The Impact of Sex-Education on Gender Perceptions and Behavioral Outcomes: A Literature Review of Comprehensive and Abstinence-Only Approaches

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This paper explores the impact of sex education curricula on gender perceptions, specifically comparing Comprehensive Sex Education (CSE) and Abstinence-Only Sex Education (AOSE). This paper examines a myriad of studies exploring how different approaches to sex education affect how adolescents perceive essential aspects of gender, including sex, power, stereotypes, and equality. Based on evidence from longitudinal studies, case studies, and policy evaluations, the paper recognizes AOSE to be less effective in promoting healthy gender perceptions within adolescents. At the same time, CSE has proven to have the potential to produce significantly positive outcomes surrounding gender perceptions in adolescents. With this evidence, the paper recognizes the powerful role of sex education in shaping gender norms and promoting healthier sexual behaviors. Ultimately, the paper claims that many CSE programs do not have a sufficient curriculum to combat unhealthy gender perceptions, calling for CSE curriculums to incorporate gender and power dynamics education into their sex education curricula to see effective outcomes and provide students with the knowledge and skills necessary to make healthy and informed decisions about their sexual health and relationships.

Introduction

In academic discourse, there are two primary types of sex education in discussion: Comprehensive Sex Education (CSE) and Abstinence-Only Sex Education (AOSE). Research demonstrates that these differing approaches yield distinct outcomes and effects. CSE includes providing adolescents with accurate information about sex, safety, consent, sexuality, etc; whereas AOSE is a method that promotes abstinence until marriage as a primary method of preventing pregnancy and sexually transmitted diseases or infections (STD/STI)[1].

Among all the developed countries in the world, the United States consistently ranks one of the highest in teen pregnancy rates. A significant contributor to this issue is the prevalence of inadequate sex education that plagues the nation[2]. Research has consistently demonstrated that Abstinence-Only Sex Education (AOSE) programs are ineffective at decreasing teen pregnancy rates, and in fact can increase susceptibility to pregnancy as it leaves adolescents ill-informed and ill-prepared[3].

Despite growing societal awareness around sexual health, sex education in the US remains inconsistent. As of 2024, only five states mandate comprehensive sex education. The majority still emphasizes abstinence-only sex education, a system of education that leaves significant gaps in information about consent, contraception, and inclusivity. It may also provide adolescents with information that does not require to be medically accurate, age-appropriate, culturally responsive, or evidence-based[4].

Sex education marks an essential aspect of adolescent education, guiding them as they navigate their future romantic and sexual decisions. Therefore, the type of education received should also impact how adolescents engage with their perceptions of gender and gender roles.

Culturally, society has moved into a paradigm of women's equality and equal rights, and due to this push, we often overlook the long-lasting implemented systems that were created during a time of outward gender discrimination and are now inherently sexist. To better understand the role of sex education in shaping adolescent gender perceptions, this paper conducts a literature review. It synthesizes findings from peer-reviewed papers, historical trends, and policy reports that examine how different sex education curricula- Comprehensive Sex Education (CSE) and Abstinence-Only Sex Education (AOSE)-impact gender attitudes, power dynamics, and inclusivity among adolescents. This review does not include original data collection but instead analyzes patterns in existing literature to assess how curriculum type relates to gender perceptions, norms, and equity. This analysis is guided by Social Learning Theory and Gender Schema Theory, which help explain how sex education influences attitudes and behaviors related to gender.

Theoretical Framework

This literature review analysis is supported by both Gender Schema Theory and Social Learning Theory, which provide frameworks for understanding how adolescents develop gender perceptions through sex education. Gender Schema Theory proposes that children learn about male and female roles from the culture and environment in which they live, meaning that a child's education is a powerful influence on how they view themselves, others, and the idea of gender[5]. These cultural messages adolescents receive from family, school, media, religion, and friends function as cognitive filters, helping to shape what children perceive as acceptable or desirable based on gender[6]. Similarly, Social Learning Theory emphasizes that learning-especially for young people-is due mainly to modeling, imitation, and the reinforcement they receive from those around them, including educators and curriculum content[7]. Together, these frameworks help contextualize why Comprehensive Sex Education and Abstinence-Only Sex Education may foster different outcomes in how adolescents come to perceive gender.

