

The effect of a perineal hygiene education series on the perineal hygiene behavior of school-age children

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Abstract. There are 95% of women have lactobacillus in the vagina, while the remaining 5% contain pathogenic bacteria. The need to maintain cleanliness in the vaginal area is a preventive measure to prevent the risk of infection due to pathogenic bacteria that can interfere with the growth of lactobacillus bacteria. These infections can be prevented by practicing proper vulva hygiene. This study aim to determine the effect of educational series about vulva hygiene on vulva hygiene behavior in school-age children. The method use was a quantitative study using a pre-experimental design with a pre-test-post-test design. The sample in this study were 42 female students. The instrument used was a vulva hygiene questionnaire consisting of 15 question items. The statistical test used was the Wilcoxon Signed Rank Test. The result showed Perineal hygiene behavior before being given an educational series intervention on perineal hygiene was in the insufficient category for 45 female students (90%). Perineal hygiene behavior after being given an educational series intervention on perineal hygiene was in the sufficient category for 27 female students (54%). In conclusion, there is an effect of an educational series on perineal hygiene on perineal hygiene behavior in school-age children.

1 Introduction

Vulva hygiene is an effort to prevent infections in the female genital area. Vulva hygiene is one of the actions women take to maintain their genitals [1]. The aim of vulva hygiene is to keep the genitals dry, free from infection and irritation which can cause the vulva to become red, hot, swollen and itchy [2]. One effort that can be made is to keep the genitals clean and free from moisture. This effort is done by cleaning and drying the genitals after defecation and urination. Furthermore, it is necessary to pay attention to the length of time sanitary napkins are used during menstruation and it is not recommended to wash the genitals with antiseptic soap, which can kill good bacteria that prevent the entry of bad bacteria into the genitals [3].

Women are highly susceptible to infection because their genitals are open, allowing pathogens to enter easily, making them among the most sensitive organs in women. 95% of

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women's vaginas contain lactobacillus, while the remaining 5% contain pathogenic bacteria. Maintaining vaginal hygiene is a preventative measure to prevent the risk of infection from pathogenic bacteria, which can disrupt the growth of lactobacillus bacteria. Lactobacillus bacteria are part of the normal vaginal flora and, if disrupted, can lead to infection, characterized by abnormal vaginal discharge. These infections can be prevented by practicing proper vulva hygiene [4].

Indonesian statistics show that 43.3 million adolescent girls practice very poor vulvar hygiene. One of the impacts is a lack of cleanliness and care of the vulva, which can lead to discomfort due to vaginal discharge. Vaginal discharge is a health problem that bothers most women. Vaginal discharge occurs when fluid or mucus is released from the vagina and cervix. This vaginal discharge is a natural process by the body to prevent infection, but attention to cleanliness and moisture is essential to prevent abnormal vaginal discharge that can lead to disease. One way to improve genital hygiene behavior is by providing Health Education [5].

Health education can be a medium to change behavior, especially for school children, so it is very important to provide media that is appropriate for their age group and easy to accept, one of the most interesting media is an educational series with pictures, which combines pictures and writing media as well as attractive colors and images so that it is easy for school-age children to understand. Although perineal hygiene education interventions have been shown to be effective in improving the behavior of school-aged children in the short term, there is a gap in the literature regarding the effectiveness and sustainability of these behavior changes over a longer period (longitudinal), and there is limited evidence linking these behavior changes to a reduction in the incidence of clinically relevant infections.

From the results of a preliminary study conducted at SD N 1 Kasihan Bantul, it was found that 8 out of 10 children did not know how to do vulva hygiene properly, and did not change sanitary napkins as often as possible when menstruating. From the results of interviews with teachers at the school, it was stated that there had never been any health education about genital hygiene. The aim of this study was to determine the effect of the educational series about vulva hygiene on vulva hygiene behavior in school-age children.

2 Methods

The research conducted was a quantitative study using a pre-experimental design with a pre-test-post-test design. This research design only used one group without using a comparison group. The population in this study was the number of female students of Elementary School 1 Kasihan Bantul, namely 89 female students. The sampling technique in this study was purposive sampling with inclusion criteria, namely female students aged 8-12 years and willing to be respondents. The number of samples in this study was 50 respondents using the Slovin formula. The tool used to collect data in this study was a vulva hygiene behavior questionnaire sheet adopted from Lestari [6] containing 15 questions with 9 favorable questions and 6 unfavorable questions. Perineal Hygiene Behavior Education was carried out for 1x30 minutes using picture story media. The statistical test used was the Wilcoxon Signed Rank Test.

3 Results and discussion

The results of this study were conducted in December 2024-January 2025 on 50 school-age female students, with the following results:

3.1 Participants' characteristics

Participants' characteristics included occupational, menstruation, information and age. The results of this study are presented in Table 1.

