

VULVAR HYGIENE DURING MENSTRUATION IS ASSOCIATED WITH
VULVAR PRURITUS IN ADOLESCENT GIRLS

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Article Info	Abstract
DOI : https://doi.org/10.26751/ijp.v10i2.2689	<p>Vulvar pruritus is a common problem experienced by adolescents during menstruation, which can be caused by inadequate vulvar hygiene. Maintaining hygiene during menstruation can prevent reproductive tract infections. This study aimed to identify the correlation between vulvar hygiene during menstruation and the incidence of vulvar pruritus in female students. The study was conducted at MA Nurul Huda Medini Demak on November 16, 2024, using a quantitative study with a correlational research design and a cross-sectional approach. The variables in this study were vulvar hygiene during menstruation and vulvar pruritus. The study population consisted of 134 female students, with a sample of 100 students selected using a simple random sampling technique. Data collection used vulvar hygiene and vulvar pruritus questionnaires. The data were analyzed using the Spearman rank test. The results showed a statistically significant relationship between vulvar hygiene during menstruation and vulvar pruritus in adolescent girls at MA Nurul Huda Medini Demak with a p-value of $0.001 < \alpha = 0.05$, with a moderate strength (0.342) and a unidirectional relationship. Vulvar hygiene during menstruation is essential to maintain the health of women's reproductive organs, especially to prevent reproductive tract infections such as vulvar pruritus. It is expected that educational institutions can contribute to a deeper understanding of scientific disciplines so that they can increase adolescents' knowledge of vulvar hygiene, both during and outside of menstruation .</p>
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I. INTRODUCTION

The World Health Organization (WHO) defines adolescents as individuals aged 10 to 19 years and youth as those aged 15 to 24 years (WHO, 2021). Adolescents are those aged between 10-19 years and unmarried (Indanah et al., 2020). In society, adolescents are known as an age group that is neither children nor adults (Yulisetyaningrum et al., 2023). Globally, there are 1.3 billion adolescents, representing 16% of the world's population (UNICEF, 2024). In Southeast Asia, there are 360 million adolescents, comprising 20% of the adolescent population in the region (WHO, 2021). In Indonesia, the number of female adolescents aged 10-19

years in 2023 was recorded as 21,461.3 residents, while in 2022 in Central Java it reached 2,689,112 people (BPS, 2022). According to the Central Java Provincial BPS, in 2023 in Demak Regency, females aged 10-19 years increased to 17.03% (BPS, 2023).

Adolescent development includes physical, mental, social, and emotional aspects (Hartinah et al., 2023). Menstruation is one of the signs of puberty in adolescent girls, during menstruation, there will be an increase in moisture, facilitating bacterial growth, which can lead to infection risks on the vulvar skin surface and surrounding areas. Additionally, germs can easily enter, causing

genital organ disorders (Trisetiyaningsih et al., 2020). Many adolescents often neglect the importance of maintaining genital hygiene, especially during menstruation.

Based on WHO survey data, over 500 million adolescents have reproductive health problems, such as genital infections with the herpes simplex virus (HSV). Globally, the highest prevalence of reproductive tract infections is among adolescents, ranging from 35% to 42%, with candidiasis at 25%-50%, bacterial vaginosis at 20-40%, and trichomoniasis at 5%-15% (Auliani et al., 2021). Common female reproductive health disorders in Indonesia include 20% infertility, 15% vaginal discharge, 35% uterine cancer, 52% cervical cancer, and 5% candidiasis (Auliani et al., 2021). In addition to global rates, Indonesia has the highest prevalence of reproductive tract infections among adolescents, reaching 42% (Umami et al., 2021).

Vulvar hygiene is a significant issue for adolescent girls, as many are unaware of the correct vulvar hygiene practices (Umami et al., 2021). Several countries report poor menstrual hygiene practices, such as India (44.8-81.7%), Nepal (27.5-40%), Kenya (28.8%), Ghana (69.9%), Bangladesh (68.5%), Uganda (45.45%), and Nigeria (74.7%) (Maharani et al., 2023). According to Indonesian statistical information, 63 million adolescent girls have very poor hygiene behaviors, 30% have poor genital hygiene practices, and 70% use sanitary pads inappropriately (Mu'minun et al., 2021). Reproductive organs are very sensitive and require special care to prevent problems and maintain reproductive function. Poor vulvar hygiene, especially during menstruation, can trigger menstrual discomfort, such as vulvar pruritus.

