



# Health Promotion Using Dental Story Sticker Media on Prevention Knowledge Caries in Primary School

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## ABSTRACT

**Background:** The results of basic health research in 2018 show that the biggest dental problem in Indonesia is broken/caved/sick teeth (45.3%). The proportion of problems with damaged, cavities or diseased teeth in Garut Regency is 57.61%. Health promotion is an effort to provide knowledge as a basis for behavior change to improve the health status of individuals, families, groups, and communities through learning activities. Dental Story Stickers are a way of conveying information about dental and oral health by using stickers that can be removed and reattached, as well as using storytelling as an outreach method where the instructor tells information about dental and oral health. **Objective:** To determine the effect of health promotion using dental story sticker media on knowledge of caries prevention in class IV students at State Elementary School 2 Mulyasari, Garut Regency. **Method:** The type of research is pre-experimental with a one-group pre and post-test design with total sampling technique, and measuring instruments namely questionnaires and statistical tests using the Wilcoxon test. **Results:** 18 students (60%) obtained good criteria, 12 students (40%) had sufficient criteria and no good curve criteria (0%). **Conclusion:** Health promotion using dental story sticker media influences knowledge of preventing dental caries in class IV students at State Elementary School 2 Mulyasari, Garut Regency.

## INTRODUCTION

Dental and oral health is very important for every individual, including children, because untreated tooth and gum damage will cause pain, and difficulty chewing, and can affect their health. Dental problems in children can also affect their growth and development. Children are the most vulnerable age group (Puspita et al., 2022).

Dental and oral health is still a topic that requires attention for handling (Anggow et al., 2017). Poor oral health can have negative functional, social, and psychological impacts because it can cause pain. Tooth decay is one of the most common dental and oral diseases. The results of basic health research in 2018 show that the biggest dental problem in Indonesia is broken/caved/sick teeth (45.3%). The most common oral health problems in Indonesia are swollen gums and/or abscesses in 14% of cases. The proportion of problems with damaged, cavities or diseased teeth in Garut Regency is 57.61%.

Caries is a disease of the hard tissue of teeth, enamel, dentin, and cementum, which occurs due to gradual damage to the surface of the tooth and continues to grow on the tooth, characterized by the dissolution of minerals and hard tissue followed by the destruction of biological substances so that bacterial invasion can occur further into the tooth. In the tooth, namely the dentin layer, until it reaches the pulp (Nasution et al., 2023). There are many causes of tooth decay, so this disease is caused by many factors. The four main factors that play a role in the formation of caries are the anatomy and structure of the tooth (host), microorganisms, carbohydrates, and time (Tarigan, 2015). If these four components work together, tooth decay will occur. Apart from direct oral factors related to the occurrence of caries, there are also indirect or driving factors, namely race, age, gender, genetics, social status, attitudes, and behavior (Tarigan, 2015).

Tooth decay often occurs in children, usually due to sweet foods/drinks. Children like to eat sweet and sticky foods which are classified as foods that cause tooth decay and can cause tooth decay. How often the food is eaten and the lack of awareness of brushing teeth after eating and before sleeping (Recca, 2018). Children are at an age that is vulnerable to caries and other dental diseases because they still need help from parents and family to guide them in maintaining the cleanliness of their teeth and mouth (Indahwati, et al., 2015). Therefore, efforts need to be made to increase knowledge, understanding, and awareness that

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individuals can maintain good oral health. Knowledge is the result of human perception, or the result of a person's understanding of an object through the senses they have, especially sight, smell, hearing, taste, touch, and so on. Most knowledge is obtained through the sense of hearing (ears) and the sense of sight (eyes) (Notoatmodjo, 2018) believed that knowledge plays an important role in shaping individual behavior.

Three approaches can be used to promote dental health: promotive, preventive, and curative. Dental and oral health education is an example of a dental health promotion effort (Nugraheni et al., 2018). The way to gain knowledge is through health promotion, which is an effort to provide knowledge as a basis for behavior change to improve the health status of individuals, families, groups, and communities through learning activities. Health promotion activities must contribute to the implementation of treatment, rehabilitation, disease prevention, and health improvement programs (Widyanto, 2014).