Methodology

This study used a qualitative literature review methodology to compare Comprehensive Sex Education (CSE) and Abstinence-Only Sex Education (AOSE) in the United States, focusing on their influence on adolescent gender perceptions and related behavioral outcomes.

Databases Searched

PubMed, Google Scholar, and JSTOR.

Search Period

December 2024 to July 2025

Search Strategy

The initial search terms included "sex education," "gender roles," and "gender (in)equality." These were later refined to include more specific terms including "comprehensive sex education" and "abstinence-only sex education." Boolean operators (AND, OR) were used to combine terms and broaden or narrow results as needed.

Inclusion Criteria

- Peer-reviewed journal articles, systematic reviews, or policy reports
- Studies published in English between 2000 and 2024 for a modern understanding of educational practices and policies
- Research conducted in the United States or, if international, findings relevant to the United States
- Studies examining at least one of the following outcomes: gender perceptions, gender role attitudes, inclusivity, sexual behavior, or consent education

Exclusion Criteria

- Non-English publications
- Opinion pieces, news articles, or sources without empirical data
- Research focused only on sexual health outcomes without addressing gender perceptions
- Literature not open to the public domain

Data Extraction

There were ten articles. We excluded articles from Africa and Asia. We found several articles that satisfied our criteria. One was a large retrospective study that included 80 papers. Most of the papers were from the United States with a few from Western Europe (Goldfarb et al). The second was involving 95 eighth graders. Pre- and post-survey after a voluntary comprehensive sex education course in the community (Grose et al).

Synthesis Method and Quality Assessment

One of the largest sources of information was Goldfarb's paper. His article included a review of 80 papers from the last 30 years. Most of the articles were from American authors. The aggregate data was focused on adolescents and the effects comprehensive sex education had on healthy sexual behavior such as gender equity, social justice, decreased sexual and intimate partner violence, and victimization. The articles varied widely in their size, rigor of analysis. The studies ranged from methodically strong studies to experimental designs as well as meta-analyses. Some studies had smaller sample sizes and were more qualitative. As the overall number of studies and subjects studied was large, this did increase the likelihood of showing statistical differences in the study arms.

Background and Context

Sex education varies significantly not only by state, but by zip code. Some states mandate comprehensive instruction while others focus on abstinence-only. What further complicates matters is that many local school districts have their own policies on what may be allowed. Parents are also allowed to opt their children out of learning certain aspects of sexual education.

Comprehensive Sex Education (CSE)

As stated by the World Health Organization, CSE "gives young people accurate, age-appropriate information about sexuality and their sexual and reproductive health, which is critical for their health and survival"[8]. Comprehensive Sex Education is associated with encouraging healthier perceptions of gender, sexuality, consent, and safety. Studies show that CSE helps adolescents delay the onset of sexual activity, reduce the frequency of sexual activity, decrease the number of sexual partners, and increase the use of condoms and contraceptives. Notably, CSE has proven that students who receive it are less likely to become sexually active, increase sexual activity, or experience negative sexual health outcomes in comparison to those who have not[9]. However, this form of education is new compared to AOSE, which remains prevalent in many areas despite its supported lack of effectiveness. Examining the differences between these approaches and why they both remain contenders in the debate of curricula is essential in understanding their impacts on social behaviors and ideas.

Abstinence-Only Sex Education (AOSE)

Abstinence-Only Sex Education is a form of education that teaches abstinence as the only way to prevent pregnancy and sexually transmitted diseases (STD/STI), often omitting critical information about consent, contraception, and gender roles[10]. This form of sex education generally does not discuss contraceptive methods, consent, homosexuality, or condom use (unless to discuss their failure of protection)[11]. Research consistently shows that AOSE does not effectively delay sexual activity and is ineffective in reducing unintended pregnancies and STI rates and is associated with negative sexual health outcomes[3,12].

Past and Current Sex Education Policies

Past

After the rapid AIDS and HIV spread in the 1980s, the interest in sexual education programs across the country rose significantly[13]. In 1990, 41 states encouraged or required sex education for students, and all 50 required HIV and AIDS education. This implementation was effective for adolescents as teen birth rates decreased significantly with the annual pregnancy rate for women aged 15 to 19 years from 1991-1995 decreasing by 13% to 83.6 per 1000[14]. The type of sex education implemented during this period was more comprehensive, focusing not only on heterosexuality but also on information about HIV and AIDS prevention, safe sexual practices, and discussions involving homosexual relationships. These topics have been previously avoided but had become essential parts of the curriculum[13].

