

# **Socialization of Diarrhea Prevention in School-Age Children Using Healthy Pocket Media at Elementary School UPT 101800 Deli Tua Timur, Deli Tua District, Deli Serdang Regency**

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## **ABSTRACT**

Diarrhea remains a major health problem in Indonesia, especially among school-aged children, generally caused by a lack of understanding of personal hygiene and healthy eating habits. This activity aims to increase elementary school students' knowledge about diarrhea prevention through the interactive educational media "Saku Sehat". The socialization was conducted on July 19, 2025, at SD UPT 101800 Delitua Timur, Deli Serdang Regency, involving 37 fifth-grade students. The method used was education and interactive games with the "Saku Sehat" media containing health information, questions and answers, and images of healthy foods. Evaluation was carried out through pre-tests and post-tests, and analyzed using the Wilcoxon Signed-Rank test. The results showed an increase in the average score from 70.00 to 80.27, with a Z value of -3.785 and  $p = 0.0001$ , which means the increase was significant. Thus, the "Saku Sehat" media is effective in increasing students' knowledge about diarrhea prevention through a fun and interactive approach.

**Keywords:** Diarrhea, School-Age Children, Healthy Pocket, Health Education, Prevention

## **INTRODUCTION**

Diarrhea is a global health problem in many countries, especially developing ones. Diarrhea is defined as the passage of three or more loose or watery stools per day (or more frequently than usual). Diarrhea is usually a symptom of an intestinal infection, which can be caused by various bacterial, viral, and parasitic organisms. Infection spreads through contaminated food or drinking water, or from person to person due to poor hygiene (WHO, 2024). Diarrhea is an environmental health-related disease. Diarrhea

occurs when there is a change in stool consistency, in addition to the frequency of bowel movements. A person is said to have diarrhea if the stool is more watery than usual, or if they have three or more loose stools, or if they have watery but non-bloody stools within 24 hours (Ministry of Health of the Republic of Indonesia, 2017). Prompt treatment is essential to overcome this disease because if it is delayed and the body's fluid output exceeds the fluid intake, this can be dangerous and even cause death. This often occurs in at-risk groups such as infants, toddlers, and the elderly (Prawati & Haqi, 2019).

Diarrhea remains the leading cause of death in healthcare facilities such as community health centers (Puskesmas) and hospitals. The causes of diarrhea are diverse and closely related to clean and healthy living habits, including handwashing with soap, drinking clean water, and consuming nutritious food (Amirah et al., 2024). Research by Akhdan Paramasatya (2023) indicates that seven factors are associated with diarrhea: improper waste disposal, education and understanding, child age, economic status, water source, not exclusively breastfeeding, and the lack of toilets or latrines. The World Health Organization (WHO) reports that diarrhea causes 21% of infant deaths and is responsible for approximately 1.1 million infant deaths each year. Furthermore, diarrhea causes 28% of deaths in children aged 5 to 9 years, resulting in approximately 84,000 deaths worldwide. In developing countries, children under three experience an average of three episodes of diarrhea each year. Each episode of diarrhea deprives children of the nutrients they need for growth and development, and diarrhea is a leading cause of malnutrition in children, according to the 2023 Indonesian Health Survey (SKI). North Sumatra Province stated that the prevalence of diarrhea in North Sumatra was 4.7%. The number of diarrhea cases in North Sumatra Province was recorded at 205,155. Of these, 40,126 cases occurred specifically in Medan City, while 1,266 occurred in In Deli Serdang Regency, the incidence of diarrhea was 33,771 in 2022. (Central Statistics Agency of North Sumatra Province, 2023).

