

Let's Save Your Teeth by Brushing Diligently: Education and Practice of Proper Toothbrushing for Students of SD Negeri 23 Painan Utara

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ABSTRACT

Oral and dental health is an essential part of general health, yet proper toothbrushing behavior among elementary school children still needs improvement. This community service activity aimed to improve students' knowledge, awareness, and skills in maintaining oral health through proper toothbrushing techniques and age-appropriate use of toothpaste. The activity was carried out by students of the USR 08 Community Service Program (Kuliah Kerja Nyata, KKN) of Universitas Baiturrahmah, Nagari Painan Group, on Saturday, 27 July 2024 at SD Negeri 23 Painan Utara, Pesisir Selatan Regency, West Sumatra, Indonesia, targeting 499 students. The methods used were socialization (interactive lecture), demonstration, and hands-on toothbrushing practice, followed by evaluation through question-and-answer sessions and observation of practice. The results showed that the students participated enthusiastically, actively asked questions, were able to answer the presenters' questions well, and could demonstrate the correct toothbrushing steps. This activity improved students' knowledge of proper toothbrushing and is expected to establish a habit of brushing at least twice a day with the support of teachers and parents.

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INTRODUCTION

The teeth and mouth are vital parts of the body whose maintenance deserves priority. Dental problems, such as toothache, can cause difficulty in speaking and eating, thereby disrupting daily activities, including learning activities in school-aged children. The mouth is also the gateway for germs and bacteria to enter the body, so poor oral hygiene can affect the health of other organs (Raisah et al., 2023). Nationally, oral and dental health problems remain high; the 2018 Basic Health Research (Riskesdas) reported that 57.6% of the Indonesian population experienced dental and oral problems, while the proportion of the population brushing their teeth properly was only 2.8% (Ministry of Health of the Republic of Indonesia, 2018).

Tooth decay begins with the process of caries and inflammation originating from food debris left in the oral cavity. Over time, this food debris decomposes, and oral bacteria such as *Lactobacillus acidophilus* convert it into acids that damage the tooth enamel. In addition, *Streptococcus mutans* plays a role in the formation of caries and can cause infection of the gingival tissue. This infection can enter the bloodstream and subsequently cause inflammation in other parts of the body, such as the kidneys and joints (Tameon et al., 2021). Children's knowledge of dental health is associated with the occurrence of caries, so efforts to improve knowledge are an important preventive measure (Tameon et al., 2021).

One of the simplest ways to maintain oral hygiene is to brush the teeth regularly using fluoride toothpaste with the correct technique. The toothbrushing method affects the occurrence of dental caries in children (Santi & Khamimah, 2019). The use of a safe mouthwash can complement oral care by maintaining oral freshness and helping prevent plaque hardening; however, it does not replace the habit of toothbrushing and is not recommended in excess. The ability to brush the teeth properly is an important factor in oral health care, and this habit is most effectively instilled from an early age (Muharni, 2022).

Elementary school-aged children are in a stage of growth and development, making them still receptive to the cultivation of clean and healthy living behaviors through education. Schools are strategic settings for health education activities because they can reach many children at once and involve teachers as mentors of daily behavior (Pagayang et al., 2023; Astawan et al., 2024). Health education and toothbrushing practice in elementary schools have been shown to improve students' knowledge of oral and dental health (Raisah et al., 2023; Pagayang et al., 2023).

Based on the above, students of the USR 08 Community Service Program (KKN) of Universitas Baiturrahmah, Nagari Painan Group, carried out a community service activity themed "Let's Save Your Teeth by Brushing Diligently" (*Ayo Selamatkan Gigimu dengan Rajin Menyikat Gigi*) at SD Negeri 23 Painan Utara. This activity aimed to improve students' awareness, attitudes, and behavior in maintaining oral and dental health through socialization and practice of proper toothbrushing steps and age-appropriate use of toothpaste, as part of clean and healthy living behavior in daily life.

METHOD

This community service activity was held on Saturday, 27 July 2024, from 07.00 WIB (Western Indonesian Time) until completion, in the schoolyard of SD Negeri 23 Painan Utara, Nagari Painan, Pesisir Selatan Regency, West Sumatra. The target participants were the students of SD Negeri 23 Painan Utara, totaling 499 students. The activity was organized by the USR 08 KKN students of Universitas

Baiturrahmah, Nagari Painan Group, using a participatory approach in which students were actively involved in the socialization and practice. The activity consisted of the following stages:

a) Preparation Stage

At this stage, coordination was carried out with the school and the nagari (village) government, socialization materials on the importance of maintaining oral and dental health and proper toothbrushing were prepared, and the necessary tools and materials were provided, namely toothbrushes, fluoride-containing toothpaste, and clean water for rinsing.

b) Implementation Stage

The implementation consisted of two parts: (1) socialization on proper toothbrushing through an interactive lecture, and (2) a demonstration by the team followed by hands-on toothbrushing practice by the students under the team's guidance. The toothbrushing steps delivered and practiced are summarized in Table 1.

