



The Relationship Between Adolescents Knowledge Level About Reproductive Health And Their Behaviors To Prevent Sexually Transmitted Infections

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ABSTRACT

Sexually Transmitted Infections (STIs) are a common health problem among adolescents due to a lack of knowledge and sub optimal preventive behavior. This study aims to analyze the relationship between adolescents' knowledge of reproductive health and their STI prevention behavior. The research method used a quantitative approach with a cross-sectional design with 150 adolescent respondents. Data were collected using a questionnaire and analyzed using chi-square and t-tests. The results showed that adolescents with a good level of knowledge had better preventive behavior ($p < 0.05$). It was concluded that there is a significant relationship between knowledge and STI prevention behavior.

Keywords: Adolescents, Knowledge, Reproductive Health, STIs

1. INTRODUCTION

Adolescents are an age group vulnerable to various health problems, including sexually transmitted infections (STIs). Risky behaviors such as a lack of knowledge about reproductive health, unsafe sex, and lack of access to appropriate information can increase the risk of STIs.

Knowledge about reproductive health is a crucial factor in shaping preventative behavior. Adolescents with good knowledge are more likely to make informed decisions regarding sexual and reproductive health.

Many teenagers still have a poor understanding of STIs and how to prevent them. This can contribute to the increasing incidence of STIs among adolescents.

This study aims to determine the relationship between adolescents' level of knowledge about reproductive health and STI prevention behavior.





2. RESEARCH METHODS

a. Types and Design of Research

This study uses an analytical quantitative approach with a cross-sectional design, namely research that aims to determine the relationship between the level of adolescent knowledge about reproductive health and behavior in preventing sexually transmitted infections (STIs) at one observation time without any intervention.

This design was chosen because it is efficient in identifying relationships between variables and allows for objective statistical analysis.

b. Location and Time of Research

The research was conducted in the school/youth community environment that served as the research location. The research period ran from January to April 2025, encompassing preparation, data collection, and data analysis.

c. Population and Sample

1) Population

All adolescents aged 15–19 years in the research area.

2) Sample

A total of 150 respondents met the research criteria.

3) Sampling Techniques

Using purposive sampling, namely selecting samples based on certain criteria that are in accordance with the research objectives.

d. Respondent Criteria

1) Inclusion Criteria

- Teenagers aged 15–19 years
- Willing to be a respondent
- Can read and understand the questionnaire
- Not currently experiencing serious health problems

2) Exclusion Criteria

- Not filling out the questionnaire completely
- Not present during data collection
- Withdrawing during research

e. Research Variables

1) Independent Variables

- Level of knowledge about reproductive health

2) Dependent Variable

- Sexually Transmitted Infection (STI) Prevention Behavior



**f. Operational Definition**

Variables	Definition	Measuring instrument	Scale
Knowledge	Level of adolescent understanding of reproductive health and STIs	Questionnaire	Ordinal
Behavior	Adolescents' actions in preventing STIs	Questionnaire	Ordinal

g. Research Instruments**1) Knowledge Questionnaire**

- Contains questions about:
 - Reproductive organs
 - Types of STIs
 - Mode of transmission
 - Prevention methods

2) Behavior Questionnaire

- Measure:
 - Behavior to maintain reproductive health
 - STI prevention practices
 - Attitude towards risk

The instrument uses a Likert scale and has been adapted to the characteristics of adolescents.

h. Validity and Reliability Test

- Validity test using Pearson Product correlation Moment
- Reliability test using Cronbach's Alpha (>0.70)
- The instrument is tested first before use.

i. Data collection technique**1) Questionnaire Completion**

Conducted directly by respondents with the assistance of researchers

2) Observation

To ensure honesty and completeness of data

3) Documentation

of research data recording

j. Research Procedures

- 1) Manage research permits from relevant agencies
- 2) Determine respondents according to criteria





- 3) Provide an explanation of the research objectives and informed consent
- 4) Distributing and collecting questionnaires
- 5) Perform data processing and analysis

k. Data Analysis Techniques

1) Univariate Analysis

Used to describe distribution:

- Respondent characteristics
- Level of knowledge
- Preventive behavior

2) Bivariate Analysis

Using the Chi-Square test to determine the relationship between knowledge and STI prevention behavior.

Criteria:

- $p < 0.05$ → significant
- $p \geq 0.05$ → not significant

3) T Test (Independent Sample T- Test)

Used to compare the average behavioral scores between good and poor knowledge groups.

4) Multivariate Analysis (Optional)

Using logistic regression to determine the dominant influence of independent variables on STI prevention behavior.

