fifty-one additional student participants were needed to reach power. Time constraints and the current pandemic prevented further sample collections because student participants were prevented from congregating or attending class per the approved study guidelines.

Conclusions

The WHO, the CDC, and the HHS-OAH endorse and fund actions to improve sexual health education and services to the adolescent population. Sexual health education must be provided before the adolescent begins having sexual relationships to decrease risk behaviors that expose the adolescent to sexually transmitted infections and

unintended teen pregnancy. Senior-level, fourth-semester undergraduate nursing students are in the process of joining the largest number of healthcare providers in the United States and will work in a variety of healthcare settings where sexual health education to the fifth-grade students would be appropriate. Results from this study indicate a one-hour FLASH education intervention is effective in increasing overall attitude and comfort in providing sexual health education to fifth-grade students. Research indicates educational interventions given to registered nurses, improves overall attitude, comfort, confidence, and enhanced role responsibility. In registered nurses, educational interventions have translated into practice and allowed nurses to provide sexual health education to adolescents. Improving self-efficacy, comfort, and attitudes in providing sexual health education is a move toward better health outcomes for our nation's adolescent population.

Implications for Nursing Practice

By utilizing a mixed-method, two-group, pretest-posttest interventional design, it can be concluded that a 1-hour FLASH education intervention presented to senior-level, fourth-semester undergraduate nursing students can improve attitudes, especially comfort levels, towards providing sexual health education to fifth-grade students. Study findings were:

1. Nursing student attitudes toward providing sexual health education to fifth-grade students can be improved with a 1-hour FLASH education curriculum.

2. Participation in FLASH education increases comfort levels in senior-level, fourth-semester nursing students' ability to provide sexual health education to fifth-grade students.

James' pragmatism, Tenet 3, meliorism, states that the world can be made better through human effort. Future nurses have a social, moral, and ethical responsibility to assess and provide sexual health education to adolescents as a matter of population health. James' fourth and final tenet of the coexistence of rationalism and empiricism is met through the translation of research to practice. This study translates to nursing practice in three ways: nursing education, practice, and research.

Nursing Education

Qualitative data from research participants stated they had received information regarding the sexual health of adolescents, but not in a way that would allow them to educate future patients regarding sexual health. The American Association of Colleges of Nursing (2008), *The Essentials of Baccalaureate Education for Professional Nursing Practice*, Essential VII: Clinical Prevention and Population Health, require nursing curricula health promotion and disease prevention. The FLASH program is valid and reliable tool that could be used to deliver this education and meet this requirement. Nursing educators should be skilled in teaching undergraduate nursing students, not only about sexual health in the adolescent population, but in how to provide sexual health education at a developmentally appropriate level for adolescents. This translates education to practice.

Nursing Practice

Quantitative and qualitative data indicated study participants who received the FLASH education intervention improved overall attitude and comfort levels than those who did not. Those within the intervention group reported feeling more confident, ready to implement into practice, and reported fewer perceptions of barriers to providing sexual health education to fifth-grade students than those in the attention control group. Nursing practice is impacted by education and research.

Nursing Research

This mixed-methods study provided valuable information on the attitudes of senior-level, fourth-semester nursing students' attitudes towards providing sexual health education to fifth-grade students. Statistically, significant improvements were seen in the FLASH education intervention group attitudes and comfort levels. Self-reports of less perceived barriers improved understanding of role responsibility and decreased reports of negative impacts on future patient relationships were also obtained. More research questions were generated because of this study. Recommendations for future studies are listed below.

Recommendations for Further Studies

Recommendations for future studies include:

1. Expand this research study to include other schools of nursing in more locations around the United States.

2. Expand the study participants to incorporate nursing faculty at the baccalaureate level.
3. Include qualitative questions specific to future working environments.
4. Include qualitative questions to reflect perceptions of impacts in future patient relationships regarding sexual health education.
5. Evaluate the effectiveness of an online platform to provide the FLASH education intervention to participants.
6. Evaluate if study participants within FLASH education intervention incorporate sexual health education into their practice.

