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Predicted Sexual Risk by Sexual Minority Emerging and Young Adults Who Had Sex Education in School

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Abstract

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Jewel Flitcraft

MA, Indiana University- Purdue University Indianapolis 2013

BS, Marian University 2010

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

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Abstract

The topic of abstinence-only sex education and comprehensive sex education in schools, as well as its effectiveness, have been a subject of conversation in the United States since the beginning of the 21st century. The lack of applicable sex education for sexual minorities has been missing from the conversation, and has led to STIs, HIV/AIDs, and pregnancy. The purpose of this study was to test whether sexual minority emerging, and young adults would score higher or lower on sexual risk scale, depending on the type of sex education they received in school. The research question concerned whether the type of sex education received predicted sexual risk scale scores among emerging and young adult sexual minorities. A quantitative cross-sectional survey design was used. Participants (N = 320 participants) met the eligibility criteria of identifying themselves as between 18-30 years old and as any other sexual orientation than heterosexual or straight. A group comparison was made between the sexual risk scale scores for those who had abstinence only sex education and those who had comprehensive sex education. Analysis of variance was completed, and a post hoc analysis found that the sexual risk scale scores for those who had primarily abstinence-only sex education differed significantly from those sexual risk scale scores for those who had primarily comprehensive sex education. This research shows these individuals are split in their sexual risk scores, with over half high, showing that sex education of both types (abstinence-only and comprehensive) is failing to lower the sexual risk of sexual minority emerging and young adults. This study can lead to positive social change by helping educators and advocates to develop more effective sex education for sexual minorities.

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Dedication

I dedicate this dissertation for all who feel they are voiceless, or invisible. As Wonder Woman says, “I will fight for those who cannot fight for themselves.”

Acknowledgments

I would like to thank my wife, my family, and my friends for sticking by my side for all of the hours I spent ignoring you with my face in my computer. Thank you all for being there when I needed you! Thank you to my wife for making sure that the dog was cared for while I was in my office completing this dissertation. All humor aside, I cannot thank those special people in my life enough for their understanding, love, and support in finishing this degree. Thank you, Dr. Devon Hensel, for your inspiration all those years ago to never give up and to get my PhD. Thank you, Dr. Douglas McCoy, for being a fantastic dissertation chair along this journey, even though the Cubs stunk again. Thank you, Dr. Harlow, for finding patience with me, even when I know I write too much, and I overthink things.

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Chapter 1: Introduction to the Study

Sex education for sexual minorities such as gays, lesbians, bisexuals, queer, questioning, men who have sex men (MSM), women who have sex with women (WSW) is a fictional story (Crowell, 2019). These groups have pushed for ontic and equal sex education but have been constantly impeded by several social groups that are of importance to an individual's socialization process (Shtarkshall et al., 2007). These groups include conservatives, Christians, Republicans, parents, teachers, the government, and the media (Calterone Williams, 2011; Currin et al., 2017; Dent & Maloney, 2017; Jemmott et al., 2020; Kantor & Levitz, 2017). The lack of sex education for sexual minority youth contributes to young bisexuals or lesbians experiencing unplanned pregnancies and young gay and bisexual males contracting sexually transmitted infections (STI) and human immunodeficiency virus (HIV) because of their lack of education on sexual health protection (Agénor, Jahn, et al., 2019; Agénor, Pérez, et al., 2019; Arlee et al., 2019; Bauermeister et al., 2009, 2014; Paschen-Wolff et al., 2020; Rosario et al., 2020). While there has been progress by some states to provide individuals medically accurate abstinence-only education, this study examined the importance of why sexual minority students, just like their heterosexual counterparts, need medically accurate sex education (Santelli, 2008). This research can be used to push for changes within schools locally to have more inclusive sex education. This can push for policy changes at the state and federal levels, to push for changing the funding from abstinence only sex education curriculums, to sex education that not only is all inclusive but also

medically accurate for all. This research can make a positive social change for sexual minorities by showing that concerns regarding their sexual wellbeing are heard.

Background of the Study

Some programs like the Sexuality Information Education Council of the United States (SIECUS) have tried to include sexual orientation and gender identity in their comprehensive sexuality education, but the sexual minority information is often stereotypical and is not all inclusive (Elia & Eliason, 2010a). Like many controversial topics in the United States, there are individuals on opposing sides of the issue, those whom are against anything being taught other than abstinence-only education, let alone sex education that would include sexual minorities, and others who believe their children should be taught comprehensive sex education (Braeken & Cardinal, 2008; Eisenberg et al., 2008; Green et al., 2017; Helmich, 2009; Herrman et al., 2013; Jeffries et al., 2010; Kirby, 2008; Kohler et al., 2008; Lesko, 2010; Motherway, 2010; Pingel et al., 2013; Secor-Turner et al., 2017; Shepherd et al., 2017; Stanger-Hall & Hall, 2011). Parents have been found regardless of race/ethnicity, income, or age to support comprehensive sex education but there is a large gap reported between what they want and what is offered to their children in schools (Constantine et al., 2007; Eisenberg et al., 2008; as cited in Kantor & Levitz, 2017). In two rural midwestern communities in the state of Iowa, parents who chose to remove their children from sex education courses cited religious beliefs as the reason for doing so, showing a tie between rural areas, strength of religious beliefs (Foley, 2015). In several states such as North Carolina (Ito et al., 2006), California (Constantine et al., 2007), and Minnesota (Eisenberg et al., 2008), researchers

have found that urban, low-income, community college parents support comprehensive sex education and the inclusion of many topics, but that is not what their children are being taught (Heller & Johnson, 2013). Some opponents argue that if children learn about inclusive aspects of sex education than they will engage in same sex practices or become sexual minorities themselves (Gegenfurtner & Gebhardt, 2017). Researchers have discussed that government funding in the United States is the reason that abstinence-only sex education has lasted so long (Schalet et al., 2014). Texas has received more federal abstinence-only funding than any other state (Tortolero et al., 2011). However, despite receiving these abstinence-only funds, two-thirds of parents surveyed in Harris County Texas said that sex education should include comprehensive sex education with both abstinence and condoms and contraception (Gray, 2019; Tortolero et al., 2011). Even though there are federal and sometimes state mandates about what should be taught about sex education, the sociopolitical climate of the state can determine what students would learn (Currin et al., 2017).

Previously, researchers have found that individuals who are against LGBTQ+ teachings include those who have strong religious beliefs, are less intelligent, are politically conservative, and may live in a rural area (Currin et al., 2017; Gegenfurtner & Gebhardt, 2017). Similar to previously cited research, residents of Iowa were removing their children from sex education for religious beliefs (Foley, 2015). Residents of Florida who considered themselves Conservatives or Republicans were more likely to choose abstinence-only sex education (Howard-Barr & Moore, 2007). Researchers have also found that individuals who were older with lower levels of education had less favorable

attitudes towards sex education (Chappell et al., 2010). According to Currin et al. (2017), a study participant from rural and conservative Oklahoma who identified as gay stated that he did not learn what STIs and HIV were until he was in his thirties.

Problem Statement

The topic of abstinence-only sex education and comprehensive sex education in schools (sometimes called abstinence plus or abstinence-only plus) has been a subject of conversation in the United States since the beginning of the 21st century (Heller & Johnson, 2013; Schalet et al., 2014; Shepherd et al., 2017). Sex education for sexual minorities such as gays, lesbians, bisexuals, queer, questioning, MSM and WSW is a part of the conversation that has been missing. In sex education courses, sexual minority students felt that the areas of discussion did not relate to them or their futures, making them feel excluded, like freaks or aliens and discriminated against (Elia & Eliason, 2010a; Gowen & Winges-Yanez, 2014; Hobaica & Kwon, 2017; McCarty-Caplan, 2015; Pingel et al., 2013; Sansone, 2019; Snapp et al., 2015). McCarty-Caplan (2013) explained the ideology of sex education, and the dominance of abstinence-only sex education programs that forbid the discussion of sexual minorities identity or behavior is ignoring the students who are in the greatest need for social support. Due to this lack of appropriate sex education for sexual minority individuals, women who are bisexual or lesbian are at higher risk for being diagnosed with an STI as they mature into emerging and then young adults (Bodnar & Tornello, 2019). These women also experience higher pregnancy rates (Arlee et al., 2019), and if they are living in rural communities, they are not being given appropriate safe-sex education or being recommended for the HPV

vaccination by their healthcare providers (Barefoot et al., 2017). Young gay and bisexual males are contracting STIs and HIV because of their lack of education on sexual health protection (Bauermeister et al., 2015; Pingel et al., 2013).

Previous researchers have questioned students on what they would like to see in their sex education courses, and a recurring answer from students is "inclusive sex education" (Bauermeister et al., 2014; Elia & Eliason, 2010a; Snapp et al., 2015). Students have suggested to their instructors that sexual minority inclusive lessons should be taught in their health classes (Snapp et al., 2015). One study had students state that they were irresponsible sexual decisions makers (Allen et al., 2008). It is important that society is aware that students feel this way, and that children and teens are well supported, socially connected, and accurately informed as they begin to make independent choices that have consequences for their personal and relational development as they move into emerging adulthood (Allen et al., 2008). Emerging adulthood is the age range of individuals between age 18 and 25 years old (Arnett, 2006).

Purpose of the Study

The purpose of this quantitative cross-sectional survey study was to test if sexual minority emerging and young adults would score higher or lower on sexual risk scale (SRS) scores, depending on the type of sex education they received in school. Their SRS scores may vary because of the heterosexually centered in the classroom which makes them feel invisible during abstinence-only sex education courses and leads them to search other places for basic health and sex behavior information (Currin et al., 2017; Estes, 2017).

Research Question(s) and Hypotheses

Research Question

RQ1. Does the type of sex education received predict sexual risk scale (SRS) scores among emerging and young adult sexual minorities?

Hypotheses

H_0. There is no significant difference between the abstinence only sex education group and comprehensive sex education group on SRS scores.

H_1. Abstinence only sex education group scores significantly higher than the comprehensive sex education group on the SRS scores.

H_0. There is no significant difference between the abstinence only sex education group and comprehensive sex education group on the SRS scores.

H_2. Comprehensive sex education group scores significantly higher than abstinence only sex education group on SRS scores.

Theoretical Foundation

The first theoretical foundation for this study is reference group theory. Merton and Rossi (1950, 1968) describe reference group theory as when individuals use social groups as frames of reference for their attitudes and behaviors if they perceive some similarity in status attributes between themselves and other members of the group. Aalsma et al. (2013) expands on reference group theory in the analysis of adolescents who will align their sexual attitudes and behavior with the standards and expectations of the group with which they feel most affiliated. Beeghley et al. (1990) used reference group theory as well as socialization theory to examine religious change and alcohol use.

This is a solid foundation within sociology to examine individuals' attitudes and behaviors which are shaped by the groups to which they belong or to which they relate. This combination is important in my research, as reference group theory would help to identify the conditions that people use their membership groups as frames of reference, in this case their membership groups can be sexual orientation, religion, geographic location, or their age group. Socialization theory is an important theory which comes from the basics of sociology in all people are socialized by agents of socialization, and throughout their lives, this socialization process impacts their personality interaction within a group (Beeghley et al., 1990). Reference group theory and socialization theory are both discussed in that there are five degrees in which a group acts as a reference group for an individual, which include:

1. the degree of *similarity* between the status attributes of an individual and other members,
2. the degree to which an individual's values and beliefs *agree* with those of other members,
3. the degree of *clarity* in a group's values and beliefs,
4. the degree to which an individual is in *sustained interaction* with other group members, and
5. the degree to which an individual defines group leaders as significant others. (Beeghley et al., 1990, p. 263)

The four elements of socialization theory that can be identified include:

1. Childhood experiences are usually more influential on individuals

than later experiences.

2. Interaction in primary groups is usually more influential on individuals than interaction in secondary groups.
3. Interaction with significant others is usually more influential on individuals

than interaction with ordinary persons.

4. Long-term interaction is usually more influential on individuals than short-term interaction. (Brim,1966 as cited in Beeghley et al., 1990, p. 264).

These five degrees and four elements assisted their research in analyzing religious group position which is the reference group and the implication that it should have on drinking alcohol (Beeghley et al., 1990). The values that are associated with these reference groups, such as what type of leadership exists, or the interactions that individuals have with other people in these reference groups can influence their decisions.

Socialization theory is also important to this study, because as previously mentioned socialization is a lifelong process and important agents of socialization include families, peers, religious groups, media, and educational institutions (Beeghley et al., 1990). In this study, I examined how each one of these agents is influential to a sexual minority individuals' risky sexual behavior. As discussed by Beeghley et al. (1990), adults sometimes change characteristics and attitudes once they interact with new groups or will their childhood socialization continue to place them within their reference group.

Since parents play an important role in their adolescents' sexual socialization by impacting adolescent sexual cognitions, that is why is socialization theory is included in this research of sex education and the examination of what is taught and who is teaching it (Dave et al., 2017; Evans et al., 2020a).

It was important to examine whether study participants followed the pattern of sexual risks from their primary reference group during their sex education or if that reference group changed as they grew into an emerging or young adult. Beeghley et al. (1990), found that people's religious beliefs would affect their everyday lives, and that individuals who change their religious beliefs increased their use of alcohol in predictable ways, considering their new reference group.