However, as medical advancements for the treatment of AIDS and HIV became successful, the urgency surrounding that comprehensive structure of sex education decreased. By the 2000s, a few states mandated sex education and many prioritized AOSE over CSE and as of recently there has been a significant decrease in mandated sex education[13].

Present

Despite the growing awareness of the importance of Comprehensive Sex Education, many adolescents across the nation lack access to such education due to governmental laws that dictate how a state will run its curricula.

As of 2024, only 30 states and the District of Columbia require sex education, yet only five of these states officially mandate CHE, with three states (CA, OR, WA), requiring it in all schools and two states (CO, IL) requiring that only if sex education is taught, it must be CSE.

Additionally, 35 states emphasize abstinence in their curricula, with 17 states teaching abstinence-only education. Furthermore, 12 states do not require sex education or HIV/STI instruction to be age-appropriate, medically accurate, culturally responsive, or evidence-based. Moreover, in an era of growing inclusivity, four states explicitly mandate discriminatory instruction against LGBTQ+ individuals[4].

Results/Analysis

Overview of Findings

The current paper examines how the choice of sex education curriculum affects gender perceptions among adolescents. Based on the literature assessed, the type of sex education adolescents receive impacts how they view gender. A study by Goldfarb and Lieberman (2021) noted:

"Children learn gender role attitudes at an early age from observing the people in their families. As they progress through school, these attitudes are further shaped by classmates and peers, as well as by the biases of teachers, the curriculum design, and the school environment"[15].

The reviewed studies demonstrate a clear pattern: Comprehensive Sex Education (CSE) is consistently associated with more positive gender attitudes, greater inclusivity, and increased sexual health knowledge, while Abstinence-Only Sex Education (AOSE) tends to reinforce traditional gender roles, perpetuate sexual stigma, and exclude critical discussions on consent, relationships, and sexual diversity[12].

These findings are organized below into three key themes:

1 CSE & Gender Equity

2 AOSE and Sexual Shame

3 Intersectionality

CSE & Gender Equity

Previous literature has demonstrated that Comprehensive Sex Education (CSE) encourages more equitable gender perceptions and attitudes toward sexuality and relationships. CSE programs

often include topics on healthy relationships, respect, gender equality, consent, and inclusivity, all of which contribute to shaping and strengthening adolescents' perceptions of gender in society, while simultaneously allowing students to be exposed to comprehensive and accurate information that often challenges common gender stereotypes [15].

Comprehensive Sex Education's success is found in its multifaceted learning approach; an effective CHE curriculum includes mentoring, gender-specific support groups, and life skills workshops. A notable study that included such aspects in its curriculum examined 8th graders in a pretest-posttest survey assessing students' perceptions on components of sexual health, including gender ideology, sexual knowledge, and contraceptive beliefs. This study found a correlation between participation in the CSE program and more positive gender outlooks, with students after receiving the education reporting a more egalitarian attitude towards girls and women, and less agreement with hegemonic masculine ideology (enforcement of restrictions in behavior based on gender roles that serve to reinforce existing power structures that favor the dominance of men), and increases in sexual health and resource knowledge [12].

Research has shown that CSE is most effective when introduced in elementary school and taught gradually over time in a scaffolded style [15].

Early exposure to such discussions on "sexual orientation, gender identity and expression, gender equality, and social justice related to the LGBTQ community" allow students to challenge common ingrained gender stereotypes before hetero- and cisnormative values solidify, helping create a healthier understanding of gender and sexuality throughout development [15]. This encourages students to engage in essential discussions and gain the tools to challenge social norms and push for equality. This approach not only creates students who are better informed about sexual health but also contributes to a more socially equitable society, where knowledge is shared. From a Gender Schema Theory perspective, this early exposure prevents the formation of restrictive gender views, making it more likely that inclusive and egalitarian views will persist as Bem believed these schemas were learned early in childhood [6].

An essential element of CSE is LGBTQ+ inclusion. Research has demonstrated that students exposed to curricula, being CSE or in other subject disciplines, that appreciate sexual diversity have reduced levels of homophobia, bullying, and harassment [15]. They also found that including such information across multiple subjects including sex education, expands students' understanding of gender and gender norms, even at a young age, consequently allowing students to become more socially and physically prepared for healthy engagement with topics of gender as they mature.