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APPENDIX A

Demographic Questionnaire

APPENDIX A

Demographics Survey

1. Are you currently enrolled in a Baccalaureate of Science in Nursing degree program?

Yes

No
2. What semester are you currently enrolled within the BSN program?
1st Semester- Junior 1

2nd Semester- Junior 2

3rd Semester- Senior 1

4th Semester- Senior 2
3. Have you previously participated in this study (*Assessing senior baccalaureate nursing students' attitudes toward sexual health education as a nursing responsibility following a family life and sexual health education intervention*)?

Yes

No
4. Have you participated in a specialty course such as *Human Sexuality* in college or a project that promotes sexual health education such as the *Baby and Mother Bonding Initiative (BAMBI)*?

Yes, Human Sexuality

Yes, BAMBI

Yes, both Human Sexuality and BAMBI

No

5. Are you currently a Licensed Vocational Nurse?

No

Yes, Licensed Vocational Nurse

6. What is your age range?

18-24

25-30

31-35

36-40

41-45

46-50

51-55

56-60

61-65

Greater than 65

7. What is your gender?

Male

Female

Other

8. What is your marital status?

Single/ Never married

Married/ Partnered

Divorced/ Separated

Widowed

Other

9. What is the highest level of education you have completed?

High school/ GED

Associates Degree (Please specify major below)

Baccalaureate Degree (Please specify major below)

Master's Degree (Please Specify Major Below)

Doctoral Degree (Please specify major below)

10. If you have completed a degree, please specify your major.

11. What is your religion?

I have no religious affiliation

Christian

Jewish

Hindu

Islamic

Other: _____

12. Were you or are you a teen parent?

Yes

No

APPENDIX B

Students' Attitudes Toward Addressing Sexual Health

Students' Attitudes Towards Addressing Sexual Health

Using the rating scale below of strongly disagree to strongly agree, please tell us how well you agree to providing sexual health education to 5th-grade students in your future occupation using the following statements:

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

1. I feel comfortable about informing future patients about sexual health.
2. I feel comfortable about initiating a conversation regarding sexual health with future patients.
3. I feel comfortable about discussing sexual health with future patients.
4. I feel comfortable about discussing sexual health issues with future patients regardless of their sex.
5. I feel comfortable about discussing sexual health issues with future patients regardless of their age.
6. I feel comfortable about discussing sexual health issues with future patients regardless of their cultural background.

7. I feel comfortable about discussing sexual health issues with future patients regardless of their sexual orientation.
8. I feel comfortable about discussing specific sexual activities with future patients.
9. I am unprepared to talk about sexual health with future patients.
10. I believe that I might feel embarrassed if future patients talk about sexual issues.
11. I believe that future patients might feel embarrassed if I bring up sexual issues.
12. I am afraid that future patients might feel uneasy if I talk about sexual issues.
13. I am afraid that conversations regarding sexual health might create a distance between me and the patients.
14. I believe that I will have too much to do in my future profession to have time to handle sexual issues.
15. I will take time to deal with patients' sexual issues in my future profession.
16. I am afraid that my future colleagues would feel uneasy if I brought up sexual issues with patients.
17. I am afraid that my future colleagues would feel uncomfortable in dealing with questions regarding patients' sexual health.

18. I believe that my future colleagues will be reluctant to talk about sexual issues.
19. In my education, I have been educated about sexual health.
20. I think that I was a student need to get basic knowledge about sexual health in my education.
21. I have sufficient competence to talk about sexual health with my future patients.
22. I think that I need to be trained in my education to talk about sexual health.

