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## Utilization of Animated Cartoon Media in Increasing Students' Knowledge of Dental and Oral Health

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### ABSTRACT

Animated cartoons are media that contain a collection of images that are processed in such a way as to move and are equipped with audio so that they are memorable and store learning messages. The purpose of this study was to determine the effect of counseling using animated cartoon media on dental and oral health knowledge. Based on the results of the initial data examination conducted on 15 students, the results obtained were 2 students with good knowledge, 2 students with moderate knowledge, and 11 students with less knowledge. This research method uses a Quasi Experiment One Group Pre test-Post test design. The population in this study were all fifth-grade students of SDN 2 Lamcot Aceh Besar totaling 30 respondents. The sampling technique used was the Total Sampling technique. This research was conducted on 12-18 May 2022. Data collection using a questionnaire. This study used the SPSS Paired Sample T-test and analyzed univariately and bivariate. Based on the results of the study, there were differences in the mean before and after the intervention with a difference in the mean value of 40.1. The results of statistical tests obtained a significance value of  $p = 0.000$  ( $p < 0.05$ ). The results of this analysis indicate that there is a significant difference between before and after counseling using animated cartoon media. It can be concluded that in this study there was an effect of counseling using animated cartoon media on dental and oral health knowledge of fifth-grade students at SDN 2 Lamcot Aceh Besar. It is recommended to teachers and health workers at the local health center use animated cartoon media in increasing students' dental and oral health knowledge.

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### INTRODUCTION

Dental and oral health counseling to increase knowledge about dental health requires media that can attract students' interest in learning (1). Dental and oral health counseling can be done with various media, including animated cartoons (2). Animated cartoons are media that contain a collection of images that are processed in such a way as to move and are equipped with audio so that they are memorable and store learning messages (3).

Educational media in improving dental and oral health in children, such as multimedia, especially animated cartoons which have been extensively explored, can be used as teaching aids (4). Studies report that teaching using animation techniques will improve students' academic

achievement (5). According to research conducted by Sinor, it can be concluded that animated cartoons are a more effective medium in conveying dental and oral health education messages compared to conventional methods for students at the Hulu Terengganu School District (6).

The extension is a process, method, act of counseling, information, surveillance, or investigation (7). Health education is an educational activity carried out by disseminating message information, and instilling confidence, so that people are aware, know and understand, but are also willing and able to make recommendations related to health and increase knowledge, skills, and attitudes (8).

Counseling is part of the health program, so it must refer to the ongoing health program (9). The planning of extension programs must be considered that the plans made must be to the needs of the target, easy to accept, practical in nature, can be implemented by the local situation, and by the program that is supported and supported by existing policies (10).

The emphasis on the concept of health education is more on efforts to change the behavior of the target so that they behave healthily, especially in the cognitive aspect (knowledge and understanding of the target), so that the knowledge of the target of counseling is by what is expected by the health instructor, the next counseling will be carried out by the planned program (11).

Dental and oral health counseling are efforts made to change the behavior of a person, group of people, or society so that they have the ability and habit to behave in a healthy life in the field of dental and oral health (12).

Dental health counseling for elementary school children aged 6-12 years is very important because that age is a critical period, both for the growth of their teeth as well as for the development of their soul as it requires an approach to produce knowledge, attitudes and healthy behavior, especially dental and oral health (13).

Success in dental health education efforts for school children can not be separated from the method of education and the importance of the role of media because it can support the learning process, making it easier for students to understand the learning material. Through the media, the messages conveyed can be more interesting and easy to understand (14).

In conducting counseling, it is necessary to have tools that can assist in activities such as the use of media or teaching aids so that there is continuity between the information provided by the information provider to the recipient of the information. Media comes from Latin and is the plural form of the word medium which means intermediary or introduction, namely an intermediary or introduction to the source of the message with the recipient of the message (15).

Based on the 2018 Riskesdas data, dental and oral health problems were recorded at 57.6%, getting services from dental medical personnel was 10.2%, and the proportion of brushing teeth properly was 2.8%. In the province of Aceh itself, dental and oral health problems reached 56% with the number of medical personnel services being 15%, in addition to brushing the teeth of Acehese people aged over 3 years reached 85% but good and correct brushing of teeth was 2.8%. This is certainly related to the lack of knowledge about how to maintain proper dental health.

From the results of the initial data examination conducted on 15 fifth-grade students at SDN 2 Lamcot, it was found that 2 students with good knowledge, 2 students with moderate knowledge, and 11 students with less knowledge. Meanwhile, from the results of the data report I obtained from the Darul Iman Health Center, it was found that for children aged 6-14 years from January-November 2021, there were 42 cases of dental caries.

Based on the above background, the researchers are very interested in conducting research on the effect of animated cartoon media on the knowledge of dental and oral health of fifth-grade students of SDN 2 Lamcot in 2021.

## **METHOD**

The research design used is One group pretest-posttest, where this study aims to determine knowledge before being given counseling and after being given counseling to students in class V SDN 2 Lamcot Aceh Besar. Sampling in this study is the total population using the total sampling technique. The sample in this study were all students of class V with a total of 30 people.

