

LINKS BETWEEN SEXUAL HEALTH CONTENT AND TEACHER CHARACTERISTICS
IN NORTH DAKOTA'S SECONDARY SCHOOLS

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ABSTRACT

Numerous studies indicate the ineffectiveness of abstinence-only education in preventing teen pregnancies and the spread of sexually transmitted infections (STIs), yet many U.S. schools still rely on abstinence-only programming. North Dakota, the focus of this study, neither prevents nor requires contraception instruction in sexual health education classes, leaving the decision to include contraception instruction and other sexual health information up to the individual schools and teachers. For this study, a survey of sexual health teachers was used to determine the content of sexual health classes, teacher characteristics, and links between the two. Results indicate that teacher beliefs in program efficacy impact what content is included in class, which suggests the need to provide evidenced-based training and continuing education for sexual health teachers.

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INTRODUCTION

Sexual health education classes can provide adolescents with knowledge and skills that promote healthy sexual outcomes in both adolescence and adulthood. Substantial evidence has shown that the content taught in a sexual health class impacts adolescent sexual behaviors (Duberstein Lindberg, & Maddow-Zimet, 2012; Kohler, Manhart, & Lafferty, 2008; Mueller, Gavin & Kulkarni, 2008; Santelli, Duberstein Lindberg, Finer, & Singh, 2007, Whitaker, Miller, May, & Levin, 1999). When sexual health education class includes instruction on contraception, communication skills, and other sexual health topics, students tends to delay sexual intercourse onset and subsequently use contraception effectively and consistently when engaging in sexual intercourse (Mueller et al., 2008; Santelli et al., 2007; Whitaker et al., 1999). This combination of delayed sexual onset and consistent contraception use decreases a teen's risk of becoming involved in a teen pregnancy and contracting a sexually transmitted infection (STI). Parents, the general public, and the medical community support this approach known as comprehensive sexual education (CSE) (Bleakley, Hennessy, & Fishbein, 2006; Constantine, Jerman, & Huang, 2007; Eisenberg, Bernat, Bearinger, & Resnick, 2008; Ito et al., 2006; Lindley et al., 1998; Ott & Santelli, 2007; Santelli, Ott, Lyon, Rogers, & Summers, 2006); yet many schools still implement abstinence-only education (AOE), which neglects to include key content such as contraception instruction (Lindberg, Santelli, & Singh, 2006). This is problematic because most students who receive AOE do not abstain from sexual intercourse until marriage and are less likely to use contraception than students who receive comprehensive sex education (Brückner & Bearman, 2005; Duberstein Lindberg & Maddow-Zimet, 2012). This puts the students of abstinence-only programming at an increased risk for unintended pregnancies and sexually transmitted diseases compared to comprehensive sex education students.

Currently, the United States has one of the highest teen pregnancy rates in the world compared to other industrialized countries. The teen pregnancy rate in the U.S. is twice as high as the rate in the U.K. and five to ten times as high as the rates in Italy, Denmark, Finland, France, Germany, Netherlands, Sweden, Switzerland, and Japan (Demographic Yearbook, n.d.). The discrepancy in teen pregnancy rates is not due to adolescents abstaining from sexual intercourse in these other countries. In fact, teens in the United States and Europe have similar levels of sexual activity; however, European teens are more likely than U.S. teens to use effective contraceptives (Santelli, Sandfort, & Orr, 2008). The high level of effective contraception use leads European teens to have substantially lower pregnancy rates. By age 18, 70-80% of adolescents have had sexual intercourse in Sweden, France, Canada, Great Britain, and the United States; however, only the teen pregnancy rate in the United States is above 40 births per 1000 adolescent females (Darroch, Singh, & Frost, 2001; Demographic Yearbook, n.d.). Interestingly, between 1988 and 2010, the U.S. teen pregnancy rate dropped from 117 pregnancies per 1,000 teen girls to 41 teen pregnancies per 1,000 teen girls (Kost & Henshaw, 2012; Demographic Yearbook, n.d.). The majority of the decline is attributed to improved contraceptive use, although a smaller portion is due to abstinence (Santelli et al., 2007). Efforts to continue the decline of teen pregnancy rates are crucial because teen pregnancy leads to a cascade of negative outcomes which are detrimental to the teens involved in the pregnancy, the children of teen parents, and society (Fletcher & Wolfe, 2010; Perper, Peterson, & Manlove, 2010; Ray, Escobar, & Lorch, 2010).

Sexual activity in adolescence not only increases the chance of pregnancy, but also raises the risk of contracting an STI, including human immunodeficiency virus (HIV). According to the Centers for Disease Control and Prevention (CDC), U.S. adolescents and young adults between

the ages of 15 and 24 have four times the reported rates of chlamydia and gonorrhea than that of the total U.S. population (10-65 years) (CDC, 2011). The effects of STIs are harmful to one's health and costly for society in terms of medical expenses (Chesson, Blandford, Gift, Tao, & Irwin, 2004; The Henry J. Kaiser Family Foundation, 2003).

Thus, understanding a school's sexual education curricular choice is critically important to preventing teen pregnancies and the spread of STIs. The type of sexual health education that a school provides can be influenced by many factors, including teachers' personal beliefs, school policies, state regulations, community expectations, and funding sources. The focus of this study is to examine sexual health education in one upper Midwestern state.

Types of Sexual Health Education

Many middle schools and high schools throughout the United States include a sexual health component within their curriculum; however, the content of sexual health education programs can vary. Three common approaches to sexual health education are abstinence-only, abstinence-based, and comprehensive as described by the Sexuality Information and Education Council of the United States (SIECUS).

Abstinence-only Education (AOE)

Abstinence-only programs, sometimes known as "abstinence-until-marriage," emphasize abstaining from sexual behaviors until marriage (Wilson, Goodson, Pruitt, Buhi, & Davis-Gunnels, 2005). Pregnancy and STIs are mentioned as potential results of sexual activity, but effective pregnancy and STI prevention methods (i.e., contraception use) other than abstinence are not taught. Failure rates for contraceptives are sometimes included in a way that discourages contraception use by focusing on the ineffectiveness of contraceptives or even presenting inaccurate effectiveness rates (Lin & Santelli, 2008; Santelli, 2008).

