



The Effect of Educational Video "Learning About Dental Health" on the Knowledge of Islamic Boarding School Students

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ARTICLE INFORMATION	ABSTRACT
<p><i>Article History:</i> <i>Received: December 19, 2024</i> <i>Revised: May 17, 2025</i> <i>Published: May 31, 2025</i></p> <hr/> <p>Keywords: Video Media Knowledge Dental Health</p>	<p>School-age children, including santri who study in pesantren, are vulnerable to oral health problems so it is necessary to provide appropriate dental health education (education). The utilization of video as an educational media is one of the effective ways to convey information to improve students' dental health knowledge. This study aims to see the effect of the educational video "learning about dental health" on oral health knowledge of students in boarding schools. This study used pre-experiment research with a one group pretest-posttest design. The study population amounted to 67 students at the Madrasah Ibtidaiyah (MI) level. The sample was taken using purposive sampling technique with a total of 37 students. Data analysis using the Wilcoxon test. The results of the Wilcoxon test analysis obtained a p value of $0.000 < \alpha 0.05$, so it means that there is a significant effect of providing educational video learning about dental health on the knowledge of boarding school students. It is concluded that the educational video "learning about dental health" can improve the dental health knowledge of students in a better direction.</p>

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INTRODUCTION

School-age children are one of the groups that are vulnerable to health problems, including oral health. The 2018 West Java Province Riskesdas report shows that school-age children aged 10-14 years have a fairly high proportion of dental and oral problems, namely cavities (38.80%), missing teeth (20.19%), unsteady teeth (11.67%), swollen gums (11.39%), and gums that bleed easily (12.89%) (Kemenkes RI, 2018). Based on these results, it can be seen that cavities or dental caries are still the highest dental health problem in school-age children.

Many promotive actions are taken to overcome dental health problems, including through counseling or dental health education activities. These activities are carried out in order to create community participation in efforts to improve their health. Education or education needs to be delivered using the right methods and media, so that children can achieve an

understanding of the content of the message or information that has been given (Samjaji et al., 2017; Sodikin et al., 2013).

One of the educational media for health promotion is using video. The use of video has its own appeal to attract the attention of health promotion targets. Video is an audio-visual media that can help the delivery of health education. Videos have the advantage of being easy to understand and can be repeated to be learned by the target. Audio-visual media is said to contribute greatly to aspects of information and persuasion for target behavior change because it can provide stimulation to hearing and vision as much as approximately 75-87% in channeling knowledge to the brain (Mahamit et al., 2022; Maulana, 2009).

Previous research shows that the use of videos for dental health education is effective in increasing students' knowledge about how to maintain oral hygiene. There was a significant increase in knowledge, where the percentage of knowledge in the good category was initially only 27%, after providing educational videos there was an increase in the percentage of knowledge in the good category to 90% (Sadimin, Prasko, Sariyem, & Sukini, 2021). However, how to maintain dental hygiene taught in the study was only about brushing teeth as one of the indicators of PHBS. In practice, *dental* hygiene measures to control the formation of dental plaque can be done through mechanical (brushing and *dental flossing*), chemical (mouthwash), and regulating diet (selection of high-fiber fruit and vegetable consumption) (Putri, Herijulianti, & Nurjannah, 2013).

Santri pesantren mostly consist of school-age children who need attention related to their oral health. This is because santri have their own responsibility to maintain their oral health while living in the pesantren environment (Fatimah et al., 2021; Handayani & Arifah, 2013; Hestieyonini et al., 2013). Providing education as a promotive effort needs to be done so that awareness of oral health maintenance can increase (Fatimah et al., 2023). Education should be provided continuously with material that is tailored to the conditions of the students and if necessary can be associated with Islamic habits carried out in pesantren to increase the independence of students in maintaining oral health. Research related to the application of video media in the pesantren environment for oral health education is still very limited, so it needs to be further explored. This study aims to determine the effect of the educational video "learning about dental health" on the knowledge of pesantren students.

METHOD

This type of research is a pre-experiment with a one group pre-test and post-test design. The study population amounted to 67 students of Pesantren X Bandung City. The research sample was taken using purposive sampling technique. The inclusion criteria were students living around the pesantren and aged 10-12 years, while the exclusion criteria were students who did not participate in the entire series of research activities or resigned in the middle of the research implementation. This research has previously obtained a certificate of ethical feasibility from the Health Research Ethics Commission of the Poltekkes Kemenkes Bandung with No.02/KEPK/EC/VIII/2024. This research was conducted in July - August 2024.

Education was provided using the "learning about dental health" video media. The video has a duration of 5 minutes and was played to respondents twice, so the total duration of video playback was carried out for 10 minutes. After that, a question and answer session was held for 5-10 minutes. Data collection on oral health knowledge was carried out twice, namely before being given an educational video (pre-test) and 1 month after being given an educational video (post-test). Knowledge data were collected using a 15-item questionnaire. The lowest total score is 0, while the highest total score is 15. The questionnaire was tested for validity and reliability on 30 respondents. The calculated r value for 15 questionnaire items was obtained > 0.3 , so the questionnaire was declared valid. Meanwhile, the Cronbach's Alpha value was found to be $0.807 > 0.6$, so the questionnaire was declared reliable. Data analysis in this study used the Wilcoxon test to compare oral health knowledge between before and after watching the educational video "learning about dental health".

