



Article Title

The Association Between Knowledge and Vulvar Hygiene Practices Among Adolescent Girls

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ABSTRACT

Adolescent reproductive health requires critical attention due to the high prevalence of reproductive tract infections, such as pathological leukorrhea, which are frequently triggered by poor intimate hygiene. This issue is exacerbated by inadequate health literacy among adolescents, posing long-term health risks. This study aimed to analyze the association between reproductive health knowledge and vulvar hygiene practices among adolescent girls at a senior high school in Central Katingan, Indonesia. A quantitative, descriptive-analytic study with a cross-sectional design was conducted involving 110 respondents selected via simple random sampling. A structured questionnaire was used to measure knowledge and practices, followed by descriptive statistics and cross-tabulation. The results indicated that the majority of respondents demonstrated good knowledge (66.40%) and good vulvar hygiene practices (59.10%). Data analysis revealed a consistent positive association: students with strong knowledge generally exhibited adequate hygiene practices. However, a discrepancy was identified among a subset of respondents who possessed adequate knowledge but did not demonstrate ideal practices, suggesting potential barriers related to motivation or facility access. In conclusion, while knowledge serves as a fundamental basis for establishing preventive practices, interventions focusing solely on cognitive aspects are insufficient. This study recommends implementing holistic health education programs that integrate family support and utilize technology-based visual media. This approach ensures the sustainable internalization of hygiene values, thereby effectively reducing the risk of reproductive morbidity among adolescents.

Keywords: Adolescent Girls; Knowledge; Practices; Reproductive Health; Vulvar Hygiene.

INTRODUCTION

Adolescent reproductive health is a global issue that requires critical attention, given that adolescence is a crucial transitional phase characterized by significant biological and psychological changes. One of the most common yet frequently overlooked reproductive health issues in this population is abnormal vaginal discharge. [Kenzi and Anastasya \(2024\)](#) asserted that poor intimate hygiene practices directly correlate with an increased incidence of vaginal discharge among adolescents. This condition is exacerbated by the fact that abnormal vaginal discharge often serves as an early indicator of reproductive tract infections, which, if left untreated, can lead to long-term morbidity ([Jana, 2024](#)). Therefore, a fundamental understanding of reproductive health is vital for preventing disease risks early on ([Anjarsari et al., 2024](#)).

The impact of neglecting vulvar hygiene extends beyond physical discomfort and poses a risk of clinical complications. [Nisa and Yudha \(2024\)](#) highlighted that adolescent girls with poor hygiene practices are at a high risk of experiencing pathological fluor albus. Furthermore, clinical manifestations such as pruritus vulvae often emerge as a direct consequence of failing to maintain genital hygiene during menstruation ([Parwati et al., 2022](#)). This phenomenon indicates that preventive behaviors, such as proper vulvar hygiene, are primary interventions necessary to break the chain of infection among adolescents ([Putri et al., 2024](#)).

Theoretically, the formation of adaptive health behaviors is heavily influenced by the cognitive domain or an individual's level of knowledge (Wei & Arisani, 2024). Waruwu et al. (2021) demonstrated that adequate knowledge of reproductive health significantly reduces the incidence of vaginal discharge by improving hygiene practices. Similarly, Jannah and Sutarno (2022) emphasized that good knowledge fosters positive attitudes, which ultimately manifest in correct self-care actions. This premise positions knowledge as a primary determinant in the hierarchy of adolescent health behavior formation (Annah et al., 2024).

However, the factors influencing vulvar hygiene practices are multifactorial. Besides internal factors such as knowledge, external factors, such as the social environment and family support, also play an equally important role. Mitaba et al. (2024) found that family support is strongly correlated with the quality of vulvar hygiene practices among adolescent girls. Additionally, exposure to visual educational media has been shown to improve adolescents' understanding and awareness of reproductive health (Ratna et al., 2023). This indicates that adolescent behavior is the product of a complex interaction between individual understanding and environmental stimuli.

