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## The Impact of Abstinence-Only Sex Education Programs in the United States on Adolescent Sexual Outcomes

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## The Impact of Abstinence-Only Sex Education Programs in the United States on Adolescent Sexual Outcomes

**Sonja W. Heels**

### ABSTRACT

Though there are many evaluations of abstinence-only sex education programs in the United States, there is a relatively small body of literature exploring the programs' impact specifically on adolescent sexual behavior. Thus, the purpose of this literature review is to examine the impact of abstinence-only sex education programs on adolescent sexual outcomes. The phrase "sexual outcomes" refers to attitudes, behaviors, and experiences of adolescents as a result of their sex education. After an overview of sex education in the United States, I discuss three major themes found in the most recent literature: abstinence and delaying the initiation of sex, consequences of the lack of contraceptive use, and lastly, the perspectives and experiences of LGBTQ+ youth. Overall, abstinence-only sex education programs are found to have no beneficial or harmful impact on rates of abstinence, STDs, and unintended pregnancies. Additionally, strong evidence suggests that abstinence-only programs adversely impact LGBTQ+ youth, largely due to the lack of relevant information and the heteronormative framing. I conclude with a brief discussion of how these findings relate back to the current policy debate, as well as suggestions for future research.

### INTRODUCTION

Sex education is a long-debated topic in the United States. By the 1980s, the majority of the public supported schools providing sex education, and the debate then became about what type of sex education schools should or should not be providing to adolescents (Irvine 2002). Sex education is key to the sociology of sexuality, because it is through both formal and informal sex

education that young people learn about their bodies, romantic and sexual relationships, safer sex, communication and consent, and important information regarding STDs. It is also through sex education that young people learn influential social norms. Sexual health is a normal part of wellbeing, so when sex education lacks accurate and relevant information, this can adversely impact young people's health, relationships, and families.

Before continuing, I will clarify some key terms. I use the acronym STD to collectively refer to both sexually transmitted infections and diseases for the sake of brevity, and because it is common for someone with a sexually transmitted infection to experience no symptoms, and in some cases the infection can develop into a disease (American Sexual Health Association N.d.). Additionally, it is important to clarify the distinction between abstinence-only programs and comprehensive programs, because sex education programs are most often separated into those two categories. Abstinence-only programs discuss abstinence as the only method of preventing STDs and unintended pregnancies, often without discussing other preventive methods, such as condoms and other contraceptives (Kirby 2008). In contrast, comprehensive programs, sometimes referred to as "abstinence-plus" programs, discuss abstinence as the safest strategy to avoid STDs and unintended pregnancies, while also providing information on condoms and other contraceptives for those who do choose to have sex (Kirby 2008). Sex education curricula are not easily divided into these two concrete categories, though. Rather, they exist upon a continuum, and it is important to remember that the two groups are diverse in nature (Kirby 2008).

The purpose of this review is to examine the effects of abstinence-only sex education curricula on adolescent sexual outcomes. There is a relatively limited body of recent research exploring this topic, and many evaluations conducted in the past, some commissioned by the government, have problematic methodologies that lead to misleading results (Kirby 2008;

McClelland and Fine 2008). Because of this, I focus on three major themes that I found occurring throughout the most recent literature regarding abstinence-only education: abstinence rates and delaying the initiation of sex, consequences of the lack of contraceptive use, and lastly, the perspectives and experiences of LGBTQ+ youth with regard to their abstinence-only sex educations. The phrase “sexual outcomes” in this review refers to the attitudes, behaviors, and overall experiences of adolescents as a result of abstinence-only education. First, I will provide background information regarding sex education in the United States, then I will discuss the research findings, patterns, and inconsistencies for the three major themes, and I will conclude with a brief discussion of the implications of these findings specifically within the context of the sex education policy debate in the United States, as well as suggestions for future research.