Nature of the Study

The methodology for this quantitative study was a cross-sectional survey design. A cross-sectional survey design was used to collect data from one period of time (Creswell, 2009). This cross-sectional survey design was appropriate for this study because this population was examined at a certain point of time when they have already participated in a sexual behavior and had sex education. Participants were emerging and young adults' sexual minorities who have participated in a sexual behavior and have taken an abstinence-only or comprehensive sex education course. For this study, the sampling strategy was convenience snowball sample. Data for this study were collected from participants between the ages of 18-30 years old, and were recruited through social networking sites, such as Facebook, Instagram Snapchat, Twitter, LinkedIn, list servs and Walden's participant pool. The online link for the survey was shared on my social media

pages, allowing others to share the link, and I advised others to share the link, so that more people would participate in the study. The link also included a picture with the visual text of what this study was about and who specifically was being recruited, such as people 18-30 years old and individuals who were MSW, WSM, MSM, WSW, lesbian, gay, bisexual, asexual, pansexual, demisexual, or another sexual orientation (not including straight/heterosexual only) individuals. All recruitment materials or social media posts provided a link to the study website, which was from Survey Monkey. Survey Monkey is an online organization that provides researchers a place to create and export surveys to many people as well as export data collected into SPSS or Excel. Individuals who visited the website via the link provided were given several descriptions and answers to questions potential participants may have had; a brief description of the study and why it was being done, how many people were participating, what would happen during the study, risks of participating, potential benefits of participating, an explanation that participating is voluntary, that their information was protected and maybe used in future research, that individuals would not have to pay or be paid for participating in the study, who they could call with questions or problems, what was done with the results, and lastly could they withdraw from the study once they've started the survey. They could then decide if they want to participate or not, by clicking the consent box at the bottom of the introduction page, and then they would move to the next page. Those who consented to completing the study were presented with a screening question to see if participants were age appropriate for this study. The age range was divided into two groups of emerging adults from ages 18 to 25 years and then young adults aged 26

years and older according to Arnett's (2006) theory of emerging adulthood. According to Arnett the term "emerging" is more of a descriptive term for the exploratory, unstable, fluid quality of the time period in which individuals were experiencing two different types of sexual encounters. Individuals who fit the age range were allowed to continue to the next page. Those who were not approved to participate were presented with a message that unfortunately they did not meet the recruitment criteria and thank them for their time. After they were confirmed as being within the age range of 18-30 years old, they started the survey, or they chose to close the webpage. Using Survey Monkey allowed participants to participate in the survey via computer or mobile device. Also, Survey Monkey allowed results to be anonymous, making sure participation was voluntary and anonymous. Participating individuals would exit the study by completing the survey and receiving a thank you for your participation message at the end. Due to confidentiality and anonymity, there was no follow up with participants.

The sample size that needed to be collected was calculated by G*Power analysis which yielded a sample size of 128 based on a using a F test of ANOVA: with fixed effects, omnibus and one way, with an effect f size of .25, an error probability of .05 with a power of .8 and 2 groups (Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. 2007). To make sure that I came close to the sample size of 128 I needed to have at least 300 participants. Creswell (2009) explains that the importance of measuring sample size by power analysis instead of from previous studies samples, or a percentage of the population is not optimal.

Once the participants agreed to participate, they were presented with a demographic questionnaire with five demographic questions based off Walcott et al. (2011) study, which included age, sex, race/ethnicity, primary language spoken at home during childhood, and religious affiliation. Questions I created and added to the demographic questionnaire included asking participants what sex they were assigned at birth or what appears on their birth certificate and then asking them how they identify, as a man, women, transgender man, or transgender woman. I also created the question that asked about categories of sexual minorities; options including men who have sex with women (MSW), women who have sex with men (WSM), men who have sex with men (MSM), women who have sex with women (WSW), lesbian, gay, bisexual, asexual, pansexual, demisexual, straight, as well as individuals being able to include their own identification as a write in option. Transgender was not included in this variable list because it is considered a gender identity not a sexual orientation (American Psychological Association [APA], 2014). Participants had a blank space to provide where they grew up, based on city, and state, where do they currently live, based on city and state, what city and state they were in when they learned about sex education in school, and how they would identify this area as urban or rural. Permission to use the instrumentation created by Walcott et al. can be found in Appendix A.

Section 2 of the questionnaire included 22 items based on the work of Walcott et al. (2011), which were designed to obtain information about the primary theme of sex education, amount, quality, location/source, and depth of previous sex education lessons and discussions. This was important to include in the study as I wanted to examine the

impact that sex education lessons and discussions based on their theme, such as abstinence only, or comprehensive, or no formal sex education lessons or discussions, and the quality, amount and location/source of the sex education lessons had on young and emerging sexual minority adults.

Section 3 of the questionnaire included 42 items based on the work of DeHart & Birkimer, 1997; and Walcott et al., 2011. The first 38 items were used to assess what participants current sexual attitudes as well as current sexual behaviors were. These were created to measure perceived susceptibility to HIV/AIDS (human immunodeficiency virus and acquired immunodeficiency syndrome), substance use, normative beliefs, attitudes about safer sex, intention to try to practice safer sex, and expectations about the feasibility of safer sexual activity. The last 4 items were added to this survey section to measure current sexual activity and self-reported condom use with steady and nonsteady partners. Walcott et al. (2011) reviewed that the original creators of the survey instrument DeHart and Birkimer (1997) found differences in what predicted condom use with steady versus nonsteady partners when assessing the predictive validity of the first 38 items, suggesting these subgroups should be considered separately. Since I was also comparing groups to see if group membership matters to the sexual risk scale score and if there was variance between groups rather than within groups, then analysis of variance was the most appropriate statistical test (Warner, 2013).

Definitions

Comprehensive sex education: According to Walcott et al. (2011) is defined as “detailed information about STIs, contraception, and abstinence; this

model may emphasize that abstinence is the best method for avoiding STIs and unintended pregnancy, but it also teaches about condoms and contraception to reduce the risk of unintended pregnancy and STIs, including HIV. Comprehensive models also teach interpersonal and communication skills to help young people explore their own values, goals, and options (p. 832)."

Abstinence-only sex education: According to Walcott et al. (2011) is defined as "education that includes discussions of values, character building, and, in some cases, refusal skills. This program promotes abstinence from sex but does not acknowledge that many teenagers will become sexually active. It does not teach about contraception or condom use, avoids discussions of abortion, and cites STIs and HIV as reasons to remain abstinent (p. 832)."

Emerging adulthood: Emerging and young adulthood are considered as two separate periods, as young adulthood is better applied to those 25 years old and into their thirties, while emerging adulthood meets the demographic of high school until they are 25 years old to include a large range of individuals from the ages of 18 to 30 years (Arnett, 2006).

Limitations

Limitations that may exist for this study include sample size, diversity of participants responses, and validity of statistical measures. There is always the issue of making sure that you can recruit enough participants to meet the G*Power requirement. The diversity of participants responses is important for this sample as I examined a specific independent variable of sexual minorities, in hopes that there were diverse

experiences. There are other ethical procedures that would arise. Completing research online and through sharing on social media outlets can make individuals fearful of their information being released in some way or hacked breaking confidentiality. To prevent this issue, all data collected was password protected and not used on public computers. Another limitation is if participants do not answer truthfully, even though it was anonymous. With an online survey it provides individuals anonymity, but there is always a fear of whom is reading the information that is collected. This was explained in the consent form.

Significance of the Study

This research study focuses on emerging and young adult sexual minorities who have been through abstinence-only or comprehensive sex education courses in school and have participated in sexual experiences. The findings from this study could have an impact on sexual minorities by helping advocates to fight for changes in sex education policies to benefit sexual minorities students in schools and benefit sexual minorities groups and organizations. Previous research found students stated that their abstinence-only sex education courses focused on heteronormativity and made it clear that a good, sexual person was married and heterosexual (Abbott et al., 2015; Currin et al., 2017; Gegenfurtner & Gebhardt, 2017). Research has found that individuals described sex education as being heteronormative, exclusive of their identities, making them feel invisible, sexually unprepared, and shameful (Estes, 2017; Hobaica & Kwon, 2017). When sexual minorities feel invisible in their abstinence-only sex education courses they

may turn to the internet and pornography to learn about sexual health and sexual behaviors (Currin et al., 2017).

It is important that sexual minority individuals are included in these sex education discussions as these individuals are at risk of HPV, and STIs because of a lack of openness to discuss sexuality in their youth, which has been discovered to impact them as young adults (Barefoot et al., 2017; Bostwick et al., 2015). Sexual minority women have been found less likely to have had sex education before their first sexual intercourse, and researchers found they would have used birth control if they had sex education before first intercourse (Bodnar & Tornello, 2019). Society does not recognize that with abstinence-only sex education courses, risky sexual behaviors by young adult's lead to the potential risks of unintended pregnancy or sexually transmitted infections, which have an impact on all of society (Griner et al., 2017). Considerably few research studies exist on sexual minorities because of the lack of data collected from them compared to their heterosexual counterparts, making it difficult to conduct research on sexual minorities if there is little data available (Byers, 2011).

Chapter 2: Literature Review

The development of engaging in safer sex behaviors is part of a larger set of social and interpersonal skills (C. Abraham and Sheeran, 1993 as cited in Casey et al., 2009). These risk reduction skills that come from sex education are important because many believe that providing sex education in the public-school system is necessary to ensure that adolescents receive correct information about sex and sexuality (Chappell et al., 2010). School-based sex education provides a formal approach to socializing young people into behaviors that are the sexual norms and values of the dominant groups in society (Gardner, 2015). This problem only continues when examining adolescent boys' choice of being ready or not to use protection during sex with discussion that "masculine values were associated with both abstinence and the intention to delay sex" (Cummings et al., 2014, p. 596). If these students are not learning how to make such a complex behavioral decision of abstinence from sex which is influenced by demographic, behavioral, attitudinal, and contextual factors such as age, race, noncoital sexual behaviors, and masculine values problems will continue as they age (Cummings et al., 2014.) Some college students who were interviewed about their abstinence-only education courses in high school described that they felt that this information was being pushed on them, and even used the term "brainwash" for the course they were in (Gardner, 2015).

The problem with teaching to the dominant groups is that school-based sexuality education programs often omit information about sexual minority attraction, identity, healthy sexual behavior, and romantic relationships which makes sexual minority youth

feel excluded by the programs and teaching (Elia et al., 2015; Kubicek et al., 2010; McNeill, 2013 as cited in Bishop et al., 2020; Elia & Eliason, 2010a; Pingel et al., 2013; Snapp et al., 2015). High risk populations such as sexual minorities should be taught early on that sexual and reproductive health is important, including routine screening for STIs/HIV, which should be promoted as one aspect of taking care of oneself in both schools and community settings through classroom instruction as well as addressing gender inequalities in contextual factors (Abraham et al., 2011; Biello et al., 2010). Focus group participants who are lesbian and bisexual females discussed that in their sex education HIV prevention was never brought up in conversation, confusion over whether STI prevention practices exist for sexual activity between women, and they wished it was more talked about they could understand it better (Arbeit et al., 2016). Urban youth are using HIV/STI screening clinics as determinations for trust in sexual and/or romantic relationships and to determine the need to use of condoms during protected sex with a new partner or the non-use with an established partner (Abraham et al., 2011). Abraham et al., discussed that this is a problem and that while these clinics are good, school programs should explain that information which is just one part of sexual self-care, especially if sex behaviors are happening outside of the committed relationships (2011). Some students say they go to the LGBT community centers to receive their sex education because they provide sexual minority diversity and inclusivity (Bishop et al., 2020).

Lesbian and bisexual women have reported engaging in sex with male partners before their heterosexual classmates (Bodnar & Tornello, 2019). Previous research found that “sexuality education programs must be of high quality in order to prepare young

persons for the complex world in which healthy sexual choices can be made" (Russell, 2005). This high quality is important because STIs can become acquired rapidly after sexual debut (Griner et al., 2017; Zhang et al., 2015). Policymakers of national and international proportion have skewed the importance of sexual education beyond abstinence-only into a political and religious debate which no longer really addresses the real issues of young people's sexual and reproductive health (Braeken & Cardinal, 2008).

Literature Search Strategy

Major library databases and search engines that were used include Academic Search Premier, EBSCOhost, Google Scholar, Marian University Library, Walden University Library.

Key search terms used include: sex, sexuality, abstinence-only, abstinence-only sex education, abstinence only, abstinence only sex education, abstinence plus sex education, school based sex education, abstinence only education, comprehensive sex education, LGB, LGBTQ, LGB sex education, rural, LGB rural, LGB protection sexually, young adulthood, young adult, emerging adult, emerging adulthood, emerging adulthood theory, religion, LGB religion, sexual minority religion, MSM, reference group theory, socialization theory. Research was completed for articles and journals from the 1980s to 2020.

Theoretical Foundation

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similarity in status attributes between themselves and other members of the group. Aalsma et al. (2013) expands on reference group theory in the analysis of adolescents who will align their sexual attitudes and behavior with the standards and expectations of the group with which they feel most affiliated. Beeghley et al. (1990) used reference group theory as well as socialization theory to examine religious change and alcohol use. This is a solid foundation within sociology to examine individuals' attitudes and behaviors which are shaped by the groups to which they belong or to which they relate. This combination is important in my research, as reference group theory would help to identify the conditions that people use their membership groups as frames of reference, in this case their membership groups can be sexual orientation, religion, geographic location, or their age group. Socialization theory is an important theory which comes from the basics of sociology in all people are socialized by agents of socialization, and throughout their lives, this socialization process impacts their personality interaction within a group (Beeghley et al., 1990). Reference group theory and socialization theory are both discussed in that there are five degrees in which a group acts as a reference group for an individual, which include:

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5. the degree to which an individual defines group leaders as significant others. (Beeghley et al., 1990, p. 263)

The four elements of socialization theory that can be identified include:

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These five degrees and four elements assisted their research in analyzing religious group position which is the reference group and the implication that it should have on drinking alcohol (Beeghley et al., 1990). The values that are associated with these reference groups, such as what type of leadership exists, or the interactions that individuals have with other people in these reference groups can influence their decisions.

Socialization theory is also important to this study, because as previously mentioned socialization is a lifelong process and important agents of socialization include families, peers, religious groups, media, and educational institutions (Beeghley et al., 1990). In this study, I examined how each one of these agents is influential to a sexual minority individuals' risky sexual behavior. As discussed by Beeghley et al. (1990), adults sometimes change characteristics and attitudes once they interact with new groups or will their childhood socialization continue to place them within their reference group. Since parents play an important role in their adolescents' sexual socialization by impacting adolescent sexual cognitions, that is why is socialization theory is included in this research of sex education and the examination of what is taught and who is teaching it (Dave et al., 2017; Evans et al., 2020a).

It was important to examine whether study participants followed the pattern of sexual risks from their primary reference group during their sex education or if that reference group changed as they grew into an emerging or young adult who identifies as a sexual minority still but has changed their reference group or kept it the same. Beeghley et al. (1990), found that people's religious beliefs would affect their everyday lives, and that individuals who change their religious beliefs increased their use of alcohol in predictable ways, considering their new reference group.