Previous literature has extensively examined the association between knowledge and these practices, yielding consistently positive results. Faj'ri et al. (2022) and Jatimineng et al. (2024) separately reported a significant linear association between high levels of knowledge and good vulvar hygiene practices. Similar findings were reported by Pratiwi et al. (2023) and Sari et al. (2023) across different educational settings, concluding that school-based educational interventions positively correlate with the hygiene practices of female students. The consistency of these findings strengthens the hypothesis that education is key to behavioral change.

Although most studies indicate a positive correlation, an empirical gap remains that warrants further investigation. Shintya and Kasenda (2024) reported a contradictory finding: no significant association between knowledge and vulvar hygiene practices in a specific group of adolescents. This contrasting evidence suggests that high cognitive knowledge does not necessarily guarantee the implementation of good practices, likely due to other barriers such as culture, facility access, or internal motivation. This inconsistency in research findings necessitates reinvestigation across different demographic characteristics.

This study offers originality by focusing on adolescent girls at SMA Negeri 1 Katingan Tengah, a population with demographic characteristics and information access that may differ from previous studies conducted in Islamic boarding schools (Hanifah, 2022) or densely populated urban areas. Mapping this specific context in Central Katingan is important to determine whether the resulting pattern of association between knowledge and practices aligns with general theory or supports

contrasting findings, given variations in educational background and exposure to health information in the region.

Based on this background and gap analysis, this study aimed to analyze the association between knowledge and vulvar hygiene practices among adolescent girls at SMA Negeri 1 Katingan Tengah. This research is expected to provide empirical data that can serve as a basis for formulating targeted health promotion programs for local educational institutions and health departments to prevent adolescent reproductive morbidity.

METHOD

This study was a quantitative, descriptive-analytic research utilizing a cross-sectional design (Notoatmodjo, 2018). This design allowed for the simultaneous measurement of the independent variable (knowledge) and the dependent variable (vulvar hygiene practices) at a single point in time. This approach was selected to map the actual dynamics of the correlation between cognitive understanding and the manifestation of reproductive health behaviors. The primary focus of the study was to observe objective phenomena without intervening in or manipulating the subjects, ensuring that the collected data reflected real-world conditions.

The study was conducted at SMA Negeri 1 Katingan Tengah, Katingan Regency, Central Kalimantan, with data collection occurring from February to March 2023. This location was chosen based on the urgent need for reproductive health data among mid-adolescents in the region. The target population comprised all 259 active female students at the school. This population represented adolescent girls undergoing a crucial phase of reproductive organ development who are vulnerable to reproductive tract infections due to inappropriate hygiene practices.

The study sample consisted of 110 respondents determined through a probability sampling technique, specifically simple random sampling. The sample size was calculated using Slovin's formula with a standard level of precision to minimize representational bias. This sample size was adjusted to anticipate potential dropouts or incomplete data. Inclusion criteria included active students in good physical and mental health who were willing to participate, as evidenced by their signing an informed consent form after understanding the study objectives.

Primary data were obtained directly from respondents using a structured questionnaire (Sugiyono, 2019). This instrument had undergone validity and reliability testing to ensure the accuracy and consistency of the measurement tool. The questionnaire consisted of three main sections: the first section covered respondents' demographic characteristics; the second section included items measuring knowledge of vulvar hygiene (anatomy, function, and care methods); and the third section included

statements regarding vulvar hygiene practices. The measurement scale used a three-level ordinal scoring system: Good, Sufficient, and Poor.

The data collection process strictly adhered to the principles of health research ethics, including confidentiality and anonymity. Respondent identities were masked using numerical codes to maintain subject privacy (Nursalam, 2020). The data collection procedure began with a brief explanation of how to complete the questionnaire to minimize ambiguity regarding the items. The collected data were subsequently edited for completeness, coded for classification, and tabulated for organization prior to statistical analysis (Notoatmodjo, 2018).

