

The Effects of Promotional Efforts Based on Gender Characteristics on Knowledge and Practice of Personal Genital Hygiene among Students of SD Negeri Ledug

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ABSTRACT

Background: Hygiene behavior is very important to prevent children and adolescents from falling into various forms of sexual violence which are increasingly common in this millennial era. It is important to provide sexual education from an early age. **Objectives:** This research aims to identify the influence of promotive efforts based on gender characteristics on the knowledge and practice of personal genital hygiene in Ledug State Elementary School students. **Methods:** This was quantitative research with a quasi-experimental design with a Solomon four-group approach. The sample was 70 respondents using the simple random sampling method. Data analysis used the one-way ANOVA test. **Results:** The results of this research are the results of the one-way ANOVA statistical test which obtained a p-value of 0.000 which means $p < 0.05$; for knowledge, the average result of the female intervention group was greater, with a score of 29.3. Meanwhile, the skill that had the highest average value was the male intervention group, with a score of 19.4. **Conclusion:** There is an effect of promotional efforts based on gender characteristics on knowledge and practice of personal genital hygiene among students of SD Negeri Ledug. Ledug Elementary School students are expected to have a greater desire to know and a better way of thinking to gain knowledge, intellectual skills and problem-solving skills.

Keywords: Gender, Knowledge, Practice, Personal Genital Hygiene, Students

INTRODUCTION

Genital personal hygiene is one of the personal hygiene activities that must be carried out to prevent infection and is carried out to maintain family health (Djusad et al., 2021). Genital personal hygiene is the practice of maintaining the cleanliness and health of the genital organs carried out in everyday life to prevent reproductive system problems such as urinary tract infections, improve physical and mental well-being, and improve overall health status (Dwianggimawati, 2022). Indicators of good genital area hygiene are cleaning the genitals with clean water from the vaginal area to the anus, drying with a towel or tissue, wearing the right pants (underwear made of material that easily absorbs sweat, not tight), using sanitary napkins and changing them frequently, using cleansers for the feminine area, and keeping the bathroom clean (Arofah & Rohimah, 2019).

Biological factors influence disease exposure and health risks through

gender norms, roles, and relationships. Therefore, health policies must consider the differences in the needs of men and women. Promoting the realization of everyone's right to health, reducing health inequalities, and increasing positive impact are all possible by adapting health programs and policies to these differences and trends. Social (gender) and biological (sex) differences influence the health of women and men in Indonesia and elsewhere. Sexual and reproductive health is not the only area where men's and women's health differs. Apart from gender, health status is influenced by education, income and place of residence (urban or rural) (World Health Organization (WHO), 2020).

Learning at school can be different for boys and girls in different ways (Connell, 2023). This can have an impact on several things, including the level of class participation and the learning outcomes achieved. The Indonesian government faces significant obstacles over the next 10 years to ensure that men

and women have equal access to educational opportunities and outcomes (Nugraha et al., 2021). Gender equality can be incorporated into teaching and learning activities for many good reasons (Rosa & Clavero, 2022). This includes breaking old stereotypes such as respecting the abilities of both male and female students, giving equal attention to both boys and girls, and encouraging female students to actively participate in extracurricular activities that most male students attend (Sardjunani, 2013).

Hygiene behavior is very important because if it is not implemented well it will hurt reproductive health. Based on WHO data in 2010, the prevalence rates of candidates (25-50%), bacterial vaginosis (20-40%), and trichomoniasis (5-15%) (Mulyani et al., 2018). In Turkey, the prevalence of urinary tract infections in school-aged girls is 7.8%, while it affects 1.6% of boys. Only 1% of older children, 3% of school-age children, and less than 1% of term infants have asymptomatic bacteriuria (Zincir et al., 2012). Asymptomatic conditions may involve significant bacteriuria and leukocyturia; the majority of these problems occur in countries where circumcision is less common.

Health services for school-aged children aim to identify children at risk of disease so that it can be controlled early, encourage optimal growth and development, contribute to learning and ultimately produce healthy, high-achieving school-aged children (Nugraha, 2021). Based on the phenomenon above, the author is interested in exploring "the effect of promotional efforts based on gender characteristics on knowledge and practice of personal genital hygiene among students of SD Negeri Ledug.