## SEX EDUCATION IN THE UNITED STATES

Those in favor of abstinence-only programs want to protect young adults from unintended pregnancies and STDs, and believe that contraceptive use only reduces the risk, whereas abstinence eliminates the risk entirely (Kirby 2008). They argue that comprehensive programs do not send a clear message, but rather are confusing and contradictory (Kirby 2008). Those in favor of comprehensive programs argue that the combination of both abstinence and information about condoms and other contraceptives can delay the initiation of sex as well as increase use of condoms and other contraceptives, and thus decrease rates of STDs and unintended pregnancies (Kirby 2008).

Today, there is relatively little public support for abstinence-only sex education (Santelli et al. 2006). The minority of the population that does support abstinence-only programming is rather vocal, politically active, and has thus strongly influenced policymakers; many of these supporters are socially conservative and have an evangelical Christian background (Kantor et al.

2008). In a recent nationwide poll of both middle school and high school parents, only 15 percent favored abstinence-only sex education. Meanwhile, the majority of parents were in favor of schools providing information on a wide variety of sexual health topics: 99 percent for sexually-transmitted infections, 86 percent for contraception, 77 percent for masturbation, 73 percent for “homosexuality,” 72 percent for oral sex, and 71 percent for birth control (Santelli et al. 2006). Despite this widespread support of a more comprehensive sex education, however, many adolescents are still not receiving all the information they need (Planned Parenthood N.d.). Between 2011 and 2013, 43 percent of adolescent women and 57 percent of adolescent men did not receive any information about birth control before having sex for the first time (Planned Parenthood N.d.).

The federal government has supported abstinence-only sex education for several decades, and federal funding for abstinence-only programming has increased dramatically in recent years, from 73 million US dollars in fiscal year 2001 to a total of 176 million US dollars in fiscal year 2007 (Kantor et al. 2008). This funding plummeted during the Obama administration between 2008 and 2017, though, and instead went towards funding more comprehensive programs. However, under the current more socially conservative administration, funding for abstinence-only programs is increasing again (Guttmacher Institute 2017). The core message conveyed to youth through these programs is to abstain completely from sex until marriage (Stranger-Hall and Hall 2011). Abstinence-only sex education programs are supported through several different laws, including the Adolescent Family Life Act (AFLA), the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, and the Social Security Act (Stranger-Hall and Hall 2011). Today, either abstinence-only or comprehensive sex education curricula are implemented in the majority of U.S. middle schools or high schools (Kirby 2008).

This policy debate is especially important because, although the teen pregnancy rate in the United States has steadily declined in the previous few decades and recently reached a record low of 22.3 births per 1,000 women aged 15 to 19 in 2015, it is still remarkably higher in contrast to other developed nations (Guttmacher Institute 2015; CDC 2017a). Additionally, according to a recent report from the Centers for Disease Control and Prevention, “incidence and prevalence estimates suggest that young people aged 15-24 years acquire half of all new STDs and ... one in four sexually active adolescent females has an STD” (CDC 2017b:43). These rates of teen pregnancy and STDs are alarmingly high, and sex education programs are an opportunity to provide adolescents with the relevant and accurate information they need to avoid these harmful outcomes. Now the question is, are the current programs effective?

#### ABSTINENCE & DELAYING THE INITIATION OF SEX

When considering the impact of abstinence-only programs, a key aspect to consider is, as the name suggests, whether or not these programs result in adolescents abstaining from sex or delaying the initiation of sex. As mentioned above, there is a relatively limited body of research specifically concerning adolescent sexual behavior. Most of the findings, though, suggest that these abstinence-only programs, particularly when compared to comprehensive or “abstinence-plus” programs, have little to no effect on abstinence (Kirby 2008; Trenholm et al. 2008; Underhill, Montgomery, and Operario 2007).

