

Use of Flipchart in Improving Oral Health Knowledge and Debris Index in Mentally Disabled Children

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Abstract

Children with special needs are children who have physical, mental, social, and emotional limitations or abilities that require more specific attention, affection, both at home and at school. These specifications exist because they have various obstacles in their growth and have special characteristics that are different from children in general. The problem in this study is the poor value of Tunagrahita children's index debris in *Sekolah Luar Biasa or SLB* (School for Disabled Children) BC Optimal Surabaya. The purpose of this study is to understand the effect of using flipchart media on improving dental and mouth hygiene knowledge and debris index on mentally disabled children at SLB B-C Optimal Surabaya. The research method used was Quasi experiment with one group pre-test post-test design, the research target was SD Tunagrahita elementary school children at SLB BC Optimal Kenjeran Surabaya, the method of data collection was examination sheets and questionnaire sheets, Analysis Techniques used alternative test t- Dependent test or Paired Sample t-test using the Wilcoxon test. The results are, there are improvement on dental health knowledge and debris index after educating mentally disabled children using flipchart.

Keywords: Oral and Dental Health Knowledge; Debris Index; Flipchart; Mentally Disabled Children

Background

Children are of age vulnerable to caries and other dental diseases because they still need help from parents and families to guide them in maintaining oral hygiene. Dental and oral health problems are often ignored due to lack of dental and oral health knowledge. According to Gede in Prasko [1], lack of knowledge about oral and dental hygiene is one of the reasons children ignore oral and dental health problems. Children with special needs are children who need more specific attention, affection, both at home and at school. These specifications exist because they have various obstacles in their growth and have special characteristics that are different from children in general. Special education or training needs to be given to children with special needs to reduce the limitations and dependencies due to abnormalities suffered and foster life independence in society.

Children with mental abilities that are generally known as mentally disabled. Mentally disabled children are identified as having low intelligence (below normal) with IQs below 70. Children with intellectual disabilities have difficulties in academic, communication and

social tasks and their development requires special assistance or services, especially needs Education program and guidance. These barriers occur before the age of 18 years. Children with intellectual disabilities have a higher risk of dental and oral health problems, this is because they have the deficiencies and mental limitations to do their own optimal teeth cleaning. Nawang’s research [2] shows that mentally disabled children is more likely to have poor oral hygiene and periodontal disease which has a higher risk of caries compared to without intellectual disabilities.

Objective of the Study

The purpose of this study is to understand the effect of using flipchat media on improving dental and mouth hygiene knowledge and debris index on mentally disabled children at SLB B-C Optimal Surabaya.

Methods

This type of research is a Quasi experiment with one group pre-post-test design. This design does not use a control group. The subject of the research is mentally disabled children in SLB Optimal Kenjeran Surabaya. The study was conducted in December 2019 until April 2020. The researches taught usomg flipchart media about dental and oral hygiene for approximately 3 hours. Teachings and counseling was given in 2 meetings on the first day of the pretest and 3 days later. In the second meeting children was given a second counseling with the help of phantom media accompanied by a match-match method. 3 days after the second teaching researchers conducted post test and examination. The research instrument used for this study was the examination sheet. Data analysis technique used is an alternative test Dependent t-test or Paired Sample t-test using the Wilcoxon test.

Results

	n	Mean (minimum-maximum)	sig
Knowledge before education	15	54,8 (33 - 80)	0.001
Knowledge after education	15	78,6 (46 - 86)	

Table 1: Oral health knowledge.
Wilcoxon test.

Based on the results of table 1 it is known that differences in knowledge before and after counseling there is an increase in the difference in Mean (23.8) with a value of P value < 0.001, which means it is less than a significant value of 0.005 (0.001 < 0.005) so that there is a difference in knowledge before and after giving education.

	n	Mean (minimum-maximum)	Sig
Debris index before education	15	2,47 (2 - 3)	0.005
Debris index after education	15	1,73 (1 - 2)	

Table 2: Debris index.
Wilcoxon text.

