



THE EFFECT OF EDUCATIONAL VIDEO ABOUT MATERNAL HEALTH RELATED TO COVID-19 TO KNOWLEDGE LEVEL OF MEDICAL STUDENT

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ABSTRACT

Background : There have not been many cases of COVID-19 infection in pregnant women before, during and after gave birth, so knowledge about COVID-19 infection in pregnancy and the fetus is still limited. This research is expected to provide basic data for further studies and provide new knowledge, especially regarding maternal health related to COVID-19, considering that currently COVID-19 is a new type of virus and is currently a pandemic. **Objectives :** This study aimed to determine the effect of educational videos about maternal health related to COVID-19 to the knowledge level of Medical Students. **Methods :** This research was a pre-experimental research design using the form of a "One Group Pretest-Posttest only" design (without a control group). Statistical analysis using the Wilcoxon Test. **Results:** The results shows that from 38 respondents after being given education through video media, it was found that 36 (95%) of respondents had increased knowledge, 2 (5%) had fixed knowledge, and there were no respondents whose knowledge had decreased, so there was a significant difference in knowledge before and after being given education through video. **Conclusion:** The study result showed that there is a significant difference in knowledge about maternal related to COVID19 before and after being given education via video and it can be concluded that there is an effect of educational videos on Maternal Health related to COVID19.

Keywords : Educational Video, Maternal, COVID-19, Knowledge.

INTRODUCTION

Cases of corona virus disease continue to increase over time. To date, corona virus cases have reached more than 100 countries with more than two million cases.¹ The outbreak of the corona virus, known as Coronavirus Disease 2019 (COVID-19), began when a pneumonia case with an unknown cause was later reported from Wuhan, China on December 31 2019 to the World Health Organization (WHO). On January 20, 2020, WHO declared the corona virus a global emergency status and on February 11, 2020 WHO announced COVID-19 as the name of the disease.² COVID-19 is caused by a new type of corona virus given name Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2).^{3,4}

Although there is no evidence of transmission through vertical transmission, an anamnesis of the travel history of a pregnant woman with symptoms of fever and upper respiratory tract infection is still carried out according to the guidelines in the Guidelines for Preparedness for the 2019 nCoV Novel Coronavirus infection issued by the Directorate General of Disease Prevention and Control, January 2020, and the Guidelines for the Diagnosis and Management of COVID-19

Pneumonia issued by the Indonesian Lung Doctors Association (PDPI) in 2020 by doctors and other medical personnel.⁵

Video is a medium that can be used for education. This media is in the form of videos containing visual messages supported by sound. Video is used as a media for extension because it can provide messages that can be received evenly, more realistically, can be repeated and stopped as needed can affect the attitude of the audience, and is very good for explaining the process so that it can produce better learning outcomes for assignments such as remembering, recognizing, recalling and linking facts and concepts.⁶

METHOD

This is a pre-experimental research design design using the form of a "One Group Pretest-Posttest only" design (without a control group) and the population reached for the study was general medical students class 2017 at Diponegoro University with 38 students as respondents using non-random consecutive sampling. The research was conducted using education through video media and google form questionnaires and took place from May to September 2020 and data processing took



place from September to November 2020. The data collected in this study are primary data, namely data taken directly from the research subject. All respondents were given an explanation of the research to be carried out first, then filled in their personal data and answered the questions in the pre-test first according to the predetermined time. Then all respondents watched an educational video about maternal and COVID19 which lasted 6 minutes 49 seconds together. After completion, the respondents filled out the post test questionnaire according to the predetermined time. The questionnaire was compiled by researchers from the available literature. The validity test was conducted by using experts judgment method. The score was measured by a questionnaire of 30 questions. The results are categorized based on the score results, there are good with score 22-30, sufficient with score 17-21, and low if the score is lower than 17. All data will be analyzed first by a normality test is carried out to find out how the distribution of data is. Then, a hypothesis test is carried out to compare the level of knowledge of the same respondents before and after the intervention.

RESULTS

Based on table 1, out of 38 respondents, 18 respondents were male and 20 respondents were female. The age distribution of respondents is 19-22 years with an average age of 20 and 21 years.

Table 1. Respondents Characteristics

Knowledge level	Frequency	Percentage
Increased	36	95%
Stay	2	5%
Decreased	0	0,0%

1. Univariate Analysis

In the study, of the 38 respondents, the pre-test average score (before education through video media) was 22.34 with a minimum score of 14 and a maximum value of 27. While the post-test average score (after education through video media) was 26.42 with a minimum value of 23 and a maximum value of 29 where these results indicate an increase with the comparison

Based on the research results, in the pre-test 2 (5.3%) respondents had low knowledge, 8 (21%) respondents had sufficient knowledge, and 28 (73.7%) respondents had good knowledge. Meanwhile, in the post-test, 38 respondents (100%)

entered the criteria for good knowledge. Then, from 38 respondents after being given education through video media, it was found that 36 (95%) of respondents had increased knowledge, 2 (5%) had fixed knowledge, and there were no respondents whose knowledge had decreased.