Kirby’s (2008) review of 56 studies assessing the impact of both abstinence-only and comprehensive sex education programs provides strong evidence to suggest that abstinence-only curricula are ineffective. He reviewed eight studies that evaluated nine abstinence-only programs, and 48 studies that evaluated comprehensive programs; evaluations were chosen based on specific criteria. The majority of the abstinence programs did not affect when adolescents

initiated sex (Kirby 2008). Of the nine abstinence-only programs evaluated, only three showed to have any kind of significant beneficial effect on sexual behavior, though the evidence to support those three programs is rather weak (Kirby 2008). The findings suggest that the abstinence-only curricula have no overall impact on any of the following: delay in initiation of sex, age at initiation of sex, any return to abstinence, and the number of sexual partners (Kirby 2008). In contrast, his findings also provide strong evidence to suggest that comprehensive programs are far more effective: roughly two-thirds of the comprehensive programs had a significant beneficial impact on adolescent sexual behavior, including delayed initiation of sex, reduced frequency of sex, and reduced number of sexual partners (Kirby 2008).

Another recent rigorous study found similar results. Trenholm and colleagues (2008) evaluated four different abstinence-only programs and their impact on adolescent sexual behavior: “My Choice, My Future,” “Recapturing the Vision,” “Families United to Prevent Teen Pregnancy,” and “Teens in Control.” Their sample included more than 2,000 adolescents from both control and program groups (Trenholm et al. 2008). This study largely focused on the impacts concerning STDs and unintended pregnancies, which will be discussed further below. Regarding abstinence and delaying sex, though, they found no statistically significant effects on reducing sexual behavior for any of the four programs (Trenholm et al. 2008). Similarly, another study found that, when compared to a variety of control variables, “no program affected incidence of unprotected vaginal sex, number of partners, condom use, or sexual initiation” (Underhill et al. 2007:1).

However, one study’s findings are inconsistent with the literature discussed above, suggesting that abstinence-only curricula may have beneficial effects on adolescents, including abstaining from sex. Denny and Young (2006) evaluated “Sex Can Wait,” a five-week

abstinence-only curriculum that includes programming for three separate grade levels: upper elementary, middle school, and high school. A total of 1,421 students across fifteen school districts participated in their study (Denny and Young 2006). Their results suggest that the “Sex Can Wait” curriculum may have beneficial effects on adolescents. For the upper elementary group, the treatment group reported higher levels of knowledge, hope for their future, and self-efficacy, but no differences in behavior, though the lack of differences in behavior is likely simply due to their young age (Denny and Young 2006). For the middle school group, at the eighteen-month follow-up, the treatment group was less likely to report engaging in sexual intercourse both ever and in the past month (Denny and Young 2006). For the high school group, they found statistically significant differences in attitudes; the treatment group had more positive attitudes towards abstinence, and were also less likely to report engaging in sexual intercourse both ever and in the last month (Denny & Young 2006).

These inconsistent findings may be in part due to some methodological flaws. The researchers compared the “Sex Can Wait” curriculum against the schools’ regular programming, which they define as “a health education with a sex education component,” rather than a true control group (Denny and Young 2006:415). They also acknowledge that the comparison group, the group of students participating in the schools’ regular programming, were educated on many of the same topics as the treatment group. Compared to their comparison group though, the “Sex Can Wait” curriculum appears to be more beneficial in some aspects. Overall, then, the most recent literature provides strong evidence to suggest that abstinence-only sex education programs do not impact rates of adolescents abstaining from sex, although one study with some methodological weaknesses suggests that abstinence-only programs may have a beneficial effect on attitudes towards sex and rates of abstinence.

Abstinence rates, by definition, are linked to rates of STDs and unintended pregnancies.

This connection is clearly observed in one study, in which sex education programs were ranked on a scale of zero to three, based on how much abstinence was stressed: “no provision, abstinence covered, abstinence promoted, abstinence stressed” (Stranger-Hall and Hall 2011:2). The level of abstinence education positively correlated with both teen pregnancy and teen birth rates. This demonstrates that abstinence-only education does not lead to youth abstinence (Stranger-Hall and Hall 2011).