School-age children are those aged 6-12 years. At this stage, they are expected to acquire basic knowledge essential for hygiene and adaptability as adults (Mukendah et al., 2019). During this period, children begin to demonstrate critical thinking, are realistic, have a high level of curiosity, become independent, and learn to manage health issues independently (Romlah et al., 2020). However, most school-age children still lack an

understanding of the importance of maintaining personal hygiene, putting them at risk of various health problems such as diarrhea if this is not properly addressed (Romlah et al., 2020). There are still school-age children who pay less attention to preventing diarrheal diseases and are vulnerable to exposure by not washing their hands with soap before eating.

Therapy for diarrhea can include rehydration, zinc supplementation, adequate nutrition, selective antibiotic use, and education for parents/caregivers. Rehydration can be achieved by administering oral rehydration salts (ORS) early in the diarrhea. Oralit is a mixture of electrolyte salts, such as sodium chloride (NaCl), potassium chloride (KCl), and trisodium citrate hydrate, as well as anhydrous glucose which can be given orally to replace lost body fluids (Rahmawati et al, 2022). Diarrhea is actually a disease that can be prevented, if someone understands the risk factors for diarrhea. Preventive measures that can be taken include providing outreach through health education counseling for children. The goal of health education according to Health Law No. 23 of 1992 is to increase the community's ability to maintain and improve their physical, mental, and social health so that they are economically and socially productive. Health education is included in all health programs, including the eradication of infectious diseases, environmental sanitation, community nutrition, health services, and other health programs.

A preliminary survey showed that fifth-grade students at SD UPT 101800 Deli Tua Timur lacked knowledge about the causes and prevention of diarrhea. Many were unfamiliar with washing their hands with soap before eating and were unaware of the importance of maintaining food and environmental hygiene. This was due to a lack of information about health, particularly diarrhea. Therefore, educational efforts are needed to increase children's understanding of healthy and hygienic living practices to prevent diarrhea in a fun and accessible way.

## **METHOD**

The method used is socialization by utilizing healthy pocket media created to increase students' knowledge about diarrhea prevention. This activity was carried out on July 19, 2025 at SD UPT 101800 Delitua Timur, Deli Serdang Regency. The sample in this community service was 37 students from grade V. The implementation of the community

service was carried out through several stages, starting with gathering 37 students from grade V in the classroom. After gathering in the classroom, the instructor gave a brief explanation about how to prevent diarrhea in school-age children, such as the importance of washing hands with soap, consuming clean food and drinks, and maintaining environmental cleanliness.

This service is accompanied by the use of healthy pocket media. The healthy pocket media that will be used consists of 4 pockets, where pocket 1 and pocket 2 contain 15 questions and 15 answers about diarrhea, pocket 3 contains information about diarrhea and its prevention and pocket 4 contains pictures of healthy food. For pocket 1 and pocket 2 will be given to 30 students divided into two groups of 15 participants each, 15 participants holding questions and 15 participants holding answers and 7 people holding pictures. Next, each participant must match the question card with the answer that has been prepared according to the material given, then read the results in front of the class and then the instructor asks questions about healthy food and the students who hold the picture mention the healthy food, and in the last pocket contains 40 pieces of information about diarrhea and its prevention where when students want to go home they take 1 piece of information about diarrhea and its prevention. This activity aims to increase students' knowledge about diarrhea prevention while training their cooperation and understanding in an interactive and fun way.

## **RESULTS AND DISCUSSION**

The health service carried out on July 19, 2025 at SD UPT 101800 Delitua Timur, Deli Serdang Regency, involving 37 fifth grade students using the interactive media-based socialization method "Saku Sehat" showed the following results and discussions:

1. The interactive method, which combines a matching game with question and answer cards in the Saku Sehat media, successfully captured students' attention. Dividing students into two groups (each with question and answer cards) and several students bringing pictures created a fun and communicative learning environment. Students actively engaged in discussions, collaborated, and were eager to understand the material on diarrhea prevention.