Lastly, a study in Ireland discussed the importance and benefits of teaching young people how to assertively say "no" to sexual acts as an essential part of CSE [16]. The study notes that social norms – while applicable in Ireland and also in the US – especially for women, often discourage assertive rejection, instead leading to hesitation or passive responses that can be misinterpreted as consent. Because of this, the study noted the need for incorporating lessons on the brain's response to trauma, allowing adolescents to understand how fear or stress affects reactions to sexual behaviors or violence. Teaching about the biological response challenges the traditional, hegemonic perception of consent, which holds that resistance to sex must be explicitly verbal. Without an understanding of these neurological responses, victims, more typically women, are often blamed for not "saying no" in a way that aligns with dominant gender norms [16]. Based on the Social Learning Theory, normalizing and teaching assertive communication in safe environments increases the likelihood of these behaviors being used in real-world situations by adolescents [17].

AOSE & Sexual Shame

Abstinence-Only Sex Education has been found to reinforce traditional gender ideologies as it fails to discuss essential aspects of not only sexual health but also gender and power dynamics. The AOSE curriculum relies on the gender binary and heteronormative norms, often reinforcing traditional gender roles while promoting abstinence. Studies find that AOSE frequently perpetuates gender stereotypes by depicting "male aggressiveness" and "female passivity" [1]. The AOSE curriculum presents sex as a conscious and calculated choice that adolescents make, degrading and putting to shame youth who are sexually active [1]. This structure, however, fails to acknowledge the presence of rape, sexual violence, coercion, and power dynamics in relationships. By reducing abstinence to simply being a matter of personal control, AOSE programs disregard adolescents who "do not have the choice to remain abstinent due to intimate partner violence, sexual abuse, rape, and/or molestation" [1]. This negation perpetuates harmful ideas that overlook survivors of sexual violence and reinforces the belief that men are "dominant sexual initiators" while women are simply "passive gatekeepers" of sexual activity. From a Social Learning Theory perspective, when students are taught through AOSE that men are dominant sexual initiators and women are passive gatekeepers, those messages combine with what they also observe in peers, families, and media; this repeated modeling and reinforcement strengthen unequal gender roles. Gender Schema Theory further supports that when sex is consistently framed in stereotypical ways, adolescents may internalize schemas that limit how young people interpret gender and sexuality.

As a result, young women are burdened with the responsibility of preventing sex, while men are excused from being held accountable for their actions. AOSE programs such as Why kNOw, for instance, tell adolescent girls that they must watch their behavior, explaining that "because girls are usually more talkative, make eye contact more often than men, and love to dress in

eye-catching ways, they may appear to be coming on to a guy when in reality they are just being friendly." Victim-blaming consequently upholds a system where women are limited to protecting themselves from the actions of men while enforcing a culture where men's entitlement to sex is normalized[18].

Additionally, AOSE curricula stigmatize female sexuality, resulting in a discouragement of safer sex practices. In these programs, women are taught to believe that their worth correlates with their sexual purity, which makes them less likely to purchase or carry contraceptives or seek medical treatment for STIs in fear of shame and being perceived as impure[1,18].

Moreover, a Harvard study that analyzed different AOSE curricula found programs that preached extremely regressive views. One emphasized the notion that women need "financial support," while men need "admiration." Another program taught the mindset that "women gauge their happiness and judge their success on their relationships, [while] Men's happiness and success hinge on their accomplishments." Both ideas enforce traditional beliefs that a woman's worth is determined by merely her ability to attract and remain desirable or committed to a male partner, rather than her personal ambitions[18].

AOSE programs are typically heteronormative, and outright stigmatize homosexuality as "unnatural behavior"[1]. These programs fail to provide queer-inclusive information, often degrading the LGBTQ+ identity altogether. For example, one AOSE curriculum was found to impudently teach students that the "male and female body are not anatomically suited to accommodate sexual relations with members of the same sex"[18,19]. This type of rhetoric is harmful as queer students already face significant isolation in school environments. The traditional gender roles taught in these programs do not allow for queer students to be discussed, not only reinforcing a narrow view of traditional sexual norms but also contributing to the marginalization of students who do not conform to traditional gender roles[1].

Intersectionality

While most studies analyzed adolescent populations broadly, fewer examined how the effects of sex education vary by race, socioeconomic status, religion, region, or political affiliation.

