Dental Hygiene Tell-Show-Do Model to Improve Teeth Brushing Skills for Mentally Impaired Children

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Abstract:- Background: Dental health of children with special needs, mental retardation is more in need than children in general. Children with special needs have various limitations that exist on them, such as not being able to clean their own cavities, so they need the help of parents and teachers to guide them. Children who are basically easily bored or bored, the situation to overcome this problem is the required media or a method in the form of a tell show do model in the form of learning videos, understanding the content of the material so that changes in brushing behavior are obtained. Objective: to present the tell show do model as a learning medium to improve the brushing skills of mentally retarded children. Methods: Research and Development (R&D) and the trial model used a quasi-experimental method (pre and post test with control group design). Sampling using the Lemeshow formula obtained 17 samples of children per group based on the inclusion criteria. The intervention group to measure the knowledge, attitudes, actions of parents and teachers, action index and debris was then given education using the tell show do model for 10 days. The control group to measure the knowledge, attitudes, actions of teachers and parents, action index and children's debris was then given education using flipchart media and dental phantoms. Result: Tell show do is feasible as a medium for learning about brushing teeth (p=0.000). This implementation model is effective in increasing the knowledge of teachers and parents (p = 0.021), attitudes of teachers and parents (p = 0.019), and teeth brushing skills of teachers and parents (p = 0.025). The ability to brush the teeth of mentally retarded children (p = 0.000) and reduce the debris index of mentally retarded children (p = 0.040) compared to the control group. Conclusion: Tell Show Do is effective as a learning medium to improve brushing skills in mentally retarded children.

Keywords:- Tell Show Do; Mentally Retarded Child; Tooth Brushing Skills.

I. INTRODUCTION

Dental health of children with special needs, more mentally retarded need compared to children in general. This is a problem that needs attention, especially those related to dental caries and gingivitis. National data according to the 2018 Basic Health Research in the 10-14 year age group, namely 57.6% of people in Indonesia have dental and oral health problems. [1]

The prevalence of the number of mentally retarded children obtained from the results of studies in various countries in 1980-2009 was 10.37 per 1000 population, with the highest cases occurring in low-middle income countries which were dominated by the age of children to adolescents. According to the Social Welfare Education and Research Agency (Badiklit Kesos), population data for people with severe disabilities in 2012 totaled 3,342,303 people with a mental retardation percentage of 13.68% (290,837 people). [2]

Characteristics of mentally retarded children are experiencing decreased intellectual function, difficulty communicating, adaptive behavior, having a higher level of fear and anxiety than normal children in general, and requiring longer adaptation time to new situations. [3] Based on general characteristics, it can be concluded that mentally retarded children unable to carry out independent activities for health maintenance, especially efforts to maintain oral health.

Efforts to prevent dental and oral health problems in mentally retarded children require behavioral changes by using strategies: force (enforcement), the power of regulation or law (regulation), and education (education). The right behavior change strategy for mentally retarded children is to provide dental health education by providing persuasive health information. [4]

Tell-show-do model as a management procedure or behavior management to treat children's teeth. Providing learning about children's dental and oral health, cooperative attitude of children in maintenance, dental and oral health care, and involving parents/teachers. The implementation phase of this model has a sequence of teacher training implementation, learning model simulation, tooth brushing practice, and evaluation. [5]

II. METHOD

The method used in this research is Research and Development (R&D) which is used to produce a tell show do model of dental health to improve the teeth brushing skills of mentally retarded children. The research and development procedure includes 5 steps, namely: 1) information gathering, 2) model design, 3) expert validation and revision, 4) model testing, and 5) model results.

The design of this study was a quasi-experimental research design with pre and posttest with control group design and the selection of respondents was not done randomly. Respondents consisted of 34 students, the sample

was divided into two groups, namely 17 students for the intervention and control groups. The students in this study were taken from SLB B/C Swadaya and SLB YPAC Semarang.

