



THE EFFECTIVENESS OF COUNSELING WITH THE MEDIA LEAFLET AND AUDIO VISUAL ON MOTHER'S KNOWLEDGE ABOUT DENTAL AND MOUTH CARE TODDLERS

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ABSTRACT

Dental and oral health care needs to be applied to children from an early age. The participation of maternal knowledge is needed in supporting the health of children's teeth and mouth. Based on the results of the researcher's preliminary study, ten out of fourteen mothers in Klidang Wetan village who have toddlers still lack knowledge about the correct tooth brushing time. The mother's lack of knowledge about the child's dental and oral health care will have an impact on the child's dental and oral health. Knowledge can be improved through health promotion. Leaflet and audio-visual media are health promotion media that can be used to help increase maternal knowledge. **Objective:** Knowing the effectiveness of counseling with leaflet and audio-visual media on maternal knowledge about dental and oral care in toddlers in Klidang Wetan Batang Village. A type of pseudo-experimental research using a *nonequivalent control group design*. The samples in the study were 66 mothers in Klidang Wetan Village who had toddler children, filled out Counseling using audio-visual media and leaflets obtained a sig value. (2-tailed) of (0.006 and 0.010) < 0.05, meaning there is a difference. Counseling with audio-visual media shows a *sum of ranks* or *mean rank* value higher than counseling using leaflet media. Counseling with audio-visual media is more effective than leaflet media on maternal knowledge about dental and oral care in toddlers.

Keywords: Promotion of children's oral health, Leaflets, Audio Visual

1. INTRODUCTION

Dental and oral health efforts are a way that can be done in preventing dental and oral problems such as caries. The World Health Organization says that the problem of caries in children reaches 60-90% [19]. In Indonesia, based on the results of the 2018 Basic Health Research, 57.6% of cases of dental and oral health problems were found [8]. In Central Java province, the number of dental cases recorded was 1,307,722, spread from various regencies/cities and Batang which is one of the districts in Central Java province found 23,251 dental cases [5]. From the results of preliminary research conducted in Klidang Wetan Batang village, ten out of fourteen mothers who have toddler children still lack knowledge about the correct brushing time.

Regular dental and oral health care is necessary to achieve good dental and oral health [13]. The role of parents, especially mothers, is very meaningful so that providing education to mothers about dental and oral care is necessary so that children can recognize methods of maintaining oral and dental health correctly [1].

Health promotion is one of the efforts to influence individuals, groups and communities with the aim that they carry out the expected instructions from health promotion actors. Media that can be used as an intermediary or useful for facilitating the health promotion process include leaflet and audio-visual media [11].

To support efforts to increase maternal knowledge about dental and oral care in toddlers, researchers will conduct counseling with leaflet and audio-visual media as well as to compare the effectiveness of the two media against maternal knowledge in Klidang Wetan Batang village.

2. METHODS OF RESEARCH

This research is a type of experimental research with a pseudo-experimental group which was carried out in April 2022 at PAUD Permata Bunda and Posyandu Klidang Wetan Village. The study sample was 66 respondents who had children under five years old. The total respondents will be divided into 2 groups, namely the leaflet media group of 33 respondents and the audio-visual media group of 33 respondents. The



research instruments used are leaflet media, audio-visual media and dental and oral care

knowledge questionnaires made by the researcher himself [12].

3. RESULT OF RESEARCH

A. Univariate Analysis

1) Characteristics of Respondents

Table 1

Variable	Media Leaflet		Media Audio Visual	
	Sum	Percentage (%)	Sum	Percentage (%)
Characteristics of Maternal Age				
Late teens (17-25)	6	18,2	7	21,2
Early adulthood (26-35)	14	42,4	18	54,5
Late adult (36-45)	12	36,4	7	21,2
Early Elderly (46-55)	1	3,0	1	3,0
Characteristics of Maternal Education				
Elementary	7	21,2	2	6,1
JHS	10	30,3	13	39,4
SHS	15	45,5	9	27,3
Diploma (D3)	0	0,0	5	15,2
Bachelor (S1)	1	3,0	4	12,1
Characteristics of Mother's Work				
Housewife	23	69,7	23	69,7
Laborer	3	9,1	0	0,0
Private Employees	3	9,1	5	15,2
Trader	2	6,1	1	3,0
Teacher	1	3,0	0	0,0
Village Apparatus	1	3,0	0	0,0
Civil servants	0	0,0	2	6,1
Assistant Midwife	0	0	1	3,0
miscellaneous	0	0	1	3,0