METHODS

Based on data collection, the number of samples in this study was 70 respondents divided into four groups. The male control and experimental groups consisted of 40 students, while the female control and experimental groups consisted of 30 female students. This research was carried out from October 2022 to July 2023 at Ledug Elementary School which is located in Kec. Kembaran, Kab. Banyumas, Central Java. This research has received ethical equality from the Health Research

Ethics Committee of the Universitas Muhammadiyah Purwokerto No. KEPK/UMP/08/II/2023, dated February 1, 2023.

Inclusion Criteria

- Class V students of Ledug State Elementary School
- 10-12 years old
- Willing to be a respondent
- Willing to fill out the questionnaire.

Exclusion Criteria

- Students who cannot read and write.

Furthermore, the male control group and the female experimental group were given a pretest of knowledge with a children's knowledge questionnaire regarding vulva and penile hygiene on March 7-10, 2023. Providing health education using booklets and personal genital hygiene practices in the experimental group on 13-17 March 2023, all groups were given a knowledge posttest using a vulva and penis hygiene questionnaire on March 20, 2023. The control group was given personal genital hygiene health education using the lecture method after the posttest on March 21, 2023.

This study is quantitative research. The research was a quasi-experimental design, with a randomised Solomon four-group approach (Winarno, 2013). Two previous experimental designs were combined in this design to create the 4-group method. The Solomon four-group design research is presented in Table 1.

Table 1. Research Design.

(R)	Intervention 1 (female)	Y ₁	X	Y ₂
(R)		Y ₁	-	Y ₂
(R)	Control 1 (man)	-	X	Y ₂
(R)	Intervention 2 (man)	-	-	Y ₂

Control 2 (female)

Information:

R: Randomization

Y₁: Pretest in groups 1 and 2 before being given treatment

Y₂: Posttest on the four groups after treatment

X: Treatment in the intervention group

-: Control group without treatment

RESULTS AND DISCUSSION

1. Univariate Analysis

a. Respondent Characteristics

The distribution of respondent characteristics in this study included children's age, gender, and menstrual status at Ledug Elementary School.

Table 2. Distribution of Respondent Characteristics.

Characteristic	Intervention		Control	
	N	%	N	%
Child Age				
10 years old	8	22.9	9	25.7
11 years old	23	65.7	20	57.1
12 years old	4	11.4	6	17.1
Total	35	100	35	100
Gender				
Man	20	57.1	20	57.1
Woman	15	42.9	15	42.9
Total	35	100	35	100
Menstrual Status				
Already menstruating	12	80	10	66.7
Not menstruating yet	3	20	5	33.3
Total	15	100	15	100

Based on Table 2, the sample used in this study consisted of 70 students divided into four groups, the male intervention and control groups were 40 students (57.1%) while the female intervention and control groups were 30 female students (42.9%). Age characteristics show that most of the respondents were aged 11 years, for the intervention group there were 23 students (65.7%) and the control group 20 students (57.1%). Based on menstrual status, there were 12 female students in the intervention group who had menstruated (80%) and 10 female students in the control group (66.7%). Meanwhile, there were three female students in the intervention group (20%) who had not menstruated and five female students in the control group (33.3%).

b. Respondents' Knowledge Before Being Given Health Education About Personal Genital Hygiene

Table 3. Percentage Distribution of Pretest Knowledge.

	F	(%)	F	(%)
Good	9	60.0	12	60.0
Enough	3	20.0	5	25.0
Not enough	3	20.0	3	15.0
Total	15	100.0	20	100.0

Based on Table 3, the results of knowledge research before being given health education about personal genital hygiene in the female intervention group were in the good category, nine respondents (60%), in the sufficient category, three respondents (20%) and in the poor category, there were three respondents (20%). Meanwhile, in the male control group, there were 12 respondents (60%) in the good category, five respondents in the fair category, and three respondents in the poor category (15%).

c. Respondents' Knowledge After Being Given Health Education About Personal Genital Hygiene Based on Female Gender Characteristics.

Table 4. Posttest Percentage Distribution of Women's Knowledge.