Vulvar pruritus is defined as inflammation or itching in the vulvar area, caused by poor vulvar hygiene practices and inadequate care of the vulvar area, leading to moisture. According to research by the Indonesian Ministry of Health, 5.2 million adolescent girls complain of vulvar pruritus (Amallya et al., 2022). In Central Java, pruritus cases among adolescents have increased by 79.4%,

with 82% of cases involving *Candida albicans*, which proliferates rapidly, especially in moist areas during menstruation (Kusumastuti et al., 2021).

Demak Regency is located in Central Java. Based on a preliminary survey conducted through interviews with 10 tenth-grade students at MA Nurul Huda Medini Demak, all 10 students had experienced vulvar pruritus, with 3 students (30%) experiencing pruritus that led to scratching, causing soreness and abrasions, 5 students (50%) experiencing itching that resulted in redness, thickened skin, and scaling in the vulvar area, and 2 students (20%) occasionally experiencing itching around the vulva. When interviewed about vulvar hygiene behavior using a questionnaire, 5 out of 10 students (50%) had poor vulvar hygiene, 4 students (40%) had good vulvar hygiene, and 1 student (10%) had moderate vulvar hygiene. The researcher determined vulvar hygiene categories by scoring student responses and then summing the scores. A score of 31-40 indicates good vulvar hygiene, 24-30 indicates moderate vulvar hygiene, and <24 indicates poor vulvar hygiene (Lestari, 2020).

Currently, technological developments can support and accelerate learning outcomes, both cognitive and psychomotor, for adolescent students. However, technological advancements have hindered their ability to learn (Kartikasari et al., 2023). This can occur because some assume that adolescents can independently seek and understand information about reproductive issues, leading to less discussion, coupled with taboos or myths about menstruation that are still practiced in society (Hubae.dah, 2019). Therefore, the researcher is interested in studying the relationship between vulvar hygiene behavior during menstruation and the incidence of vulvar pruritus among adolescent girls at MA Nurul Huda Medini. The aim of this study is to identify the relationship between vulvar hygiene during menstruation and the incidence of vulvar pruritus among students at MA Nurul Huda Medini Demak.

II. METHOD

This type of research is quantitative research using a correlational research method. The correlational research method is a research method that investigates the degree of relationship between one variable and another variable being studied based on the correlation coefficient (Hikmawati, 2021). The design used in this study is cross-sectional, where the researcher measures variables at the same time across several different sample groups (Widodo et al., 2023). Before conducting the research, the researcher obtained ethical approval from the Health Research Ethics Committee (KEPK) of Muhammadiyah University of Kudus with No. 59/Z-7/KEPK/UMKU/XI/2024.

The independent variable in this study is vulvar hygiene during menstruation. The dependent variable is vulvar pruritus. The research was conducted at MA Nurul Huda Medini Demak on November 16, 2024, with a population of all female students of MA Nurul Huda Medini Demak in grades X, XI, and XII for the 2023/2024 academic year, who were actively registered based on information from the school's administrative data, totaling 134 students (Secondary Data, 2024). This study did not use specific sample criteria; the sample consisted of adolescent girls who had experienced menstruation.

In this study, the sample size was determined using the Slovin formula, resulting in 100 students. The sampling technique used was probability sampling with simple random sampling. Probability sampling is a method of selecting samples that gives equal opportunity to all members of the population. Simple random sampling is the selection of samples from a population by randomizing without considering strata (Sahir, 2022). The researcher randomized respondents using a table containing the results of questionnaire completion by respondents, then assigned numbers to each respondent, and randomly selected numbers.

The researcher used a data collection technique with two questionnaires: a vulvar hygiene behavior questionnaire and a vulvar pruritus questionnaire. The vulvar hygiene

questionnaire was adapted from a previous study (Swantari, 2021) with a Likert scale, providing answer choices consisting of always, often, sometimes, and never. The measurement results for vulvar hygiene behavior were analyzed using frequency distribution with an ordinal scale (Swantari, 2021). The questionnaire's validity and reliability were tested using Pearson product moment, yielding a table r-value of 0.514 with a significant r-table value of 0.05 (5%). The calculated r-value for all questions in the questionnaire was greater than the table r-value, indicating the questionnaire was valid. The reliability test using computer software yielded a Cronbach's Alpha value > 0.6 , indicating reliability.