Based on table 2 it is known that the index debris before counseling and after counseling there is a decrease in the difference in Mean (0.74) with a value of P value < 0.005, which means less than a significant value of 0.005 (0.005 < 0.005) so there is a difference in the decrease in index debris before and after counseling. Thus, it can be seen that “there is a difference in dental and mouth hygiene knowledge using flipchart media for the reduction of index debris in mentally disabled children at SLB B-C Optimal in Surabaya in 2020.

Discussion

Based on the results of data analysis it can be seen that the average value of students' knowledge about oral hygiene before counseling using flipchart media is in the "poor" category. Children with intellectual disabilities are groups of children who have limited ways of thinking that only reach the stage of thinking concretely and semi-concretely so that they need more media towards playing while learning, for example flipchart media, which are props for health promotion so that mental retardation children more easily focus attention, understand material given and not easily feel bored. Through this media, mentally retarded children not only learn by seeing and hearing, but children are also asked to practice, practice their skills by imitating how to use a toothbrush and toothpaste and how to gargle. Use of flipchart media is more effective and enjoyable so as to increase the attention and concentration of mentally disabled children to increase their knowledge, skills and independence in maintaining oral health.

The results of another study conducted by Diah Enggar (2012) showed that the counseling method with the make a match method and the lecture method both had an effect on increasing knowledge about dental and oral health, but counseling with the make a match method showed an increase in better knowledge scores. rather than lecture method. This study also has similar result with the Haqqi and Sondang, 2011 research, namely that counseling on oral health by playing method is better and more effective than lecture method. In the make-a-match method the child looks more active and happy because of the process of play and two-way communication so that the material is more memorable in the child's memory [3]. The lecture method is often ineffective because it places the child as a passive party so that children tend to get bored and lose attention even imagination of something.

This study is also in line with Rusli, 2012 that one of the effective methods is the play method, which is an activity with or without using something which is given pleasure, information and even imagination about something. This result is also in line with research from Ulfa., *et al.* [4] found that the flipchart media influence self-ability in the form of brushing teeth on mentally disabled students. The use of flipchart media for mentally retarded students will facilitate the delivery of the message to be conveyed. Flipchart is one of the simple and effective printed media, flipchart consists of sheets of paper containing messages which are explained with pictures that fit the topic in detail. This educational media involves the sense of sight and sense of hearing so that someone is easy to remember.

The Kantohe., *et al.* [5] study also found that dental health education using video and flipchart media was effective in increasing children's oral health knowledge. Knowledge is one of the factors that influence behavior, including predisposing factors, namely factors that provide rational ways of thinking or motivation to behave, factors that can facilitate and predict the change in behavior in a person or society [6]. As stated (Azhar, 2007) that flipchart media complement students' basic experiences, describe a process precisely and can be repeated, and instill attitudes and affective aspects. Student knowledge can influence changes in student behavior that will have an impact on dental and oral health status.

Based on the results of this study it was found that the debris index of mentally disabled children before education was categorized as poor, while after counseling using flipchart media there was an improvement in which the categorization was moderate. According to Blum theory, the status of oral hygiene could be influenced by genetics, environment, behavior and health services. Behavioral factors in children with disabilities who play an important role in influencing the status of dental and oral hygiene are inseparable from parental guidance at home, while behavior is influenced by education. Education is not only obtained formally at school but also at home. Parents serve as role models for children, as well as in maintaining oral health, patterns of parental habits will be imitated by children [7]. Anandya research, 2019 is in line with the results of this study, that each type of mental retardation has a poor plaque index and gingivitis in the oral cavity. The lower the level of intelligence of children, the lower the oral hygiene except in children with severe mental retardation. Counseling for mentally retarded children is effective in improving the oral hygiene of mild retarded children, which is characterized by a decrease in the value of mild retarded OHI-S after being given education on how to brush teeth [2,8-27].

Conclusion

Based on data analysis, it can be concluded that education about oral hygiene using flipchart media effectively increases knowledge in mentally disabled children and counseling about dental and oral hygiene using flipchart media effectively improves debris index from the bad category to the medium category.

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