

Original Research Article

EFFECT OF HEALTH EDUCATION WITH AUDIO-VISUAL MEDIA AS COVID-19 PREVENTION ON HANDWASHING BEHAVIOUR IN SCHOOL AGE CHILDRENMarline Merke Mamesah^{1)*}, Hermanto Wijaya¹⁾¹⁾ Administration of Hospital Program, STIKES Adi Husada Surabaya, Indonesia

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ABSTRACT

Introduction. Coronavirus Disease 2019 is caused by SARS-Cov-2 which can be transmitted through physical contact such as touching and shaking hands with sufferers. School-age children are at high risk of hand-to-mouth transfer when they come into contact with feces while playing on the school grounds. School is a strategic place and plays a role in optimizing the growth and development of school-age children with promotive and preventive efforts in health. Health education with audio visual will make them imagine and want to try something new, so that through this media it will improve their intellectual and cognitive abilities. This research aim was to analysis effect of health education with audio-visual media as Covid-19 prevention on handwashing behaviour in school age children. **Method.** This research was Pra-Experiment with one group pretest-posttest design. The number of respondents is 28 students of class V and VI SD Negeri Kapasan 5 Surabaya. Collecting data using observation checklists and questionnaire sheets. Data analysis used the Wilcoxon test with a significance level of 0.05. **Results & Analysis.** This study showed there was an effect of health education with audio-visual media on the ability ($p=0.000<0.05$), knowledge ($p=0.001<0.05$), and handwashing attitude ($p=0.001<0.05$) in school-age children as Covid-19 prevention. **Discussions.** School-age children are in an active and imaginative phase. Audio visual media make them more interested in learning, because through the media sound and images are presented to support the learning process. Children also experience good and optimal cognitive, motor and intellectual development.

Keywords: Audiovisual Media, Covid-19, Health Education, School Age Children, Hand Washing

INTRODUCTION

Coronavirus Disease 2019 ((Covid-19)) is caused by SARS-Cov-2 (Severe Acute Respiratory Syndrome Coronavirus 2) which represents the causative agent of a potentially fatal disease that is spreading worldwide and is of great global public health concern. (Kementerian Kesehatan Republik Indonesia, 2020). The corona

virus that causes Covid-19 can be transmitted through droplets (splashes) when talking, coughing, and sneezing from people infected with the corona virus and experiencing symptoms (mild or severe) or people who are infected but do not show symptoms or before the onset of symptoms (Rothe *et al.*, 2020). This disease can also be transmitted through physical contact such as touching and

shaking hands with sufferers, and touching the face, mouth and nose areas with hands that are exposed to the corona virus. The body part that is the most common medium for the spread of the virus is the hands (Velavan & Meyer, 2020).

Severe symptoms of COVID-19 are associated with an increase in the number and rate of deaths especially in the epidemic region of China. By January 22, 2020, China's National Health Commission reported details of the first 17 deaths and on January 25, 2020, the number of deaths increased to 56 deaths (W. Wang, Tang, & Wei, 2020). Since its initial appearance at the end of 2019 until May 20, 2020, this disease has infected 4,789,205 people and caused the death of 318,789 people worldwide. As of June 10, the Government of Indonesia announced 34,316 confirmed cases (1 241 new cases – highest daily count) of COVID-19, 1,959 deaths and 12,129 recovered cases from 424 districts in 34 provinces (*World Health Organization* (WHO), 2020).

The results of a preliminary study of 10 school students in grades V and VI who were students of SD Negeri Kapasan 5 Surabaya showed that 6 children did not know the correct way to prevent COVID-19, they only knew how to wash their hands but did not know how to wash their hands properly and correctly. The students

said they only wash their hands before and after eating, they also have not been able to practice the steps for washing hands with soap and clean running water properly, so the students are still not used to washing their hands independently. Based on the results of the interview above, it can be seen that the potential for the spread of Covid-19 in the school environment is very high.

