

Flashcard-Media Drill Intervention as an Educational Media on Handwashing Behavior with Soap in Preventing Covid-19 Transmission in Children with Mental Retardation in West Aceh District, Indonesia

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Abstract: Children with mental retardation have a high vulnerability to exposure to diseases such as Covid-19. Special interventions are needed to increase the knowledge of mentally retarded children so that they can practice handwashing skills with soap to minimize the transmission of Covid-19 and other diseases. One method that can be applied in the intervention of handwashing with soap is the drill method with flashcard media. This study aims to examine the effect of the flashcard-based drill method intervention on increasing the ability of mentally retarded children to wash their hands with soap. This study uses a Quasi-Experimental design. The planned design is a one-group before and after intervention design. Based on the results of the bivariate test, it is known that there is a significant effect of flashcard-based drill method education on improving handwashing skills with soap in mentally retarded children, Samatiga District, West Aceh Regency. Research clearly shows that the flashcard-mediated drill method intervention has an effect on increasing the knowledge of mentally retarded children so that they are able to practice handwashing behavior with soap so as to minimize the risk of contracting Covid-19 and other bacteria.

Keywords: Mental Retardation, Healthy Lifestyle, Covid-19

Introduction

The extraordinary event of Covid-19 caused great panic in the world community (1,2). Even researchers say that the Covid-19 pandemic that has hit the world since the end of 2019 is a global health disaster for mankind (2,3). The number of victims infected with Covid-19 is increasing day by day. Even now, several countries are still showing an increase in the number of Covid-19 infections along with the mutation of the coronavirus (4,5). As a global action, various policies issued by the governments of many countries such as the People's Republic of China, the United States, Germany, Britain, Spain, Singapore, and Malaysia imposed a total lockdown for their countries. (6,7). Population mobility is limited in line with contact tracing measures, handling infected people through treatment and quarantine in hospitals, limiting large gatherings, and so on. These measures were taken to reduce the number of Covid-19 transmissions, which until 19 September 2021 reached 229 million cases and 4.7 million deaths globally. (8).

Indonesia is one of the countries with the highest rate of Covid-19 cases in the world (9). In contrast to many countries, the Indonesian government has adopted a policy of limited

restrictions on citizens' activities (10,11). Only essential sectors are allowed to operate in compliance with strict health protocols. The Indonesian government also follows the policies of the World Health Organization (WHO) to implement clean and healthy living behaviors (12,13). These behaviors include frequent hand washing, maintaining physical distance, avoiding touching your eyes and mouth, maintaining personal hygiene, wearing masks, and reporting yourself to health workers when you feel a fever associated with symptoms of Covid-19 infection.(12–14). In general, the policies implemented by the Indonesian government have succeeded in reducing the number of Covid-19 infections, but on the other hand, the implementation of clean and healthy living behavior has not been carried out optimally because of community behavior. (13,14) and the effects of disinformation (15–17).

Although anyone can be infected with COVID-19, vulnerable populations have a higher level of risk of contracting it. One of the most vulnerable types of population are people with disabilities (11) like mentally retarded children. According to Tiara (2018) Mental retardation also refers to other terms such as mental retardation, mental deficiency, mental defective, and others. Mentally retarded children are children who experience obstacles in mental and intellectual development so that it has an impact on cognitive development and adaptive behavior in life. (18,19). according to Suchyadi *et al.* (20) mentally retarded children usually have an IQ of around 51-36 on the Binet Scale and 54-40 on the Weschler Scale. Meanwhile, according to Endriyani & Yunike (21) mentally retarded children have limited mental function, the ability to communicate, the ability to defend themselves and the child's independence during the developmental period. The general characteristics of mentally retarded children are limited conceptual skills, unable to get along and play with peers, difficulty caring for or helping themselves, communicating, and adapting to the environment, difficult to focus, easy to forget, avoid thinking actions; rarely have a sense of pride, responsibility, appreciation, in the heavy group can barely avoid danger and defend themselves (21,22).

The physical and mental limitations possessed by mentally retarded children often make them experience various discriminations (20). Good social rejection by the family due to pressure on the psychological unpreparedness of parents so that the social environment does not accept them. Whereas according to The United Nations Convention on the Rights (UNCRPD) people with disabilities, including mentally retarded children, have the right to live, develop, and receive protection against threats to personal security. (23,24). Mentally retarded children need family support, especially from parents and the social environment such as an educational environment to optimize their stages of development (21,25–27).