Instruments for measuring knowledge, attitudes using questionnaires, measuring skills using checklist sheets and debris index scores using observation sheets. The research data uses an interval scale, statistical test of the interclass correlation coefficient to test the feasibility of the model, while the normality test uses the Shapiro Wilk test because the number of respondents is less than 50. Test the effectiveness on normal data using the Paired Sample Test and Independent Sample Test.

III. RESULT

A. Information Collection

The collection of information was carried out through the interview method which concluded that mentally retarded children were mentally retarded and intellectually disabled children. Characteristics of mentally retarded children: intelligence below the average of normal children, limited behavioral development, what they see is what they do, mentally and socially retarded, difficulty remembering various forms of objects and sounds, causing difficulty speaking and communicating. Efforts are used to improve dental health with media in the form of videos and direct tools that practice directly such as phantom.

B. Model design

The Tell Show Do model of dental health as a learning tool or media in health promotion that can make it easier for children to get information to change their brushing behavior in an easy and interesting way.

C. Expert Validation

Table 1 shows the results of expert validation that the p-value = 0.023, which means that the Tell Show Do model is feasible as a model to improve teeth brushing skills in mentally retarded children.

Expert validation			
	n	f(%)	*p-value*
Relevant	8	80	0,023
irrelevant	2	20	

* Intraclass correlation coefficient

Table 1. Expert validation

D. Model Test

Variable	Intervention		Control		Homoginitas
Mentally Retarded Child (n=17)					
Gender	N	%	N	%	
Male	8	47,1	9	52,9	0,741
female	9	52,9	8	47,1	
Age					
7-10	2	11,8	11	64,7	0,001
11-14	15	88,2	6	35,3	

Table 2. respondent characteristic data

Table 2. Shows that based on the gender of the child, it is proven that the p-value is 0.741 (p > 0.05), the child's age is 0.001 (p > 0.05).

Variable	P-Value	
	Intervention	Control
Pre-test skill	0,012	0,013
Post-test skill	0,000	0,000
Pre-test debri index	0,190	0,057
Post-test debri index	0,127	0,367

*Shapiro-Wilk

Table 3. Normality Data

Table 3. The results show the normality test that the p value> 0.05 indicates that the data is normally distributed, then the parametric test is continued.

Variable	Pre-post	n	Mean	Sd	P-value
Skill					
Intervention	Pre	17	5.53	1.179	0,000
	Post	17	9.29	1.572	
Control	Pre	17	5.00	0.866	0,005
	Post	17	7.76	2.587	
Debris index					
Intervention	Pre	17	1.335	2.548	0,044
	Post	17	0.924	2.016	
Control	Pre	17	1.265	2.499	0,000
	Post	17	1.094	2.585	

* mann whitney test

Table 4. Paired Data Effectiveness Test

Table 4. showed that the results of the effectiveness test of the child's tooth brushing action data had a p-value of the intervention group, which was 0.000 (p < 0.05) meaning that the tell show do model of dental health was effective in improving the child's tooth brushing habit. The p-value of the control group was 0.005 (p <0.05), meaning that flipchart and dental phantom media also increased the child's tooth brushing action.

Variable	n	Mean	SD	p-value
Skill				
Intervention	17	6.97	2.516	0,000
Control	17	1.50	0.508	
Debris index				
Intervention	17	0.924	2.016	0,040
Control	17	1.094	2.585	

* mann whitney test

Table 5. non-Paired Data Effectiveness Test

Table 5. The results of the effectiveness test of unpaired data showed that the act of brushing children's teeth had a p-value of 0.000 (p <0.05), meaning that the tell show do model of dental health was more effective in improving the act of brushing children's teeth compared to flipchart media and dental phantoms.

The effectiveness test of unpaired data showed that the debris index p-value was 0.040 (p < 0.05), meaning that the tell show do model of dental health was more effective in reducing index debris compared to flipchart and dental phantom media.

E. Model Result

The results of the model are in the form of a module which is a guideline for dental therapists as a recommendation to improve dental health as a recommendation to improve how to brush teeth using the tell show do model.

