

## The influence of early children's dental health monitoring books on parents' knowledge In Az-Zahra Islamic Kindergarten, Jambi City (short, clear, and informative)

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### Abstract

**Background:** The results of the 2018 Basic Health Research (Riskesdas) show that the prevalence of caries in the 3-4 year age group is 81.5% and the caries prevalence in the 5-9 year age group is 92.6%. The average def-t for the age group 3-4 years was 6.2 and the average def-t for the 5-year age group was 8.1. Research conducted on all kindergarten students in Malalayang District showed that the prevalence of primary tooth caries was 90% with an average index def-t = 6.99.

**Method:** The design in this study used a pre-experimental one group pretest posttest. There were 30 samples in the study that met the inclusion and exclusion criteria.

**Results:** The statistical test output shows that the p-value of knowledge is 0.000. Because the value  $0.000 < 0.05$ , the hypothesis is accepted, which means there is a difference between the dental health knowledge scores for the pre-test and post-test.

**Conclusion:** Monitoring books can increase parents' knowledge in Az-Zahra Islamic Kindergarten, Jambi City.

**Keywords:** Dental; Health; Monitoring; Books; Early Children's.

### INTRODUCTION

The prevalence of caries in the 3-4 year age group was 81.5% and the 5-9 year age group was 92.6%. The average def-t for the 3-4 year age group is 6.2 and the average def-t for the 5 year age group is 8.1 (1). Research on all kindergarten students in Malalayang District showed a prevalence of primary tooth caries of 90% with an average index def-t = 6.99 (2). The high prevalence of childhood caries is influenced by parental knowledge, attitudes and behavior. Parents play a role in organizing and supervising so that oral health can be maintained (3). There are several ways to encourage children to brush their teeth, namely modeling and reinforcement techniques. Parents act as models and it is hoped that the cooperative behavior of the model will be imitated by the child (4). Modeling is a very practical approach, easy to do, and effective in shortening the time for changing children's behavior. Then reinforcement is given, such as praise, giving attention and prizes, so that what was learned is reinforced (5). The feasibility test for early

childhood dental health monitoring books has been carried out with validation from material and book experts and users, namely 30 parents (mothers) at the Az-Zahra Islamic Kindergarten, Jambi City, so that they get decent results without revisions. This research still has shortcomings, namely that preliminary field tests have not been carried out/limited to this monitoring book. Therefore, it is necessary to continue previous research with the research title "The role of parents in educating their children using early childhood dental health monitoring books at the Az-Zahra Islamic Kindergarten, Jambi City.

### METHOD

The test design uses Pre experiment one group pre-test post test which can be described as follows:

$O_1XO_2$

Information :

O1= Parents' knowledge before using the dental and oral health monitoring book for early childhood

O2= Parents' knowledge after using the dental and oral health monitoring book for early childhood

X = Treatment book monitoring oral health for early childhood children

The influence of early childhood oral health monitoring books on the role of parents = (O2 – O1): O1.

The population in this test were all children of the Az-Zahra Islamic Kindergarten in Jambi City. The sample size was 30 respondents with a total sampling technique using inclusion and exclusion criteria. The inclusion criteria were that the sample was parents whose children attended the Az-Zahra Islamic Kindergarten and had given consent. The exclusion criteria were the child's parents who were sick.

Work Procedures and Division of Tasks  
Preparation stage: 1) Initial survey, 2) Arranging Ethical Clearance, 3) Making a letter requesting permission to carry out research and collecting data through the Jambi Health Polytechnic Dental Health department, 4) Dividing the main tasks and functions of the proposing research team consisting of 3 people and assisted by an enumerator totaling 2 JKG students, 5) Calibration, 6) Creating lesson units and power point materials, 7) Preparing learning media and supporting activities, 8) Holding a meeting with the kindergarten school regarding permission to conduct research.  
Implementation stage: First week visit: 1) Opening and welcoming remarks from the school principal and researchers, 2) Filling out the questionnaire by the child's parents (pre-test), 3) Distribution of monitoring books to parents (target), 4) Book review and delivery 4 main materials in the dental health monitoring book for young children, 5) Providing food, 6) Question and answer session, 7) Closing of the second week's visit: 1) Opening and remarks by the Principal and Researchers, 2) Filling out the questionnaire by parents children (post-test), 3) Providing food, 4) giving souvenirs to parents and schools. 5) conclusion and conclusion.