	F	(%)	F	(%)
Good	11	73.3	6	40.0
Enough	3	20.0	5	33.3
Not enough	1	6.7	4	26.7
Total	15	100.0	15	100.0

Table 4 shows the results of knowledge research after being given health education about personal genital hygiene based on female gender in the intervention group, 11 respondents (73.3%) in the good category, three respondents (20%) in the adequate category and one respondent in the poor category (6.7%). Meanwhile, in the control group, there were six respondents (40%) in the good category, five respondents in the fair category (33.3%), and four respondents in the poor category (26.7%).

d. Respondents' Knowledge After Being Given Health Education About Personal Genital Hygiene Based on Male Gender Characteristics

Table 5. Posttest Percentage Distribution of Male Knowledge.

	F	(%)	F	(%)
Good	19	95.0	13	65.0
Enough	1	5.0	7	35.0

Table 5 shows the results of knowledge research after being given health education about personal genital hygiene based on male gender in the intervention group, 19 respondents (95%) in the good category and one respondent in the fair category (5%). Meanwhile, in the control group, there were 13 respondents (65%) in the good category and seven respondents (35%) in the fair category.

- e. Respondents' Skills Before Being Given Health Education on Personal Genital Hygiene

Table 6. Percentage Distribution of Pretest Skills.

	F	(%)	F	(%)
Skilled	7	46.7	12	60.0
Quite skilled	5	33.3	7	35.0
Unskilled	3	20.0	1	5.0
Total	15	100.0	20	100.0

Based on Table 6, the results of research on skills before being given health education about personal genital hygiene in the female intervention group were seven respondents (46.7%) in the skilled category, five respondents in the quite skilled category (33.3%) and three respondents in the unskilled category (20%). Meanwhile, in the male control group, there were 12 respondents (60%) in the skilled category, seven respondents in the moderately skilled category, and one respondent in the unskilled category (5%).

- f. Respondents' Skills After Being Given Health Education on Personal Genital Hygiene Based on Female Gender Characteristics

Table 7. Posttest Percentage Distribution of Women's Skills.

	F	(%)	F	(%)
Skilled	13	86.7	1	6.7
Quite skilled	2	13.3	12	80.0
Unskilled	-	-	2	13.3
Total	15	100.0	20	100.0

Table 7 shows the results of skills research after being given health education about personal genital hygiene

based on female gender in the intervention group, 13 respondents (86.7%) in the skilled category and two respondents in the moderately skilled category (13.3%). Meanwhile, in the control group, there was one respondent in the skilled category (6.7%), in the moderately skilled category there were 12 respondents (80%), and in the unskilled category there were two respondents (13.3%).

- g. Respondents' Skills After Being Given Health Education on Personal Genital Hygiene Based on Male Gender Characteristics

Table 8. Posttest Percentage Distribution of Male Skills.

	F	(%)	F	(%)
Skilled	18	90.0	15	75.0
Quite skilled	2	10.0	5	25.0
Total	20	100.0	20	100.0

Table 8 shows the results of skills research after being given health education about personal genital hygiene based on male gender in the intervention group, 18 respondents (90%) in the skilled category, and two respondents in the moderately skilled category (10%). Meanwhile, in the control group, there were 15 respondents (75%) in the skilled category and five respondents (25%) in the quite skilled category.

2. Bivariate Analysis

a. Normality test

Data analysis using parametric statistical methods has several conditions that must be met. These conditions include, among other things, that the data must be normally distributed and the data for the variables being analyzed be homogeneous. The normality test is a way to determine whether the distribution of data in a sample can be rationally expected to come from a certain population with a normal distribution (Budiwanto, 2017). The normality test that researchers used in this research was the Kolmogorov-Smirnov (KS) test. The normality test results are shown in Table 9.

Table 9. Kolmogorov-Smirnov Normality Test Results.

