

EFFECTIVENESS OF DENTAL AND ORAL HEALTH COUNSELING USING TRADITIONAL FOLKLORE VIDEO MEDIA ON ATTITUDE IN 8-9 YEARS OLD CHILDREN

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ABSTRACT

Introduction Oral health problems among elementary school children are still very high. One of the contributing factors is behavioral in maintaining oral hygiene. Behavior begins to form from knowledge which will then stimulate changes in attitudes and practice. Efforts to change children's attitudes can be achieved through counselling. **Objective** This study aims to determine the effectiveness of dental and oral health counselling traditional folklore video media on attitudes in children aged 8-9 years. **Method** This type of research is quasi-experimental with a two group pre-test and post-test design. Sampling using multistage cluster random sampling with a total sample of 112 children aged 8-9 years in elementary schools, the sample was divided into 2 groups, 56 children using traditional folklore video as the intervention group and 56 children using conventional video as the control group. Attitude variables were measured using a questionnaire. Data analysis using the Independent T-Test and the Mann-Whitney U Test. **Results** of the difference analysis with the Mann-Whitney U Test at pre-post 2 showed a significant change in attitude in both intervention groups. The median attitude score of the traditional folklore video group showed a greater change compared to the conventional video group by 7.5 (5-14.0) (p 0.007). **The conclusion** of this study is that oral health counseling using traditional folklore video is more effective in changing attitudes towards maintaining dental and oral health in children aged 8-9 years compared to conventional video media.

Keywords: attitude, conventional video, traditional folklore video

INTRODUCTION

Dental and oral health is an integral part of overall health that can affect a person's quality of life and is an important concern in population health development throughout the world.¹ The World Health Organization (WHO) in 2022 stated that as many as 3.5 billion people worldwide experience dental and oral diseases such as caries, periodontal disease and oral cancer. Caries is the most common dental and oral disease found in all age groups and is most common in elementary school-aged children, namely around 60-90% of cases.² One of the causes of caries in children is behavioral factors, which is evidenced by the fact that children often neglect their oral hygiene. Three important domains that can change a person behavior are knowledge, attitudes and practice. Knowledge is a very important domain for the formation

of attitudes and practice so that it will affect a person daily habits or behavior.³

Efforts made to change attitudes in maintaining children's dental and oral hygiene include increasing knowledge through counseling.⁴ Oral health counseling in elementary school children can increase children's knowledge, which will then stimulate changes in attitudes and practice. These changes will affect their behavior in maintaining oral health, which will improve oral hygiene status and prevent oral health problems in children.⁵ Children as the target of counseling have certain characteristics according to their age and cognitive development. Children aged 8-9 years are at the concrete operational stage of development, who can already use reasoning, solve problems and understand cause and effect, so that the media used to assist the educational process in children must be adjusted

to ensure that the information conveyed is effectively received and that the recipient understands the educational material.⁶

Video is one of the audiovisual media that displays images or displays moving objects and sounds that can stimulate the senses of sight and hearing, making it easier for children to remember the information provided.⁷ Video has advantages that can be combined with learning methods such as conventional methods and folklore methods. Conventional video are a combination of conventional learning methods such as powerpoints containing images and sounds packaged into video form, while traditional folklore video are a combination of storytelling methods taken from folklore from their respective regions packaged into video form. Folklore are a form of literary work whose story is not really true or is fictional, but because folklore have entertaining and educational characteristics, folklore are often used as a learning method for school-age children.⁸ Folklore are often used as a learning method because they have entertaining characteristics and can educate children's character from the moral values contained in the folklore. Research using learning with traditional folklore has been shown to change attitudes compared to conventional methods in elementary school children, this is due to the presence of funny characters and the storyline presented in traditional folklore is very entertaining so that it makes students very interested in participating in learning.^{9,10}

Based on the description above, researcher wants to know the effectiveness of dental and oral health education using traditional folklore inserted with messages about how to maintain oral health packaged in the form of video media on attitude toward maintain oral health in children aged 8-9 years.

MATERIAL AND METHOD

This study was conducted in January-February 2024 and Ethical Clearance was obtained from the Ethics Commission of the Faculty of Dentistry, Universitas Gadjah Mada Number 14/UN1/KEP/FGK-RSGM/EC/2024. This was a quasi-experimental study with a two group pre-test and post-test design. The research subjects were drawn from a population of third-grade elementary school children in South Kuta District, Badung Regency, Bali Province. Third-grade elementary school children are 8-9 years old. The sampling technique in this study used multistage cluster random sampling.

South Kuta Subdistrict was selected as the research location due to its high prevalence of oral health issues in Badung Regency. South Kuta Subdistrict has six villages with the same population characteristics, then from the six villages, two villages were randomly selected. The selected villages are Jimbaran Village and Ungasan Village then each of the selected villages will be represented by one elementary school taken randomly.

The selected elementary schools are SD No. 10 Jimbaran and SD No. 4 Ungasan.