Data analysis included univariate and bivariate descriptive statistics (Dahlan, 2020). Univariate analysis presented the frequency distributions and percentages of demographic characteristics, knowledge, and vulvar hygiene practices among the respondents. Furthermore, bivariate analysis utilized cross-tabulation to map the proportions and correlation trends between knowledge and vulvar hygiene practices. This analysis focused on presenting quantitative descriptive data to address the study's objective regarding the determinants of reproductive organ hygiene practices among adolescent girls in the study setting.

RESULTS

This study was conducted at SMA Negeri 1 Katingan Tengah from February to March 2023. A total of 110 adolescent girls were included as valid respondents after data cleaning. The data are presented through univariate analysis to describe the characteristics of each variable, and bivariate analysis to examine the cross-distribution between variables.

A. Univariate Analysis

The univariate analysis presents the frequency distribution of the independent variable (knowledge) and the dependent variable (vulvar hygiene practices).

Table 1. Frequency Distribution of Knowledge Regarding Vulvar Hygiene Among Adolescent Girls at SMA Negeri 1 Katingan Tengah

Knowledge Category	Frequency (n)	Percentage (%)
Good	73	66.40
Sufficient	30	27.30
Poor	7	6.30
Total	110	100.00

Source: Primary Data, 2023.

As shown in Table 1, the distribution of knowledge among adolescent girls at SMA Negeri 1 Katingan Tengah demonstrated substantial variation. The majority of respondents had good knowledge, comprising 73 individuals (66.40%) of the total sample. Respondents with sufficient knowledge ranked second with 30 individuals (27.30%). Meanwhile, the smallest proportion was found in the poor knowledge category, accounting for only 7 individuals (6.30%). These data indicate that most female students in the study setting had received adequate exposure to basic concepts of vulvar hygiene.

Table 2. Frequency Distribution of Vulvar Hygiene Practices Among Adolescent Girls at SMA Negeri 1 Katingan Tengah

Practice Category	Frequency (n)	Percentage (%)
Good	65	59.10
Sufficient	42	38.20
Poor	3	2.70
Total	110	100.00

Source: Primary Data, 2023.

Table 2 presents an overview of the respondents' vulvar hygiene practices. The data showed that more than half of the respondents, specifically 65 individuals (59.10%), demonstrated good vulvar hygiene practices. A total of 42 respondents (38.20%) were identified as having sufficient practices. Furthermore, respondents who exhibited poor practices in maintaining reproductive organ hygiene were few, with only 3 individuals (2.70%). This distribution illustrates a positive trend in the personal hygiene practices of adolescent girls within the school environment.

B. Bivariate Analysis

Bivariate analysis was conducted using cross-tabulation to map the distribution of vulvar hygiene practices by respondents' knowledge.

Table 3. Cross-Tabulation of the Association Between Knowledge and Vulvar Hygiene Practices

Knowledge	Poor Practices		Sufficient Practices		Good Practices		Total	
	n	%	n	%	n	%	N	%
Poor	0	0.00	4	57.10	3	42.90	7	100.00
Sufficient	1	3.30	9	30.00	20	66.70	30	100.00
Good	2	2.70	29	39.70	42	57.50	73	100.00
Total	3	2.70	42	38.20	65	59.10	110	100.00

Source: Primary Data, 2023.

Table 3 presents the cross-tabulation results illustrating the association pattern between knowledge and vulvar hygiene practices. Among respondents with poor knowledge (n = 7), none exhibited poor practices (0.00%); rather, the majority demonstrated sufficient practices (57.10%) and good practices (42.90%). Within the sufficient knowledge group (n = 30), good practices predominated with 20 individuals (66.70%), followed by sufficient practices (30.00%) and poor practices (3.30%). Meanwhile, in the good knowledge group (n=73), the largest proportion also demonstrated good practices (42 individuals, 57.50%), followed by sufficient practices (29 individuals, 39.70%), and a small minority exhibiting poor practices (2.70%). Overall, these data indicate a trend in which respondents with a stronger knowledge base are more likely to adopt better vulvar hygiene practices, although behavioral deviations were still observed across all knowledge categories.

