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THE EFFECT OF THE COVID SIMULATOR TABLE TOP ON THE KNOWLEDGE AND ATTITUDE OF SCHOOL CHILDREN IN PREVENTING COVID 19

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ABSTRACT

The most dangerous infectious disease that is currently being debated around the world is the Corona virus disease. The problems and challenges currently faced by educational institutions require prevention strategies by providing motivation as well as guidance and enthusiasm in the learning activities of elementary school students. The purpose of this study was to explore the effect of table top covid simulator on knowledge and attitude of elementary school students. Methods: Pre-experimental research using one group pre-test and post-test design. The population in the study was 120, and a sample of 38 elementary school students was obtained using a total sampling technique. The data collection technique uses a pre-post test which is carried out by assessing elementary school students regarding their attitudes and knowledge of preventing Covid-19 using a questionnaire guide. Data processing by editing, coding, scoring, and tabulating and analyzed by Paired T-Test. Results: This study shows that the statistical test results of the independent and dependent variables in this study are the significance value <0.05, which is 0.000 with a correlation coefficient value of 0.82, which means that there is an effect of the table top simulator on the knowledge and attitudes of elementary school students about preventing covid-19. Conclusion: Table top covid simulator can improve attitudes and knowledge about prevention of covid-19 in elementary school students, it has a positive impact on students in complying with health protocols and preventing infection transmission.

Kata Kunci:

Table Top covid simulator;
Covid 19;
Pengetahuan;
Sikap;

ABSTRAK

Penyakit menular paling berbahaya yang saat ini menjadi perdebatan di seluruh dunia adalah penyakit virus Corona. Permasalahan dan tantangan yang dihadapi lembaga pendidikan saat ini memerlukan strategi pencegahan dengan memberikan motivasi serta bimbingan dan semangat dalam kegiatan belajar siswa sekolah dasar. Tujuan dari penelitian ini adalah untuk mengeksplorasi pengaruh table top covid simulator terhadap pengetahuan dan sikap siswa sekolah dasar. Penelitian pra-eksperimen dengan menggunakan one group pre-test and post-test design. populasi dalam penelitian sebanyak 120, dan di dapatkan sampel 38 siswa sekolah dasar dengan teknik taotal sampling. Teknik pengumpulan data menggunakan pre-post test yang dilakukan dengan melakukan penilaian siswa sekolah dasar mengenai sikap dan pengetahuan pencegahan Covid-19 dengan panduan kuesioner. Pengolahan data dengan cara editing, coding, scoring dan tabulasi serta dianalisis dengan Paired T-Test. Penelitian ini menunjukkan hasil uji statistik variabel bebas dan terikat dalam penelitian ini nilai signifikansi < 0,05 yaitu 0,000 dengan nilai koefisien korelasi 0,82 yang berarti ada pengaruh simulator table top terhadap pengetahuan dan sikap siswa sekolah dasar tentang pencegahan covid-19. Table top covid simulator dapat meningkatkan sikap dan pengetahuan tentang pencegahan covid-19 pada siswa sekolah dasar, berdampak positif bagi siswa dalam mematuhi protokol kesehatan dan mencegah penularan infeksi.

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INTRODUCTION

The most dangerous infectious disease that has become a major topic in the world recently is the Corona virus. Infectious disease in humans caused by the Coronaviridae virus. This disease was first detected at the end of 2019 in Wuhan, China. This virus spread rapidly in China and spread to many parts of the world, including Indonesia. The 2019 corona virus disease, abbreviated as Covid-19, is an infectious disease caused by SARS-CoV-2 (Zhou et al., 2020). COVID-19 is transmitted from

person to person through the same mechanisms as other cold or flu viruses, namely through face-to-face contact through sneezing, coughing, or direct contact with an infected person's droplets, phlegm, or secretions, and through contact with an infected person (Lai et al., 2020).

The Covid-19 incident began when there were several cases of pneumonia patients with unknown causes. This case started in China and spread throughout the world, including Indonesia. According to WHO data, there were 76,250,431 confirmed positive cases of Covid globally in December 2020. And there were 1,699,230 estimated deaths worldwide (Shen et al., 2020). The three highest cumulative cases occurred in the United States, India, and Brazil. India is ranked 20th as the country with the highest number of cumulative cases. Indonesia is said to have a cumulative total of 671,778 confirmed Covid-19 infections, of which 20,085. The three provinces in Indonesia with the highest cumulative total of confirmed Covid cases are DKI Jakarta, East Java and West Java. Meanwhile, the number of positive cases of Covid-19 in East Java, according to Kominfo, on 15 February 2021 reached 122,807 positive cases of Covid-19. The total number of people who were declared cured of Covid-19 was 109,400 people, while the total deaths were 8,613 people. Data results in Bojonegoro Regency on February 15 2021 confirmed 1020 people, 75 people active, 917 people recovered, and 28 people died (Kemenkes RI, 2014).