The research subjects were divided into 2 different treatment groups, the intervention group consisted of 56 children aged 8-9 years at SD No. 10 Jimbaran given oral health counseling using traditional folklore video media and the control group consisted of 56 children aged 8-9 years at SD No. 4 Ungasan who received oral health counseling using conventional video media. Inclusion criteria in this study were children who were cooperative and willing to become respondents by signing the informed consent form given to parents. Exclusion criteria in this study were children of dentists.

Oral health counseling using traditional folklore video media is counseling using audio-visual media containing a series of images with moving illusions taken from traditional Balinese folklore entitled "I Cupak teken I Gerantang". The folklore story is modified with key messages on oral health including the number of teeth, tooth functions, causes of tooth decay, food diet, frequency of brushing teeth, how to brush teeth, and visit to the dentist delivered in Balinese language with a duration of 13 minutes.

Oral health counseling using conventional videos is oral health counseling using audio-visual media that shows only text or images and sounds containing the same material as traditional folklore and packaged into videos delivered using Balinese language with a duration 7 minutes.

The attitude measurement tool for maintaining dental and oral health was conducted by administering a questionnaire consisting of 15 statements adapted from research by Selvaraj et al. and Alshloul et al. The questionnaire was then modified by the researchers by adjusting the language and adding several statement items.^{11,12} The attitude questionnaire in maintaining dental and oral health in this study contains statements about attitudes in maintaining daily dental and oral hygiene, attitudes towards the use of toothbrushes and toothpaste containing fluoride and attitudes related to the effects of caries. The selection of answers on the questionnaire sheet with a Likert scale design (Strongly disagree, disagree, neutral, agree, and strongly agree) with a score of 1-5. The questionnaire assessment for favorable statements is a score of 5 (strongly agree), a score of 4 (agree), a score of 3 (neutral/uncertain), a score of 2 (disagree), and a score of 1 (strongly disagree). The questionnaire assessment for unfavorable statements is given a score of 1 (strongly agree), a score of 2 (agree), a score of 3 (neutral/uncertain), a score of 4 (disagree), and a score of 5 (strongly disagree). The selection of answers on the questionnaire sheet with a Likert scale design (Strongly disagree, disagree, neutral, agree, and strongly agree) with a score of 1-5. The value can be divided into 3 categories, namely the less, enough and good categories. The lowest attitude score is 15 and the highest is 75. The attitude

category is less if the score is between 15-34, the category is enough if the score is between 35-54, the category is good if the score is between 55-75.

The validity and reliability test of the questionnaire were carried out on 30 children aged 8-9 years in SD No. 4 Jimbaran, Badung Regency, Bali Province. The results of validity and reliability tests showed that 15 question items were declared valid ($r > 0.361$) and reliable (Cronbach $\alpha = 0.920$).

Attitude questionnaire toward maintaining oral health that was self-administered by the subjects was carried out before the intervention as a pre-test. Post-test 1 was carried out immediately after the intervention was given to each group and post-test 2 was carried out 15 days after post-test 1.¹³ Data analysis using parametric statistics (Independent T-Test) for normally distributed data and non-parametric statistics (Mann-Whitney U Test) for non-normally distributed data.

RESULT

Research has been conducted on the effectiveness of oral health counseling using traditional folklore video media on attitude toward maintaining oral health in children aged 8-9 years in SD No. 10 Jimbaran and SD No. 4 Ungasan, Badung Regency, Bali Province. Characteristics of respondents by intervention group can be seen in Table 1.

Table 1. Characteristics of Respondents by Intervention Group

Characteristics of Respondents	Folklore Video n (%)	Conventional Video n (%)	Total n (%)
Age			
8 years	26 (23.2)	20 (17.9)	46 (41.1)
9 years	30 (26.8)	36 (32.1)	66 (58.9)
Gender			
Male	30 (26.8)	29 (25.9)	59 (52.7)
Female	26 (23.2)	27 (24.1)	53 (47.3)
Attitude	Mean±SD	Mean±SD	SD,
Pre-test	4.23±9.11	44.66±9.56	Standard
Post-test 1	55.01±8.83	51.33±8.50	Deviation
Post-test 2	56.55±8.96	50.39±7.97	n

Table 1 shows the age distribution of respondents who participated in this study was 9 years old (58.9%) both in the traditional folklore video group (26.8%) and the conventional video group (32.1%). The majority of respondents were male (52.7%) in both the traditional folklore video group (26.8%) and the conventional video group (25.9%). The mean value of respondents attitude from pre-test to post-test 2 showed a change in both

intervention group.

The results of the analysis of differences in attitude toward maintaining oral health between traditional folklore video media and conventional video media using the Mann-Whitney U Test and Independent T-Test are presented in Table 2.

