

DIFFERENCES IN THE EFFECT OF HEALTH PROMOTION MEDIA USING BOOKLETS AND AUDIO VISUALS ON THE LEVEL OF CARIES KNOWLEDGE 6TH GRADE STUDENT DENTAL 09 AIE PACAH ELEMENTARY SCHOOL

Perbedaan pengaruh media promosi kesehatan menggunakan booklet dan audio visual terhadap tingkat pengetahuan karies gigi siswa kelas 6 SD 09 Sekolah Dasar Aie Pacah

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ABSTRAK

Masalah kesehatan gigi dan mulut umumnya terjadi karena masih rendahnya pengetahuan masyarakat tentang pemeliharaan gigi dan mulut yang baik. Tujuan penelitian ini adalah untuk mengetahui perbedaan pengaruh media promosi kesehatan menggunakan *booklet* dan audiovisual terhadap tingkat pengetahuan karies gigi siswa kelas 6 SDN 09 Aie Pacah. Jenis penelitian ini adalah kuantitatif, menggunakan metode *quasi experimental* dengan desain penelitian *two group pretest-posttest*. Sampel penelitian berjumlah 58 responden yang dibagi menjadi 2 kelompok yaitu 29 responden untuk tiap kelompok, dengan menggunakan teknik *total sampling*. Analisis data meliputi uji *paired t-test* dan *independent t-test*. Hasil penelitian menunjukkan bahwa terdapat perbedaan pengetahuan sebelum dan setelah pendidikan kesehatan karies gigi pada responden dengan media *booklet* ($p=0,000$) dan media audiovisual ($p=0,000$). Tidak terdapat perbedaan rerata antara kelompok yang telah diberi pendidikan kesehatan menggunakan media *booklet* dan audiovisual terhadap pengetahuan karies gigi siswa kelas 6 SDN 09 Aie Pacah ($p=0,863$). Kesimpulan, media *booklet* dan audiovisual berpengaruh dalam meningkatkan pengetahuan tentang kesehatan karies gigi pada anak sekolah dasar. Tidak terdapat perbedaan edukasi kesehatan gigi antara menggunakan media *booklet* dengan audiovisual.

Kata Kunci: Audiovisual, booklet, karies gigi, pengetahuan, pendidikan kesehatan

ABSTRACT

Dental and oral health problems generally occur due to low public knowledge about good oral and dental care. This

study aimed to determine the effect of health promotion media using booklets and audiovisuals on the level of dental caries knowledge of 6th-grade students of SDN 09 Aie Pacah. This type of research is quantitative, using a quasi-experimental method with a two-group pretest-posttest research design. The research sample comprised 58 respondents who were divided into 2 groups, namely 29 respondents for each group, using the total sampling technique. Data analysis includes paired t-tests and independent t-tests. The results showed the difference in knowledge before and after dental caries health education in respondents with booklet media ($p=0,000$) and audiovisual media ($p=0,000$). There was no difference between the groups who had been given health education using booklets and audiovisual media on the dental caries knowledge of 6th graders at SDN 09 Aie Pacah ($p=0,863$). In conclusion, booklets and audiovisual media increase knowledge about dental caries health in elementary school children. There is no difference in dental health education using the booklet and audiovisual media.

Keywords: Audiovisual, booklet, dental caries, health education, knowledge

INTRODUCTION

Dental and oral health is considered essential for a satisfactory quality of life. The World Health Organization (WHO) explains that dental and oral health is free from verbal and facial pain, infections and mouth sores, and other oral diseases that limit a person's ability to bite,



chew, smile, speak, and psychosocial well-being. However, the lack of human attention to dental and oral health can cause oral diseases. Oral disease can produce severe functional limitations, discomfort, and pain, leading to disability¹.

The number of dental and oral problems in Indonesia is still relatively high. Many still do not pay attention to their teeth and mouth health. Bad habits that are carried out, such as thumb sucking in children, if left until the age of 5 years, can cause crooked teeth. In addition, breathing through the mouth when the nose is blocked can cause dryness of the oral cavity, resulting in food sticking to the teeth so that microorganisms quickly form holes in the teeth².

According to data from the periodic health center in 2020 in the work area of the Health Center that houses SDN 09 Aie Pacah, the number of students at SDN 09 Aie Pacah who experienced caries was 202 out of 351 students (57,54%). Shows the high incidence of dental caries at SDN 09 Aie Pacah.

The use of media is very influential in the ongoing process of education. In addition to facilitating the delivery of information to students, the use of media is also considered to increase students' motivation to learn more actively and interactively.⁴ There are seven types of media, namely motion audiovisual media, silent audiovisual media, semi-motion audio, moving visual media, silent visual media, audio media, and print media⁵.

A booklet is one type of printed media containing several pages containing informative matters. The booklet's contents should have clear and firm language and will be more interesting if accompanied by pictures. The relatively small booklet size makes this media very easy to carry anywhere⁶.

