

THE CORRELATION BETWEEN PERSONAL HYGIENE OF ADOLESCENT GIRLS DURING MENSTRUATION TOWARD THE INCIDENCE OF PRURITUS VULVAE AT ONE OF THE HIGH SCHOOLS IN DOLOK SANGGUL

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ABSTRACT

Pruritus vulvae refer to itching of the external female genitalia. Pruritus vulvae refer to the occurrence of itching in the area of the female genitalia during menstruation. Up to 5.2 million Indonesian adolescent girls frequently have pruritus vulvae, a condition characterized by itching in the external female genital area, following menstruation as a result of inadequate personal hygiene practices. Based on the findings of an initial survey conducted on a sample of 25 students at a high school in Dolok Sanggul, it was observed that every student reported experiencing itchiness in the female genital area during menstruation. The objective of this study is to investigate the possible correlation between menstrual hygiene practices and the occurrence of pruritus vulvae in adolescent girls who are enrolled in a high school in Dolok Sanggul. This study employed an analytical quantitative approach with a cross-sectional methodology. This study employed the method of accidental sampling to choose a sample of 41 female students. The research instrument included a questionnaire to examine the correlation between personal hygiene practices and the occurrence of pruritus vulvae. The research was done between February and April 2023. The study findings indicated that 63.4% of class XII students exhibited adequate personal cleanliness practices during menstruation, whereas 82.9% of respondents reported no occurrence of pruritus vulvae. The study found no significant correlation between personal hygiene behaviour and pruritus vulvae, as indicated by the results of the Chi-square test ($p\text{-value} = 0.629, p < 0.05$). In order to enhance our research, we want to integrate supplementary research factors and augment the participant pool.

Keywords: Hygiene, Menstruation, Pruritus vulvae

INTRODUCTION

Reproductive health is the state of a healthy reproductive system that is free from disease or disability (WHO, 2022). Reproductive health is important to get attention to, especially among adolescents who are experiencing a period of rapid physical, psychological, or intellectual growth and development (Bone et al., 2022)

Adolescents are included in the age group of 10–19 years and experience a transition period from children to adults, which is characterized by physical, sexual, and

psychological changes (WHO, 2018) as well as the growth of secondary sexual signs (Harahap, 2021) such as breast enlargement, pubic hair growth, and menstruation (Ashari, 2019).

Menstruation is a biological process that causes the shedding of the uterine wall (Dartiwen & Aryanti, 2022). During menstruation, the blood vessels of the uterus are prone to infection, pruritus vulvae can also be due to moist vaginal conditions (Ashari, 2019).

Currently, the global population of young

individuals between the ages of 10 and 24 is at 1.8 billion. In Indonesia, out of the overall population of 273.5 million, there are more than 46.3 million adolescents aged 10 to 19 years (WHO, 2022). Up to 5.2 million Indonesian adolescents frequently suffer from pruritus vulvae following menstruation. This is a result of inadequate personal hygiene.

As many as 63 million out of 69.4 million adolescents have poor personal hygiene (Kementerian Kesehatan RI, 2014). Personal hygiene during menstruation plays an important role in determining reproductive health status (Bone et al., 2022). The menstrual cycle that occurs causes the uterine blood vessels to be susceptible to infection because it is influenced by the moist vaginal area, resulting in pruritus vulvae (Ashari, 2019). Poor hygiene behavior can also lead to a high incidence of reproductive tract infections (Bone et al., 2022).

Personal hygiene and sanitation ranked third among the top 10 risk factors for pain, mortality in adolescence, while reproductive health ranked eighth (Hanifah, 2022). The rate of vulvae pruritus in Germany has been recorded to range from 5-10% (Woelber et al., 2020). In the United States, the rate of

vaginitis reported by general gynecology is 32%-64% (Parsapure et al., 2016), and according to Kandanearachchi, about 67.3% of doctors in the UK reported that there were five patients in one month who experienced pruritus vulvae (Raef & Elmariah, 2021).

Pruritus vulvae refer to intense itching in the external genitalia of women during menstruation. This occurs because the moist environment of the female genital area promotes the growth of fungus and bacteria, leading to itching (Hubaedah, 2019).

Pruritus vulvae can be avoided with the practice of proper personal hygiene. Prior research conducted by Pandelaki et al. (2020), shown a correlation between improved personal cleanliness behaviour and a moderate level of pruritus vulvae. In a study conducted by Hubaedah (2019), it was discovered that 63.3% of the 50 respondents exhibited poor behaviour, while 74.7% of the 59 respondents reported vulva pruritus. This indicates a correlation between vulva hygiene behaviour and vulva pruritus.

According to initial data collected from a sample of 25 female students at a high school in Dolok Sanggul, it was found that 60% of them were unaware of the concept of personal hygiene. Additionally, 100% of the

participants reported experiencing itching and redness in the female genital area, while 80% reported having vaginal discharge. Furthermore, it was observed that 100% of the students rarely changed their pads every 4 hours, and 80% did not practice good personal hygiene. Therefore, based on the initial problems found from the preliminary research, the researcher was interested in conducting research on “the correlation between personal hygiene of adolescent girls during menstruation toward the incidence of pruritus vulvae at one of the senior high schools in Dolok Sanggul.