AOE typically promotes the idea that marriage is the only moral place in which sexual intercourse can occur; however, using marriage as the expected standard for sexual activity onset is difficult for adolescents to attain. Many youth begin to experience sexual attraction as young as 10 years of age and participate in physical intimacy with a partner between the ages of 14 and 17 (Crockett, Raffaelli, & Moilanen, 2006; McClintock & Herdt, 1996), yet most individuals do not marry until their mid-twenties or older, making abstinence until marriage unrealistic (United States Census Bureau, 2011). It can also be difficult for some students to connect with an abstinence-only message when marriage is not a legal option in most states for gay men and lesbian women. Even when marriage is an option, the vast majority of young adults have sex before getting married (Finer, 2007; Rosenbaum, 2009; Rosenbaum & Weathersbee, 2013). By age 20, over 75% of young Americans report having had premarital sex. This is not a new trend when considering that 95% of Americans age 44 also report having engaged in premarital sex (Finer, 2007). This rate is similar even for members of religious groups that frown upon premarital sex. For example, 70% of young married Baptist adults and 80% of young unmarried Evangelical adults report premarital sexual activity (Rosenbaum & Weathersbee, 2013; Special Tabulations of the National Survey of Reproductive and Contraceptive Knowledge, 2009).

Many abstinence-only programs encourage participants to pledge to remain virgins until marriage, which was found to be ineffective in preventing STIs. Although adolescents who take a pledge of virginity tend to delay sex and have fewer partners than those who do not pledge, the pledging adolescents still have premarital sex and are less likely to use contraception, thus putting them at risk for pregnancy and contracting an STI (Brückner & Bearman, 2005; Rosenbaum, 2009).

Programs that encourage students to abstain from sexual activity until marriage are disconnected from the reality of adolescent and young adult sexual behaviors. Beyond that, students receiving this message may have parents who are unmarried for various reasons. These differences between experience and messaging could widen the gap between students' lives and the messages being taught in class, thus making it more difficult for students to connect with class content.

Furthermore, the health community does not support an abstinence-only approach because it does not reduce teen pregnancy and STI rates (Ott & Santelli, 2007; Santelli et al., 2006). Due to the lack of contraception instruction, students who receive abstinence-only education are significantly less likely to use contraception than students who receive comprehensive sex education, but equally likely to engage in sexual intercourse, thus putting students of abstinence-only education at a higher risk for pregnancy and STIs (Duberstein Lindberg & Maddow-Zimet, 2012).

Abstinence-based Education (ABE)

Another type of sexual health education that students can receive is abstinence-based, sometimes referred to as abstinence-plus. This form of sex education encourages students to delay or abstain from sex, but still provides contraceptive information and promotes contraceptive use for students who have sex (Arnett, 2010). Because the focus of abstinence-plus programs remains on abstaining, a disconnect exists between what is taught and what students do. Sexual activity outside of marriage is still portrayed as harmful and unacceptable which perpetuates the societal image of adolescent sexuality as troublesome and inappropriate (Crockett et al., 2006).

Comprehensive Sexual Education (CSE)

The third form of education addressed in this study is comprehensive sexual health education. Students receiving CSE are exposed to a range of age-appropriate information pertaining to sexuality, including relationships, sexual decision-making skills, sexual orientation, masturbation, abstinence, contraceptives, and how to advocate for their own sexual health (Santelli et al., 2006). Students are taught skills and information that promote healthy relationships, decision-making skills, and a general understanding of sexuality throughout life, not just in adolescence. The skills taught can include how to obtain and use contraceptives, get tested for STIs, and talk to parents, partners, and health care providers about healthy sexual behaviors. Abstinence is still encouraged as a major part of comprehensive sex education, but the courses cover many other areas within sexuality and emphasize instruction on skills that promote healthy sexuality. Comprehensive sexual health programs recognize that students need information on contraceptives and other sexual health related topics regardless of marital status. Even teens who are not sexually active will eventually benefit from the skills and information learned in class when they become sexually active in the future.

Comprehensive sexual health education is associated with reduced rates of teen pregnancy STIs (Duberstein Lindberg & Maddow-Zimet, 2011). Adolescents who receive CSE are less than half as likely to report a teen pregnancy as adolescents who receive AOE (Kohler et al., 2008). Furthermore, adolescents receiving CSE are significantly more likely to use condoms and other contraception than those receiving AOE (Duberstein Lindberg & Maddow-Zimet, 2011). When adolescents receive instruction on how to properly use contraception, talk to parents and partners about sex, and navigate dating relationships, they tend to have positive outcomes in terms of delaying sexual activity and using contraceptives consistently, thus

reducing the likelihood of becoming pregnant or contracting an STI (Kohler et al., 2008; Mueller et al., 2008; Secor-Turner, Sieving, Eisenberg, & Skay, 2011; Whitaker et al., 1999). Compared to teens with no sex education, recipients of CSE are less likely to become sexually active and are at a decreased risk of unintended pregnancy. CSE programs reliably foster protective sexual behaviors by promoting abstinence, contraception, and relationship skills thus supporting the fact that content in a sexual health class matters (Santelli et al., 2006).

Students in comprehensive sexual health courses also receive accurate information on a broader range of human sexuality topics that are often misunderstood or neglected in abstinence-only programs. For example, masturbation has been found to be a normal and safe activity that does not cause mental or physical problems (Levin, 2007; Tiefer, 1998), yet a review of abstinence-only programs found that masturbation was frequently excluded from the curriculum (Wilson et al., 2005).

Sexual orientation is another component of human sexuality that is frequently ignored or misrepresented in abstinence-only programs (Wilson et al., 2005); however, approximately 4% of boys and 11% of girls between the ages of 15 and 21 have engaged in same-sex sexual activities (McCabe, Brewster, & Harker Tillman, 2001). This indicates that programs that exclude instruction on sexual orientation are not meeting the sexual health needs of all students. In fact, gay, lesbian, and bisexual (GLB) youth are more vulnerable to negative outcomes than their heterosexual counterparts, including more frequent reports of STIs, pregnancy, unsafe feelings at school, and suicide (CDC, 2012b; Eisenburg & Resnick, 2006; Hillier & Mitchell, 2008; Lesbian, Gay, Bisexual, Transgender, and Questioning Youth, n.d). Instruction that addresses sexual orientation not only benefits the health and wellbeing of GLB students, but also may aid heterosexual students in understanding the sexuality of others. In addition, the CDC

recommends inclusion of sexual orientation in schools to reduce bullying and create safe environments for all students (CDC, 2012b).

Parent and Public Preference

Many studies show support from parents and the public for inclusion of pregnancy and STI prevention methods in schools. A recent nationally representative sample of U.S. adults found that over 80% support sexual health programs that promote both abstinence and contraception instruction (Bleakley et al., 2006). In fact, the participants within this study indicated low support (36%) and high opposition (50%) for abstinence-only education. Results are similar for studies conducted with parents. Studies of parents from four states (Minnesota, North Carolina, South Carolina, and California) found that 80-90% of the parents surveyed preferred that sexual health education include instruction on how to use contraception (Constantine et al., 2007; Eisenberg et al., 2008; Ito et al., 2006; Lindley et al., 1998). The results of these public and parent studies show that support for comprehensive sexual health education exists throughout states of varying size, location, and political tendency. Furthermore, a study in Minnesota indicated that although parents believe their teens get information regarding sex from peers and the media, they prefer that their teens receive sexual knowledge from parents and teachers (Lagus, Bernat, Bearinger, Resnick, & Eisenberg, 2011). As a result of these studies, it is evident that parents and the public prefer that sexuality education extend beyond abstinence. Parents and the public seem to understand that contraception instruction is a key component to an adolescent's health education.

