

THE EFFECT OF EDUCATIONAL VIDEOS ON KNOWLEDGE OF COVID-19 PREVENTION

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Abstract

A respiratory viral disease called Covid-19 poses a threat to health. All ages, including children, are targeted with Covid-19. The objective of the research was to determine the effect of video education on school-age children on knowledge about preventing Covid-19. The method used in this study was quasi-experimental, with a pre-test and post-test design with a control group. The population of this research was all students of SD Negeri 47 Kota Bengkulu. The research sample was students in grades IV-IV which were determined by using a 2-mean different test sampling technique obtained based on purposive sampling. The number of samples was 30 people consisting of 15 samples for the intervention group and 15 for the control group. The intervention provided was education through videos about Covid-19 prevention, while the control group was given education about Covid-19 prevention from school programs. The results showed that there was an increase in the average knowledge about Covid-19 prevention after being given video education compared to before the intervention ($p = 0.000 \leq \alpha = 0.05$) and there was a difference in the average knowledge score between the intervention and control groups before and after the intervention ($p = 0.001 \leq \alpha = 0.05$). Video education increases students' knowledge of covid-19 prevention. It can be concluded that there is an effect of video education on knowledge of Covid-19 prevention in school-age children. It is recommended to use video education to increase students' knowledge about COVID-19 prevention.

Keywords: Educational Video, Knowledge, Covid-19 Prevention

INTRODUCTION

The world was shocked that Coronavirus Disease 2019 (Covid-19) was a global pandemic (World Health Organization, 2020). The Covid-19 pandemic has transformed into a case that has unsettled many people almost all over the world to the point of causing mass paranoia (Manderson & Levine, 2020). Covid-19 is an infectious disease caused by a virus called Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-COV2) or Covid-19 virus which is classified as a positive single strain RNA, encapsulated and not segmented (Huang, Wang, Li, Ren, Zhao, Fan, 2020).

Based on data from WHO and the Public Health Emergency Operating Center (PHEOC) of the Ministry of Health (Kemenkes) on July 13, 2021, the

latest confirmed data for Covid-19 in the world was 188,030,820 with 4,055,269 deaths. The development of Covid-19 in Indonesia is very advanced and has had an impact on all provinces. The prevalence of Covid-19 cases in Indonesia based on data from the PHEOC of the Indonesian Ministry of Health in July 2021 recorded 2,615,529+47,899 confirmed cases, 68,219 + 864 cases of death and 2,139,601 + 20,123 recovered cases. According to data from the Indonesian Ministry of Health on September 6, 2020, Bengkulu Province is in the 3rd (third) order, the province with the highest death rate due to Covid-19. Based on data from the Bengkulu City Health Office, the development of Covid-19 cases until July 2021 recorded 12,044 confirmed cases, 9,837 recovered cases, and 218 deaths. If this is allowed, the death rate in Bengkulu Province will be even higher.

The incidence of COVID-19 infection in children in China has reached 2,143 children and half of them have symptoms of fever, sore throat, cough, and runny nose (Erllich, 2020). Meanwhile in Indonesia, according to the Indonesian Ministry of Health, (2020), the total number of positive child cases of Covid-19 was 79.5 million (30.1%). Based on data from the Covid-19 Task Force Team in Bengkulu City, positive cases of Covid-19 in children are quite high at 150 cases. The cases came from among children under the age of 15 years. Several factors are suspected to be the cause of the high number of Covid-19 cases, such as groups of children playing more so that they ignore the Covid-19 prevention protocol, many groups of children who have not received information about how to prevent Covid-19 are good and right, as well as parental negligence in supervising children. The group of children is a group that is vulnerable to being infected with Covid-19, even though children have carried a defense in the body called non-adaptive (innate) or also called natural immunity, children's ignorance of health protocols can be a risk for developing Covid-19 in children.

Efforts to prevent the transmission of Covid-19 can be done by educating everyone to implement health protocols. Covid-19 education is education, guidance, learning, and efforts to invite the public to prevent the spread of Covid-19. Covid-19 education plays an important role in handling Covid-19. In general, nurses have a very important role in terms of promotive, preventive, and nursing care services in conditions of the Covid-19 outbreak. One of the roles of nurses in the midst of the Covid-19 outbreak is to provide education or education to the public to comply with health protocols such as

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wearing masks, washing hands & keeping a distance. In delivering education, one can use various media, one of which is using video media.

Video is considered more interesting because it involves two senses, namely the sense of sight and the sense of hearing which can maximize the reception of information (Nurmayunita, 2019). The more senses that are used, the easier it will be to enter information (Listyarini, 2017). A study conducted by Kholishah (2017) showed that after being given health education with video media, there was a change in students' practice in brushing their teeth. Likewise, the results of a study conducted by Melina, et al (2014), it is known that the use of video media is more effective in changing knowledge compared to leaflet media.

