

The Effect of Health Education Media on Knowledge of Elementary School Students about Covid-19 Prevention

Ariatul Muna^{1a}, M. Fajriannor TM^{1b*}, Nadya Novianty^{2c}

¹Diploma Four Health Promotion Study Program, Faculty of Health, Sari Mulia University, Indonesia

²Bachelor of Accounting Study Program, Faculty of Humanities, Sari Mulia University, Indonesia

^aariatulmuna12.am@gmail.com ^bfajriannor@unism.ac.id ^cnadya.novianty@unism.ac.id

Keywords: Knowledge; health education, snakes and ladders game media; power point, covid-19

ABSTRACT

Covid-19 is highly transmittable disease caused by viral infection. Children belong to the age group vulnerable to the transmission of COVID-19. Health promotion is very important in the midst of the Covid-19 pandemic. Health promotion cannot be separated from the use of media in conveying information. This study aims to determine the knowledge of respondents who were given health education through the games media of snakes and ladders and power point and to find out the differences in knowledge between the two media. This research is a quantitative research with a quasi-experimental research method with a non-equivalent control group design. This research was conducted at SDN Aranio 01, Banjar Regency, South Kalimantan Province, with 23 students in grades IV, V and VI. Data analysis used the Wilcoxon signed ranks test and U-mann Whitney. The results showed that there was an increase in pretest and posttest scores in the snakes and ladders media group with an average pretest of 11.50 and an average of 13.75 in the posttest, while the power point group had an average of 13.09 in the pretest and posttest average 13.73. The Wilcoxon test in the snakes and ladders game media group showed a p value of 0.005 and in the power point group 0.475. This study shows that there is no difference in knowledge of the two media used with statistical results showing a p value of 0.777. The results of the study show that the use of snakes and ladders game media has more influence on increasing elementary school students' knowledge about preventing Covid-19.

INTRODUCTION

Health promotion is one of the efforts that can be made to realize a healthy condition. This is because health is the most important point in life. Various kinds of activities can be done if someone is in good health [1]. Adequate sanitation is a necessary prerequisite for improving general health standards, increasing labor productivity and promoting a good quality of life. Globally, an estimated 40% of people live without basic sanitation, and lack of sanitation is the biggest cause of infection in the world [2].

The Corona Virus (Covid-19) is having an impact around the world. Local governments have carried out many communication strategies to the people of their respective regions through coercive, informative, canalizing, educative, persuasive and redundancy techniques in packaging messages in the form of instructions, appeals to the public to prevent the transmission of Covid-19 in their respective regions but have not yet carried out coercive techniques up to the stage of imposing sanctions for a deterrent effect on the violators. The central government also has not maximized its role in using a comprehensive communication strategy for all local governments [3].

Health promotion is very important in the midst of the Covid-19 pandemic. Clean and Healthy Living Behavior (PHBS) is one way to prevent transmission of COVID-19. This behavior must be applied every day, for example by washing hands with soap and running water, wearing a mask when leaving the house. Apart from that, PHBS is also carried out when sneezing, namely by covering your mouth and nose with a tissue or your arm. For someone who has just come to travel or from outside the home, it is mandatory to take a shower immediately, and the most important thing is to maintain cleanliness around the house [3].

The results of Fajriannor's research (2016) stated that health education in elementary school-age children is important in improving clean and healthy living behavior [4]. Schools play an important role in education because of their enormous influence on the child's soul. PHBS in schools is an effort to empower students, teachers, and the school community to know, want, and be able to practice PHBS and play an active role in creating healthy schools [5].

Acquisition of knowledge, skills, and positive attitudes in individuals is one sign of successful learning. Many factors influence the success of learning, one of which is using media that functions as an intermediary for learning messages. Learning media functions to direct students to gain various learning experiences. In order to get maximum, effective and efficient results, it is better for teaching to use media [6].

One of the media that can be used in the process of teaching and learning activities is the media game. Educational game media is a series of tools used by children, parents and teachers in improving the intelligence, emotional and spiritual functions of children, so that intelligence emerges with which all the potential possessed by children can be increased [7].

