



Systematic Review

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Literature Review of the effectiveness of audiovisual media base counseling on the knowledge of dental and mouth health maintenance and debris index

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Abstract

Background: Dental and oral hygiene is very important because some oral and dental problems can occur because we don't maintain good dental and oral hygiene. The extension program is expected to increase awareness and change people's bad habits so that they can maintain dental and oral health through active participation or awareness in efforts to maintain dental and oral health. The aim of this study was to carry out a systematic review by examining the effectiveness of counseling using audiovisual media on how to maintain oral health on the level of knowledge and debris index of children. **Methods:** The research method is a systematic review by examining 10 (ten) articles related to the Effectiveness of Counseling Using Audiovisual Media About How to Maintain Dental and Oral Health on Knowledge Levels and Child Debris Index conducted on the Google Scholar database and published proquests starting from 2011-2021. **Results:** The audiovisual media is more effective and most widely used to increase the level of knowledge in maintaining oral health. **Conclusion:** The counseling using audiovisual media, children's knowledge has experienced a significant increase in maintaining healthy teeth and mouth. Suggestions in this study are that health facilities/staff are expected to increase promotive efforts that innovate so as to increase knowledge in maintaining dental and oral health.

Keywords: Audiovisual media, Knowledge, Debris index.

INTRODUCTION

Teeth was one part of the body that functions to chew, speak and maintain facial shape, so it is important to maintain healthy teeth as early as possible so that they can last a long time in the oral cavity ^[1]. The prevalence of elementary school age in Indonesia with problems with broken teeth, cavities, or disease of 55.52%, with missing teeth due to extraction or self-knockout is 33.60%, the prevalence of filling have been filled or filled by 3.87%, and the prevalence for loose tooth problems was 21.96% ^[2]. At the age of 10-14 years, the prevalence of problems with damaged teeth, cavities, or pain is 39.80%, the prevalence of problems with missing teeth due to extraction or self-knocking is 20.19%, the prevalence for teeth that have been patched due to cavities is 3.62 %, and the prevalence for loose tooth problems was 12.79%. Dental and oral diseases that many people in Indonesia suffer are generally related to dental and oral hygiene ^[3].

Problems that limit biting, chewing, smiling, speaking, and psychosocial well-being. Dental and oral hygiene is very important because some oral and dental problems can occur because we don't maintain good dental and oral hygiene ^[4].

The major factor of oral cavity disease is dental and oral hygiene or oral hygiene. The condition of the oral cavity without debris, plaque, materia alba, and tooth stain is good dental and oral hygiene. Dental and oral hygiene status can be assessed by examination or called the Oral Hygiene Index-Simplified index (OHI-s). Health behavior includes dental and oral health behavior. Dental health behavior includes knowledge, attitudes, and actions related to the concept of healthy and toothache and efforts to prevent it ^[5].

The dental and oral health service programs at the public health center was under the School Health Business program. This programs provides services in promotive, preventive, curative and rehabilitative forms. Elementary school age was chosen because it is an important age period for development, at this age children experience rapid changes in receiving information, remembering, making reasons, and deciding actions. The developmental age of children will begin to learn about all self-competencies, especially instilling healthy lifestyle behaviors ^[1].

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Audiovisual or video media is one of the counseling media that can be heard and seen with moving images and sound that involves the senses of sight and hearing, so that it can convey more real information [6]. The target that becomes the object or audience will be able to understand and remember the information that has been given and the greater the possibility of recording and remembering the information conveyed [7]. Health promotion that is currently used is a form of development from health education that has been carried out for decades [8]. By carrying out health promotion or counseling is education that can influence the community or individuals and groups so that they can have healthy living habits or behaviors [9]. As a target of counseling or health education not only changes behavior, but provides understanding and knowledge as well as information that can be applied for healthy lifestyle changes [10].

Dental and oral health education is a planned and directed effort with the aim of creating an atmosphere so that a person or group of people wants to change old behavior that has bad habits in maintaining dental and oral health for the better by taking action to maintain cleanliness and health of teeth and mouth [11]. The extension program is expected to increase awareness and change people's bad habits so that they can maintain dental and oral health through active participation or awareness in efforts to maintain dental and oral health [12]. In addition, counseling can also help provide information to prevent dental and oral diseases that can occur [13]. Based on the description of the background above, the researcher was interested in conducting research on a systematic review "The Effectiveness Of Maintenance Of Dental And Mouth Health Counseling Of Audiovisual Media On The Level Of Knowledge And Debris Index".