### CONSEQUENCES OF THE LACK OF CONTRACEPTIVES

It appears that the majority of the research concerning abstinence-only education’s effects on adolescents is concerned specifically with two widespread harmful sexual outcomes: unintended pregnancies and STD rates. I have grouped this discussion together with condoms and other contraceptives, because the use or lack of use of contraception is inherently linked to these harmful outcomes. The large focus in recent abstinence-only literature on these harmful sexual outcomes is likely due to the alarmingly high STD and teen pregnancy rates in the United States compared to other developed nations. There is an overwhelming consensus across the most recent literature that abstinence-only sex education curricula do not have an impact on unintended pregnancy rates or STD rates (Stranger-Hall and Hall 2011; Trenholm et al. 2008; Underhill et al. 2007). Additionally, one study found that the state-level abstinence mandates also showed no impact on teen birth rates or STD rates (Carr and Packham 2017).

Concerning the use of condoms and other contraceptives, Kirby’s (2008) study also found that abstinence-only programs have no impact on the use of condoms and other contraceptives. Trenholm et al. (2008) also found that of the four programs they evaluated, there was a significant difference in knowledge regarding STDs and condom use. The youth in the

abstinence-only programs were able to identify STDs at higher levels than the control group. They also made note that one program in particular, “My Choice, My Future,” largely accounted for these results (Trenholm et al. 2008). These differences in knowledge were not all beneficial, though. There was also a significant difference in perceptions of effectiveness of condom use to prevent STDs: those in the programs were more likely to report that condoms are not effective at all (Trenholm et al. 2008). The authors noted that this was also largely influenced by the “My Choice, My Future” curriculum. That particular program had a particularly strong focus on STD knowledge, sending the message that abstinence is the only sure way to prevent STDs (Trenholm et al. 2008).

While the abstinence-only programs do not seem to have any beneficial effects on unintended pregnancies, STDs, or the use of condoms or other contraceptives, they do not seem to have any harmful effects on these sexual outcomes either. For example, though there was not an increase in the use of condoms or other contraceptives, there was not a decrease either (Kirby 2008). Additionally, a recent rigorous study provides strong evidence that, though abstinence-only programs do not appear to decrease the risk of STDs, they do not appear to increase the risk of STDs either. In other words, there truly appears to be little to no effect whatsoever on STD rates (Trenholm et al. 2008). However, one study’s results also suggested that the state-level abstinence mandates may actually increase STD rates, specifically in states with comparatively low populations (Carr and Packham 2017).

Stranger-Hall and Hall (2011) also investigated the relationship between teen pregnancy rates and other factors. First, they looked to see if Medicaid waivers that provide access to contraception and family planning services had any significant impact on teen pregnancy rates. No significant relationship was found (Stranger-Hall and Hall 2011). They explain, “if Medicaid

waivers contribute to the positive correlation between abstinence education and teen pregnancy at the state level, then states with waivers should have different teen pregnancy and birth rates than states without waivers. This was not the case” (Stranger-Hall and Hall 2011:6). However, significant relationships between teen pregnancy rates and several other factors were observed. Stranger-Hall and Hall (2011) found significant relationships with socioeconomic status, education, and ethnicity. In lower-income states, they found that both the pregnancy and birth rates tended to be higher (Stranger-Hall and Hall 2011). Yet, even after accounting for socioeconomic status as well as education, there was still a significant relationship between the level of abstinence education and teen pregnancy and birth rates. Although there was a positive correlation between the abstinence education levels and teen birth rates across ethnic groups as well, the pregnancy rates were still different in white, black, and Hispanic ethnic groups (Stranger-Hall and Hall 2011).

In summary, the most recent literature concludes that abstinence-only sex education curricula have no impact of any kind on rates of unintended pregnancy, STDs, and the use of condoms and other contraceptives (Stranger-Hall and Hall 2011; Trenholm et al. 2008; Underhill et al. 2007; Kirby 2008). In addition to relating these factors to teen pregnancy rates, it is also important to keep in mind how different factors and identities can impact an individual’s experience with sex education.