The concept of health counseling is given because the target is students in grades 4 and 5 where at this time students are already able to think about concepts about time and remember past events and are aware of activities that are carried out repeatedly, but their understanding is not deep, then it will further develop at the end of their lives. school or early adolescence, and will become agents of change in their environment [4]. The results of a preliminary study at SDN Aranio 01 show that the UKS program is not yet active, does not have a UKS room, still does not have UKS cadres, hand washing behavior is rarely done, health education about PHBS has never been carried out. Research conducted by Ramadhani et al (2020) shows that counseling using power point media has a positive effect on the level of knowledge, attitudes, and clean and healthy living behavior at SDN 01 Kromengan, Malang Regency [8]. According to Edgar Dale's Cone of Experience theory, someone who gets health education through media that is seen and heard will attach as much as 30% as new knowledge. In contrast, if the media used is media that can be simulated, the learning gained will stick to someone as much as 70% to 90%. This study aims to analyze the influence of health education media on knowledge in preventing Covid-19 in elementary school children.

METHOD

This research is a quantitative study with a quasi-experimental research method with a non-equivalent control group design. Each group measured knowledge before and after being given health education. The treatment group was given health education in the form of snakes and ladders game media, while the control group was only given power point. This research was conducted at SDN Aranio 01, Banjar District, South Kalimantan Province with a sample of 23 students in grades IV, V and VI. The treatment group consisted of 12 people, while the control group consisted of 11 people. The sampling technique in this study used a total sampling technique. The sample criteria used were students participating in the entire series of research activities (pretest – posttest). Data analysis using paired t-test if the data is normally distributed. If the data is not normally distributed, the Wilcoxon test is used with a 95% confidence level, while the analysis of differences between the two media uses the U-mann Whitney test.

RESULT AND DISCUSS

Table1. Differences in Knowledge Before Intervention

Knowledge				
Measure	Treatment group	Control group	P-value	Information
Mean	11.50	13.09	0.080	No difference
Median	12	14		

Minimum	9	9
Maximum	14	16

independent t-test

Source: Primary Data, 2022

Based on table 1 above, the data shows that the p-value is 0.080 which means it is greater than the alpha value (0.05). This shows that there is no difference in the average value of knowledge about Covid-19 in the treatment group and the control group. There is no difference in the average value of knowledge in the two groups before the intervention is given which is positive, so that the changes that occur do occur because of the intervention. There was no difference in the knowledge of the respondents in the two groups because control was carried out on the characteristics of the respondents so that the two groups had relatively the same characteristics. In an experimental study, there should be no difference between the treatment group and the control group before being given an intervention [4]. In this study the treatment group was given an intervention in the form of health education about covid-19 using the covid-19 snakes and ladders media. The control group still received health education, but the media used was power point slides.

Table 2. Differences in Knowledge Before and After Health Education

Knowledge of the treatment group				
Nilai	Pretest	Posttest	P-value	Information
Mean	11.50	13.75	0.005	There is a difference
Median	12	14.50		
Minimum	9	9		
Maximum	14	16		
Knowledge of the control group				
Nilai	Pretest	Posttest	P-value	Information
Mean	13.09	13.73	0.475	No difference
Median	14	15		
Minimum	9	7		
Maximum	16	16		

Wilcoxon signed ranks test

Source: Primary Data, 2022

Table 3. Differences in Knowledge of the Treatment and Control Groups

Differences in Knowledge of the Treatment and Control Groups				
Measure	Treatment group	Control group	P-value	Information
Mean	13.75	13.73	0.777	No difference
Median	14.50	15		
Minimum	9	7		
Maximum	16	16		

Based on table 2 above, it was found that there was an increase in the average value of knowledge in the treatment group after being given the intervention. Statistical test results using the Wilcoxon signed ranks test obtained a p-value of 0.005, which means it is smaller than the alpha value (0.05). This shows that

there is a difference in the average value of knowledge about Covid-19 in the treatment group before and 2 weeks after being given the intervention.

Through the media of this snake and ladder game, children can move by moving their pieces or bidar on the game board. In this game, snakes and ladders contain tiles which contain information about PHBS and its relation to Covid-19, so that children can play while learning. Some of the advantages of health education media in the form of games are fun, allow participation in learning, provide feedback, allow children to solve problems, provide real experiences, and help improve their communicative abilities. Elementary school children are children aged 6-12 years. Children like to play because they have an inner drive and urge to develop themselves. One of the effective learning is by making games. The game is a self-chosen activity without any element of coercion, without being pressured by a sense of responsibility [7].

The results of this study are in line with the results of research from Nurhidayati and Hilal (2018) which showed that based on the results of the paired t test in the treatment group using snakes and ladders media, the results obtained were a p value of $0.000 < 0.005$, which means that there was a significant difference between the pretest and posttest values in the treatment group. The more senses that are used to receive something, the more and the clearer the understanding/knowledge obtained. The use of teaching aids that are relevant to teaching objectives can improve learning outcomes so that they are more meaningful and durable [7].