APPENDIX C

Qualitative Questions

Qualitative Questions

1. What would you find most challenging if asked to provide sexual health education to 5th-grade students?
2. Please describe any differences in providing sexual health education to fifth-grade boys versus fifth-grade girls.
3. Do you feel positively or negatively towards providing sexual health education to fifth graders in your future occupation? Please explain.
4. What are your thoughts on providing a comprehensive sexual health education program to fifth-grade students?
5. Do you feel it is within the role of the nurse to provide sexual health education to fifth-grade students? If not, why not? If so, why so?
6. How do you feel about your ability to provide sexual health education to fifth-grade students?
7. Do you feel your education in the Baccalaureate of Science in Nursing program has provided you with enough information to adequately teach fifth-grade students in sexual health? If yes, how so? If not, what changes do you feel are necessary to prepare you?

APPENDIX D

Recruitment Email

Dear Senior Level, Fourth Semester Nursing Student,

Explanation of Research:

You are being asked to join a research study being conducted by Dora Kuntz, RN-BC, Doctoral Candidate for Texas Woman's University. You are being asked to take part in this study because you are a senior level, a fourth-semester nursing student. Research studies may or may not benefit the people who participate.

This research is voluntary and you may stop participating at any time. There will be no penalty to you if you decide not to participate, or if you start the study and decide to stop early.

This email explains what you have to do if you do wish to participate in the study; it also describes the possible risks and benefits. Please read the email carefully and email Dora Kuntz at dmkuntz@utmb.edu for any questions you may have regarding participation now or at any time during the study.

Background:

One in every four adolescents has a sexually transmitted infection. In Southeast Texas, 12.1% of sixth to eighth-grade students are sexually active. Research supports providing sexual health education before the initiation of intercourse to decrease early sexual debut and decrease risky sexual behavior. 80% of nurses agree providing sexual health education is within the role of the nurse, however, most cite barriers including personal attitudes as reasons not to provide sexual health education to patients or students.

Purpose:

- 1) To examine the effects of participation in family life and sexual health education intervention on the attitudes of senior-level, fourth-semester nursing students.

Procedures:

If you are eligible and decide to participate in this study, your participation will take approximately 1.5-2 hours for the pretest survey, the family life and sexual health educational intervention, and the posttest survey. All will be conducted during a lunch break during one of your regularly scheduled class days.

The decision to participate in the online surveys constitutes your consent and may be withdrawn at any time during the study.

Risks:

- 1) Due to one of the topics related to sexual health laws, sexual exploitation is covered. Recalling potentially distressing or traumatic events regarding violations of sexual health may occur. Toll-free numbers for crisis and mental health hotlines will be included at the end of the intervention and the end of both the pre-test and post-test surveys.

- 2) Minimal risk of information leak by computer breach is always possible. No direct identifiers will be collected to minimize the likelihood of identifying personal responses. The PsychData survey responses are only accessible through the Principal investigator's password-protected site and are viewed via a secure network.

Benefits:

There are no known benefits to participating in this research.

Costs:

There are no costs associated with being in the study.

Questions:

Before you begin answering questions via the PsychData link, you can contact the principal investigator at the link below.

Consent:

The decision to participate online implies consent.

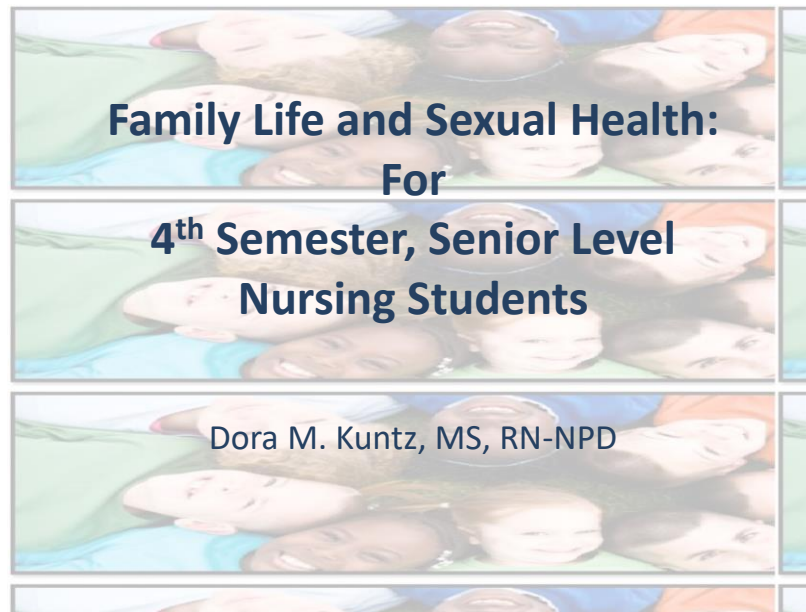
As always, thank you for your time.