Although intellectually mentally retarded children have difficulty processing information into useful knowledge for them, several studies have shown that by applying special methods, mentally retarded children can remember and repeat the information given to them in the correct stages. Riset Nursalam *et al.* (28) found that the bibliographic method encourages mentally retarded children to learn and imagine so that they can improve their self-concept, self-confidence, and self-ability. Riset Ulandara & Marlina (29) found that the shaping-token

economy method combined with visual game techniques succeeded in generating learning motivation for mentally retarded children. Sedangkan Warman (30) using the number puzzle method to increase the learning interest of mentally retarded children.

Previous studies have stated that learning interventions for mentally retarded children using methods that are fun and attract their attention can increase their motivation and enthusiasm for learning. On the other hand, the use of visual media is also beneficial for mentally retarded children so that they can remember the information provided. The urgency of this research is to examine the effect of learning media intervention with the drill method for mentally retarded children so as to increase their knowledge about the behavior of washing hands with soap in children. Sekolah Luar Biasa (SLB) Rahmatillah, Cot Seumereung, Kecamatan Samatiga, Kabupaten Aceh Barat. Based on initial observations, the researchers found that about 67.5 percent and thirty-seven students had mental retardation with the distribution of mild, moderate, and severe mental retardation. There are about ten children with mild mental retardation, eight people with moderate mental retardation, and seven people with severe mental retardation.. Conditions in the field indicate that the knowledge of mentally retarded students on hand washing activities with soap is very low. This actually increases their risk of being exposed to Covid-19 and other diseases. Therefore, this research is very important to do as an effort to help mentally retarded students to understand clean living behavior through hand washing.

In an effort to apply handwashing with soap to mentally retarded children, of course, they must go through different learning methods compared to normal children because children with special needs such as people with mental retardation have a below average understanding. Therefore, the method used must be in accordance with what they need so that it is easy to understand and do. One method that is very effective is using the drill learning method with flashcard media (Astaty 2019). The drill method is a way to get dexterity, skills, practice on what is learned, because carrying out the exercises, practically this knowledge can be perfected and prepared (31). The drill method is a good way of teaching to instill certain habits. The advantage of the drill method is that it can improve mental skills, such as in multiplication, addition, subtraction, division, signs/symbols and so on (32).

While the flashcard media according to Arsyad (33) is a small card that contains a picture, text, or sign symbol that reminds and guides students to something related to the picture. Flashcards are usually 8x12 cm in size or can be adjusted according to the size of the class at hand. Flashcards contain pictures of objects, animals, and so on that can be used to train students to spell and enrich vocabulary. The cards are drawn or written or marked to provide instructions or stimulation for students to think or do something. According to Rudi Susilana and Cepi Riyana as quoted (34) flashcard media has several advantages, namely, easy to carry because of its small size, practical both in making and using it, easy to remember because it contains short and focused messages, and fun because it can be used as a source of information.

The purpose of this study was to determine the effect of the FlashCard-mediated Drill method in improving the skills of mentally retarded children to wash their hands with soap (CTPS) as an

effort to prevent Covid-19 and it is hoped that mentally retarded children in Samatiga District can apply handwashing with soap in their daily activities without assistance. others. In this study using the Drill Method with flashcard media, namely teaching where children carry out activities in the form of CTPS exercises so that children have dexterity or skills that are better than what is learned, activities in the form of repetition of the same thing many times, and media used flashcard game media where there is a card in the sequence of the correct hand washing steps. The stages of the implementation method in this research activity consisted of a preliminary survey to the Rahmatillah Samatiga Special School, pre-test activities, flashcard-mediated drill method interventions, hand washing practice activities with soap, and post-test to measure the effectiveness of the intervention.

Methods

This study uses a Quasi-Experimental design. This study aims to evaluate the effectiveness of health program interventions in mentally retarded children. The planned design is one group, before and after intervention design, or one group pre and post test design. The study population was all mentally retarded children in Samatiga District. The research sample was determined using a consecutive sampling technique. The sample in this study amounted to 15 children with mental retardation (mild and moderate) in Samatiga District, West Aceh Regency.

