



The Correlation Between Reproductive Health Literacy and the Prevention of Sexually Transmitted Infections (STIs) in the School Environment

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ABSTRACT

Sexually transmitted infections (STIs) remain a health problem that mostly occurs among teenagers, partly due to a lack of reproductive health literacy. The school environment has a strategic role in increasing understanding and shaping behavior to prevent STIs among teenagers. The purpose of this study was to determine the correlation between reproductive health literacy and STI prevention in the school environment. This study used a quantitative approach with an analytic descriptive design and a cross-sectional method. The population of this study consisted of all students at the selected school, with a total sample of 202 students selected using a simple random sampling technique. Data were collected using a structured questionnaire that had been tested for validity and reliability, then analyzed using univariate and bivariate analyses with the Chi-square test at a significance level of $\alpha = 0.05$. The results showed that almost half of the respondents had a low level of reproductive health literacy, while their STI prevention behavior was at an adequate level. The statistical test results showed a significant correlation between reproductive health literacy and STI prevention ($p = 0.002$). Students with better reproductive health literacy tended to have better STI prevention behavior compared to students with adequate and lower literacy levels. In conclusion, reproductive health literacy is significantly related to the prevention of sexually transmitted infections in the school environment. Therefore, it is necessary to strengthen comprehensive and continuous reproductive health education in schools as an effort to prevent STIs among teenagers.

Keywords: reproductive health literacy, STI prevention, teenagers, school environment

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INTRODUCTION

Teenagers is a group of age which on a phase of important growth which marked by the change of biologically, psychologically and socially, includes the maturity of reproduction organ. On this phase, teenagers start to form behavior and attitude which related with reproduction health. The lack of correct understanding can impact on risky decision making, so it is needed correct education and evidence based to support teenager reproduction health (Sawyer et al., 2022).

STIs can be public health problem significantly in global and national. World Health Organization report that teenager and young adult is a risky group toward STIs because the low of education, lack of access to reproduction health service also risky behavior. STI Prevention needs promotive approach and preventive which emphasize the knowledge growth and realization since school age (World Health Organization, 2023).

Reproduction Health Literacy is a key factor in preventing STIs among teenagers. Reproductive health literacy includes an individual's ability to access, understand, evaluate, and use health information effectively in everyday life. The Research shows that teenagers with good levels of health literacy tend to have positive attitudes and safer behaviors in maintaining reproductive health and preventing STIs (Sørensen et al., 2022).

Schools have a strategic role in improving reproductive health literacy because they are the formal environment that reaches most teenagers Through the integration of reproductive health education into the curriculum, School Health Program (SHP) activities, and the support of teachers and school counselors, schools can become an effective purpose in STI prevention behaviors in students in a sustainable manner (UNESCO, 2023).

However, the implementation of reproductive health education in schools still faces various challenges, such as limited comprehensive teaching materials, less interactive learning methods, as well as stigma and the perception that the topic of STIs is sensitive. This condition has the potential to cause low reproductive health literacy among students and hinder optimal STI prevention efforts (Ministry of Health of the Republic of Indonesia, 2022).

The development of information technology and digital media has also influenced the way teenagers obtain information about reproductive health. On the one hand, access to information has become easier, but on the other hand, not all information obtained through social media and the internet is accurate and accountable. The Exposure of false or incomplete information has the potential to shape miss perceptions about reproductive health and STIs, thereby reducing the effectiveness of prevention efforts among teenagers (UNICEF, 2022).

Low reproductive health literacy can also impact teenagers' delays in recognizing STI symptoms and a lack of awareness in seeking appropriate health services. teenagers are often reluctant to consult or utilize reproductive health services due to lack of knowledge, shame, and concerns about social stigma. This condition can worsen the risk of STI transmission and have long-term impacts on teenagers' reproductive health (World Health Organization, 2023).

In addition, school environmental support and educational policies have a significant influence on the success of increasing reproductive health literacy. Schools that have structured health education policies and programs tend to be able to improve students' knowledge and behavior regarding STI prevention. In contrast, the lack of integration of reproductive health materials into learning can lead to knowledge gaps among students and hinder promotive and preventive efforts in the school environment (UNESCO, 2023).