Consequences of Unprotected Sexual Activity

When students are not taught how to properly use contraception, they are more likely to contract an STI and be involved in a teen pregnancy. Of the teen pregnancies that occur in the

United States, approximately 25% end in abortion and 15% end in miscarriage or still birth; this leaves over half of teen pregnancies resulting in a live birth (Kost & Henshaw, 2012). Because a very small number of teens choose to adopt their children into a new family, about half of all teen pregnancies lead to teen parenting. The consequences of teen parenting can cascade into a host of other problems. For instance, only half of all teen mothers earn a high school diploma, while 15% complete a GED. This leaves about one-third of all teen mothers with no high school diploma or GED by age 22 (Perper et al., 2010). Teen fatherhood leads to a decrease in years of school, decreased likelihood of completing high school and an increased likelihood of receiving a GED. Due to low educational attainment, teen fathers tend to have low income jobs, which leads to low child support payments (Fletcher & Wolfe, 2010). As the number of college graduates increases, those who fail to earn a high school diploma or GED are less likely to secure a job, thus causing these teen parents to fall even further behind (Kerckhof, 2002). Research has also shown that employers do not seem to value GEDs as highly as high school diplomas. GED recipients earn less money than those with high school diplomas. Additionally, GED recipients are less likely than those with high school diplomas to complete an associate or baccalaureate degree (Cameron & Heckman, 1993). Thus, implementing programs that decrease teen pregnancy rates has the potential to prevent economic and educational burdens for sexually active teens.

Furthermore, children of teenagers can suffer from the consequences of teen pregnancy. These children are at an increased risk for developing health problems, becoming teen parents themselves, dropping out of high school, becoming incarcerated and facing unemployment (Holcombe, Peterson, & Manlove, 2009). The impact of teen childbearing extends beyond the

parents and children; society pays as well. Around \$9 billion in taxpayer money funds increases in health care, foster care, and incarceration each year due to teen pregnancies (Hoffman, 2006).

The consequences of risky teen sexual behaviors are not limited to those associated with teen pregnancy. Improper contraceptive use or lack of contraceptive use leads to an increased risk of contracting an STI. Approximately half of the 19 million new STI cases each year occur in 15-24 year olds (Wildsmith, Schelar, Peterson, & Manlove, 2010). If undetected or untreated, the long-term consequences of STIs can include ectopic pregnancies, infertility, reproductive cancers, internal organ damage, pelvic inflammatory disease and life-threatening conditions (The Henry J. Kaiser Family Foundation, 2003). Some STIs, such as the human papillomavirus, genital herpes, and HIV, are not curable, leaving the infected individual with a lifetime of side effects and medical costs. When STIs and pregnancy occur simultaneously, the fetus is at risk for a host of complications including prematurity, low birth weight, neonatal conjunctivitis, pneumonia, blindness, and other life-threatening conditions (The Henry J. Kaiser Family Foundation, 2003). Similar to teen pregnancy, STIs create economic burdens. An estimated \$12-\$20 billion dollars in lifetime medical costs can result from STIs (Chesson, Collins, & Koski, 2008). Therefore, implementing programs that prevent pregnancy and STI contraction can reduce the medical and economic costs for individuals and society.

Federal Funding

The need for adolescents to receive CSE is evident, yet changes in sex education policies over the past three decades have hindered students from receiving the information that they need. The U.S. government began funding AOE programs in 1981 during the Reagan Administration with the launch of the Adolescent Family Life Act (AFLA) (A Brief History of Federal Abstinence-Only-Until-Marriage Funding, n.d.). The purpose of the AFLA was to encourage

abstinence until marriage by promoting chastity and self-discipline. Federal commitment and funding to AOE increased with the Title V Abstinence-Only-Until-Marriage portion of The Welfare Reform Act, signed by President Clinton in 1996. The law, which dedicated an additional \$50 million a year to fund AOE programs, laid out an 8-point definition of abstinence education that is still often used today. In order to receive funding, programs must adhere to the following guidelines:

1. Have as its exclusive purpose teaching the social, psychological, and health gains to be realized by abstaining from sexual activity;
2. Teach abstinence from sexual activity outside of marriage is the expected standard for all school-age children;
3. Teach that abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems;
4. Teach that a mutually faithful monogamous relationship in the context of marriage is the expected standard of sexual activity;
5. Teach that sexual activity outside the context of marriage is likely to have harmful psychological and physical side effects
6. Teach that bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society;
7. Teach young people how to reject sexual advances and how alcohol and drug use increase vulnerability to sexual advances, and
8. Teach the importance of attaining self-sufficiency before engaging in sexual activity.

This definition was not based on medical or social science research findings, but on the beliefs and opinions of federal legislators (A Brief History of Federal Abstinence-Only-Until-Marriage Funding, n.d.; Howell, 2007). All states, except California, have taken Title V funding at some point. Programs funded by Title V are prohibited from discussing contraceptives in any manner other than to highlight their ineffectiveness. In 2000, a third stream of AOE federal funding, Community-Based Abstinence Education (CBAE), was created. Instead of going through the state, this stream fed money directly into community-based organizations that promote AOE. Organizations taking this money were still required to follow the 8-point AOE definition as laid out in the Title V abstinence definition. The Bush Administration increased funding for these three streams of AOE programs. Between 1996 and 2005, federal funding for abstinence-only education rose from \$10 million to \$167 million, thus continuing the use of programs that are ineffective (Lindberg et al., 2006).

The impact of federal support for AOE can be seen clearly as 2% of sexual health teachers reported teaching abstinence-only content in 1988, but by 1999 this number had grown to 23% (Lindberg et al., 2006). Similarly, the percentage of teachers reporting that abstinence was the main message they hoped to convey to students rose from 25% to 41% between 1988 and 1999 (Darroch, Landry, & Singh, 2000). Likewise, a nationally representative study of public school districts conducted in 2000 found that the majority of districts taught abstinence as the most effective way to prevent unintended pregnancy, HIV, and other STDs, yet only 20% of middle schools/junior highs and 50% of senior highs included instruction on proper condom use (Kolbe, Kann, & Brener, 2001). This suggests that federal funding for abstinence-only education has likely prompted schools and teachers to provide it.

Under the Obama Administration, federal funding for sexual health education has seen changes that promote evidence-based sexual health education (An Explanation of Federal Funding for More Comprehensive Approaches to Sex Education, n.d.). In 2010, Congress passed the Consolidated Appropriations Act of 2010 that eliminated funding for both AFLA and CBAE. Title V funding expired on June 30, 2009, but was granted a 5-year renewal as part of Obama's health care reform package. Although Obama's health care plan dedicated \$50 million a year towards continuing AOE, a second stream of funding provides \$75 million a year for CSE programs. This stream, known as the Personal Responsibility Education Program (PREP), marks the U.S. government's first-ever funding commitment to CSE.