Literature Review

Types of Sex Education

One study found that differing groups have dissimilar definitions of the words "abstinence and sex", such as 45% of high school freshman surveyed said that not having

oral sex is part of the definition of abstinence before marriage, while 85% said that penis penetration in the anus or rectum is considered sex, the same as penile-vaginal intercourse, but there were differing thoughts on French kissing being considered having sex (Coffelt, 2018). Several studies explain that comprehensive sex education teaches about abstinence, but also teaches about the benefits of risk-reduction such as condom and contraception use (Bodnar & Tornello, 2019; McCarty-Caplan, 2013). There are a few major types of sex education in the United States. There are different names for abstinence-only sex education, such as sexual risk avoidance education (SRAE) (Maziarz et al., 2019). Bay-Cheng (2003) discusses school-based sexuality (SBSE) programs which have been in existence for over a century, "which acted as an influential force in the construction of a 'normal' adolescent sexuality and the production of a specific sexual teen" (p.61). However, Bay-Cheng (2003) also finds that this type of sex education is providing morally based, biased, misinformation to adolescents. For Bleakley et al. (2010), comprehensive sex education and abstinence-only plus sex education are one in the same. While Maziarz et al. (2019) views abstinence-plus as sex education that stresses abstinence-only sex education while also teaching about contraception and barrier protection. Another option is inclusive sex education, which is defined as inclusive sexuality education or curricula which gives attention to sexual minority individuals, issues and enable students and teachers to learn and talk about stereotypes and experiences of sexual minority peers (Baams et al., 2017; Poteat et al., 2013). Baams et al. (2017) uses the definition of comprehensive sexuality education as explained by the Sexuality Information and Education Council of the United States 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” (SIECUS, 2009, p. 932). The Kaiser Family Foundation described comprehensive sex education as including medically accurate information about abstinence in addition to safe sex, STDs, unintended pregnancy, contraception, condom use, consent, relationships, intimate partner violence, sexual orientation, and gender (Maziarz et al., 2019). The Guttmacher Institute has an updated list of important statements about the general requirements for sex education and HIV education in the United States: 39 states and the District of Columbia mandate sex education and/or HIV education, 17 states require program content to be medically accurate, 17 states and DC require either an inclusive or discriminatory view of sexual orientation, 10 states and DC require inclusive content with regard to sexual orientation, 7 states require only negative information to be provided on homosexuality and/or positive emphasis on heterosexuality (Guttmacher Institute, 2020).

History of Sex Education

The movement towards sex education being put into public schools’ curricula was as early as 1924 (Bigelow, 1924 and Campos, 2002 as cited in Chappell et al., 2010). In the 1950’s after Alfred Kinsey published his famous sex research, the conservatives wanted sex education to intentionally include hetero-normative perspectives that marginalized homosexual behavior or identity, as if the conservatives felt threatened by the deviant others (McCarty-Caplan, 2013). It was in the 1960s that the previously mentioned Sex Education and Information Council of the United States (SEICUS) was

created (Chappell et al., 2010). The ongoing limbo of what type of sex education is taught in the United States is largely impacted by the type of funding schools receive (McCarty-Caplan, 2013). This sex education conservatism went on for nearly three decades of conservative sex education policies which all began from the conservative base of political power, characterized by federal funding of abstinence-only education (McCarty-Caplan, 2013). Even amid conservative takeover of the 1980s and abstinence-only education in 1986, the Surgeon General's report on AIDS called for a nationwide education campaign, including the need for school-based sexuality education coverage of HIV/AIDS, which unfortunately was turned to a largely fear based education (Bishop et al., 2020). Research by Kantor and Lindberg (2020, p. 145) found that in the United States, there were available guidelines for sex education including the *Guidelines for Comprehensive Sexuality Education, K-12*, which were first published by the Sexuality Information and Education Council of the United States (SIECUS) in 1991, and the *National Sexuality Education Standards*, published by the Future of Sex Education 2011." It was between 1981 and 2010 that federal funding for sex education went exclusively to support one of three AOE (abstinence-only education) policies in the United States: The Adolescent Family Life Act (AFLA) of 1981; Title V, Section 510 of the Personal Responsibility and Work Opportunity Act of 1996; and the Community Based Abstinence Education program (CBAE) of 2000 (McCarty-Caplan, 2013). These federally funded programs were prohibited against using these funds to discuss contraceptive methods (Lindberg & Maddow-Zimet, 2012). In 2010, Congress authorized the Personal Responsibility Education Program (PREP) as part of the Patient Protection

and Affordable Care Act, and the Teen Pregnancy Prevention Initiative (TPPI) but these changes still do not represent the needs of sexual minority students (McCarty-Caplan, 2013, 2015).

Who Should Teach Sex Education?

There has been an ongoing discussion about if school is the appropriate environment for sex education to be taught (Zimmerman, 2015 as cited in Estes, 2017). There is continued debate over not only what should be taught in sex education, but also who should be teaching it (Bleakley, 2009). Study participants recognized teachers, principals, school nurses, community members, and parents as having the most influence on the delivery of SHE (sexual health education) in their school (Dickson et al., 2020). There were 10 self-identified LGB young adults between 19-25 interviewed about how they were taught sex education, and where was it taught; finding that no matter if it was taught at home, or school, or even if they used other means of searching, the information is heterosexually centered, revolves around sex as being dangerous, and is often lacking the most basic health and behavior information (Estes, 2017).

School Programs

School programs or interventions have been created to replace or enhance the sexuality education being presented in a school or by the local community, one example is nine 45-min lessons in the given by trained educators that is a sex education program called “Get Real: Comprehensive Sex Education That Works,” implemented in sixth grade, in hopes that this would prevent heterosexual intercourse from occurring (Erkut et al., 2013; Grossman et al., 2018). Research on early intervention programs found that

they could reduce the number of students who started sexual behaviors early on (Erkut et al., 2013; Grossman et al., 2018). Their results found that 30% of students who were taught sex education by a different program were likely to have had heterosexual intercourse by 7th grade, while their research found that 8th graders delayed sex (Erkut et al., 2013; Grossman et al., 2018). However, researchers had limitations because they only examined vaginal sex and did not assess how lesbian and gay or bisexual students would fit into these program lessons (Erkut et al., 2013; Grossman et al., 2018). Strategies for sex education for inner city African American and Puerto Rican youth such as abstinence, monogamy and safer sex are not often desirable, available, or fit within the context of these youths' lives (Abraham et al., 2011). These youth are found to be at highest risk for contracting STIs, and abstinence-only education long term has not been found effective for this group (Abraham et al., 2011). Gardner explained that the interviewees for their study were frequently citing a lack of birth control or STD prevention discussion in their sexual education courses (2015). Chicago Public Schools or CPS created a K-12 curriculum that was supposed to be aligned with the US National Sexuality Education Standards but also be inclusive of LGBTQ+ and other identities, and research was published based on 9th grade students and teachers' experiences (Jarpe-Ratner, 2020).

Teachers

In the United States, students are being put in dangerous situations by their teachers, including multicultural teachers who continue to teach sex education with a heteronormative mindset even if they try to mask it (Abbott et al., 2015; Gorski et al., 2013). Even with teachers teaching sex education with a heteronormative mindset it was

found that 62% of youth that were surveyed said that they relied on their teachers as a source of sexual information (Bleakley, 2009). Rural educators felt controlled by parents and religious groups and the school board for what they could teach or not (Blinn-Pike, 2008). Some teachers note the explicit prohibition of sexual minorities topic inclusion, while other teachers report fear of repercussion without any explicit direction from administration (Fredman et al., 2015; Jarpe-Ratner, 2020). With this lack of direction from administrators, teachers feel like the training and/or comfort with the sex education material can inhibit implementation efforts for programs or curriculum (Paine-Andrews et al., 2000 and Schaalma et al., 2004, as cited in Jarpe-Ratner, 2020). Student teachers can make a difference in teaching sex education (Castillo Nuñez et al., 2019). These student teachers who had positive attitudes and high self-efficacy beliefs could be significant especially since experienced teachers were mentioned or discussed less when working to make classroom neutral, such as using the language of all, unlike those novice or pre-service teachers (Anne Shelton et al., 2019; Castillo Nuñez et al., 2019). Teachers discussed that they receive a lot of push back from parents, one commented: ‘That’s my favorite thing, when parents come in and say this abstinence thing is working, and there are five girls walking around pregnant, and I am like, “yeah, works great” (Eisenberg et al., 2012, p. 322).

Parents/ Family

If parents do discuss sexuality with their children research found that parents communicate more about sexual risk than sex-positive topics with their adolescents and this discrepancy was largest for mothers of daughters (Evans et al., 2020b). Research has

found there is a large gap in the communication that exists between parents and their adolescent children especially when it has to do with sexuality (Eyam et al., 2018). Research found that 20% of parents have not talked to their teens about safe sex and nearly 60% have not talked about sensitive topics like masturbation (Evans et al., 2020b). Parents are not discussing birth control and safer sex, sexual decision making, and sexual pleasure and enjoyment to their children and sexual health educators are concerned (Byers, 2011). Parents play a critical role in teaching sexuality education to their children and have the chance to teach them not just about the sexual risks, but also to discuss sex positive topics (Evans et al., 2020b).

Some parents may not be talking to their children about sex because it is difficult to do so for multiple reasons, including the parents' lack of accurate information regarding sexual health, discomfort in talking about sex, and perceptions that their teens are not ready to talk about sex or engage in sexual activity, and most assume their child is heterosexual (Estes, 2017; Grossman et al., 2018). There is an importance of medical and public health communities helping to educate parents about these issues and services and offering it confidentially making it more comfortable for parents (Akers et al., 2010).

In order to ease into the conversation school programs such as Get Real: Comprehensive Sex Education That Works, focuses on delaying sex and providing medically accurate information about protection, it also includes a parent homework component with each lesson, giving parents an assist to discussing this important and sensitive topics with their children (Grossman et al., 2019). Parents can also get help in having these difficult conversations with a family-based sexual health intervention, it

encouraged parent-child communication about sex, which significantly reduced instances of sex without condoms (Estrada et al., 2017 and Widman et al., 2019 as cited in Evans et al., 2020a). In the discussion of difficulty for parents to discuss sexuality with their children, we are not just talking about mothers, Grossman et al., (2019) has suggested that fathers need to increase their involvement in health education programs that encourage communication about delaying teen sexual behavior. This would be important to as many fathers educated with their own opinions and values in the case of same sex relationships or behaviors (Coakley et al., 2017). The communication between African American fathers and their sons about risky sexual behaviors, provides a good outlook on the importance of sex education being taught by schools or parents (Coakley et al., 2017). However, we have to keep in mind that fathers may also be speaking with their daughters, and fathers of daughters communicate the least about sex-positive topics (Evans et al., 2020b).

When parents are not having conversations with their children, they find other resources, surveyed undergraduates in college and young adults stated that they received most of their information from peers and school, and others said their parents were not the primary source (Angera et al., 2008; Arliss, 2008; Estes, 2017). One study found that cousins, and other family members help adolescents to feel more positive about their sexual decisions or delay sexual intercourse (Bleakley, 2009). Dolcini et al. (2012) found that some heterosexual, African American youth of low income obtained their sexual health information from other family members. Many research studies have found that sex education from both schools and families increases the likelihood that youth will

consistently use contraception (Chin et al., 2012; Evans et al., 2020a; Kirby & Laris, 2009). Parents are also important in the discussion of what their children should be taught in sex education. Over a thousand parents were surveyed in California in 2006, and 89% of them said that comprehensive sex education should be what is taught in schools (Constantine et al., 2007). Constantine et al. (2007) found shocking statistics that across all of these demographics; race or ethnicity (79–92%), age (86–94%), education (84–93%), household income (87–92%), religious affiliation (86–91%), religious service attendance (69–96%) and ideological leaning (71–96%) support for comprehensive sex education was high. The Guttmacher Institute (2020) has published the recent general requirements for sex education and HIV education in relation to parents and these include; 40 states and DC require school districts to involve parents in sex education, HIV education or both, 25 states and DC require parental notification that sex education or HIV education will be provided, 5 states require parental consent for students to participate in sex education or HIV education, 36 states and DC allow parents the option to remove their child from instruction.

School Nurses

A lesser discussed group of individuals who could be teaching youth sex education are school nurses (Brewin et al., 2014). As with most positions in the school building such as teachers, they face barriers and a fear of what school administrators and parents want their children to be taught about sex education (Brewin et al., 2014). Many of the school nurses had to abide by and be responsible to the community in which they work and live, especially rural communities (Dickson & Brindis, 2019). Interviews with

18 nurses from 12 Massachusetts high schools found that they did not officially teach sex education but were frequently having informal sessions with students who needed them (Brewin et al., 2014). School health clinics and the school nurse's office were the most common places to make condoms available if the school district allows it, if not nurses can partner with local health departments, health clinics, and family planning agencies to increase referral options for students who are coming in to speak with them (Maziarz et al., 2019). Other researchers found that school nurses who were teaching sexual health education sometimes are able to collaborate with other school staff when they were not able to decide the planning or delivery of sexual health education and were frequently asked by teachers to be a guest speaker (Dickson & Brindis, 2019). Brewin et al. (2014) and Dickson and Brindis (2019) both discussed the importance of trust to the success of the nurse teaching the sexual health education information or discussing with students informally while being cautious of confidentiality issues and fear of conflict within their research. The National Association of School Nurses (2017 as cited in (Maziarz et al., 2019) released their Sexual Health Education position statement which emphasizes the importance of advocating for medically accurate, evidence-based sexual health education.

Media/ Internet

The internet is a main source for gaining information about sex (Pingel et al., 2013). Research revealed a significant relationship between exposure to sexual content in magazines and movies (which can now also be viewed on the internet) and higher intentions to have sex and engage in heavy sexual activity (Bleakley, 2009). Young people use the internet not just for information about sexual activity, but also in the

process of self-identification and socialization of their sexual orientation, as was found in research consisting of two years of interviews of 12 gay teenagers by (Calvelhe Panizo, 2018). Calvelhe Panizo discussed that the internet is a space for anonymity and can be a place of hope, and through their interviews found that these teenagers would use the internet during a time of confusion about consequences that may exist because of their homosexuality. The internet is used by sexual minority youth to explore aspects of their sexual health but is used with caution, but it is also used to find friends, and romantic partners, more than heterosexual youth (DeHaan et al., 2013; Mustanski et al., 2015;). DeHaan et al. (2013) completed 32 interviews with sexual minority youth between 16-24 years old about their internet usage to get information that they feel is missing in their offline resources. Estes' (2017) participants stated that they used websites, chat rooms, and social media sites when they would search the internet for information about sex, and also used pornography and television shows as a guide for sexual behaviors to engage in. Estes (2017) found that young adult sexual minorities gathered information through television shows like LOGO or South of Nowhere and movies depicting sexual minorities individuals.