## **RESULTS**

This research was conducted from 5 February to 2 March 2022, with the respondents being mothers. Research on the Effect of Counseling Using Animated Cartoon Media on Dental and Oral Health Knowledge of Class V SDN 2 Lamcot Aceh Besar was conducted on 12 to 18 May 2022, where the pre-test, intervention, and post-test, with 30 respondents.

1. The age distribution of respondents can be seen in the following frequency distribution table:

**Table 1 Frequency Distribution of Respondents by Age in Class V Students at SDN 2 Lamcot Aceh Besar:**

No	Age	Age	%
1	10 years	3	10,0 %
2	11 years old	27	90,0 %
	Total	30	100

Based on the table above, it is known that the age of the respondents who are at most 11 years old is 27 students (90%) and at least 10 years is 3 students (10%).

2. Age Distribution:

**Table 2. Frequency Distribution by Age of Pregnant Women at Simpang Tiga Health Center, Aceh Besar District in 2022**

No	Age	F	%
1	20-30	18	60 %
2	31-40	12	40 %
	Total	30	100

Based on the table above, it is known that the age of most respondents is between 20-30 years, totaling 18 (60%) respondents.

3. Pre-test value before intervention:

**Table 3. Distribution of Students' Knowledge Frequency Based on Pre-Test Before Counseling Using Animated Cartoon Media to Class V Students at SDN 2 Lamcot Aceh Besar**

No	Criteria	F	%
1	Not enough	24	80,0 %
2	Currently	6	20,0 %
3	Well	0	0 %
	Total	30	100

Based on the above, it can be seen that the criteria for knowledge before the intervention were mostly on the fewer criteria, amounting to 24 students (80%).

4. Bivariate Analysis:

**Table 5. Results of Paired T-Test The Effect of Counseling Using Animated Cartoon Media Knowledge of Dental and Oral Health for Class V SDN 2 Lamcot Aceh Besar**

	Va	l	T	f	ig
riabel	ean	td			
Pre test scores	0	2,5	6,3	16,7	9
Post test scores	0	2,6	2,0		

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Based on table 5 above, it can be seen that there is a difference in the mean value before counseling, which is 42.5 and after counseling using animated cartoon media, it becomes 82.6 with a difference in the mean before and after 40.1. The results of the analysis showed that there was a significant difference between before and after being given counseling using animated cartoon media.

The results of the statistical test showed that the value indicated a significance value of .000, which means less than 0.05 ( $p < 0.05$ ), then the hypothesis is accepted. Thus, the results of the study showed that there was an effect of counseling using animated cartoon media on dental and oral health knowledge in students.

**DISCUSSION**

Frequency Distribution of Respondents Based on Age and Gender in Class V Students of SDN 2 Lamcot Aceh Besar

Based on Table 1 it is known that the age of the respondents who are at most 11 years old is 27 students (90%) and at least 10 years is 3 students (10%). This data is obtained based on data collection at the time of pre-test. Based on table 4.2, it is known that the gender of the respondents is mostly male, amounting to 16 students (53.3%) and female respondents being 14 (46.7%). This data is obtained based on data collection at the time of pre-test.

Student Knowledge Based on Pre-Test Before Giving Counseling Using Animated Cartoon Media. Based on Table 2 it can be seen that the knowledge criteria before intervention were mostly at least 24 students (80%) in criteria and 6 students (20%). Researchers assume that students have never received health education in the form of dental health counseling so that their knowledge about maintaining and caring for dental health is very lacking.

Student Knowledge Based on Post Test After Being Given Counseling Using Animated Cartoon Media Based on table 3, it is known that

the students' knowledge criteria after being given counseling using animated cartoon media increased with a good category of 20 students (66.7%), and a moderate category of 10 students (33.3%). Researchers assume that this increase is because students have received dental health education through counseling using interesting media, making it easier for students to understand information and increase their knowledge.

Test Results and Differences in Students' Average Values Based on Pre-Test Before and Post-Test After Being Given Counseling Using Animated Cartoon Media. Based on table 4 it can be seen that there is a difference in the mean value before counseling that is 42.5 and after counseling using animated cartoon media it becomes 82.6 with a difference in the mean value before and after 40.1. Based on the test results using the Paired Sample T-test, a significance value of 0.000 was obtained ( $P < 0.05$ ). The results of the above study indicate that there is a significant effect of counseling using animated cartoon media on dental and oral health knowledge. This is indicated by the difference in the average value of knowledge before and after being given dental and oral health counseling using animated cartoon media.

## CONCLUSION

Based on the results of the research and discussion, it can be concluded that there is an effect of counseling using animated cartoon media on dental and oral health knowledge in fifth-grade students of SDN 2 Lamcot Aceh Besar with the difference in the average score before and after is 40.1. This is evidenced by the p-value which is less than 0.05 ( $P < 0.05$ ) which is 0.000.

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