Race has been a critical lens of analysis. Fields argues that debates regarding sex education and even what type of sex education to teach adolescents are deeply racialized. In her ethnographic study of a predominantly Black and low-income community in North Carolina, Fields found that those who advocated for students to receive abstinence-only sex education and those who advocated for "abstinence-plus" education (more content, but still not full CSE), both placed young Black girls in stereotypical roles[20].

Abstinence-only advocates framed young Black girls as sexually precocious and in need of moral discipline, while abstinence-plus advocates portrayed them as innocent victims needing protection and guidance. Fields' work discusses how sex education policies are created with stereotypical assumptions about who is seen as dangerous, innocent, or in need of more control. The Gender Scheme Theory explains how racialized stereotypes, like the ones made in Fields' study, become a part of the broader cultural understanding of gender.

Another critical factor is political affiliation, which shapes the policies and priorities underlying sex education curricula. According to SIECUS, state-level differences in policy highlight how politics and culture shape curriculum. For instance, liberal states such as Washington, Oregon, California, New Jersey, and Illinois mandate more comprehensive content requirements that emphasize consent, inclusivity, and medically accurate information. In contrast, conservative states such as Mississippi, Florida, Alabama, and Idaho maintain restrictive policies that emphasize abstinence, exclude the queer community, and stigmatize abortion in their sex education[4]. This illustrates the Social Learning Theory and how the cultural and political context an adolescent life in can influence the type of sex education they receive and, consequently, the gender perceptions they develop.

Discussion

Literature supports the notion that Abstinence-Only Sex Education programs are not only ineffective at preventing sexual behaviors, sexual safety, or teen pregnancy but also contribute to the unhealthy traditional gender stereotypes that continue to circulate in adolescent minds, affecting how they approach gender, sex, consent, gender equality, and whether they conform to or challenge gender roles.

AOSE is shown to be ineffective long-term. A study of women who received AOSE showed them to be more likely to use pornography as a learning tool compared to those with comprehensive sex education. About 79% of women using porn saw it as a way to learn about sexuality and sexual pleasure, due to gaps in their formal sexual education[21]. The use of pornography also harms the perpetuation of traditional gender stereotypes, as it has been correlated to more "permissive sexual attitudes, more sexual aggression, both in terms of perpetration and victimization, and [tendency] to be linked with stronger gender-stereotypical sexual beliefs"[22].

On the other hand, research has shown that Comprehensive Sex education has the ability to do the opposite. Suppose CSE curricula are truly comprehensive and allow for discussions about gender roles, power dynamics, healthy relationships, and consent. In that case, they have the potential to challenge harmful stereotypes and promote positive gender perceptions. However, gender discrimination is so deeply ingrained in societal norms that it can be challenging to identify and address. To truly combat these biases, educators must engage students with critical thinking exercises that encourage them to question gender stereotypes. This system of teaching allows teachers to aid students in disrupting systemic gender inequities[23]. These

outcomes reflect Social Learning Theory and Gender Schema Theory, showing how education shapes adolescents' understanding of gender and sexual norms.

However, based on reviewing many different sources, I have found that while many CSE programs claim to teach an all-encompassing curriculum, many leave out the essential aspects that shape its effectiveness in terms of gender ideology [12]. It is also important to consider that sex education plays a role in how adolescents view gender. There are confounding variables, such as information from family or media consumption, that also contribute to these views.

Limitations

This study faced several limitations. A primary challenge was a lack of experience in conducting research and writing research-structured papers. Additionally, limited access to specific academic databases restricted the scope of available resources, as many required paid subscriptions or a college academic account. As a result, the search often yielded only a smaller number of relevant articles, and many of the sources found included countries outside the United States of America.

Conclusion

Despite these study limitations, evidence indicates that a comprehensive sex education program is effective in promoting more positive gender perceptions, aligning with the Social Learning Theory and Gender Schema Theory, which explain how adolescents internalize gendered norms and behaviors from their environments. From reviewing the literature, it is clear that the most effective components of comprehensive sex education curricula that create positive outcomes for students in their future interactions with gender issues and sexual knowledge include aspects that touch on, gender norms, sexuality, relationships, rape, sexual violence, consent, how to say no, biological information, contraception, power dynamics, and queer education. With that, to help put an end to the unhealthy gender ideals that are spreading, CSE must be genuinely inclusive.

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