Young People

Adolescents have said that they want their parents to communicate with them about sex (Pariera & Brody, 2018 as cited in Evans et al., 2020b). Young adults have said that the clear implication of their sex education when they were younger was that they should be abstinent until marriage, but that the lessons never discussed marriage as a topic (Gardner, 2015). This led to a lifelong issue when abstinence-only sex education

programs were inherently biased against homosexual youth for whom marriage is generally not an option before 2015 (Miller and Schleifer 2008; Santelli et al., 2006; Santelli and Kantor, 2008 as cited in Bleakley et al., 2010). Young people are 'knowledgeable actors' in the field of sexuality education and any effort to reconceptualize the practice should 'begin with students' understandings of their sexual knowledge rather than a sexuality educator's perception of them and it must actively engage their interests and concerns as defined by them (Allen et al., 2008; Coll et al., 2018). Gardner asked adults what they would have liked to see in their sex education, the answers were overwhelming including the assumption that some students will be sexually active before marriage, that it be age appropriate, boys and girls are not separated, inclusive and comprehensive and debunks sexuality myths, includes specific and accurate information about contraception, safe sex options, alcohol and drugs and sexual activity, accessing sex health services; including phone numbers, websites, office addresses of these locations and, a discussion of relationships and emotions in relation to sexual activity (Gardner, 2015). Examining a different set of young people, they had reservations about the types of conversations that should occur in sexuality education and/or that students-educators should/could attempt within a school setting, such as discussing masturbation and pleasure (Coll et al., 2018). With some reservations from young people about what should be taught ninth grade students who participated in the Chicago Public Schools k-12 curriculum wanted a more LGBTQ+-inclusive curriculum defined by "1) including identity topics integrated throughout the curriculum; 2) more holistic discussion of sexuality; 3) more information about identity development, and 4)

the creation of a safe space through an accepting, non-judgmental tone from teachers" (Jarpe-Ratner, 2020). Youth who have been surveyed discuss their frustration with the lack of discussion about pleasure in their sex education courses (Estes, 2017), and about the lack of sexual or gender minority education or information, while internationally some students are surveyed about masturbation, how to have sex more satisfying, and sexual feelings, emotions, and relationships (Kantor & Lindberg, 2020).

Sexual Minorities and Sexual Risks

Kinsey, Pomeroy, and Martin (1948, p. 650), and Kinsey, Pomeroy, Martin and Gebhard (1953, p. 475) as cited in Biddulph (2006) reported that 37 percent of males and 13 percent of females had at least one same-sex experience to orgasm and that suggested that a person's sexual orientation could change over the course of his or her lifetime. While Kinsey does not say at what age this same-sex experience happens or at what age they start to define their sexual orientation, it is important that sexual minority individuals are educated about what changes can happen to them sexually. With the lack of sex education curricula related to sexual minorities, these students who are not receiving any or accurate sex education will look to other resources to answer their questions, their main resource is the internet, and sources mentioned include Wikipedia, health or sex education organization websites, fiction, advertisements, queer community websites, and papers from academic scholars (Marshall, 2016). Sexual minority students discussed that they would use a range of interpersonal sources that included peers, parents, teachers, sex education presenters, members of the queer community, siblings, therapists, film, and television media, including news stories (Marshall, 2016). Local health departments or

community-based organizations serve as the point of entry for many young gay and bisexual men to learn about HIV/STI testing, and safer sex education (Bauermeister et al., 2015). While Bauermeister et al. (2015) examined the sexual risks of young gay and bisexual men and young men who have sex with men they found that the scope of the content in risk reduction counseling and safer sex education presented varied between HIV-only sites and comprehensive HIV/STI testing sites. Since young gay and bisexual men often times do not receive information during sex education that they need about HIV and STIs these testing sites may try to ensure that their testing services do not become so medicalized that they fail to provide risk reduction counseling and safer sex (Pingel et al., 2013 as cited in Bauermeister et al., 2015).

While this is good news, this does not appear to happen for all sexual minority individuals, such as lesbians, who had at least one previous male sexual partner or not having to face a multitude of sexual health risks due to a lack of reported sexual orientation, causing them to no be provided with proper safe sex education by providers, having been less likely to have had a vaccine for HPV, or have been tested for HIV or STIs (Barefoot, et al., 2017). This fear of reporting and the absence of sex education for sexual minorities as well as a lack of resources for them has led to some devasting consequences from sexual behaviors. For bisexual women between the age of 18-25 years old, they are at higher risk of ever having been diagnosed with an STI and report more male sexual partners, both of these are seen as risks since women are less consistent to use a condom during vaginal sex (Bostwick et al., 2015). Consistent with previous research bisexuals and lesbians have reported higher numbers of male sex partners, STIs

transmitted through male or female partners, sexual intercourse at younger ages, not using hormonal contraception, meaning they are more likely to become pregnant and do at younger ages (Arbeit et al., 2016; Bodnar & Tornello, 2019). Could some of this be prevented? Sexual minority women were found less likely to have had sex education before their first sexual intercourse, and it was found that receiving sex education before engaging in intercourse was associated with an increase in birth control use among bisexual participants (Bodnar & Tornello, 2019).

Sexual minority males (SMM) represent about 3.5% of the American population yet members of this population, experience numerous health disparities especially in their youth, as well as when they become emerging adults, including being at greater risk for STIs, experience stigma due to sexual orientation which would delay their testing for HIV, and they also have to handle mental, and physical health stigmas (Griffin et al., 2020; Halkitis et al., 2020). Emerging adult gay men are at risk for more than just HIV, they are at high risk for chlamydia and gonorrhea and syphilis, disproportionally burdened by risk for such as bacterial STIs (e.g.,), human papillomavirus, hepatitis B and C, and herpes simplex virus (HSV) (Halkitis et al., 2020).

Rural

Sex education for sexual minorities in rural areas is almost nonexistent. Kosciw et al., 2016; Warbelow & Diaz, 2016 (as cited in Boyland et al., 2018) found that the Midwest is a region where communities tend to be less progressive in their views toward non-heterosexual relationships, especially in rural areas. Other than national GLSEN studies of LGBTQ youth, very little research has been conducted on these youth in

Indiana schools (Boyland et al., 2018). Sex education in rural areas can be discussed even though Blinn-Pike (2008) found that there is a lack of research in rural areas regarding sex education requirements, needs and what educators teach. Blinn-Pike found from the rural educators that they had strong ties with their rural schools, students, and communities, did not have strong differences in opinions of what the rural students needed to be learning in sex education, and did not think rural students were less likely to be involved in risky behaviors. Ebersole et al. (2020) researched rural areas and small towns a decade after Blinn-Pike in the United States, where youth residing in rural areas were more likely to report ever having sexual intercourse which is a scary predicament because those youth are at risk of having higher HIV rates when they do not have formal sexual health education to inform about HIV prevention, which is also being spread by the opioid epidemic (Ebersole et al., 2020).

Emerging and Young Adult Sexual Risks

The CDC (2016b; Satterwhite et al., 2013, as cited in Coakley et al., 2017) define at-risk sexual behaviors as having more than one sexual partner; changing sexual partners frequently; having oral, vaginal, or anal sex without a condom; and using unreliable methods of birth control or using birth control inconsistently. The sexual risks of emerging and young adults can vary from those of sexual minority individuals especially since this group of individuals are more likely to receive sex education directed towards them. Health education programs had attempted to decrease adolescents' sexual risk-taking through delaying sexual initiation or teaching successful condom use; however, the approximately 40,000 new HIV infections acquired by sexual behaviors of

individuals before the age of 25 showing that these programs are inconsistent or insufficient even for those nonsexual minority individuals (Bauermeister et al., 2009; DiClemente et al., 2011). Even with sex education programs seen as primarily heteronormative as previously mentioned, they are not efficient in preventing risky sexual behaviors by young or emerging adults, such as in 2010 the CDC (as cited in Biello et al., 2010) found that women among ages 15–39 now account for one fourth of all new infections, resulting in almost 10,000 new cases annually. These numbers continued to increase as in 2011 the CDC (as cited in Black et al., 2011), found that no use and inconsistent use of condoms are major contributors to the approximately 19 million new STIs each year; almost half of these infections are among individuals aged 15 to 24 years. Continued research on young adults by the US National College Health Assessment found that 51% of men and 46% of women in college did not use some form of protection during vaginal sex, less than 28% during anal sex, and 5% during oral sex (Griner et al., 2017).

Higgins & Browne (as cited in Cheney et al., 2014, p. 1452) discussed that gender and class setting impacted a women's sexual health, because many "perceived men as unable to control their sexual desires—viewed as primarily biologically based—and believed that they had to meet men's sexual needs, sometimes at the risk of engaging in forced, unprotected sex." This heteronormative mindset led researchers to try and explain why risk for STIs and self-reported history of STIs were higher among women than men in this sample, and it is because these young adults at a 4-year university, were found to be concerned with not getting pregnant so they could complete their professional and

educational goals, but this increased their risk for sexually transmitted infections (Cheney et al., 2014). Not only is there a concern about STIs and pregnancy but college females are at high risk for HPV (human papillomavirus) and are not vaccinated against HPV, which should be a concern for sexuality educators (Catalano et al., 2016).

Not all of the sexual risks or difficulty to stay abstinent are falling on the weight of women's shoulders a review from 2008-2019 found that sexual abstinence in young (10-24 years) and middle aged (25-59 years) men (by their definition) decreased with increasing age in young men but increased with increasing age in middle-aged men (Irfan et al., 2020). The reasons found for young men's (10-24 years) rate of sexual abstinence included age, unavailability of a partner, lower educational levels, low socioeconomic status, conservative and religious conditions, and no or less knowledge about sexually transmitted infections were common predictors of sexual abstinence in most of the men. (Irfan et al., 2020). While other research of emerging adults found that God and their parents were reasons that they stayed abstinent or delay sexual intercourse (Coffelt, 2018).

Religion and Politics

Religion is a matter that impacts how all individuals view, act and discuss sexuality and what type of sex education should be taught, impacting sexual minorities. Since people are more likely to encounter religious people who are open about their conservative values, others may feel that they have to support those dominant religious views, then local media, advertisements, government, schools and other institutions will continue to perpetuate the dominant religion, as religious organizations and members

increase in organizing social events, meaning that the overall level of the nation's religious belief could be more important than the dominant religion itself (Adamczyk and Hayes, 2012, Finke and Adamczyk, 2008, Scheepers et al., 2002, van den Akker et al., 2013, Zelinsky, 2001 as cited in Adamczyk & Liao, Y.-C, 2019). This started to come to fruition as the conservatives in the 1980s was wanting to take back their Christian values in the United States and recognized the strong political power of religious voters beginning campaigns denouncing premarital sex, abortion, liberal sex education, and homosexuality as incongruous with the Bible's teachings (McCarty-Caplan, 2013).

Conservative's campaign focused on specific areas in the United States such as rural communities as Blinn-Pike (2008) questioned rural educators about the differences between rural and urban administrators, revealing that rural communities seem to be more religious, and that rural churches present more opposition to school-based sex education especially when it comes to information about contraception. This was a positive for the conservatives. For adults 18 years and older beliefs about the effectiveness of abstinence-only education and about condom instruction were largely driven by increased attendance at religious services and by conservative political orientation (Bleakley et al., 2010). The Teach One Reach One program attempted to help parents communicate with their kids about sex but was unsuccessful because the sample was located in the southeast ‘‘Bible Belt’’ region of the United States and are more likely to be religious and have conservative values that may conflict with openly discussing sex topics (Dave et al., 2017). Research on school-based sex education in the United States was dominated by Republicans and the religious right which leaves homosexuality

largely invisible within sex education courses (Irvine, 2002 and Zimmerman, 2015 as cited in Estes, 2017). This does not differ in other countries in Canada despite the government's attempts to construct a scientifically supported curriculum that honors the province's diversity, some parents and community groups such as The Parents Alliance of Ontario and a number of conservative advocacy groups, branches of organized religious denominations, along with newly formed political and activist groups such as Parents as First Educators expressed outrage (Bialystok, 2019). Some students attend churches to receive their sex education because they provide sexual minority diversity and inclusivity (Bishop et al., 2020). One individual from said "the church I go to has a very comprehensive sexual education program that starts in fifth and sixth grade, which I hugely appreciate, because our school sex ed was pretty much abstinence based and very, very poor" (Bishop et al., 2020, p. 7).

With pressure coming from governments, churches, and rural educators, how did individuals make decisions about sexual behavior in relation to these religious beliefs? In the Midwest female adolescents' sexual behaviors were studied to see if their religiosity would impact these behaviors and if this religiosity would make any difference in how conservative they were or not with their sexual experiences, finding in their longitudinal study of 328 females that "decreased religiosity affects the accrual of sexual experience through decreased sexual conservatism" (Aalsma et al., 2013, p. 1193). An interesting finding that correlates with previous research is that evangelical protestant youth are among the youngest group to instigate intercourse (Regnerus, 2007 as cited in Aalsma et al., 2013).

While there is some disagreement in what and where sex education should be taught research found that while sex education is sometimes used to pass on the main religious and moral values and norms with regard to sexuality, this desire to pass along these values also prevents adequate examination of certain topics, with respect to sexual diversity, non-marital sexual relationships, and other sensitive topics such as homosexual and bisexual relationships (Braeken & Cardinal, 2008). Attitudes on homosexuality are based on religiosity and that those who have a high religiosity express more negative attitudes towards homosexuals, and the attitudes that women have compared to men are more influenced by that religiosity (Guittar & Pals, 2014). Sexual minority individuals struggles exist with white Protestant denominations, historically black Protestant denominations, Catholicism, the Church of Jesus Christ of Latter-Day Saints, Jehovah's Witnesses, Islam and Judaism (Coley, 2019). It is noted that an individuals sexual identity could also be relevant to the impact of religion on one's beliefs and behavior as, religious sexual minority individuals have reported that religion provides a source of love, support, strength, and a sense belonging to something greater than themselves (Rosenkrantz et al., 2016 as cited in Hall et al., 2020). Even with such animosity by individuals of religious faiths towards sexual minorities, it has been found that most sexual minorities in the US continue to identify with some form of religion (Sherkat, 2016 as cited in Coley, 2019). Some sexual minority individuals of faith do not experience conflicts between their sexual identities and religions, and "finding that they may even report their desire for same sex relationships as a gift from God" (Moon, 2014 as cited in Coley, 2019, p. 48). However, this is not the case with all, some sexual

minority individuals deal with this conflict between sexuality and religious beliefs by trying to rid their sexual desires with conversion therapy or to remain celibate, or for some being a sexual minority meant that they had to leave their religion (Coley, 2019; Hall et al., 2020). Religion is found to still be relevant to some beliefs and values that emerging adults may transfer into life decisions, potentially impacting their sexual risks during sex (Hall et al., 2020).

