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Determinants of Personal Hygiene Behaviour of Adolescent During Menstruation in Junior High Schools in Jakarta

Determinan Perilaku Kebersihan Diri Remaja Pada Saat Menstruasi di SMPN X Jakarta

Trimawartinah[1]*, Hashifah Salma Azzahra[2]
[1, 2] Department of Public Health, Undergraduate Programme, Faculty of Health Sciences, Universitas Muhammadiyah Prof.Dr.Hamka Jakarta, Indonesia

***Correspondence:**
E-Mail/ Phone Number: tri_mawartinah@uhamka.ac.id/ 08569060716
Address: Jl. Limau II No.2, RT.3/RW.3, Kramat Pela, Jakarta 12130, Indonesia

ABSTRACT

Adolescent girls are prone to infections of the reproductive organs during menstruation, this can occur if they do not perform good menstrual hygiene. This study aims to determine the determinants of adolescent personal hygiene behaviour during menstruation at SMPN X Jakarta in 2024. This study used a cross-sectional design with stratified random sampling technique. The total population was 429 in all classes VII, VIII and IX, with a sample size of 94 who met the inclusion criteria. Data collection used a questionnaire instrument that was filled in directly by the respondent. Descriptive data analysis uses frequency counts and percentages, while relationship analysis with the chi-square test with a degree of significance of 5%. The results of the research data showed that more than half behaved well on personal hygiene during menstruation 79 students (84%), had high knowledge 72 students (76.6%), thought that Water, Hygiene and Sanitation (WASH) facilities were adequate during menstruation as many as 55 students (58.5%), and received peer support 62 students (66%). The results of the relationship test stated that there was a significant relationship between personal hygiene behaviour and the variables of knowledge (p value= 0.045) and peer support (p value= 0.044), but there was no significant relationship on the variable of school facilities related to water, hygiene, and sanitation (p value= 0.874). It is recommended that there should be a continuous health programme between increasing knowledge and increasing peer support, so that the problem of female reproductive organ hygiene can be resolved.
Keywords: Hygiene, menstruation, adolescents

ABSTRAK

Remaja putri rentan mengalami infeksi pada organ reproduksi pada masa mesntruasi, hal ini dapat terjadi apabila tidak melakukan kebersihan diri menstruasi yang baik. Penelitian ini bertujuan untuk mengetahui determinan perilaku kebersihan diri remaja pada saat menstruasi di SMPN X Jakarta tahun 2024. Penelitian ini menggunakan desain *cross-sectional* dengan teknik sampling stratified random sampling. Total populasi sejumlah 429 diseluruh kelas VII, VIII dan IX, dengan jumlah sampel sebanyak 94 yang memenuhi syarat kriteria inklusi. Pengumpulan data menggunakan intrumen kuesioner yang diisi langsung oleh responden. Analisis data deskriptif menggunakan jumlah frekuensi dan presentase, sedangkan analisis hubungan dengan uji kai kuadrat dengan derajat kemaknaan sebesar 5%. Hasil data penelitian menunjukan bahwa lebih dari setengah berperilakuan baik pada kebersihan diri saat menstruasi 79 siswi (84%), memiliki pengetahuan tinggi 72 siswi (76,6%), berpendapat bahwa fasilitas *Water, Hygiene and Sanitation* (WASH) memadai selama masa menstruasi sebanyak 55 siswi (58,5%), dan mendapat dukungan teman sebaya 62 siswi (66%). Hasil uji hubungan menyatakan ada hubungan yang signifikan antara perilaku kebersihan diri dengan variabel pengetahuan (nilai p=0,045) dan dukungan teman sebaya (nilai p=0,044), tetapi tidak ada hubungan yang signifikan pada variabel fasilitas sekolah terkait *water, hygiene, and sanitation* (nilai p= 0,874). Sebaiknya diadakan program kesehatan yang berkesinambungan antara peningkatan pengetahuan dan peningkatan dukungan teman sebaya, agar masalah kebersihan organ reproduksi wanita dapat teratasi.
Kata kunci: Kebersihan, menstruasi, remaja