The most common symptoms at the onset of COVID-19 illness are fever, cough, and fatigue, while other symptoms include sputum production, headache, hemoptysis, diarrhea, dyspnoea, and lymphopenia (Ren et al., 2020; W. Wang et al., 2020). Patients infected with Covid-19 showed higher leukocyte counts, abnormal respiratory findings, and elevated plasma pro-inflammatory cytokine levels, patients had fever for 5 days accompanied by cough, coarse breath sounds of both lungs, and body temperature of 39.0° C, the patient's sputum shows positive real-time polymerase chain reaction results confirming Covid-19 infection (Rothana & Byrareddy, 2020).

In Indonesia and in the world, the number of infections with this virus is increasing day by day, with positive cases, efforts are needed to break the chain of spread of COVID-19 through isolation, early detection and basic protection,

namely by protecting yourself and others. (Keputusan Menteri Kesehatan Republik Indonesia, 2020). There are two ways that are the key to controlling the transmission of Covid-19 that the community can do, namely maintaining distance and diligently washing hands with soap. Washing hands with soap is the easiest and safest basic step to protect yourself from the virus and is a recommendation from WHO. The content of soap is clinically proven to be able to kill bacteria, viruses, and germs (Sinaga, Munthe, & Bangun, 2020).

Maintaining a clean and healthy lifestyle is very important to be applied from an early age, namely in school age children (Tabi'in, 2020). School age children are the main assets or capital for future development that need to be maintained, improved and protected for their health. Schools are strategic places in children's lives, so that schools can function properly as one of the institutions that can help and play a role in optimizing the growth and development of school-age children with promotive and preventive efforts. (Sitorus & Luca, 2014).

Health education is an activity or effort to deliver health messages to the public, groups, or individuals (Notoatmodjo, 2010). One of the practical health education media is audio-visual media. Audio visual media is a modern

learning media that is in accordance with the times. The selection of informative audio-visual media can be well received by children. Audio visuals will make them imagine and want to try something new, so through this media it will improve children's intellectual and cognitive (Suryaningsih, 2018).

School-age children are at high risk of hand-to-mouth transfer when they come into contact with feces while playing on school grounds and share crowded restrooms that often do not have proper hand washing facilities. As a result, school children are at high risk of being exposed to Covid-19. Although several studies have reported the impact of poor handwashing on communicable diseases among children in Indonesia, the protective effect of hygiene practices with audio-visual media on the ability, knowledge and attitude of handwashing in schools has not been explored. Therefore, preventive efforts are needed to prevent Covid-19 disease by implementing audio visuals to improve the abilities, knowledge, and attitudes of school children.

METHOD AND ANALYSIS

This research is included in the type of pra-experiment research with one group pretest-posttest design. The population in

this research was the students of SD Negeri Kapasan 5 Surabaya, as many as 30 students spread over 2 classes, namely Class V and Class VI. In this study, the sampling method was using probability sampling technique with the simple random sampling method. The random sample technique referred to here is to choose 2 classes which are the research population. The number of samples in this study were 28 respondents. The independent variable in this study was the Audio Visual Media of Hand Washing, while the dependent variable in this study was the ability, knowledge, and attitude of washing hands with soap in the students of SD Negeri Kapasan 5 Surabaya.

The research instrument for the variable of hand washing ability is an observation sheet (check list) with a Guttman scale. On the knowledge variable, the assessment used a questionnaire sheet measuring instrument with a Guttman scale and the attitude variable used a questionnaire sheet measuring instrument with a Likert Scale. The results of the validity test of each item on the knowledge variable 1 – 10 are declared valid because the value of r count $>$ r table (0.266), while each item on the attitude variable 1 – 10 is declared valid because the value of r count $>$ r table (0.266). The results of the reliability test on the knowledge variable showed

Cronbach's Alpha 0.951, while the attitude variable showed Cronbach's Alpha 0.951.

The data obtained were analyzed using the Wilcoxon signed test and assisted by a computer software program for Windows with a significance level of 0.05.