Based on table (1), characteristics are obtained based on age, education and occupation. The characteristics of respondents based on age in 33 leaflet media respondents and 33 audio-visual media respondents were in the category of late teens to early elderly. From these results, it was found that the highest number of leaflet media respondents was in the early adult category with 14 respondents (42.4%) and the lowest in the early elderly category, namely 1

respondent (3%). Meanwhile, in audio-visual media respondents, the highest age category was also in early adulthood, namely 18 respondents (54.5%) and the lowest in the early elderly category, namely 1 respondent (3%).

When viewed from the characteristics of education, 33 respondents of the media leaflet were obtained the highest number in the SHS category, namely 15 respondents (45.5%)



then followed by the junior high school, elementary and bachelor (S1) categories. Meanwhile, in audio-visual media, a maximum of 13 respondents (39.4%) were obtained in the junior high school category and then followed by the SHS, diploma (D3), bachelor (S1) and elementary categories.

The job characteristics of the 33 leaflet media respondents had the highest number in the Housewife (IRT) category, namely 23

respondents (69.7%), followed by other categories, namely Labor, Private employees, Trader, Teachers and Village Officials. Meanwhile, audio-visual media found that the most respondents had jobs as Housewives (IRT) as many as 23 respondents (69.7%) followed by the categories of Private employees, Civil Servants, Trade, Midwife Assistants and others.

2) Description of Mother's Knowledge on Counseling with Leaflet Media

Table 2

Category	Before the Media Leaflet		After Media Leaflet	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Good	17	52%	20	61%
Moderate	15	45%	13	39%
Less	1	3%	0	0%
Total	33	100%	33	100%

Based on Table (2) it is known that there are differences in maternal knowledge about dental and oral care of toddlers before and after counseling using leaflet media. Before the counseling, the number of respondents with good knowledge was 17 respondents, moderate as

many as 15 respondents, and less as many as 1 respondent. After counseling, this number increased so that mothers with a good level of knowledge of dental and oral care for toddlers were 20 respondents and moderate 13 respondents.

1) Description of Mother's Knowledge on Counseling with Audio Visual Media

Table 3

Category	Before Audiovisual Media		After Audiovisual Media	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Good	20	61%	21	64%
Moderate	6	18%	12	36%
Less	7	21%	0	0%
Total	33	100%	33	100%

Based on Table (3) it is known that there are differences in maternal knowledge about dental and oral care of toddlers before and after counseling using audiovisual media. Before the counseling, there were 20 respondents who had a good level of knowledge, while the less respondents were 7 respondents. After

counseling, there were results that none of the respondents had insufficient knowledge in dental and oral care for toddlers. The number of respondents who have good knowledge of dental and oral care for toddlers increased to 21 respondents.

B. Bivariate Analysis

- 1) The Effectiveness of Counseling using Leaflets and Audio Visual Media on The Level of Mother's Knowledge about Dental and Oral Care



Table 4

Test Statistics ^a		
	leafletpost - leafletpre	audiopost - audiopre
Z	-4,178 ^b	-4,449 ^b
Asymp. Sig. (2-tailed)	,000	,000
a. Wilcoxon Signed Ranks Test		
b. Based on negative ranks.		

Based on the Wilcoxon Test in table (4), counseling using audio-visual media and leaflets has a Sig value. (2-tailed) of (0.000 and 0.000) < 0.05 with an overall Sig value of < 0.05, then as the basis for decision-making in the Wilcoxon test it can be concluded that H₀ is rejected and H_a is

accepted. With a significance level of 5%, it can be concluded that there are differences in counseling on leaflet and audio-visual media to maternal knowledge about dental and oral care in toddlers.

