

MEGI'S BOOK AS AN ATTEMPT TO INCREASE KNOWLEDGE AND REDUCE PLAQUE SCORE FOR CHILDREN WITH INTELLECTUAL DISABILITIES

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Info Article	Abstract
<p>Article History:</p> <p>Received: 29 Jul 2023 Revised: 25 Sep 2023 Accepted: 4 Oct 2023 Available Online: 19 Oct 2023</p>	<p>Background: Intellectual disabilities is a term used to refer to children who experience limitations in their intellectual functioning. Such limitations in the learning process can affect their dental and oral hygiene. A total of 22 children with intellectual disabilities at Cineam State Special Elementary School (SDLB), Tasikmalaya Regency, underwent OHI-S (Simplified oral hygiene index) assessment based on specific criteria. Objective: This study aims to identify the impact of the using of scheduled diary media containing pictures of brushing teeth (MEGI) on the level of knowledge and dental and oral hygiene in children with intellectual disabilities. The research method used is quasi-experimental research with a one group pre-post test design. 33 samples of children with intellectual disabilities were selected using the purposive sampling method. After that, an oral hygiene index (OHI-S) was checked and a questionnaire was distributed to measure their level of knowledge. The collected data was analyzed using the Wilcoxon test with the help of the SPSS application. Results: The results of statistical analysis ($p < 0.005$), showed a significant influence between counseling and the level of knowledge and dental and oral hygiene of respondents. Conclusion: The media of megi book's ith pictures of brushing teeth have a positive influence on increasing knowledge and dental and oral hygiene in children with intellectual disabilities.</p>
<p>Keywords: Intellectual Disabilities, Knowledge, Dental and Oral Hygiene.</p>	



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Introduction

Children with special needs are children who have special characteristics that distinguish them from children in general. Children with special needs have mental, emotional, physical, and intellectual deficiencies (Saptiwi, Cilmiaty, Susanti, & Handayani, 2019). Children with special needs are included in groups that have a high risk of health problems (Octiara, 2018), one aspect of concern especially in children with intellectual disabilities, is oral and dental health. In general, dental and oral hygiene in children with intellectual disabilities tend to be less than optimal (Constantika, Dewi, & Wardani, 2022).

According to the American Psychological Association (APA), intellectual impairment is a term that refers to children who have special intellectual function limitations, as well as adaptive function limitations that appear before the age of 22 years (Julia, Endah Yani, & Budirahardjo, 2018). Adaptive

behavior encompasses a variety of aspects including difficulties or limitations in mastering language skills, reading, writing, math, thinking skills, and knowledge-(Nahar, 2019).

Lack of knowledge about dental and oral hygiene is a factor causing children to ignore dental and oral health problems (Husna & Prasko, 2019). Specific limitations in the learning process that affect knowledge in children with intellectual disabilities are quick forgetfulness, being less able to follow directions, less able to focus attention (Faizin & Rofiatul Ummah, 2022). As a result of these limitations include, children with intellectual disabilities have difficulty in clean their teeth and mouth (Pratiwi, Hatta, & Adhani, 2019).

The way to increase the lack knowledge about dental health is through health promotion. Health promotion is a very important step in disease prevention efforts (Rachmawati, 2019). The success of dental health promotion among schoolchildren depends largely on the educational methods used and

the importance of proper use of media. Educational methods and media utilization can support the learning process and make it easier for students to understand learning materials related to dental health (Husna & Prasko, 2019). In health promotion, aids or props should be arranged, taking into account the principle that knowledge in every human being is absorbed or understood through the use of the five senses (Nurmalasari, Hidayati, & Prasetyowati, 2021).

Improving dental and oral hygiene in children with intellectual disabilities can be through health promotion using scheduled and illustrated diary media. The messages are conveyed in the form of interactive content, such as games, puzzles, quizzes, images to color, and other elements involving writing or images (Utami, Yodong, Prasko, & Ekoningtyas, 2021), picture books are considered more motivating for children to learn because they are picture books are presented with text and illustrations or pictures, easy to use, can clarify a problem, can help aid in supervision and observation, and more realistic (Hanisha & Djalari, 2018).