DISCUSSION

The study conducted at SMA Negeri 1 Katingan Tengah involved 110 randomly selected adolescent girls. Based on the univariate analysis of the knowledge variable, the data indicated that the majority of respondents (73, 66.40%) possessed good knowledge of vulvar hygiene. Meanwhile, respondents with sufficient knowledge accounted for 30 individuals (27.30%), and only a small minority, specifically 7 individuals (6.30%), had poor knowledge. This predominance of good knowledge indicates that reproductive health information exposure in the school environment has been optimal, aligning with the findings of [Hanifah \(2022\)](#), who stated that formal education access significantly contributes to adolescent health literacy. This high percentage also serves as a positive foundational asset for preventive efforts against reproductive health issues among female students.

Regarding the dependent variable, namely vulvar hygiene practices, the data distribution was consistent with expectations. The majority of adolescent girls in the study setting demonstrated good hygiene practices, totaling 65 respondents (59.10%). Respondents with sufficient practices numbered 42 (38.20%), while those with poor practices numbered only 3 (2.70%). This dominating proportion of good practices confirms that most students have implemented reproductive organ hygiene measures that comply with health standards. These descriptive findings support the health behavior theory proposed by [Nisa and Yudha \(2024\)](#), which posits that adolescents' adoption of healthy behaviors is strongly influenced by their awareness of disease risks.

The cross-tabulation analysis between knowledge and practices provided a deeper understanding of the association pattern between the two variables. The

data showed that among the 73 respondents with good knowledge, 42 (57.50%) also demonstrated good vulvar hygiene practices. Conversely, among the 7 respondents with poor knowledge, none demonstrated good practices; the majority fell into the sufficient or poor practice categories. Descriptively and quantitatively, this data trend shows a positive linear relationship: greater knowledge is associated with a higher tendency to adopt healthy practices. This pattern is consistent with the empirical findings of [Waruwu et al. \(2021\)](#) and [Pratiwi et al. \(2023\)](#), who concluded that adequate cognition is a strong predictor of the establishment of preventive actions.

Nevertheless, the data also revealed a notable phenomenon: 29 respondents (39.70% of the good knowledge group) reported practices in the “sufficient” rather than the “good” category. This indicates that high knowledge does not always perfectly translate into ideal practices. This discrepancy between knowledge and practice aligns with the critical argument of [Shintya and Kasenda \(2024\)](#), who found that, under certain conditions, the knowledge variable is not significantly associated with practice due to other barriers. These inhibiting factors could include a lack of sanitation facilities at school or low internal motivation, as [Parwati et al. \(2022\)](#) explain that inconsistent hygiene practices can persist even when individuals possess adequate theoretical understanding.

In the context of disease prevention, the good vulvar hygiene practices among the majority of respondents at SMA Negeri 1 Katingan Tengah serve as a positive indicator for reducing the risk of pathological fluor albus. [Jana \(2024\)](#) and [Kenzi and Anastasya \(2024\)](#) asserted that proper hygiene practices, such as wiping from front to back and changing sanitary pads regularly, are the most effective methods for preventing colonization by bacteria that cause abnormal vaginal discharge. With only 2.70% of respondents exhibiting poor practices, the risk of reproductive tract infection incidence in this population can theoretically be minimized. These findings provide empirical confirmation of the study by [Putri et al. \(2024\)](#), which stated that behavioral intervention is the primary key to controlling adolescent reproductive health morbidity.

However, the presence of respondents with “sufficient” knowledge (27.30%) and “sufficient” practices (38.20%) must not be overlooked. This middle-range group represents a crucial target for intervention as they have the potential to shift toward poor practices if they do not receive reinforcement. [Jatimineng et al. \(2024\)](#) suggested that, for this group, conventional education may no longer be effective and should be replaced with more persuasive methods. [Jannah and Sutarno \(2022\)](#) added that transitioning from “sufficient” to “good” practices requires a deeper internalization of values (attitude), rather than a mere transfer of cognitive information.

