
Original Article

THE INFLUENCE OF HEALTH EDUCATION REGARDING PERSONAL HYGIENE DURING MENSTRUATION ON BEHAVIOR OF ADOLESCENT GIRLS

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ABSTRACT

Background: Menstrual hygiene management is a public health concern, particularly among adolescent girls.

Objectives: This study aimed to evaluate the impact of health education on personal hygiene during menstruation on behavioral changes among adolescent girls at SMAN 1 Jombang.

Methods: A quasi-experimental study with a one-group pretest-posttest design was conducted in March 2024. Sixty-five female students from grades X1 to X4 were selected through total sampling. Health education was delivered using leaflets, videos, and WhatsApp messages. Data were collected using validated questionnaires before and after the intervention. The Wilcoxon signed-rank test was used for data analysis.

Results: 55% of participants exhibited negative hygiene behavior before the intervention. Post-intervention, 100% showed improved, positive behavior. The Wilcoxon test showed a statistically significant effect ($p < 0.05$).

Conclusion: Health education significantly improved menstrual hygiene practices among the participants. Schools should incorporate menstrual hygiene education through the School Health Unit (UKS).

Keywords: Menstrual Hygiene Education, Quasi-Experimental Study, Adolescent Behavior, School Health Promotion.

INTRODUCTION

Adolescence is a critical developmental phase marked by rapid physical, emotional, and social changes. One of the most significant biological events for adolescent girls is the onset of menstruation. This transition requires biological preparedness and adequate education regarding menstrual hygiene. Poor menstrual hygiene can lead to various health issues, including urinary tract infections, reproductive tract infections, and long-term fertility problems.

Based on statistical data from the World Health Organization (WHO, 2017), the prevalence of inadequate personal hygiene during menstruation is very high globally. On a

global scale, the majority of women, more than 50%, exhibit this behavior unconsciously. According to research findings, the prevalence rates of personal health behaviors are as follows: 60% in America, 72% in Sweden, 75% in Egypt, and 55% in Indonesia (Angraini, 2021).

In Indonesia, especially in the provinces of East Java and Bali, the majority of young individuals, namely 77.3%, do not have an adequate understanding of reproductive health, as reported by the Indonesian Ministry of Health Research and Development in 2018. This data was obtained from the assessment of behavioral patterns of the Surabaya Health Office in 2019. According to Ni Luh Agustini Purnama (2021), only 20.3% of adolescents have knowledge and guidance about reproductive health among their peers. According to data collected by the Central Statistics Agency (BPS) and the National Development Planning Agency (BPPN) in 2017, the prevalence of infectious disorders affecting the reproductive system in adolescents aged 10-18 years is estimated to be between 35% and 42%. The prevalence of infectious disorders of the reproductive system in adolescents (10-18 years) is 27 to 33%, while in young adults (18-22 years) it is also 27 to 33%. The level of awareness of reproductive health is likely to have a significant impact on personal hygiene practices during menstruation. Lack of understanding of reproductive health causes women to not implement healthy behaviors during menstruation, which can hurt their reproductive health.

Personal hygiene during menstruation refers to the practice of maintaining cleanliness and health during menstruation. It involves hygienic actions to ensure the well-being of an individual, both physically and psychologically. By following these steps, one can improve their overall well-being and increase their level of comfort and satisfaction (Rosyida, 2019).

Having a thorough understanding of personal hygiene is very important because it has the potential to improve one's overall health and well-being. Individuals who have information about personal hygiene will consistently uphold personal hygiene practices as a means of preventing disease. Lack of understanding of reproductive health leads to unhealthy behaviors among women during menstruation, which has the potential to impact their reproductive health.

By providing sufficient knowledge to women, it is hoped that they can cultivate healthy behaviors that can improve the cleanliness of their reproductive organs and reduce the risk of disease. Isro'in & Sulis Andarmoyo (2012) linked the lack of maintenance of reproductive organ hygiene among adolescent girls to low knowledge and a lack of interest in learning about reproductive health.

Cultural and societal factors also play a role. Menstruation remains a taboo subject in many communities, leading to misinformation and stigma. This prevents open discussions and learning opportunities, especially in school settings. Lack of structured education in schools results in reliance on peers or unverified online sources, further compounding the issue.