## PERSPECTIVES AND EXPERIENCES OF LGBTQ+ YOUTH

There is an emerging body of literature focusing on the perspectives and experiences of youth of color and lesbian, gay, bisexual, transgender, queer, and questioning youth (henceforth abbreviated as LGBTQ+ youth) regarding their sex education. I chose to include this topic in my discussion of the effects of abstinence-only education on adolescent sexual outcomes because it

is crucial in any academic discussion of youth experiences, such as sexual outcomes, to also consider minorities and their experiences. Their stories provide an important and unique insight into the abstinence-only programs and can help policymakers understand what could be changed or improved.

Many of the LGBTQ+ individuals who were interviewed expressed dissatisfaction towards abstinence-only education (Hoefler and Hoefler 2017; Kubicek et al. 2010; Pingel et al. 2013). This is largely due to the fact that the abstinence-only educations the participants received were framed specifically for cisgender, heterosexual youth, and thus excluding important information regarding other body types and sexualities (Hoefler and Hoefler 2017; Kubicek et al. 2010; Pingel et al. 2013). In other words, the abstinence-only programming they experienced was heteronormative. For example, when the topic of anal sex was introduced, it was in a heterosexual context of avoiding pregnancy, and many were told that it was wrong (Kubicek et al. 2010). Heteronormativity plays a large role in contemporary U.S. society; it is the assumption that people are heterosexual unless stated otherwise, and impacts both day-to-day interactions and larger institutional privileges, such as marriage (GLSEN N.d.).

As a result of the exclusionary, heteronormative framing of the abstinence-only programs, many of these LGBTQ+ youth felt they had a lack of information, and needed to seek information elsewhere (Hoefler and Hoefler 2017; Kubicek et al. 2010; Pingel et al. 2013). Alternative resources for information included physicians, parents, porn, the internet, friends, experienced partners, and even trial and error (Kubicek et al. 2010). This led to harmful sexual outcomes. Several men in one study reported unpleasant and extremely painful first experiences with anal sex, because they did not know how to properly prepare themselves and their bodies (Kubicek et al. 2010). This itself had a number of consequences, including tearing, bleeding, and

the use of substances such as lotion and Vaseline as a substitute for proper lubrication that increase the risk for contracting HIV (Kubicek et al. 2010).

In addition to the heteronormative framing of the curricula, several other themes emerged through interviews with LGBTQ+ individuals, including an overall lack of emotional safety, and a reliance on fear and shame from the curricula and educators (Hoefler and Hoefler 2017). The findings from these studies show that adolescent-only programs are designed and framed specifically for heterosexual individuals, excluding the LGBTQ+ community, and are thus ineffective for LGBTQ+ individuals. However, according to the most recent literature discussed in this review, these programs do not seem to be particularly effective for heterosexual youth either.

Overall, LGBTQ+ young adults reported negative attitudes towards abstinence-only sex education and harmful sexual experiences, largely due to the heteronormative and thus exclusionary nature of these programs (Hoefler and Hoefler 2017; Kubicek et al. 2010; Pingel et al. 2013).

## CONCLUSION: IMPLICATIONS, POLICY DEBATE, AND FUTURE RESEARCH

Most of the literature concludes that abstinence-only sex education has little to no impact on abstinence rates or any delay in the initiation of sex (Kirby 2008; Trenholm et al. 2008; Underhill et al. 2007; but see Denny and young 2006). Several studies also conclude that abstinence-only sex education curricula do not have an impact on unintended pregnancy rates, STD rates, or the use of condoms or other forms of contraception (Kirby 2008; Stranger-Hall and Hall 2011; Trenholm et al. 2008; Underhill et al. 2007). Lastly, the experiences and perspectives from LGBTQ+ young adults shed light on the heteronormative and thus exclusionary nature of abstinence-only programs; LGBTQ+ young adults felt the need to seek relevant sexual health

information elsewhere. As a result, some LGBTQ+ young adults had harmful and sometimes painful sexual experiences (Hoefler and Hoefler 2017; Kubicek et al. 2010; Pingel et al. 2013).