The role of the external environment, particularly family support, was also identified as a latent variable that strengthened the positive findings in this study. The high rate of good practices (59.10%) likely does not stand alone but is supported by parenting styles and information openness at home. [Mitaba et al. \(2024\)](#) emphasized that adolescent girls who receive emotional and informational support from their mothers tend to exhibit more disciplined hygiene practices. This is relevant to the characteristics of mid-adolescent respondents who still rely on parental figures for health-related decision-making. Therefore, the synergy between school education and the family's role is an inseparable determining factor.

In addition to family factors, exposure to the media also contributed to the respondents' high level of knowledge. [Ratna et al. \(2023\)](#) demonstrated that visual educational media, such as videos, are highly effective at increasing adolescent knowledge retention. In the current digital era, the access of SMA Negeri 1 Katingan Tengah students to health information via the internet likely enriched their understanding, which is reflected in the dominance of the "good" knowledge category. However, information filtering is essential to ensure that the formed understanding is valid and scientific, rather than misleading health myths ([Sari et al., 2023](#)).

The findings of this study also highlight the importance of behavioral consistency during menstruation. [Faj'ri et al. \(2022\)](#) warned that the menstrual period is the most vulnerable time for adolescent girls, necessitating heightened hygiene practices. The descriptive data indicated that despite having good knowledge, there are still gaps in specific practices, such as the frequency of changing sanitary pads, which may not be optimal in the "sufficient" practice group. Specific education on menstrual hygiene management needs to be a subsequent focus, as infections during this period can have long-term effects on fertility ([Nisa & Yudha, 2024](#)).

Overall, the results of this study confirm that knowledge plays a central role as the foundation of behavior, but it is not the sole determinant. The positive linear trend between knowledge and practices among the majority of respondents proves that reproductive health curricula in schools have a positive impact. However, the data deviation among a small minority of respondents serves as a reminder that a holistic approach encompassing attitudes, facilities, and social support is necessary. The integration of these various factors will create an ecosystem conducive to the establishment of sustainable healthy behaviors.

As a practical implication, the high percentages of good knowledge and practices at SMA Negeri 1 Katingan Tengah should be maintained and enhanced through peer-educator or peer-counselor programs. This method is considered effective because adolescents tend to be more open with their peers ([Waruwu et al., 2021](#)). Furthermore, creative media interventions, as suggested by [Ratna et al. \(2023\)](#), can be implemented

to reach respondents who are still at the “poor” and “sufficient” knowledge and practice levels, ensuring an equitable distribution of reproductive health status across the entire female student population.

CONCLUSIONS AND SUGGESTIONS

The results of this study involving 110 respondents at SMA Negeri 1 Katingan Tengah demonstrated a positive reproductive health profile based on quantitative descriptive analysis. The data showed that adolescent girls’ knowledge was predominantly in the good category (66.40%), followed by the sufficient (27.30%) and poor (6.30%) categories. In line with the knowledge indicators, vulvar hygiene practices were predominantly in the good category (59.10%), with sufficient practices at 38.20% and poor practices at 2.70%. These data indicated a positive linear association between the two variables, wherein an increase in cognitive understanding directly correlated with the quality of reproductive organ hygiene practices implemented.

This conclusion addresses the research problem and objectives, affirming that knowledge is a fundamental determinant of health behaviors. However, specific data analysis revealed a gap among respondents who had adequate knowledge but maintained hygiene practices at the “sufficient” level. This phenomenon indicates that the cognitive aspect does not operate in isolation; rather, other factors, such as the availability of facilities or internal motivation, influence the conversion of knowledge into actual practice. This underscores the necessity for a more comprehensive approach to align theoretical understanding with daily practice.

