



# Does Sex Education Decrease STD/STI Rates?

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## BACKGROUND/SIGNIFICANCE

According to the National Library of Medicine (2021), "An STD/STI is an infection that is passed from one person to another through sexual contact. The contact is usually through vaginal, oral, and anal sex." The CDC (2019) reports there were 26 million new sexually transmitted diseases in the U.S. in 2018 and almost half of the new STDs were among youth aged 15-24. There is an associated annual cost of approximately 16 billion dollars (CDC, 2019). STD/STIs do not always produce symptoms or may only cause mild symptoms, so it is not always possible to know if there is an infection present or not. STD/STIs are preventable, so it's important for adolescents to know how to protect themselves and their sexual partners if sexually active.

P: Adolescent ages 12-18 years  
I: Sex education  
C: No sex education  
O: Decreased rate of STD/STIs

In adolescents aged 12-18 years old, how does sex education compared to no sex education affect the rate of sexually transmitted diseases/infections?

## METHODS

- This review examined if sex education could decrease the rate of sexually transmitted diseases/infections among adolescents. Research terms included sex education, adolescents, sexual behavior, high school, STIs and STDs, utilizing Google Scholar and CINAHL databases through Cumberland University Vise Library. For the purpose of this review, five studies were found in peer reviewed journals, were written in English, and were published within the past five years to be appropriate to answer the proposed PICO question.
- The Health Belief Model (HBM) was used to guide this review of the literature. The HBM asserts when a person believes he or she is susceptible to a health problem with severe consequences, the person will more likely conclude that the benefits outweigh the barriers associated with changing one's behavior to prevent the problem (Ebbert, 2021). If the adolescent knows he/she is at risk of contracting an STD/STI and knows the outcomes, they may be more likely to make changes to their sexual behavior, resulting in safe sex practices.



## RESULTS

- Von Rosen and colleagues (2018) performed a cross-sectional study that assessed self-rate and factual STI knowledge in a sample of 9th graders in 13 secondary schools. Differences by age, gender, migrant background, and school type were quantified using bivariate and multivariable analyses. A total of 1177 students in 61 classes participated. This study showed knowledge of human immunodeficiency virus (HIV) was widespread, but other STIs were less known. 46.2% had never heard of chlamydia, 10.8% knew of the HPV vaccination, and only 2.2% were aware that no cure exists for HPV infection. The results showed that despite particular risk to contract an STI, adolescents suffer from suboptimal levels of knowledge on STIs beyond HIV. Urgent efforts needed to improve adolescent STI knowledge to improve the uptake of primary and secondary prevention is needed.
- Chaumaroeng and Panza (2019) conducted a cross-sectional descriptive study to describe the prevalence and factors associated with safe sex behavior among vocational students to determine the modifying factors including socio-demographic characteristics, the level of HIV and sexually transmitted infection knowledge, attitude toward reproductive health, and safe sex behavior. The study showed that both male and female vocational students have a low level of knowledge of HIV, STIs and contraception.
- Zizza and Guido (2021) conducted a study that evaluated how knowledge, information needs, and risk perceptions about HIV and STDs can change after targeted education interventions. A total of 436 subjects aged 15–24 attending high school and university courses were enrolled to respond to a questionnaire before and after targeted education. 94% of participants reported education useful to promote safe sex behaviors. Receiving sex education was found to generate awareness in more than 85% of high school students and 93% of university students. Furthermore, it highlighted the effectiveness of an educational intervention to improve the limited baseline knowledge of HIV and STD/STIs.
- Gardner and Amankwaa (2020) performed a quantitative study on a convenience sample of 18–24-year-old male and females (n=30). All subjects completed a questionnaire asking about demographics and sexual behaviors. Findings confirmed that young adults engage in risky sexual behaviors that lead to contracting STD/STIs and exposed the need for further STD/STI preventive education. Biopsychosocial factors must be recognized among this population to help educate and influence the engagement of a healthy sexual lifestyle. Knowledge is essential, especially among adolescents and young adults age 15 to 24.
- Jeihooni et al. (2018) performed an experimental study on 100 male high school students using a questionnaire to evaluate knowledge of HIV/AIDS. An educational intervention, based on Health Belief Model, resulted in meaningful enhancement of the students' knowledge, perceived susceptibility, perceived severity, perceived benefits, and perceived self-efficacy. Furthermore, the students' perceived barriers about beliefs related to HIV/AIDS preventive behaviors decreased significantly.