The vulvar pruritus questionnaire was adapted from (Lestari, 2020), consisting of 10 questions with a Guttman scale. The researcher used yes-no answer choices to measure vulvar pruritus. The researcher used the Guttman scale to obtain clear (definite) and consistent answers to the issues asked. The validity of this questionnaire was tested using face validity, where the instrument had been validated by two expert lecturers in the field. The instrument used was a structured questionnaire with closed-ended questions. Expert I and Expert II stated that the questionnaire met the criteria in the face validity test sheet, indicating the questionnaire was valid. A closed-ended questionnaire is a type of questionnaire prepared by the researcher with provided answer alternatives, allowing respondents to directly choose from the provided answers (Putri & Ferdianto, 2023). The obtained data will be tested using the Spearman rank test, processed using computer software.

III. RESULTS AND DISCUSSION

Adolescence is a developmental period experienced by individuals from childhood to adulthood. Several developments that adolescents may experience include hormonal changes such as menarche and menstruation, physical changes like the onset of breast budding, increased curiosity towards new things, a tendency to be more

sensitive, and greater susceptibility to peer influence. In this study, the characteristics of the respondents were as follows :

Table 1. Frequency distribution of respondents' characteristics based on age and parents' last education (n=100)

Characteristics	f	%
Age		
15 years	23	23
16 years	32	32
17 years	37	37
18 years	6	6
19 years	2	2
Parents last education		
SD	39	39
Junior High School	34	34
Senior High School	26	26
Bachelor	1	1
Total	100	100

Source : Prime Data, 2024

Based on Table 1, it can be explained that the majority of respondents were adolescents aged 17 years, with 37 respondents (37%). This is in line with the research by (Diana et al., 2023), which found that the majority of respondents were 17 years old (mid-adolescence). Age can influence understanding and mindset, so as age increases, understanding and mindset also develop, which impacts better behavior (Diana et al., 2023).

Meanwhile, the majority of respondents' parents' last education level was elementary school, with 39 respondents (39%). Parental education can be a factor that influences adolescent girls' vulvar hygiene habits. Parents with higher education can improve communication between mother and child. If mother and child have good communication, a good relationship can be established. Additionally, the child will be open with their parents, allowing the parents to provide accurate information. The child will also feel fully supported in maintaining reproductive health, one of which is by practicing good vulvar hygiene (Shalsabila, 2019).

Table 2. Frequency distribution of respondents based on vulvar hygiene during menstruation among adolescent girls at MA Nurul Huda Medini De.mak. (n=100).

Vulva Hygiene during menstruation in female students	f	%
Good	30	30
Enough	68	68
Not enough	2	2
Total	100	100

Source: Prime. Data, 2024

Based on Table. 2, it can be. explained that the. vulvar hygiene behavior during menstruation performed by the students was mostly in the 'sufficient' category, with 68 respondents (68%). The researcher identified that some. respondents performed inappropriate. vulvar hygiene practices, such as washing the. vulva from back to front, changing sanitary pads after more. than 6 hours, and using special soaps when cleaning the. vulva.

In performing vulvar hygiene, vulvar cleansing soaps are actually unnecessary because these. soaps can dry out the vagina, cause itching due to allergies, and irritate the mucous membranes. Every vulvar cleanser contains chemicals that can disrupt the balance. of beneficial bacteria in the. vagina (Hidayah e.t al., 2021).

Table 3. Frequency distribution of respondents based on vulvar pruritus during menstruation among adolescent girls at MA Nurul Huda Medini Demak (n=100).

