## Introduction

The United States ranks first among developed countries in terms of teen pregnancy rates and sexually transmitted infections. In 1996, Congress enacted Section 510(b) of Title V of the Social Security Act to address high teen pregnancy rates. Section 510(b) allocated federal dollars to state programs that advocated for abstinence-only sex education and defined what constituted abstinence education. Therefore states could only receive federal funding if they demonstrated that their sex education programs’ purpose was “teaching the social, psychological, and health gains to be realized from abstaining from sexual activity.” In 2006 and 2007, federal funding for abstinence-only programs was $176 million annually. However, public debate remains heated whether an abstinence-only approach is as effective compared to a comprehensive approach that includes teaching about contraception methods. One objection to the comprehensive philosophy is the belief that providing contraceptive information will promote earlier sexual activity in adolescents. Due to continued federal funding for abstinence-only programs and continuing public controversy concerning the most effective sex education program, we conducted a literature search to identify studies that compared abstinence-only and comprehensive sex education programs with schools’ existing health curricula to see which is more effective at lowering teen pregnancy rates and pregnancy risk factors.

## Methods

A literature search in PubMed was performed using the terms “pregnancy in adolescence,” “United States,” “abstinence only education.” References from several articles were used to find additional sources (specifically the Jemmott et al. trials).

The search resulted in 42 articles. Those articles were then individually searched in order to eliminate opinion pieces and in order to find randomized controlled, ecological, or cohort studies. We specifically looked for studies that compared abstinence-only interventions with some other comprehensive intervention. Finally, we only included studies that measured pregnancy and pregnancy-risk behaviors, such as sexual activity and condom use, as final outcomes.

## Results

Most studies found that abstinence-only sexual education had little to no effect on decreasing pregnancy rates when controlled for confounding variables, including SES, ethnicity, education, and family intricacies. The increased emphasis of state laws on abstinence-only education was even correlated with increased pregnancy rates. When abstinence-only education was compared to a comprehensive education, the comprehensive education had 50% lower rates of pregnancy. Alternatively, one study did find that abstinence-only sexual education involving a nontraditional approach to abstinence education led to lower rates of sexual activity after 2 years. Self-reporting was a common limitation in several of these studies.

## Discussion

Abstinence-only education as currently taught showed no reduction in teen pregnancy rates and pregnancy risk factors compared to schools’ pre-existing health curricula.

- No difference in pregnancy rate or risk factors between abstinence and control.
- Comprehensive intervention significantly decreased pregnancy rates.
- Pregnancy rates were directly correlated with increasing focus on abstinence education.

Abstinence-only education might not be effective for the following reasons:

- Rates of sexual intercourse initiation naturally increase as a population ages.
- Abstinence-only programs do not prepare adolescents for future experiences.
- Abstinence-only interventions are moralistic and discourage the efficacy of condoms.

Therefore, changing school programs to a comprehensive approach would be the most beneficial.

However, Jemmott’s 2010 trial demonstrated that abstinence-only education can be effective. Their intervention did not reduce sexual behavior at 12 month follow-up compared to other interventions (71%, vs 22%, P=14.00, 23.1%, P=42). Comprehensive group reported more consistent condom use at 12 month follow-up.

## Recommendations

Moving forward, it is our opinion that comprehensive sex education should be implemented as schools’ standard health curricula. Federal statutes should be changed to allow funding for comprehensive sex education instead of being restricted to abstinence-only programs. If abstinence programs are continued due to societal or religious demands, then abstinence interventions that do not disparage contraception use and that approach abstinence in a realistic fashion might prove more effective than current strategies.