RESULTS

Table 1 Characteristic of Respondents

Age	N	Percentage(%)
10 years	10	35,7%
11 years	12	42,9%
12 years	6	21,4%
Amount	28	100%

Based on the data in table 1, it can be concluded that the age of the most respondents is 11 years (42,9%).

Table 2 Characteristic of Respondents

Gender	N	Percentage(%)
Male	12	42,9
Female	16	57,1
Amount	28	100%

Based on the data in table 1, it can be concluded that the majority of respondents are female, a total of 16 respondents (57.1%)

Table 3 Ability of Handwashing

Ability	N	Mean	Std. Deviation	Min	Max	Z
<i>Pre</i>	28	2.3214	.77237	1.00	3.00	-4.119^b
<i>Post</i>	28	1.5357	.69293	1.00	3.00	

Asymp.Sig. (-tailed) 0.000

Min : Minimum; Max : Maximum

Based on the data in table 3, it can be seen that the Wilcoxon signed test results obtained a significance value of = 0.000 (p 0.05), which means that there is a difference in the average ability of school-age children to wash their hands before and after the audio-visual intervention. regarding hand washing with soap, so it can be concluded that there is an effect of health education with audio-visual media on the ability to hand washing school-age children as an effort to prevent Covid-19.

Table 4 Knowledge of Hand Washing.

Knowledge	N	Mean	Std. Deviation	Min	Max	Z
<i>Pre</i>	28	1.8571	.65060	1.00	3.00	-3.207
<i>Post</i>	28	1.4286	.50395	1.00	2.00	

Asymp.Sig. (-tailed) 0.001

Min : Minimum; Max : Maximum

Based on the data in table 4, it can be seen that the results of the Wilcoxon signed test have a significance value of = 0.001 (p 0.05), which means that there is a difference in the average knowledge of school-age children in washing their hands before and after the audio-visual intervention. about hand washing with soap, so it can be concluded that there is an effect of health education with audio-visual media on knowledge of hand washing in school-age children as an effort to prevent Covid-19.

Table 5 Attitude of Hand Washing.

Attitude	N	Mean	Std. Deviation	Min	Max	Z
<i>Pre</i>	28	1.8929	.31497	1.00	2.00	-3.464
<i>Post</i>	28	1.4643	.50787	1.00	2.00	

Asymp.Sig. (-tailed) 0.001

Min : Minimum; Max : Maximum

Based on the data in table 5, it can be seen that the results of the Wilcoxon signed test obtained a significance value of = 0.001 (p 0.05), which means that there is a difference in the average attitude of school-age children in washing their hands before and after the audio-visual intervention. regarding hand washing with soap, so it can be concluded that there is an effect of health education with audio-visual media on hand washing attitudes in school-age children as an effort to prevent Covid-19.

DISCUSSION

1. Characteristic of Respondents

School age children are the main assets or capital for future development that need to be maintained, improved and protected for their health. Schools are strategic places in children's lives, so that schools can function properly as one of the institutions that can help and play a role in optimizing the growth and development of school-age children with promotive and preventive efforts (Sitorus & Luca, 2014). Children aged 10-12 years

are more able to work together than children under the age of 10-12 years, because they often lack focus and play a lot. Personal social development of children at the age of 10 years is like friends, likes to play, and mental development that likes to read to get information (Siringoringo, 2018).

Gender is related to hand hygiene behavior (Suen, So, Yeung, Lo, & Lam, 2019). Hand hygiene is considered a social norm which is an effective driver for following the behavior of others in the relevant social group. Similarly, women's high adherence can also be associated with their tendency to practice socially acceptable behaviors (Aunger et al., 2016).

Hand washing is scrubbing both hands vigorously with soap or cleanser, followed by a brief rinse with clean water. These are basic hygiene procedures aimed at achieving disease control and preventing the spread of microbial infections. As an effective means of infection control, hand washing has been shown to have an impact on the prevalence of respiratory diseases and appropriate hand washing interventions can break the cycle of transmission. A systemic review including eight intervention studies reported that hand washing decreased the risk of respiratory

infections, with risk reductions ranging from 6% to 44% (L. Wang, 2021).

