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DEVELOPMENT OF AUDIOVISUAL MEDIA TO KNOWLEDGE AND ATTITUDE OF STUDENTS IN HANDWASHING WITH SOAP

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ABSTRACT

Washing hands with soap is the handwashing act in 7 steps with soap and then rinsing with running water, to clean hands and break the chain of bacteria. In 2021, data obtained in Bunda Kasih Sudiang Elementary School showed the results of health measurements that 23 of 50 students had poor personal hygiene. This study aimed to recognize the effect of video media to knowledge and attitudes of students in washing hands act with soap. This was pre-experimental research with one group pretest-posttest study design without control group. The number of sample was 46 students in grades 4, 5 and 6 selected by total sampling. Data analysis applied Wilcoxon test which was previously analyzed by Kolmogorov-Smirnov normality test. The results revealed that before intervention, lack of knowledge category was 22 (47.8%), while after intervention, all respondents performed good knowledge by 46 (100%). Meanwhile, attitude before intervention was negative by 17 (37%), while after intervention, all students showed positive attitude by 46 (100%). Wilcoxon test results obtained value of knowledge by $\rho = 0.000 < (0.05)$, and attitude by $\rho = 0.000 < (0.05)$. It concluded that audiovisual media affected knowledge and attitude of washing hands with soap on students at SDS Bunda Kasih Sudiang. It is encouraged that audiovisual media may be applied as a promotive effort in the delivery of health education regarding handwashing with soap at school circumstances.

Keywords: attitude; audiovisual media; knowledge; handwashing with soap

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INTRODUCTION

Handwashing with soap is a series of techniques for washing hands with soap in 7 steps, rinsing hands with running water, and breaking the chain of bacteria. Hands may transmit bacteria through direct or indirect contact, then spread from those who carrying the pathogen to other people (Fadiah dan Tirtayanti, 2020). Washing hands using anti-septic liquid is not a habit for school children, but washing hands with simple and mild soap is very effective in preventing infectious diseases such as diarrhea and Acute Respiratory Infection (ARI). Problems of health literacy and attitudes in elementary school students are often related to personal and environmental hygiene, including washing hands with soap (Johan, Reni, & Noorbaya, 2018). Children tend to imagine, so they need the appropriate media to convey their message from a young age. One suitable media is audiovisual media because it may describe ideally and observe repeatedly, so that the use of audiovisual media achieves the effectiveness of the learning process. Children's attention is focused on the material learned, therefore, the learning process becomes interesting and audiovisual may be a learning media (Parasyanti, Yanti, & Mastini, 2020).

UNICEF stated that if this trend continues, the world will not be able to achieve SDGs. According to WHO, approximately 2.2 million people in developing countries, especially children, have died due to lack of safe drinking water, poor hygiene and various diseases caused by hygiene. In addition, around 35 million toddlers are still at risk, and if the child mortality target is not met, around 150,000 children will die in Indonesia by 2025 (subrayan et al., 2020).

Data from WHO (2015) on Arinil Hidayah (2020) showed 100,000 Indonesian children die from diarrheal diseases every year. 40-60% of school-age children suffer from intestinal worms and 20% of ARI. The 2017 Public Health Development Index depicts the percentage of clean and healthy lifestyle on a national average is 35.7% and at the level of educational institutions is 67.52% while the average for handwashing with soap is merely 24.5% (Handayani, Maifita, & Armaita, 2020).

Data of Dinas Kesehatan South Sulawesi (2019) stated the number of diarrhea cases per district/city that Pare-pare (19,592); North Toraja (11,246); North Luwu (2,6750; Luwu (5,871); Pinrang (5,565); Wajo (7,530); Bone (2,966); Pangkep (7,438); Sinjai (7,139); Takalar (6,697); Bantaeng (6,598) and Selayar (3,429). In 2019, it was estimated that there were 236,099 cases of diarrhea, while the elaborated cases by 146,958 (62.24%), with the highest cases in Makassar by 19,592 of the total population by 9,145,143 (Dinas Kesehatan Sulawesi Selatan, 2020).

The previous research revealed the significant differences in knowledge of handwashing with soaps before and after the audiovisual health education in fourth grade students at MI Jamilurrahman Bantul ($\rho = 0.000$) (Saputri dan Suryati, 2019). Furthermore Wikurendra (2018) found that there was a significant difference in the effect of education on handwashing with soap with attitudes in fourth grade elementary school students at SDN Sukomoro I and III Sukomoro District, Nganjuk Regency ($\rho = 0.000 < 0.05$) (Wikurendra, 2018).

METHOD

This was pre-experimental research with one group pretest-posttest study design without control group. The number of sample was 46 students in grades 4, 5 and 6 selected by total sampling. Data analysis applied Wilcoxon test which was previously analyzed by Kolmogorov-Smirnov normality test. Data collection applied questionnaires. The research flow includes:

1. Administration process (permit letter submission)
2. Sampling
3. Explanation to respondents:
   a. The aim of study
   b. Agreements
   c. Informed consent sign
   d. Questionnaire form
4. Health education by audiovisual media for 1 month:
   a. Week 1: Monday (pretest) and Thursday during ≤60 minutes for each and posttest 1 on Saturday
   b. Week 2: Monday and Thursday during ≤60 minutes for each
   c. Week 3: Monday and Thursday during ≤60 minutes for each
   d. Week 4: Monday and Thursday during ≤60 minutes for each and posttest 2 on Saturday

RESULTS

Characteristics of Respondents

mTable 1. showed the characteristic of respondents. From 46 respondents, the highest is 11 years old by 16 (34.8%) students, while the lowest is 8 years old by 2 (4,3%). Furthermore, the students were mostly male by 27 (58.7%), and mostly from grade 4 by 19 (41.3%).