If you have questions, please feel free to contact dmkuntz@utmb.edu, 409-266-7956.

Dora M. Kuntz, RN-BC

Appendix E

FLASH Educational Intervention



Objectives:

Upon completion, participants should be able to:

1. Identify why family life and sexuality education is crucial to community health
2. Identify key aspects of how to teach family life and sexuality education to 5th grade students

What are the Statistics?

- How many teen pregnancies in the US? Texas?
- Have you thought about the STI (Sexually transmitted infection) rates in Galveston County?
- Cost associations with teen pregnancy?



Statistics for Texas

OAH 2015 Data

- *US teen birth rates*
 - 22.5 per 1000
- *Texas Teen Birth Rates*
 - 38.5 per 1000

TDH 2013 Data

- *Galveston County*
 - 38 per 1000
- *STIs > than US in Texas*
- *Costs of Teen Pregnancy*
 - US-\$10.9 billion annually
 - Texas-\$1.20 billion annually
 - Galveston County-\$8.05 million annually



Chlamydia Diagnoses in Galveston County, by City and Age Group, 2013

	Year		
	2013		
	Age Group		
	13-14	15-16	17-18
<i>Resident city</i>			
BACLIFF	1	1	6
CLEAR LAKE SHORES	0	0	0
DICKINSON	1	8	20
FRIENDSWOOD	0	4	13
GALVESTON	2	17	35
HITCHCOCK	0	6	3
KEMAH	0	0	4
LA MARQUE	0	3	18
LEAGUE CITY	1	5	33
PORT BOLIVAR	1	0	0
SAN LEON	1	1	1
SANTA FE	0	1	9
TEXAS CITY	1	33	66
All	8	79	208

Gonorrhea Diagnoses in Galveston County, by City and Age Group, 2013

	Year		
	2013		
	Age Group		
	13-14	15-16	17-18
<i>Resident city</i>			
BACLIFF	0	0	0
CLEAR LAKE SHORES	0	0	0
DICKINSON	1	3	3
FRIENDSWOOD	0	0	2
GALVESTON	0	7	8
HITCHCOCK	0	1	0
KEMAH	0	0	0
LA MARQUE	0	2	6
LEAGUE CITY	1	0	3
PORT BOLIVAR	0	0	0
SAN LEON	0	0	1
SANTA FE	1	0	0
TEXAS CITY	2	6	15
All	5	19	38

Births to Mothers 18 Years of Age and Under in Galveston County by Residence City, 2003-2012											
Mother's Residence City	Year of Birth										Total
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
ALOGA	0	0	0	0	0	*	0	0	0	0	*
ALVIN	0	0	*	*	*	*	*	*	*	0	14
ARCADIA	0	0	0	0	0	0	0	*	0	0	*
BACLIFF	11	15	16	13	16	14	17	22	13	14	151
BAYOU VISTA	0	0	0	0	0	0	0	*	0	0	*
BOLIVAR PENINSULA	0	0	0	0	*	*	0	0	0	0	*
CLEAR LAKE SHORES	*	0	0	0	0	0	0	*	0	0	*
CRYSTAL BEACH	*	0	0	*	0	*	0	*	0	0	*
DICKINSON	44	37	41	41	39	42	36	31	34	31	376
FRIENDSWOOD	10	*	*	10	*	*	*	*	*	*	65
GALVESTON	93	102	65	92	77	83	58	67	47	46	730
GILCHRIST	*	0	0	0	0	*	0	0	0	0	*
HIGH ISLAND	0	0	0	0	0	0	0	0	0	*	*
HITCHCOCK	12	20	17	*	*	12	19	14	*	12	131
JAMAICA BEACH	0	0	0	0	0	0	*	0	0	0	*
KEMAH	*	*	*	*	*	*	0	*	*	*	21
LA MARQUE	20	20	21	20	21	23	30	16	12	*	**
LEAGUE CITY	25	22	19	17	28	26	29	31	23	16	236
PORT BOLIVAR	*	*	*	*	0	*	0	*	0	0	14
RURAL	*	0	0	0	0	0	0	0	0	0	*
SAN LEON	*	*	*	*	*	*	10	*	*	*	65
SANTA FE	15	19	15	21	14	22	20	15	10	11	162
SEABROOK	0	0	0	*	0	0	0	0	0	0	*
TEXAS CITY	77	64	61	73	91	76	82	69	54	49	696
WEBSTER	0	0	0	0	*	0	0	0	0	*	*
Total	327	320	277	306	311	321	313	284	218	199	2,876