2. Analysis of the Health education with audio-visual media on the ability to wash hands in school age children

In an effort to prevent Covid-19 for school-age children, health education intervention with audio-visual media was carried out on 28 respondents to assess the level of ability, knowledge, and attitude of the given action. The results obtained were also significant for each respondent before and after the intervention.

Based on the test results for the 2 variables used in the assessment of respondents' abilities, it was found that there were significant differences in the ability of school-age children to wash their hands before and after the audio-visual intervention on washing hands with soap. The respondent's lack of ability in carrying out hand washing with soap is because they are still not trained and understand the six steps of how to wash their hands with soap properly. After being given an audio-visual intervention and continued demonstration practice, the respondents experienced an improvement in terms of ability, namely better understanding and being able to do the six steps of washing hands with soap properly and correctly. The ability possessed by the group between before and after the intervention showed a significant change.

This result is supported by previous research which states that a person can remember from what is heard and seen simultaneously through video, which can obtain a memory level of 50% (Rahman, Setyowati, & Ifroh, 2019). Another study also stated that there was an effect of health education with audio-visual methods on the ability to wash hands in preschool children (Suryaningsih, 2018). These results indicate an increase in the ability to wash hands in children. This is because children can be given a health education stimulus through audio-visual media voluntarily and without coercion. Health education can serve to increase individual willingness and ability.

3. Analysis of the Effect of Health Education with audio-visual media on the knowledge to wash hands in school age children

Based on the test results for the 2 variables used in the assessment of respondents' knowledge, it was found that there was a significant difference in the knowledge of school-age children in washing their hands before and after the audio-visual intervention about washing hands with soap. The respondent's lack of knowledge in understanding the concept of washing hands with soap is due to a lack of information from the environment. The learning process through audiovisual media provides high success in improving learning processes and outcomes, both in

terms of knowledge, attitudes, and subjective norms (Rahman et al., 2019). Another study also stated that there was an effect of health education with audio-visual media on the knowledge of hand washing with soap in grade 2 children in elementary school (Rosidah, 2020).

Knowledge is the result of knowing and it happens after people sense a certain object. Sensing occurs through the five human senses, namely the senses of sight, hearing, smell, taste and touch, most of human knowledge can be obtained through the eyes and ears. (Sari & Setiadi, 2019). Based on the theory put forward by (Triwibowo & Pusphadani, 2015) that health education is a dynamic process of behavior change, with the aim of changing human behavior which includes components of knowledge, attitudes or actions related to the goal of healthy living both individually, in groups and in society. This theory is in line with the theory of Lawrence Green (1980) which argues that The factor that facilitates the occurrence of a person's behavior is knowledge.

4. Analysis of the Health education with audio-visual media on handwashing attitudes in school age children

Based on the test results for the 2 variables used in the assessment of respondents' attitudes, it was found that there were significant differences in the

attitudes of school-age children in washing their hands before and after the audio-visual intervention about washing hands with soap.

In this study, children were given health education using audio-visual media. Audio visual media makes them interested in learning, because through the media sound and images are presented to support the learning process. Giving stimulus to preschool children is very important, because according to Abdurrahman Akhi, (2009) At this age children are in an active and imaginative phase. Children also experience good and optimal cognitive, motor and intellectual development. Reasonable intellectual development will help children to be more responsive in thinking and acting, which can reduce conflict and frustration. This will save the child from bad and monotonous social and environmental conditions. Health education was also learning process of individuals, groups, and communities from not knowing about health values become aware of it, of not being able to overcome his own health problems became capable, and so forth.

CONCLUSION

There is an effect of health education with audio-visual media on the ability, knowledge, and handwashing

attitude of school-age children as an effort to prevent Covid-19 at Kapasan 5 Elementary School Surabaya on Jalan Donorejo 28, Kecamatan Simokerto, Surabaya.

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