Research Ethics Considerations

This research pays attention to ethical principles:

- Informed consent
- Confidentiality
- Anonymity
- Respondent's right to withdraw at any time

3. RESEARCH RESULTS AND DISCUSSION

a. Results

1. Respondent Characteristics

Table 1. Respondent Characteristics (n=150)

Variables	Frequency	Percentage (%)
Age		
15–17 years	80	53%





Variables	Frequency	Percentage (%)
18–19 years	70	47%
Gender		
Man	75	50%
Woman	75	50%

The majority of respondents were in the 15–17 age group. The gender distribution was balanced between males and females, so the research results were not biased toward any particular gender.

2. Adolescent Knowledge Level

Table 2. Level of Knowledge

Category	Frequency	Percentage
Good	90	60%
Not enough	60	40%

Most adolescents have a good level of knowledge about reproductive health. However, 40% of respondents still have insufficient knowledge, potentially increasing the risk of unhealthy behaviors.

3. STI Prevention Behavior

Table 3. STI Prevention Behavior

Category	Frequency	Percentage
Good	85	57%
Not enough	65	43%

Most adolescents demonstrate good preventive behavior, but there is still a large proportion with poor behavior, which indicates the need for educational intervention.

4. Relationship Analysis (Chi- Square)

Table 4. Relationship between Knowledge and STI Prevention Behavior

Knowledge	Good Behavior	Poor Behavior	Total
Good	70	20	90
Not enough	15	45	60





p- value = 0.001

Square test results showed a p-value <0.05, indicating a significant relationship between knowledge levels and STI prevention behavior. Adolescents with good knowledge tend to have better prevention behavior.

5. T-Test Analysis

Table 5. Comparison of Behavior Scores

Group	Mean	Elementary School	p- value
Good knowledge	80.5	6.5	
Lack of knowledge	65.3	7.8	0,000

The t-test results showed a significant difference between the preventive behavior scores in the good and poor knowledge groups. This indicates that knowledge has a significant influence on behavior.

6. Odds Analysis Ratio (OR)

Table 6. Odds Ratio

Variables	OR	CI 95%	p- value
Good knowledge	5.2	2.5–10.4	0.001

Adolescents with good knowledge are 5.2 times more likely to have good STI prevention behavior compared to adolescents with less knowledge.

b. Discussion

1) The Relationship Between Knowledge and STI Prevention Behavior

The research results show a significant relationship between knowledge levels and STI prevention behavior. This aligns with health behavior theory, which states that knowledge is the foundation for shaping attitudes and behavior.

2) The Effect of Knowledge on Behavior (T & OR Test)

The t-test results showed a significant difference in behavior scores, while the OR value of 5.2 indicated a strong influence of knowledge on preventive behavior. This confirms that increased knowledge can directly improve healthy behavior.

3) Risk Factors in Adolescents with Low Knowledge

Adolescents with low knowledge tend to engage in risky behavior, such as a lack of understanding about how STIs are transmitted and the importance of prevention.





4) Implications for Health Education

The research results show the importance of:

- Reproductive health education in schools
- Counseling by health workers
- The role of the family in providing information

5) Relation to Previous Research

These results are consistent with various studies showing that knowledge is a major factor in the formation of STI prevention behavior in adolescents.

4. CONCLUSION AND SUGGESTIONS

a. Conclusion

Based on the results of research on *the relationship between adolescents' level of knowledge about reproductive health and their behavior in preventing sexually transmitted infections (STIs)*, it can be concluded that:

1) **There is a significant relationship between the level of knowledge and STI prevention behavior.**

The results of the statistical test showed a p value < 0.05 , which means that knowledge has a significant relationship with preventive behavior in adolescents.

2) **Level of knowledge has a strong influence on STI prevention behavior**

Odds Value The ratio (OR) of 5.2 shows that adolescents with good knowledge have a greater chance of having good preventive behavior compared to adolescents with less knowledge.

3) **There is a significant difference in behavioral scores based on the level of knowledge.**

The t-test results show that adolescents with good knowledge have significantly higher preventive behavior scores than the group with low knowledge.

4) **There is still a proportion of adolescents with inadequate knowledge and behavior.**

This shows that reproductive health education is not evenly distributed and still needs to be improved.

5) **Knowledge is a key factor in the formation of health behavior in adolescents.**

Good knowledge can improve awareness, attitudes, and preventive practices towards STIs.