2015 Statistics

STD Diagnoses and Rates per 100,000 population, 2015							
County	Age Group	Disease category					
		Chlamydia		Gonorrhea		Syphilis	
		N	rate	N	rate	N	rate
Galveston	13-14	8	88.5	4	44.2	1	11.1
	15-16	107	1161.2	16	173.6	.	.
	17-18	255	2909.6	49	559.1	3	34.2
HIV Diagnoses and Rates per 100,000 population, 2015							
County	Age Group	N	rate				
Galveston	11-12	1	11				
	17-18	1	11.4				

Local Problem 2016

Sexually Transmitted Infections in Galveston County by Age Group, 2016

	Year			
	2016			
	Age Group			
	11-12	13-14	15-16	17-18
Sexually Transmitted Infection				
Chlamydia	1	13	95	220
Gonorrhea	0	3	20	38
Syphilis	0	0	1	2
HIV	0	0	0	1

(TDHHS,
2016)

Data by year 2018

Special Note

In 2018, there was a large number of chlamydia and gonorrhea cases for the "unknown" race/ethnicity category. This was due to a delay in updating the race/ethnicity field in the surveillance data. Ongoing data quality improvement will address this for 2019 reporting.

Numbers for race/ethnicity for chlamydia and gonorrhea should be interpreted with caution.

Explore STD cases and rates by geography and demography.

Select an STD

Year

Select a Geographic Area

Chlamydia

(All)

Galveston

Sex

Race/Ethnicity

Age Group

All Sex

All Race

(Multiple values)

Area	Race/Ethnicity	Sex	Age Group	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Galveston	All Race	All Sex	0-14	11	14	15	12	8	16	8	15	13	17
			15-24	755	812	863	786	826	908	982	985	1,138	1,018
			All Age	998	1,117	1,365	1,138	1,195	1,364	1,451	1,551	1,646	1,556

Gonorrhea 2018

Special Note

In 2018, there was a large number of chlamydia and gonorrhea cases for the "unknown" race/ethnicity category. This was due to a delay in updating the race/ethnicity field in the surveillance data. Ongoing data quality improvement will address this for 2019 reporting.

Numbers for race/ethnicity for chlamydia and gonorrhea should be interpreted with caution.

Explore STD cases and rates by geography and demography.

Select an STD

Gonorrhea

Year

(All)

Select a Geographic Area

California

Sex

All Sex

Race/Ethnicity

All Race

Age Group

(Multiple values)

Area	Race/Ethnicity	Sex	Age Group	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
California	All Race	All Sex	0-14	---	6	---	8	---	---	---	---	---	---
			15-24	172	178	254	222	189	138	204	216	263	259
			All Age	280	268	378	363	291	251	342	405	445	469

Problem



(CDC, 2018)