METHOD

This study used a quantitative correlational method with a cross-sectional design that aimed to see the correlation between personal hygiene during menstruation toward the incidence of pruritus vulvae, with personal hygiene as the independent variable and the incidence of pruritus vulvae as the dependent variable.

The survey included the entire population of female students in class XII, aged 18 and above, from one of the Dolok Sanggul senior high schools. The sample collection in this study utilized the accidental sampling technique, which involved selecting individuals based on chance encounters with

the researcher, regardless of any specific criteria.

The research utilized a total of 41 samples. The inclusion criteria consisted of female high school students in grade XII from one of the high schools in Dolok Sanggul, who were 18 years old or older and willing to participate as respondents. On the other hand, female students who experienced amenorrhea were excluded from the study.

The questionnaire utilized in this study was sourced from the research conducted by Laily (2022). The questionnaire's validity was assessed using the Pearson product-moment correlation technique. From the results of the r table (0.790) r count $>$ r table was said to be valid. The questionnaire underwent a reliability test using Cronbach's alpha, resulting in an alpha value of 0.912. Since a value $>$ r table, the questionnaire was considered reliable.

The research had obtained ethical approval from the Ethics Commission of the Faculty of Nursing, Pelita Harapan University, under the reference number 009/KEPFON/I/2023. This study employed both univariate and bivariate analysis. A univariate analysis was conducted to elucidate the frequency distribution of each variable. A bivariate

analysis was performed utilizing the chi-square test to determine the association between the two variables.

RESULT

According to the data in Table 1, the majority of respondents were 18 years old, specifically 36 (87.8%) female students. According to the conducted research, all respondents had a regular menstrual cycle of 41 (100%). Out of a total of 38 respondents, which accounts for 92.7% of the participants, the majority indicated that their menstruation lasts for 4-7 days. Over 50% of the participants reported using a sanitary pad less than 4 times per day, including 23 female students, which accounted for 56.1% of the total. As many as 18 (43.9%) female students obtained information on pruritus vulvae primarily from the internet or social media.

Table 1. Respondent Characteristics (n=41)

Category	Frequency (n)	Percentage (%)
Age		
18 years	36	87.8
19 years	5	12.2
Menstrual cycle		
Regular	41	100
Irregular	0	0
Menstrual Duration		
4-7 days	38	92.7
>7 days	3	7.3
Frequency of sanitary pad use		
4-6x a day	18	43.9
<4x a day	23	56.1
Source of information		
Parents/family	14	34.1
School	6	14.6
Television/Radio	0	0
Internet/social media	18	43.9
Newspaper/Magazine	0	0
Health workers	3	7.3

Table 2. Personal Hygiene during Menstruation (n=41)

Category	Frequency (n)	Percentage (%)
Good	15	36.6
Adequate	26	63.4
Poor	0	0

Table 2 indicated those 26 respondents, accounting for 63.4% of the total, exhibited satisfactory personal hygiene practices during menstruation.

Table 3. Incidence of Pruritus Vulvae (n=41)

Category	Frequency (n)	Percentage (%)
Yes	7	17.1
No	34	82.9

Table 3 showed that 34 (82.9%) respondents did not experience pruritus vulvae.

Table 4. The Relationship between Personal Hygiene during Menstruation and The Incidence of Pruritus Vulvae (n=41)

Personal hygiene behavior	Pruritus vulvae				P-value
	Yes		No		
	f	%	f	%	
Good	2	13.3	13	86.7	0.629
Enough	5	19.2	21	80.8	

According to table 4, the analysis data using the Chi-Square test showed that the P value was 0.629 ($p < 0.05$), hence H1 was not accepted. These results suggested that there was no correlation between personal hygiene behaviour during menstruation and the incidence of pruritus vulvae.

DISCUSSIONS

According to the research findings, 36 (87.8%) respondents were 18 years old. Alfi et al. (2022) stated in their research that adolescents had demonstrated the capacity to engage in rational thinking in order to prevent health issues during menstruation through the practice of maintaining personal cleanliness. Furthermore, adolescents have gained awareness of both the beneficial and detrimental effects that might arise from neglecting personal hygiene practices during menstruation.

Based on the results of the study, 41 (100%) respondents had a regular menstrual cycle. According to Sinaga (2020), the normal menstrual cycle range is 28–35 days. The menstrual cycle is said to be abnormal if it

lasts less than 21 days or more than 40 days.

Based on the results of the study, 38 (92.7%) respondents had a menstrual duration of 4–7 days. The menstrual cycle is a recurring period with a menstrual duration of about 3–7 days (Sinaga, 2020). This research is supported by Hilmiati & Saparwati, (2016), who states that the normal menstrual cycle lasts for 21–35 days, with the length of menstrual blood discharge lasting for 3–8 days.