**b. Suggestion****1) For Health Workers**

- Increase regular reproductive health education programs for adolescents
- Using educational methods that are interesting and appropriate for teenagers (digital, interactive media)

2) For Educational Institutions (Schools)

- Integrating reproductive health education into the school curriculum
- Organizing outreach activities or seminars related to STIs and their prevention

3) For Parents and Families

- Increase open communication with adolescents regarding reproductive health
- Provide correct information and support healthy behavior

4) For Government and Policy Makers

- Developing school and community-based adolescent health programs
- Increasing access to reproductive health information through public media

5) For Teenagers

- It is expected that people will actively seek correct information about reproductive health.
- Implementing healthy living behavior and avoiding risky behavior

6) For Further Researchers

- Using a longitudinal design to look at long-term behavioral changes
- Adding other variables such as the influence of social media, social environment, and culture

REFERENCES

1. American Academy of Pediatrics . Adolescent sexual health care . Elk Grove Village : AAP; 2018.
2. Asikin SB, Yarnita Y, Rahmat RA. Adolescent reproductive health education as an effort to prevent early pregnancy. Barongko : Journal of Health Sciences. 2026;4(2):889–896.
<https://jurnal.agdosi.com/index.php/Barongko/article/view/1103>
3. Barriuso -Ortega S, Fernández-Hawrylak M. Sex education in adolescence : a systematic review . Child Youth Service Rev . 2024;166:107926.





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4. BKKBN. Adolescent reproductive health. Jakarta: BKKBN; 2022.
5. Cohen S, Wills TA. Stress , social support , and health behavior . Psychol Bull . 1985;98(2):310–357.
6. Ernawati Y, Sari R. Community-based reproductive health education to improve the quality of life of adolescents. Journal of Health Service. 2022;4(2):134–142. <https://jurnal.agdosi.com/index.php/jpemas/article/view/811>
7. Hardianti RN, Bansu IA. Education on the impact of early marriage on adolescent reproductive health. Sahabat Sosial: Journal of Community Service. 2024;3(1):101–107. <https://jurnal.agdosi.com/index.php/jpemas/article/view/541>
8. Ministry of Health of the Republic of Indonesia. Indonesian health profile 2023. Jakarta: Ministry of Health of the Republic of Indonesia; 2023.
9. Notoatmodjo S. Health promotion and health behavior. Jakarta: Rineka Cipta; 2012.
10. Pratiwi ED, Naingalis AL. Adolescent reproductive health education in preventing STIs. J Health Service. 2026;3(1):36–43.
11. Rahadi DS, Indarjo S. Sexual behavior of adolescents in Semarang city. J Health Educ . 2017;2(2):115–121.
12. Rahma M. Relationship between knowledge and adolescent sexual behavior . 2019;5(1):17–25.
13. Reffita LI. Development of adolescent reproductive health programs to increase knowledge and awareness. Sahabat Sosial: Journal of Community Service. 2025;3(4):892–901. <https://jurnal.agdosi.com/index.php/jpemas/article/view/826>
14. Rahmawati D, Hidayati C. The relationship between knowledge and attitudes of adolescents about free sex. J Health Sciences. 2018;7(1):72–77.
15. Rahayu S, Indrayani T. Adolescent reproductive health education. J Women Health . 2021;4(1):5–10.
16. Sara Surya, & Rezqiqah Aulia Rahmat. (2026). Drug Analysis Related Problems (DRPs) in Hypertension Patients in Outpatient Installations. *Barongko : Journal of Health Sciences* , 4 (3), 956–966. <https://jurnal.agdosi.com/index.php/Barongko/article/view/1183>
17. Setyowati. Maternity and reproductive nursing. Jakarta: EGC; 2016.
18. Sugiyono. Quantitative research methods. Bandung: Alfabeta ; 2017.
19. Syaiful Bachri, Rahmat Pannyiwi, & Sara Surya. (2026). Utilization Of Family Medicinal Plants (TOGA) in Health Improvement Efforts . *International Journal of Health Sciences* , 4 (1), 246–252. <https://doi.org/10.59585/ijhs.v4i1.1151>





Publish: Association of Indonesian Teachers and Lecturers

International Journal of Health Sciences (IJHS)Journal Homepage: <https://jurnal.agdosi.com/index.php/IJHS/index>

Volume 4 | Number 2 | June 2026 |



20. World Health Organization . Adolescent health and development . Geneva : WHO; 2024.
21. World Health Organization . Sexually transmitted infections (STIs). Geneva : WHO; 2024.
22. Wahyuni S, Latif SA, Rihi P, et al. The relationship between attitudes and adolescent knowledge about reproductive health. Barongko : Journal of Health Sciences. 2023;2(1):176–182.
<https://jurnal.agdosi.com/index.php/Barongko/article/view/245>