Audiovisual media has advantages when compared to other media. This media can overcome the difficulties of students in understanding a process. Objects that are abstract and complicated can be explained in such a way. Audiovisual media can also be played repeatedly and stopped as needed. It will encourage students' learning motivation to understand a complex explanation to be simpler so that it can be more easily understood⁸.

Conventional counseling received less attention from respondents. Happens due to the unattractiveness of the extension method used. The use of health promotion media will undoubtedly increase the attractiveness of respondents in understanding the content of health promotion itself. Based on the description of the background above, the researcher is interested in examining the comparison of the effect of health promotion media using booklets and audiovisuals on the level of dental caries knowledge of 6th-grade students of SDN 09 Aie Pacah.

METHOD

Design

The activity model is quantitative using a quasi-experimental research design with a two group pre-posttest research design, namely an experimental design in two different groups using different media. The sample size used in this study was 58, 6th-grade students at SDN 09 Aie Pacah.

How Research Works

They are making booklets and videos about Dental Caries. We are designing a questionnaire based on booklets and videos about Dental Caries. Conduct validity and reliability tests. Divide the respondents into two groups, namely the booklet group and the video group.

The pretest was to distribute questionnaires to the respondent. Respondents will be faced with 15 questions and asked to choose one answer to measure knowledge before being given an intervention. After filling out the pretest, the respondent will be immediately given an intervention. In the booklet group, each respondent will be given a media booklet and 15 minutes to read. In the video group, respondents will be shown a video with a duration of 7 minutes which will be displayed through a projector and played two times.

Next, a posttest was conducted, and respondents will again be faced with the same questionnaire to measure knowledge after being given the intervention. The duration for filling out the questions is 20 minutes.

Data Analysis

Data processing will be carried out after the data is collected. Univariate analysis was conducted to determine the characteristics of each variable studied. Analysis of the data presented is a descriptive statistical value, including the average knowledge before and after being given treatment. Bivariate analysis was conducted to compare the knowledge scores of respondents before and after being given education about dental caries using booklets and audiovisuals. The data processing uses the Statistical Program for Social Science (SPSS) software. Analysis of the data used in this study is the paired T-test, Wilcoxon test, and Mann-Whitney test.

RESULTS AND DISCUSSION

Characteristics of Respondents

The results of the study obtained the distribution of sex and age frequencies of 6th graders at SDN 09 Aie Pacah can be described as follows:

Table 1. Characteristics of respondents

Characteristics	Booklet Group		Audiovisual group	
	Amount	%	Amount	%
Gender				
Man	14	48.3	14	48.3
Woman	15	51.7	15	51.7
Age (years)				
11	2	6.9	9	31.0
12	25	86.2	19	65.5
13	2	6.9	1	3.4
Total	29	100.0	29	100.0

Based on table 1, it is known that in the group with health promotion using booklets and audiovisuals, most of the sexes are female; namely, 15 people (51,7%), and the most age is 12 years, 25 people (86,2%) in the booklet group and 19 people (65,5%) in the audiovisual group.

Based on the research results, the respondents' characteristics were 6th graders at SDN 09 Aie Pacah with the most gender being female and the most age being 12 years in both research groups, namely the group being given health promotion with booklets and with audiovisuals.

Following the theory that childhood is a golden age, often called the (golden period). It is usually characterized by rapid physical, cognitive, social, and emotional changes. Childhood is a time when all aspects of the development of spiritual intelligence experience extraordinary stories. Children are individual figures undergoing a process of rapid and fundamental growth for the next life.¹⁰

Dental Caries Knowledge Pretest

Table 2. Dental caries knowledge pretest

Knowledge	Booklet Group		Audiovisual group	
	Frequency	%	Frequency	%
Not enough	20	69.0	21	72.4
Enough	6	20.7	7	24.1
Well	3	10.3	1	3.4
Total	29	100.0	29	100.0

Table 2 shows that at the pretest, the two groups of respondents knew the poor category, namely 20 people (69%) in the booklet group and 21 people (72,4%) in the audiovisual group.

Based on the research, the results of the t-test were -3.984 (p= 0,000), so the data was significant, meaning there was a difference in knowledge before and after health education was carried out with booklet media about dental caries for 6th-grade students at SDN 09 Aie Pacah.

Health education is a health education activity carried out by spreading messages, and instilling confidence so that people are not only aware, know, and understand but are also willing and able to make recommendations related to health. Health extension workers must master the science of communication and master a complete

understanding of the message. Health education in health promotion is needed as an effort to increase knowledge and awareness, in addition to knowledge and attitudes. Therefore, it is undoubtedly necessary to provide and deliver information, which is the field of health education. The original meaning of counseling is the provision of knowledge information.¹⁰

Dental Caries Knowledge Posttest

Table 3. Posttest of dental caries knowledge

Knowledge	Booklet Group		Audiovisual group	
	Frequency	%	Frequency	%
Not enough	9	31.0	12	41.4
Enough	13	44.8	10	34.5
Well	7	24.1	7	24.1
Total	29	100.0	29	100.0

Table 3 shows that from the two groups, the most posttest booklet knowledge was sufficient, namely 13 people (44,8%), and the most audiovisual was less, namely 12 people (41,4%).