## RESULTS

### Univariate Analysis

**Table 1. Frequency distribution of children's parents' latest education at Az-Zahra Islamic Kindergarten, Jambi City**

Parental education	Amount	Percentage (%)
S1	15	50
DIII	2	6,7
SMA	9	30
SMP	4	13,3
Total	30	100

The number of respondents with a bachelor's degree is more, namely 50%, than those with other education levels.

**Table 2. Frequency Distribution of Dental Health Knowledge Statistics Values of Parents of Children in Az-Zahra Islamic Kindergarten, Jambi City**

Statistic	Knowledge	
	Pre-test	Post-test
N	30	30
Mean	63,17	93,83
SD	10,945	5,826
Min	40	85
Max	85	100

Table 2 shows that the average value of dental health knowledge increased after being given the intervention, namely 12.63 to 18.77.

### Bivariate Analysis

**Table 3. Test of the Difference in Dental Health Knowledge Values of Parents of Children in Az-Zahra Islamic Kindergarten, Jambi City**

Value post-test – nilai pre-test	N	Mean Rank±Sum of Ranks	Z±p-value
Knowledge	30	15,50±465,00	-4,795±0,000

The statistical test output shows the knowledge p-value is 0.000. Because the value  $0.000 < 0.05$ , the hypothesis is accepted, which means there is a difference between the value of dental health knowledge for the pre-test and post-test so it can be concluded that the monitoring book is effective in increasing the knowledge value.

## DISCUSSION

**Increased Knowledge:** The results of data analysis show that the average rank (mean rank) of respondents after being given the guidebook was 15.50, and the total number of ranks (sum of ranks) was 465.00. This shows that on average, respondents had a dental health knowledge rating of around 15.50 after intervention with the early childhood dental health monitoring book. The total number of overall ratings for all respondents was 465.00. The mean rank of 15.50 indicates that on average, respondents tend to have a higher rating after being given the guidebook. This value can illustrate a significant increase in knowledge in this group of respondents. The total sum of ranks 465.00 reflects the total number of ranks given to all respondents in the study. These numbers provide an idea of the distribution of ratings among respondents and can help understand the distribution of knowledge gains within the group. This is in line with research results which state that junior high school mathematics learning media books are effective in increasing teachers' knowledge in learning media, especially in knowledge about the benefits and functions of learning media, types of learning media, concept maps, interactive powerpoints (6). The difference with the results of this study is that what increased was the dental health knowledge of early childhood children who were given the same book. Other research also stated that there was an increase in behavior in maintaining oral hygiene after using the book "Healthy Teeth Diary" with the average initial behavior of respondents regarding maintaining oral hygiene being 10.40 and after counseling it increased to 12.90 (7).

The advantages of guidebooks in the context of increasing knowledge are: 1) **Focused Summary:** Guidebooks tend to have a summary that is more focused and straight to the core of the material. This allows readers to get important information quickly without having to read the entire book, 2) **Structured Organization :** Guidebooks often have a structured and easy to follow organization. The material is arranged in a logical sequence, helping readers understand the development of concepts from beginning to end, 3) **Targeted Information:** The guidebook is designed to provide information that suits the reader's needs. They may focus more on practical solutions or step-by-step instructions for solving specific problems, 4) **Use of Illustrations and Graphics:** Guidebooks tend to use illustrations, graphics, or diagrams to visualize concepts or processes that are difficult to explain with text alone. This can help readers understand the material better, 5) **Quick Reference:** Due to their concise nature, guidebooks are often used as quick references. They allow readers to refer to necessary information without needing to read the entire long book, 6) **Immediate Application:** Guidebooks often contain practical instructions that the reader can apply immediately. This can be an action guide or concrete steps to achieve a desired result. 7) **Focus on Specific Knowledge:** Guidebooks are often designed to address a specific topic or issue in depth. This allows readers to gain knowledge that is more specialized and relevant to their needs, 8) **Ideal for Emergency Situations:** In emergency situations or circumstances when readers need information immediately, guidebooks become a very useful and effective source of knowledge, 9) **Reduces Overwhelm:** Guidebooks helps reduce the feeling of overwhelm that readers may experience if they have to face a thicker and more comprehensive book. They provide information that is easier to digest, 10) **Accessibility:** Guidebooks are often available in both physical and digital formats, making them easily accessible across platforms and devices, 11) **Save Time:** Because guidebooks focus more on essential information, readers

