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THE EFFECT OF HEALTH EDUCATION THROUGH THE DIRECT DEMONSTRATION METHOD ON HANDWASHING SKILLS AMONG SCHOOL-AGE CHILDREN AT SDN 115/III TANJUNG GENTING, KERINCI REGENCY, IN 2025

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Abstract

Many diseases that are the cause of death are caused by unclean and unhealthy behavior such as malaria, diarrhea, typhus abdominalis, dengue fever, worms, skin diseases, malnutrition, bird flu, and even swine flu which is now quite shocking to the world. The purpose of this study was to determine the effect of health education through direct demonstration methods on hand washing skills in school-age children. This study is a quantitative study with a Pre-Experimental research design, namely with a one-group pre-test-post-test design approach). The population in this study were all students from grades IV-VI at SDN 115/III Tanjung Genting in 2025 as many as 20 people. The sampling technique used in this study was the Total Sampling technique with a sample of 20 people who met the inclusion criteria. This research was conducted at SDN 115/III Tanjung Genting, Kerinci Regency, Jambi Province, from January to June 2025. The results obtained an average of 17 (85.0%) respondents with poor handwashing skills in school-age children before being given health education through direct demonstration methods, while after an average of 19 (95.0%) respondents with good handwashing skills in school-age children, with a p-value = 0.000 (p≤0.05). The conclusion of the study shows that there is an effect of health education through direct demonstration methods on handwashing skills in school-age children. The researcher's suggestion from the results of the study can be applied to health workers in providing health education through direct demonstration methods on handwashing skills in school-age children so that children will be protected from diseases caused by microorganisms.

Keywords: Health Education, Direct Demonstration Method & Handwashing

1. INTRODUCTION

Clean and Healthy Living Behavior (PHBS) in schools is a set of behaviors practiced by students, teachers, and the school community based on awareness developed through learning, so that they are independently able to prevent diseases, improve their health, and actively participate in creating a healthy environment. Children are highly vulnerable to health problems because they often neglect to wash their hands, especially while at school (Riastawaty, 2021).

Bacteria can be found in many places, including the oral cavity, palms of the hands, between the teeth, and in soil containing garbage and spoiled food waste (Amin S.S et al., 2023). Intrinsic and extrinsic factors can influence the bacteria present on the palms. Bacteria on the hands can become a medium for transmitting digestive tract infections, respiratory tract infections, and other diseases such as *Escherichia coli*, *Salmonella* species, *Shigella* species, and *Klebsiella*

pneumoniae (Kurniati P.S et al., 2019). According to Heryani H et al. (2018), many diseases that cause death are associated with unhealthy and unhygienic behavior, such as malaria, diarrhea, typhoid fever, dengue fever, worm infections, skin diseases, malnutrition, bird flu, and even swine flu, which once caused worldwide concern.

According to the latest data from the World Health Organization (WHO) in 2024, acute respiratory infections (ARI) remain the leading cause of morbidity and mortality from infectious diseases worldwide, with 18.8 billion cases and approximately 4 million deaths annually. There are also around 1.7 billion cases of diarrhea among children globally, causing the deaths of 443,832 children under five years old each year, with an additional 50,851 deaths among children aged nine years. Meanwhile, nearly 1.5 billion people suffer from helminthiasis, with Brazil being among the countries with the highest number of cases (World Health Organization, 2024).

Based on age groups, toddlers aged 1–4 years have the highest prevalence of diarrhea in Indonesia, at 16.7% (Lusida N et al., 2023). The 2023 Indonesian Health Survey (SKI) reported 877,531 cases of ARI in Indonesia. In addition, 26 regencies and cities in Indonesia recorded helminthiasis prevalence rates above 10% (Ministry of Health of the Republic of Indonesia, 2024). The Central Statistics Agency reported 46,379 cases of diarrhea among children in Jambi Province in 2023 (Central Statistics Agency, 2023). Meanwhile, ARI cases in Jambi Province reached 11,588 cases (Ministry of Health of the Republic of Indonesia, 2024).