Group	Kolmogorov-Smirnov	Sig
Knowledge	<u>Pretest</u>	0.168
	Women's Intervention	
	<u>Pretest</u> Male Control	0.328
	<u>Posttest</u>	0.132
	Women's Intervention	
	<u>Posttest</u> Female Control	0.206
	<u>Posttest</u> Male Intervention	0.436
	<u>Posttest</u> Male Control	0.586
Skills	<u>Pretest</u>	0.913
	Women's Intervention	
	<u>Pretest</u> Male Control	0.654
	<u>Posttest</u>	0.696
	Women's Intervention	
	<u>Posttest</u> Female Control	0.634
	<u>Posttest</u> Male Intervention	0.444
	<u>Posttest</u> Male Control	0.313

Based on the results above, it can be concluded that all research data are normally distributed because the significance of the variables is > 0.05 , so the normality assumption test can be carried out using the one-way ANOVA statistical test.

b. Homogeneity Test

The homogeneity test is a test used to determine whether the variances of two or more distributions are the same. The homogeneity test ensures that the data set examined in the analysis process comes from populations that do not differ much in diversity. Parametric statistical analysis is based on the assumption that population variances are equal.

Table 10. Homogeneity Test Results.

Group	Test of Homogeneity of Variance	Statistics	Sig
<u>Posttest</u> Knowledge	Based on mean	19.864	0.715

	Based on median	4.796	0.750
	Based on median and with adjusted df	4.796	0.764
	Based on trimmed mean	17.249	0.715
<u>Posttest</u> Skills	Based on mean	0.610	0.611
	Based on mean	0.554	0.647
	Based on median and with adjusted df	0.544	0.648
	Based on trimmed mean	0.555	0.647

The results of the homogeneity test calculation show that the significance value of knowledge and skills is > 0.05 . The data have the same variable value (homogeneity) because the significance level of the test is greater than or equal to 0.05, so data analysis can be carried out using the one-way ANOVA test.

c. One-Way ANOVA Statistical Test

The results of the analysis of the influence of promotional efforts based on gender characteristics on knowledge and practice of personal genital hygiene after being given include the average value or mean p-value. The results of the one-way ANOVA test are presented as follows:

Table 11. One Way ANOVA Statistical Test Results.

Group	One Way ANOVA		
		Mean Squares	Sig
<u>Posttest</u> Knowledge	Between Groups	270.542	0.000
	Within Groups	10.118	0.000
	Total		
<u>Posttest</u> Skills	Between Groups	64.840	0.000
	Within Groups	2.281	0.000
	Total		

Based on Table 11, it is found that the p-value is $0.000 < 0.05$ and it can be concluded that H_a is accepted. In other words, there are differences between

groups (intervention and control). Therefore, it can also be concluded that there is an effect of promotional efforts based on gender characteristics on knowledge and practice of personal genital hygiene among students of SD Negeri Ledug.

- d. Differences in Knowledge and Skills After Being Given Health Education on Personal Genital Hygiene Based on Gender Characteristics

Table 12. One-Way ANOVA Advanced Test Results.

Dependent Variable	(I)Group Type	(J)Group Type	Sig
Posttest Knowledge	Male Intervention	Female Intervention	0.000
		Male Control	1.000
		Female Control	0.033
		Female Intervention	0.000
	Female Intervention	Male Intervention	0.000
		Male Control	0.000
		Female Control	0.001
		Female Intervention	0.000
	Male Control	Male Intervention	1.000
		Female Intervention	0.000
		Female Control	0.001
		Female Intervention	0.000
Posttest Skills	Male Intervention	Female Intervention	0.027
		Male Control	0.384
		Female Control	0.000
		Female Intervention	0.000
	Female Intervention	Male Intervention	0.027
		Male Control	1.000
		Female Control	0.000
		Female Intervention	0.000

Male Control	Male Intervention	0.384
	Female Intervention	1.000
	Female Control	0.000
	Female Intervention	0.000
Female Control	Male Intervention	0.000
	Female Intervention	0.000
	Male Control	0.000
	Female Control	0.000

Based on Table 12, the research results show that the differences in knowledge and skills after being given health education about personal genital hygiene are as follows:

- 1) *Posttest* The male intervention group's knowledge of female intervention and female control has a significant level of difference because the p-value is < 0.05 , namely 0.000 and 0.033, while the male control group has no significant difference because the p-value is > 0.05 namely 1.000.
- 2) *Posttest* The female intervention group's knowledge of male intervention, male control and female control has a significant level of difference because the p-value is < 0.05 , namely 0.000 and 0.001.
- 3) *Posttest* There is no significant difference in the male control group's knowledge of male intervention because the p-value is > 0.05 , namely 1.000, while the female intervention and female control have a significant level of difference because the p-value is < 0.05 , namely 0.000 and 0.001.
- 4) *Posttest* The female control group's knowledge of male intervention, female intervention and male control have a significant level of difference because the p-value is < 0.05 , namely 0.033 and 0.001.