These findings have concerning implications that need to be taken into consideration by policymakers going forward. For example, one might argue that the students receiving abstinence-only sex education are choosing to have sex because they perceive the benefits to outweigh the costs, and that these perceptions are due to the lack of information provided in these programs. Similarly, regarding STDs and unwanted pregnancies, one might argue that these students are choosing to have unprotected sex because of their skewed perceptions of the costs and benefits, due to the lack of adequate information about STDs and contraception provided in abstinence-only programs. Concerning the LGBTQ+ youth, one might argue that these LGBTQ+ young adults are experiencing these harmful sexual outcomes because of the lack of relevant information provided in these programs that would otherwise help them to have safer and more pleasurable sexual experiences. Altogether, it appears that the core issue is the lack of relevant, comprehensive, and medically accurate information being provided through AOUM sex education programs, resulting in these concerning outcomes.

It is also essential to consider the ethics of these programs. Abstinence-only sex education programs challenge health-related ethical principles, specifically “respect for autonomy” and “beneficence” (Beauchamp and Childress 1979; National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research 1977). When the government controls and limits classroom discussion on certain topics, particularly information about condoms and other contraceptives, educators and other professionals become trapped in an “ethical quandary, compelling them to withhold potentially lifesaving information—or to breach government guidelines” (Kantor et al 2008:11). With these restrictions in place, educators are not

able to provide the valuable information that students need.

Considering the policy debate, then, I highly recommend that policymakers strongly consider all the evidence and implications discussed in this review that suggests that abstinence-only sex education programs have very little if any impact on adolescent sexual outcomes, the public opinions regarding this topic, as well as the several health-related ethical issues that the implementation of abstinence-only education raises. It is also important to keep in mind the religious roots and ongoing promotion of this programming, as well as the large amount of federal funding that is currently being allocated towards supporting the implementation of these programs across the country.

Lastly, because there is a limited body of research concerning this topic, there are many approaches one could take in future research endeavors that would be beneficial to the understandings of the relationship between different sex education programming and adolescent sexual outcomes. Because the majority of existing literature are relatively small-scale and thus difficult to generalize to larger populations in the United States, it would be beneficial to see a larger-scale research project that perhaps compares youth experiences in different regions of the United States. It would also be beneficial to explore specific student populations' experiences with sex education, including students of color and students with disabilities.

All in all, sex education is a complex and nuanced topic that is crucial to the sociology of sexuality, as young people learn about a wide array of critical sexual health topics. As presented in this review, there is strong evidence that suggests that abstinence-only sex education programs are ineffective. This is especially concerning, because sex education is a topic of such importance to wellbeing in young adulthood and throughout life. One has to wonder, then, what

policy makers will decide in the coming years, and whether or not abstinence-only sex education will have a future in the United States.

## REFERENCES

- American Sexual Health Association. N.d. "STD or STI? What's the Difference?" Retrieved November 25, 2018 (<http://www.ashasexualhealth.org/stdsstis/>).
- Beauchamp, T. L. and James F. Childress. 1979. *Principles of Biomedical Ethics*. New York: Oxford University Press.
- Carr, Jillian B. and Annalisa Packham. 2017. "The Effects of State-Mandated Abstinence-Based Sex Education on Teen Health Outcomes." *Health Economics* 26:403-420.
- Centers for Disease Control and Prevention. 2017a. "Teen Pregnancy in the United States." Atlanta, Georgia: Centers for Disease Control and Prevention. Retrieved October 11, 2018 (<https://www.cdc.gov/teenpregnancy/about/index.htm>).
- Centers for Disease Control and Prevention. 2017b. *Sexually Transmitted Disease Surveillance 2016*. Atlanta, Georgia: Centers for Disease Control and Prevention.
- Denny, George and Michael Young. 2006. "An Evaluation of an Abstinence-Only Sex Education Curriculum: An 18-Month Follow-Up." *The Journal of School Health* 76(8):414-422.
- GLSEN. N.d. "Coming Out." Retrieved November 25, 2018. (<https://www.glsen.org/article/coming-out-resource-lgbtq-students>).
- Guttmacher Institute. 2015. "Teen Pregnancy Rates Declined in Many Countries Between the Mid-1990s and 2011." Retrieved October 11, 2018 (<https://www.guttmacher.org/news-release/2015/teen-pregnancy-rates-declined-many-countries-between-mid-1990s-and-2011>).
- Guttmacher Institute. 2016. "Despite Recent Declines, Unintended Pregnancy Rates in the U.S. Remain