Based on the research, the results of the t-test were -3,325 and p= 0,001, so the data was of significant value, which means that there is a difference in knowledge before and after health education with audiovisual media about dental caries in 6th-grade students of SDN 09 Aie Pacah.

The average knowledge of audiovisual media and the average ability was 6,62. And after treatment, the intermediate knowledge increased to 9,45; this shows an increase in the average score in the audiovisual group after being given health education. Based on the analysis before and after treatment using audiovisual media on respondents' knowledge about dental caries, it can be concluded that there is an effect of health knowledge after health education using audiovisual media.

Health promotion is essentially an activity or effort to convey health messages to the community, group, or individual, with the hope

that with the news, the community, group, or individual can gain knowledge about better health. This knowledge is ultimately expected to affect behavior. In other words, health promotion is hoped to bring about changes in the target's conduct. Health promotion is also a process where the process has inputs and outputs. A health education process that leads to the achievement of promotional objectives, namely behavior change, is influenced by many factors.¹¹

Homogeneity and Normality Test

Table 4. Homogeneity test on booklet and audiovisual media

Variable	Levene's test	p-value	Conclusion
Posttest knowledge	1,308	0.258	Homogeneous

Table 4 shows that the knowledge data for the post-test group is homogeneous because the p-value is more significant 0,05.

Table 5. Normality test on booklet and audiovisual media

Variable	p-value	Conclusion
Pretest knowledge booklet	0.061	Normal
Posttest knowledge booklet	0.143	Normal
Pretest audiovisual knowledge	0.309	Normal
Posttest audiovisual knowledge	0.027	Abnormal

Based on table 5 shows that the knowledge data for the booklet and audiovisual groups were normally distributed because the p-value of each group was more significant than 0.05 except for the posttest group for audiovisual knowledge (p < 0,05). Hence, the distribution of the data proved to be abnormal.

Paired T-Test (Pre-Posttest Mean Difference Test for Booklet Group Knowledge)

Based on table 4.6, the t-test results are - 3,984, and the p-value is 0,000, so the data is significant, which means that there are differences in knowledge before and after health

education with booklet media about dental caries.

Table 6. The results of the pre-posttest mean difference test for knowledge of the booklet group

Knowledge	Average	t-test	P-value	Conclusion
Pretest	7.00	-3,984	0.000	Significant
Posttest	9.55			

Wilcoxon Test (Pre-Posttest Mean Difference Test Audiovisual Group Knowledge)

Table 7. Pre-posttest average difference

Knowledge	Average	Z	P-value	Conclusion
Pretest	6.62	3,325	0.001	Significant
Posttest	9.45			

Test Results Audiovisual Group Knowledge Based on the table above, the t-test results are -3,325, and the p-value is 0,001, so the data is significant, which means that there is a difference in knowledge before and after health education with audiovisual media about dental caries.

Mann Whitney Test (The Effect of Health Promotion on Knowledge)

Based on table 8, the t-test results were 0,157, and the p-value was 0,875, so the data was not significant, which means that there was no difference between the booklet group and the audiovisual group. In other words, the two media groups are not different or the same.

Table 8. The difference between the booklet and audiovisual groups

Posttest Knowledge	Average	t-test	P-value	Conclusion
Booklet Group	9.55	0.157	0.875	Not significant
Audiovisual Group	9.45			

Based on the results of the t-test of 0,157 and the p-value of 0,875. It means there is no difference between the booklet and audiovisual groups. In other words, the two media groups are not different or the same.

The average value in the booklet group is 9,55, while in the audiovisual group is 9,45, and the probability value is 0,863 (0,863 > 0,05). It shows no difference in mean between the health education group with booklet media and the health education group with audiovisual media. Based on the small value of the difference and it was concluded that the HO was accepted, it indicated that the two media, namely booklets and audiovisuals, were equally effective in increasing knowledge about dental caries. This possibility can occur because after health education is carried out, both using booklets and audiovisual media, discussions or questions and answers are carried out so that it can affect the results of filling out questionnaire questions. In addition, the influence of the environment or conditions when the respondent sits or can interact with others so as reduces concentration and create conditions that are not conducive to filling out questionnaires for both media and may make the average value of the two media almost have the same average knowledge to respondents. It makes the health education media have almost the same effectiveness.

CONCLUSIONS

There is an influence of health promotion media using booklets on the level of dental caries knowledge of 6th grader Aie Pacah. There is an influence of health promotion media using audiovisuals against the dental caries knowledge level of 6th grader Aie Pacah. There is no average difference between the group that has been given health education using a booklet and audiovisual media against dental caries knowledge of 6th grader Aie Pacah.

RECOMMENDATIONS

For school principals to cooperate with the nearest health center to conduct coaching in the form of health education on a regular basis.

Health promotion using media is very important, so that parents take better care of their children's dental caries health and treatment. Further researchers are expected to be able to examine the extent of the influence of media booklet health education and audiovisual media health education on the attitudes and behaviors of parents about dental caries in children aged 5-9 years.

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