## PRACTICE IMPLICATIONS

According to Gaines (2021), nurses ranked most trusted profession for the 19<sup>th</sup> year in a row in 2021. Because of the obvious trust in nurses, adolescents may be more prone to speak openly and communicate with nurses about sexual behaviors and questions. The nurse can then provide evidence-based information and education including safe sex practices and STD/STI prevention. Also, nurses work in a variety of settings from hospitals, schools, urgent care, to primary care. In all these settings, nurses have a great likelihood of encountering adolescents or the parent of an adolescent. It is important for the nurse to be knowledgeable about ways to prevent STD/STIs and use the best available evidence in providing education and interventions on sex education and prevention of STD/STIs.

## CONCLUSIONS

Through this review of the literature, it has become evident that sex education helps decrease the rate of sexually transmitted diseases among adolescents by enhancing knowledge. With the teaching of safe sex (such as condom use) and the teaching of different STD/STIs (side effects/who's at risk), adolescents are more likely to follow the recommendation of safe sex. The Health Belief Model provides a theoretical model that can be used to guide health promotion and disease prevention programs and can be used to predict individual changes in health behaviors. Sex education, directed by the HBM, can have positive effects including increasing knowledge, awareness, and improving attitudes related to sexual health and behaviors. Providing accurate evidence-based information can influence adolescents' thoughts by clarifying and correcting perceptions and promote healthy and safe sexual behavior. Ongoing research is needed to guide appropriate sex education for this patient population.

## REFERENCES

- Centers for Disease Control and Prevention. (2021). STI prevalence, incidence, and cost estimates. <https://www.cdc.gov/std/statistics/default.htm>
- Chaumaroeng, M. & Panza, A. (2019). Prevalence and factors associated with safe sex behaviors among adolescent vocational students in Nakhon Ratchasima Province, Thailand. *Journal of Health Research*, 34(1), 79–87. <https://doi.org/10.1108/jhr-03-2019-006>
- Ebbert, J. (2021). Health Belief Model. *Study.com*. <https://study.com/academy/lesson/health-belief-model-in-nursing-definition-theory-examples.html>
- Gaines, K. (2021). Nurses ranked most trusted profession 19 years in a row. *Nurse.org*. <https://nurse.org/articles/nursing-ranked-most-honest-profession/>
- Gardner, L., & Amankwaa, L. (2020). Sexual behavior of young adults with sexually transmitted infections. *ABNF Journal*, 31(1), 35-43.
- Jeihooni, A., Arameshfard, S., Hatami, M., Mansourian, M., Kashfi, S., Rastegarimehr, B., Safari, O. & Amirkhani, M. (2018). The effect of educational program based on health belief model about HIV/AIDS among high school students. *International Journal of Pediatrics*, 6(3), 7285-7296.
- U.S. National Library of Medicine. (2021, March 3). Sexually transmitted diseases | STD | venerealdisease. *MedlinePlus*. <https://medlineplus.gov/sexuallytransmitteddiseases.html>
- Von Rosen, F., Von Rosen, A., Müller-Riemenschneider, F., Damberg, I., & Tinnemann, P. (2018). STI knowledge in Berlin adolescents. *International Journal of Environmental Research and Public Health*, 15(1), 110. <https://doi.org/10.3390/ijerph15010110>
- Zizza, A., & Guido, M. (2021). Knowledge, information needs, and risk perception about HIV ... *International Journal of Environmental Research and Public Health*, 18(4), 2069. <https://www.mdpi.com/1660-4601/18/4/2069/pdf>