Summary and Conclusions

After examining the abundance of literature on topics ranging from sex education, including what different types of sex education exist, and sex educations history within the United Sates. It was important to dig deeper into the literature and see whom society thinks should be teaching sex education. These different options for educators included programs outside of school, programs in schools, within the schools should it be teachers, or school nurses. The literature found that many young people are reaching out to one another and to the media and the internet to learn about sex and all that should come with sex education. After reviewing all the different literature related to sex education, it was important to this study to review young people, sexual minorities, individuals in rural communities, young and emerging adults' sexual risks, and sexual risks for sexual minorities. This literature provided information but also exposed a gap that exists on the lack of research of sexual minorities and their sexual risks related to sex education. Lastly, literature on religion and politics were also reviewed to see if a connection which between religion, politics, and sex education for heterosexuals, had the same consequences for sexual minorities as well.

In summary, I can state that no previous research has examined the sexual risks taken by young and emerging adults, of sexual minorities who had abstinence-only sex education or comprehensive sex education. Major themes that appeared throughout the literature is the complete lack of research of sexual minority emerging and young adults and their sexual risk behaviors related to sex education.

Chapter 3: Research Method

The purpose of this quantitative cross-sectional survey study was to test if sexual minority emerging and young adults would score higher or lower on sexual risk scale (SRS) scores, depending on the type of sex education they received in school. Their SRS scores may vary because of the heterosexually centered in the classroom which makes them feel invisible during abstinence-only sex education courses and leads them to search other places for basic health and sex behavior information (Currin et al., 2017; Estes, 2017).

This chapter includes a description of the study design, sample size, and characteristics, a description of the instrumentation and materials for data collection and analysis, and a discussion of ethical considerations.

Research Design and Rationale

This study used a quantitative cross-sectional survey study to examine the sexual risk during sex by sexual minorities who had abstinence-only sex education or comprehensive sex education during their K-12 school years. The quantitative approach was the best method to ask and answer questions about the relationships between variables and the differences between independent variables (Creswell, 2009). Completing an anonymous cross-sectional research design is important due to the sensitive nature of questions being asked, and the answers that may be presented. Having participants complete the survey online through a secure website allowed participants to feel more comfortable to reveal information that is sensitive and be able to keep their identity and answers anonymous. This is important to this research study and future

research as sexual minority individuals are not surveyed about their history with sex education or how it has impacted their sexual risk taking outside of their K-12 years. This design choice may take longer than expected depending on the consistency of participants sharing the link with other individuals. Time may be an issue if there are concerns or problems with the website being used to collect the survey information. Previous research of sex education, sexual minorities and emerging and young adults have utilized surveys to collect this information.

The dependent variable was a continuous variable that is the mean score from the SRS which includes questions created to measure perceived susceptibility to HIV/AIDS/STDs, substance use, peer norms toward safer sex, attitudes toward safer sex, intention to try to practice safer sex, and expectations to practice safer sex. Questions that specifically say, “condom use or nonuse” have the term “barrier methods” added to the questions with a description of what these could be, including male condoms, female condoms, dental dams, diaphragm, and spermicides in order to be inclusive of all individuals who may participate in the survey. These were presented in 5- point Likert scales from strongly disagree to strongly agree. Reverse scoring of odd numbered items and item number 38 was completed (Walcott et al., 2011). Higher scores indicated more positive attitudes toward safer sex. The scores of each subscale; (attitudes toward safer sex, peer norms toward safer sex, perceived susceptibility to HIV, substance use, intention to practice safer sex and expectation to practice safer sex); was determined by using the mean ratings for each subscale, which were created by a combination of questions from the survey.

The primary independent variable which was at the nominal level is what type of sex education they had in school, abstinence-only sex education, comprehensive sex education or no formal sex education lessons or discussions. This allowed to the completion of group comparisons between those who did have abstinence-only sex education and those who did not.

In order to collect inclusive and accurate data there were many descriptive questions asked including; age: emerging adults, young adults; what sex they were assigned at birth or what appears on their birth certificate and then asking them how they identify, as a man, women, transgender man or transgender woman; asking about categories of sexual minorities or answering their sexual orientation; options including, MSW, WSM, MSM, WSW, lesbian, gay, bisexual, asexual, pansexual, demisexual, straight, as well as individuals being able to include their own identification as a write in option; participants can provide where they grew up, based on city, and state, where do they currently live, based on city and state, what state they were in when they learned about sex in school, and how they would identify this area, such as urban or rural; and language, religious affiliation.

Methodology

The methodology for this quantitative study is a cross-sectional survey design. A cross-sectional survey design is recommended to collect data from a single time period (Creswell, 2009).

Population

Participants would be emerging and young adult sexual minorities who have participated in a sexual behavior and have taken an abstinence-only sex education course or comprehensive sex education course.

Sampling and Sampling Procedures

For this study, the sampling strategy would be a convenience snowball sample. Individuals would not be excluded in the initial collection of data because individuals are not defined in this study by just their sexual orientation. The sample size that needed to be collected was calculated by G*Power analysis which yielded a sample size of 128 based on a using a F test of ANOVA: with fixed effects, omnibus and one way, with an effect f size of .25, an error probability of .05 with a power of .8 and 2 groups (Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. 2007). To make sure that I came close to the sample size of 128 I sought to recruit at least 300 participants.

Procedures for Recruitment, Participation, and Data Collection (Primary Data)

Data for this study was collected from participants between the ages of 18-30 years old, and were recruited through social networking sites, such as Facebook, Instagram Snapchat, Twitter, LinkedIn, list servs and Walden's participant pool. The online link for the survey was shared on my social media pages, allowing others to share the link, and I advised others to share the link, so that more people would participate in the study. The link also included a picture with the visual text of what this study was about and who specifically was being recruited, such as people 18-30 years old and individuals who are MSW, WSM, MSM, WSW, lesbian, gay, bisexual, asexual,

pansexual, demisexual, or another sexual orientation (not including straight/heterosexual only) individuals. All recruitment materials or social media posts would provide a link to the study website, which would be from Survey Monkey. Survey Monkey is an online organization that provides researchers a place to create and export surveys to many people as well as export data collected into SPSS or Excel. Individuals who visit the website via the link provided were given several descriptions and answers to questions potential participants may have; a brief description of the study and why it was being done, how many people were participating, what would happen during the study, risks of participating, potential benefits of participating, an explanation that participating is voluntary, that their information was protected and maybe used in future research, that individuals will not have to pay or be paid for participating in the study, who they could call with questions or problems, what was done with the results, and lastly can they withdraw from the study once they've started the survey. They could then decide if they want to participate or not, by clicking the consent box at the bottom of the introduction page, and then they would move to the next page. Those who consented to completing the study would be presented with a screening question to see if participants are age appropriate for this study. The age range was divided into two groups of emerging adults from ages 18 to 25 and then young adults aged 26 and older according to Arnett's (2006) theory of emerging adulthood. According to Arnett (2006) the term "emerging" is more of a descriptive term for the exploratory, unstable, fluid quality of the time period in which individuals were experiencing two different types of sexual encounters. Individuals who would fit the age range would be allowed to continue to the next page.

Those who are not approved to participate would be presented with a message that unfortunately they do not meet the recruitment criteria and thank them for their time. After they have been confirmed as being within the age range of 18-30 years old, they would start the survey, or they could choose to close webpage. Using Survey Monkey will allow participants to participate in the survey via computer or mobile device. Also, Survey Monkey allows results to be anonymous, making sure participation would be voluntary and anonymous. Participating individuals will exit the study by completing the survey and receiving a thank you for your participation message at the end. Due to confidentiality and anonymity, there was no follow up with participants.

Instrumentation and Operationalization of Constructs

Demographic Questionnaire

Once the participants agreed to participate, they were presented with a demographic questionnaire with five demographic questions based off Walcott et al. (2011) study, which included age, sex, race/ethnicity, primary language spoken at home during childhood, and religious affiliation. Questions I created and added to the demographic questionnaire included asking participants what sex they were assigned at birth or what appears on their birth certificate and then asking them how they identify, as a man, women, transgender man, or transgender woman. I also created the question that asked about categories of sexual minorities; options including men who have sex with women (MSW), women who have sex with men (WSM), men who have sex with men (MSM), women who have sex with women (WSW), lesbian, gay, bisexual, asexual, pansexual, demisexual, straight, as well as individuals being able to include their own

identification as a write in option. Transgender was not included in this variable list because it is considered a gender identity not a sexual orientation (American Psychological Association [APA], 2014). Participants had a blank space to provide where they grew up, based on city, and state, where do they currently live, based on city and state, what city and state they were in when they learned about sex education in school, and how they would identify this area as urban or rural. Permission to use the instrumentation created by Walcott et al. can be found in Appendix A.

Section 2 of the questionnaire included 22 items based on the work of Walcott et al. (2011), which were designed to obtain information about the primary theme of sex education, amount, quality, location/source, and depth of previous sex education lessons and discussions. The next 5 items included questions such as What would best describe the predominant "theme" across all of your previous sex education experiences?"; To what extent did the sex education you received answer your questions about sex and sex-related practices?"; How would you best describe the duration and intensity of your previous school-based sex education courses, if you had any?; Approximately how many school hours were spent on the subject of sex education during your middle and high school years?; How would you describe the information received from your previous lessons in sex education?

The definitions of the primary themes for this question about models of sex education are listed below.

Comprehensive sex education: According to Walcott et al. (2011) is defined as "detailed information about STIs, contraception, and abstinence; this

model may emphasize that abstinence is the best method for avoiding STIs and unintended pregnancy, but it also teaches about condoms and contraception to reduce the risk of unintended pregnancy and STIs, including HIV. Comprehensive models also teach interpersonal and communication skills to help young people explore their own values, goals, and options (p. 832)."

Abstinence-only sex education: According to Walcott et al. (2011) is defined as "education that includes discussions of values, character building, and, in some cases, refusal skills. This program promotes abstinence from sex but does not acknowledge that many teenagers will become sexually active. It does not teach about contraception or condom use, avoids discussions of abortion, and cites STIs and HIV as reasons to remain abstinent (p. 832)."

The next 12 items were rated on a 7-point scale, ranging from "not at all" to "extensively addressed." The last 2 items to be asked will have a yes/no response: "Did your previous sex education include a discussion of how to properly use condoms and/or other forms of contraception?" and "Did your previous sex education include distribution of, or access to, condoms and/or other forms of contraception?"

Section 3 of the questionnaire included 42 items based on the work of DeHart & Birkimer, 1997; and Walcott et al., 2011. The first 38 items were used to assess what participants current sexual attitudes as well as current sexual behaviors were. These were created to measure perceived susceptibility to HIV/AIDS (human immunodeficiency virus and acquired immunodeficiency syndrome), substance use, normative beliefs,

attitudes about safer sex, intention to try to practice safer sex, and expectations about the feasibility of safer sexual activity.

These were presented in 5- point Likert scales from strongly disagree to strongly agree. The results were determined by using the mean ratings for each subscale which were calculated on a 1 to 5 scale. Walcott et al. (2011) explains that the higher scores represented greater perceived susceptibility to HIV/AIDS, more substance use, greater norm toward safer sex, more positive attitudes about safer sex, greater intention to try to practice safer sex, and greater expectations to practice safer sex. Walcott et al. (2011) explains that this scale, including its subscales, has evidence of internal reliability (alphas of the subscales range from .76 to .90) and both construct and predictive validity (see DeHart & Birkimer, 1997). The last 4 items were added to this survey section to measure current sexual activity and self-reported condom use with steady and nonsteady partners. Walcott et al. (2011) reviewed that the original creators of the survey instrument DeHart and Birkimer (1997) found differences in what predicted condom use with steady versus nonsteady partners when assessing the predictive validity of the first 38 items, suggesting these subgroups should be considered separately. These items were presented as follows: "When I had sex with a steady partner in the past year, we used a condom;" "When I had sex with someone in the past year who was not a steady partner, we used a condom;" and "When I had sex in the past 2 weeks, we used a condom." Response choices for these three items were: "never," "rarely," "sometimes," "very often," "always," or "N/A (I have not had sex with a [steady/non-steady] partner in the past year)." The last item in this section will include the question "How many times in the last month have you had

sex without a condom? (select only one) with the options of answers "(I have not had sex in the last month; I have had sex in the past month but always used a condom; once without a condom; 2 times; 3 times; 4 times; 5-10 times; 11-15 times; 16-20 times and more than 20 times)".

Data Analysis Plan

Data collected was saved in a password encrypted Microsoft excel file and then transferred to SPSS. The data was analyzed using the most recent version of SPSS. Analysis of variance (ANOVA) was completed because more than 1 or 2 groups are being examined. Analysis of variance (ANOVA) was completed to examine the differences between groups (those who had abstinence-only sex education, comprehensive sex education and then those who did not have lessons or discussions). Since ANOVA required finding the differences between or within the groups and if variance exists between the independent variables and see if group membership matters to the dependent variable, which was the sexual risk scale scores (Creswell, 2009). ANOVA was completed in two stages, the first stage provided information about if there are differences among the independent variables, but not which differences are significant, so the second stage is a Tukey's HSD post hoc test was completed to see which differences between groups are significant.

Research Question

RQ1. Does the type of sex education received predict sexual risk scale (SRS) scores among emerging and young adult sexual minorities?

Hypotheses

H_0. There is no significant difference between the abstinence only sex education group and comprehensive sex education group on SRS scores.

H_1. Abstinence only sex education group scores significantly higher than the comprehensive sex education group on the SRS scores.

H_0. There is no significant difference between the abstinence only sex education group and comprehensive sex education group on the SRS scores.

H_2. Comprehensive sex education group scores significantly higher than abstinence only sex education group on SRS scores.

Threats to Validity

External Validity

One threat to external validity was that the information was only being collected at one moment in time. This did not give participants time to think over old memories to see if they could recall more details. Since the survey was a one-time, anonymous sample, this could lead to external validity to be questioned.

Internal Validity

One threat to internal validity was similar to Walcott et al. (2011) research study because I was using the same instrument as both studies relied on self-reporting. For both studies the information collected was retrospective, back several decades for some participants. Information received in the study may be suspect to scrutiny as some individuals may not exactly remember information from decades before. A second threat to internal validity was the lack of clarification in the questions asked to the participants.