Based on monthly reports by age group (6–12 years), ARI cases were recorded at 7 cases in 2022, 10 cases in 2023, and increased to 13 cases in 2024. Diarrhea cases were 26 in 2022, increased to 29 in 2023, and further rose to 36 in 2024. Helminthiasis cases were 3 in 2022, 3 in 2023, and slightly increased to 6 in 2024 (Simpang Tutup Community Health Center, 2025).

Germs are everywhere. At school, children not only study but also engage in many other activities such as playing, touching each other, and exchanging items with friends. Germs on stationery, calculators, books, and other objects can easily spread from one child's hands to another. Therefore, if one child has a certain disease, it can easily be transmitted to others. Thus, handwashing habits should be taught from an early age so children can develop the habit of washing their hands and avoid illness (Djauzi in Suhartiningsih et al., 2023).

The importance of handwashing among elementary school children is based on the understanding that proper handwashing is one of the indicators of clean and healthy living behavior that can help prevent disease transmission. Handwashing is also an effort to maintain students' health and prevent the spread of disease in the school environment. The benefits of handwashing include preventing disease transmission, maintaining health, and improving personal hygiene. In contrast, not washing hands can lead to disease spread, especially diarrhea and respiratory infections, as well as the risk of infection from germs and bacteria that may cause various illnesses (Dewi S.I.P et al., 2022).

Handwashing with soap is an effort that includes washing the hands and fingers using soap and running water. It is a simple, easy, and beneficial way to prevent various diseases such as diarrhea and acute respiratory infections, which are often causes of death in children. However, handwashing habits among elementary school students remain very low, mainly due to a lack of understanding of the importance of handwashing for health and the correct handwashing procedures. Therefore, handwashing can be identified as one of the common hygiene problems among school-age children. This school-age period is the most appropriate time to instill knowledge and healthy habits, especially handwashing (Ambarwati S et al., 2021).

Health education has a significant impact on behavioral change. Through health education, individuals, groups, and communities as a whole can develop healthier lifestyles in accordance with health norms. Achieving health-promoting behavior in a healthy environment can be considered a successful outcome of health education. Therefore, health education aims to improve the community's capacity to protect and enhance health as a primary concern and form of empathy toward well-being (Widodo, 2020).

The demonstration method is a teaching method in which learning is delivered by directly showing students or target groups a process or activity accompanied by verbal explanations.

Through demonstrations, students gain deeper impressions during learning, making understanding easier and more effective. In addition, the demonstration method makes it easier for learners to understand and imitate the process in a practical way (Endayani T et al., 2020).

Based on research conducted by Oktavianti et al. (2024), entitled *"The Effect of Health Education Using the Demonstration Method on Hand Hygiene Skills of Elementary School Children at MIM Nglinggo Pagerharjo Samigaluh Kulon Progo,"* the results showed that there was a significant effect of health education using the demonstration method on children's hand hygiene skills, with a p-value of 0.000 ($p < 0.05$). According to research by Suhartiningsih et al. (2023), entitled *"The Effect of Health Education Using Demonstration and Singing Methods on Handwashing Ability of Grade 1 Students at MIN 3 Mataram City,"* there was also a significant effect, with a p-value of 0.000 ($p < 0.05$). Similarly, research by Jannah H.N. & Zuhroh F.D. (2022), entitled *"The Effect of Demonstration-Based Health Education on Handwashing Techniques in Preschool Children Aged 4–6 Years,"* found a significant effect with a p-value of 0.000 ($p < 0.05$).

