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The influence of flipcharts educational media on the level of mother's knowledge, mother's attitudes and children's OHIS

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Abstract. Dental caries in children is a public health problem that is difficult to control. Even though it is not life-threatening, dental caries affects the growth and development of children. The aim of this research is to see the effect of flipchart media on the level of maternal knowledge, maternal attitudes and children's OHIS scores. The research was conducted using a quasi-experimental design on 20 mother and child. Data analysis used the Wilcoxon test. The research results showed significant differences in maternal knowledge, maternal attitudes and children's OHIS. Flipcart educational media has been proven to be able to increase maternal knowledge, maternal attitudes and reduce children's OHIS

Keywords: Dental Caries, Education, Flipchart

INTRODUCTION

Childhood is an important time for the growth and development of healthy teeth. Dental caries in children is the most common public health problem and difficult to control. Even though it is not life-threatening, the impact on children is quite large, causing pain, impaired chewing function, affecting the child's growth and development so that it can reduce the child's quality of life. Children not only experience problems related to oral diseases such as bleeding gums, inflammation or toothache, but can also experience sleep problems (Elamin et al., 2021). Children with poor oral health are almost 12 times more likely to experience limitations in daily activities than healthy children (Montes et al., 2019) (Gasparoni et al., 2013).

The results of the 2018 Basic Health Research (Riskesdas) show that the percentage of dental and oral health problems has more than doubled compared to 2013, namely from 25.9% to 57.6%. The 2018 Riskesdas results also stated that 93% of young children, namely the 5-6 year old group, experienced cavities, meaning that only 7% of children in Indonesia do not have dental caries problems. Children aged 5-6 years on average have 8 cavities in their oral cavity. According to the age characteristics of the Indonesian population, the proportion of the population experiencing dental health problems in the 3-4 year age group is 41.1%, the 5-9 year age group is 67.3%. and 55.6% in the 10-14 year age group. The average DMF-T index

in Indonesia based on the 3-4 year age group is 6.2 and 8.1 in the 5 year age group (Kemenkes RI, 2018).

According to Riskesdas in 2018, in Jambi Province, 45% of the population experienced dental and oral problems, with 37.7% damaged or cavities. The proportion of residents in Jambi City who experience dental and oral health problems reaches 58.5%. The prevalence rate of dental caries in the 3-4 year age group was 81.5%, and in the 5 year age group it was 90.2%. The high rate of caries in children today can be influenced by several factors, one of which is the behavior of people who lack awareness and understanding of basic information about the importance of maintaining healthy teeth and mouth. The act of brushing your teeth, like any other behavioral pattern, requires a formative phase. These stages need to be taught and familiarized with children so that children's behavior can be controlled from an early age (Al-Bluwi, 2014) (Splieth et al., 2020).

Socio-cultural factors (knowledge, attitudes, behavior, motivation, willingness, ability) and economic and educational status in the concept of dental and oral health literacy are considered as factors that can influence differences in dental and oral health literacy status and are one of the risk factors for the emergence of dental problems somebody. Differences in a person's health can also be influenced by various factors, including behavioral factors. Knowledge of parents, especially mothers, is important in shaping behavior that supports or does not support children's oral hygiene. The mother's behavior towards dental and oral health can be used as an example for children and can be used to predict the condition or status of the child's dental and oral health. It can be said that the mother's behavior towards dental health determines the child's dental and oral health (Batliner et al., 2014)(Vichayanrat et al., 2015)(Dieng et al., 2020).

Dental health education is the process of conveying information about dental and oral health in order to increase knowledge and help raise public awareness of the importance of maintaining dental and oral hygiene and then instilling habits of maintaining dental and oral health (Ghaffari et al, 2018). Various media can be used to deliver education. Among them; print media, electronic media and outdoor media (Notoadmojo, 2005). Flipchart are an example of printed media. The aim of this research is to see the effect of flipchart educational media on increasing maternal knowledge, maternal attitudes and decreasing children's OHIS scores.

METHODE

This research was conducted using an experimental design with group pretest and posttest. The research respondents consisted of the intervention group, namely mothers and 20 Nuruul Ilmi Kindergarten students. The intervention provided was in the form of education using flipchart media.

After collecting the pre-test and post-test data, the data was processed using SPSS version 23 software. The test used in this research was the Wilcoxon test as an alternative to the Paired T-test to see whether there were significant differences between the pre-test results and the post-test results.

