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Interactive Video Improve the Brushing Skills of Mild Mentally Disabled Students

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Abstract. Mentally disabled people have self-development skills that are useful to improve children's independence and can reduce dependence on others. The purpose of this study was to determine the effect of interactive video media on the brushing skills of mild mental retardation students. Research methods using QUASI experiment non-randomized with the approach of one group pretest and posttest design. The results showed that the use of interactive videos improved the brushing skills of mild mentally retarded students. Students with mild intellectual disabilities are encouraged to watch interactive videos of tooth brushing skills so that they can improve children's independence.


1. Introduction

Children with special needs include children are those who experience obstacles in intelligence / innate abilities. The mentally retarded child will experience weakness in many ways such as low academic ability, personal ability, vocational ability, and experiencing motor impairment because abilities are intelligence one's assessed from all aspects. Limitation intelligence, this makes the knowledge of mentally retarded children is below average including knowledge about oral hygiene and teeth.

The results of a study in India on the prevalence of dental caries and oral hygiene status among Blind School Children and Normal children of dental and oral hygiene showed that the prevalence in people with mental retardation was (40%) included in the bad category [1]. While in Indonesia as many as (50%) people with mental retardation have an average level of dental and oral hygiene of 2.3, including the medium category [2].

One way to overcome dental and oral hygiene problems in mentally retarded children is through dental and oral health education. The media plays an important role in the learning process of mild mentally retarded children due to their lack of ability in abstract thinking so that concrete things are needed in improving the quality of learning [3]. With the existence of media in the form of interactive videos about brushing teeth, it is expected that mentally retarded children are skilled in brushing their teeth so that dental and oral hygiene is more awake.

The purpose of this study was to determine the effect of the use of interactive video media in the brushing skills of mild mentally retarded children in the Tasikmalaya City State SLB, Indonesia.

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2. Research Method

The research uses quantitative research design. The design used is a research *quasi-experimental design* with a *Non-Randomized One Group Pretest and Posttest Design approach*. This study aims to determine the effect of interactive video use on the brushing skills of children with mild mental retardation in Tasikmalaya City State School. Sampling was done by *purposive sampling* as many as 28 people with inclusion criteria, namely: mentally retarded students with IQ 55-69 who were able to be trained to brush their teeth, were willing and allowed by parents to participate in the study, still in elementary school. Respondents were pre-tested and observed how to brush their teeth, then given an intervention in the form of watching interactive videos for 1 x every week for 6 consecutive weeks. After that, post-test and observation on brushing teeth were carried out. Interactive videos on how to brush the front teeth can be seen in Figure 1.



Figure 1. Steps for brushing the front teeth

Duration of watching videos is for 6 minutes. An interactive video about how to brush your teeth properly and correctly begins with preparing toothbrushes and toothpaste and how to brush your teeth. Steps for brushing the inner teeth can be seen in Figure 2.



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Figure 2. Steps for brushing teeth inside

3. Result and Discussion

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Table 1. Distribution of Frequency of Respondents by Gender

No	Gender	Number	Percentage of
1	Male	12	42,8%
2	Female	16	57,2%
	Amount	28	100 %

Table 2. Distribution of Frequency of Respondents by Age

No	Age	Number	Percentage of
1	7	6	21,4
2	8	6	21,4
3	9	7	25
4	10	5	17,9
5	11	2	7,1
6	12	2	7,1
	Amount	28	100%

Table 3. Average distribution tooth brushing skills according to the first and second measurements in the 2016 State SLB

Variable	Mean	SD	SE	P value	N
Tooth brushing skills before intervention	56.68	10,471	1,979	0,000	28
Tooth brushing skills after intervention	63.86	7,487	1,415		

Average teeth brushing skills on the first measurement / before it was 56.68 with a standard deviation of 10,471. On the second measurement / after getting an average of 63.86 with a standard deviation of 7.487. Statistical test results obtained a value of 0,000 it can be concluded that there are significant differences between brushing skills before and after the video presentation.

Disability has its own characteristics and unique and complex problems. This affects a specific empowerment approach strategy. In the world of education, mentally retarded children need learning methods that are different from normal children [4]. Children with special needs need educational tools based on information and communication technology (ICT). ICTs are very effective in achieving learning goals if they are used according to the needs of these children [5]. This is due to the limitations of intelligence possessed by mentally retarded children. This limitation affects mentally retarded children so that they have difficulty in brushing their teeth [6]. If the child is unable to brush his teeth, dental caries will be easily formed. Caries that have been formed can be eliminated by encouraging children to brush their teeth diligently [7].

Difficulties experienced by mentally retarded children in brushing their teeth make them dependent on others for their self-care. Therefore, mentally retarded children must be trained to be able to brush their teeth independently so that dependence on parents/facilitators becomes reduced [8]. One way is to teach them to brush their teeth through interactive video media.

Through the video screening of tooth brushing, children or students are mentally retarded able to know the steps to brush their teeth and improve the ability to remember, hear, and application significantly because videos are easy to understand [9]. Through repeated and continuous video viewing methods, children or mentally retarded students can improve their self-development skills in lightly retracting children with disabilities and be able to improve cognitive impairment of children with mild disabilities. Nurses and dental nurses can encourage families to apply the method to the mentally retarded children's home [10].

Independence of children with special needs can be improved by increasing the factors of social assistance, family care, and environmental acceptance. If a student is mentally retarded given stimulation in the form of social assistance in the form of proper tooth brushing at school, then by the

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family is given good family care and environmental acceptance of him is increased, the level of independence of the child will be achieved well [11]. Children mentally disabled, for some people are considered to have less IQ, if given information about how to brush their teeth continuously, the OHIS level and tooth brushing skills will be better.

4. Conclusion

Students with mild intellectual disabilities are encouraged to watch interactive videos of tooth brushing skills so that they can improve children's independence.

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