If a participant did not understand a word or the question being asked of them, they may skip this question, which would then mean that a full account of their surveyed information would not be collected. Lastly, another threat to internal validity was that it was impossible to monitor possible alternative reasons for participants answers, such as was the participant distracted, were they under the influence of drugs or alcohol etc.

Ethical Procedures

Following ethical procedures take high precedence in completing this study because of the American Psychological Association (APA) Code of Ethics and Walden University guidelines for completing ethical research. APA and Walden both require that participants be at little to no risk in participating in this research study. To confirm that risk was low, this study was submitted to the Walden University Institutional Review Board (IRB) for permission and approval (number 05-21-21-0673738) for this study to move forward. All ethical concerns for recruiting of participants and processes of data collection was addressed with the IRB. IRB was presented with the complete plan of how recruitment was completed, and how data was collected, and organized to keep confidentiality. If a participant starts the survey but does not full complete the requirements of questions answered, this survey was thrown out. Since the recruitment was anonymous the individual would not be notified of this event, nor would they be able to contact the recruiters if they choose to not complete the survey. Once data is collected anonymously through the collecting site, Survey Monkey, then the data was downloaded into a zip file and then encrypted by the researcher into an excel file. The researcher was the only one who has accessed to the downloaded file and any USB drives that they are

stored on with a password. All saved Excel files, downloads from Survey Monkey, or SPSS will only be viewed by the researcher. Those who work for Survey Monkey, should any technological help be needed will not be able to see whom the participants were, as no identifying information was linked to the surveys completed. All documents, data and retrieved information will be saved to a password protected external hard drive for 5 years from the completion of the study.

Chapter 4: Results

Introduction

The purpose of this quantitative cross-sectional survey study was to test if sexual minority emerging and young adults would score higher or lower on sexual risk scale (SRS) scores, depending on the type of sex education they received. The primary research question was "Does the type of sex education received predict sexual risk scale scores among emerging and young adult sexual minorities?"

Data Collection

This study received approval from the Walden University Institutional Review Board (IRB). Data collection occurred over 7 weeks. The survey link also included a picture with the visual text of what this study was about and who specifically was being recruited, such as people 18-30 years old and individuals who are men who have sex with women (MSW), women who have sex with men (WSM), men who have sex with men (MSM), women who have sex with women (WSW), lesbian, gay, bisexual, asexual, pansexual, demisexual, or another sexual orientation (not including straight/heterosexual only) individuals was distributed via Twitter, LinkedIn, Facebook, and Instagram, and through emails, then individuals could click the Survey Monkey link and complete the survey anonymously. Once data was collected it was downloaded from Survey Monkey and exported into SPSS version 27. This was the program that I used for my statistical analysis. Data was collected from 512 participants. However, participants who did not answer all of the questions needed to complete analysis were removed. This left the

number of participants at 320, which met the required threshold of 300 to complete the analysis.

Data Management

Once the participant data that could not be included in the analysis were removed, the negative survey questions 36, 37, 39, 43, 44, 47, 48, 52, 53, 56, 57, 58, 60, 62, 64, 65, 67, 69, and 72 were reverse coded. By reverse coding the Likert scale of 1 to 5, 5 was converted to 1, 4 to 2, 2 to 4, and 1 to 5. In order for the responses that had a high score to be transformed into the corresponding low score on the scale, the answers of the negative worded items were reversed to positive worded items through the reverse coding. This means that higher scores represented greater perceived susceptibility to HIV/AIDS, more substance use, greater norm toward safer sex, more positive attitudes about safer sex, greater intention to try to practice safer sex, and greater expectations to practice safer sex (Walcott et al., 2011).

Dependent Variable

The SRS (sexual risk scale), which is the dependent variable, was built by using the calculated means of respondent's answers from questions 35-72 from the survey. The means could not be calculated until after the negatively worded statements were reverse coded in SPSS before computing the SRS. After reverse coding the means of respondent's answers from questions 35-72 were calculated. The overall mean was then computed by using the calculated means of respondent's answers from questions 35-72 and then an overall mean was calculated from those means. The overall mean is then utilized as the SRS score for each participant in the study. Following the technique that

Walcott used, the SRS was split up into 6 subscales to further define respondents' sexual risks than just an overall SRS score (Walcott et al., 2011). By following Walcott's method, these 6 subscales were produced by taking the mean of each set of respondent's answers for a group of questions (Walcott et al., 2011). The number of the survey questions that were used to calculate each subscale are listed next to the subscale description in table 1.

Table 1.

Sexual Risk Scale, Subscales

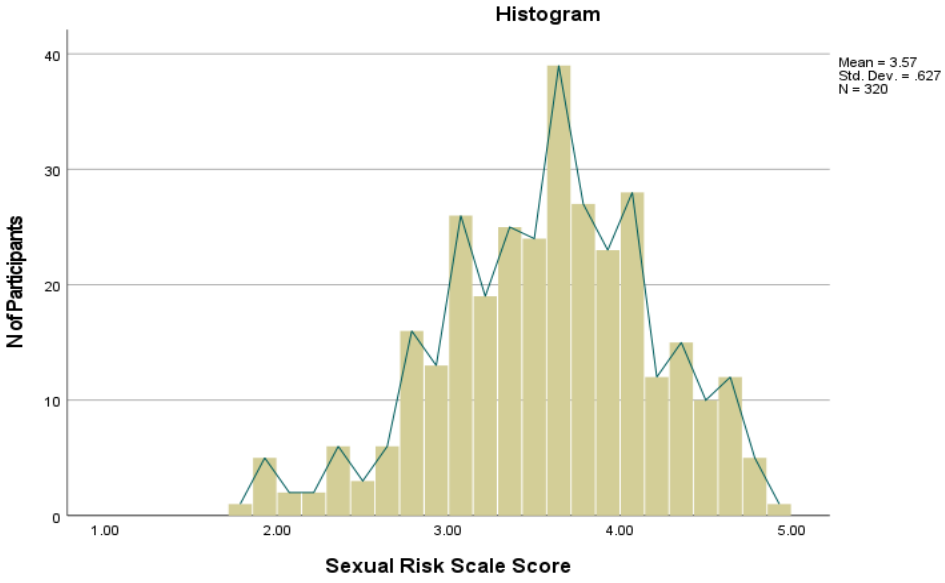
Sexual Risk Scale, Subscales	Number Of Survey Questions Used to Calculate Subscale
Attitudes Toward Safer Sex	39, 43, 45, 55, 56, 57, 61, 62, 64 ,67 ,69, 72
Peer Norms Toward Safer Sex	35, 46, 49, 50, 53, 63, 66
Perceived Susceptibility To HIV	36, 52, 58, 59
Substance Use	47, 54
Intention To Practice Safer Sex	37, 40, 41, 42, 51, 68, 70
Expectation To Practice Safer Sex	44, 48, 60, 65, 71

Similar to Walcott's study this scale, including its subscales, has evidence of internal reliability (alphas of the subscales range from .76 to .90) and both construct and predictive validity (Walcott et al., 2011). The internal reliability based on this data was found ranging from Cronbach's alpha; attitudes toward safer sex subscale consisted of 12 items ($\alpha = .90$), the peer norms toward safer sex subscale consisted of 7 items ($\alpha = .85$), the perceived susceptibility to HIV subscale consisted of 4 items ($\alpha = .74$), the substance use subscale consisted of 2 items ($\alpha = .74$), the intention to practice safer sex subscale consisted of 7 items ($\alpha = .90$), the expectation to practice safer sex subscale consisted of 5 items ($\alpha = .86$) and the Sexual Risk Scale (SRS) consisted of 38 items ($\alpha = .93$). Figure 1

is a histogram displaying the distribution of SRS scores. The mean of the SRS score was 3.57 with a standard deviation of .62737 and the distance from the upper limit of the highest score to the lowest score was 4.87 to 1.77. That means that the highest SRS score was 4.87 out of a possible high score of 5.00 and the lowest score was 1.77. According to the histogram, below over half of participants scored close to the mean score of 3.57.

Figure 1.

Histogram of Number of Participants and Sexual Risk Scale Scores



Independent Variable

With the intention of identifying the type of sex education that participants had, the question was asked on the survey “What would best describe the predominant ‘theme’ across all your previous sex education experiences?” The response options including the number of participants who answered each option, and the percentage of the total participants are found in table 2.

Table 2.

What Would Best Describe the Predominant 'Theme' Across All Your Previous Sex Education Experiences?

	N	%
Primarily Abstinence Only	160	50.0%
Primarily Comprehensive Sex Education	145	45.3%
No formal sex education lessons or discussions	15	4.7%
Total	320	100%

Research Questions

RQ1. Does the type of sex education received predict sexual risk scale (SRS) scores among emerging and young adult sexual minorities?

Hypotheses

H_0. There is no significant difference between the abstinence only sex education group and comprehensive sex education group on SRS scores.

H_1. Abstinence only sex education group scores significantly higher than the comprehensive sex education group on the SRS scores.

H_0. There is no significant difference between the abstinence only sex education group and comprehensive sex education group on the SRS scores.

H_2. Comprehensive sex education group scores significantly higher than abstinence only sex education group on SRS scores.

Analysis Of Variance (ANOVA)

In order to complete a group comparison, to compare the difference between the groups of the independent variable, abstinence only sex education groups and

comprehensive sex education groups a one-way analysis of variance (ANOVA) was conducted. To test the null hypothesis that there is no significant difference between the abstinence-only sex education group and comprehensive sex education groups on SRS scores , a one-way ANOVA was conducted using SPSS software version 27.

Table 3.

Sexual Risk Scale, Descriptives

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Primarily Abstinence Only	160	3.6777	.63870	.05049	3.5780	3.7774	1.86	4.87
Primarily Comprehensive Sex Education	145	3.4813	.59829	.04968	3.3831	3.5795	1.77	4.76
No formal sex education lessons or discussions	15	3.3547	.62452	.16125	3.0088	3.7005	1.97	4.29
Total	320	3.5735	.62737	.03507	3.5045	3.6425	1.77	4.87

The outcome of the Levene's Test for Homogeneity of Variances showed that the variances between the three groups were equal: F (2, 317) = 1.67. Therefore, the assumption of homogeneity of variances was fulfilled. There was a statistically significant difference between groups as determined by one-way ANOVA: F (2, 317) = 4.797, p=.009 (Table 4). After calculating ANOVA, the effect size can be interpreted by the proportion of variance in the dependent variable (SRS scores) are explained by the independent variable which can be explained statistically by the eta squared. The eta squared ($\eta 2 = .029$) confirmed 2.9% of the variability of SRS scores is explained by the predominant 'theme' of previous sex education experiences.

Table 4.

ANOVA- Sexual Risk Scale Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.688	2	1.844	4.797	.009
Within Groups	121.86	317	0.384		
Total	125.554	319			

Post-Hoc Results

The post-hoc multiple comparison test isolates the source of that difference was found after the ANOVA test showed statistically significant results for the dependent variable. Bonferroni post- hoc was chosen to reduce the chance that the significant results were a false positive, and the Bonferroni post-hoc test adjusts the significance cutoff to help confirm if the statistically significant result was truly significant. The Bonferroni post-hoc test shown in Table 14 shows the statistical difference between the 3 groups of the predominant 'theme' of previous sex education experience and the SRS scores. Bonferroni revealed that the SRS scores for those who had primarily abstinence only sex education (3.67± .19642, p=.018) differed significantly from those SRS scores for those who had primarily comprehensive sex education (3.48 ± .19642, p=.018). There was a significant difference in the mean the SRS scores between the group that had primarily abstinence only sex education and the group who primarily had comprehensive sex education.

Table 5.

Multiple Comparisons- Dependent Variable: Sexual Risk Scale Score

Bonferroni						
What would best describe the predominant 'theme' across all your previous sex education experiences?	What would best describe the predominant 'theme' across all your previous sex education experiences?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Primarily Abstinence Only	Primarily Comprehensive Sex Education	.19642*	.07109	.018	.0253	.3675
	No formal sex education lessons or discussions	.32301	.16743	.164	-.0799	.7260
Primarily Comprehensive Sex Education	Primarily Abstinence Only	-.19642*	.07109	.018	-.3675	-.0253
	No formal sex education lessons or discussions	.12660	.16817	1.000	-.2781	.5313
No formal sex education lessons or discussions	Primarily Abstinence Only	-.32301	.16743	.164	-.7260	.0799
	Primarily Comprehensive Sex Education	-.12660	.16817	1.000	-.5313	.2781

*. The mean difference is significant at the 0.05 level.

Descriptive Statistics

The statistics described in this section were not found to be statistically significant or have a direct impact on the study's hypothesis but were important to describing the type of participants in the study and sharing their responses to questions they were asked. Individuals who participated in the study were between 18-24 (n= 119, 37.2%) and 25-30 (n= 201, 62.8%). Ages 18-24 are classified as emerging adults and ages 25-30 is classified as young adulthood. Individuals described their sex on their birth certificate and then answered how they would describe themselves and tables 6,7,8 show the number of respondents between categories varied. The majority of participants were White/Caucasian (n=266, 83.1%) with individuals identifying as Multi-Ethnic (n=20, 6.3%) and Hispanic/Latino (n=17, 5.3%) making up 11% of participants. All participants are considered sexual minorities as none of the individuals were straight or heterosexual.

Table 6.

What Sex Were You Assigned at Birth, on Your Original Birth Certificate?

Sex assigned at birth	N	%
Male/Boy/Man	60	18.8%
Female/Girl/Woman	259	80.9%
Missing	1	0.3%

Table 7.

How Would You Describe Yourself?

How would you describe yourself?	N	%
Man	51	15.9%
Woman	189	59.1%
Transgender Man	17	5.3%
Transgender Woman	5	1.6%
Other	58	18.1%

Table 8.

How Would You Describe Yourself? Other (Please Specify)

How would you describe yourself?	N	%
Agender	2	0.6%
Cis woman / cassgender	1	0.3%
Demigirl	2	0.6%
Gender non-conforming	1	0.3%
Gender queer	3	0.9%
Genderfluid	7	2.2%
Genderfluid leaning to trans man	1	0.3%
Genderfluid/non-binary	1	0.3%
gnc/nb/genderqueer	1	0.3%
Intersex	1	0.3%
Lesbian	1	0.3%

No gender	1	0.3%
Non-binary mostly femme presenting	1	0.3%
Non-binary	27	8.4%
Non-binary femme-leaninv	1	0.3%
Non-binary/genderfluid/under the trans umbrella	1	0.3%
nonbinary but closer identifying with woman (not enough to call myself one)	1	0.3%
Nonbinary/Agender	1	0.3%
Nonbinary/genderfluid	1	0.3%
Nonbinary/genderqueer	1	0.3%
Not cisgender, questioning	1	0.3%
Questioning- demigirl	1	0.3%
Trans masculine	2	0.6%
woman/genderfluid	1	0.3%
Womxn	1	0.3%

Individuals were asked to mark all sexual orientation categories that apply to them, and 153 respondents selected 1 category, 119 selected 2 categories, 34 selected 3 categories and 13 individuals selected between 4 to 6 sexual orientation categories. Table 9 shows the number of each sexual orientation categories and the frequency of sexual orientations selected by participants. Table 10 displays those sexual orientation options that were written in for the other category.