Table 1.
Characteristic of Respondents

Variable	f	%
Age (Years old)		
8	2	4.3
9	13	28.3
10	12	26.1
11	16	34.8
12	3	6.5
Sex		
Male	27	58.7
Female	19	41.3
Grade		
4	19	41.3
5	14	30.4
6	13	28.3

Table 2. shows that the distribution of the characteristics of the pre-test of knowledge based on the highest knowledge with sufficient category by 24 (52.2%) students, while the less category by 22 (47.8%). And the posttest shows that all students performed sufficient knowledge by 46 (100.0%). Otherwise, pre-test of attitudes toward handwashing with soap was mostly positive by 29 (63.0%) students, while negative attitudes by 17 (37.0%). And the posttest shows that all students performed positive attitude of 46 (100.0%). Meanwhile, the results of bivariate analysis using the Wilcoxon test were ρ = (0.000) $\leq$0.05 for both knowledge and attitude, indicated that audiovisual media affected the knowledge and attitudes of students in handwashing with soap.

Table 2.
Frequency Distribution and Results of Bivariate Analysis of Knowledge and Attitude of Students

Variable	Pre-test		Post-test		P-value
	f	%	f	%	
Knowledge					0.000
Sufficient	24	52.2	46	100.0	
Deficient	22	47.8	0	0.0	
Attitude					0.000
Positive	29	63.0	46	100.0	
Negative	17	37.0	0	0.0	

DISCUSSION

The results depicted that there is an effect of health education by audiovisual media to students' knowledge and attitudes regarding handwashing with soap. Before showing the video, the researchers asked about when handwashing is carried out, the dangers of not handwashing, as well as the steps but many students still did not know. During the first

audiovisual intervention, many students were interested on watching the video, and automatically follow the 7 steps of handwashing. During the second intervention, students pay attention to the dangers of ignoring handwashing with soap. While watching students enthusiastically do the 7 steps of handwashing with soap and the progress of each week, the researcher conducted discussion or direct questions and answers.

Research of Saputri et al. (2019) stated that there is an effect of health education using audiovisual on knowledge of handwashing with soap in fourth grade students at MI Jamilurrahman Bantul (Saputri & Suryati, 2019). Daryanto (2011) also stated that audiovideo media is a non-printed teaching material that is rich in information and complete because it may reach students directly, as well as increase students' interest in learning because students are able to listen to audio as well as watch the pictures (Daryanto, 2011).

Nugroho et al. (2020) showed that health education with audio-visual media affected knowledge of handwashing with soap. It emphasized that the use of audiovisual media in providing counseling to children on how to wash hands with soap properly was able to provide very significant results, that children have ability to carry out the process of handwashing correctly based on directions and instructions (Nugroho & Rosidah, 2020).

The use of information technology in learning process has become a necessity as well as a demand in this global era. To increase the effectiveness and efficiency of learning, it is essential to develop various creative and innovative learning models. This needs to be conducted so that learning process does not seem less interesting, monotonous, and boring that may hinder the knowledge transfer. Therefore, the role of audiovisual media in learning process is important because it will lead the learning process more varied, not boring and be able to increase public knowledge concerning the behavior of handwashing with soap (Nugroho & Rosidah, 2020).

It is reinforced by research of Fadiah et al., (2020) that there was a significant difference between the control and the intervention group after a training using audio-visual method (Fadiah & Tirtayanti, 2020). Knowledge is one of the predisposing factors for the occurrence of someone’s behavior. Improving the knowledge of preschool children by providing health education with audiovisual media is a very important domain in forming someone's actions. In addition, other factors that influence children's behavior include attitudes, beliefs, values and traditions, facilities and infrastructure, as well as behavior of parents or teachers (Saputri & Suryati, 2019).

Research in SDN 87 Palembang students also proved that audiovisual media in health education influenced knowledge and attitude. Attitude is a reaction or response that arises from an individual to an object which then gives rise to individual behavior towards the object in certain ways (Limbong, 2018). The increase in attitudes occurred in respondents was probably caused by the knowledge gained which was able to bring up understanding and confidence in their needs who had to behave in a clean and healthy life and have a habit of washing their hands with soap. Therefore, it can be concluded that there are differences or improvements in health education through audiovisual media interventions.
Wikurendra (2018) shows that there is an effect of providing handwashing with soap counseling on handwashing attitudes in fourth grade students at SDN Sukomoro I and III Sukomoro District, Nganjuk Regency. A person who is well informed does not guarantee that he will have a positive attitude, because someone in determining a complete attitude is not only determined by knowledge, but also influenced by thoughts, beliefs, and emotions that

play an important role. The individual concerned must be able to absorb, process and understand the information received as a stimulus (Wikurendra, 2018).

The use of audiovisual media has a high level of influence in stimulating the senses of hearing and vision when delivering health education materials. In addition, health education through audiovisual can convey a consistent message and provide opportunities for viewers to watch repeatedly and increase understanding. Audiovisual media can display skills and show real situations, so audiovisual media with persuasive presentations are very useful in increasing knowledge and healthy living behavior (Amalia, 2019).

CONCLUSION

It concluded that audiovisual media affected knowledge and attitude of washing hands with soap on students at SDS Bunda Kasih Sudiang. It is encouraged that audiovisual media may be applied as a promotive effort in the delivery of health education regarding handwashing with soap at school circumstances.

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