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INTRODUCTION

Reproductive health is one of the important aspects in adolescent development, especially adolescent girls who are entering puberty. One of the main indicators of puberty in women is menstruation. Menstruation is a normal and natural biological process, characterised by the exfoliation of the uterine wall and the discharge of blood from the vagina periodically every month. The menstrual cycle generally occurs every 28-35 days, with the duration of menstruation ranging from 3-7 days.[1]

Often, the menstrual period is often accompanied by various problems, both from the physical and psychological aspects. Psychologically, adolescent girls who are menstruating can experience mood swings, anxiety, and even eating disorders. While from the physical side, if good personal hygiene efforts are not made during menstruation, there is a risk of causing infection in the reproductive organs. Menstrual blood that sticks to the vulva for a long time can cause irritation, itching, and become a medium for the growth of bacteria and fungi that cause infection.[2]

In Indonesia, the rate of reproductive tract infections is high. The prevalence of reproductive tract infections is reported to reach 39% in adolescents aged 10-18 years and 30% in young adults aged 18-22 years. Sexually transmitted diseases such as Candidiasis have a prevalence of 25-50%, Bacterial Vaginosis is around 20-40%, and Trichomoniasis reaches 51%.[3] One of the main causes of these high cases is the lack of knowledge of adolescents about reproductive health and personal hygiene practices during menstruation. Shyness about talking about menstruation, hormonal changes, and peer influence also exacerbate this condition.[4]

Another factor that increases infection of the female organs is the environment. Environmental factors also contribute to worsening the situation. Indonesia as a tropical country has a high level of humidity, creating ideal conditions for the growth of bacteria and fungi in the genital area. This has led to the tendency for Indonesian women to be more prone to leucorrhoea. The prevalence of vaginal discharge is reported to be as high as 75%, with approximately 45% of women experiencing vaginal discharge more than once in their lifetime.[6]

Adolescent girls who are experiencing menstruation for the first time often do not have sufficient understanding of how to maintain proper personal hygiene. The habit of not changing pads regularly, reluctance to bathe during menstruation, or using pads for a long time can increase the risk of infection. If left unchecked, these infections not only have short-term effects, but can also lead to serious complications such as infertility, cervical cancer, and ectopic pregnancy.[7]

Maintaining personal hygiene during menstruation is an important step in protecting the health of reproductive organs, especially in adolescents. Early reproductive health coaching is needed to help adolescents have the right knowledge and behaviour in dealing with menstruation. Adequate knowledge will encourage adolescents to lead a healthy lifestyle and enter adulthood with optimal reproductive health conditions.[8]

Considering the danger of infection and the low awareness of adolescents towards hygiene during menstruation, this study is important to identify factors that influence the personal hygiene behaviour of adolescent girls during menstruation, so that it can be the basis for planning effective reproductive health education programs, especially in the school environment.

MATERIALS AND METHODS

The research used a quantitative method with a research design. This research was conducted at SMPN X Jakarta, DKI Jakarta. The research was conducted from November 2023 to July 2024. Data collection time was carried out in July 2024. The population of this study in the first level is 31 students, in the second level is 28 students and in the third level is 35 students at SMPN X who have experienced menstruation with a total of 94 female respondents.

This research instrument uses questionnaire data that has been filled in by adolescent girls at SMPN X offline with a questionnaire filling time of 10-15 minutes which will be returned on the same day with questions regarding behaviour, knowledge, WASH facilities and support related to personal hygiene during menstruation.