Table 9.

Sexual Orientation- Frequency of Selected Sexual Orientations

How would you identify your sexual orientation?	N	Percent
Men who have sex with women	9	1.6%
Women who have sex with men	35	6.4%
Men who have sex with men	42	7.6%
Women who have sex with women	61	11.1%
Lesbian	64	11.6%
Gay	54	9.8%
Bisexual	113	20.5%
Asexual	23	4.2%
Pansexual	79	14.3%
Demisexual	33	6.0%
Heterosexual who has/had sexual experience with same gendered individuals	8	1.5%
Other (please specify)	30	5.4%
Total	551	100.0%

Table 10.

Sexual Orientation- Other

Sexual Orientation- Other	N	%
Am in polyamory relationship	1	0.3%
Aromantic Queer	1	0.3%
Bi-curious	1	0.3%
Biromantic	1	0.3%
Gray asexual	1	0.3%
Grayasexual – Pansexual	1	0.3%
Heteroromantic asexual	1	0.3%
Omnisexual	1	0.3%
Polyamorous	1	0.3%
Queer	17	5.3%
Queer, preferably women	1	0.3%
Queer/non-cisgender individuals	1	0.3%
Trans with Trans (Ftm to FTM)	1	0.3%
Unlabeled - do not identify as straight	1	0.3%

English was the primary language spoken in the home during participants childhood for 95.3% of participants (n=305). The city and state that individuals identified as where they learned about sex education in school was almost a 50/50 split between urban (n=158, 49.4%) and rural (n=160, 50%). Tables 11 and 12 show the wide variety of individuals religious affiliations. Table 11 and 12 show that a large number of sexual minorities are not affiliated with the mainstream Christian belief systems, and are agnostic/non practicing (n=137, 42.8%), and atheist (n=54, 16.9%), with only n=73, 22.8% identifying as Christians. Also individuals selected other (n=39, 12.2%), which included written in religious affliations that can be seen in the table 12.

Table 11.

Religious Affiliation

Religious affiliation	N	%
Agnostic/Non-Practicing	137	42.8%
Atheist	54	16.9%
Buddhist	5	1.6%
Christian	73	22.8%
Islamic/Muslim	1	0.3%
Jewish	11	3.4%
Other	39	12.2%

Table 12.

Religious Affiliation, Other

Religious affiliation, other	N	%
Agnostic theist	1	0.3%
Agnostic/Wicca	1	0.3%
Areligious	1	0.3%
Atheistic Satanist	1	0.3%
Catholic	3	0.9%
Interfaith	1	0.3%
Nontheistic Satanist	1	0.3%
None	2	0.6%
Not religious but very Spiritual	1	0.3%
Nothing	1	0.3%
Originally Christian, now I'm still questioning.	1	0.3%
Pagan	8	2.5%
Pagan/Wiccan/Spiritual	1	0.3%
Pantheist	1	0.3%
Polytheistic	1	0.3%
Raised catholic	1	0.3%
Raised Catholic but non practicing	1	0.3%
Religion is sexual trauma for me.	1	0.3%
Religious but not spiritual	1	0.3%
Satanist	1	0.3%
Spiritual	5	1.6%
spiritual but not religious whatsoever	1	0.3%
Spiritual- with some Christian beliefs	1	0.3%
Spiritual/bruja/witch (NOT Wicca)	1	0.3%
Unaffiliated	1	0.3%
Unitarian Universalist	1	0.3%
Wiccan	4	1.3%
Witch	1	0.3%

It is also important to note that this was not just a sample of individuals from the United States. There were 25 people who grew up outside of the United States and learned sex education outside of the United States and, 27 people who do not currently live in the United States. Within the United States the majority of participants grew up in the states of Indiana (*n* = 65, 20.3%) Texas (*n* = 17, 5.3%), Michigan (*n* = 15, 4.7%) and Ohio (*n* = 16, 5.0%). The majority of participants currently live in Indiana (*n* = 75, 23.4%) Texas (*n* = 16, 5.0%), Minnesota (*n* = 16, 5.0%) and Ohio (*n* = 17, 5.3%). The majority of participants lived in the states of Indiana (*n* = 67, 20.9%) Texas (*n* = 15, 4.7%), Michigan (*n* = 14, 4.4%) and Ohio (*n* = 13, 4.1%) when they learned about sex education in school.

Sex Education; Amount, Quality, and Location/Source

Participants responded that their first lesson in sex education occurred for 44.7% of them in middle school (grades 6-8). Over half 56.7% (*n* = 295) of participants answered that they received their sex education at school, while 27.5% (*n* = 143) said at home. Table 13 shows the frequency of responses that participants gave for where sex education occurred for them. Table 14 shows the responses from individuals who wrote in their own answers in the other category saying that their sex education came from; books, friends, entertainment industry (movies, videos, music), in a van with 4 other guys, internet, my cousins, porn, and a YouTube channel.

Table 13.

Frequency of Responses for Where Sex Education Happened

Where did sex education happen?	N	Percent
School	295	56.7%
Home	143	27.5%
Community Organization (e.g., Boys & Girls Club, YMCA, after school clubs, etc.)	7	1.3%
Church or Church-affiliated Youth Groups	51	9.8%
No formal lessons or discussions	24	4.6%
Total	520	100.0%

Table 14.

Other Responses for Where Sex Education Happened

Other responses for where sex education happened	N	%
Books	1	0.3%
Do friends count?	1	0.3%
Entertainment Industry (Movies, Videos, Music)	1	0.3%
I leaned about sex at school, but never had a formal talk about the actual mechanics of sex	1	0.3%
In a Van with 4 other Guys	1	0.3%
Internet	3	0.9%
Internet, Personal Research, College	1	0.3%
It was catholic school, and they weren't allowed to actually talk about sex besides saying to not do it.	1	0.3%
My cousins	1	0.3%
Porn	1	0.3%
School didn't really teach me anything and home was more just telling me sex made babies	1	0.3%
YouTube channel Sexplanations	1	0.3%

Sex Education; Depth of Previous Sex Education Lessons and Discussions

Questions were then asked that included more details about the sex education courses they participated in such as to what extent did the sex education, they received answered their questions about sex and sex- related practices and participants said that they answered some of their questions (*n* = 194, 60.6%). Participants responded that the duration and intensity of the previous school-based sex education course was taught occasionally as part of their other courses (e.g., Health or PE) (*n* = 242, 75.6%). Participants answered that the amount of school hours spent on the subject of sex education during middle and high school years was over 77% either none or less than 2 class periods (*n* = 114, 35.6%) or 2 to 5 class periods (*n* = 136, 42.5%). Participants described the information that they received from previous sex education lessons were somewhat helpful (*n* = 102, 31.9%). Participants described that their level of knowledge about various types of contraception that were available (i.e., devices and drugs that prevent pregnancy) and how to use them appropriately was below average (*n* = 74, 23.1%). Participants responded that they felt that the adults and/or peer leaders were less than adequately trained (*n* = 119, 37.2%) to deliver the information presented in their sex education lessons. Participants were asked in their previous sex education lessons if peers were used to deliver messages or to role play situations, and 63.4% answered that their peers were not used at all (*n* = 203). Participants were also asked if they were taught specific interpersonal skills such as negotiation, communication, and peer pressure refusal, and 46.3% said it was not at all addressed (*n* = 148), or if they used a variety of teaching methods, such as skill practice using simulated or real-life situations,

storytelling, music, group discussion, or games and over half of the participants said no variety at all was given (*n* = 168). Participants were asked if in their previous sex education lessons involved parents/caregivers, either by encouraging them to discuss safer sex issues with them, or by sending them detailed information about the sex education they were receiving, and participants answered that parents were not involved at all for 57.8% of the participants (*n* = 185). Questions were then asked about sex education discussion including if they were taught how to properly use condoms and/or other forms of barrier methods (female condoms, dental dams, diaphragm, and spermicides), which over half of participants said no to this question 52.8% (*n* = 169), if their previous sex education included the distribution of, or access to, condoms and/or other forms of barrier methods (female condoms, dental dams, diaphragm, and spermicides) and over 75% of participants said no (*n* = 255, 79.7%). Lastly, participants were asked if when they had sex with a steady partner in the past year, they used a barrier method (male condoms, female condoms, dental dams, diaphragm, and spermicides) and 37.5% answered never (*n* = 120).

Conclusion

This chapter provided the statistical depiction and analysis of the results found after surveying 320 participants individuals who were 18 to 30 years old and were sexual minorities in order to test if they would score higher or lower on sexual risk scale scores which was dependent on the type of sex education that they had received. After this study received IRB approval data was collected over seven weeks via SurveyMonkey and then

analyzed statistically in SPSS. Once the data was collected some data management had to take place by reverse coding some items in order to create the SRS.

The dependent variable which is the sexual risk scale score had to be calculated from the mean of respondent's answers for a set of questions and once these questions were reversed coded than the overall mean was calculated in order to provide each individual participant with a sexual risk scale score. Walcott et. Al (2011) previously took these sexual risk scale scores and divided them into 6 different subscales to further examine sexual risks that were taken by participants. There was an even distribution of the sexual risk scale scores shown by the histogram showing a common bell curve.

The independent variable was the responses to the question "what would best describe the predominant theme across all your previous sex education experience?" The responses that participants provided were either primarily abstinence only sex education, primarily comprehensive sex education, or no formal sex education lessons or discussions. These variables aided in answering the research question and to reject or accept the hypotheses. ANOVA was used in order to complete the group comparison between the groups of the independent variable of abstinence only or comprehensive sex education groups and to determine what their score was going to be on the sexual risk scale based on their sex education group. After completing the statistical analysis, ANOVA found that there was a statistically significant difference between the two groups, and the and a Bonferroni post hoc test explained where these variances occurred. The results found that the SRS scores for those who had primarily abstinence only sex education statistically differed from those who had primarily comprehensive sex

education. Those who had primarily abstinence only sex education had higher SRS scores compared to the mean SRS score of participants in the comprehensive sex education group. The results from this group comparison shows that neither primary abstinence only sex education nor comprehensive sex education had a significant impact on the majority of sexual minorities having lower SRS scores.

The statistics described in the descriptive statistics section were not found to be statistically significant or have a direct impact on the study's hypothesis but were important to describing the type of participants in the study and sharing their responses to questions they were asked. There were more participants who were between the ages of 25 and 30 and participants who identified themselves as White or Caucasian. Over 95% of the participants spoke English in their home and 50% identified where they were from as urban or rural areas. All of the participants were considered sexual minorities as individuals who identified as straight, or heterosexual were excluded from completing the full survey. Participants took advantage of the opportunity to answers what sex they were assigned at birth or on their birth certificate and then how they would describe themselves. Individuals supplied a range of different write in answers for the other option, than just the five that were given in the survey questions. Individuals were also asked to mark all of the sexual orientation categories that applied to them and again participants took advantage of answering as many different sex orientation categories as possible they identify with. Individuals provided their religious affiliation which surprisingly 42.8% of individuals identified themselves as agnostic or non-practicing.

Individuals also wrote in a large number of other religious affiliations that were not related to the seven categories that were provided for them to pick from.

Participants answered questions about when they first received lessons about sex education as well as, where the lessons of sex education occurred, with some individuals writing in that they received their sex education from books, friends, the entertainment industry, such as movies videos music, cousins, the internet including pornography and YouTube. The depth of their sex education was surveyed by being asked what type of lessons they had in their sex education courses with many participants saying that sex education only answered some of their questions that they had about sex related practices. Participants also responded that the duration and intensity of their school-based sex education courses occurred as a part of their other courses such as health or PE. Participants stated that they only spent less than two class periods or two to five class periods in their middle and high school years discussing sex education. Participants were surveyed about the quality of information they received from their sex education, and they stated that they thought the information they received from their sex education was somewhat helpful but described that their level of knowledge about contraception's that were available and how to use them was below average. Questions that were asked of the participants about barrier methods and how to use them, individuals said that over half of them were not properly taught how to use them, nor were they distributed to them. A summary of the findings from the survey will be further discussed in Chapter 5, including, limitations, recommendations for future research, and implications.

Chapter 5: Summary, Findings, Limitations, Recommendations, Implications, and Conclusion

Summary

The purpose of this quantitative cross-sectional survey study was to test if sexual minority emerging and young adults would score higher or lower on SRS scores, depending on the type of sex education they received. Sexual minority individuals have felt that the sex education courses they had taken did not discuss topics related to them or their futures, making them feel excluded, like freaks or aliens and discriminated against (Elia & Eliason, 2010a; Gowen & Winges-Yanez, 2014; Hobaica & Kwon, 2017; McCarty-Caplan, 2015; Pingel et al., 2013; Sansone, 2019; Snapp et al., 2015). Due to this lack of appropriate sex education for sexual minorities, previous research has discussed the consequences for sexual minority individuals such as bisexual and lesbian women who are at higher risk for being diagnosed with an STI, as they mature into emerging and then young adults (Bodnar & Tornello, 2019). They are also experiencing higher pregnancy rates and not being given appropriate safe-sex education (Arlee et al., 2019, Barefoot et al., 2017). Young, gay, and bisexual males are contracting STIs and HIV because of their lack of education on sexual health protection (Bauermeister et al., 2015; Pingel et al., 2013).

Interpretation of Findings

Sexual minorities and their sexual risks have been investigated by a small number of researchers. Even less research has been completed on sexual minorities sexual risk taking and the type of sex education they had. This study examined sexual risks in

relation to the type of sex education participants had by determining their SRS (sexual risk scale) score for each participant. The sexual risk scale (SRS) included questions that were created to measure an individual's perceived susceptibility to HIV/AIDS/STIs, substance use, peer norms toward safer sex, attitudes toward safer sex, intention to try to practice safer sex, and expectations to practice safer sex. This study revealed that the SRS scores for individuals in the group who had primarily abstinence only sex education differed significantly from individuals in the group who had primarily comprehensive sex education. Those individuals who had primarily abstinence only sex education had higher SRS scores compared to the SRS scores of participants in the comprehensive sex education group.

