The Relationship of Knowledge, Attitude and Menstrual Hygiene Management in Adolescent Women at "J" Middle School South Jakarta

Nurul Husnul Lail[1], Risza Choirunissa[2]

{nurulhusnul@civitas.unas.ac.id[1], riszaakrama@gmail.com[2]}

[1,2]Faculty of Health Sciences, Universitas Nasional, Jakarta, Indonesia

Abstract. Inadequate menstrual hygiene may lead to reproductive health issues and urinary tract infections that could affect the health of future pregnancies. Health problems resulting from inadequate hygiene during and after menstruation are caused by internal factors such as knowledge and behavior. This study aims to analyze the relationship between knowledge and attitudes with menstrual hygiene management among adolescent girls. This study is a quantitative cross-sectional study involving 65 adolescent girls obtained using purposive sampling. The results of the study show that there is a relationship between knowledge and attitudes with menstrual hygiene management ($p = 0.045$; $p = 0.009$). Researchers suggest that the next study should investigate other variables, such as self-efficacy, family support, culture, school support, family economic conditions, the influence of social media, and self-perception to further analyze menstrual hygiene management among adolescent girls.

Keywords: Menstrual hygiene management, Knowledge, Attitudes, Adolecent girls

1 Introduction

Lack of menstrual hygiene management (MHM) or hygiene during menstruation increases the risk of infection in the reproductive organs [1]. Without proper hygiene, menstruation can become a potential entry point for various infections, particularly Human Papillomavirus (HPV), which may cause long-term health issues in the reproductive organs and increase the risk of cervical cancer [2]. Adequate MHM practices include the use of clean sanitary pads, regular replacement of sanitary pads, and access to adequate sanitation facilities to maintain personal hygiene, including vulva hygiene [3].

Based on data from the World Health Organization (WHO) in 2019, 50% of women worldwide unknowingly practice poor vulva hygiene during menstruation, which can cause mild to severe vaginal discharge. As many as 75% of women worldwide have experienced vaginal discharge. As many as 25% of women in Europe have experienced vaginal discharge at least once. Meanwhile, in Indonesia, 75% of women have experienced vaginal discharge [4]. Research results indicate that 30.3% of teenagers in DKI Jakarta do not maintain personal hygiene during menstruation, which can cause vaginal discharge [5].

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Vaginal discharge can cause serious reproductive problems such as unhealthy pregnancies that threaten the well-being of the fetus [6]. Pregnancy complications might include premature birth [7], [8]. Premature birth can increase the risk of health problems in babies and risk of mortality [9], [10]. Premature babies are at risk of growth failure, which if not corrected will lead to stunting [11], [12]. Thus, the impact of poor MHM is widespread and detrimental. Based on the percentage of adolescents with poor MHM, which is potentially caused by insufficient knowledge and attitudes, as well as the broad impact it has caused, researchers are interested in investigating the relationship between knowledge and attitudes with adolescent girls' HPM.

2 Methods

This research uses a Cross-Sectional approach, which chi-square analysis. The population in this study was 186 students aged 13-16 years old. The samples in this research were selected using purposive sampling. The samples in this study were 65 grade 8 students at "J" Middle School South Jakarta. The researchers established the following inclusion criteria: junior high school female students, able to speak Indonesian well, willing to be respondents. Samples were excluded from the study if at the time of data collection, they were sick or had other conditions that prevented them from getting to school or filling out the questionnaire. The questionnaire consisted of four sections: the first section was demographic information, the second section measured knowledge, the third section measured attitudes, and the fourth section measured MHM. The questionnaire has been validity and reliability tested. Knowledge is categorized into good, adequate, and poor knowledge. Attitudes are categorized into positive and negative attitudes. The MHM variable is categorized into good management and adequate management.

3 Results

Table 1. Characteristics of study subjects based on knowledge, attitude, and menstrual hygiene management (n = 65)

Variables	Statistical results
Knowledge	
1. Good (n ; %)	25 (38,5%)
2. Adequate (n ; %)	39 (60%)
3. Poor (n ; %)	1 (1,5%)
Attitude	
1. Positve (n ; %)	54 (83,1%)
2. Negative (n ; %)	11 (16,9%)
Menstrual Hygiene Management	
1. Good management (n ; %)	22 (33,8%)
2. Adequate management (n ; %)	43 (66,2%)

Based on Table 1, the results show that the number of respondents who have knowledge in the fairly good category is compared to the number of respondents who have knowledge in the good category, and only one respondent is found who has knowledge in the poor category. The number of respondents who had knowledge in the adequate category was 39 people (60%),

and the number of respondents who had knowledge in the good category was 25 people (38.5%) The number of respondents who have attitudes in the positive category is good compared to the number of respondents who have attitudes in the negative category. The number of respondents who had attitudes in the positive category was 54 people (83.1%), and the number of respondents who had attitudes in the negative category was 11 people (16.9%). Most samples (66,2%) had adequate MHM.