Therefore, strengthening reproductive health literacy in schools needs to be done comprehensively by involving various parties, such as teachers, health workers, parents, and students. An interactive, contextual, and developmentally appropriate educational approach is expected to increase understanding and shape sustainable STI prevention behavior. This research is important as a scientific basis for identifying needs and designing effective reproductive health education interventions in schools (Ministry of Health of the Republic of Indonesia, 2022).

METHOD

This research method uses a quantitative approach with a descriptive analytical design through a cross-sectional approach which aims to determine the relationship between reproductive health literacy and the prevention of Sexually Transmitted Infections (STIs) in the

school environment. The research was conducted at MTSN 1 Bengkulu City in November 2025 with a total student population of 302 students, and sampling was carried out using a simple random sampling technique so that 202 respondents were obtained. The inclusion criteria in this study includes students who are actively registered at the school where the research is conducted, are in the teenager age range, are willing to be respondents by signing the *informed consent form*, are able to read and understand the questionnaire, and are present at the time of data collection, while the exclusion criteria include students who are not present at the time of data collection, refuse or do not complete the questionnaire, and students who have physical or cognitive limitations that may hinder them from completing the questionnaire independently and completely. The independent variable in this study is reproductive health literacy, while the dependent variable is STI prevention. Data was collected by using a structured questionnaire that had been tested for validity and reliability. The data obtained were analyzed by using univariate analysis to determine the distribution of respondent characteristics and bivariate analysis with the Chi-Square test at a significance level of $\alpha = 0.05$ to determine the relationship between variables, while still paying attention to the ethical principles of research in the form of confidentiality, voluntariness, and anonymity of respondents. This research was conducted after obtaining permission and Surat Keterangan Kelayakan Etika Penelitian (a Research Ethics Feasibility Certificate) from Universitas Dehasen with Number 0399/SB-KEPK/FK/XII/2025.

RESULT

Table 1 Frequency Distribution of Reproductive Health Literacy of Students at MTSN 1 Bengkulu City

Reproductive Health Literacy	Frequency (n)	Percentage (%)
Good	61	30.2
Sufficient	101	50.0
Inadequate	40	19.8
Total	202	100.0

Based on Table 1, the reproductive health literacy variable shows that most students are in the sufficient literacy category (50.0%), followed by the good category (30.2%) and lack category (19.8%). These findings indicate that most students have a basic understanding of reproductive health, but this literacy level is still not optimal and requires improvement so that students are able to understand and apply reproductive health information more effectively.

Table 2 Frequency Distribution of STI Prevention in Students of MTSN 1 Bengkulu City

STI Prevention	Frequency (n)	Percentage (%)
Good	70	34.7
Sufficient	92	45.5
Inadequate	40	19.8
Total	202	100.0

Based on table 2 of the prevention variables for Sexually Transmitted Infections (STIs), the results of the study show that the majority of respondents are in the sufficient prevention category (45.5%), followed by the good category (34.7%) and lack category (19.8%). These results indicate that although some students have implemented STI prevention behavior well, there are still a number of students who have not shown optimal preventive behavior, thus potentially increasing the risk of STIs.

Table 3 Relationship between Reproductive Health Literacy and STI Prevention at MTSN 1 Bengkulu City

Reproductive Health Literacy	Good STI Prevention	STI Prevention Is Enough	Lack of STI Prevention	Total	p-value
Good	38	18	5	61	
Sufficient	26	54	21	101	0.00
Lack	6	20	14	40	2
Total	70	92	40	202	

The results of the bivariate analysis using the Chi-Square test shows a p-value = 0.002 ($p < 0.05$), which means there is a statistically significant relationship between reproductive health literacy and STI prevention. Student with better reproduction health literature level which tend to have better STI prevention behavior compared with students with adequate and less adequate. Students with good levels of reproductive health literacy tend to have better STI prevention behaviors than students with adequate and poor literacy.