Vulvar pruritus	F	%
No Pruritus	1	1
Mild Pruritus	15	15
Moderate Pruritus	76	76
Severe Pruritus	8	8
Total	100	100

Source : Prime. Data., 2024

Based on Table 3, it can be explained that the majority of respondents experienced moderate vulvar pruritus, with 76 respondents (76%). Problems that can occur during menstruation are extensive, one of

which is vulvar pruritus. Vulvar pruritus is a disorder of the. external reproductive organs characterized by itching sensations (Setyawati e.t al., 2024).. The. signs and symptoms that appe.ar will vary in each

individual. Usually, the itching will trigger the urge to scratch, but if the. vaginal skin is scratched, it can increase the risk of infection (Nikmah & Ni'mah, 2020).

Table 4. The relationship between vulvar hygiene during menstruation and vulvar pruritus among adolescent girls at MA Nurul Huda Medini Demak (n= n = 100)

Vulva hygiene during menstruation	Vulvar pruritus								Total		P Value	Correlation Value Coefficient
	No Pruritus		Light		Currently		Heavy					
	N	%	N	%	N	%	N	%	N	%		
Good	1	1	10	10	18	18	1	1	30	30	0.001	0.342
Enough	0	0	5	5	56	56	7	7	68	68		
Not enough	0	0	0	0	2	2	0	0	2	2		
Amount	1	1	15	15	76	76	8	8	100	100		
Spearman rank test α : 0.05												

Source: Primary Data, 2024

Based on Table. 4, it can be explained that the statistical test results using the. Spearman rho test obtained a p-value of $0.001 < (\alpha = 0.05)$, which means there is a statistically significant relationship between vulvar hygiene during menstruation and vulvar pruritus among adolescent girls at MA Nurul Huda Medini Demak, with a moderate strength of association (0.342) and a positive (direct) relationship. This is in line with the. research conducted by (Sitompul, 2022), which found a p-value of 0.001, indicating a relationship between vulvar hygiene during menstruation and the incidence of vulvar pruritus. Furthermore, it is also consistent with the research by (Shalsabila, 2019), which, based on the bivariate test results, found a significant relationship between vulvar hygiene behavior and the incidence of vulvar pruritus during menstruation among medical faculty students at Yarsi University in the 2019 class, with a p-value of 0.028 ($P<0.05$).

Hygiene during menstruation is crucial in determining the reproductive health of adolescent girls, especially to avoid reproductive tract infections. During menstruation, women should diligently maintain the cleanliness of their reproductive organs, particularly the vagina, as neglecting hygiene can lead to an overgrowth of microorganisms such as bacteria, fungi, and viruses, there by disrupting reproductive

organ function (Lestari & Attamimi, 2023). The purpose of practicing vulvar hygiene is to improve health, maintain personal cleanliness, prevent diseases, and boost self-confidence. Reproductive organ hygiene is essential to consider, as the vulvar are a experience since ased moisture. during menstruation, making it more susceptible to infections. There fore, maintaining personal hygiene during menstruation is crucial to prevent disruption of the female reproductive system (Manoppo e.t al., 2024).

This study has limitations, including the. presence of confounding factors, where the researcher could not control confounding factors such as the frequency and method of bathing or maintaining body hygiene during menstruation, as well as the presence of fungal infections, dermatitis, or allergies that can also cause vulvar pruritus. The researcher experienced weaknesses in the data collection process, as this study did not involve direct observation of the students' vulvar hygiene habits. There fore, the honesty of the students in answering all the researcher's questions is crucial to minimize. bias in the. study.

Conclusion

Based on the results of there search conducted, it can be concluded that the vulvar hygiene behavior among adolescent girls at MA Nurul Huda Medini Demak is mostly in the 'sufficient' category, with 68

respondents (68%). The vulvar pruritus experienced by adolescent girls at MA Nurul Huda Medini De.mak is mostly in the 'moderate.' vulvar pruritus category, with 76 respondents (76%). Based on the. Spearman rank statistical test, there is a statistically significant relationship between vulvar hygiene. during menstruation and vulvar pruritus among adolescent girls at MA Nurul Huda Medini De.mak, with a p-value. of $0.001 < \alpha = 0.05$, a moderate strength of association (0.342), and a positive. (direct) relationship.

It is hoped that the. research location or educational institution can contribute. to a deeper discipline. of knowledge., the.re.by enhancing adolescents' understanding of vulvar hygiene.. For further research, it is recommended to conduct more. in-depth studies considering other factors that may influence. vulvar pruritus and to explore. more. effective preventive approaches in educating the. community.

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