Design

The design of this study is a research with a systematic review design and examines the effectiveness of counseling using audiovisual media on how to maintain dental and oral health on the level of knowledge and debris index of children.

Place and Time

The place of this research is in the Department of Dental Health and in the integrated library of the Polytechnic of the Ministry of Health of the Republic of Indonesia Medan. The time of this study is from February 2022 to May 2022.

PICOS Formulation

- 1) The population in this systematic review is school children.
- 2) Intervention in this systematic review is counseling using audiovisual media.
- 3) Comparison in systematic review is comparing the use of audiovisual media.
- 4) The outcome of this systematic review is to increase knowledge and decrease the level of debris index of children.
- 5) The study design in this study is a systematic review.

MATERIAL AND METHODS

This research was a study with a systematic review design to determine The effectiveness of maintenance of dental and mouth health counseling of audiovisual media on the level of knowledge and debris index. The research was conducted at the Department of Dental Health and the integrated library of the Republic of Indonesia Ministry of Health Polytechnic in Medan from February 2022 to May 2022 by reviewing 10 published articles from 2011-2021 and will be reviewed using the PICOS formula.

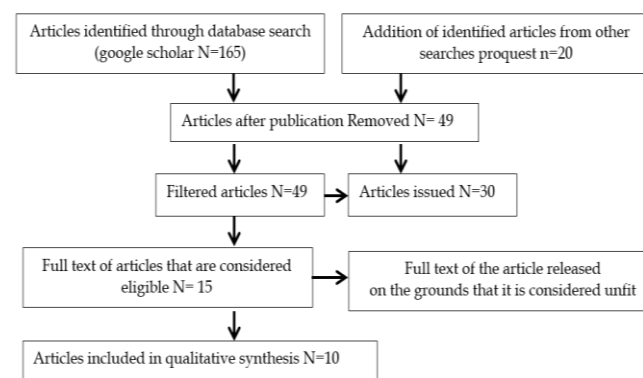
The tool used in this research was to retrieve data from published journals and articles. The data obtained is compiled, processed and presented in the form of a frequency distribution tabulation based on research variables, research year, research design, research sampling, research instruments, statistical analysis, knowledge characteristics, debris index characteristics, as well as the various audiovisual media used. Data were analyzed by describing the research results obtained.

STEPS

Stage 1: Determining Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Population	School-age children 7-15 years old	School-age children over 15 years old
intervention	Counseling using audiovisual media on how to maintain dental and oral health	Counseling using audiovisual media on how to maintain dental and oral health
Comparison	Animated videos and movies	Demonstrations, stories, flip charts, hand puppets and phantom
Outcome	Decline in the debris index category	Caries criteria; (-)
Study design	Quantitative	Qualitative
Year of Publication	Journals published in 2011-2021	Journals published before 2011
Language	Indonesian	other than Indonesian

Stage 2: Determining the steps of the research



RESULTS

The review results regarding to the summary and results of each selected article presented in the form of a frequency distribution table.

Table 1: General of Article's Characteristics

No.	Category	N	%
A. Publication Year			
1.	2016	2	20
2.	2017	1	10
3.	2018	2	20
4.	2019	3	30
5.	2020	2	20
B. Research Design			
1.	Pre- experiment with pretest posttest	2	20
2.	Quasy ekperimental design	6	60
3.	Cross sectional	2	20

C. Research Sampling			
1.	Purposive sampling	6	60
2.	Total sampling	4	40
D. Research Instrument			
1.	Observation and questionnaire	3	30
2.	Questionnaire	4	40
3.	Observation	3	30
E. Statistical Analysis Of Research			
1.	Uji Wilcoxon dan Man Whitney	2	20
2.	Uji mann Whitney	3	30
3.	Paired sample T-test	4	40
4.	Uji Wilcoxon	1	10

Based on the 10 reviewed journals, it is know that 60% of the articles were obtained with Quasy experimental design and as much as 20% of the articles each pre-experimental with pretest posttest and cross sectional. Based on the research sampling, 60% of the articles were reviewed using the purposive sampling method and 40% of the articles used the total side.

Based on the research instrument, 40% of the articles used the questionnaire instrument, 30% of the articles used the observation and questionnaire instrument and 30% of the articles used the observation instrument. Based on data analysis, it was found that 40% of the articles used data analysis with the Paired sample T-test, 30% of the articles used data analysis with the Mann Whitney test, 20% of the articles used data analysis with the Wilcoxon and man Whitney test and 10% of the articles used analysis data by Wilcoxon test.