North Dakota, the focus of this study, is one of four states that did not apply for 2010 PREP funding; however the state applied for Title V funding for AOE in fiscal years 2009 and 2010 (SIECUS, n.d.; U.S Department of Health and Human Services, n.d.). Title V funding requires a 75% match of state funds, while PREP funding requires no match from the state. Approximately half of the states in the country took both types of funds, while twenty states took only PREP funding. North Dakota's decision to take Title V funding and ignore PREP funding indicates that the decision makers in this state not only prefer AOE, but actively reject CSE opportunities.

Sexual Health Education in North Dakota

Within the state of North Dakota, the Department of Public Instruction (DPI) strongly supports local control of schools, meaning that the decision regarding what type of sexual health education to implement (abstinence-only, abstinence-plus, comprehensive sex education or no sex education) lies with the individual teachers, schools and school boards (S. Tibke, personal communication, December 9, 2011). On July 1st 2012, a new legislative mandate in North

Dakota took effect. The mandate states that “each school district and nonpublic school shall ensure that the portion of its health curriculum which is related to sexual health include instruction pertaining to the risks associated with adolescent sexual activity and the social, psychological, and physical health gains to be realized by abstaining from sexual activity before and outside of marriage.” This mandate neither promotes nor discourages instruction on contraceptives, meaning that the decision to include instruction on contraceptives is left to local control. This creates concern when considering that approximately 45% of North Dakota’s high school students have engaged in sexual intercourse and over half report that abstinence is not important to them (Safe and Healthy Schools, 2011). Because the state does not mandate or prohibit topics related to sexual health instruction other than abstinence, individual teachers have the ability to influence what content students receive. Thus, teacher efficacy and beliefs regarding sexual health education in North Dakota have the potential to impact adolescent sexual health outcomes.

Teacher Attitude and Self-Efficacy

Although support for CSE is evident from parents, adolescents, health care providers, and the general public, teachers are not required to receive training specific to adolescent sexuality before teaching a sex education class. This indicates that many sexual health teachers might not understand what promotes healthy sexual decision making nor have they had practice or preparation in talking about sexuality (Westwood & Mullan, 2007). A qualitative study of sexuality educators revealed that many older teachers had not received any sexuality training, while, other teachers reported vast differences in the depth of their education with sexuality instruction ranging from nothing to an entire semester-long class (Eisenberg, Madsen, Oliphant, Sieving, & Resnick, 2010). Studies have found that teachers tend to focus on topics that they

believe are important and effective, suggesting that teachers who have not received adequate training in sexual health instruction could be neglecting key components to preventing unwanted pregnancies and STIs (Cohen, Sears, Byers, & Weaver, 2004; Johnson Moore & Rienzo, 2000; Yarber, Torabi, & Haffner, 1997). Not only do teachers need to be comfortable and knowledgeable in discussing sexuality with students, teachers who approach sexuality with a positive attitude without evoking shame tend to have students who are more receptive to the messages they are teaching (Greenberg, 1989; Yarber & McCabe, 1981). Teachers who report having a positive attitude toward sexual health education typically have received training specific to adolescent sexual development (Hamilton & Levenson Gingiss, 1993; Westwood & Mullan, 1989).

Research Questions

The intent of this study was to identify the sexual health content taught in North Dakota's secondary schools and links between content choices and teacher characteristics. Links among teachers' inclusion of topics central to CSE, beliefs about the effectiveness of types of sexual health education, and teacher self-efficacy were assessed. The study specifically asked teachers to indicate if they included instruction on contraception that encourages use, contraception failure rates, sexual health skills (how to talk to a partner about whether to have sex, how to obtain contraceptives, etc.), and information on a range of topics relating to human sexuality (masturbation and sexual orientation). Teachers were also asked to rate their self-efficacy on three teacher effectiveness items and identify which type of sexual health education they believe is most effective (AOE, ABE, or CSE).

Findings from previous studies on AOE have indicated that these programs exclude contraception instruction, frequently include contraception failure rates, and tend to ignore topics

such as masturbation and sexual orientation (Lin & Santelli, 2008; Santelli, 2008; Wilson, Goodson et al., 2005). Based on these findings, certain hypotheses were made. First, an association was expected between support for AOE and exclusion of contraception instruction, skills related to sexual health, and human sexuality topics other than intercourse. Teachers who support AOE were expected to be more likely to teach inaccurate information about contraception failure rates than teachers who do not support AOE. Because CSE programs include contraception, sexual health skills, and instruction covering a range the range of human sexuality, teachers who believe in the effectiveness of CSE were expected to include all of these topics. A positive association was expected between support for ABE and contraception instruction, but other than that, the content could vary greatly by teacher. This study gives insight into the skills and content included in ABE.

It was anticipated that teacher self-efficacy would not vary greatly among support for the different types of sexual health education due to the confidence with which many individuals support the various types of sexual health education. For example, parents who participated in the sexual health preferences study in Minnesota indicated that they support the type of sex education that they believe to be effective (Eisenberg, et al., 2008).

It was expected that teachers who support CSE would more frequently report accurate contraception information regarding contraception failure rates than teachers who support AOE. Teachers who support AOE were expected to report more instances of discouraging contraception use through the presentation of inaccurate failure rates than teachers who support CSE. No specific predictions were made about teachers who support ABE.

It was hypothesized that a positive association would exist between accurate contraception failure rates and positive contraception inclusion; however, it was unknown

whether the range of human sexuality and sexual health skills would be associated with accurate contraception failure rates. It was also hypothesized that a negative association will occur between positive contraception inclusion and contraception information that discourages use as AOE programs tend to promote the ineffective qualities of contraception without including information on their effectiveness.

METHOD

Participants

The participants were 102 adults (19 males, 78 females, and 3 preferred not to answer) who were identified as someone who taught sexual health content in North Dakota's secondary schools at the time of the survey. The participants ranged in age from 22 to 65 years ($\bar{x} = 46$, $SD = 12$). 97% of the participants reported teaching at a public school. The sample represents varied community sizes and locations throughout the state. 43% of the participants reported teaching in a rural community (2,500 or fewer residents), 11% in a small city (2,500-50,000 residents), and 23% in an urban area (50,000 or more residents). All eight state human service districts were represented within the participant population. The participants received educational training in one or more of the following areas: health, family and consumer science, physical education, biology, nursing, counseling, and social studies.

