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 is 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 assesses the benefits associated with taking change and the risks associated with failing to take the recommended action, the individual is more likely to take the action. Research terms included sex education, adolescents, and STD/STIs. The Health Belief Model was used to guide this study. The intervention, based on Health Belief Model, resulted in meaningful enhancement of the adolescents' knowledge of HIV, STIs and contraction.

* Zizza and Guido (2021) conducted a study that evaluated how knowledge, information needs, and risk perception among adolescents to determine the modifying factors associated with safe sex behavior among adolescents. Research terms included sex education, adolescents, sexual behavior, high school, STIs and STDs.

* 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 utilizing bivariate and multivariable analyses. A total of 1777 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, 1.0% 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.

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 utilizing bivariate and multivariable analyses. A total of 1777 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, 1.0% 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.

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PRACTICE IMPLICATIONS
According to Gaines (2021), nurses ranked most trusted profession for the 18th 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 parts 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
Jehooni 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 self-efficacy. Furthermore, barriers related to beliefs related to HIV/AIDS preventive behaviors decreased significantly.
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