Follow-up recommendations for the educational institution focus on strengthening health program implementation by establishing adolescent health cadres (peer educators). This method is necessary to create more effective peer-to-peer health communication channels. In addition to educational interventions, physical infrastructure support specifically adequate access to clean water and proper sanitation facilities within the school environment is a technical prerequisite for improving female students’ hygiene practices.

The implications for policymakers, particularly the Health Department and Community Health Centers, highlight the need to revitalize health promotion methods within the School Health Unit program by adopting visual, technology-based educational media relevant to adolescents’ demographic characteristics. For academic development, future research is recommended to expand the analysis variables by examining other external determinants, such as the influence of local culture, social media exposure, and the role of peers, to obtain a more holistic understanding of adolescent reproductive health behavior formation.

REFERENCES

- Anjarsari, H., Muzakkir, A. K., Badollahi, M. Z., & Busro, B. (2024). The Role of Sanro Pammana in the Traditional Healthcare System of the Bugis People: A Case Study of Birth Rituals and Maternal and Infant Care. *SIGn Journal of Social Science*, 5(1), 32-49. <https://doi.org/10.37276/sjss.v5i1.386>
- Annah, I., Hadina, M., & Damiti, S. A. (2024). Early Marriage Incidence Before and During the Covid-19 Pandemic: A Case Study in Palangka Raya City. *SIGn Journal of Public Health*, 3(2), 31-44. <https://doi.org/10.37276/sjph.v3i2.657>
- Dahlan, M. S. (2020). *Statistik untuk Kedokteran dan Kesehatan: Deskriptif, Bivariat, dan Multivariat, Dilengkapi Aplikasi Menggunakan SPSS*. Epidemiologi Indonesia.
- Faj'ri, R. A., Sunirah, S., & Wada, F. H. (2022). Hubungan Tingkat Pengetahuan tentang Personal Hygiene Terhadap Perilaku Remaja Putri Saat Menstruasi. *Jurnal Ilmiah Keperawatan IMELDA*, 8(1), 78-85. <https://doi.org/10.52943/jikeperawatan.v8i1.687>
- Hanifah, N. N. (2022). Gambaran Tingkat Pengetahuan Remaja Putri tentang Vulva Hygiene di Pondok Pesantren Budi Utomo Surakarta. *Jurnal Ilmiah Kesehatan Masyarakat*, 1(4), 679-686. <https://doi.org/10.55123/sehatmas.v1i4.974>
- Jana, A. D. (2024). The Relationship Between Knowledge Level and Vaginal Hygiene Practices to Abnormal Vaginal Discharge in Adolescents. *Idea: Future Research*, 2(1), 37-46. Retrieved from <https://idea.ristek.or.id/index.php/idea/article/view/20>
- Jannah, M. M., & Sutarno, M. (2022). Effect of Knowledge Attitudes of Vulva Hygiene Behavior in Female Adolescent at SMAN 1 Sukakarya Bekasi Period February 2022. *Science Midwifery*, 10(2), 1086-1091. Retrieved from <https://www.midwifery.iocspublisher.org/index.php/midwifery/article/view/456>
- Jatimineng, A. R., Handayani, Y., & Shifa, N. A. (2024). Hubungan Tingkat Pengetahuan dan Sikap dengan Perilaku Vulva Hygiene pada Remaja Putri Saat Menstruasi di Kelas X di SMA Perguruan Rakyat 2 Jakarta Timur Tahun 2023. *Jurnal Ventilator: Jurnal Riset Ilmu Kesehatan dan Keperawatan*, 2(1), 227-236. <https://doi.org/10.59680/ventilator.v2i1.997>
- Kenzi, S., & Anastasya, S. (2024). Understanding the Relationship Between Knowledge, Vaginal Hygiene Practices, and Vaginal Discharge in Adolescents. *International Journal on Health and Medical Sciences*, 2(2), 53-62. <https://doi.org/10.35335/healmed.v2i2.262>
- Mitaba, T., Suminar, M., & Kartikasari, R. F. (2024). Hubungan Dukungan Keluarga dengan Perilaku Vulva Hygiene pada Remaja Putri. *Jurnal Kesehatan STIKes IMC Bintaro*, 7(1), 91-98. <https://doi.org/10.63448/rf6cq994>