The school environment offers a unique opportunity to implement health education interventions that are systematic, age-appropriate, and culturally sensitive. Using a behavioral change model, such as the Health Belief Model (HBM), educational interventions can be tailored to influence personal beliefs about health and promote sustained behavioral change. HBM posits that a person's health-related actions depend on their perceptions of susceptibility, severity, benefits, barriers, and cues to action.

This study is designed to fill a critical gap by evaluating how structured health education influences menstrual hygiene behavior among adolescent girls. By embedding the intervention

within the school setting and assessing its outcomes through a scientific approach, this research seeks to inform future educational and public health initiatives.

This research aimed to examine the influence of health education on menstrual hygiene behavior among adolescent girls at SMAN 1 Jombang.

METHODS

Study Design

This study used a Quasi-experimental design with one-group pretest-posttest approach.

Settings

This study was conducted in SMAN 1 Jombang in March 2024.

Research Subject

65 female students from classes X1 to X4 were included using total sampling. Inclusion criteria: active enrollment and parental consent. Exclusion: prior participation in similar programs.

Instruments

A validated and reliable questionnaire assessing menstrual hygiene behavior. The reliability coefficient was $\alpha = 0.83$. The questionnaire was administered pre- and post-intervention.

Intervention

Health education was provided through three sessions using leaflets, instructional videos, and WhatsApp messaging conducted over one week.

Data Collection

Pre and post-intervention assessments were administered by trained research assistants.

Data Analysis

SPSS version 16 was used. The Wilcoxon signed-rank test measured behavioral changes, with significance set at $\alpha = 0.05$.

Ethical Considerations

Ethical approval was obtained from the institutional review board. Parental and student consent were secured.

RESULTS

Characteristics of Respondents

Respondent Characteristics Table based on age, class, information acquisition, and last source of educational information for adolescent girls.

Table 1. Characteristics of Respondents based on Age, Class, Information Acquisition, and Last Source of Educational Information among Adolescent Girls in SMAN 1 Jombang in March 2024.

Characteristics of Respondents	Frequency	Percentage
	(f)	(%)
Age		
15 years	13	20.00
16 years	41	63.08

17 years	11	16.92
Class		
X1	17	26.14
X2	16	24.62
X3	16	24.62
X4	16	24.62
Information Acquisition		
Ever	29	44.62
Never	36	55.38
Source of Educational Information		
Health Worker	0	0.00
Internet	29	100.00
Radio/ TV	0	0.00
Magazine/ Book	0	0.00

Source: Primary Data of Questionnaire, 2024.

Based on the data results above, it was found that the majority of respondents were 16 years old, as many as 41 respondents (63.08%), and the largest in class X1, as many as 17 respondents (26.14%). Most respondents had never received previous information related to personal hygiene during menstruation, as many as 36 respondents (55.38%), but as many as 29 respondents (44.62%) of the 65 respondents had received previous information. All respondents who had received previous information obtained it from the internet, as many as 29 respondents (100.00%).

Analysis of the Effect of Health Education on Personal Hygiene during Menstruation on the Behavior of Adolescent Girls at SMAN 1 Jombang using Wilcoxon Signed Rank Test

Table 2. Analysis of the Effect of Health Education on Personal Hygiene during Menstruation on the Behavior of Adolescent Girls at SMAN 1 Jombang using Wilcoxon Signed Rank Test.

Behavior	Before		After		Wilcoxon Signed Rank Test
	f	%	f	%	
Positive	29	44.62	65	100.00	$p\text{-value} = 0.000$
Negative	36	55.38	0	0.00	
Total	65	100.00	65	100.00	

Source: Primary Data of Questionnaire, 2024.

Table 2 illustrates the changes in menstrual personal hygiene behavior among adolescent girls at SMAN 1 Jombang before and after receiving health education. Before the intervention, 36 respondents (55.38%) exhibited negative hygiene behaviors, while 29 respondents (44.62%) demonstrated positive behaviors. Following the educational intervention, all respondents (100%) showed positive hygiene behavior, and no respondents remained in the negative behavior category. The Wilcoxon Signed Rank Test yielded a $p\text{-value}$ of 0.000 ($p < 0.05$), indicating a statistically significant difference in behavior before and after the health education

intervention. These findings suggest that health education was effective in improving menstrual hygiene practices among adolescent girls.

