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Maintenance of Dental and Oral Health in Class 5 Students Using Explosion Box Media

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ABSTRACT

Background: School-aged children, especially those between the ages of 6 and 14, are at a time when they are vulnerable to tooth decay problems. This research focuses on the high incidence of dental caries in students of classes 5A and 5D of SDN Sidoklumpuk Sidoarjo. This study aims to evaluate the level of knowledge about the maintenance of dental and oral health before and after giving instructions on the use of explosive boxes to the students of classes 5A and 5D of SDN Sidoklumpuk Sidoarjo. This search is used almost Experimental method with a pretest-posttest design with a single group, including 36 students from classes 5A and 5D as samples. Data were collected through questionnaires in which students were given a pre-test and post-test to measure changes in their knowledge before and after counseling. Data analysis was performed using the Wilcoxon test. The results of the study showed that after receiving advice on the use of the explosion box, the students' knowledge about maintaining oral health increased significantly, with a significant value of $p < \alpha$, which it means that H_0 was rejected and H_1 was accepted. In conclusion, the instruction using the explosion box was successful in increasing the knowledge of students in classes 5A and 5D of SDN Sidoklumpuk Sidoarjo regarding the maintenance of oral health.

Keywords: Dental and oral care, Knowledge, Media, Explosion box

INTRODUCTION

Dental caries refers to the damage caused to the cells of the teeth by the acids produced by plaque bacteria, which erode the tooth enamel and can cause cavities (Wahyu et al., 2022). The cavity often appears in children from 10 to 11 years. Caries is a fairly common chronic problem among children from 6 to 11 years old in primary school (Santi & Khamimah, 2019).

According to data from the Basic Health Research (RISKESDAS), the prevalence of caries in children from 10 to 14 years has reached 73%. 4% This shows that dental health problems in Indonesia are very high, with most cases related to damaged teeth, cavities or pain, representing 45.3% of total dental problems. The region, especially in East

Java, the prevalence of active caries reached 42.4%. These data highlight the seriousness of dental health problems in the region and demonstrate the urgent need for intervention in the treatment and prevention of caries in children. (Indonesian Ministry of Health, 2018).

Therefore, maintaining dental hygiene and limiting the consumption of sugary foods are very important to prevent dental caries (Wahyu et al., 2022). Based on the background above, it was found that 10% of students were caries-free in SDN Sidoklumpuk Sidoarjo in 2023, which is lower than the results of RISKESDAS 2018 in the age group of children from 10 to 14 years (26.6%). The problem in this research is the high level of caries among 5th grade students in SDN Sidoklumpuk, Sidoarjo Regency in 2023.

RESEARCH METHOD

This research was approved by the Health Research Ethics Committee of Surabaya Health Polytechnic No. EA/2347/KEPK-Poltekkes_Sby/V/2024. This research uses a quantitative method that applies quasi-experimental methods, specifically a pre-test-post-test group design. In this study, a pre-test was first conducted before the intervention was given, followed by a final test (post-test) after the intervention was implemented. Once the data is successfully collected, it is then processed to obtain results that can be analyzed and interpreted. This step is performed to test the hypothesis using paired t test analysis if the data distribution is normal and if the data distribution does not follow a normal pattern, the Wilcoxon test is applied as a method of statistical analysis to test the hypothesis. In this research, the significant value used is $\alpha = 0.05$.

RESULT AND DISCUSSION

Knowledge of maintaining oral health before using explosion box media at SDN Sidoklumpuk Sidoarjo

Table 1. Distribution of Knowledge Results on Maintaining Dental and Oral Health Before Using Explosion Box Media in Class 5A and 5D Students at SDN Sidoklumpuk Sidoarjo in 2024

Category	Frequency	Percentage
Not enough	28	77,8%
Enough	6	16,7%
Good	2	5,5%
Total	36	100%

Based on table 1, the average percentage of knowledge level before being given counseling using the Explosion Box media was dominated by all students in the poor category, namely 77.8%. Based on the research results, it was found that maintaining the oral health of students in classes 5A and 5D at SDN Sidoklumpuk Sidoarjo before being given counseling using explosion box media showed that the

results before the counseling were carried out were that most of the students' knowledge was in the deficient category. Dental health needs to be implemented from an early age, children need to be taught about the importance of brushing their teeth properly so that their teeth grow well, tooth decay can be prevented by brushing their teeth in the right way, and brushing their teeth before going to bed in the morning after breakfast (Ardayani & Zandroto, 2020). This is in accordance with research by Danendra et al. (2024) that a person's knowledge is very important in underlying the formation of behavior that supports or does not support the individual's dental and oral hygiene. This knowledge can be obtained naturally or in a planned manner, namely through the educational process. A person with low knowledge regarding dental and oral hygiene is a predisposing factor for behavior that does not support dental and oral hygiene which in turn causes poor dental and oral hygiene conditions.