DISCUSSION

The results of the study show that most students have a reproductive health literacy level in the sufficient category. These findings indicate that students have obtained basic information about reproductive health, but this understanding is not yet fully in-depth and comprehensive. This condition is in line with the UNICEF report (2022) which states that adolescents generally have access to reproductive health information, but still experience limitations in understanding and applying this information correctly in everyday life. Suboptimal reproductive health literacy can affect teenager's ability to make safe decisions regarding their reproductive health.

In the variable of preventing Sexually Transmitted Infections (STIs), the results of the study show that most students were in the sufficient category, and there were still students with insufficiently preventive behavior. This shows that although some students have understood the importance of STI prevention, this knowledge has not been fully reflected in actual behavior. The World Health Organization (2023) emphasized that the gap between knowledge and behavior is a major challenge in efforts to prevent STIs in adolescents, especially in environments with limited structured reproductive health education.

The results of the bivariate analysis showed a significant relationship between reproductive health literacy and STI prevention ($p < 0.05$). Student with better reproduction health literature level which tend to have better STI prevention behavior compared with students with adequate and less adequate. These findings support the health literacy theory which states that the ability to understand and use health information effectively will influence an individual's health attitudes and behaviors (Sørensen et al., 2022). So, reproductive health literacy plays an important role in shaping STI prevention behavior in adolescents.

The results of this study align with research conducted by Rahmawati et al. (2022), which found a significant relationship between reproductive health knowledge levels and STI prevention behaviors in high school students. Another study by Putri and Hidayat (2023) also showed that teenagers with good health literacy have a higher tendency to adopt safe and responsible sexual behavior. These similarities in results strengthen the evidence that increasing reproductive health literacy is an effective strategy in reducing the risk of STIs among school-aged teenagers.

The role of the school environment is an important factor in supporting increased reproductive health literacy. Schools as formal educational institutions have a great opportunity to convey reproductive health information systematically through the curriculum, SHP activities,

and the role of teachers and school counselors. UNESCO (2023) emphasized that comprehensive and age-appropriate school-based reproductive health education has proven effective in improving knowledge, attitudes, and behaviors regarding STI prevention in students. Because of that, optimizing the role of schools is essential to strengthen adolescent reproductive health literacy.

In addition to reproductive health literacy factors, respondent characteristics such as age and gender also have the potential to influence STI prevention behavior. Teenagers in their mid to late teens tend to have a better level of understanding than early teens because their cognitive development and matured abstract thinking skills. Research by Patton et al. (2022) shows that increasing teenagers age is correlated with increased ability to understand health risks and make more rational decisions regarding reproductive health.

Gender differences can also influence reproductive health literacy and STI prevention behavior. Several studies have shown that teenager girls tend to have a higher level of concern about reproductive health than teenager boys, especially in terms of seeking information and utilizing health services. This is in line with research conducted by Widyaningrum et al. (2023) which stated that female students have better levels of reproductive health literacy and more positive STI prevention behaviors than male students.

The factor of access to information is also an important aspect in the formation of reproductive health literacy. Ease of access to digital media can be both an opportunity and a challenge for teenagers. Reproductive health information obtained through social media and the internet is not always accurate, means good literacy skills are needed to sort out the correct information. UNICEF (2022) emphasized that without educational support from schools and educators, exposure to digital information can actually increase misconceptions related to reproductive health and STIs.

This study also shows the important role of schools in providing an environment that supports reproductive health education. Schools that actively implement SHP programs, health education, and collaboration with health workers have greater potential to improve students' reproductive health literacy. This is in line with research by Sari et al. (2023) which stated that school-based reproductive health education programs significantly increased STI prevention behaviors among teenagers.

The findings of this study also support a promotive and preventive approach in efforts to control STIs in teenagers. Increasing reproductive health literacy not only serves as a means of increasing knowledge, but also as a basis for forming sustainable healthy attitudes and behaviors. The World Health Organization (2023) emphasizes that education-based interventions starting from school age are an effective strategy to reduce STI rates in adulthood.

