



## THE EFFECTIVENESS OF COUNSELING WITH DEMONSTRATION METHODS ON TOOTHBRUSHING BEHAVIOR IN STUDENTS GRADE 3 SDN 2 ATU LINTANG

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### Abstract

Dental and oral health is an important aspect of children's growth and development because it plays a role in supporting nutritional fulfillment. Basic Health Research data shows that dental problems in Central Aceh are still high, including in the elementary school age group. This research was conducted at SD Negeri 2 Atu Lintang which does not yet have a School Dental Health Unit (UKGS), involving all 24 3rd grade students. The results showed a significant increase in toothbrushing behavior after being given counseling using the demonstration method. Before counseling, most students were in the medium category (29.1%), while after counseling it increased to good (87.5%). The statistical test showed a value of  $p = 0.000$  ( $p < 0.05$ ), so it can be concluded that the demonstration method is effective in improving toothbrushing behavior in students. Thus, dental and oral health counseling based on the demonstration method has been proven to improve the knowledge and skills of correct brushing practices in school children. It is hoped that this activity will be carried out continuously by strengthening micro-teaching and the use of counseling media so that the effectiveness of the program is more optimal.

**Keywords :** Counseling, Demonstration Method, Brushing Teeth

### Introduction

Dental and oral health is an important part of general health that affects a person's chewing, speech, and quality of life. In school-age children, especially 6-14 years old, the period of tooth change is mixed into a period that is prone to dental health problems. Lack of knowledge about how to brush your teeth correctly often leads to dental caries and cavities (Ministry of Health of the Republic of Indonesia, 2021).

The results of Basic Health Research (2018) show that the prevalence of dental caries in elementary school children in Indonesia is still very high, reaching 92.6% (Ministry of Health of the Republic of Indonesia, 2022). Similar conditions are also found in Aceh Province, where more than 55% of the population has dental and oral problems (Ministry of Health of the Republic of Indonesia, 2019). In Central Aceh Regency, the prevalence of dental problems reached 67.96%, especially in the age group of 5–9 years at 53.03% (Atu Lintang Health Center, 2023).

SD Negeri 2 Atu Lintang is one of the elementary schools with a total of 153 students, but does not yet have a School Dental Health Unit (UKGS). The results of the initial survey showed that the majority of students did not know how to brush their teeth correctly, rarely brushed their teeth at night, and often ate sweet foods. This causes a high rate of caries and toothache complaints among students (Atu Lintang Health Center, 2023).

Promotive efforts through dental health counseling are one of the solutions to improve knowledge, attitudes, and behaviors to maintain children's dental health. The demonstration method is seen as effective because it is able to show directly the correct brushing procedure that is correct, easy to understand, and can be practiced by students (Afiati, 2019). Therefore, this study aims to determine the effectiveness of counseling with a demonstration method on toothbrushing behavior in 3rd grade students of SDN 2 Atu Lintang.

## Method

This study is a pre-experimental with a one-group pre-test post-test design, which aims to assess changes in students' knowledge, attitudes, and actions before and after counseling using the demonstration method. The research was conducted at SD Negeri 2 Atu Lintang, Central Aceh Regency, in May–August 2024.

The research sample was all grade 3 students (24 people) who were selected with a total sampling. The independent variable is counseling with a demonstration method, while the dependent variable includes the knowledge, attitude, and actions of students in brushing their teeth. Data were collected through questionnaires (15 knowledge items, 15 attitude items) and action observation sheets (8 items) that have been tested for validity and reliability. Analysis was carried out univariate for variable and bivariate distributions using the paired sample t-test or Wilcoxon according to the data distribution.

## Research Results

### Respondent Characteristics

The majority were women (62.5%) and 9 years old (70.8%); all have received dental health information; Most of them are still 1×/day toothbrushes.

**Table 1. Characteristics of Respondents (n = 91)**

Variabel	Category	n	%
Gender	Man	9	37,5
	Woman	15	62,5
Age	8 years	5	20,8
	9 years	17	70,8
	10 years	2	8,3
Have received dental health information	Ya	24	100
Frequency of toothbrushing	1×/day	19	79,2
	2×/day	5	20,8

### Analyzes Bivariat

After counseling, knowledge increased (good category 29.1%→87.5%); improved attitude (mean 25.97→29.93); Some components of practical action rise noticeably (toothpaste to taste, tongue/cheek brushing, gargling).