This research instrument has conducted reliability test of the instrument (questionnaire) before the research.[7] Based on the results of the reliability test of the behaviour variable question instrument, the Crombach's result was 0.724, the result of r Alpha is greater than r table, it can be concluded that the behaviour variable is reliable. The reliability test results of the knowledge variable question instrument obtained the result of Crombach's 0.739, the result of r Alpha is greater than r table, it can be concluded that the knowledge variable is reliable. The results of the reliability test of the instrument question variable Water, Hygiene, and Sanitation infrastructure facilities found the result of Crombach's 0.733 the result of r Alpha is greater than r table, it can be concluded that the variable Water, Hygiene, and sanitation infrastructure facilities are reliable. The results of the reliability test of the peer support variable question instrument found the result of Crombach's 0.730, the result of r Alpha is greater than r table, it can be concluded that the peer support variable is reliable.[9]

In the list of behavioural questions, such as, changing pads after bathing, not shampooing during menstruation, drying the pubic area (vagina) with a tissue after urinating and defecating, always wrapping consumable pads first before disposing of them, changing pads 4-5 times a day during menstruation, changing pads no more than 6 hours to prevent itching in the pubic area (vagina), shaving pubic hair (vaginal hair) after menstruation, during menstruation bathing only 1× a day, cleaning the pubic area (vagina) only when bathing, and I change my underwear if it leaks.[10]

The list of knowledge questions asked were, personal hygiene is an activity of maintaining personal hygiene, the purpose of personal hygiene in preventing disease, the impact of not maintaining personal hygiene is discomfort in the vagina, personal hygiene during menstruation is an action taken to maintain reproductive hygiene and health, factors that can affect personal hygiene during menstruation are created from oneself, physical problems that arise from not maintaining personal hygiene, ignoring menstrual hygiene will cause pruritus vulvae, cleaning the vagina using soap, limited knowledge, personal hygiene during menstruation will be disrupted and sanitary napkins that can cause irritation should not be used.[11]

The toilet facilities questionnaire asked whether there were infrastructure facilities such as clean toilets, clean water, soap, toilet paper/tissue, and sanitary napkins. The peer support questionnaire asked whether peers would lend sanitary napkins when not carrying sanitary napkins, communication about personal hygiene during menstruation, peers provide support about maintaining proper personal

hygiene during menstruation, peers give appreciation when personal hygiene during menstruation is correct and the attitude of peers when there are reproductive problems related to reproductive health.[12]