Procedure

The data were collected as part of a larger, IRB approved study on sexual health education through the use of an online survey. The survey invitation was sent by email to the teacher's school account using a listserv of health teachers provided by the North Dakota Department of Public Instruction (DPI), and a listserv of family and consumer sciences teachers administered by the North Dakota Department of Career and Technical Education. Both lists contained most of the public school teachers in those two content areas. Some teachers from private schools and reservation schools were also included. However, because the majority of the private and reservation school teachers statewide were not on the list, these teachers' email addresses were obtained from school websites. Private and reservation school teachers were emailed the survey invitation individually. The survey was also sent to the North Dakota

principals listserv provided by DPI in case individual sexual health teachers were not on the other listservs. The invitation asked teachers and principals to forward the survey to others they know who teach sexual health education in North Dakota schools. All participants were asked to take the survey only once, even if they received multiple invitations. The goal was to ensure that the majority of teachers received the survey invitation. A reminder email with the survey invitation was sent one week later through the original recruitment methods. A second reminder indicating a final opportunity was sent after two weeks. The survey was open for 21 days.

The survey was completed by individual teachers at a location and time of their choice. Participants accessed the survey by clicking on a link that was included in the emailed invitation or by pasting the link into a browser. Upon completing the survey, participants had the opportunity to receive a fact sheet about adolescent sexual health developed by the research team, obtain results of the survey, and enter themselves into a raffle drawing for an iPad.

Survey

The survey contained items that assessed the content taught in CSE classes. Content was chosen by examining previous studies, including two studies that used the SIECUS Guidelines for instrumentation design (Johnson Moore & Rienzo, 2000; Yarber, Torabi, & Haffner, 1997). The SIECUS Guidelines include pregnancy and STI prevention methods along with other topics related to sexuality (i.e. orientation and body image) in order to promote a thorough understanding of human sexuality. The selected items reflect content from previous studies and the SIECUS guidelines that is informative, skill-based, and encourages communication (i.e. How to Talk to Parents about Sex, How to Get Tested for STIs, Types of Sexual Orientation). Not only are the topics common components of comprehensive sexual health programs, they also reflect information that parents prefer their adolescents learn in sexual health classes (Bleakley et

al., 2006; Constantine et al., 2007; Eisenberg et al., 2008; Ito et al., 2006). The topics chosen have been found to be effective in promoting healthy sexual behaviors such as delaying sexual onset, limiting partners, and increased contraceptive use. To ensure face validity, the survey was examined by the Coordinator of Health Education from DPI and professors from Human Development and Family Science and from Nursing.

A list of all the items used for the analysis can be found in the Appendix.

Measures

Positive Contraception Instruction (PCI)

Teachers responded to two items assessing their inclusion of contraception instruction. The two items were “Do you include instruction on condoms as an effective tool to prevent pregnancy and STIs?” and “Do you include instruction on contraceptives other than condoms as effective tools to prevent pregnancy?” The response options were 0 (*no*) and 1 (*yes*). Scores were calculated by summing responses of these items with higher scores indicating more inclusion of contraceptive coverage. The PCI scores could range from 0-2.

Contraception Failure (CF)

Teachers were asked if they cover failure rates of condoms and other contraceptives. For teachers indicating inclusion of failure rates, an open-ended follow-up question asked what failure rates were taught. The written responses to the follow-up question were coded into three categories: 1 (*information that discourages use, for example “We teach kids to abstain from sex and tell them condoms don't always work”*), 2 (*information that appears accurate and meant to encourage proper use, for example “Must be used properly, that's when failure rates raise*), and 3 (*unclear presentation, unclear reliability of source, for example “I will look up current rates on the internet”*). The researchers coded the responses separately. The inter-rater reliability for

the raters was excellent, Kappa = .81, indicating that the inter-rater reliability is almost perfect (Landis & Koch, 1977). Disagreements were resolved through discussion. A high number of responses were coded as unclear because of stringent criteria for each category, whereby the raters refrained from making assumptions that went beyond the actual responses.

Sexual Health Skills (SHS)

Teachers responded to eight items asking whether they provided instruction on various sexual health skills (e.g. “Do you include instruction on how to talk to a partner about birth control?”). The sexual health skills variable was created by summing the responses of the eight skill-related items. The response options were 0 (*no*) and 1 (*yes*). The SHS scores could range from 0-8 with higher scores indicating more inclusion of skills instruction.

Teaching the Range of Human Sexuality (RHS)

The range of sexuality variable was created by summing the responses of 4 items that asked teachers about their coverage of aspects of sexuality that cover a broader range of human sexuality than heterosexual intercourse (e.g. “Do you include instruction on sexual activities with little or no risk?”). The response options were 0 (*no*) and 1 (*yes*). The RHS scores could range from 0-4 with higher scores indicating more inclusion of medically accurate and broad sexuality topics.

Teacher Self-efficacy (TSE)

Teachers responded to 3 items measuring their self-efficacy for sexual health education (e.g. I have had adequate training on the sexuality of adolescents). One item was reverse-scored. Participants rated their agreement with the items using a 4-point Likert scale with options ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Scale scores were calculated by averaging the items. Cronbach’s alpha = .81.

Sex Education Beliefs

Teachers responded to one item asking which type of sexual health education they believe is the most effective type of sexual health education. The response options were 1 (*abstinence-only*), 2 (*abstinence-plus*), and 3 (*comprehensive*).

RESULTS

Means and standard deviations for all scales are presented in Table 1. Table 2 shows the percentage of teachers who reported instruction on each sexual health topic. Overall, abstinence was the most commonly included topic. A majority of teachers included instruction on getting tested for STIs, followed by instruction on how to talk to a partner about whether to have sex and how to know if one is ready to have sex. Other common topics taught in North Dakota's secondary schools are sexual behaviors with little risk and what to do if sexually assaulted. Over half the participants reported instruction on condoms as an effective tool to prevent pregnancy, while less than 20% of those teachers (n=10) use real condoms in class to demonstrate proper use. Although over half of the participants included instruction on condoms, contraception other than condoms and how to talk to a partner about birth control, fewer than half provided instruction on how to choose and obtain birth control or a contraceptive. Sexual orientation and attraction to the opposite and same sex were included by less than half of the participants. Masturbation was the least frequently included sexual health topic.