The Minister of Education and Culture has announced Decree Number 3 of 2020 concerning the Prevention of Covid-19 Outbreaks in Educational Institutions, point 5 which states the need to ensure educational institutions regularly clean classrooms and the environment of educational facilities. equipment, especially door handles and light switches. , computers, keyboards and other handheld devices that are usually used in the hand (Susilo et al., 2020). This is done to prevent the transmission of Covid-19 in elementary schools, especially in the Bojonegoro Regency area, East Java.

The problems and challenges currently faced by educational institutions require prevention strategies by providing motivational factors as well as guiding and encouraging learning activities. There is no accompanying teacher. Therefore, teachers as educational machines must continue to carry out their duties well even during the Covid-19 pandemic (Zhou et al., 2020). After that, research was carried out (Bedford et al., 2020) regarding the difficulty of handling the corona virus, which prompted many state leaders to take steps to prevent its spread and even set very difficult policies that must be carried out by every government. nation. state, one of the most influential and ideal policies for all aspects of life. The obstacle that many teachers currently face is the implementation of Covid-19 prevention strategies that have not been optimal. In addition, many students are not yet aware of compliance with the medical procedures implemented at each school.

According to Purwanto, A, 2020 said that an exploratory study of the impact of the Covid-19 pandemic on the learning process in elementary schools was a strategy, namely a lack of ability to master technology, additional internet quota costs, part-time work. for parents who accompany their children to study, communication, socialization between students, teachers and parents is reduced and work time is not limited for teachers because they have to communicate and coordinate with parents, other teachers and the school principal. Because Covid-19 is an emerging disease, further efforts are needed to improve strategies for preventing, diagnosing and treating Covid-19 (Xu et al., 2020) especially so that education continues despite a crisis or emergency. Tabletop Simulator is a player-driven physics sandbox, without set victory or failure conditions. After selecting a table to play on, players interact with the game by spawning and moving virtual pieces, which are subject to a physics simulation

Elementary school students are a special group who should benefit from good prevention, considering their knowledge and attitudes towards Covid 19. To improve this, a formula is needed, especially prevention on the Covid simulation board. With this approach, we will learn the steps we can follow: Frequently wash your hands. Corona virus can be transmitted through droplets or saliva. Sparks will likely come out of the victim's mouth when they sneeze or cough. If these droplets get on our hands or surfaces that we often touch, the virus will easily enter the body. The good news is, this virus can die if we wash our hands with soap and water, or if we use a hand sanitizer that contains at least 70% alcohol (Renate H. M. de Groot, Rebecca Emmett, 2019). So, if there are droplets containing the corona virus on our hands, the virus can be removed by washing our hands so that we

do not get infected. The education sector is also greatly affected, because to prevent the spread of the corona virus, all students must understand how to handle or prevent the corona virus.

METHOD

Types of research

The type of research used in this experiment was pre-trial and used a pre- and post-test group design. The pre-trial and post-trial group design is research that does not use controls but carries out observations first before providing treatment, then allows researchers to manipulate and observe post-experiment experiences (Nursalam, 2021).

Research Location and Time

This research is located at MI Fattahul Huda Pungpungan, Pungpungan Village, Kalitidu District, Bojonegoro Regency, because at that school there had been cases of students contracting Covid. The research was conducted in January 2021-February 2022.

Population and Sample

The population in this study were all children of MI Fattahul Huda Pungpungan. Based on the number of elementary school students there were 120 students, According to Arikunto (2006), if the population exceeds 100 people, 10-15% or 20-25% of the sample or more can be taken. Based on the number of elementary school students there are 120 students, this research uses 20% of the population as a sample, namely 38 respondents. This study uses a non-probability sampling method by means of purposive sampling. Purposive sampling is a sampling technique by providing criteria according to the wishes of the researcher. In this study, the inclusion criteria were as follows: 6th grade MI child and Respondents are willing to be researched by signing a consent form

Data collection

The study was conducted during the Covid-19 pandemic, when collecting data, researchers followed health standards (washing hands, using masks, and keeping a safe distance). Before visiting the school, researchers instructed volunteers to wash their hands and then to wear masks correctly and keep a safe distance. Collecting research data begins with providing informed consent to become a respondent and explaining the project. Following that, a questionnaire on knowledge and attitudes on preventing Covid-19 was distributed, based on earlier research. After learning the results of the respondents' pre-test knowledge and attitudes, the researchers conducted a table top simulator on avoiding Covid-19 and retested the knowledge and attitudes questionnaire (post-test). This research was conducted 2 times a week, and it's has passed ETHICAL APPROVAL No: 0441-KEPKSHJ.