The policy given by the Minister of Education and Culture of the Republic of Indonesia which was conveyed at a press conference on television media on August 9, 2020, for the green zone area of the Covid-19 virus, can carry out face-to-face learning by implementing health protocols. Likewise in Bengkulu City, several Elementary Schools carry out face-to-face learning even though currently Bengkulu City is classified as the Orange Zone (medium risk). The decision to study face-to-face is considered very risky for Elementary School children because children have not received sufficient information regarding the Covid-19 prevention protocol.

The results of interviews conducted by researchers with the Principal at SD Negeri 47 Kota Bengkulu who has started face-to-face learning at school, it is known that there has been no prevention education and health protocols provided to prevent the risk of Covid-19 transmission to children. Therefore, the purpose of this study was to determine the effect of video education on school-age children on knowledge about Covid-19 prevention.

METHOD

Research Design and Subject

This type of research uses a quasi-experimental study, with a pre-test – post-test design with a control group. The population of this study was all students in grades IV, V, and VI SD Negeri 47 Kota Bengkulu as many as 146 people with samples taken based on the 2 mean difference test formula with a minimum sample size of 30 students divided into 2 groups, namely 15 children in the intervention group and 15 students in the intervention group. The children for the control group were obtained by purposive sampling,

namely based on the class groups that were studied which had been divided by the school teacher for each class based on the learning policies in the covid-19 era.

Instruments and Data Analysis Procedures

The pretest and post-test data on knowledge about the prevention of Covid-9 were obtained by giving a questionnaire containing 20 questions in the form of ordinary multiple choice which had been tested for validity. The intervention group was given education by showing videos using a classical Liquid Crystal Display (LCD) projector accompanied by researchers while still implementing the health protocol. The provision of video education was given 3 times with an interval of 1 day apart. The post-test was conducted on the last day after the video education. The control group was given education through lectures following the covid-19 prevention education program carried out by the school.

The study was conducted after obtaining ethically appropriate information issued by the Research Ethics Committee of the Bengkulu Ministry of Health Poltekkes No. KEPK. M/063/05/2021. The analysis was performed using an independent t-test

FINDING

The results of this study for the characteristics of children identified by sex and age groups of children. The results of the study of the characteristics of children by gender are shown in Table 1 as follows

Table 1. Characteristics of Children by Gender

Variable	Group			
	Intervention		Control	
Gender	Frequency	%	Frequency	%
Women	8	53,3	5	33,3
Men	7	46,7	10	66,7
Total	15	100.0	15	100,0

Table 1 showed most female children were followed by 53.3% while the control group was more followed by the male group, namely 46.7%.

Table 2 presents the characteristics of groups of children based on age, as follows.

Table 2. Characteristics of Respondents by Age

Variable	Group							
	Intervention				Control			
Gender	N	Min	Max	SD	N	Min	Max	SD
	Mean				Mean			
	15	10	12	0,561	15	9	11	0,976
	1,80							

Table 2 shows the age characteristics of the respondent's children are in the range of 9-12 years. The youngest age in the intervention group was 10 years and the oldest was 12 years. While the youngest age in the control group was 9 years and the oldest was 11 years.

Table 3 presents the results of the homogeneity test of the child group based on the average knowledge before being given the intervention

Table 3. Average Knowledge Score and Knowledge Homogeneity of Respondents Before being given the Intervention

Group	Freq	%	Mean	Min	Max	SD	SE	CI 95%	<i>P Value</i>
Intervention									
Good	-	-							
Enough	6	40							
Kurang	9	60	10,93	9	13	1,223	0,316	10,26; 11,61	0,881*
Kontrol									
Baik	-								
Cukup	6	40							
Kurang	9	60	11,00	9	13	1,195	0,309	10,34; 11,66	

Table 3 shows the homogeneity value (equivalence test) of children's knowledge about preventing transmission of Covid-19 before the intervention was carried out, which was 0.881, which means that the knowledge of the intervention group and the control group of children before the intervention was given was the same/equivalent

Table 4. Differences in Children's Average Knowledge Before and After Intervention

Variable	Group				P Value
	Intervention		Control		
	N	Mean (SD)	N	Mean (SD)	
Pre-Intervention	15	10,93(1,223)	15	11,00(1,195)	0,881*
Post Intervensi	15	16,60(2,746)	15	13,80(2,859)	0,011*
<i>P Value</i>		0,000		0,000	

Table 4 shows the average score of children's knowledge before being given action in the intervention group of 10.93 with a Standard Deviation (SD) of 1.223, while in the control group the average score of initial knowledge was 11.00 with an SD value of 1.195. After being given the intervention, there was a change in the average score of children's knowledge in the intervention group to 16.60 with an SD value of 2.746. Likewise, there was a change in the average knowledge score of children in the control group to 13.80 with an SD value of 2.859.