RESULTS AND DISCUSSION

The data obtained include the characteristics of respondents consisting of age and gender, as well as data on dental health knowledge variables taken before and after watching educational videos. The description of the research data can be seen in the following table.

Table 1. Frequency distribution of respondent characteristics and research variables

Respondent Characteristics	n	%
Age		
10	17	45.95
11	19	51.35
12	1	2.70
Gender		
Male	22	59.46
Female	15	40.54
Knowledge (Before)		
Good	0	0
Medium	30	81.08
Bad	7	18.92
Knowledge (After)		
Good	26	70.27
Medium	11	29.72
Bad	0	0
Total	37	100

Table 1 shows the characteristics of respondents based on age and gender. Based on the age of the respondents who participated in this study, most of the students were 11 years old as many as 19 respondents (51.35%). The characteristics of respondents based on gender showed that most of the students who participated in this study were male students as many as 22 respondents (59.46%). Oral health knowledge before being given video education "learning about dental health" as many as 30 respondents (81.08%) were in the moderate category, while after being given video education "learning about dental health" as many as 26 respondents (70.27%) were in the good category.

Table 2. Wilcoxon Test Analysis Results

Knowledge	Mean Rank	Z	p-value	Effect Size
Before	4,75	-5.014	0.000	0.825
After	18,80			

Description: Mean Rank; Z (Z value); p-value (p value or significance); Effect Size.

Table 2 shows the results of the *Wilcoxon* test analysis obtained a p value of $0.000 < \alpha$ 0.05, so it means that there is a significant effect of providing educational videos "learning about dental health" on the knowledge of boarding school students. The *effect size* value is $0.825 \geq 0.5$, which means that the effect of the educational video "learning about dental health" on the knowledge of boarding school students is very significant and has a strong impact even though the respondents only numbered 37 students.

Before being given the educational video "learning about dental health", it was known that none of the students had good dental health knowledge. The cause of students not knowing dental health information can be because students have never received health promotion that specifically discusses in detail about oral health in accordance with the dental health problems experienced. According to Rejeki et al. (2023), health education efforts need to be carried out to form children's concern in maintaining their health (Rejeki et al., 2023). In the practice of maintaining dental health, providing correct and appropriate education helps improve dental health knowledge, which will then be followed by changes in attitudes and

better dental health behavior in the future (Handayani & Arifah, 2013; Hestieyonini et al., 2013; Saffan et al., 2017).

After being given an educational video "learning about dental health" there was an increase in oral health knowledge. This is evidenced by the fact that there are no students who have poor oral health knowledge. Increased knowledge can be supported by its success through the selection of the right media. This is in line with the research of Ilmianti et al.(2023) which states that the use of appropriate learning media will increase knowledge in accordance with the expected results. In addition, Dewi et al.(2022) research also supports the results of this study by stating that video media is one of the teaching aids that can improve children's dental health knowledge.



Figure 1. Footage of the educational video "learning about dental health".

This study shows that the provision of educational videos "learning about dental health" affects the oral health knowledge of students in a better direction. The use of video media is more efficient in delivering information messages because videos can display attractive images accompanied by sound, and are easily accessible anywhere and anytime. These results are in line with previous publications which state that video media has an effect on increasing children's dental health knowledge (Harapan et al., 2023; Heriyanto et al., 2018; Restuning et al., 2023). Regina et al.(2023) and Eliot et al.(2024) stated that attractive media in terms of color and shape can stimulate children's memory in storing oral health information. Norfai & Abdullah(2019) argue that the selection of animated video media to convey health information will have a positive effect in improving and increasing children's knowledge related to health.

Dental health education in this study was provided for 10 minutes of video playback and 5 - 10 minutes of questions and answers. The determination of this time is based on previous theory which states that children's concentration will increase in the first 15-20 minutes, so that information will be effectively provided within this period. According to Hadi(2017), video as learning media presents an audio-visual picture that can be seen using the sense of vision and heard using the sense of hearing. Video is effectively used for the learning process and plays a role in increasing understanding both with mass, individual, and group learners (Poitras et al., 2021). Video has the appeal to create a learning atmosphere that can stimulate individual attention and motivation, so that the process of delivering oral health information can be understood more easily and knowledge retention will be longer (Huang & Liaw, 2018; Sadimin et al., 2021). Video media is effective in increasing dental health knowledge, especially if the video is published on a social media base that can be accessed by the general public anytime and anywhere (Variani et al., 2023). Although the provision of educational videos has a

significant effect and a strong impact on the knowledge of students, this study still has limitations, namely the limited number of samples, no control group, and short *follow-up* duration.

CONCLUSION

The provision of educational videos "learning about dental health" affects the knowledge of boarding school students. Dental health knowledge shows an increase in a better direction after students watch educational videos. The educational video "learning about dental health" can be used as one of the counseling media that is played continuously to improve oral health knowledge in Islamic boarding school students. Given the limited number of respondents, the absence of a control group, and the short duration of follow-up, further research is recommended to increase the number of samples, control groups, and extend the duration of follow-up.

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