Processing and analysis of data

Data Check (Editing) is an effort to re-check the correctness and completeness of the data obtained. Data were grouped based on age and gender, as well as grouping pre-test and post-test results for knowledge and attitude questionnaires. Coding: Each respondent will be given a code according to a serial number. For the dependent variable, if it is good, it is coded 1, adequate, it is coded 2, poor, it is coded 3.Scoring (Scoring) is giving values in the form of numbers to obtain data. Tabulating is the process of grouping answers in a careful and orderly manner from the results of observations made by researchers. Furthermore, statistical tests were carried out using the paired t test.

RESEARCH RESULT

Based on table 1, it shows that of the 38 respondents, more than half were 11-12 years old, namely 26 respondents (68.4%) and for the gender of the 38 respondents, more than half were female, namely 20 respondents (52.6%).

Table 1. Sample Distribution of Respondent Characteristics (n=38)

Category	Frequency	Percentage %
Age		
9-10 Years	11	28,9
11-12 Years	26	68,4
13-14 Years	1	2,7
Gender		
Man	18	47,4
Woman	20	52,6
Total	38	100

Table 2. Sample Distribution of Respondents Based on knowledge and attitudes (n=38)

Category	Pre-Test		Post Test	
	n	%	n	%
Knowledge				
Good	33	86,8%	38	100%
Enough	5	13,2%	0	0%
Not enough	0	0%	0	0%
Attitude				
Positive	18	47,4%	31	81,6%
Negative	20	52,6%	7	18,4%
Total	38	100%	38	100%

Based on table 2, it shows that the majority of respondents had good knowledge, 33 respondents (86.8%) and for attitudes, the majority of respondents had negative attitudes, 20 respondents (52.6%).

Table 3 Statistical Test Results

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Knowledge Pre	2.87	38	.343	.056
	Knowledge Post	3.00	38	.000	.000
Pair 2	attitude pre	1.45	38	.504	.082
	attitude post	1.82	38	.393	.064

Based on table 3, it shows that the statistical test results of the independent and dependent variables in this study are a table top simulator on the knowledge and attitudes of MI Fattahul Huda children regarding preventing Covid-19 with a very strong level of correlation.

DISCUSSION

Students' knowledge before and after the simulation

Based on Table 2, it can be seen that there was an increase in initial knowledge in 33 respondents (86.8%) then in 38 respondents (100%). Changes in a person's knowledge can occur due to a variety of reasons such as education, employment, experience, age, culture, interests, exposure to information, and media. According to (Zhou et al., 2020) knowledge is the result of understanding and occurs after a person perceives a particular object. Perception occurs through the five human senses namely sight, smell, taste, and touch. Most human knowledge is acquired through the eyes and ears. (Ji et al., 2020) argues that everyone has a different level of understanding. The level of knowledge starts from knowledge, understanding, application, analysis, synthesis, and evaluation.

According to (Saputra et al., 2017) factors that influence knowledge include level of education, occupation, experience, age, culture, interests, ability to contact information and media. A person's upbringing influences the way of looking at the environment and the process of learning to acquire

knowledge. Work is a means of gaining knowledge of the truth. Other factors that also affect a person's ability to acquire knowledge are internal factors, both physical and mental. Internal factors include physical and mental factors. Physical factors are the condition of a person's body itself, while mental factors are psychological, intellectual, psychomotor, as well as emotional and cognitive conditions. While the external factors are appreciation, a supportive environment and interesting learning activities.

After watching the simulation, students learn about Covid-19, its symptoms, causes, prevention, and treatment. Knowledge increases through the transmission of information using appropriate Covid-19 simulator support boards, so that knowledge also increases. Students with a fairly high level of knowledge also experienced an increase from before receiving the simulation, although only a slight increase. Knowledge can be obtained through formal or informal education. In this modern era, non-formal education can be done through mass media such as the internet, television, radio and print media. Exposure to media with good and effective methods will have the opportunity to increase knowledge. This is in accordance with research (Rubiani & Sembiring, 2018) that the use of desk simulation tools is very effective in increasing students' knowledge levels.

According to researchers, students had good knowledge because they knew, understood, and evaluated the Covid conditions that were occurring at that time. Students know the signs and symptoms and prevention of Covid-19 at school and at home. In this research, knowledge increased after being given a simulation using table top media which was carried out directly. In this way, students can play roles and try according to what has been done to prevent Covid-19. This is very effectively used to improve knowledge for the better, this is proven by students who knew enough about COVID-19 to know after carrying out a simulation of preventing Covid-19.