Participants were asked a few questions about sexual risk and their use of protection within the last year, month, and 2 weeks and this was analyzed in relation to what they answered about the type of sex education that they received, and these results were not found to be statistically significant. It is important to note that the survey questions for this study included less commonly asked about forms of barrier methods including male condoms, female condoms, dental dams, diaphragm, and spermicides and not just condoms, or birth control and condoms, which previous studies have not done, especially not in a study of only sexual minority individuals. Participants were asked "when they had sex with a steady partner in the past year, if they used barrier methods (male condoms, female condoms, dental dams, diaphragm, and spermicides)?" Participants who answered that they had sex with a steady partner in the past year said they rarely used a barrier method (n = 120, 37.5%). Participants were also asked "when

they had sex with someone in the past year who was not a steady partner if they used barrier methods (male condoms, female condoms, dental dams, diaphragm, and spermicides)?" While 174 people answered that they had not had sex with a non-steady partner in the past year, 32 people who did say they never used barrier methods and 11 people said they did rarely which was a combined 13.4% of respondents. Participants were asked if they have had sex without barrier methods in the last month, in the last month and 139 respondents said that they have had sex without barrier methods from 2 times to 20 or more times, while 109 participants said that they had not had sex in the last month. Participants were asked if they had sex in the past 2 weeks and if they used barrier methods (male condoms, female condoms, dental dams, diaphragm, and spermicides), 121 respondents answered that they had not had sex in the past 2 weeks, but 110 people, which was 34.4% of the sample answered that they never used barrier methods when they had sex in the past 2 weeks before taking this survey. While these results were not found to be statistically significant, they do show that sexual minorities who have a study partner or not are not consistently using safe sex practices, putting them at risk.

This study worked to utilize a combination of reference group theory and socialization theory (Beeghley et al., 1990). This study examined individuals' attitudes and behaviors which are shaped by the groups to which they belong or to which they relate. This combination was important because, as reference group theory would help to identify the conditions that people use their membership groups as frames of reference, in this case their membership groups be sexual orientation, gender identity, religion,

geographic location, or their age group. These membership groups also assisted in the examination of the type of sex education they had in school in combination with the reference group membership. The research was unable to find significant statistical results to confirm that the group that individuals used as their reference group dictated their decision to make risky sexual decisions. The reference group that participants tied themselves to such as their sexual minority identification, their religious affiliation, if they live in the urban or rural area, what type of leadership exists, or the interactions that individuals have with other people in these reference group was not found to make a significant difference in their sexual risk scale scores.

This study examined how each one of the agents of socialization is influential to a sexual minority individuals' risky sexual behavior. Since parents play an important role in their adolescents' sexual socialization by impacting adolescent sexual cognitions, including socialization theory in this research of sex education and the examination of what was taught and who was teaching it was important (Dave et al., 2017; Evans et al., 2020a). While the following results were not found to be statistically significant, it was found that over half of participants received their sex education from school (n = 295, 56.7%), and that the second highest response was at home (n = 143, 27.5%). It was also found that sex education that was taught in school was taught occasionally as part of other courses (e.g., Health or PE) for over 75% of participants. Of those school hours spent on sex education, respondents said that none or less than 2 class periods for 35.6% (n = 114) of them, and 2 to 5 class periods for 42.5% of them (n = 136). Many of these students found the information that they received as somewhat helpful to not at all helpful

(*n* = 205, 64.1%). Some students said they go to the LGBT community centers to receive their sex education because they provide sexual minority diversity and inclusivity (Bishop et al., 2020). However, this study asked about students going to community organizations, but it could not be determined if the 7 participants went to an LGBT community organization, but this could be examined in future research.

Limitations of the Study

There were a few limitations to completing this research, one of which is the length of the survey. I found that many participants would stop at a certain point and not continue. I am unsure if this is related to the generation of individuals taking the survey being between 18-30 years old with shorter attention spans especially with a survey that had over 70 questions. Another limitation of asking participants about something that happened in their past is that they may not fully remember parts of their past, also they may be confused as to what time period of their life the question is exactly asking about.

Recommendations for Future Research

I have several recommendations for future research. Specifically related to this study, I would recommend re-writing some of the questions in order to focus specifically on one aspect of sexual minorities and their sexual risks rather than all sexual minorities and all of the sexual risks in relation to sex education. I would recommend asking about an individual's marital status or relationship status as a question because for some individuals the use of barrier methods could vary if they are in a monogamous or polygamous relationships, and the phrase "steady" partner could mean something different generationally. I would recommend completing this study in stages. In order to

ask all of the questions that are needed to be asked in order to examine sexual minorities sexual behaviors and their sex education this needs to be done in different stages. Even though this would be completed in different stages the time between the stages should be short. This may bring into jeopardy complete anonymity for participants, but the researchers would be able to gather a wealth of information each stage of the process. I think that breaking up the process into stages will prevent participants from skipping important questions that are listed later on in the survey. Previous researchers did ask participants how the lack of sex education for them made them feel, this was harder to gauge through quantitative research so I think a mixed methods approach could be presented after the previous stages are completed by interviewing a group of participants to better game how the lack of sex education that related to them not only affected them socially, sexually, but also how it made them feel. These individuals are split in their sexual risk scores, and with over half of them being high, showing that it doesn't matter which type of sex education they've had it is not having any true impact on keeping them from making risky sexual decisions.

Previous research found that the internet is one of the main sources of gaining information about sex (Marshall, 2016, Pingel et al., 2013). This leads to a recommendation for future research to ask more detailed questions about who should teach sex education such as school nurses or the internet and media. A question should be asked specifically about sexual minorities internet usage and the connection to using the internet to search for sex education. Other items that are recommended for future research include, asking participants about the influence of religion and politics in society, and if

this is related to their sex education and sexual risks. Lastly, it is recommended that individuals be asked about their own personal religious and political affiliations and if this relates to their sexual risk-taking decisions.

Implications

In order to make sure that all participants in the current study did not feel restricted by the options for answers included by the researchers when asked about gender identities or sexual orientations, individuals were able to describe the sex on their birth certificate and then answer how they would describe themselves. they were also able to write in any gender identity that were not listed that they identified as. This was a groundbreaking approach because many studies in the past only asked about an individual's sex or gender, and maybe gender identity, but not specifically their sex on their birth certificate and also then how they would then identify their gender.

The same process was done when asking about sexual orientation, participants were given several options for answers of more modern sexual orientation terms which varies from previous research which generally had 3-5 options presented for selection (straight, bisexual, homosexual, gay, or lesbian). Another difference in this study is that individuals were allowed to mark as many sexual orientations as possible that applied to their life. Allowing no participant to feel that they were not being represented in the questionnaire because their sexual orientation or gender identity was not listed. This was important an important part of the design process of the questionnaire, because more detailed information was able to be gathered about specific sexual minorities and their gender identities rather than just grouping them together into generic labeled groups.

One more important implication from this study is that much of the research about individuals' sexual behaviors only focus on birth control or condom usage. Since this study was examining individuals who utilize different sexual risks, and sexual behaviors, they also utilize different safe sex practices. For this reason, when participants were asked about sex with a partner, they were asked if they, if they used barrier methods (male condoms, female condoms, dental dams, diaphragm, and spermicides) instead of just condoms which is what was previously asked in Walcott's questionnaire (Walcott et al., 2011). While it is not possible to determine if this change in questioning truly made a difference in the methods or data, it does fill a gap in the literature for sexual minority participants, that when taking other surveys feel uncomfortable or left out when answering a questionnaire because it did not have anything that related to their sexual practices

This research can be used to push for changes within schools locally to have more inclusive sex education. These findings can help push for policy changes at the state and federal levels, to push for changing the funding from abstinence only sex education curriculums, to sex education that not only is all inclusive but also medically accurate for all. This research can make a positive social change for sexual minorities, by showing that they are being heard, and that their concerns about their sexual well beings are not going unnoticed. Positive social change can come from including sexual minorities in more studies and finding out what more they need in order to help them be healthy sexually. This research can be the foundation for a push for more inclusive research in the participants that we recruit and how we recruit them, but also by changing the language

and terms we use when discussing gender identity, sexual orientation and safe sex practices and contraception.

Conclusion

In conclusion, this research study examined a group of individuals who are commonly ignored in research, especially research about their experiences with sex education and its effectiveness. They are often taught they do not exist in the world of sex education. In this study these individuals were found to be making risky sexual behaviors after having either abstinence- only sex education or comprehensive sex education, and as they grew into young and emerging adults, meaning that sex education is failing this group of sexual minorities individuals. This research should make all who read it aware of the injustice that is occurring for all students in K-12 sex education courses. At the larger scale, this research should make policymakers and educators realize that if they continue passing abstinence only policies and schools continue educating students about sex heteronormatively, than they are impacting a group that when they grow up are making risky sexual decisions.

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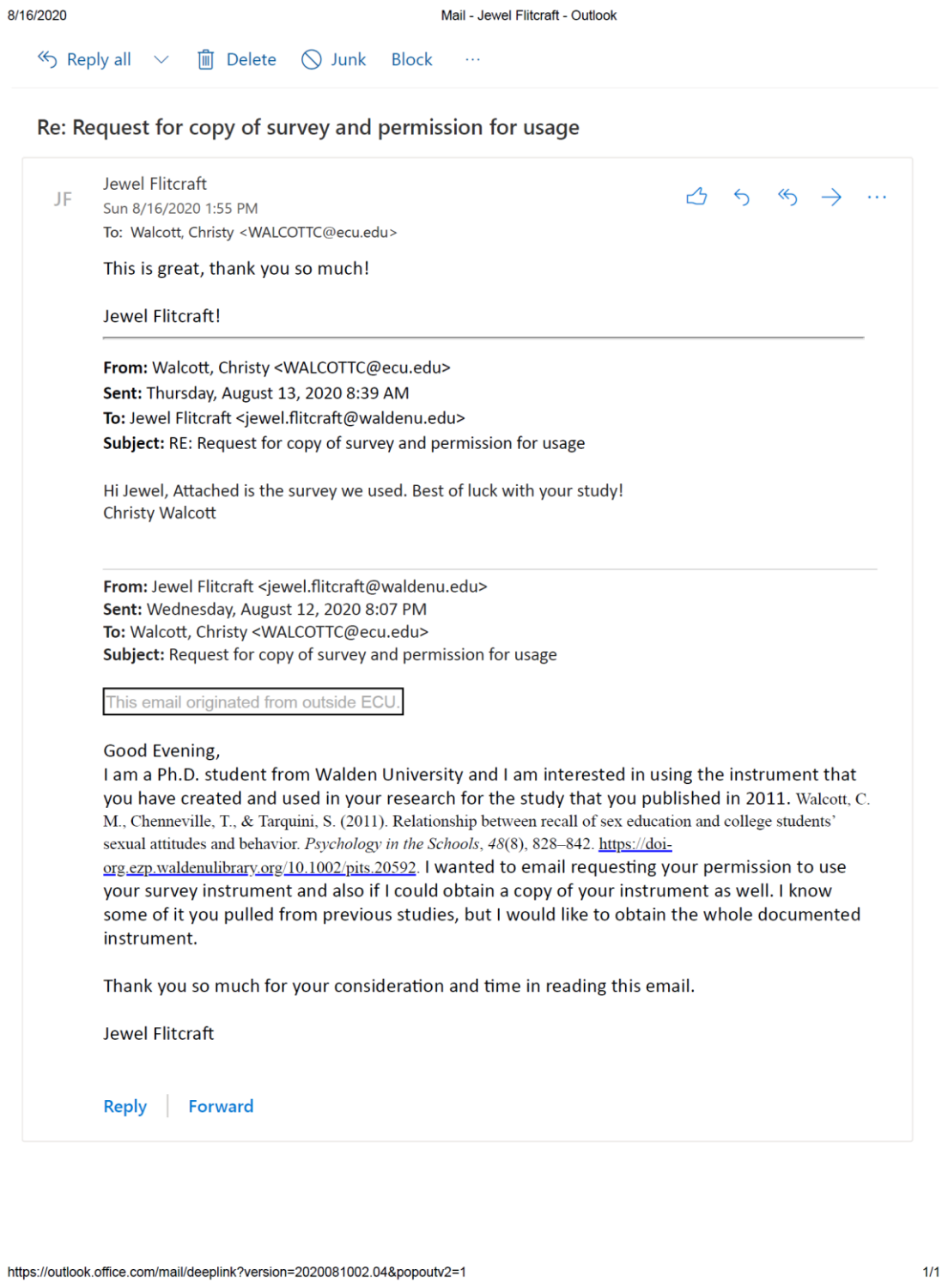
Appendix A: Permission for Instrumentation Use



8/16/2020 Mail - Jewel Flitcraft - Outlook

Reply all | Delete | Junk | Block | ...

Re: Request for copy of survey and permission for usage

JF

Jewel Flitcraft
Sun 8/16/2020 1:55 PM
To: Walcott, Christy <WALCOTTC@ecu.edu>

This is great, thank you so much!

Jewel Flitcraft!

From: Walcott, Christy <WALCOTTC@ecu.edu>
Sent: Thursday, August 13, 2020 8:39 AM
To: Jewel Flitcraft <jewel.flitcraft@waldenu.edu>
Subject: RE: Request for copy of survey and permission for usage

Hi Jewel, Attached is the survey we used. Best of luck with your study!
Christy Walcott

From: Jewel Flitcraft <jewel.flitcraft@waldenu.edu>
Sent: Wednesday, August 12, 2020 8:07 PM
To: Walcott, Christy <WALCOTTC@ecu.edu>
Subject: Request for copy of survey and permission for usage

This email originated from outside ECU.

Good Evening,
I am a Ph.D. student from Walden University and I am interested in using the instrument that you have created and used in your research for the study that you published in 2011. Walcott, C. M., Chenneville, T., & Tarquini, S. (2011). Relationship between recall of sex education and college students' sexual attitudes and behavior. *Psychology in the Schools*, *48*(8), 828–842. https://doi-org.ezp.waldenulibrary.org/10.1002/pits.20592. I wanted to email requesting your permission to use your survey instrument and also if I could obtain a copy of your instrument as well. I know some of it you pulled from previous studies, but I would like to obtain the whole documented instrument.

Thank you so much for your consideration and time in reading this email.

Jewel Flitcraft

Reply | Forward

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