Sensing occurs through the human senses, namely the senses of sight, hearing, smell, taste, and touch. Part of human knowledge is acquired through the eyes and ears. Knowledge or cognitive domain is a very important domain in shaping a person's behavior (*over behavior*) (S2013 Notoatmodjo, 2013).

The results OHI-S examination results in children with intellectual disabilities showed 70% in the moderate category. Factors that cause this include parenting styles that lack independence related to dental and oral hygiene from an early age, as well as children's difficulties in the learning process that lead to quick forgetfulness (Rudi Triyanto, 2015).

The purpose of this study was to assess the effect of the use of scheduled and illustrated diary media focusing on brushing teeth (MEGI) on knowledge and oral hygiene in children with intellectual disabilities in Cineam State Special Elementary School (SDLB), Tasikmalaya Regency.

Method

This study used quasi-experiment research methods (*quasi-experiment*) with *desain a one group pre-post. test design* without a control group, where the experimental group is viewed *Pretest* before intervention and *posttest* after the intervention, the

results of the treatment can be known more accurately (S Notoatmodjo, 2010). The sample technique in this study uses *purposive sampling* 33 samples were obtained with the provision of inclusion criteria for children with moderate intellectual disabilities and mild intellectual disabilities. The sample in this study was students of SDLB Negeri Cineam, Tasikmalaya Regency. The measured using a questionnaire and collected on January 2022. Data analysis was performed using tests *Wilcoxon* with application statistic programs.

Result

Table 1. Distribution based on Gender children with intellectual disabilities at SDLB Negeri Cineam, Tasikmalaya

No	Gender	N	%
1	Man	21	64
2	Woman	12	36
Sum		33	100

The number of children with intellectual disabilities at SDLB Negeri Cineam, Tasikmalaya Regency is 33 people, most of whom are men, namely 21 people.

Table 2. Distribution based on Frequency of Classification of Children with intellectual disabilities at SDLB Negeri Cineam, Tasikmalaya

No	Classification	N	%
1	Mild intellectual disabilities	28	85
2	Medium intellectual disabilities	5	15
Sum		33	100

The total number of children with intellectual disabilities in SDLB Negeri Cineam, Tasikmalaya Regency is 33 people, most of whom are classified as 28 people.

Table 3. Distribution of Knowledge Frequency based on Before and After Criteria Scheduled and Picture Brushing Diary (MEGI) Media Counseling for Children with intellectual disabilities

Variabel	Group	Intervensi	Control
		Mean+SD	Mean+SD
Knowledge	Pretest	40.91+15.48	42.12+22.18
	posttest	70.30+16.48	39.39+18.19
	difference	29.39+1	2.73+3.99
	p-value	0.000	0.072

Table 3. Showing the results of unpaired data difference test of knowledge variables with the mean

value of the intervention group before treatment 40.91 and after treatment 70.30 and in the control group before treatment 42.12 and after treatment 39.39 means there is a change in knowledge between before and after treatment. The results of the unpaired data effectiveness test where in the intervention group the difference value is 29.39 while the control group is 2.73, meaning that counseling using MEGI book's media is more effective in increasing knowledge than counseling without media in the control group.

Table 4. OHI-S *Frequency Distribution* based on Before and After Criteria Scheduled and Picture Brushing Tooth Brushing (MEGI) Media Counseling for Children with intellectual disabilities

Variabel	Group	Intervensi	Control
		Mean+SD	Mean+SD
OHI-S	Pretest	2.85+0.81	3.95+0.70
	posttest	1.84+0.70	4.13+0.90
	difference	1.01+0.11	0.18+0.20
	p-value	0.000	0.195

Table 4. The results of the unpaired data difference test showed that the OHI-S variable with the mean value of the intervention group before treatment was 2.85 and after treatment was 1.84 and in the control group before treatment was 3.95 and after treatment was 4.13, meaning that there were changes in OHI-S between before and after treatment. The results of the unpaired data effectiveness test where in the intervention group the difference value is 1.01 while the control group is 0.18, meaning that the MEGI book's media is more effective in reducing OHI-S in the intervention group compared to the control group.