- 5) *Posttest* The skills of the male intervention group toward female intervention and female control have a significant level of difference because the p-value is < 0.05, namely 0.027 and 0.000, while the male control group has no significant difference because the p-value is > 0.05 namely 0.384.
- 6) *Posttest* The skills of the female intervention group toward male intervention and female control have a significant level of difference because the p-value is < 0.05, namely 0.027 and 0.000, while the male control group has no significant difference because the p-value is > 0.05 namely 1.000.
- 7) *Posttest* The skills of the male control group to the female control group have a significant level of difference because the p-value is > 0.05, namely 0.000, while the male intervention and female intervention have no significant difference because the p-value is < 0.05, namely 0.384 and 1.000.
- 8) *Posttest* The skills of the female control group toward male intervention, female intervention and male control have a significant level of difference because the p-value is < 0.05, namely 0.000.

In this study, health education was provided to the intervention group using booklet and phantom media, and for the control group using lecture and phantom media. The research results showed that students' knowledge and skills increased after being exposed to health education through booklets as well as phantom vulva and penis hygiene, which was marked by an increase in the respondents' knowledge and skills scores.

These results are also in line with research conducted by Fitriyah (2023) which states that good and high personal hygiene knowledge among teenagers can influence these teenagers to carry out good and correct hygiene practices because they are supported by adequate knowledge about reproductive health, especially personal external genital hygiene. This is supported by Orem's

theory, according to which effective self-care is developed to help shape the integrity of human structure and function and is closely related to human development (Ahenkorah, 2024).

According to Dorothea Orem's theory, self-care is an activity that arises from individual care to fulfill individual needs to maintain life, health and well-being both in health and illness (Queirós et al., 2014). Personal hygiene is important because if implemented well it can minimize access for microorganisms (port of entry) and ultimately prevent people from getting sick (Finlay et al., 2021). Forms of personal hygiene include skin cleanliness, hair cleanliness, oral cleanliness, eye cleanliness, ear cleanliness, genital cleanliness, hand cleanliness, and foot and nail cleanliness (Kipps et al., 2023). Factors that influence personal hygiene include age, gender, developmental status, health status, social culture, health system, and family system (Lin et al., 2021). Self-care according to the Orem principle, means everyone has the need and the right to take care of themselves, unless they are unable to take care of themselves (Martínez et al., 2021). Orem's model can be expanded beyond the parameters of the original model, namely from personal self-care to family care (Fadhilah et al., 2022). The implications of the research results after the intervention is carried out is that students can apply genital hygiene in their daily lives by using available tools such as using a clean towel or washcloth, and clean water and can practice how to care for their genitals properly and correctly to maintain their health status and maintain reproductive health (Altundağ, 2024).

CONCLUSION

Based on the results of the studies and analyses that have been carried out, it can be concluded that the age characteristics of most of the respondents were 11 years old, for the intervention group there were 23 students (65.7%), and for the control group there were 20 students (57.1%). Based on menstrual status, 12 female students in the intervention group had menstruated (80%) and 10 female students in the control group (66.7%). Meanwhile, three female students in the intervention group had not menstruated (20%) and five female

students in the control group (33.3%) and the average knowledge of intervention and control group respondents was 10.118 and the average skill of intervention and control group respondents was 2.281, so the difference between the two groups is 7.837. The results of the one way ANOVA statistical test obtained a p-value of 0.000, which means $p < 0.05$, so it can be concluded that there is an influence of promotional efforts based on gender characteristics on the knowledge and practice of personal genital hygiene in Ledug State Elementary School students.

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