Table 1. Frequency distribution of respondent characteristics (n =50)

Charecteristic of subject		Frequency (n)	Percentage (%)
Occupational	Teacher	1	2.0
	TNI/Polri	2	4.0
	Farmer	13	26.0
	Self-employed	19	38.0
	Businessman	15	30.0
Menstruation	Got it	8	16.0
	Not yet received	42	84.0
Information	Got it	3	6.0
	Not yet received	47	94.0
Age	9 year	2	4.0
	10 year	32	64.0
	11 year	16	32.0

Based on the table above, it can be seen that the characteristics of respondents based on occupation, most respondents are included in the self-employed category, namely 19 respondents (38%). Respondent characteristics based on information, most respondents are included in the never category, namely 47 respondents (94.0%). Respondent characteristics based on menstruation, most respondents are included in the never category, namely 42 respondents (84%). Respondent characteristics based on age, most respondents are included in the 10-year category, namely 32 respondents (64%).

The ages of 11-12 are characterized by early adolescence, characterized by a fascination with new challenges. At this age, children have the cognitive capacity to evaluate themselves and their peers [7]. Table 1 shows 47 respondents who had not received information about perineal hygiene, consistent with research by Alkarima [8] that states that a person's health behavior is influenced by their understanding of the subject. Lack of knowledge and information about how to care for reproductive organs can result in a lack of ability to maintain reproductive hygiene [8]

3.2 Bivariat analysis of the effect of a perineal hygiene education series on the perineal hygiene behavior of school-age children

Table 2. Cross-tabulation the effect of a perineal hygiene education series on the perineal hygiene behavior of school-age children (n=50)

Category	Pre Test		Post Test	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Good	1	2.0	14	28.0
Sufficient	4	8.0	27	54.0
Poor	45	90.0	9	18.0

Based on the table above, it can be seen that the characteristics of respondents based on Pre, most respondents are included in the poor category, namely 45 respondents (90%). The characteristics of respondents based on Post, most respondents are included in the sufficient category, namely 27 respondents (54.0%).

Table 2 explains that the behavior of school-aged children before being given knowledge through the educational series was in the poor category for 45 respondents (90%). Factors influencing behavior are the environment and experiences of children's behavior by imitating the habits of those closest to them. Maintaining reproductive health is very important for women's reproductive health. Lack of attention in caring for reproduction can cause reproductive disorders such as pathological vaginal discharge, itching, odor, and irritation [8]. According to Suryani [9], vulva hygiene behavior is influenced by several factors, including culture, environmental beliefs, and individual motivation. This is in line with Kurniasih [10] who stated that good behavior will help students with reproductive health problems because if not implemented, it will have a negative impact on the reproductive organs.

Table 2 shows that after the series of educational interventions were given to 27 female students (54%), their perineal hygiene behavior increased to the sufficient category. This indicates that the interventions provided can improve female students' behavior towards perineal hygiene. Health education can influence behavior and can determine how female students think in carrying out actions and making decisions [11]

3.3 Differences in perineal hygiene behavior before and after the intervention

Table 3. Wilcoxon test effect of a perineal hygiene education series on the perineal hygiene behavior of school-age children

Group		Mean ± SD	Sig.
Eksperiment	Pre	27,38±6,934	0,000
	Post	41,80±7,519	

Based on the table above states that there is an Effect Of A Perineal Hygiene Education Series On The Perineal Hygiene Behavior Of School-Age Children. The results of this study are in line with Saleh's [12] study on the effect of education through picture stories on COVID-19 prevention behavior in elementary school students in Maros Regency in 2021. The results showed that after being given education using picture stories, there was an increase in COVID-19 prevention behavior in the control and intervention groups with a p-value of 0.000 each (p value <0.05). Picture story books or children's educational series can increase students' knowledge because the pictures presented in book form and provided with easy-to-understand explanations for each picture can leave an impression on students. Childhood is a time when it is easy to capture information and easily digest what they see and hear. Education using picture stories is the first thing they experience so that students are enthusiastic about the material presented [12].

The results of this study are in line with Candra [7] with the title The Influence of Health Education on Personal Hygiene During Menstruation Through Video Media on Knowledge and Attitudes of Female Students of SMP Negeri 29 Samarinda. This study explains that there is an influence of Health Education on knowledge and attitudes of personal hygiene with a p-value of 0.000 (p <0.05). Health Education with audio and visual media is very suitable if applied to children or adolescents to improve reproductive health because it is in accordance with the characteristics of children who like images and visuals to understand the material.

The results of this study are in line with Boshra & Mariod [13] concluded that the effects of health education were highly significant among participants after the intervention

program. Students' personal hygiene and awareness scores increased significantly ($p < 0.01$). Result study from Abic *et al.* [14] found that a statistically significant increase in genital hygiene behavior scores was found after education was provided. This underscores the effectiveness and necessity of planned education in improving hygiene practices

4 Conclusion

The conclusions of this study are perineal hygiene behavior before the educational series intervention on perineal hygiene was categorized as inadequate in 45 female students (90%). Perineal hygiene behavior after the educational series intervention on perineal hygiene was categorized as adequate in 27 female students (54%). There is an effect of the educational series on perineal hygiene on perineal hygiene behavior in school-age children with a p-value of 0.000 ($p < 0.05$)

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