RESULTS

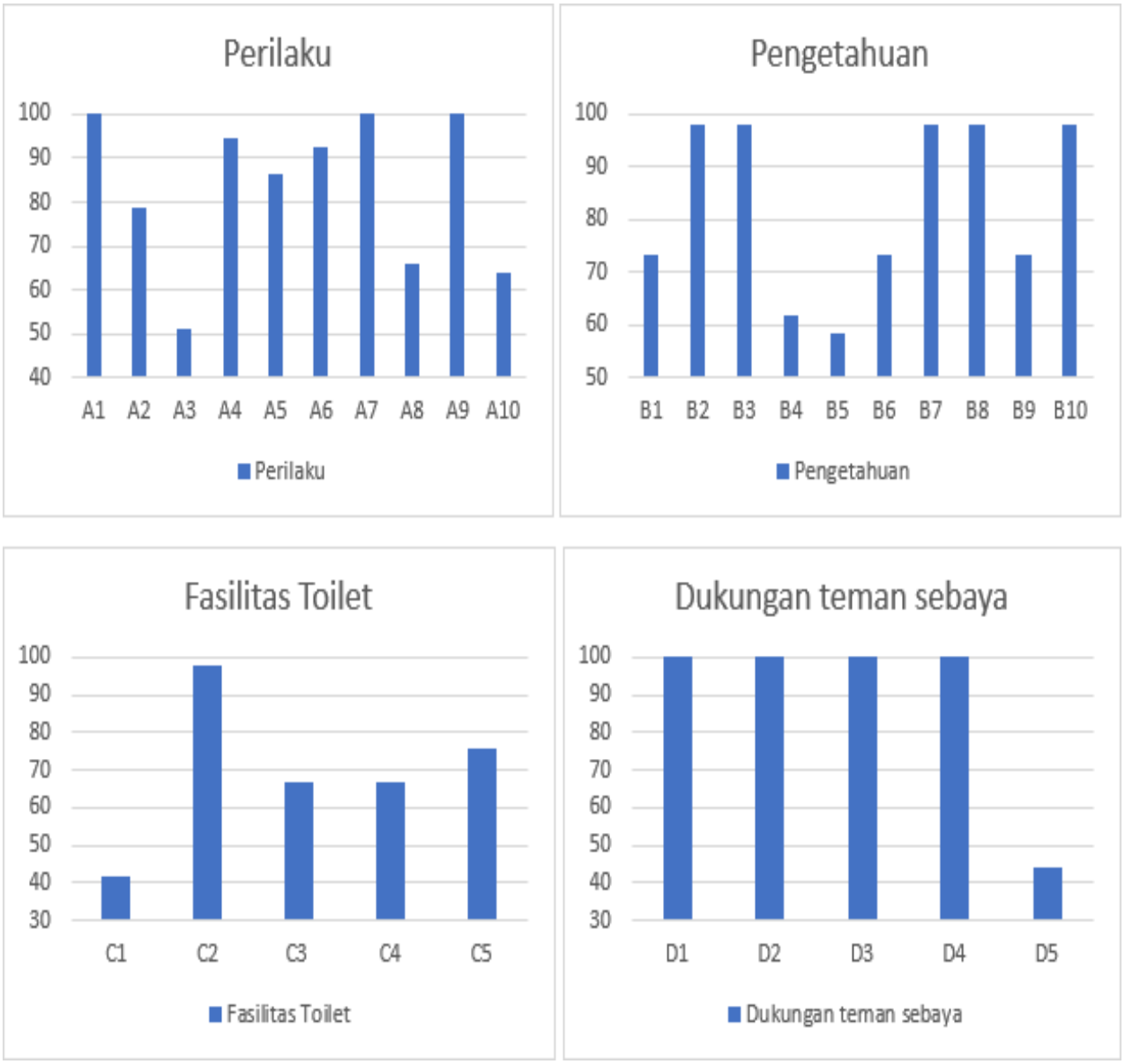
An overview of the results of respondents' answers in table 1 and graph 1, shows that the majority of adolescents have good personal hygiene behaviour, namely a total of 79 students (84%). In behavioural questions related to changing sanitary napkins after bathing (A1), adolescents answered shaving pubic hair (vaginal hair) after menstruation (A7), adolescents answered changing underwear if it leaks (A9) were 100% answered doing it or yes, Furthermore, adolescents answered that they always wrap used sanitary napkins first before disposing of them (A 4) and change sanitary napkins no more than 6 hours to prevent itching in the pubic area or vagina (A6) by 94.7%, and the opposite stated that adolescents answered the question of drying the pubic area (vagina) with tissue after urinating and defecating (A3) which reached half of the respondents by 51.1%.

The results showed that the knowledge of respondents mostly had good knowledge, reaching 76.6%, with the answers to each question that answered yes to the question of the purpose of personal hygiene, one of which was to prevent disease (B2), the impact of not maintaining personal hygiene can cause a sense of discomfort (B3), ignoring menstrual hygiene will cause pruritus vulvae (B7), cleaning the genitals (vagina) using bath soap is an inappropriate way to maintain pubic / vaginal hygiene (B8), and pads that can cause irritation should not be used (B10), as much as (97.9%). Furthermore, 73.9% of adolescents answered that physical problems that arise from not maintaining personal hygiene include skin damage and if someone has limited knowledge, personal hygiene during menstruation will be disrupted (B1, B6, B9). Finally, the results of the description of the respondents' answers which were the least correct related to knowledge answered by respondents related to adolescents who knew the factors that could affect personal hygiene, one of which was the desire of themselves (B5), which reached 58.9%.

In terms of WASH infrastructure and facilities, in general, the respondents' answers on adequate were relatively equal to inadequate, namely 58.8% and 41.2% (see table 1). The WASH facilities asked were divided into several questions, namely in the description of the majority of adolescents answered (97.9%) adolescents considered WASH facilities in schools adequate clean water to be the most available facilities (C5), second place (67%) adolescents answered that the availability of soap and tissue was adequate, and the lowest respondents answered that they considered hygiene to be lacking (C1) which was 41.5%.