**Table 2. Effect of Counseling on Tooth Brushing Behavior (n=24)**

Variabel	Indicator	Pre-test	Post-test
Knowledge	Average (Medium $\pm$ SD)	9,10 $\pm$ 0,80	9,66 $\pm$ 0,60
	Category baik, n (%)	7 (29,1)	21 (87,5)
Attitude	Average (Medium $\pm$ SD)	25,97 $\pm$ 3,23	29,93 $\pm$ 0,25
Actions (concise per key step)	Applying toothpaste to taste	11 (45,9%)	17 (70,8%)
	Brush slope $\pm 45^\circ$ at the tooth–gum boundary	12 (50,0%)	15 (62,5%)
	Rubbing from gums to teeth	10 (41,7%)	12 (50,0%)
	Running through all the teeth (clockwise)	13 (54,1%)	14 (58,3%)
	Brushing chewable surfaces	11 (45,9%)	13 (54,1%)
	Comb the tongue and cheeks $\pm 30$ seconds	10 (41,7%)	15 (62,5%)
	Gargling water/mouthwash	8 (33,4%)	16 (66,6%)
Action (composite)	Students with good deeds, n (%)	15 (62,5%)	18 (75,0%)

## Discussion

The results of the study show that dental health counseling with the demonstration method has a significant influence on students' knowledge, attitudes, and actions in brushing their teeth. Before being given counseling, the majority of students had knowledge in the medium category, but after the intervention it increased to the good category ( $p = 0.02$ ). The students' attitudes also increased significantly ( $p=0.00$ ), and the correct brushing of teeth increased after counseling ( $p=0.03$ ).

This finding is in line with the research of Asio (2019) which states that training on how to brush teeth can increase the knowledge of elementary school teachers by up to 100% (Asio, 2019). Similar results were also shown by Arini (2020), where the demonstration method was proven to be effective in increasing students' knowledge about dental health, even students with low knowledge categories were not found after being given an intervention (Arini, 2020).

The demonstration method is believed to be more effective because students can directly see, imitate, and practice the skills taught. This is in line with learning theory which emphasizes that information retention will be better if learners not only hear or see, but also practice directly (Bloom, 1984; Dale, 1969). In addition, counseling with a demonstration approach also touches on the affective aspect, namely building students' trust, belief, and positive emotions, which can ultimately affect the formation of attitudes (Notoatmodjo, 2012).

Good knowledge is the basis for the formation of healthy behavior. Pontunuwu et al. (2018) emphasized that knowledge is a dominant factor in influencing health behaviors, including dental and oral health. Similarly, Buaton (2017) added that the right source of information can shape a person's decision in determining their health behavior.

Teachers have a very important role in this process. The results of this study show that the intervention carried out by teachers through the demonstration method is able to significantly improve student behavior. This is in accordance with Green's (1980) theory that teachers function as reinforcing factors, namely reinforcing factors that strengthen changes in student behavior. Other research findings

also emphasize that teachers are the most effective health promoters in schools, because students place great trust in teachers and tend to imitate their behavior (Notoatmodjo, 2012; Law No. 14 of 2005).

Thus, school-based interventions, especially through School Dental Health Enterprises (UKGS) involving teachers, need to be further improved. Teachers are not only academic teachers, but also as supervisors, motivators, and evaluators of students' healthy behavior (Ministry of Health of the Republic of Indonesia, 2015). This study proves that teacher involvement through the demonstration method is an effective strategy to form good teeth brushing habits from an early age.

## Conclusion

Dental and oral health counseling using the demonstration method has been proven to be effective in improving the knowledge, attitudes, and actions of 3rd grade students of SDN 2 Atu Lintang regarding toothbrushing behavior. After the intervention, most of the students had knowledge in the good category (87.5%), a more positive attitude towards toothbrushing habits, and the correct act of brushing their teeth increased significantly compared to before the counseling ( $p < 0.05$ ).

The demonstration method gives students the opportunity to see, imitate, and practice how to brush their teeth correctly, making them easier to understand and remember. Teachers play an important role as facilitators and reinforcing factors in shaping students' healthy behavior, especially in maintaining dental and oral hygiene from an early age.

Thus, the application of the demonstration method in dental health counseling in schools can be used as an effective strategy in supporting the School Dental Health Business (UKGS) program and health promotion in elementary school-age children.

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