The reason the researcher chose SDN 115/III Tanjung Genting as the research location is because it is close to the researcher's home, and the researcher had previously studied there and observed that many students did not wash their hands after consuming food at school. The total number of students in grades IV–VI at SDN 115/III Tanjung Genting in 2025 was 20 students, consisting of 11 girls and 9 boys. Grade IV had 9 students, Grade V had 1 student, and Grade VI had 10 students. Based on a preliminary survey conducted on Friday, January 3, 2026, interviews with 11 students regarding handwashing methods, frequency, common illnesses, and food consumed showed that 8 students stated they did not wash their hands before or after eating foods at school such as bread, fried snacks, and spicy foods like meatballs. They also did not wash their hands after playing or before sleeping. Meanwhile, 3 students stated that they did wash their hands before and after eating at school, did not consume fried or spicy foods, and also washed their hands after playing and before sleeping. Interviews with 10 teachers revealed that they had never provided health education regarding handwashing skills to their students. Teachers also stated that the most common illness experienced by students was diarrhea, as parents often requested permission for their children to be absent from school due to diarrhea.

2. METHODOLOGY

This study was a quantitative study using a pre-experimental research design with a one-group pretest-posttest approach. The population in this study consisted of all students in grades IV–VI at SDN 115/III Tanjung Genting in 2025, totaling 20 students. The sampling technique used in this study was total sampling, with a sample of 20 participants who met the inclusion criteria. This research was conducted at SDN 115/III Tanjung Genting, Kerinci Regency, Jambi Province, from January to June 2025.

3. RESULTS

3.1 Univariate Analysis

3.1.1 The Average Handwashing Skills of School-Age Children Before Being Given Health Education Through the Direct Demonstration Method at SDN 115/III Tanjung Genting, Kerinci Regency, in 2025

Table 1. Before the Provision of Health Education

Handwashing Skills	*F*	*%*
Good	3	15,0
Poor	17	85,0
Total	**20**	**100,0**

Based on Table 1, it was found that almost all respondents, namely 17 (85.0%), had poor handwashing skills among school-age children before being given health education through the direct demonstration method at SDN 115/III Tanjung Genting, Kerinci Regency, in 2025.

3.1.2 The Average Handwashing Skills of School-Age Children After Being Given Health Education Through the Direct Demonstration Method at SDN 115/III Tanjung Genting, Kerinci Regency, in 2025

Table 2. *After the Provision of Health Education*

Handwashing Skills	*F*	*%*
Good	19	95,0
Poor	1	5,0
Total	**20**	**100,0**

Based on Table 2, it was found that almost all respondents, namely 19 (95.0%), had good handwashing skills among school-age children after being given health education through the direct demonstration method at SDN 115/III Tanjung Genting, Kerinci Regency, in 2025.

3.2 Bivariate Analysis

The Effect of Health Education Through the Direct Demonstration Method on Handwashing Skills Among School-Age Children at SDN 115/III Tanjung Genting, Kerinci Regency, in 2025

Table 3 *The Effect of Health Education Through the Direct Demonstration Method on Handwashing Skills*

Variabel	N	%	Handwashing Skills	P Value
Pretest	17	85,5	Good	0,000
Posttest	19	95,0	Poor	

Based on Table 3, the results of the statistical test using the dependent t-test showed that the handwashing skills variable had a p-value = 0.000 ($p \leq 0.05$). Therefore, there was a significant effect of health education through the direct demonstration method on handwashing skills among school-age children at SDN 115/III Tanjung Genting, Kerinci Regency, in 2025.

4. CONCLUSIONS

There was an effect of health education through the direct demonstration method on handwashing skills among school-age children at SDN 115/III Tanjung Genting, Kerinci Regency, in 2025. There was a change in handwashing skills before and after the health education intervention using the direct demonstration method. Before the intervention, 17 respondents (85.0%) had poor handwashing skills, whereas after the intervention, 19 respondents (95.0%) had good handwashing skills. Therefore, students at SDN 115/III Tanjung Genting should continuously be provided with health education through the direct demonstration method so that they can understand more quickly and avoid diseases caused by microorganisms.

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