On the question of peer support, which consisted of 5 questions, 66% received support from friends (see table 1). The details of the peer support questions resulted in the majority of peers being supportive, helpful, such as helping to provide sanitary napkins when needed, friends who appreciate positive attitudes, support when performing clean attitudes, and communicating with each other about hygiene during menstruation, all answered that they received support, namely 100%, although adolescents are more closed when there are problems related to the female area which can be seen only 34% who tell stories, namely in question D5, namely telling stories related to personal hygiene problems during menstruation

Figure 1. Percentage of Respondents' Correct Answers to Questions Related to Self-Hygiene Behaviour, Knowledge, Facilities and Peer Support for Girls at SMPN X Jakarta in 2024



who feel unsupported.

The results of the study presented in Table 3, there was a significant relationship between knowledge and menstrual hygiene behaviour with a p value of 0.045 (<0.05). Prevalence ratio (PR) of 1.263 indicates that adolescents with low knowledge have a 1.263 times greater risk of having poor personal hygiene behaviour compared to those with high knowledge. WASH facility variable showed a significant relationship with water, hygiene, and sanitation behaviour not personal hygiene during menstruation, with a p value of= 0.874. The PR of 1.234 indicated that adolescents with inadequate access to WASH facilities had a 1.234 times greater risk than those with adequate access, although this result was not significant. In the peer support variable, the p value of 0.044 showed a significant relationship with menstrual hygiene behaviour when those who did not get peer support had a 2.906 times greater risk of having poor menstrual hygiene behaviour. The PR of 2.906 indicates that adolescents compared to those who get peer support.

Table 1. Overview of Behaviour, Knowledge, WASH Facilities and Peer Support Related to Personal Hygiene of Students at SMPN X Jakarta

Variable	n	%
Behaviour		
Good	79	84
Bad	15	16
Knowledge		
High	72	76,6
Low	22	23,4
Infrastructure Facilities		
Adequate	55	58,5
Inadequate	39	41,5
Peer Support		
Supportive	62	66
Not supportive	32	34

Source: Primary Data, 2024

Table 2. Test Results of the Relationship between Independent Variables with Personal Hygiene Behaviour Menstrual Hygiene Behaviour of Girls at SMPN X Jakarta

Variable	Behaviour						P-value	PR
	Good		Bad		Total			
	n	%	n	%	N	%		
Knowledge								
High	15	100	57	72,2	72	100	0,045	1,3
Less	0	0	22	27,8	22	100		1,12 - 1,42
Facilities								
Adequate	8	53,3	47	59,5	55	100	0,87	0,8
Inadequate	7	46,7	32	40,5	39	100		0,49 - 3,12
Support								
Support	6	40	56	70,9	62	100	0,044	2,9
Not supportive	9	40	23	29,1	32	100		1,13 - 745

Source: Primary Data, 2024

DISCUSSION

This study aimed to determine the determinants of adolescents' personal hygiene behaviour during menstruation at SMPN X Jakarta in 2024, including hygiene behaviour, level of knowledge, condition of WASH facilities, and peer support. Based on the results of the analysis, it can be concluded that most adolescents have good hygiene practices, although there are still some aspects that need to be improved.

Most of the respondents showed good personal hygiene behaviour. All female students (100%) stated that they always change sanitary napkins after bathing, shave pubic hair after menstruation, and change underwear if there is leakage.

A total of 94.7% also wrapped used sanitary napkins before discarding and changed them every less than 6 hours. This is in accordance with WHO guidelines,which recommend changing sanitary napkins every 4-6 hours to avoid irritation and infection.[3] However, only 51.1% of respondents consistently dried the genital area with a tissue after urinating or defecating. In fact, keeping the area dry is important to prevent excess moisture that favours the growth of pathogenic microorganisms.[13] This suboptimal practice is one of the gaps in hygiene behaviour that still needs to be improved through educational interventions and regular monitoring.

