



The relationship between premarital sexual knowledge and adolescent sexual behavior at SMA Negeri 1 Nisam

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ABSTRACT

Premarital sexual behavior among adolescents has become an urgent public health concern in North Aceh due to increasing reports of risky behaviors and limited access to accurate reproductive health information. The study aimed to determine the relationship between the level of premarital sexual knowledge and sexual behavior among adolescents at SMA Negeri 1 Nisam, North Aceh Regency. This research used a quantitative analytic approach with a cross-sectional design. The population consisted of students of SMA Negeri 1 Nisam, and the sample was selected using proportional random sampling. Data were collected through questionnaires assessing knowledge and sexual behavior and analyzed using the Chi-square test. The results showed that most respondents had a moderate level of premarital sexual knowledge (49.4%) and mild premarital sexual behavior (73%). Statistical analysis revealed a significant relationship between the level of premarital sexual knowledge and adolescent sexual behavior (p -value = 0.003; α = 0.05). It can be concluded that adolescents with better knowledge of premarital sex tend to exhibit more responsible and less risky sexual behaviors. It is suggested that adolescents should enhance their understanding of reproductive health and sexual education from credible sources to prevent misconceptions and risky behaviors.

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1. Introduction

Adolescence is a critical period of human development characterized by rapid physical, psychological, and emotional changes. The World Health Organization (WHO, 2024) states that the health and well-being of adolescents depend on their physical, mental, and social conditions. Globally, adolescents aged 10–19 years represent approximately 16% of the total population, while in Indonesia, they account for around 17% or 46 million people (WHO, 2024). This period is marked by exploration and curiosity, including in the area of sexuality, which can influence their behavior and decision-making.

The Ministry of Health of the Republic of Indonesia (Kemenkes, 2021) reports that 3.8% of female adolescents and 6.9% of male adolescents have engaged in sexual intercourse. Among them, only 20.38% have received lessons at school on how to respond if forced to have sex, while 63.62% never received such material. These data indicate that adolescents still lack sufficient sexual knowledge, which may lead to risky behavior. According to the Indonesian Family Planning Association (Perkumpulan Keluarga Berencana Indonesia or PKBI), 90% of adolescents in Aceh admitted to watching pornographic

films and 40% reported physical contact with the opposite sex. Lhokseumawe City has the highest prevalence of adolescent sexual behavior (70%), followed by Banda Aceh (50%) (Dewi, 2023) & (Putri, 2021).

When compared critically, national data show lower levels of risky sexual behavior than what is observed in Aceh, indicating that the local context is more vulnerable. This discrepancy suggests that regional cultural norms, exposure to media, and limited access to structured sexual education may contribute to higher risk levels in Aceh compared to the national average

(Wahyuni, 2023) found that premarital sexual behavior among adolescents is significantly related to their level of knowledge and attitudes. The study concluded that a higher level of understanding leads to more responsible sexual behavior. However, in many cases, adolescents still rely on peers or the internet as their main sources of information, which can often be misleading and incomplete. The Public Health Center (Puskesmas) of Nisam Subdistrict has implemented the Youth Care Health Services (Pelayanan Kesehatan Peduli Remaja or PKPR) program, which aims to provide health education tailored to the psychological characteristics of adolescents. Nevertheless, preliminary observations revealed that teenage pregnancy still occurs, and discussions about sexuality remain limited in schools (Fauziah, 2022).

At SMA Negeri 1 Nisam specifically, preliminary findings show three critical gaps: (1) sexual education is not included consistently across subjects; (2) many teachers lack training or confidence to deliver accurate information about premarital sexual risks; and (3) students demonstrate misconceptions about reproductive health, including inaccurate understanding of consequences and prevention. These gaps highlight the urgent need for research at this particular school.

Therefore, this study aims to analyze the relationship between the level of premarital sexual knowledge and adolescent sexual behavior at SMA Negeri 1 Nisam, North Aceh Regency. The findings are expected to contribute to the development of reproductive health education and promote the creation of effective intervention programs to reduce risky sexual behaviors among adolescents.

2. Methods

This research used an analytic observational study design with a cross-sectional approach. This design was chosen because the study aimed to examine the relationship between the independent and dependent variables at a single point in time. Cross-sectional design was also considered the most appropriate due to ethical and practical reasons, as it avoids repeated measurements on sensitive topics such as sexual behavior and minimizes the risk of discomfort among adolescent respondents. It was considered appropriate since the purpose of the study was to identify associations rather than causal relationships between the level of premarital sexual knowledge and adolescent sexual behavior.