can save time by only read the parts that are relevant to them. Counseling using a healthy dental diary is one way to increase a person's knowledge about dental and oral health. The early childhood dental health monitoring book is one of the educational media in the form of visual media. Counseling conducted using visual media has proven to be effective in conveying the message to be given. Respondents became more knowledgeable about dental and oral health after being given a healthy dental diary. This is also supported by research which states that education using visual media (posters and models) can increase knowledge about dental and oral hygiene (8).

Influencing Factors: 1) Frequency of Reading Books: Frequency of reading books is a key factor in increasing knowledge. The more often someone reads, the more information they can absorb. Consistency in reading guidebooks or relevant materials can lead to better understanding, 2) Education Level: Individuals with a higher level of education tend to have better understanding abilities. Education provides a foundation of knowledge and critical skills that can help in understanding more complex information, 3) Previous Experience: Previous experience in a particular field can influence the way a person processes and understands new information. Previous positive or negative experiences can shape a person's views and knowledge, 4) Learning Motivation: Motivation to learn and increase knowledge also plays an important role. Individuals who have high internal motivation to understand certain topics are more likely to respond well to sources of knowledge such as guidebooks, 5) Learning Style: Every individual has a different learning style. Some people learn better through visuals, while others may prefer an auditory or kinesthetic approach. Recognizing a person's learning style can help in choosing appropriate guidebooks or learning methods. 6) Learning Environment: The environment around an individual can also have an influence. An environment that supports learning, such as a place that is quiet and free of distractions, can help in understanding the material better. 7) Social

Interaction: Discussion or interaction with other people about certain material can also influence understanding and increase knowledge. Talking about what has been learned can help clarify understanding and broaden horizons, 8) Active Engagement: Using active engagement approaches, such as formulating questions or summarizing material, can improve understanding and retention of information, 9) Guidebook Quality: The quality of the guidebook, including clarity, completeness of information, and visual presentation, also influence increasing knowledge. A good guidebook will be more effective in conveying information clearly. 10) Support from a Facilitator or Teacher: In a more structured learning context, support from a facilitator or teacher can also influence increased knowledge. Help in explaining difficult concepts and providing additional guidance can improve understanding. 11) Technology and Media: The use of technology and media such as video, animation, and interactives in guidebooks can also influence the way a person understands and responds to learning material.

This is in accordance with research results which state that changes in knowledge and behavior are caused by many factors, such as the habit of opening a diary and repeating the actions when opening the book, thus making the book a motivation to become better at maintaining children's oral and dental hygiene (7).

A mother's level of education plays a very important role in increasing knowledge and behavior in maintaining children's oral and dental hygiene (9). Early childhood dental health monitoring books contain a lot of information about dental and oral health that must be understood well. With good understanding, it will be easier for a mother to apply this information into behavior that is carried out every day. As in the monitoring book, there are actions that can be taken by a mother and child. Every act of brushing your teeth must be recorded properly in the book

## CONCLUSIONS

The initial field test of the early childhood dental health monitoring book has been carried out with respondents, namely 30 parents (mothers) at the Az-Zahra Islamic Kindergarten, Jambi City, the results of which are that the monitoring book can increase parents' knowledge.

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