RESULT AND DISCUSSION

Table 1. Comparison of Pre Test and Post test results

Variable	Mean	SD	P-value	N
Knowledge*				
Pre test	69,85	8,81	0,003	20
Post test	76,85	3,57		
Attitude*				
Pre test	72,60	7,24	0,000	20
Post test	81,55	10,26		
OHIS*				
Pre test	3,30	0,91	0,000	20
Post test	2,68	0,81		

Based on the table above, it can be seen that there is a significant difference in maternal knowledge with a p value of 0.003. The mean pre test of maternal knowledge was 69.85 and the mean post test of maternal knowledge was 76.85. The mean difference in mother's knowledge is 7. In the mother's attitude variable, it is known that the p value is 0.000, meaning there is a significant difference in mother's attitude. The mean pre test for maternal attitudes was 72.60 and the mean post test was 81.55. The mean difference in maternal attitudes is 8.95. This means that there is an improvement in the mother's attitude after being given education using flipcharts. In children's OHIS scores, it is known that the p value is 0.000, meaning there is a significant difference in children's OHIS after being given educational intervention using flipchart media. The pre test mean was 3.30 and the post test mean was 2.68. The OHIS mean difference was 0.62.

Mother's Knowledge

The results of this study showed that there was a significant difference in mothers' knowledge after being given intervention using flipcharts. The mother's mean score increased by 7 points. Flipcharts have been proven to be able to increase mothers' knowledge. The results of this research are in line with research conducted by Nugraheni and Agus who examined the effectiveness of flipchart media as a health promotion medium in early childhood. As a result, there was a significant difference in early childhood knowledge after health promotion using flipcharts (Widyastuti & Supriyatna, 2022).

Other research results that are in line are research conducted by Nurul, et al. He researched the effectiveness of posters and leaflets in increasing knowledge of dental and oral hygiene. As a result, leaflet media was proven to be more effective in increasing knowledge than poster media (Mufidah et al., 2022).

Another parallel research is Utami's research. Based on this research, there is a significant difference between students' knowledge scores after being given oral health education through flipcharts and leaflets. According to the results, it is known that using flipchart media in counseling has proven to be more effective than using leaflets. This is because the target of this research is elementary school children, which causes them to be more interested in looking at the pictures on the flipchart compared to the dense writing on the leaflet (Utami, 2018).

Mother's Attitude

The results of this study found that there were significant differences in mothers' attitudes after being given educational intervention using flipcharts. The mean increase in maternal attitudes was 8.95. The results of this research are in line with the results of research conducted by Sinta, et al. Her research tested the most effective media for health promotion targeting mothers with babies. In this research, it is proven that using flipchart media in carrying out health promotion is able to increase the level of respondents' attitudes in understanding stunting prevention (Juwita et al., 2022). Another research that is in line is research conducted by Ety and Wiworo. The results of the research show that flipchart media can increase the average score of students' motivation to maintain dental health (Yuniarly & Haryani, 2023).

Attitudes are a function of beliefs about the consequences of an action and judgments about that action. Attitude also means a general feeling that shows a person's liking for an object that encourages him to respond. The attitude factor is the decision point for behavior

change, manifested as a change in a person's attitude towards something. This change in attitude can be in the form of acceptance or rejection.

Regarding beliefs and attitudes, namely by considering the pros and cons of the behavior (consequences of behavior or beliefs about behavior). Second, the assessment response to the possibility of the behavior occurring, in other words the consequences that will occur if the person carries out the behavior (assessment of outcome/assessment of outcome of the behavior).

Child's OHI-S

⁴ The results of this research found that there was a significant difference in students' OHIS before and after being given education using flipchart media. The mean difference is 0.62, which means that flipchart media can reduce the OHIS value by 0.62 points.

Research conducted by Siska and Darmayanti compared which educational media is most effective, between booklets and flipcharts, in reducing elementary school students' OHIS scores. As a result, after looking at the comparison of the average scores, it was found that the booklet media was more effective in reducing the OHIS score after a week. After that, the OHIS score was checked again a month later. As a result, the group of students who were given education via flipcharts had a higher average difference in OHIS scores compared to the group who were given education via booklets. This is because flipcharts are more practical and easy to carry everywhere compared to booklets. Apart from that, presenting interesting information using pictures and unique written presentation attracts students' interest in reading flipcharts (Natassa & Siregar, 2022).

Several other journals also have results similar to the results of this research in comparing the most effective media between leaflets or flipcharts. ³ One research that is in line is research conducted by Sri Aulia, et al. According to him, leaflet and flipchart media both increase students' knowledge and attitude scores. However, leaflet media proved unsuccessful in reducing students' OHIS scores in this study. Environmental factors are very influential in this case, where students still often consume school snacks. Meanwhile, flipchart media succeeded in reducing students' OHIS scores. (Rahmi et al., 2023)

CONCLUSION AND RECOMMENDATION

⁶ Based on the research results, it can be concluded that flipchart media influences the mother's level of knowledge, mother's attitude and the child's OHIS. The suggestion based on the research results is that in an effort to increase knowledge, attitudes and reduce OHI-S, it is

hoped that schools can combine flipchart educational media with other educational media so that there is a more significant increase in maternal knowledge, maternal attitudes and a decrease in children's OHIS.

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