Based on the results of statistical tests, shows that there is a difference in knowledge scores between the intervention groups before and after the intervention, with a p-value of 0.000 (≤ 0.05) which means that there is an effect of video education on knowledge of Covid-19 prevention in school-age children at SD Negeri 47 Bengkulu City

Table 5. Differences in the Average Score of Covid-19 Prevention Knowledge

Variable	N	Mean	Mean Difference	SD	P Value
Knowledge					
Intervention	15	5,67		2,160	
Control	15	2,80	-2,867	2,077	0,001

Table 5 shows that after being given the intervention, it is known that the difference in the increase in the average value of knowledge in the intervention group is 5.67 with a standard deviation of 2.160, while the average value of knowledge in the control group is 2.80 with a standard deviation of 2.077. The results of the statistical test p value of 0.001 (≤ 0.05), proves that there is a difference in the average score of knowledge about Covid-19 prevention between groups before and after the intervention

DISCUSSION

The results of this study showed that in the intervention group, the gender of the respondents was mostly female. This result is in line with the study conducted by Pius (2018), on 96 adolescents at SMAN 3 Atambua, East Nusa Tenggara, with almost the majority of respondents being female. According to Nurhasim (2013), people often assume that a person's knowledge is influenced by gender. But nowadays, if someone is still productive, educated, or experienced, the level of knowledge tends to be higher or better.

Based on the characteristics of the age of the respondents are in the range of 9-12 years. Children in this age range are classified as being in a period of intellectual development, such as their desire to better understand natural phenomena, correction abilities, paying attention to individual differences, and increased concentration and readiness to learn concepts (Farida 2014). According to Notoatmodjo (2012), age affects a person's perception and mindset. As they get older, their grasping power and mindset will also develop so that the knowledge they gain will improve

The results of this study show that although currently there has been quite a lot of education and reporting about Covid-19 to the public through mass media, electronic media, and social media, most of the respondents are with less knowledge. This condition illustrates the risk of transmission of Covid-19 in the child respondent group. This study is in line with the previous study by Erlin, Putra & Hendra (2020) conducted on 20 4th and 5th-grade elementary school children in Pekanbaru City, all of whom had a low level of knowledge about preventing transmission of Covid-19. Likewise, a study by Susanti & Sri (2020), which was conducted on 40 students, found that most of the student's knowledge of Covid-19 prevention was in a low category. This condition requires special attention, namely the need for special education so that children can have sufficient knowledge to fortify themselves with protective behavior against the dangers of transmission from the corona virus.

In this study, there was an increase in the knowledge of the children's group before and after the intervention. These results prove that there is an effect of educational videos on increasing children's knowledge at SD Negeri 47 regarding the prevention of Covid-19. This study is in line with the study of Chifdillah & Hazanah (2021) conducted on 90 students who proved that audiovisual education media can increase students' knowledge of Covid-19 ($p = 0.000$). Likewise, the Anggraini & Agustin (2020) study, which was

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conducted on 38 residents, proved that there was a significant effect of video-based virtual education interventions on controlling the transmission of COVID-19. A study by Mulyani (2021), on 35 community members in Klaten Regency, also proved that there was a significant increase in public knowledge after receiving education on preventing the spread of Covid-19 through video. Another supporting study, namely the study of Prihwanto & Firdaus (2021), on 50 students in Yogyakarta, also proved that there was a significant effect of education using audio-visual in increasing student awareness of the use of masks

Audio-visual media is a type of media that combines audio that can hear sounds and visuals that can show live/moving images so children can more quickly capture the information provided (Sanaky, 2013). Providing education using audio-visual media is better in increasing knowledge and health behavior than using audio-only or visual-only media. The use of media in learning is highly recommended to improve the quality of learning. Audio-visual media encourage the desire to know more. Audio-visual media not only produce effective ways of learning in a shorter time but what is received through audio-visual media lasts longer and is better stored in one's memory. Audio-visual media also makes it easier to convey and receive lessons or information and can avoid misunderstandings (Firdaus, 2016). According to Bili (2019), information will be easier to receive and remember if you use more than one sense.

The results of a study conducted by Suwarna (2014), show that learning using video media has the carrying capacity of learning outcomes in the good category. Listiyanto's research (2015), shows that education by utilizing video affects learning motivation by greater than without video. Videos are easier to understand and even if needed can be shown repeatedly so that it is effective in changing the views of the target to be intervened (Ilgiany, 2016). The difference in the increase in knowledge between the intervention group and the control group in this study could be due to several possibilities, including the educational material provided in the form of video media which attracted the attention of children more, because it was in the form of moving animations, while the education provided by the school was in the form of lectures. which allows children to get bored. In contrast to the Sabarudin study (2020), 120 people in Baubau City did not find differences in knowledge about preventing Covid-19 before and after being given education through video media.

CONCLUSIONS AND SUGGESTIONS

Based on the results of the analysis can be concluded that there is an effect of video education on knowledge of Covid-19 prevention in school-age children in SD Negeri 47 Kota Bengkulu in 2021. It is recommended to use video education to increase students' knowledge about COVID-19 prevention.

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