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Health Education on Clean and Healthy Living Behavior through Proper Handwashing among Elementary School Students at SD Negeri Serdang Kulon 1

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ABSTRACT
Proper handwashing is a crucial component of clean and healthy living behavior, especially for school-age children who are highly vulnerable to various diseases due to their daily interactions in the school environment. This community service activity aimed to educate elementary school students on the importance of hand hygiene and to teach them the correct handwashing techniques using both soap and hand sanitizer. The method involved direct counseling sessions, visual aids through leaflets and posters, and interactive demonstrations. The evaluation included pre- and post-activity questionnaires and practical demonstrations. Although there was a positive change in students' knowledge, the outcome did not fully meet the expected target. Several challenges, such as limited time, classroom distractions, and the complexity of the questionnaire for young learners, hindered optimal results. Nonetheless, the activity succeeded in raising awareness about proper hand hygiene and laid the groundwork for future improvements in health education among young students.
Keywords: Handwashing Education, Health Promotion, School-age Children, Clean and Healthy Living Behavior

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INTRODUCTION

School-age children must be taught the importance of proper handwashing, as they are more vulnerable to health disturbances. In addition to being physically susceptible, children at this age are also highly responsive to external stimuli, making them more prone to illnesses. Therefore, instilling positive habits such as maintaining cleanliness and adopting a healthy lifestyle is essential. Their natural curiosity makes it important to introduce them to hand hygiene using soap or hand sanitizer. Proper handwashing is proven to prevent various life-threatening diseases such as diarrhea and acute respiratory infections (Handayani, 2019; Marleni & Megawati, 2024).

Through educational activities at school and the promotion of proper handwashing habits, elementary students can better understand the importance of hand hygiene and reduce the risk of disease transmission. SDN Serdang Kulon 1 was chosen as the outreach site due to its proximity to campus and the presence of alumni among the outreach members.

As this was the group's first outreach program, an easier topic and audience (elementary students) were selected. Another reason is the significance of early education in building lifelong hygiene habits (Sari, 2023).

Schools, as educational institutions, are strategic targets for Clean and Healthy Living Behavior (PHBS) programs. Students are among the age groups most affected by diseases such as diarrhea, worm infections, and respiratory illnesses. One preventive effort is the implementation of handwashing with soap (CTPS), which aims to maintain hand hygiene and prevent illness-causing germs and bacteria (Handayani et al., 2019). At SDN Serdang Kulon 1, located in Serdang Kulon village, Panongan subdistrict, several sinks had been provided, but these were damaged due to students' disruptive behavior during handwashing. Although an alternative solution using hand sanitizer was introduced, many students considered its use unimportant.

Health education activities focusing on clean and healthy living practices, especially proper handwashing, serve as a solution. Providing clear instructions on proper hygiene practices can help students understand the consequences of poor hygiene, such as increased disease risk. After the counseling session, students are expected to become more aware and concerned about their health. Therefore, it is essential to conduct counseling sessions to educate children on correct handwashing behavior. This ensures they wash their hands properly, avoid rinsing with water alone, and recognize the importance of hand sanitizer as an alternative to soap and water. Such education aims to improve students' knowledge of hand hygiene and promote consistent application at home and school. The main goal of this activity is to improve quality of life through actions based on personal awareness. This initiative is expected to bring positive behavioral change, such as integrating handwashing into daily routines at school—before meals, after outdoor activities, and encouraging both teachers and students to wash their hands correctly and thoroughly.

METHODS

This community outreach activity was designed as a health education initiative to promote clean and healthy living behaviors, specifically focusing on proper handwashing techniques among elementary school children. The method used in this program combined informative counseling sessions with interactive demonstrations, supported by educational materials such as posters and leaflets. The activity was conducted as part of an academic project by undergraduate students of the Public Health Study Program, Faculty of Health Sciences, Esa Unggul University.

The educational session took place at SD Negeri Serdang Kulon 1, located in Panongan District, Tangerang Regency. The school was chosen based on its proximity to the university and the presence of alumni among the outreach members, which facilitated communication and coordination. The outreach was carried out on a weekday morning to align with the school's regular class schedule, allowing maximum participation from the targeted students.

Participants in this program were third-grade students, totaling forty children. This specific age group was selected because early education on hygiene is most impactful when children are still forming behavioral habits. Moreover, younger students are generally more open to interactive and fun learning activities, such as demonstrations and group participation. The team believed that early intervention through engaging health education could leave a lasting impression on these students.

Before the main session, the team coordinated with the school to secure permission and schedule the event. Preparation involved drafting a proposal, designing the presentation materials using Canva, and creating printed educational tools such as posters and brochures. A set of ten questions was also prepared for a short pre-test and post-test to measure changes in students' understanding of handwashing practices. During the session, the outreach team began by introducing themselves and explaining the purpose of the activity. They then distributed leaflets to all students, which provided simple, visual guidance on how and why to wash hands properly. The material was tailored to be age-appropriate, using colorful graphics and straightforward language to keep students engaged and focused.