Dental and oral health promotion is an effort to increase awareness about the importance of maintaining healthy teeth and mouth. This aims to produce good dental and oral health and improve everyone's standard of living. Dental and oral health promotion activities are one effort to improve health (Nasution et al., 2023). The goal of health promotion is to empower people to not only know and want but also be able to live a clean and healthy lifestyle (Rosdiana, 2018). In efforts to improve children's dental and oral health, educational methods are needed and the role of the media is important because it can support learning activities and help children understand learning material. Media can help convey messages more interestingly and easily (Husna et al., 2019).

Learning media is media that can improve children's abilities, thinking, and attention (Puspitawati et al., 2022). In the educational process, many types of media can be used to provide knowledge to children. However, the intensity of each media in helping someone's understanding varies (Ulfayana, 2018). Selecting media that is not appropriate to the child's interests will result in maximum results not being achieved. Knowledge can be obtained from game media, game media is considered according to the character of school children who like to play, move, and carry out activities directly (Sapto et al., 2019), one of which is sticking pictures/stickers. Dental Story Stickers are a way of conveying information about dental and oral health by using stickers that can be removed and reattached, as well as using storytelling as an outreach method where the instructor tells information about dental and oral health.

Based on the results of an initial survey conducted on February 28 2024 on fourth-grade students at State Elementary School 2 Mulyasari, Garut Regency, researchers conducted interviews with the school that research had never been conducted on the effect of health promotion using dental story sticker media on knowledge of caries prevention and carrying out health checks. Teeth to class IV students so it was found that the prevalence of caries was 76.7%.

## METHOD

The type of research used is Pre-Experimental research with a design using one group pre and post-test design, namely by giving a pre-test question questionnaire before being given health promotion using dental sticker story media, then giving a post-test question questionnaire after health promotion using Dental Sticker story Media and data analysis using the Wilcoxon test. This research was conducted from March 1 to March 21, 2024, at State Elementary School 2 Mulyasari, Garut Regency. The population in this study was all 30 grade IV students at State Elementary School 2 Mulyasari, Garut Regency. The measuring instrument used is a questionnaire.

This research was conducted over 21 days, the first week a pre-test was conducted and a health promotion intervention using dental story sticker media was conducted on students, the second week a health promotion intervention was conducted using dental story sticker media, the third week a health promotion intervention was conducted again using dental story sticker media and a post-test was conducted on students in the form of filling out a questionnaire sheet with 20 questions about caries prevention knowledge.

## RESULT

**Table 1.** Frequency Distribution Based on Gender

Gender	Frequency	Percent (%)
Man	18	60
Women	12	40
Total	30	100

Table 1 shows that class IV of State Elementary School 2 Mulyasari Garut Regency is mostly male, namely 18 people (60%) while there are 12 women (40%).

**Table 2.** Frequency Distribution Based on Age

Age	Frequency	Percent (%)
9 years	8	26,7
10 years	22	73,3
Total	30	100

Table 2 shows that the majority of class IV students at State Elementary School 2 Mulyasari, Garut Regency are 10 years old, namely 22 people (73.3%).

**Table 3.** Level of Knowledge of Class IV Students at State Elementary School 2 Mulyasari, Garut Regency Before Health Promotion Using Dental Story Stickers

Knowledge Criteria	Frequency	Percent (%)
Good	0	0
Enough	22	73,3
Less	8	26,7
Total	30	100

Table 3 shows that the knowledge criteria for class IV students at State Elementary School 2 Mulyasari, Garut Regency before health promotion was carried out using dental story sticker media, the highest level of knowledge was obtained, namely at sufficient criteria, 22 people (73.3%).

**Table 4.** Level of Knowledge of Class IV Students at State Elementary School 2 Mulyasari, Garut Regency After Health Promotion Using Dental Story Stickers

Knowledge Criteria	Frequency	Percent (%)
Good	18	60
Enough	12	40
Less	0	0
Total	30	100

Table 4 shows that the knowledge criteria for class IV students at State Elementary School 2 Mulyasari, Garut Regency after health promotion using dental story sticker media obtained the highest level of knowledge, namely good criteria, 18 people (60%).