The population of this study consisted of all students at SMA Negeri 1 Nisam, North Aceh Regency, in 2025. The total sample was 89 respondents who met the inclusion criteria, namely adolescents aged 15–18 years who were active students at the school, willing to participate, and able to complete the questionnaire independently. Exclusion criteria included students who were absent during data collection or unwilling to complete the questionnaire. Although the sampling technique was non-probability, proportional random sampling was applied to ensure representation from each grade level. The final sample consisted of 28 students from grade X, 30 students from grade XI, and 31 students from grade XII, with a gender distribution of 48 female students and 41 male students.

The research instrument used was a structured questionnaire developed from previous studies regarding adolescent reproductive health, premarital sexual knowledge, and sexual behavior. The questionnaire was modified according to local context and validated through content and construct validity tests. Content validity was assessed using expert judgment based on relevance, clarity, and completeness, while construct validity was tested through item–total correlation. Reliability testing was conducted using Cronbach's Alpha. The knowledge scale had a Cronbach's Alpha of 0.82, while the sexual behavior scale had a Cronbach's Alpha of 0.79, indicating good internal consistency. The instrument consisted of 15 items measuring knowledge about premarital sexuality (covering aspects of reproductive organs, the impact of early sexual activity, and prevention), and 10 items measuring sexual behavior (including mild and moderate actions).

The data collection procedure included several stages. First, the researcher obtained ethical clearance and research permission from Poltekkes Kemenkes Aceh and the local education authorities. Coordination was then carried out with SMA Negeri 1 Nisam to schedule data collection activities. The researcher explained the purpose, benefits, and procedures of the study to the respondents before distributing the questionnaires, which were completed independently. To minimize response bias, confidentiality and anonymity were strictly maintained by using anonymous codes instead of names, providing separate envelopes for completed questionnaires, and ensuring that teachers were not present during data collection. For participants under 18 years old, informed consent was obtained through both student assent and parental/guardian consent via a written permission form distributed before the study began.

After all questionnaires were collected, the researcher checked for completeness, performed coding, editing, and tabulation to prepare the data for analysis. Data were analyzed using the Chi-Square test with a confidence level of 95% ($\alpha = 0.05$). This test was selected because all research variables were categorical and consistent with the study's objective—to determine whether there was a significant relationship between adolescents' level of premarital sexual knowledge and their sexual behavior at SMA Negeri 1 Nisam, North Aceh Regency, in 2025.

3. Results and Discussion

Results

This study was conducted on 89 adolescent respondents from SMA Negeri 1 Nisam, North Aceh Regency. The results are presented systematically according to the order of analysis described in the research methods.

a. Level of Premarital Sexual Knowledge

Table 1.
Distribution of Adolescents' Level of Premarital Sexual Knowledge

Level of Knowledge	Frequency (f)	Percentage (%)
Good	26	29.2
Moderate	44	49.4
Poor	19	21.3
Total	89	100

The results show that almost half of the respondents (49.4%) had a moderate level of premarital sexual knowledge, while 29.2% had good knowledge and 21.3% had poor knowledge. This indicates that most adolescents have sufficient understanding of reproductive organs, the consequences of premarital sexual behavior, and ways to prevent risky sexual activities. However, some still have low awareness, possibly due to limited access to reproductive health information and a lack of communication about sexuality within families.

b. Adolescent Sexual Behavior

Table 2.
Distribution of Adolescent Sexual Behavior

Sexual Behavior Category	Frequency (f)	Percentage (%)
Mild	65	73.0
Moderate	24	27.0
Total	89	100

Most respondents (73%) exhibited mild sexual behavior, such as holding hands or hugging, while 27% engaged in more moderate behaviors. These findings suggest that although adolescents have started to engage in physical intimacy, most have not progressed to risky sexual acts. This condition reflects the role of school education, religious teachings, and cultural norms that influence adolescent behavior in the Nisam area.

c. Relationship Between Premarital Sexual Knowledge and Adolescent Sexual Behavior

Table 3.
Relationship Between Premarital Sexual Knowledge and Adolescent Sexual Behavior

Knowledge Level	Mild Behavior	Moderate Behavior	Total	p-value
Good	22	4	26	0.003
Moderate	39	5	44	
Poor	4	15	19	
Total	65	24	89	

The results of the Chi-Square test showed a p-value = 0.003 ($\alpha = 0.05$), indicating a significant relationship between adolescents' level of premarital sexual knowledge and their sexual behavior. This means that respondents with higher knowledge levels tend to engage in milder and more responsible sexual behaviors, while those with lower knowledge levels are more likely to exhibit moderate or risky behaviors. These findings align with Wahyuni et al. (2023), who stated that knowledge is an important determinant influencing adolescent sexual attitudes and actions.