Results

2. Characteristics of Respondents

Characteristics of respondents include gender, age and class, each respondent's characteristics are made in a table with the stages of making the table as follows:

Table 1. Distribution of Characteristics of Mentally Impaired Children

Characteristic	F	%
Sex		
Male	5	33.3
Female	10	66.6
Age (years)		
>10 years	11	73.3
< 10 years	4	26.6

The number of respondents in this study were 15 people. The gender of the respondents was mostly female as many as 10 people (66.6%). The highest respondent's age was >10 years with 11 people (73.3%), and the lowest age was <10 years with 4 people (26.6%).

2. Univariate Analysis

Table 2. Frequency distribution based on skills About CTPS Before and after the intervention

Skills CTPS	Before Intervention		After Intervention	
	F	%	F	%
Not Good	15	100	3	20
Good	-	-	12	80
Total	15	100	15	100

Source: Research Result, 2021.

Based on the table above, it can be seen that from a total of 15 respondents, all respondents had poor hand washing skills with soap before being given the flashcard-mediated drill method intervention and there were 12 respondents (80%) who had good hand washing skills with soap after the post-test. given the intervention of drill method with flashcard media.

3. Bivariate Analysis

Wilcoxon Test Results

Table 3. The Effect of Interventions on CTPS Skills in Children with Mental Requirements

Variable	N	Mean	P-value
Before intervention	15	0	
After Intervention	15	6,50	0.001

Source: Research Result, 2021.

Based on Table 3, it can be seen that the average value obtained by respondents regarding the skill of washing hands with soap before being given the intervention of the flashcard-mediated drill method is 0 indicating that the skills of mentally retarded children when washing hands with soap are not good, and after being given the flashcard-mediated drill method intervention, the average score of respondents regarding the skill of washing hands with soap increased to 6.5f which indicates that the skills of mentally retarded children when washing hands with soap according to WHO standards are very good compared to before the flashcard-media drill method intervention was given.

Based on the results of the wilaxocon test, the P value = 0.002 and this is smaller than = 0.05 (P-value = 0.005 < 0.05) so it can be described that there is a significant effect of flashcard-mediated education on the drill method on improving handwashing skills with soap in mentally retarded children in Samatiga District, West Aceh Regency.

Discussion

1. The Effect of Flashcard Media Drill Method Education in improving the skills of mentally retarded children to carry out CTPS in Samatiga District, West Aceh Regency

The results showed that at the final measurement all respondents experienced an increase in handwashing skills with soap compared to the initial measurement (pre-test). The difference in hand washing skills with soap at the beginning of the measurement with the final measurement (post-test) shows that there is an effect of the implementation of the flashcard-based drill method on the skills of washing hands with soap in mentally retarded children.

Based on observations made by all respondents, they have practiced hand washing with soap well. There are several factors that can influence a person in practicing hand washing with soap, one of which is the learning media factor that supports and is easily understood by children with mental retardation. With the existence of special learning media such as flashcard media, it will be very helpful to be implemented in mentally retarded children because it is easy to understand and easy to understand.

Based on the results of the wilaxocon test, the P value = 0.001 and this is smaller than = 0.05 (P-value = 0.003 < 0.05) so it can be explained that there is a significant effect of education on handwashing with soap using flashcard media on the skills of washing hands with soap in mentally retarded children. in Samatiga Sub-district, West Aceh District. The results of this study are reinforced by the results of previous studies which suggest that counseling using the drill method using Flashcard media has an influence on changes in hand washing skills with soap as research conducted by Susiani (35), who concluded that there was a significant effect between counseling with the drill method on changes in the provision of flashcard-based drill methods on improving hand washing skills with soap in mentally retarded children. Likewise, Andayani's research (36) concluded that the drill method with flashcard media was very effective as a learning medium to see the dexterity and ability of hand washing skills with soap in mentally retarded students. In general, the results of Erlinda's research (37) state that the drill method can improve the learning outcomes and activities of mentally retarded students because it can help them understand the material being studied.

Conclusions

Based on the research findings and discussions that have been described previously, this research concludes that there is an influence between before and after the intervention of washing hands with soap using the flashcard-based drill method on improving the skills of mentally retarded children with the average value after the intervention of the flashcard-based drill method being higher. than the average value before the intervention of the flashcard-based drill method.

This study recommends in particular to the school to apply the drill learning method with flashcard media, especially to improve the skills of washing hands with soap for children with special needs, especially for mentally retarded children. Parents need to pay more attention to

the personal hygiene of mentally retarded children and apply the habit of washing hands with soap in order to avoid infectious diseases such as Covid-19, diarrhea, and acute respiratory infections.

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