Table 1. Toothbrushing steps socialized and practiced

No.	Proper toothbrushing steps
1	Prepare a toothbrush and a pea-sized amount (approximately ½ cm) of fluoride-containing toothpaste.
2	Rinse the mouth with clean water before brushing.
3	Brush all tooth surfaces with short back-and-forth or circular movements for about 2 minutes (at least 8 strokes on each tooth surface).
4	Pay special attention to the area where the teeth meet the gums.
5	Repeat the same movements on the outer and inner surfaces of all upper and lower teeth.
6	For the inner surfaces of the lower front teeth, tilt the toothbrush and brush with the correct movement.
7	Clean the chewing surfaces of the upper and lower teeth with short, gentle, repeated back-and-forth movements.
8	Brush the tongue and palate with repeated back-and-forth movements.
9	Do not brush too hard, especially where the teeth meet the gums, as this can damage the enamel and cause tooth sensitivity.
10	After brushing, rinse only once so that residual fluoride remains on the teeth.
11	Clean the toothbrush with water and store it upright with the brush head on top.
12	Brush the teeth at least twice a day, in the morning after breakfast and at night before bed.

c) Evaluation Stage

Evaluation was carried out directly during the activity through a question-and-answer session to assess the students' understanding of the material and through observation of the students' ability to practice the proper toothbrushing steps. The students' engagement and enthusiasm during the socialization were also recorded as indicators of the success of the activity.

d) Reporting

The final stage was the preparation of a report describing the implementation of the activity, evaluation results, and recommendations for follow-up.

RESULT

The socialization and toothbrushing practice activity themed “Let’s Save Your Teeth by Brushing Diligently” was carried out on Saturday, 27 July 2024 at 07.00 WIB at SD Negeri 23 Painan Utara and was attended by 499 students. The activity began with a presentation on the importance of maintaining oral and dental health, the causes of tooth decay, proper toothbrushing, and the age-appropriate use of toothpaste (Figure 1). The activity ran smoothly; the students attended as planned and participated actively throughout the socialization.



(a)



(b)

Figure 1. Socialization on the importance of maintaining oral and dental health for students of SD Negeri 23 Painan Utara

After the presentation, the team demonstrated the proper toothbrushing steps (Figure 2), and the students then practiced them directly under the guidance of the team (Figure 3). The demonstration and practice methods were chosen because elementary school children understand material more easily through concrete examples and direct experience than through lectures alone. This is consistent with similar activities reporting that education accompanied by toothbrushing practice can improve students’ knowledge of oral and dental health (Raisah et al., 2023; Pagayang et al., 2023).



(a)



(b)

Figure 2. Demonstration of proper toothbrushing by the KKN team



Figure 3. Students practicing proper toothbrushing

The success of the activity was evident from the enthusiasm of the students, who actively asked questions about how to brush their teeth and maintain dental health. During the evaluation session, the students were able to answer the questions given by the presenters well and to practice proper toothbrushing. These findings indicate that the material was well received by the students and that their knowledge of proper toothbrushing improved.

Toothbrushing behavior in children needs to be practiced in daily life without a sense of compulsion. Brushing with fluoride toothpaste using the correct technique can prevent plaque formation and inhibit the growth of microorganisms that disturb oral and dental health (Santi & Khamimah, 2019). Cavities become a place where decaying food debris accumulates and bacteria that produce indole and

skatole gases grow, causing bad breath. The simplest preventive measure is to brush the teeth regularly at least twice a day, paying attention to the correct technique, frequency, and timing of toothbrushing. In addition, the students were reminded to limit the consumption of cariogenic foods and drinks, increase the consumption of non-cariogenic foods, and have their teeth checked regularly by a dentist every six months.

Instilling proper toothbrushing and age-appropriate use of toothpaste through schools is a strategic step. School-aged children are in a stage of growth and development, so they are still receptive to behavior formation through education (Muharni, 2022). However, behavioral change cannot be achieved through a single activity. Parents, the environment, and teachers play a major role in shaping students' behavior through supervision, guidance, and role modeling, so that the habit of proper toothbrushing can be maintained (Astawan et al., 2024). Therefore, support from the principal, teachers, and parents is needed so that the practices taught can be applied consistently at home. Documentation of the activity with the school is presented in Figure 4.



(a)



(b)

Figure 4. Documentation of the activity with the school staff and students of SD Negeri 23 Painan Utara

A limitation of this activity is that the evaluation was still qualitative, based on question-and-answer sessions and observation, so the magnitude of knowledge improvement could not yet be measured quantitatively. Future activities are recommended to use pre-test and post-test instruments and to monitor students' toothbrushing habits periodically, for example through a joint toothbrushing program at school.

CONCLUSION

The socialization activity themed "Let's Save Your Teeth by Brushing Diligently," attended by 499 students of SD Negeri 23 Painan Utara, was carried out well and smoothly on Saturday, 27 July 2024. The students participated actively, were able to answer the presenters' questions, and could practice proper toothbrushing. The expected outcome, namely improved student knowledge of proper toothbrushing, was achieved. Sustaining this habit requires the support of teachers and parents in supervising and accustoming students to brush their teeth at least twice a day.

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