Characteristics of Knowledge Based on the Use of Audiovisual Media-

Based on ten journals that examined the characteristics of knowledge based on the use of audiovisual media about maintaining dental and oral health, before counseling using audiovisual media, 50% of the articles found the criteria for children with moderate knowledge, 30% of the articles found the criteria for children with poor knowledge, and 20% of the articles known the criteria of well-knowledgeable children. Meanwhile, after counseling using audiovisual media as many as 70% of the articles obtained the criteria of children with good knowledge, 20% of the articles obtained children with moderate knowledge, and as many as 10% of the articles obtained children with poor knowledge.

Table 2: Characteristics of Knowledge Based on the Use of Audiovisual Media About Dental and Oral Health Care

Children's Knowledge Criteria	N	%
Before		
Good	2	20
Currently	5	50
Bad	3	30
After		
Good	7	70
Currently	2	20
Bad	1	10
Amount	10	100

Table 3: Characteristics of Index Debris based on the Use of Audiovisual Media About Dental and Oral Health Care

Child Debris Criteria	F	%
Before		
God	0	0
Currently	3	30
Bad	4	0
After		
God	3	30
Currently	3	30
Bad	1	10
Amount	7	70

Based on the 10 journals reviewed, the characteristics of index debris based on the use of audiovisual media regarding the maintenance of dental and oral health, before counseling using audiovisual media obtained data as many as 40% of articles reporting index debris criteria with poor criteria, as many as 30% of articles obtained index debris index of moderate children and 0% of the articles obtained the debris index criteria for good children.

Whereas after counseling using audiovisual media, as many as 30% of the articles obtained the debris index criteria for moderate children, 30 percent of the articles obtained the debris index criteria for good children and as many as 10% of the articles reported the debris index criteria for bad children. From the articles reviewed, it was obtained that 30% of the data did not measure the index debris level of the child.

Table 4: Types of Audiovisual Media

Types of Audiovisual Media	f	%
Videos	9	90
Animation	1	10
Amount	10	100

Based on the 10 journals that examined the types of audiovisual media, 90% of the articles used the audiovisual video type and 10% of the articles used the animation audiovisual media type.



Figure 1: Index Debris Measurement

Based on the 10 (ten) journals reviewed, it can be conclude that knowledge is a factor that encourages a person to take action to maintain oral health. Lack of knowledge about dental and oral hygiene that cause for a child to neglect dental health problems. This is because knowledge is an important domain in shaping a person's behavior, especially children who are still in the process of growth and development.

DISCUSSION

School-age children are the ideal time to direct a positive direction that can help to get the development of skilled knowledge and have good creativity towards dental and oral health maintenance actions. Dental and oral health education is very important to lay the foundation for adapting to the environment for further growth and development ^[14].

Oral health is an important part of general body health. School-age children tend to experience dental and oral health problems due to a lack of knowledge and ability of children to maintain dental and oral health ^[15]. The occurrence of tooth decay begins with food debris that is still left in the oral cavity and is not cleaned immediately for a long time (debris). Food scraps that are still left behind will rot and become a breeding ground for bacteria in the mouth, causing decay and dental disease that can damage the tissues and structures of the mouth ^[16].

Prevention of dental and oral diseases can be done with education in the form of counseling on how to maintain dental and oral health, especially for school-age children ^[17]. One of the dental and oral health education is how to brush your teeth. Brushing your teeth is a form of action to clean food debris or debris left in the oral cavity. Tooth brushing must be applied early on because the condition of the baby teeth (deciduous teeth) will determine the condition of the permanent teeth as a replacement ^[18].

Dental and oral health education is an action to prevent tooth decay in children from an early age and increase children's knowledge and abilities on how to maintain dental and oral health ^[13]. Audiovisual media is one of the counseling media that can be heard and seen. Audiovisual media involve the senses of sight and hearing, so that they can convey information that is more real and easier to understand and remember ^[19].

Based on the journals reviewed, the most widely used audiovisual media in counseling about oral health is video. Video media has the advantage of being able to observe more closely, saving time in delivering material and recordings can be played repeatedly making it easier to absorb knowledge ^[20].

CONCLUSION

The conclusion of this study include Audiovisual media is more effective and most widely used to increase the level of knowledge in maintaining dental and oral health with the percentage of types of audiovisual media used 90% video and 10% animated film. Knowledge of children after counseling using audiovisual media experienced a significant increase in maintaining dental and oral health with presentations. Children's debris index has decreased with increasing knowledge after counseling using audiovisual media on maintenance of dental and oral health.

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Conflicts of Interest

The author reports no conflicts of interest.

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