Table 2. Relationship between knowledge and menstrual hygiene management (n = 65)

Knowledge	Menstrual Hygiene Management				Total		P value
	Good		Adequate				
	N	%	N	%	N	%	
Good	13	20%	12	18%	25	38%	0,045
Adequate	9	14%	30	46%	39	60%	
Poor	0	0%	1	2 %	1	2%	
Total	**22**	**34%**	**43**	**66%**	**65**		

Based on Table 2, it was found that the relationship between knowledge and management of menstrual hygiene among young women at "J" Middle School was found to be that the majority of respondents had sufficient knowledge (46%). From the statistical test results, it was found that there is a relationship between knowledge and the management of menstrual hygiene in teenage girls at "J" Middle School South Jakrata (p-value = 0.045)

Table 3. Relationship between attitudes towards menstrual hygiene management (n=65)

Attitudes	Menstrual Hygiene Management				Total		P value	OR
	Good		adequat					
	N	**%**	**N**	**%**	**N**	**%**		
Positive	22	34%	32	49%	54	83 %	0.009	1.688
Negative	0	0%	11	17%	11	17%		
Total	22	34%	43	66%	65			

Based on Table 3, it was found that the relationship between attitudes towards the management of menstrual cleanliness in young women at "J" Middle School South Jakrta was found to be that the majority of respondents who managed their menstrual cleanliness. enough to have a positive attitude (49%). From the statistical test results, it was found that there is a relationship between attitude and menstrual hygiene management in teenage girls at Middle School (p-value = 0.009). Teenage girls with good knowledge are 1.6 times more likely to have better menstrual hygiene management than teenage girls with adequate knowledge (OR = 1.688)

4 Discussions

The results of the study indicate that there is a relationship between knowledge with menstrual hygiene management. These results are in line with those of Shumie et al (2024), which prove that knowledge is one of the factors that determine menstrual hygiene management behavior [13]. This study also confirmed the results of previous studies that found evidence of a gap between knowledge about menstrual duration and hygiene practices [14]. The results of this study also reinforce the findings that female students who live with their mothers have a place to dispose of sanitary napkins and maintain personal hygiene by bathing [15][15]–[17]. However, there are still some misconceptions among female students regarding menstrual hygiene practices due to cultural factors [18], [19]. Therefore, it is necessary to further examine the role of culture, female students' self-efficacy during menstruation, and the role of family support in menstrual hygiene management.

The results of this study indicate that there is a relationship between attitudes with menstrual hygiene management behaviors among adolescent female students. These findings are consistent with previous studies that found that adolescent girls with negative attitudes have not implemented menstrual hygiene management [20]–[22]. Therefore, the researchers recommend that schools improve facilities that support menstrual hygiene management [23]. The results of this study also reinforce the findings of Mupasi *et al* (2023), which prove that there is a relationship between attitudes and MHM behavior [24]. On the other hand, digital literacy through social media has proven to have an impact on MHM [25]–[27]. Therefore, it is necessary to examine in future research the support provided by schools and the influence of social media on adolescent behavior in menstrual hygiene management.

The results of this study indicate that there is a relationship between knowledge and attitudes with MHM . However, these results are not in line with the study conducted by Laswini et al (2022), which showed that there is no significant relationship between knowledge with personal hygiene behavior during menstruation [28]. This is due to the internal and external conditions of students who are boarding school students. Thus, further study is needed on the relationship between the conditions and values of adolescents towards MHM.

5 Conclusion

The results of the study prove that there is a relationship between knowledge and attitudes with menstrual hygiene management among adolescent girls. However, there may be other factors that were not examined in this study. Therefore, the researchers suggest that future studies examine these factors such as self-efficacy, family support, culture, school support, family economic conditions, the influence of social media, and self-perception to find out more about the menstrual hygiene management of young women.

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