The main educational content was delivered using an animated PowerPoint presentation that explained the importance of hand hygiene, the types of diseases that could be prevented through proper handwashing, and step-by-step instructions following World Health Organization (WHO) guidelines. To reinforce the material, the team demonstrated the correct six-step handwashing process and invited students to practice along with them. Evaluation was an integral part of the method, designed not only to assess learning outcomes but also to encourage participation. After the session, students were asked to complete a post-test identical to the pre-test. In addition, several students were invited to the front of the class to demonstrate what they had learned. This interactive element helped solidify their understanding and created a positive atmosphere in the classroom.

RESULTS AND DISCUSSION

The health education outreach on clean and healthy living behavior through proper handwashing was conducted on November first at SD Negeri Serdang Kulon 1, located in Panongan District, Tangerang Regency. The subjects of this activity were students from classes 3A and 3B, totaling forty participants. The session began with an introduction of the outreach team, followed by welcoming remarks from the teacher and supervising lecturer to officially open the event.

Figure 1. Welcoming and Introduction Session

Next, leaflets were distributed containing a brief explanation of the importance of handwashing with soap or hand sanitizer, along with the proper steps.

Figure 2. Leaflet Distribution Session

The image shows a classroom setting at SD Negeri Serdang Kulon 1 during the leaflet distribution session. Students from class 3A and 3B are enthusiastically holding up educational leaflets about proper handwashing. The atmosphere is lively and engaging, with all students actively participating in the activity. The room is decorated with colorful ocean-themed murals, creating a child-friendly and stimulating learning environment. Several outreach team members and teachers are also visible, supporting the smooth execution of the session. This moment captures the initial stage of the health education activity aimed at promoting clean and healthy living behavior through proper hand hygiene.

Figure 3. Education on Clean and Healthy Living Behavior

The session continued with a presentation on clean and healthy living behavior (PHBS) through proper handwashing. Delivered using animated PowerPoint slides, the material

highlighted the importance of hand hygiene. The team also demonstrated the six proper handwashing steps and invited students to follow along together in class.

Figure 4. Material Delivery Session

The final activity was awarding prizes to students who asked questions and demonstrated proper handwashing as taught during the session.

Figure 5. Prize Distribution Session

The image captures a moment from the prize distribution session held during the health education outreach. Two students, a boy and a girl, are standing at the front of the classroom, each holding a wrapped prize as a token of appreciation for their active participation. They are accompanied by three facilitators, two women and one man, who appear to be part of the outreach team. Everyone in the photo is smiling, creating a warm and encouraging atmosphere. The background shows a typical elementary classroom setting, complete with

desks, educational posters, and a portrait of the president on the wall. This image reflects the success of the engagement strategy used to motivate student involvement during the session.

Table 1. Overview of Students' Knowledge Improvement

No	Question Code	% Correct (Pre-Test)	% Correct (Post-Test)	% Change in Score
1	Q1	37	37	0.00%
2	Q2	33	31	-5.00%
3	Q3	33	31	-5.00%
4	Q4	12	28	40.00%
5	Q5	1	11	25.00%
6	Q6	20	19	-2.50%
7	Q7	7	22	37.50%
8	Q8	29	28	-2.50%
9	Q9	12	15	7.50%
10	Q10	8	21	32.50%

The activity resulted in a 14% increase in students' knowledge of the six handwashing steps. However, the target was not fully achieved, reaching only 26.56% of the expected outcome, and was therefore considered ineffective. Contributing factors included the difficulty level of the questions for third-grade students, limited time for discussion, and classroom distractions in the afternoon, including noise from outside. Another issue during preparation was the replacement of plaques with certificates due to a printing machine malfunction and time constraints at the printing service.

CONCLUSION

This community outreach program aimed to promote clean and healthy living behavior by educating elementary school students on proper handwashing techniques. The activity involved engaging third-grade students through interactive presentations, demonstrations, and the distribution of informative leaflets. Although the students showed a modest improvement in their knowledge after the session, the overall impact did not meet the expected goals. Several factors contributed to this outcome, including the limited time allocated for the session, the difficulty level of the questionnaire, and the disruptive environment during the later part of the activity. Despite these challenges, the program successfully introduced the importance of hand hygiene and initiated behavioral awareness among the students. It also served as a valuable learning experience for both the outreach team and the school community. The students' enthusiasm during the demonstrations and their active participation reflected a positive reception to the topic. Furthermore, the use of visual aids and rewards helped maintain engagement and reinforced key messages. Moving forward, future programs should consider adjusting the materials to better match the comprehension level of younger students, allocate more time for interaction, and ensure a conducive learning environment. Strengthening collaboration with teachers may also enhance the program's effectiveness and sustainability within the school setting.

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throughout the implementation of this outreach activity. Our appreciation also goes to the students who actively participated and showed great enthusiasm and eagerness to learn during the sessions. Thanks to the collaboration of all parties involved, the outreach program was conducted smoothly and succeeded in delivering meaningful benefits to the participants.

CONFLICT OF INTEREST STATEMENT

We hereby declare that this outreach activity was conducted without any affiliation to or influence from personal interests, political agendas, or specific groups. This initiative is purely a form of community service and an academic responsibility undertaken by us as students. The activity was carried out under the guidance and supervision of the course advisor and was designed to make a positive and educational contribution to the targeted community, based on the theme that had been carefully prepared. We sincerely hope that this outreach program provides valuable knowledge and insights that will support the community's ongoing efforts to improve quality of life within the school environment and beyond.

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