Table 5

Ranks				
		N	Mean Rank	Sum of Ranks
leafletpost - leafletpre	Negative Ranks	3 ^a	10,67	32,00
	Positive Ranks	27 ^b	16,04	433,00
	Ties	3 ^c		
	Total	33		
audiopost - audiopre	Negative Ranks	3 ^d	11,00	33,00
	Positive Ranks	30 ^e	17,60	528,00
	Ties	0 ^f		
	Total	33		
a. leafletpost < leafletpre				
b. leafletpost > leafletpre				
c. leafletpost = leafletpre				
d. audiopost < audiopre				
e. audiopost > audiopre				
f. audiopost = audiopre				

Based on Table (3), the mean rank and sum of rank values show the magnitude of the effectiveness of the counseling media, it appears that counseling using audio-visual media has a mean rank value of 11.00 and 17.60, while the sum of rank values are 33.00 and 528.00. Meanwhile, in counseling using leaflet media, it has a mean rank value of 10.67 and 16.04, while the sum of rank values are 32.00 and 433.00. Counseling using audio-visual media has a higher *sum of ranks* and *mean rank* value than counseling using leaflet media. This shows that

audio-visual media is more effective than leaflet media against mothers' knowledge of dental and oral care in toddlers.

4. DISCUSSION

The health of the child's teeth and mouth should be considered as early as possible by the mother. Factors such as sugary foods, low fluoride exposure, salivary deficiency, vulnerable dental anatomy and others should be considered by mothers to avoid the child from dental and oral problems. Efforts to invite children to avoid



causative factors, control plaque by brushing their teeth, using dental floss and fissure sealants can be done by mothers. Thus, the knowledge and role of the mother is needed in helping to take good care of the health of the teeth and mouth in children [9][17][18].

Knowledge is the result of knowing a person after receiving an object from the senses he possesses [11]. So that the knowledge gained from the stimulation of more senses, will be easier for a person to understand [6]. Audio-visual media is an information medium that includes audio and visual messages so that they can be received by the sense of sight and listener. The advantages of audio-visual media are that they can explain a process well, can be repeated and stopped as needed, and can attract attention with the play of colors, animations, sounds and moving images. While the disadvantage is that it costs relatively expensive production costs, requires tools and is skilled in its operation. In addition to audio-visual media, print media in the form of leaflets is also often used in health promotion. Leaflet media is one of the print media in the form of sheets of paper containing written information and images. Leaflets have the advantage that they can be stored for a long time, can be opened and re-read and can be easily duplicated. The weakness of leaflet media is that it is not friendly to people who cannot read or are illiterate and needs an interesting presentation so as to attract the interest of readers [16].

Based on the results of previous bivariate tests, it is stated that counseling using audio-visual media is more effective than leaflet media on maternal knowledge about dental and oral care in toddlers. These results are supported by several previous studies, including (Setiani & Warsini, 2020), (Jannah & Timiyatun, 2020), (Alini & Indrawati, 2018), and (Pratiwi, Afriyani, & Zulkarnain, 2019) which also compared the effectiveness of the two media [15][7][2][14]. The delivery of information through moving images at a certain speed involving hearing and vision through audio-visual media can foster maternal interest thereby accelerating comprehension and strengthening memory [10].

The results of the study that stated that audio-visual media is more effective than leaflets can be caused because audio-visual media can explain a process well, can be repeated and stopped as needed, and attract respondents' attention with the play of colors, animations and sounds displayed. During the study, the respondents also seemed to be more interested, focused and paid close attention to the information provided on the layer. This makes the atmosphere conducive and comfortable for respondents to absorb information.

The role of parents or mothers, which is one of the factors for the formation of children's behavior towards oral hygiene in daily life, makes education about preventive measures and dental and oral care need to be prepared before pregnancy to improve dental and oral health from an early age. With the increase in maternal knowledge in this study, it is hoped that there will be a sense of wanting to apply the information obtained to children so that good dental and oral health behaviors arise by children.

5. CONCLUSION

Based on the results of the study, it can be concluded that there are differences in the effectiveness of counseling with leaflet and audio-visual media to increase maternal knowledge about dental and oral care in toddlers. Counseling with leaflet and audio-visual media provides a change in mothers' knowledge about child dental and oral health care. However, compared to leaflet media, counseling using audio-visual media provides greater changes. Thus, between leaflet and audio-visual media, it was found that audio-visual media is more effective in maternal knowledge about dental and oral care in toddlers.

6. AUTHORS' CONTRIBUTIONS

All authors contributed to the study.

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