**Table 5.** Average Knowledge of Class IV Students at State Elementary School 2 2 Mulyasari, Garut Regency Before and After Health Promotion Using Dental Story Stickers

Knowledge Criteria	Average	Criteria
Before	58,5	Enough
After	78,6	Good

Table 5 shows that the average knowledge score of class IV students at State Elementary School 2 Mulyasari, Garut Regency before health promotion was carried out using the dental story ticker with an average score of 58.5 (Fair), and after health promotion was carried out using the dental story ticker with an average score of 78.6 (Good).

**Table 6.** Wilcoxon Statistical Test on the Knowledge Value of fourth-grade Students at State Elementary School 2 2 Mulyasari, Garut Regency Before and After Health Promotion Using Dental Story Stickers

Variable	Total	p-value
Pre-Test and Pos-Test	-4,831 <sup>b</sup>	0,000

Table 6 shows that the results of the Wilcoxon Statistics value of knowledge before and after health promotion using dental story sticker media shows that Asymp. Sig (2-tailed) is worth 0.000, which can be interpreted as Asymp. Sig (2-tailed) is worth 0.000, which is smaller than <0, 05 so it can be concluded that the hypothesis is accepted because there is a difference between learning outcomes using dental story

sticker media for the pre-test and post-test, which means there is an influence from health promotion using dental story sticker media.

## DISCUSSION

The research was carried out at State Elementary School 2 Mulyasari, Garut Regency on March 1, 2024-22 March 2024 with a total sampling of 30 students from class IV of State Elementary School 2 Mulyasari, Garut Regency, consisting of 18 male students and 12 female students. By administering questionnaires before and after being given health promotion.

The results of research on the effect of health promotion using dental story sticker media on knowledge of caries prevention in class IV students at State Elementary School 2 Mulyasari with 30 students as respondents experienced an increase, with it being found that the knowledge criteria for class IV students at State Elementary School 2 Mulyasari, Garut Regency before health promotion was carried out using dental media story stickers obtained the highest level of knowledge, namely at sufficient criteria, 22 people (73.3%) and after health promotion using dental story sticker media, the highest level of knowledge was obtained, namely at good criteria, 18 people (60%).

Comparison of the results of respondents' knowledge before and after being given counseling using dental story sticker media has increased, that of the 30 respondents there was a change in the level of knowledge of class IV children at State Elementary School 2 Mulyasari, Garut Regency, the criteria for good knowledge were previously none (0%) and after being given health promotion by using dental story sticker media, the criteria for good knowledge were 18 students (60%). The results of the Wilcoxon Statistical Test on the value of knowledge before and after health promotion using dental story sticker media showed that Asymp. Sig (2-tailed) was worth 0.000, which can be interpreted as Asymp. Sig (2-tailed) was worth 0.000, which is smaller than  $<0.05$  so it can be concluded that the hypothesis is accepted because there is a difference between learning outcomes using dental story sticker media for the pre-test and post-test, which means there is an influence from health promotion using dental story sticker media.

The changes before and after showed that after respondents were given health promotion using dental story sticker media, there was an increase in knowledge. The results of this study are in line with the study (Rahmawati, 2020) entitled The Effectiveness of Dental Story Sticker Media as Counseling on the Level of Dental and Oral Health Knowledge in Class II Students of Palebon 01 Elementary School, Semarang City in 2020 where counseling using Dental Story Sticker media can increase dental and oral health knowledge in class II students of Palebon 01 Elementary School, Semarang City,

The success of efforts to promote dental health in school children cannot be separated from the educational method and the importance of the role of media because it can support the learning process, making it easier for students to understand learning materials. The messages conveyed Through the media can be more interesting and easily understood (Husna et al., 2019).

## CONCLUSION

Based on the results of the research, it can be concluded that there is an influence of health promotion using dental story sticker media on fourth-grade students of SD Negeri 2 Mulyasari, Garut Regency. It is expected that dental story sticker media can be used as an alternative media in dental health promotion to improve elementary school children's knowledge about caries prevention.

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