World Health Organization

Key facts

- More than 1 million sexually transmitted infections (STIs) are acquired every day worldwide (1, 2).
- Each year, there are an estimated 376 million new infections with 1 of 4 STIs: chlamydia, gonorrhoea, syphilis and trichomoniasis (1, 2).
- More than 500 million people are estimated to have genital infection with herpes simplex virus (HSV) (3).
- More than 290 million women have a human papillomavirus (HPV) infection (4).
- The majority of STIs have no symptoms or only mild symptoms that may not be recognized as an STI.
- STIs such as HSV type 2 and syphilis can increase the risk of HIV acquisition.
- 988 000 pregnant women were infected with syphilis in 2016, resulting in over 350 000 adverse birth outcomes including 200 000 stillbirths and newborn deaths (5).
- In some cases, STIs can have serious reproductive health consequences beyond the immediate impact of the infection itself (e.g., infertility or mother-to-child transmission)
- The Gonococcal Antimicrobial Resistance Surveillance Programme has shown high rates of quinolone resistance, increasing azithromycin resistance and emerging resistance to extended-spectrum cephalosporins. Drug resistance, especially for gonorrhoea, is a major threat to reducing the impact of STIs worldwide.

More Statistics!

- An estimated 52% of high school students in Texas, ages 15-19, have had or are having sex.
- The national average = 46%.
- 12.1% of 6th graders in the Houston area have had or are having sex.
The national average =10.6%

Now Ask Yourself:

- How can I make a difference?



Differences You can make!

- Nurses are the largest number of healthcare providers in the U.S. at 3.6 million (ANA, 2016)
- Sexual education prior to the onset of sexual activity (Mueller, 2008)
 - Reduce adolescent sexual risk behaviors
 - Delay early sexual debut
- Early sexual debut is associated with (Erkut, 2012):
 - Increased rates of substance abuse
 - Cigarette smoking
 - Family dysfunction
 - Poverty

Thoughts?



Before Beginning Any Education:

- Key Aspects
 - Who is your audience?
 - How old are they? Developmental Level?
 - How much time do you have?
 - Do you have an evidence-based curriculum/ educational activity?
 - How will you keep them engaged in the learning?
 - What types of audio/ visuals do you have available in the location of teaching?





Family Life and Sexual Health Education for 5th Graders

Tammy Cupit, PhD, RN-BC

And

Dora Kuntz, MSN-Ed, RN

Module 1: Day 1



1. Introduction
2. Family
3. Self-Esteem
4. Gender Roles
5. Friendship
6. Decision-Making

Module 2: Day 2



1. Sexual Exploitation
2. Puberty
3. Reproductive System

Module 3: Day 3

1. Pregnancy
2. HIV/ AIDS
3. Review and Resources

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Appendix F

Stress Management Course

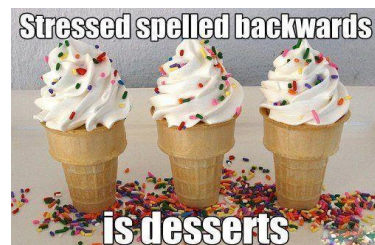
Caring for Self and Others: The Art of Stress Management



Jacqueline Stout-Aguilar PhD, RN-BC, CNE

Coping with Stress

- ☐ Understand what is going on
- ☐ Track your stressor
- ☐ Develop a healthy response
- ☐ Take time to recharge
- ☐ Learn how to relax
- ☐ Talk to your supervisor
- ☐ Get support as needed



Working Together to Work Wonders

Time Management

- ☐ Create and use an actual schedule
- ☐ Assign time to important activities
- ☐ Schedule time for interruptions
- ☐ Take time at the beginning of the day to plan
- ☐ Close your door or put up a do not disturb sign
- ☐ Don't answer your phone or respond to text messages
- ☐ Avoid social media and other distractions



Assertive Communication

- ☐ Based on mutual respect
- ☐ Stand up for your interests
- ☐ Express your thoughts and feelings
- ☐ Respect the rights and beliefs of others



Relaxation

- ☐ Massage
- ☐ Exercise
- ☐ Reading
- ☐ Sleeping
- ☐ Music
- ☐ Breathing
- ☐ Walking
- ☐ Eating