More than half of the respondents in this study, specifically 23 (56.1%) female students, had a frequency of using sanitary napkins <4 times a day. According to Laili's research (2019), 63.2% of the participants did not frequently replace their pads. This was because adolescents felt it was wasteful to do so. Therefore, they considered changing pads 1-3 times a day to be sufficient. This study contradicts the idea proposed by Sholahuddin (2013), which suggests that menstrual pads should be changed every 5-6 hours. Using excessively long pads can disrupt the maintenance of moisture in the vaginal area, leading to the growth of fungus and bacteria, which can result in infection.

The primary information source in this study was the internet or social media, cited by 18 respondents, accounting for 43.9% of the total. The internet serves as a channel for adolescents to easily obtain information on personal hygiene behaviour through smartphone platforms, websites, and social media (Ria et al., 2020). Apart from the internet or social media, parents also played a role as a source of health information, as evidenced by 14 (34.1%) respondents obtaining information through parents. In line with this, Harahap (2021) found that 50% of respondents got information from their mothers. Parents, especially mothers, are the main source of information for girls regarding menstrual health management education (Sassi Mahfoudh et al., 2018).

Furthermore, the data analysis revealed that 26 (63.4%) respondents had adequate personal hygiene behavior during menstruation. This was in accordance with research conducted by Ashari (2019), where 91.1% of respondents had adequate personal hygiene behavior. This occurs due to a lack of awareness among adolescents on proper personal hygiene practices, perceiving personal hygiene as a trivial matter, and being unaware of the adverse consequences of improper personal hygiene behaviour. Swantari et al. (2022) found in their research

that 98 (51%) respondents had good personal hygiene behavior. Extended duration of menstruation leads to the development of positive vulva hygiene practices among participants.

The findings of this study are in contradiction to research conducted by Hubaedah, (2019), which categorized 50 (63.3%) of adolescent females' behaviour during menstruation as inadequate. Insufficient understanding among adolescents regarding vulva hygiene is another contributing factor to the absence of personal hygiene practices.

This is supported by the findings of a study carried out by researchers, which revealed that a significant number of participants hardly replace sanitary napkins, even when they are completely saturated or leaking.

According to Firdaus & Astutik (2019), this can cause the genitalia area to become moist so that germs and fungi can develop quickly. Hence, it is imperative for adolescents to diligently adhere to proper personal hygiene practices. This is supported by research findings, which reveal that a significant number of participants frequently cleanse the pubic region from the front. This practice serves as a preventive measure against the transmission of bacteria or dirt from the

rectum to the vagina. Researchers can infer from this that the outcomes of this study were impacted by the sources of information acquired by participants, specifically the internet and parents, which were the primary sources. The internet is a readily available information resource that can enhance the knowledge and comprehension of individuals regarding reproductive health. This includes moms who play a crucial role in educating their daughters about managing reproductive health throughout menstruation.

According to the study findings, a significant number of participants, up to 34 (82.9%), did not report any symptoms of pruritus vulvae.

This study aligns with the research conducted by Khatib et al. (2019), who found that maintaining good personal cleanliness can help prevent inflammation or redness of the vagina. If left untreated, these conditions can lead to itching or pruritus vulvae. This study diverges from Hubaedah's research (2019) as it reveals that 59 individuals (74.7%) encountered pruritus vulvae due to poor hygiene practices.

The findings of this study are contrary to Laili's, (2019) research, which reported that 32 respondents (56.1%) had vulvar pruritus

as a result of infrequent use of sanitary napkins. A lack of vaginal cleanliness is the primary cause of pruritus vulvae among most of respondents. The study's findings suggest that pruritus vulvae can be attributed to inadequate personal cleanliness practices (Pandelaki et al., 2020).

Based on this study, 21 (80.8%) respondents had adequate personal hygiene behavior during menstruation and did not experience pruritus vulvae. Research conducted by Khatib et al. (2019) found that 85.2% of respondents had good personal hygiene behavior by not experiencing an itchy sensation on the vulva. This study is not in line with the research of Hubaedah (2019), where 50 people had poor behavior, and as many as 47 people experienced pruritus vulvae. The findings indicate that modifications in menstrual hygiene practices are necessary in order to prevent pruritus vulvae.

This study also diverged from the research conducted by Swantari et al. (2022), in which as many as 98 respondents had good behavior but 44 respondents experienced pruritus vulvae in the mild category. The research conducted by Pandelaki et al. (2020) is inconsistent with this study, since it found that 65 (66.3%) of the respondents

experienced pruritus vulvae while exhibiting good behaviour.

Based on the findings of this study, personal cleanliness behaviour has a direct impact on the occurrence of pruritus vulvae. Despite having adequate personal hygiene, students in one of the

Dolok Sanggul high schools do not have pruritus vulvae. This can be attributed to the fact that kids acquire information about personal cleanliness and pruritus via the internet and their parents.

CONCLUSION

To sum up, there was no relationship between the personal hygiene of adolescent girl during menstruation toward the incidence of pruritus vulvae. This was evidenced by the results of the chi-square test ($p\text{-value} = 0.629$). Moreover, future researchers can enhance this work by investigating the impact of personal hygiene parameters on the occurrence of pruritus during menstruation, using a bigger sample size.

ACKNOWLEDGEMENTS

The researcher expresses gratitude to all individuals who contributed to the execution of this study, with special recognition to one of the senior high schools in Dolok Sanggul.

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