In addition to the main research findings, other studies have shown that reproductive health literacy levels among teenagers remain low in many countries, including Indonesia, which poses a serious challenge to efforts to prevent STIs and risky sexual behavior. The Findings from literature studies indicate that adolescent reproductive health literacy is still relatively low, which has implications for their limited understanding of reproductive health issues and behaviors related to preventing sexually transmitted diseases. This is in accordance with research findings that show that the majority of students are in the adequate and inadequate literacy categories, so that more attention is needed from education and public health stakeholders to strengthen this literacy (Ayu, 2022).

Reproductive health education is considered an effective strategy to increase teenagers understanding of reproductive issues and change risky behaviors. A study analyzed the impact of reproductive health education found that education provided to teenagers can help them become wiser and more cautious about risky sexual behavior and help prevent sexually transmitted infections (STIs). This shows the importance of providing systematic and structured

reproductive health education in the school environment to strengthen teenagers' literacy regarding STI prevention (Fauziah, 2023).

Cross-national research shows that most teenagers have limited health literacy, and variables such as access to health workers and reliable sources of information are strongly associated with this level of literacy. A study in Ethiopia found that the majority of respondents had limited sexual and reproductive literacy, and that getting information from health workers and trusted sources such as books was positively associated with better literacy. This shows that educational interventions involving health workers and credible information sources can strengthen reproductive literacy in teenagers (Gebre, 2024).

In addition, social environmental factors such as family and peer support also play a role in shaping teenager reproductive health literacy. Other studies show that the role of family, age, and peer support contribute significantly to teenagers' reproductive health literacy levels. Teenagers with positive support from their social environment tend to have better literacy, which in turn can influence their health behaviors including STI prevention (Hidayah, 2023).

Other findings also show that access to digital media and the need for reproductive health information are correlated with reproductive health literacy. Research has found a positive relationship between digital media access and reproductive health information needs, meaning that teenagers with better access to information tend to have higher health literacy. However, because digital information is not always accurate, it is important to combine this access with formal education and guidance from educators or health workers to maximize its positive effects (Kurniawati, 2023).

Furthermore, studies related to health education programs in schools show that educational interventions—both in the form of direct learning materials and health promotion activities—have a significant positive impact on teenagers' knowledge levels about reproductive health. Programs such as integrated education and interactive learning media have proven effective in increasing teenagers' understanding and readiness to make informed decisions regarding their health behaviors, including STI prevention. These findings support the need for a comprehensive and contextual educational approach in schools as part of an STI prevention strategy (Putra, 2024).

Thus, the results of this study confirm that increasing reproductive health literacy through a supportive school environment, a comprehensive curriculum, and interactive learning methods is essential to strengthen STI prevention efforts in teenagers. These findings are expected to serve as a reference for schools and policymakers in developing more effective and sustainable reproductive health education programs (UNESCO, 2023; Ministry of Health of the Republic of Indonesia, 2022).

CONCLUSION

Based on the results of research on reproductive health literacy and prevention of Sexually Transmitted Infections (STIs) in the school environment involving 202 students, it can be concluded that most respondents have a level of reproductive health literacy and STI prevention behavior in the sufficient category. The results of the analysis showed a significant relationship between reproductive health literacy and STI prevention ($p < 0.05$), which indicates that students with better levels of reproductive health literacy tend to demonstrate better STI prevention behavior. These findings indicate that reproductive health literacy plays an important role in shaping attitudes and behaviors regarding STI prevention among teenagers in the school environment.

RECOMMENDATION

It is recommended that schools improve reproductive health education efforts through more comprehensive integration of materials into the curriculum, strengthening the role of School Health Units (SHU), and using interactive learning methods that are appropriate to teenager development to improve reproductive health literacy and prevent sexually transmitted infections (STIs) in students; students are expected to be more active in seeking, understanding, and applying correct and reliable reproductive health information; educators and health workers need to strengthen collaboration in providing sustainable and youth-friendly reproductive health education; and further researchers are advised to develop research with broader designs and variables to obtain a more in-depth picture of the factors that influence STI prevention in teenagers.

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