The majority of adolescents showed a high level of knowledge. A total of 97.9% understood that

maintaining hygiene during menstruation can prevent disease, avoid discomfort, and prevent conditions such as pruritus vulvae. They also knew that the use of bath soap is not recommended for cleaning the vagina, and that irritating pads should be avoided.

This finding supports previous research which states that knowledge is one of the strongest predictors in shaping menstrual hygiene behaviour.[14] However, only 58.9% of adolescents realised that self-motivation is a factor that affects personal hygiene. This means that although their cognitive is quite good, the affective aspect or internal awareness still needs to be improved.[15]

The results of this study stated that there was a statistically significant relationship between knowledge and personal hygiene behaviour (p = 0.045), with a PR of 1.263 and 95% CI (1.122-1.422). This indicates that adolescents with low knowledge have a 1.263 times greater risk of having poor behaviour than those with high knowledge. This result is in line with research, which found that increased knowledge was significantly correlated with changes in menstrual hygiene behaviour in adolescent girls.[16] The majority of schoolgirls rated the clean water facilities at school as adequate (97.9%). However, only 67% stated that the availability of soap and tissue was sufficient, and only 41.5% felt that the cleanliness of school toilets was good. These figures are high for public school standards, the imbalance between aspects of facilities suggests that interventions on soap and sanitation aspects are still needed.[16]

The results showed that there was no significant association between WASH facilities and personal hygiene behaviour (p = 0.874). The PR of 1.234 with 95% CI (0.488-3.120) indicates an increased risk, but not strong enough to show a direct association. This could be due to students' subjective perceptions or because they already have internalised hygienic behaviours, despite limited facilities. This finding is consistent with research stating that the existence of facilities alone is not enough to shape behaviour, unless accompanied by education and reinforcement of the consistent use of these facilities.[17]

Almost all respondents (100%) stated that they received peer support, either in the form of help, appreciation, or encouragement during menstruation, however, 34% of them did not open up to friends regarding menstrual hygiene issues, which indicates that menstrual issues are still a sensitive or taboo topic to be discussed openly.[18]

Statistical test results showed a significant association between peer support and personal hygiene behaviour (p = 0.044), with a PR of 2.906 (95% CI: 1.134-7.446), meaning that adolescents who did not receive peer support had almost three times the risk of poor hygiene behaviour. Research also confirms that the role of peers is critical in shaping health norms and behaviours among adolescents, especially in topics as personal as menstruation.[19]

Overall, this study showed that knowledge and social support were the most significant factors in shaping adolescents' personal hygiene behaviour during menstruation. Meanwhile, WASH facilities still need to be improved, especially in terms of cleanliness and availability of sanitation equipment. These results provide important implications for schools, health workers, and policy makers to, strengthen school-based reproductive health education, expand peer support through the establishment of discussion groups or peer counsellors and improve WASH facilities not

only in quantity but also quality and routine maintenance.[20]

CONCLUSIONS AND SUGGESTIONS

An overview of respondents' answers from the questionnaire shows that most adolescents have a high level of personal hygiene knowledge, and Water, Hygiene, and Sanitation (WASH) facilities in schools are mostly considered adequate. Respondents' answers related to peer support for adolescent personal hygiene were also high, although it is still taboo to talk about feminine hygiene and health problems.

The results of the study statistically showed a relationship between the level of knowledge of personal hygiene and hygiene behaviour during menstruation and peer support with personal hygiene behaviour during menstruation, while the results of the study between the condition of WASH facilities and personal hygiene behaviour during menstruation showed that there was no relationship. This confirms that knowledge and peer support play an important role in shaping adolescents' menstrual hygiene behaviour.

Schools need to collaborate with local health authorities in pursuing adolescents in continuous knowledge education programmes, so that collaborative programmes are more in line with the education level and age approach.

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CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest that could affect the results or interpretation of this study.

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