Knowledge of maintaining oral health after using Explosion Box media among students in class 5A and 5D at SDN Sidoklumpuk Sidoarjo

Table 2. Distribution of Knowledge Results on Maintaining Dental and Oral Health After Using Explosion Box Media in Class 5A and 5D Students at SDN Sidoklumpuk Sidoarjo in 2024

Category	Frequency	Percentage
Not enough	0	0,0%
Enough	3	8,3%
Good	33	91,7%
Total	36	100%

Based on table 2, the average percentage of knowledge level after being given counseling using Explosion Box media is dominated by all students in the good category, namely 91.7%. From the results of the research, it was found that the oral health maintenance of the students of classes 5A and 5D of SDN Sidoklumpuk Sidoarjo after receiving the blast box

supports showed that the average knowledge of the students was in the good category. According to Notoatmodjo (2021) in (Sukarini, 2018) the knowledge covered in the cognitive field begins with knowledge, the knowledge that a person receives is limited to remembering what was learned before, then the level of the knowledge of knowledge, so students can explain the maintenance of oral health with Corretta. This is consistent with the research of Sujatmiko et al. (2021) interactive educational materials can improve student learning outcomes and are effective and suitable for use in the educational process.

Knowledge of maintaining dental and oral health before and after using Explosion Box media in class 5A and 5D students at SDN Sidoklumpuk Sidoarjo

Table 3. Wilcoxon Test Results Before and After Using Explosion Box Media in Class 5A and 5D Students at SDN Sidoklumpuk Sidoarjo in 2024

Level of knowledge	Σ	Average	P	Results
Before	36	49,383	0,000	H0
After	36	92,325		rejected

Based on table 3, it can be seen that the average value of target knowledge before counseling using Explosion Box media regarding maintaining dental and oral health was 49.383% and after counseling using Explosion Box media regarding maintaining dental and oral health was 92.325%. These results are obtained from the pre- and post-consultation research results using "Explosion Box" media, namely the significance value $\rho < \alpha$, which means that H0 has been rejected and H1 has been accepted, that is to say that there has been an increase in knowledge about dental maintenance. and oral health using blast box media among grade 5A and 5D students of Sidoklumpuk Primary School Sidoarjo. Based on the results of the research, it was found that the knowledge

of students in classes 5A and 5D of SDN Sidoklumpuk Sidoarjo after receiving the Blast Box, the media reported that the students' knowledge had increased. Interesting and quite unique learning materials used in the learning process will definitely be familiar to children and can solve the problems of students' interest, because we can change the format of writing and text, present interesting pictures and different colors in a way that they stimulate. Students interest in learning and makes it easier for educators to provide materials (Tarigan & Yarshal 2022). According to research results of Sipnaturi & Farida (2020), learning materials that use explosion boxes are effective as a tool to facilitate the learning process. Blast boxes are interesting and motivating learning materials that increase students' interest in learning and make learning more fun. In Edgar Dale's experience, if someone demonstrates, his level of understanding is 90%. So, when providing information about dental and oral care with the media blast, the students found it increasing their knowledge.

CONCLUSION AND RECOMMENDATION

With reference to the results obtained in relation to dental care and knowledge of oral health among the students of classes 5A and 5D of SDN Sidoklumpuk Sidoarjo in 2024, it can be concluded as follows:

1. Before receiving advice on dental and oral health care with blast box arms, the knowledge of students in classes 5A and 5D of SDN Sidoklumpuk Sidoarjo was in the deficient category.
2. After being trained with explosive box materials, the knowledge of students increased and fell into the good category.
3. There is a significant difference in oral health maintenance knowledge between students of classes 5A and 5D of SDN Sidoklumpuk Sidoarjo after using blast box retainers.

Suggestions based on the results of

the research and the implementation of oral health education using explosion box stands in 2024, the following suggestions can be made:

1. For the teachers of SDN Sidoklumpuk Sidoarjo Teachers can motivate students in classes 5A and 5D of SDN Sidoklumpuk Sidoarjo to keep their teeth and mouth healthy to improve the skills of their students to maintain their oral health, such as keep brushing at least once a tooth week and also the organization of the little ones. training activities for dentists and the realization of a competition on the topic of oral health.
2. For later researchers The results of this research can serve as a reference and a source of motivation for all those who want to do similar research, to be a point of reference for future researchers

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