Table 1. Means and Standard Deviations of Scales

Scale	Mean (SD)	Range
Positive contraception instruction	1.22 (.91)	0-2
Teaching the range of human sexuality	1.81 (1.34)	0-4
Teacher self-efficacy	9.36 (1.84)	3-12
Sexual health skills	5.11 (2.07)	0-8

Table 2. Item Level Percentages for Content Inclusion

Variable	<i>N</i>	%
Abstinence	88	99
How to get test for STIs	71	90
How to Talk to a Partner about Having Sex	73	82
How to Know if You're Ready to Have Sex	64	77
Sexual Behaviors with Little Risk	61	69
What To Do if You've Been Assaulted	55	72
Condoms	51	62
Contraceptives Other than Condoms	49	58
How to Talk to Parents about Sex	50	56
How to Talk to Partner about Birth Control	46	51
Attraction to Opposite and Same Sex	37	49
How to Obtain Birth Control	37	46
Sexual Orientation	33	42
How to Choose a Contraceptive	27	34
Masturbation	16	18

Table 3 shows the correlations between scales for positive contraception inclusion, sexual health skills, teaching the range of human sexuality, and teacher self-efficacy. There was a strong positive correlation between sexual health skills and positive contraception instruction such that teachers who taught more sexual health skills overall were more likely to teach about contraception in a positive manner. Teachers who reported higher self-efficacy were more likely

to include instruction on sexual health skills and the range of human sexuality. Teacher self-efficacy was not significantly related to positive contraception instruction. There was a strong positive correlation between teaching the range of human sexuality and both positive contraception instruction and sexual health skills. Thus, teachers who covered the range of human sexuality in class were also more likely to include positive contraception instruction and information on sexual health skills.

Table 3. Correlations between Sexual Health Skills, Range of Human Sexuality, Teacher Self-efficacy, and Contraception Instruction

Measure	Sexual Health Skills	Range of Human Sexuality	Teacher Self-Efficacy
Contraception instruction	.54***	.31**	.17
Sexual health skills		.64***	.33**
Range of human sexuality			.26*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 4 shows the frequency of contraceptive failure inclusion by teacher beliefs about the most effective type of sex education. Teachers who believe CSE is most effective reported the highest frequency of contraception failure rate inclusion, followed by teachers who support ABE, and teachers who support AOE.

Table 5 shows the frequency of contraceptive failure inclusion by how abstinence is taught in class. Teachers who present abstinence as one of multiple options reported the highest frequency of contraception failure rate inclusion followed by teachers who present abstinence as the only option. Leaving out participants who neglected to include abstinence allowed for a chi-square test of independence to examine the relationship between how abstinence is taught and

inclusion of failure rates. The relationship between these variables was significant, $\chi^2 (1, N = 74) = 6.56, p = .01$.

Table 4. Frequency of Contraceptive Failure Rate Inclusion by Sex Education Belief

Failure Rate Inclusion	Abstinence-only	Abstinence-based	Comprehensive
	n (%)	n (%)	n (%)
Yes	5 (55)	17 (77)	34 (92)
No	4 (44)	5 (23)	3 (8)

Table 5. Frequency of Contraception Failure Rate Inclusion by How Abstinence is Taught

Failure Rate Inclusion	Multiple options	The only option	Not Presented
	n (%)	n (%)	n (%)
Yes	49 (89)	12 (63)	0 (0)
No	6 (11)	7 (37)	1 (100)

Free response answers for accuracy of contraceptive failure rates were coded into three categories: information that is misleading and/or discouraging (n=7), information that is accurate and supportive of use (n=17), and information that is unclear (n=23). Due to low cell numbers, chi-square analyses could not be conducted, however, the breakdown of accuracy of contraception coverage by teacher beliefs about the most effective type of sex education and by how abstinence is taught are shown in Tables 6 and 7 respectively.

Table 6. Frequency of Contraception Coverage by Sex Education Belief

Contraception Coverage	Abstinence-only	Abstinence-based	Comprehensive
	n (%)	n (%)	n (%)
Discourage	1 (50)	4 (33)	2 (4)
Encourage	0 (0)	3 (25)	14 (42)
Unclear	1 (50)	5 (42)	17 (51)

Table 7. Frequency of Contraception Coverage by How Abstinence is Taught

Coverage	Only option n (%)	One of many options n (%)
Discourage	4 (40)	3 (8)
Encourage	1 (10)	16 (41)
Unclear	5 (50)	20 (51)

Teachers who believe CSE is most effective had a high number of contraception failure rates coded as accurate/supportive of use. These teachers also have the highest number of unclear coded responses, as can be seen in Table 6. Due to strict coding criteria, many of these answers were coded as unclear, yet could likely be encouraging (e.g. “Current rates and statistics that are available from a local clinic in town.”). 14 teachers believed that AOE is the most effective type of sex education. Of these, only two reported contraception failure rates, one teaching discouraging information and the other is unclear. As predicted, teachers who support ABE tend to teach contraceptive failure rates with no clear consistency.

Table 7 shows the accuracy of contraception failure rates presented based on how abstinence is taught. Most of the teachers who reported teaching abstinence as one of many options for preventing pregnancy and STIs covered contraception failure rates in a way that encourages use. In contrast, all but one of the teachers who taught that abstinence is the only option covered contraception failure rates in a way that discourages use. The highest frequency of failure rate inclusion occurs in classes where abstinence is taught as one of many options for preventing pregnancy and STIs, with most of these participants presenting failure rates that are unclear. Similar to the results in Table 6, it is likely that some of the unclear responses would likely be coded as encouraging if answers had more depth available.

A one-way ANOVA was used to examine whether scores on all scales (positive contraception coverage, range of human sexuality, teacher self-efficacy, and sexual health skills) varied by accuracy of contraceptive failure rates (see Table 8 for ANOVA results and Table 9 for means and standard deviations). A trend towards a significant difference was found for positive contraception instruction ($p = .07$). A visual examination of the means shows that teachers who included positive contraception instruction were trending towards being more likely to present failure rate information that was coded as accurate/encouraging or unclear, rather than discouraging contraceptive use. No significant differences were found for the range of human sexuality, teacher self-efficacy, and sexual health skills (p 's $> .10$).

A one-way ANOVA was used to examine whether scores on all scales varied by sexual education beliefs (see Table 10). Means and standard deviations are reported in Table 9. A significant difference was found for positive contraception instruction. Follow-up analyses using Dunnett's T3 test showed that all three sexual education belief categories were significantly different from each other on positive contraception instruction. Teachers who support CSE were significantly more likely to include positive contraception instruction than teachers who support ABE or AOE. Teachers who support ABE were significantly more likely to include positive contraception instruction than teachers who support AOE. A trend towards significance was found for teaching sexual health skills, $p = .06$. A visual examination of the means shows that teachers who support CSE and ABE were trending towards more inclusion of sexual health skills instruction compared to teachers who support AOE (see Table 8). No other significant differences were found (p 's $> .10$)

Table 8. One-Way Analysis of Variance Comparing Contraception Coverage for All Scales

Variable and Source	df	SS	MS	F
Contraception Instruction				
Between Groups	2	3.28	1.68	2.70 ⁺
Within Groups	49	29.70	.61	
Total	51	32.98		
Range of Human Sexuality				
Between Groups	2	.10	.05	.028
Within Groups	46	81.82	1.78	
Total	48	81.92		
Teacher Self-efficacy				
Between Groups	2	2.71	1.35	.43
Within Groups	46	145.29	3.16	
Total	48	148		
Sexual Health Skills				
Between Groups	2	1.95	.98	.34
Within Groups	47	136.23	2.90	
Total	49	138.18		