2. Through card-matching activities and a question-and-answer session in front of the class, students were able to identify the causes of diarrhea and correctly take preventive measures. For example, students recognized the importance of washing hands with soap, consuming healthy food and drinking water, and maintaining a clean environment as effective ways to prevent diarrhea. This demonstrates the ability of the Healthy Pocket media to convey information in a way that is easy for students to understand and remember.
3. Group activities involving questions, answers, and images of healthy foods hone students' collaborative skills. They don't just passively receive information but actively seek out question-answer pairs and name healthy foods within their groups. This approach strengthens memory and overall understanding of the material.
4. The final pocketbook, containing 40 pieces of information about diarrhea and its prevention, is distributed as students leave. It serves as a reminder for them to take home. This allows diarrhea prevention information to continue to be received and learned outside of the classroom, thus enhancing the sustainability of the educational impact.

**Table 1. Data Normality Test Results Table**

Variables	Sig (P)	Distribution
Pretest	0.054	Normal
Posttest	0,000	Abnormal

Based on the normality test, the pretest data was normally distributed (sig = 0.054), while the posttest was not normally distributed (sig = 0.00). Therefore, to determine the difference between the pretest and posttest, the Wilcoxon Signed-Rank test was used. The test results showed that... (continue with the Wilcoxon results)

**Table 2. Descriptive Table**

Variables	n	Mean	Minimum	Maximum
Pre-test	37	70.00	20	100
Post-test	37	80.27	10	100

From the results of community service to 37 fifth grade students of SD UPT 101800 Delitua Timur (n = 37), it was found that there was an increase in knowledge about preventing diarrhea after being given the educational media "Saku Sehat." The average pre-test score was 70.00 with a minimum score of 20 and a maximum of 100, while the average post-test score increased to 80.27 with a minimum score of 10 and a maximum of 100. This average increase indicates that the Saku Sehat media is effective in increasing students' understanding of ways to prevent diarrhea even though there are variations in individual scores.

**Table 3. Wilcoxon Test Results Table**

Variables	Z	Asymp.Sig. (2-Tailed)	Conclusion
Pretest-Posttest	-3,785	0.0001	There is a significant difference.

Based on the Wilcoxon Signed-Rank test, the Z value was obtained = -3.785 and a significance value of 0.0001 ( $p < 0.05$ ). This indicates that there is a significant difference between the pretest and posttest scores. The negative direction of the Z value indicates that the post-test score statistically increased compared to the pre-test, so that the intervention or treatment given was effective. The socialization service for diarrhea prevention in school-age children at SD UPT 101800 Deli Tua Timur using the Saku Sehat media showed an increase in students' knowledge and enthusiasm for diarrhea prevention material. Students were not only active in following each stage of the activity, such as matching questions with answers and recognizing healthy foods through pictures, but were also able to remember and understand information about diarrhea prevention in an interactive and fun way.

The results of this community service are in line with the community service conducted by Amirah et al. (2024), at Methodist 1 Kutalimbaru Middle School, Deli Serdang Regency, who used puzzle educational media in the socialization of diarrhea prevention.

In Amirah et al.'s research, students also showed high interest and enthusiasm for interactive learning methods. The use of game media (in this case, puzzles and healthy pockets) has been shown to improve students' understanding of risk factors, prevention methods, and the impact of diarrhea. Students more easily understand and remember the material presented because the method used involves aspects of play and group discussion, not just a one-way lecture.

Thus, the use of interactive educational media such as puzzles and healthy pockets for school-age children is a relevant and effective strategy in health education efforts. This community service project emphasizes the importance of innovation in delivering health messages in the school environment so that students not only passively receive knowledge but also are able to apply clean and healthy living behaviors in their daily lives.

## **CONCLUSION**

The implementation of the Saku Sehat (Healthy Pocket) socialization method has proven effective in increasing the knowledge and awareness of fifth-grade students at UPT 101800 Elementary School in East Delitua regarding diarrhea prevention. This media makes the learning process interactive, engaging, and enjoyable, which is expected to encourage the adoption of healthy lifestyle behaviors to prevent diarrhea in school-age children.

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