2. Bivariate Analysis

a. Saphiro-Wilk normality test.

The normality test is carried out to determine whether the research data is normally distributed or not. Because the data taken was less than 50, the normality test used was the Saphiro Wilk test. After the normality test was carried out using the Saphiro Wilk test, it showed that the results of all data were <0.05, which means that the data were not normally distributed. So that the comparison test of the level of pre-test and post-test knowledge for the intervention and control groups used is an alternative test (Wilcoxon Test).

Tabel 2. Pre-test and post-test results.

Knowledge level	Pre-test	Percentage	Post-test	Percentage
Low	2	5,3%	0	0,0%
Sufficient	8	21%	0	0,0%
High	28	73,7%	38	100%

Tabel 3. Post-test frequency distribution.

	Frequency	Percentage (%)
Gender		
Male	18	47,4
Female	20	52,6
Total	38	100,0
Age		
19	1	2,6
20	15	39,5
21	15	39,5
22	7	18,4
Total	38	100,0

b. Wilcoxon test

Based on the Wilcoxon test, it was found that the value of $p = 0.000$ where the value is <0.05, which means that there is a significant difference in knowledge about maternal related to COVID19 in Diponegoro University General Medicine students class of 2017 before and after being given education via video and it can be concluded that there is an effect of educational videos on Maternal health



related to COVID19 on the results of knowledge of Diponegoro University General Medicine students in class 2017. In the Wilcoxon test, the results of the z coefficient value were -5.066 (minus), which means that the post-test score is greater than the pre-test.

DISCUSSION

The results of data analysis using the Wilcoxon test obtained p value = 0.000 where the value is <0.05 , which means that there is a significant difference in maternal knowledge regarding COVID19 in Diponegoro University General Medicine students class of 2017 before and after being given education via video and it can be concluded that there is an influence educational video about Maternal Health related to COVID19 on the knowledge results of Diponegoro University General Medicine students class of 2017.

These results indicate that education using video media has a positive impact in increasing knowledge. Sari N, et al.⁷ in their research entitled "The Effect of Education through Video Media on Knowledge and Family Attitudes about Pneumonia in Toddlers", shows that there is an effect of education through video media on knowledge where increased knowledge is influenced by learning media, namely videos that make it easier for respondents to remembering and perceiving the material given. Carmichael M, et al.⁸ also explained that most students like learning to use video as a medium where learning using video provides a flexible and independent learning style.

Video can describe an object moving together with natural sounds or appropriate sounds.⁹ In this study, education through video media also pays attention to media that are creative, interesting, and easy to understand so that the material presented is not boring so the material to be conveyed can be more leverage. In research by Laufianti, it was explained that with video, the message conveyed was more attractive and motivated to the audience. The message that is conveyed becomes more efficient because moving images can communicate messages quickly and real. Audiovisual messages are more effective because audiovisual presentations make the audience more concentrated.¹⁰

The video media in this research includes material and media aspects. Material aspects contain maternal health related to COVID-19 starting from the beginning of the COVID-19 pandemic, its

effects on mothers and fetuses, diagnosis, necessary examinations, pre-natal care such as antenatal care, handling during childbirth, postpartum handling, prevention and advice to be careful of hoaxes. The material presented is also displayed in order so that it is easier to understand. Then from the media aspect, in this research video the duration is 6 minutes 49 seconds where the duration is not too long, the video presentation also uses animation so it is more interesting and is accompanied by a narrator to explain the contents of the video. The selection of music for the accompaniment also considers the weak volume intensity (soft) so that it does not interfere with the visual presentation and the narrator so that the researcher chooses the instrument music.

This research is also in line with Sadiman's theory in his book entitled "Media education: Definition, development, and utilization" that video provides a stimulus to view and hearing by holding psychomotor, behavioristic, and cognitive principles, so that a person can receive material or information through the senses listener and vision maximally which is expected to encourage increased knowledge.¹¹

Education through video media is expected to provide clearer information to make it easier for someone to learn. The advantages of using video media include learning to be more interesting and easy to understand, can be used for independent study, can be repeated in certain parts that need to be clearer, can display a detail, and can be accelerated or slowed down so that learning will be more flexible.

In the future, general medical students will definitely face cases related to obstetrics and gynecology. In times of the COVID19 pandemic like today, general medical students need to know some basic things about maternal related to COVID19. Video as an educational medium can increase general medical students' knowledge about maternals related to COVID19 by displaying images, clear flow, and sound, all of which involve the senses of sight and hearing so that information is conveyed optimally. In addition, the material presented is also easy to understand because it is explained neatly and uses language that is easily understood by general medical students.



CONCLUSION

The study result showed that there is a significant difference in knowledge about maternal related to COVID19 before and after being given education via video and it can be concluded that there is an effect of educational videos on Maternal Health related to COVID19.

Ethical Approval

This research has been approved from Komite Etik Fakultas Kedokteran Universitas Diponegoro, 168/EC/KEPK/FK-UNDIP/VII/2020.

Conflicts of Interest

The authors declare no conflict of interest.

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