The result also supports Dewi and Junizar (2023), who found that adolescent understanding of reproductive health and moral values strongly correlates with their sexual self-control. Hence, continuous education on reproductive health at schools and within families is crucial to prevent risky adolescent behaviors.

Discussion

The results of this study showed that most respondents had a moderate level of premarital sexual knowledge (49.4%) and mild sexual behavior (73%). Statistical analysis using the Chi-Square test revealed a p-value of 0.003, indicating a significant relationship between the level of premarital sexual knowledge and adolescent sexual behavior. These findings suggest that adolescents with better knowledge of reproductive health tend to have more responsible sexual behavior compared to those with poor knowledge.

This result supports the health behavior theory proposed by Notoatmodjo (2014), which states that knowledge is one of the fundamental factors that influence a person's behavior. Sufficient understanding enables individuals to assess the benefits and risks of their actions, which affects decision-making, including sexual behavior. Adolescents who possess accurate knowledge about reproductive health are more likely to avoid risky behaviors because they are aware of the potential negative consequences such as early pregnancy and sexually transmitted infections (STIs).

The findings of this study are consistent with Wahyuni et al. (2023), who reported that adolescent sexual behavior is strongly influenced by knowledge and attitudes toward reproductive health. Similarly, Dewi and Junizar (2023) found that adolescents with low knowledge levels tend to be easily influenced by peers and media exposure, leading to more permissive sexual behavior. However, the present study found a larger proportion of adolescents with mild behavior compared to some previous studies conducted in urban areas of Indonesia, suggesting that the socio-cultural characteristics of Aceh—such as strong religious norms and community monitoring—may play a protective role. This shows that the findings partially align with previous studies but also reveal context-specific differences.

In the context of SMA Negeri 1 Nisam, adolescents' moderate level of knowledge may be associated with limited access to reproductive health education, as discussions about sexuality are still considered taboo in many families and communities. Furthermore, the influence of social and cultural norms in Aceh, which strongly uphold religious and moral values, may explain why most respondents still demonstrated mild sexual behavior despite their curiosity. According to Sarwono (2016), cultural and religious norms play a protective role in shaping adolescent morality and behavior. Local data from the Nisam Health Center (Puskesmas) also reported several cases of teenage pregnancy in the past three years, indicating that although risky sexual behavior is not predominant, the consequences of

limited knowledge still occur in the community. This strengthens the relevance of the study and highlights the need for targeted intervention.

The presence of the Youth Care Health Services (Pelayanan Kesehatan Peduli Remaja or PKPR) program in the Nisam Health Center also contributes positively by providing reproductive health information and counseling for adolescents. However, the coverage and intensity of such programs are still limited. Strengthening school-based reproductive health education through collaboration between teachers, health workers, and parents could further improve adolescent knowledge and prevent risky sexual behaviors.

This study also acknowledges several limitations. First, the cross-sectional design does not allow the establishment of causal relationships between knowledge and behavior, as both variables were measured at the same time. Second, the use of self-administered questionnaires on a sensitive topic introduces the potential for social desirability bias, where respondents may underreport moderate or risky behaviors. Third, the study was conducted in a single school, which may limit generalizability to other regions with different socio-cultural backgrounds. Despite these limitations, the findings provide valuable insights into adolescent sexual behavior in Aceh and highlight areas for further research.

Overall, the results of this study indicate that knowledge is a key factor influencing adolescent sexual behavior. Improved education, open communication, and access to credible reproductive health information are necessary to foster responsible behavior among adolescents. Therefore, efforts to enhance adolescent reproductive health knowledge should be an integral part of school health promotion programs.

