

Evaluation of Understanding of Clean Living Behavior in Diarrhea Prevention Efforts in Elementary School Students

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ABSTRACT

Diarrhea remains a public health problem in Indonesia due to its high morbidity and mortality. The World Health Organization (WHO) reports that 100,000 Indonesian children die from diarrhea each year. Therefore, community service is very important to improve knowledge about hand washing behavior in school children. The purpose of this service is to evaluate knowledge about PHBS among elementary school students as an effort to prevent diarrhea. The targets were 33 students of Elementary School (SD) of Inpres Kanreapia in Balanglohe Hamlet, Tombolopao District. This service method uses a combination of material delivery with PowerPoint, poster installation, and hand washing practice. Evaluation of counseling was carried out using post-test I and post-test II questionnaires to measure knowledge after 8 months of counseling, which was analyzed using the Friedman test. The results of statistical analysis showed a significant value of 0.050 ($p > 0.05$), indicating that there was no statistically significant difference in knowledge regarding diarrhea prevention counseling with PHBS between the period before and after 8 months of counseling. Suggestions given during the implementation of the program have been implemented by SD Inpres Kanreapia, such as the provision of hand washing stations.

Keywords: counseling; diarrhea; hand disinfection; healthy lifestyle; students

ABSTRAK

Diare masih menjadi masalah kesehatan masyarakat di Indonesia karena morbiditas dan mortalitasnya yang tinggi. World Health Organization (WHO) melaporkan bahwa 100.000 anak Indonesia meninggal akibat diare setiap tahunnya. Oleh karena itu, pengabdian kepada masyarakat sangat penting untuk meningkatkan pengetahuan tentang perilaku cuci tangan pada anak sekolah. Tujuan dari pengabdian ini adalah untuk mengevaluasi pengetahuan tentang PHBS di kalangan siswa sekolah dasar sebagai upaya pencegahan diare. Sasarannya adalah 33 siswa SD Inpres Kanreapia di Dusun Balanglohe, Kecamatan Tombolopao. Metode pengabdian ini menggunakan kombinasi penyampaian materi dengan PowerPoint, pemasangan poster, dan praktik cuci tangan. Evaluasi penyuluhan dilakukan menggunakan kuesioner post-test I dan post-test II untuk mengukur pengetahuan setelah 8 bulan penyuluhan, yang dianalisis menggunakan uji Friedman. Hasil analisis statistik menunjukkan nilai signifikan sebesar 0,050 ($p > 0,05$), yang mengindikasikan bahwa tidak ada perbedaan pengetahuan yang signifikan secara statistik mengenai penyuluhan pencegahan diare dengan PHBS antara periode sebelum dan setelah 8 bulan penyuluhan. Saran yang diberikan selama pelaksanaan program telah diimplementasikan oleh SD Inpres Kanreapia, seperti pengadaan tempat cuci tangan.

Kata Kunci: penyuluhan; diare; desinfeksi tangan; gaya hidup sehat; siswa

INTRODUCTION

According to data from the World Health Organization (WHO), diarrheal disease is the second leading cause of death in children under five, and was the cause of death for 370,000 children in 2019. Diarrhea is a major cause of malnutrition, which makes sufferers more vulnerable to diarrhea attacks and other diseases later in life. Diarrhea prevalence in Indonesia based on Riskesdas (2018) was 182,338 (6.2%) children with diarrhea aged 5-14 years, and 165,644 (6.7%) children with diarrhea aged 15-24 years (Riskesdas 2018, 2019). South Sulawesi ranks 14th with a service coverage of diarrhea patients of 40.92%. In 2019 the largest incidence of diarrhea was found in Makassar City with a total of 19,592 cases treated out of a total population of 9,145,143 people. Makassar City ranks 5th highest with a diarrhea prevalence of 8.25% (Awalia et al., 2023). From the data of the health department in 2021 January-August in gowa district, it shows that diarrhea sufferers for ages 5-15 years are 126 boys and 127 girls (Nur haidah, 2023). We conducted this service based on data collected in Balanglohe Hamlet, which showed that 29 children, or 8.9% of the total number of children, had diarrhea.

In the service (Cahyani et al., 2022) researchers have the assumption that the incidence of diarrhea is one of the diseases that is very vulnerable to occur in school-age children. One of the efforts made in preventing diarrhea in school-age children is to instill clean and healthy living behavior in daily activities. One indicator of clean and healthy living behavior in the school environment that is important for children is hand washing. WHO notes that every year 100,000 children in Indonesia die from diarrhea. Proper handwashing using soap can reduce the risk of diarrheal disease by 47% (Etrawati & Lionita, 2023).