- Nisa, F., & Yudha, E. K. (2024). The Relationship between Vulva Hygiene Behavior and the Risk of Vaginal Discharge (Fluor Albus) in 8th Grade Adolescent Girls at SMPN 1 Parongpong. *Health Dynamics*, 1(12), 448-453. <https://doi.org/10.33846/hd11203>
- Notoatmodjo, S. (2018). *Metodologi Penelitian Kesehatan*. PT. Rineka Cipta.
- Nursalam. (2020). *Metodologi Penelitian Ilmu Keperawatan: Pendekatan Praktis* (Fifth Edition). Salemba Medika.
- Parwati, N. W. M., Swantari, N. K. D., & Suyasa, I. G. P. D. (2022). Hubungan Pengetahuan dan Perilaku Vulva Hygiene Saat Menstruasi dengan Kearifan Pruritus Vulvae. *Jurnal Ilmu Kesehatan MAKIA*, 12(2), 160-167. <https://doi.org/10.37413/jmakia.v12i2.217>
- Pratiwi, R., Risala, A. F., & WijayaRisala, O. P. (2023). Hubungan Pengetahuan dan Sikap dengan Perilaku Vulva Hygiene Saat Menstruasi pada Siswi SMP Muhammadiyah 06 Palembang Tahun 2022. *Medical Scientific Journal (MESINA)*, 4(1), 54-63. Retrieved from <https://jurnal.um-palembang.ac.id/msj/article/view/7289>
- Putri, F. S., Saadah, N., Sumaningsih, R., & Heru, S. W. N. (2024). The Relationship Between Personal Hygiene Behavior and the Incidence of Vaginal Discharge. *International Journal of Advanced Health Science and Technology*, 4(3), 197-201. <https://doi.org/10.35882/ijahst.v4i3.358>
- Ratna, R. N., Mariza, A., Yuviska, I. A., & Putri, R. D. (2023). The Effect of Vulva Hygiene Education Video Media on the Knowledge Level and Attitude of Adolescent Women with Fluor Albus. *JKM (Jurnal Kebidanan Malahayati)*, 9(2), 293-301. <https://doi.org/10.33024/jkm.v9i2.8063>
- Sari, I. P., Mariana, S., Monica, O. T., & Rahmah, R. (2023). Hubungan Pengetahuan dan Sikap Remaja Putri dengan Perilaku Vulva Hygiene di Sekolah Menengah Kejuruan Swasta Keluarga Bunda Jambi. *Jurnal Ilmiah Ners Indonesia*, 4(2), 169-176. <https://doi.org/10.22437/jini.v4i2.25565>
- Shintya, L. A., & Kasenda, G. (2024). Pengetahuan dan Perilaku Vulva Hygiene Saat Menstruasi pada Siswi Sekolah Menengah Pertama. *Klabat Journal of Nursing*, 6(1), 130-136. <https://doi.org/10.37771/kjn.v6i1.1113>
- Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- Waruwu, F., Rizal, A., & Yuliza, E. (2021). Pengetahuan dan Perilaku Vulva Hygiene Dapat Menurunkan Angka Kejadian Keputihan pada Remaja Putri: Knowledge and Behavior of Vulva Hygiene Can Reduce the Incidence of Vaginal Discharge in Young Women. *Indonesian Scholar Journal of Nursing and Midwifery Science*, 1(4), 141-147. <https://doi.org/10.54402/isjnms.v1i04.71>
- Wei, L. L., & Arisani, G. (2024). An Overview of Postpartum Mothers' Knowledge Regarding Exclusive Breastfeeding at Pahandut Primary Health Center. *SIGN Journal of Public Health*, 3(2), 1-16. <https://doi.org/10.37276/sjph.v3i2.655>
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