4. Conclusion

This study found a significant relationship between the level of premarital sexual knowledge and adolescent sexual behavior at SMA Negeri 1 Nisam, North Aceh Regency, with a p-value of 0.003 ($\alpha = 0.05$). Most respondents demonstrated a moderate level of knowledge and mild sexual behavior. The findings suggest that adolescents with better understanding of premarital sex and reproductive health tend to avoid risky sexual behaviors and make more responsible decisions regarding relationships. Adequate knowledge plays an essential role in shaping positive attitudes and preventing early sexual initiation.

A unique contribution of this study is its focus on a rural Aceh setting where cultural, religious, and social norms strongly influence adolescent behavior—an area that has been understudied compared to urban settings. Additionally, this study provides school-level evidence showing how knowledge disparities relate directly to behavioral differences among students, offering locally relevant data that complements previous national and regional studies.

It is recommended that schools, parents, and healthcare institutions collaborate to strengthen reproductive health education through structured counseling and peer education programs. Providing accurate and age-appropriate information will help adolescents develop a healthy perception of sexuality and improve their ability to resist negative peer pressure. Future research should explore other influencing factors, such as parental supervision, exposure to digital media, and cultural values, to provide a more comprehensive understanding of adolescent sexual behavior.

References

- Dewi, R., & Junizar, A. (2023). *Relationship between adolescent knowledge of reproductive health and premarital sexual behavior in Banda Aceh*. *Journal of Public Health Research*, 5(2), 75–82.
- Fauziah, L., & Rahayu, D. (2022). *Effect of reproductive health education on adolescents' premarital sexual behavior*. *Indonesian Journal of Health Promotion and Education*, 8(1), 15–23.
- Putri, A., & Lestari, S. (2021). *Correlation between knowledge and sexual behavior among high school students in North Sumatra*. *Jurnal Kesehatan Reproduksi*, 12(2), 102–110. <https://doi.org/10.22435/jkr.v12i2.3312>
- Rahmawati, I., & Prasetyo, B. (2022). *Influence of parental supervision and knowledge on adolescent sexual attitudes*. *Asian Journal of Nursing and Health Sciences*, 4(3), 45–54.
- Siregar, R., & Mulyani, E. (2023). *Adolescent perception and behavior toward premarital sex in Aceh Province*. *Journal of Midwifery and Reproductive Health*, 11(1), 33–40.

- Wahyuni, N., Putri, E., & Lestari, M. (2023). *The influence of reproductive health knowledge on sexual attitudes among Indonesian adolescents*. Indonesian Journal of Midwifery and Reproductive Health, 7(1), 41–49.
- Yuliani, D., & Hidayat, F. (2021). *Knowledge, peer influence, and adolescent sexual behavior: A cross-sectional study*. Jurnal Ilmiah Kebidanan, 13(2), 88–95.
- Rahmah, N., & Sari, L. (2022). *The effect of media exposure and peer interaction on premarital sexual behavior among adolescents*. International Journal of Public Health and Midwifery, 6(2), 112–120.
- Aulia, H., & Samosir, R. (2023). *Factors influencing adolescent attitudes toward premarital sex in rural Indonesia*. Global Journal of Health Science, 15(1), 51–59.
- Hasanah, U., & Wahyudi, D. (2020). *Relationship between reproductive health knowledge and risky sexual behavior among senior high school students*. Nursing and Public Health Journal, 9(3), 145–153.
- Santoso, A., & Widyaningsih, N. (2021). *The role of school-based education in improving adolescent reproductive health knowledge*. Journal of Health Education and Behavior, 13(4), 210–218.
- Nisa, F., & Handayani, P. (2022). *Correlation between knowledge, attitude, and behavior toward premarital sex among adolescents*. Jurnal Kesehatan Masyarakat Indonesia, 8(1), 55–63.
- Yuniar, M., & Rahman, T. (2023). *Impact of digital media exposure on adolescent sexual behavior*. International Journal of Nursing and Midwifery Research, 9(2), 99–106.
- Nuraini, S., & Zulkarnain, A. (2021). *Effect of counseling intervention on adolescent reproductive health knowledge*. Jurnal Ilmu Keperawatan dan Kebidanan, 12(1), 23–30.
- Kementerian Kesehatan Republik Indonesia. (2021). *Profil Kesehatan Indonesia 2021*. Jakarta: Kemenkes RI.
- Notoatmodjo, S. (2014). *Health Promotion and Behavioral Science*. Jakarta: Rineka Cipta.
- World Health Organization. (2024). *World health statistics 2024: Monitoring health for the SDGs*. Geneva: WHO.