Table 2. Differences in Attitude Toward Maintaining Oral Health Before and After Intervention

Observation Period	Attitude Variable		sig.*
	Folklore Video Median (25% - 75%)	Conventional Video Median (25% - 75%)	
Pre-test	45.0 (41.0 – 55.0)	41.0 (39.0 – 52.2)	0.059 ^a
	Mean±SD	Mean±SD	
Post-test 1	55.01±8.83	51.33±8.50	0.027 ^b
Post-test 2	56.55±8.96	50.39±7.97	<0.001 _β

^aMann-Whitney U Test; ^bIndependent T-Test

Table 2 shows that there is no significant difference in respondents attitude before treatment (pre-test) between the traditional folklore video group and the conventional video ($p > 0.05$). Respondents attitude after treatment (post-test 1 and 2) there was a significant difference between the traditional folklore video and conventional video groups.

The results of the analysis of differences in attitude toward maintaining oral health between traditional folklore video media and conventional video media using the Mann-Whitney U Test are presented in Table 3.

Table 3. Difference Test Results of Attitude Towards Maintaining Oral Health

Observation Period	Attitude Variable		Sig.*
	Folklore Video Median (25%-75%)	Conventional Video Median (25%-75%)	
Pre-test ke post-test 1	6.0 (5.0 – 9.0)	4.0 (0 – 12.0)	0.048
Pre-test ke post-test 2	7.5 (5 -14.0)	3.0 (0 – 11.0)	0.007
Post-test 1 ke Post-test 2	0 (0 – 5.0)	0 (-2.2 - 0)	0.031

*Mann Whitney U Test

Table 3 shows the results of the difference in attitude toward maintaining oral health, pre-test to post-test 1, pre-test to post-test 2 and post-test 1 to post-test 2 in both treatment groups there are significant differences ($p < 0.05$).

DISCUSSION

The descriptive data in Table 1 indicate an increase in the

mean attitude towards maintaining dental and oral health from before the intervention (pre-test) to after the intervention in each group (post-test 2). These results show that dental and oral health counseling, whether using traditional folklore video media or conventional video media, can change attitude towards maintaining dental and oral health in 8-9-year-old children. These findings are supported by previous research, which found that dental and oral health counseling has been proven to increase knowledge, attitudes, and oral hygiene status.^{4,14,15} Oral health counseling is an effort to deliver messages about oral health to individuals, groups or communities with the aim of increasing knowledge about oral health, so that it will lead to attitudes and actions that affect community behavior either individually or in groups towards healthy behavior in their daily lives.^{3,16}

The results of the Mann-Whitney U Test in table 2 show that the initial data before being given the intervention (pre-test) there is no significant difference, this indicates that the initial position of the respondent attitude before being given the intervention in each group is the same. The results of Independent T-Test after being given counseling (post-test 1 and post-test 2) showed a significant difference in attitude in each group.

The results of the difference in attitude tested using the Mann-Whitney U Test in table 3 show that there is a significant difference in attitude between pre-test to post-test 2 in each group. The median value in the traditional folklore group is greater than the conventional video group, this shows that counseling with traditional folklore video media is better at changing attitude towards maintaining oral health compared to conventional video media.

The better attitude changes in attitude in the intervention group using traditional folklore video media is due to the interesting storyline of traditional folklore taken from Balinese folklore entitled "I Cupak Teken I Gerantang" and the funny characters in the folklore are made into animation which will make children more interested in participating in counseling compared to conventional videos that only display powerpoints packaged into video form, besides that traditional folklore have distinctive voices and interesting intonations that can help children to be more involved in the story and strengthen their memory of the contents of the story.^{17,18}

Folklore video that are used as objects in dental and oral health counseling improve children's attitudes towards dental and oral hygiene more than conventional videos because children are emotionally involved in understanding and feeling the cause and effect of the experiences of the characters in the folklore storyline, in addition, the characters and storylines in folklore reflect

real everyday life, so that children will be inspired or motivated by characters who are considered good by children so that children will tend to follow the characters with various types of character in the folklore towards a better direction.^{10,18,19}

Previous research conducted by Parmini found that learning through traditional folklore in Bali also significantly contributed to behavioral changes in elementary school children. These changes generally focused on the attitudes of the characters in the fairy tales.⁸ The results of this study are also supported by previous research conducted by Shruti which found that traditional folklore given using hand puppet tools and modified by inserting dental health messages such as how to brush teeth, frequency of brushing teeth, foods that are good for teeth and control to the dentist proved to be able to increase knowledge, attitudes and practice in maintaining oral health because children become more interested in listening the messages in the folklore given.²⁰ Limitations of this study cannot see long-term retention of knowledge in elementary school-aged children because it only once intervention and the interval between administering post-test 1 and post-test 2 is relatively short, only 15 days apart. Future research is expected to provide repeated interventions with a longer research period.

CONCLUSION

Based on the results of the research that has been conducted, it can be concluded that dental and oral health counseling using traditional folklore video media is effective in changing attitude toward maintaining oral health in children aged 8-9 years.

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