FIG. 1: Cover Model Image

IV. DISCUSSION

Based on the research conducted, it can be concluded that mentally retarded children are children with special needs who experience mental and intellectual retardation. Characteristics of mentally retarded children, intelligence below the average of normal children, limited behavioral development, what they see is what they do, difficulty remembering various forms of objects and sounds, causing difficulty speaking and communicating. According to Sukadari (2020), mentally retarded children need special services tailored to their needs. [6]

Based on the results of expert validation with a feasible category with a p-value of 0.023. These results indicate that the tell show do model of dental health is relevant and feasible as a learning model in an effort to improve behavior (knowledge, attitudes, actions) and decrease the debris index score in children with mental retardation operationally in dental health learning. [8]

Based on the characteristics of mentally retarded children, they cannot carry out independent activities, practice brushing their teeth and need help from other people, both parents / teachers. Teachers are considered the closest people to children at school and are someone who is an expert in providing educational interventions for mentally retarded children so that they can improve their skills. child.7

Dental and oral health education interventions can be given by teachers and parents to mentally retarded children,

but in the process teachers and parents need to be given training first because of the knowledge, attitudes and skills of maintaining oral hygiene. Then the knowledge, attitudes and actions of the teacher are given to mentally retarded children. According to Muhammad's research (2019), the provision of dental health education to mentally retarded children is not much different from normal children, but requires the role of parents/teachers in the implementation process. [9]

The tell show do model of dental health is feasible as a learning medium to improve the teeth brushing skills of mentally retarded children. This is proven by the p-value of 0.023. The tell show do model of dental health is appropriate as a learning guide in carrying out education and education about brushing teeth in mentally retarded children. This has been proven to have been tested by experts with the classification of psychologists, media experts, and special education experts (PLB) with a p-value of 0.000. p-value = 0.003.

The results of the effectiveness test of the paired variable data of knowledge, attitude, and tooth brushing skills showed that the p-value was <0.05, meaning that the tell show do model of dental health was effective in increasing the knowledge, attitudes, and teeth brushing skills of teachers and parents.

Dental health maintenance training is an activity that is planned through a teaching and learning process that aims to provide knowledge, instill attitudes and practice skills so that a person can independently carry out dental and oral hygiene maintenance actions. [10]

The increase in knowledge was due to the fact that during the training parents were given an understanding of the material for maintaining oral hygiene. Knowledge is a learning result that is obtained by a person after that person is exposed to a certain object, [11] as evidenced by Tedi's research (2019), training can increase teachers' knowledge about dental health. [12]

An increase in attitude occurs if there is a person's response after being given information and then considering taking action in accordance with the information provided. Attitudes can be formed when someone obtains information, responds and will take action after being given the information

The increase in the practice of brushing teeth occurs because during training parents are given instructions on how to brush their teeth properly and correctly through simulations and demonstrations of the tell show do model of dental health. [13] proves that training in maintaining oral and dental health can improve the practice of brushing teeth for teachers and parents. [14]Teachers and parents who have been given training are role models for mentally retarded children because they will then accompany and provide guidance on the implementation of the tell show do model at home as an effort to improve the teeth brushing skills of mentally retarded children.

Dental health education learning interventions for mentally retarded children require certain strategies tailored to their level of understanding. The mentally retarded child himself is identified as having a very low level of intelligence (below normal) so that to learn his developmental tasks he needs special assistance or services, especially in terms of the need for education and guidance programs. [15]

The results of the effectiveness test of the unpaired variable data showed that the p-value between the intervention and control groups was 0.000 (p <0.05), meaning that the tell show do model was more effective in improving the teeth brushing skills of mentally retarded children compared to flipcharts. This is because the advantages of the tell show do model provide a lot of stimulus in the learning process and children are directly involved in brushing their teeth properly and correctly.

V. CONCLUSION

From the results of the study, it can be concluded that the dental health tell show do model training has proven to be effective in improving the behavior of maintaining oral hygiene (knowledge, attitudes, skills) of teachers and parents, proven effective in improving the teeth brushing skills of mentally retarded children and reducing debris scores in children. mentally disabled.

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