DISCUSSION

Behavior of Adolescent Girls Before Being Given Health Education about Personal Hygiene during Menstruation at SMAN 1 Jombang

Based on the findings of the study on personal hygiene habits of female adolescents before receiving instructions on menstrual hygiene, 36 respondents (55%) showed negative behavior, while 29 respondents (45%) showed good behavior.

Behavior is a series of actions that occur as a result of stimulation and then become habits because of the values adopted. Human behavior refers to human behavior and activities, both observable and unobservable, resulting from contact with the environment. This behavior is expressed through the acquisition of information, the formation of attitudes, and the implementation of actions (Nursalam, N., & Efendi, F., 2008).

According to Damayanti (2017), behavior is influenced by three variables, namely predisposing factors, supporting factors, and driving factors. The main factor contributing to the lack of respondent behavior is age. The Age distribution table shows that the age range of female students is between 15 and 17 years, with the highest frequency occurring at the age of 16 years.

The second element that contributes to the limited knowledge of respondents is the information acquisition factor. Participants in this study consisted only of female students of SMAN 1 Jombang.

The knowledge that a person has allows them to engage in beneficial activities based on the information they have acquired. An effective method to increase understanding is through the provision of health education, which can be delivered through various means such as interactive discussions, informative leaflets, or engaging presentations. Health education delivered through lectures or counseling has the potential to increase understanding and facilitate behavioral change in the community. Health education is essentially the act of providing health-related information to a community, organization, or individual. Researchers have stated that as individuals grow older, they gain wisdom, thereby increasing their knowledge, while adolescents may increase their understanding of proper personal hygiene. However, the implementation of proper personal hygiene practices during menstruation is not innate, but rather a cognitive process whereby people understand the beneficial or detrimental effects of activities related to menstruation.

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The knowledge that a person has allows them to carry out useful activities based on the information they obtain. An effective method to increase understanding is through the provision of health education, which can be delivered through various means such as interactive discussions, informative leaflets, or interesting presentations. Health education delivered through lectures or counseling has the potential to increase understanding and facilitate changes in community behavior. Health education is the act of providing health-related information to the community, organization, or individual. Researchers state that as individuals grow older, they gain wisdom, thereby increasing their knowledge, while adolescents may improve their understanding of proper personal hygiene. However, the adoption of proper personal hygiene practices during menstruation is not innate, but rather a cognitive process whereby people understand the beneficial or detrimental effects of activities related to menstruation.

The Effect of Health Education on Personal Hygiene during Menstruation on the Behavior of Adolescent Girls at SMAN 1 Jombang

When comparing behavior before and after using SPSS 16 for Windows, the Wilcoxon Statistical Test results produced a significant value of 0.000, which is smaller than the significance criterion of 0.05. This indicates that the test successfully identified a significant difference. Thus, the H1 hypothesis can be accepted. Therefore, it can be concluded that there is a significant influence of health education on the behavior of adolescent girls in terms of personal hygiene during menstruation at SMAN 1 Jombang. Based on the results of the study, most participants showed an increase in behavior after receiving health education. This is indicated by the increasing proportion of respondents who answered the questions given correctly. Inadequate levels of knowledge can be attributed to several things, including the spread of incorrect or inadequate information and reliance on sources that are not reputable. According to Notoadmodjo (2023), it is very important to equip individuals with the knowledge that underlies behavior so that they can carry out tasks by a reasonable theory. During this study, several additional factors became limitations. One of these variables is the impact that parents have on personal hygiene habits during menstruation. In terms of children's education, parental involvement is essential. Parents are the first people to interact with their children and serve as the primary educators of their children in the context of the home environment. This is the reason why this happens. Parental involvement, which includes parenting, education, and experience, may influence the ability and independence of adolescent girls in terms of maintaining personal hygiene during menstruation.

CONCLUSION

Health education positively influences menstrual hygiene practices among adolescents. This confirms the value of school-based interventions in promoting reproductive health and hygiene.

SUGGESTION

The findings of this study are expected to be integrated menstrual hygiene education into the UKS program, conduct follow-up studies with control groups, and have a broader geographic scope. And also, provide continuous teacher training in adolescent reproductive health.

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