In the control group, it was found that the average increase in the value of knowledge in the control group did not occur significantly after being given health education in the form of power points. The results of statistical tests using the Wilcoxon signed ranks test obtained a p-value of 0.475, which means it is greater than the alpha value (0.05). This shows that there is no difference in the average value of knowledge about Covid-19 in the control group before and after being given health education.

The results of this study indicate that knowledge cannot last long if it is given by lecture method using power point only. Power point is used in counseling because it is presented in an interesting way, can be reproduced as needed, the message is easier to understand, but power point also has several weaknesses, namely that instructors must have a level of ability and accuracy in making effective material, and the information capacity that individuals get is limited at one time. A person's ability to remember information obtained only from delivering visual power point after 3 days will only last 20%. In contrast to the information obtained by simulation which can last up to 65%.

Based on table 3, it was found that the average knowledge in the treatment group was 13.75 while in the control group it was 13.73. The results of the Mann Whitney U test showed a p-value of 0.777, which means it was greater than the alpha value (0.05). This shows that there is no difference in the average value of knowledge about Covid-19 in the group given snakes and ladders game media and power point. The use of the right type of media will make it easier to achieve the goals of health education being carried out. Educational media has several benefits, including generating interest in the target audience, avoiding boredom and boredom, helping to overcome many barriers to understanding, facilitating the delivery of information, and facilitating the receipt of information for the target students. This snakes and ladders game is light (easy to understand), simple rules, educates, and entertains children in a positive and highly interactive way. This snakes and ladders game is light (easy to understand), simple rules, educates, and entertains children in a positive and highly interactive way for elementary school students [9].

CONCLUSION

The snakes and ladders game media has proven to be influential in increasing knowledge to prevent Covid-19. Power point media has no effect on increasing knowledge to prevent Covid-19. There was no difference in knowledge in the group given snakes and ladders game media and power point.

REFERENCES

1. Anggraini DT, Hasibuan R. Gambaran Promosi Phbs Dalam Mendukung Gaya Hidup Sehat Masyarakat Kota Binjai Pada Masa Pandemic Covid-19 Tahun 2020. Jurnal Menara Medika, 2020. 3(1): 22-31.

2. Okechukwu. Toilet Pratices Among The Inhabitants of Kintampo District of Northern Ghana. *Journal of Medicine and Medical Sciences*, 2012. 3(8): 522-530.
3. Zahrotunnimah, Z. Langkah Taktis Pemerintah Daerah Dalam Pencegahan Penyebaran Virus Corona Covid-19 di Indonesia. *SALAM: Jurnal Sosial Dan Budaya Syar-i*, 2020. 7(3).
4. Fajriannor M, Shaluhiah Z, Nugraha P. Pengaruh Pendidikan Kesehatan Pada Orang Tua Melalui Anak Terhadap Pengetahuan, Sikap, Dan Praktek Penggunaan Jamban Sehat Di Wilayah Kerja Puskesmas Dalam Pagar. Semarang: Magister Promosi Kesehatan Universitas Diponegoro, 2016.
5. Widoyono. Penyakit Tropis: Epidemiologi, Penularan, Pencegahan, dan Pemberantasannya. Semarang: Erlangga. 2008.
6. Irwan D. Pengembangan Media Permainan (Game) Monopoli Pada Pembelajaran Fisika Materi Besaran Dan Satuan Pada Tingkat Sekolah Menengah Pertama (SMP). Banda Aceh: Universitas Islam Negeri Ar-Raniry Darussalam, 2017.
7. Nurhidayati A, Hilal N. Pengaruh Pendidikan Kesehatan tentang PHBS Dengan Media Permainan Ular tangga dan Ceramah Terhadap Pengetahuan Siswa SD Negeri Limpakuwus Kabupaten Banyumas Tahun 2017. *Keslingmas*, 2018. 37(3): 332-338.
8. Ramadhani SN, Adi S, Gayatri RW. Efektivitas Penyuluhan Berbasis Power Point terhadap Tingkat Pengetahuan, Sikap, dan Perilaku tentang Pencegahan Cacingan pada Siswa Kelas V dan VI SDN 01 Kromengan Kabupaten Malang. *Preventia: Indonesian Journal of Public Health*, 2020. 5(1): 8-16.
9. Prasetyanti DK. Pengaruh Permainan Ular Tangga terhadap Perilaku Hidup Bersih dan Sehat (PHBS) Pada Anak Sekolah Dasar. *J. Penelit. Keperawatan*, 2019. 5(1).