High Among Women of Color.” Retrieved October 27, 2018

(<https://www.guttmacher.org/infographic/2016/despite-recent-declines-unintended-pregnancy-rates-us-remain-high-among-women-color>).

Guttmacher Institute. 2017. “The Looming Threat to Sex Education: A Resurgence of Federal Funding for Abstinence-Only Programs?” Retrieved October 27, 2018

(<https://www.guttmacher.org/gpr/2017/03/looming-threat-sex-education-resurgence-federal-funding-abstinence-only-programs>).

Hoefler, Sharon E. and Richard Hoefler. 2017. “Worth the Wait? The Consequences of Abstinence-only Sex Education for Marginalized Students.” *American Journal of Sexuality Education* 12(3):257-276.

Irvine, Janice M. 2002. *Talk about Sex: The Battles Over Sex Education in the United States*. Berkeley: University of California Press.

Kantor, Leslie M., John S. Santelli, Julien Teilte, and Randall Balmer. 2008. “Abstinence-Only Policies and Programs: An Overview.” *Sexuality Research & Social Policy* 5(3):6-17.

Kirby, Douglas B. 2008. “The Impact of Abstinence and Comprehensive Sex and STD/HIV Education Programs on Adolescent Sexual Behavior.” *Sexuality Research & Social Policy* 5(3):18-27.

Kubicek, Katrina, William J. Beyer, George Weiss, Ellen Iverson, and Michele D. Kipke. 2010. "In the Dark: Young Men's Stories of Sexual Initiation in the Absence of Relevant Sexual Health Information." *Health Education and Behavior* 37(2):243-263.

McClelland, Sara I. and Michelle Fine. 2008. “Embedded Science: Critical Analysis of Abstinence-Only

Evaluation Research.” *Cultural Studies & Critical Methodologies* 8(1):50-81.

National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research.

1977. *Reports and Recommendations: Research Involving Children*. Washington, DC: U.S.

Department of Health and Human Services.

Pingel, Emily S., Laura Thomas, Chelsea Harmell, and José A. Bauermeister. 2013. "Creating Comprehensive, Youth Centered, Culturally Appropriate Sex Education: What do Young Gay, Bisexual, and Questioning Men Want?" *Sexuality Research & Social Policy* 10(4):293-301.

Planned Parenthood. N.d. "What's the State of Sex Education in the U.S.?" Retrieved September 22, 2018 (<https://www.plannedparenthood.org/learn/for-educators/whats-state-sex-education-us>).

Santelli, John, Mary A. Ott, Maureen Lyon, Jennifer Rogers, Daniel Summer, and Rebecca Schleifer. 2006. "Abstinence and Abstinence-only Education: A Review of U.S. Policies and Programs." *Journal of Adolescent Health* 38:72-81.

Stranger-Hall, Kathrin F. and David W. Hall. 2011. "Abstinence-Only Education and Teen Pregnancy Rates: Why We Need Comprehensive Sex Education in the U.S." *PLoS ONE* 6(10):1-11.

Trenholm, Christopher, Barbara Devaney, Kenneth Fortson, Melissa Clark, Lisa Quay, and Justin Wheeler. 2008. "Impacts of Abstinence Education on Teen Sexual Activity, Risk of Pregnancy, and Risk of Sexually Transmitted Diseases." *Journal of Policy Analysis and Management* 27(2):255-276.

Underhill, Kristen, Paul Montgomery, and Don Operario. 2007. "Sexual Abstinence Only Programmes to Prevent HIV Infection in High Income Countries: Systematic Review." *British Medical Journal* 335:248-252.