Diarrheal disease is one of the major public health problems in Indonesia, with a high mortality rate caused by the disease, especially in children. Diarrhea that often occurs in Indonesia is the type of acute diarrhea, which can be dangerous if the child is dehydrated (Wantoro et al., 2020). According to the devotion (Anggraini & Kumala, 2022) important personal hygiene in the transmission of diarrhea germs is hand washing. Washing hands with soap, especially after defecation, after removing the child's stool, before preparing food, before feeding the child and before eating, has an impact on the incidence of diarrhea.

The focus of Handwashing with Soap (CPTS) is school children as "Agents of Change" (Tulak et al., 2020) with the symbolism of the unity of all school components in celebrating commitment to better change in healthy behavior through CPTS which is not only applied in the school environment but can also be applied in the family and community environment. Clean and healthy living behavior in schools is a set of behaviors practiced by students, teachers, and the school community, so that they are independently able to prevent disease, improve their health, and play an active role in creating a healthy environment (Safitri, 2020). This service is carried out with the aim that it can be evaluated to assess the effectiveness of the program that has been implemented and to find out the inhibiting factors during the program and to make improvements and recommendations for action so that the program we are doing can continue and be sustainable.

METHODS

The activity method chosen to evaluate the success of the program is using the ABCD (Asset-Based Community Development) service method, which is a participatory approach. The assets used include individual assets in the form of members' knowledge and skills, group assets in the form of social networks with principals and teachers, and physical assets in the

form of school buildings, school facilities (LCD and sound system), and physical resources in the environment.

In the ABCD service method, assessment can be done using qualitative, quantitative, and observation evaluation methods. Quantitative evaluation is carried out using pre-test, post-test 1, and post-test 2 instruments. Qualitative evaluation is done by conducting advocacy to principals and teachers. Observational evaluation is done by visiting SD Inpres Kanreapia to observe the school environment and daily student behavior.

RESULTS AND DISCUSSION

Figure 1 shows the evaluation activities carried out on students in grades 5-6 at SD Inpres Kanreapia using lecture and practice methods. The evaluation process went smoothly and followed the planned stages, starting from giving a post-test, followed by a re-delivery of the material, discussion of questionnaire questions to students, and practice of washing hands with soap properly. Clean and healthy living behavior (PHBS) is one of the keys that is very important and needs to be considered deeply in an effort to prevent disease, especially diarrhea in children (Diana & Kala, 2024). Diarrhea is a disease that can be caused by various factors, including a lack of clean and healthy living behaviors, especially in terms of hand washing with soap (Albuquerque et al., 2023). Handwashing with soap is a simple yet effective practice that can reduce the risk of infection and disease, especially in children who tend to be vulnerable to abdominal diseases such as diarrhea (Khasanah & Sari, 2015).

This activity is part of the evaluation of the diarrhea prevention program with PHBS for elementary school children. The physical resources available for this activity include facilities such as LCD screens, laptops, electrical plugs, posters, and so on. SD Inpres Kanreapia in Ballanlohe Hamlet was used as the location for delivering PHBS materials. Human resources involved include support from the Ballanlohe Hamlet RT, teachers, and the principal of SD Inpres Kanreapia. Several stages were carried out during the evaluation, namely the first stage of providing ice breakers to encourage students, ice breaking techniques were carried out to avoid boredom of students. In addition to eliminating boredom, ice breaking can encourage and restore students' learning concentration (Nazhifah, 2024). The second stage is by distributing post-test II as evaluation material to students, the next task is to provide repetition of material to students to strengthen memories related to diarrhea prevention with PHBS.



Figure 1. Evaluation, Practice and Repetition of Preventing Diarrhea with PHBS Materials

Table 1. Distribution of Respondents Based on Knowledge Level

Knowledge	Pre Test		Post Test I		Post Test II		Friedman Test
	n	%	n	%	n	%	
Kurang	3	9,1	-	-	-	-	0.050
Baik	3	90,9	33	100	33	100	

From Table 1 obtained that the level of knowledge of respondents of Diarrhea Prevention Counseling with PHBS with a good category in post test I as many as 33 people (100%) and a good category in post test II which was conducted within 8 months after counseling, namely 33 people (100%) which means that in post test I and Post Test II there is no decrease in knowledge of respondents of diarrhea prevention with PHBS.

The results of the statistical test analysis showed a significant value of 0.050 ($p > 0.05$) so it can be concluded that statistically there is no difference in respondents' knowledge related to diarrhea prevention counseling with PHBS in the time span before and after 8 months after counseling.

After evaluation through post-test II, we formed a team of three 5th and 6th grade students who had received counseling on PHBS. They were tasked with providing training on proper handwashing practices to students in grades 1-4 at SD Inpres Kanreapia. In addition, we also made observations regarding hand washing facilities at SD Inpres Kanreapia, which were previously unavailable. We made this observation as an evaluation and basis for program follow-up, including the installation of posters at each hand washing station (See Figure 2).