Note. ⁺ $p < .10$, $*p < .05$, $*p < .01$, $***p < .001$

Table 9. Means and Standard Deviations for all ANOVAs

Scales	Sex Education Beliefs			Accuracy of Contraceptive Failure Rates		
	<u>AOE</u>	<u>ABE</u>	<u>CSE</u>	<u>Accurate</u>	<u>Discourage</u>	<u>Unclear</u>
Teacher Self-efficacy	8.67 (2.39)	9.18 (1.81)	9.48 (1.74)	9.71 (2.05)	10.00 (1.53)	9.36 (1.63)
Range of Human Sexuality	1.55 (1.58)	1.81 (1.25)	1.78 (1.35)	2.00 (1.41)	2.14 (0.69)	2.04 (1.40)
Positive Contraception Inc.	0.22 (0.44)	0.95 (.95)	1.59 (0.72)	1.65 (0.61)	0.86 (1.07)	1.54 (0.79)
Sexual Health Skills	3.88 (2.42)	5.00 (1.57)	5.59 (2.03)	5.65 (1.66)	6.00 (1.00)	5.42 (1.86)

Table 10. One-Way Analysis of Variance Comparing Sexual Education Beliefs for All Scales

Variable and Source	df	SS	MS	F
Contraception Instruction				
Between Groups	2	15.69	7.84	12.93***
Within Groups	65	39.42	.61	
Total	67	55.12		
Range of Human Sexuality				
Between Groups	2	.43	.22	.12
Within Groups	63	115.68	1.84	
Total	65	116.12		
Teacher Self-efficacy				
Between Groups	2	5.18	2.59	.75
Within Groups	65	224.52	3.46	
Total	67	229.69		
Sexual Health Skills				
Between Groups	2	22.08	11.04	2.89 ⁺
Within Groups	65	247.81	3.81	
Total	67	269.88		

Note. ⁺ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

DISCUSSION

The purpose of this study was to identify the sexual health content taught in North Dakota's secondary schools and links between content choices and teacher characteristics. Teachers answered questions regarding the content taught in their sexual health education classes, and their attitudes and beliefs regarding sexual health education. Research shows sexual health education is effective when certain topics are included. The results of this study indicated that many teachers are neglecting to include research-based topics; however, inclusion of these topics is more common among teachers who support CSE.

The majority of the teachers reported instruction on abstinence; however, only 60% included instruction on condoms and other contraceptive options. Previous studies indicate that the combination of abstinence and contraception instruction contributes to the decline of teen pregnancy and STI rates (Santelli et al., 2007). Only 10% of teachers who included condom instruction in this study actually used real condoms in class to demonstrate proper use. This is concerning because condoms are most effective when used properly and consistently (CDC, 2012a). This suggests that even when students learn the factual knowledge that condoms can prevent pregnancy and STIs, the students might not know how to properly use condoms.

The lack of instruction regarding sexual health extended beyond contraception. Although some participants in this study reported instructing students on sexual health skills such as how to get tested for STIs, how to talk to a partner about whether to have sex, and how to know if you are ready to have sex, many did not address skills for how to choose and obtain contraceptives or how to talk to a partner about birth control. These sexual health skills are crucial parts of an individual's health education, especially since the 2011 Youth Risk Behavior Survey results indicated that 45% of North Dakota's high school students have engaged in sexual activity and

over half report that abstinence is not important to them (Safe and Healthy Schools, 2011). Even students who abstain from sexual activities during adolescence will benefit from these skills later in life when they become sexually active.

This study also examined the inclusion of sexual orientation and masturbation, which are frequently ignored topics, yet are normal aspects of human sexuality. Many sexual health classes in North Dakota are ignoring facets of human sexuality that could lead to better understanding of students' own and other's sexuality. North Dakota's DPI health education standards state that the aim is to include content that is essential for all students, yet only a quarter of teachers included information regarding sexual orientation (North Dakota Department of Public Instruction, 2006). The 2011 YRBS survey revealed that 4% of North Dakota's high school students identify as gay, lesbian, or bisexual, meaning that this portion of the student population is not receiving sexual health education appropriate to their needs. Beyond that, the CDC recommends including instruction on sexual orientation to reduce bullying incidents in schools, which suggests that all students, regardless of sexual orientation, would benefit from learning about this topic (CDC, 2012b).

Masturbation was excluded by over 80% of the teachers surveyed, yet previous studies have found that as many as 75% of boys and over half of girls masturbate during their teen years (Robbins et al., 2011). Although masturbation is common, many adolescents associate guilt and fear with masturbation (Bell, 1998; Stein & Reiser, 1994). This lack of inclusion supports the notion that North Dakota's sexual health classes are not covering a range of topics pertinent to understanding one's sexuality. Sexual health classes present the opportunity to dispel myths commonly associated with masturbation (Laqueur, 2004). Studies of historical accounts of masturbation convey fear and misunderstanding that have led societies to extreme measures to

prevent masturbation, when research clearly shows that masturbation is normal and safe (Levin, 2007; Tiefer, 1998). Although it is common for sexual health classes to neglect masturbation, including accurate information could decrease guilt and increase general understanding of bodily functions and sexuality.

Teachers' beliefs regarding the effectiveness of sexual health education can impact what content is included in their class. For instance, this study revealed that teachers who indicated support for CSE included contraception instruction more frequently than teachers who supported ABE. Furthermore, teachers who support ABE included contraception instruction more frequently than teachers who support AOE. Similarly, teachers who supported CSE and ABE were more likely to include instruction on sexual health skills than teachers who supported AOE. These findings have implications regarding teacher preparation, certification requirements, and continuing education. It appears that teachers who support a comprehensive approach to sexual health education are likely to include instruction related to contraception and other sexual health skills. Within the state of North Dakota, there are no specific requirements regarding who teaches sexual health education, meaning that sexual health teachers might not have training specifically related to adolescent sexual development. This could contribute to a lack of awareness about what is effective in terms of delaying sexual activity and preventing teen pregnancies and STIs.

In this study, teacher self-efficacy refers to a teacher's self-reported feelings of knowledge, preparation, and comfort in teaching sexual health education. Teacher self-efficacy did not vary by sexual health education beliefs, which suggests that many teachers feel confident that their approach is effective, even when the concepts and information taught in class are not supported by research. Similar results have been found among parents regarding their support for

CSE or AOE (Eisenberg et al., 2008). It appears that both parents and teachers tend to support the approach to sexual health education that they believe is most effective. This reinforces the importance of requiring education on adolescent sexual development and training in evidence-based programs for pre-service and current sexual health educators.