Discussion

The study was carried out for 21 days with 3 visits, namely on January 31, 7 and 14 February 2022 at SDLB Negeri Cineam, Tasikmalaya Regency with a sample of 33 individuals. The sample technique used is *purposive sampling*. The procedure that the researchers carried out in this study was to provide counseling using scheduled and illustrated diary media and conduct dental and oral hygiene checks using the *OHI-S index*.

The most respondents had mild intellectual disabilities, with 28 people (85%) and the rest had moderate intellectual disabilities, with 5 people (15%). According to Rochyadi (2012), classifying children with intellectual disabilities is important to make it easier for teachers to develop programs and

implement educational services. The classification of children with intellectual disabilities according to AAMD is mild intellectual disabilities, IQ is 70-55 and moderate intellectual disabilities IQ range 55-40.

The results of the analysis of dental and oral hygiene data in children with mild and moderate intellectual disabilities can be described that children who have intellectual disabilities have poor dental and oral hygiene. The implementation of interventions using media can be an alternative in dental health education and increase children's knowledge so that the level of dental and oral hygiene increases.

The achievement of the increase in the OHI-S index occurred because the role of parents in intellectual disabilities children's oral hygiene and teeth is very important to improve the degree of dental and oral hygiene of their children, according to Triyanto (2015), parenting styles of parents of children with intellectual disabilities that show success in instilling independence and in educating children from an early age in maintaining oral and dental health and providing media intervention can be understood by parents and conducting continuous dental and oral hygiene checks for 21 days in 3 visits, according to Prawestri & Hartati (2019), dental and oral health education and dental and oral health services greatly affect the cleanliness of the child's oral cavity. Conducting dental and oral health promotion programs in schools accompanied by education to parents can improve children's dental and oral hygiene and according to Niakurniawati (2022), said that picture book media can be useful for increasing knowledge and practice of brushing teeth because it provides information on how to brush your teeth properly and correctly accompanied by diseases caused by not brushing your teeth regularly.

The results of data analysis after the intervention showed that there was a significant increase in knowledge among in respondents ($p < 0.005$), meaning that the intervention using scheduled diary media and brushing pictures (MEGI) had an impact on respondents.

Increased knowledge in children with intellectual disabilities due to interventions carried out face-to-face or directly and this diary media can be read repeatedly since and children with intellectual disabilities since children with intellectual disabilities have intelligence that can still be developed. This according to Prihandini (2019), direct learning in this study is one of the teaching approaches specifically

designed to support the student learning process related to declarative knowledge and well-structured procedural knowledge, which can be taught with a pattern of activities that are gradual, step by step, structured, directing, the directing the students the focus of academic achievement and according Budi (2021), improving the ability of learning outcomes can be achieved through practice and repetition. Exercise is usually done by repeating something so that the expected ability furthermore Wardani & Sumardiko (2023), states that the success of health counseling is a joint learning activity that is not measured by how many teachings are conveyed but how far there is a dialogical shared learning process that is able to foster awareness, knowledge and new skills that are able to change the behavior of the target group towards better activities and lives in each individual, family and community.

Conclusion and Suggestions

The results of statistical tests showed a significant effect ($p < 0.005$) from the use of scheduled and illustrated diary media for brushing teeth (MEGI) on the knowledge and hygiene of teeth and mouth of respondents.

The suggestion from this study is that students can maintain dental and oral hygiene by brushing their teeth properly, for schools it is recommended that they can consider implementing dental and oral nursing care service programs on an ongoing basis in collaboration with nearby health facilities.

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