Student Attitudes Before and after Simulation

Based on Table 2, it can be seen that the respondents' attitudes before receiving the simulation panel increased by 20 people (52.6%), while afterward there were 31 respondents (81.6%). Changes in a person's attitudes and knowledge can change because they are influenced by several factors, including education, work, experience, age, culture, interests, exposure to information and media. According to (Bedford et al., 2020) attitudes are formed through social interaction, in social interaction individuals form certain attitude patterns towards the psychological objects they encounter. Various factors that influence attitude formation include; personal experiences, culture, other people who are considered important (significant others), media, educational or religious institutions, and emotional factors within the individual. Attitude is a response or response that is still contained within a person to a stimulus or object. Expressions of attitudes cannot be seen directly, but can only be interpreted first from closed behavior.

The good attitude of students at first improved after the simulation. However, changing attitudes requires a long process, according to Rogers' (1974) theory of the process of accepting attitudes and behavior. According to (Renate H. M. de Groot, Rebecca Emmett, 2019) the attitude of the respondents after being given health education had a significant influence. Showing the positive attitude of respondents expressed through an attitude of acceptance, response, appreciation, and responsibility in preventing the transmission of COVID-19 will also have a positive impact on them. This is in accordance with L. Green's theory, this attitude is a tendency for behavior to emerge which can be proven by research. This is consistent with research (Widianti et al., 2017) which suggests that knowledge and attitudes have a systematic relationship: if the cognitive component (knowledge) changes, attitudes will also change. Thus, the attitude comes from the knowledge of the respondent, so that the attitude determination must be based on the knowledge of the respondent.

The Effect of Table Top Covid Simulator on School Children's Knowledge and Attitudes towards Covid-19 Prevention

Based on table 3, it shows that the statistical test results of the independent and dependent variables in this study are that the significance value is <0.05, namely 0.000 with a correlation coefficient value of 0.82, which means that there is an influence of the table top simulator on the knowledge and attitudes of MI Fattahul Huda children regarding prevention. covid-19.

The success of this simulation depends on several factors, including the methods and facilities used. This study uses a desktop simulation that is carried out using the system directly to build strong

interpersonal relationships between extension agents and individuals who differ in understanding new behaviors or hobbies. This method can be applied to targets with a very low level of basic knowledge to a high level of knowledge (Xie et al., 2020). The success of this method depends on the ability of the presenter (researcher) to provide material and presentations in language that is on target and understandable to respondents. The approach can provide in-depth space for respondents. This is also supported by the media used.

Changes in respondents' attitudes were observed in this study. The good attitude of students at first improved after the simulation. The positive attitude of respondents as shown by their attitude of acceptance, response, appreciation, and responsibility in preventing the transmission of COVID-19 will have a positive impact. This is consistent with the factors that can influence attitudes, namely personal experience, the influence of other people who are considered important, cultural influences, mass media, educational institutions and religious organizations, and emotional factors (Sheng, 2020). Meanwhile, according to (Susilo et al., 2020) knowledge greatly influences attitudes: the higher the knowledge, the better the ability to understand information.

According to researchers, knowledge and attitudes can be changed by providing information or by educating and carrying out health simulations. Providing this simulation can increase students' knowledge and positive attitudes about how to prevent Covid 19 in the school environment. As stated in the Ministry of Education and Culture's Guidelines for organizing learning during the Covid 19 pandemic (2019). There are several steps to take, especially before departure (breakfast, cleaning, mask, etc.). The second when traveling (mask, avoid touching surfaces, nose, eyes with bare hands, etc.). Third, before going through the gate (checking temperature, washing hands), then during and after studying and when going home from school. Everything is specified in this instruction. Thus, thanks to this table top simulation, students will more easily understand how to prevent Covid-19.

CONCLUSIONS AND RECOMMENDATIONS

The results showed that students' knowledge and attitudes increased before and after the table top simulation, In the knowledge category of respondents before the table top simulator was carried out, 33 respondents had a good level of knowledge and 5 respondents had a sufficient level of knowledge, then after being given the table top simulator intervention the level of knowledge of all respondents fell into the good knowledge category. In terms of attitudes, there was an increase in the positive category, from previously 20 respondents (52.6%) to 31 respondents (81.6%). From the results of the statistical tests of the independent and dependent variables in this study, a significance value of <0.05 or 0.000 was obtained with a correlation coefficient of 0.82, which means that there was a significant influence.

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