Although teacher self-efficacy did not vary by sexual health education beliefs, greater self-efficacy was associated with teaching more content (i.e. sexual health skills and a broad range of sexual topics), which again suggests that training can be beneficial. Teachers who are equipped with a wide variety of sexual health knowledge appear to be prepared to address a broader range of topics, thus exposing the students to more information regarding their sexual development.

As expected, the participants in this study who support CSE reported a high frequency of including instruction on contraception failure rates and also presenting these failure rates in a manner that does not discourage use. Additionally, teachers who reported that they present contraception information as effective tools to prevent pregnancy and STIs tended to present failure rates in a way that did not discourage use. Furthermore, almost half the teachers who indicated that AOE is effective did not include instruction on failure rates. These findings suggest that students who receive sexual health education from teachers who support CSE are likely learning accurate information regarding sexual health skills and knowledge, thus preparing them to be confident and informed advocates for their own health. Beyond that, inclusion of contraception failure rates seems to vary based on how abstinence is presented. When teachers present abstinence as one of several options for students to choose, these teachers tend to include instruction on contraception failure rates, thus increasing student knowledge about contraception in general. However, close to two-thirds of the teachers who present abstinence as the only

option for students still included instruction on contraceptive failure rates. This situation may lead to students' lack of contraceptive use in the future because the only information they have about contraception is that it fails (Duberstein Lindberg & Maddow-Zimet, 2012).

The hypothesis that teachers who support ABE would teach contraceptive failure rates with no clear consistency was supported. As hypothesized, the nature of ABE classes was mixed, indicating that students in these classes likely range from receiving adequate information to inadequate or possibly inaccurate information about sexuality and skills. Even though this approach is vague and inconsistent, it is being encouraged in North Dakota as evidenced by the passing of a bill requiring abstinence-based concepts. This bill has the potential to create an environment in North Dakota in which the youth of this state, in regards to their sexual health, range from being educated and accurately informed to unaware and even misinformed.

Although this abstinence-based bill exists, a portion of the participants in this survey indicated that they value CSE. The policy-makers of this state chose not to apply for federal funding that could have been used to support some teachers in this state and their efforts in delivering education that is known to reduce teen pregnancy and STIs rates (SIECUS, n.d.; U.S Department of Health and Human Services, n.d.). This highlights the disconnect between public policy and evidence-based practice. This study demonstrates that teachers who understand the efficacy of CSE tend to implement it. Any individual making decisions related to sexual health education, whether at the district, state, or federal level, needs to be aware of what works in order to provide effective programs.

Limitations

The response rate for this study is unknown. Due to the lack of requirements regarding sexual health education in North Dakota, each district, school, or teacher implements programs

on an individual basis. Because of this, it is not known by the state how many teachers and which teachers address sexual health education in each district. The length and content of the survey could also be a limitation. Some participants mentioned that the survey took too long to complete, which could have contributed to participants not completing or attempting the survey. Also, the survey contained questions regarding content that is often included in CSE programs. For teachers who have not received much training or for those who support AOE, these questions might have felt burdensome, unnecessary or inappropriate, which could lead some participants to quit the survey.

Future Directions

The results of this survey indicate that teacher support for CSE matters, which has implications for teacher preparation and training. Future studies could examine how training impacts teacher understanding of adolescent sexuality and support for CSE. Beyond that, studies could examine if states develop training requirements for sexual health teachers and how those requirements or lack of requirements impact sexual health content taught in class. Furthermore, future research could investigate the links between teacher support for CSE and student acquisition of CSE skills and knowledge, especially in the school setting. Sexual health education is often delivered in settings other than schools, such as community centers or churches. Future studies could examine if the setting of CSE impacts adolescent sexual health outcomes.

In conclusion, teachers are in a position to provide instruction on sexual health information and skills that can have an enduring impact on students' lives. When equipped with the proper information, teachers have the potential to be the experts on sexuality, instead of peers and the media, which is what parents and the general public want. In order for teachers to fulfill

this role, they need proper training, support, and funding from school districts and policy-makers.

Training and employing sexual health educators who support CSE programs can be a step towards reducing rates of teen pregnancy and STIs, which would likely to lead to more positive outcomes. With fewer teen pregnancies, high school graduation rates and educational attainments would rise, thus preventing lifelong economic and educational burdens for many individuals. Furthermore, decreasing teen childbearing will likely increase the rate of children being born into financially stable relationships, which in turn leads to better outcomes for children including improved overall health in childhood and a reduced likelihood of experiencing incarceration, unemployment, and teen parenting later in life. Furthermore, CSE teachers can reduce the number of long term health consequences associated with STIs including fewer complications with birth and lowering costs to society. When training and hiring sexual health education teachers, schools must consider the impact that a teacher and content can have on students' lives and society as well.

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APPENDIX

Content of the Sexual Health Component

Do you include the following topics in the sex education portion of your class?
Indicate YES or NO

1. How to Talk to a Partner about Whether to Have Sex
2. How to Talk to a Partner about Birth Control
3. How to Talk to Parents about Sex
4. Abstinence
5. Sexual Behaviors with Little Risk (Kissing, Petting, Rubbing, Massage)
6. Masturbation
If yes, BOX (Discuss how masturbation is presented)
7. How to Know if You're Ready to Have Sex
8. Condoms as an Effective Tool to Prevent Pregnancy and STIs
If yes, do you use real condoms (remove package, show to use...)? Y/N
9. Contraceptives Other than Condoms as Effective Tools to Prevent Pregnancy
10. Failure Rates of Condoms & Other Contraceptives
If yes, give BOX (What do you teach about failure rates?)
11. How to Obtain Contraceptives
12. How to Choose a Contraceptive
13. How to Get Tested for STIs
14. Types of Sexual Orientation
If yes, BOX (Briefly describe what is taught about sexual orientation)
15. Sexuality can Include Attraction to People of the Opposite Sex, Same Sex, or Both
16. What to Do if You've Been Sexually Assaulted

We are interested in your thoughts about your preparation for and comfort level with teaching sexuality.

Please rate how you feel about each statement.

1-strongly disagree, 2-disagree, 3-agree, 4-strongly agree, X-choose not to answer

1. I have had adequate training on the sexuality of adolescents.
2. I have the knowledge and skills to teach the emotional aspects of human sexuality.
3. I find it difficult to talk about sex with my students.

What do you think is the most effective type of sexual health education?

- a. **Abstinence-only:** Focuses exclusively on postponing sex until marriage. Pregnancy and STI's are mentioned as potential results of sexual activity. Condoms and birth control are not typically mentioned; however the failure rates for contraceptives can be included.
- b. **Abstinence-based:** Encourages students to delay sex while also providing contraceptive information for students who choose to have sex.

- c. **Comprehensive:** Covers matters relating to sexuality and sexual decision making, including information on relationships, types of STIs, and how to prevent pregnancy. Provides information on both abstinence and contraceptives.