This service is in line with the service (Fitriani & Mesi Setiana, 2024) which uses activity evaluation to measure program effectiveness, an evaluation is carried out which includes the use of instruments such as a questionnaire with a total of 10 questions to measure students' knowledge of PHBS. In the service (Rama et al., 2024) also used PHBS posters that had been made and then pasted at school to make it easier for children to practice PHBS regularly and also to increase memory and help increase general student awareness about the importance of personal hygiene practices. The shortcomings of this poster installation are less effective because the posters are not laminated or wrapped in plastic, allowing the posters to be exposed to rain.



Figure 2. Poster Installation

Diarrhea is a condition where a person defecates with a mushy or liquid consistency, which can be water alone and the frequency is more frequent (usually three times or more) in one day (Maulani et al., 2024). Diarrhea is caused by infection with microorganisms such as bacteria, viruses, parasites and protozoa and can be transmitted through feces and mouth and is a major cause of morbidity and mortality in children (Arif et al., 2023). Diarrhea will also cause dehydration and lead to death (Irianty et al., 2018).

PHBS refers to a series of actions or habits that aim to maintain health and prevent disease (Julianti & Kala, 2023). One of the indicators of Clean and Healthy Living Behavior is Handwashing with Soap (CTPS) which is a way of washing hands with soap to prevent various diseases. Based on (Parasyanti et al., 2020) The main route of entry of germs is starting from both hands, because the hands are the part of the body that is often in contact with the mouth and nose. CTPS is done to break the chain of disease transmission. (Natsir, 2018). The practice of proper hand washing has many benefits in preventing diseases, such as diarrhea and helminthiasis (Manurung, 2020).

Schools or institutions are one of the strategic educational places to teach the importance of knowledge in the form of clean and healthy living behavior (Arif et al., 2023). Clean and healthy living behavior education is carried out as a preventive effort against diarrheal disease, because diarrhea is one of the most common causes of child morbidity and mortality (Nurhaedah et al., 2022). According to WHO, there are five pathways for diarrhea management, namely: adequate rehydration, zinc, nutrition, appropriate antibiotics, and education. With good diarrhea management, diarrhea has a good prognosis (Rendang Indriyani & Putra, 2020).

Of course, so that clean and healthy living behavior can continue to be implemented by all students, it must be supported by adequate facilities. The availability of the facilities they have will affect the actions of the students to carry out good or positive actions (Hestiyantari et al., 2020). Introducing clean and healthy living practices to elementary school students requires the provision of facilities such as clean water, adequate toilets, and hand washing facilities (Yahya, 2024).

The government program launched on Clean and Healthy Living Behavior is a collection of behaviors practiced by school residents and the school community on the basis of awareness as a result of learning, it aims to change the unhealthy behavior of school residents and the school community to become healthy. (Saide et al., 2024). In the dedication (Saide et al., 2024) Hand washing habits are a factor influencing the incidence of diarrhea in children. Because children whose hand washing habits are good are more likely not to experience diarrhea, so it can be concluded that the worse the hand washing habits, the higher the risk of diarrhea in children (Tuang, 2021).

According to the Indonesian Ministry of Health (2009), about 30 studies on diarrhea concluded that hand washing with soap and water can reduce the incidence of diarrhea. Diarrhea is often associated with hydration problems, but bacteria that cause diarrhea can also be found in human waste such as feces and urine, so care must be taken when handling these wastes. Socialization activities have proven to be a means of disseminating health information, especially in areas where health information literacy has not yet been achieved. This service shows that socialization of PHBS practices at the elementary school level increases student knowledge by 40% (Elfany, 2023).

This service is in line with the service of Aulia Radhika (2019). The study showed an association between hand washing with soap and the incidence of diarrhea in RW infants. Because $\alpha \leq 0,05$ and the probability value (p) is $0,013$, the hypothesis is rejected, namely

that there is a relationship between washing with soap and the incidence of diarrhea in young children in RW XI Sidotopo Village (Radhika, 2020).

CONCLUSIONS

The results of the evaluation of diarrhea prevention activities with PHBS showed the results of knowledge in the good category, 8 months after counseling. This shows that there is no decrease in knowledge regarding the prevention of diarrhea with PHBS between post-test I and post-test II. In addition, suggestions given at the time of program implementation have been implemented by SD Inpres Kanreapia, such as the provision of hand washing stations. We recommend teachers and principals of SD Inpres Kanreapia to maintain and sustain students' knowledge of PHBS. It is important to continue to hold periodic counseling activities to ensure that students' PHBS knowledge and practices are maintained and do not decline. In addition, the utilization of hand washing facilities that have been made by SD Inpres Kanreapia also needs to be improved, as well as ensuring that the facilities are in good condition and can be accessed easily by all students. These steps are expected to support diarrhea prevention efforts and improve public health in the school environment.

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