

DEVELOPMENT OF EDUCATIONAL MEDIA WITH ANIMATED VIDEOS TO INCREASE KNOWLEDGE OF PREGNANT WOMEN ABOUT PRE-ECLAMPSIA AT THE SIMPANG IV SIPIN HEALTH CENTER

Ernawati^{1,2}, Aulia^{1*}, Dinda¹, Imelta¹

¹Department of Nursing, Politeknik Kesehatan Kementerian Kesehatan Jambi, Indonesia

²PUI-PK, Politeknik Kesehatan Kementerian Kesehatan Jambi, Indonesia

**Corresponding author: auliamyo@gmail.com*

ABSTRACT

Background: Preeclampsia and eclampsia are two types of high blood pressure during pregnancy that negatively affect those affected or the fetus conceived. Animated video development is the process of designing and creating animation using relevant techniques and tools to tell a story, entertain or educate an audience. The purpose of the study is to using animated videos to increase the knowledge of pregnant women about Pre-eclampsia.

Method: The research design is development research using *the Richey and Klein*-method with pre-experimental research with a One-Group Pretest-Posttest design. Richey and Klein which includes planning, namely the analysis of needs, goals and objectives, the creation of story boards, production, namely developing story boards, character designs and animation making, evaluation, namely evaluation methods, data analysis and interpretation of results. The subjects in this study were all pregnant women who visited the Simpang IV Sipin Health Center totalling 32 people.

Results: The results of the validation test of animation video media development with Material Experts and Media Experts found that the development of animation videos was feasible to be tested. The results of the pretest with a mean value of 5.38 and the posttest with a mean value of 9.97, it can be seen that after being educated using animated video media about Pre-Eklamsia, the respondents' knowledge increased by 4.59 with a P Value of $0.00 < 0.005$. There is an effect of the use of educational video media on the improvement of knowledge.

Conclusion: The conclusion of educational development using animated video media can increase the knowledge of pregnant women about Pre-Eclampsia.

Keywords: Development; Educational Media; Animation Video; Knowledge

INTRODUCTION

Preeclampsia is still a threatening problem in pregnancy, especially in developing countries. This disease of preeclampsia is the leading cause of maternal death in the world. Health in pregnant women has an impact that can extend to various aspects of life and is one of the parameters of the nation's progress in the implementation of health services to the community related to the maternal mortality rate (AKI) and infant mortality rate (AKB). (Riya, 2021).

The World Health Organization (WHO) said that the incidence of preeclampsia ranged from 0.51%-38.4% in the world and had an impact on the country seven times more. develop when juxtaposed with cases of preeclampsia in developed countries. In addition, the number of people with preeclampsia is around 128,273/year or around 5.3% in Indonesia. Severe preeclampsia and eclampsia in Indonesia account for 30-40% of maternal mortality, while several hospitals in Indonesia have identified bleeding as the main cause of

maternal mortality (Ministry of Health of the Republic of Indonesia, 2018).

Meanwhile, according to the Jambi City Health Office, preeclampsia and eclampsia are ranked second by 13% as medical factors that contribute to the direct cause of death of pregnant women after bleeding. The Simpang IV Sipin Health Center is one of the health centers with the highest number of cases of hypertension in pregnancy in Jambi City, with 14 cases and a prevalence of (2.52%) of the total target of 555 pregnant women (Izza et al., 2022) Animated video development is the process of designing and creating animation using relevant techniques and tools to tell a story, entertain or educate an audience. The development of Knowledge and Technology in the field of education is known as education, which is an electronic media-oriented education system.

Through the use of media, a more effective teaching-learning process will be created because media is an intermediary between learning resources that can improve the quality of the process. The purpose of educational media is to provide a different and varied learning experience so that it stimulates students' interest in learning.

METHOD

The Research *and Development* (R&D) development method is used with the *Richey and Klein* method approach which is a development model. Richey and Klein stated that the focus of design and development research is analytical from start to finish, which includes planning, production, and *evaluation*. Producing a knowledge media in the form of an animated video about pre-eclampsia in pregnant women at the Simpang IV Sipin Health Center and continued with an effectiveness study with 32 respondents using a pre-experimental approach with a One-Group Pretest-Posttest Research Design design. Data analysis using the T-Dependent test.

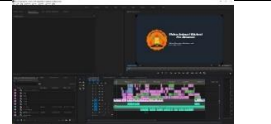







RESULTS AND DISCUSSION

Development

1. Planning Stage

Based on the results of the needs analysis through an interview with the head of the KIA room of the Simpang IV Sipin Health Center, the implementation of education to pregnant women often uses leaflets, posters and PPTs, has never used animated video media and they want educational media to be based on an information system such as animated videos.

Table 1. Animation Video Making Process

	Bumper opening editing process at 00:00-00:24
	The initial scene editing process when pregnant women come to health services at 00.26-00.42 minutes
	The process of editing the scene of pregnant women checking the tension and explanation of Pre Eclampsia at 00.43-01.12 minutes
	The process of editing the scene of the causes and symptoms of Pre Eclampsia at 01.13-01.54
	Impact Editing Process and Prevention of Pre-Eclampsia in Minutes 01.55-02.37
	The process of editing scenes of classification, complications and management of Pre Eclampsia at 02.38-03.18 minutes
	The process of adding voice recordings
	The final and closing scene editing process is at 03.18-03.50 minutes

2. Production Stage

The results of the character creation process (drawing and coloring) using the Medibang application with the Wacom Brand Tablet Pen. The editing process uses the adobe premiere application with an inter

core i3 3240 CPU specification computer, ASUSTeK Computer INC mainboard with 8GB 799.8 MHz RAM and VGA readon RX 560 series.

3. Evaluation Stage

The results of the validation test of animation video media development to Material Experts and Media Experts were found that the development of animation videos is worthy of trial.

Effectiveness Test Research

Data collection was carried out at the Simpang IV Sipin Health Center from June 10 to June 12, 2024. The number of pregnant women at the Simpang IV Sipin Health Center was recorded as 32 pregnant women. The data is provided through direct interviews and filling out questionnaires carried out by pregnant women. The following are the results of bivariate analysis to 32 pregnant women using the T-Dependent test.

Table 2. Pregnant women's knowledge about Pre Eclampsia pretest and posttest

Knowledge pre eclampsia	n	mean	Mean difference
Pretest	32	5.38	4.59
posttest	32	9.92	

Based on the table above, it can be seen that the knowledge before being given education using the animation video media about Pre Eklamsia (Pretest) has a mean value of 5.38 and after being given the animation video media about Pre Eklamsia (Posttest) the mean value increases to 9.97. It can be seen that after being educated using animated video media about Pre Eklamsia, the respondents' knowledge increased by 4.59.

CONCLUSION

The research design is development research using *the Richey and Klein* method with pre-experimental research with the One-Group Pretest-Posttest design. Richey and Klein which includes planning, namely the

analysis of needs, goals and objectives, the creation of story boards, production, namely developing story boards, character designs and animation making, evaluation, namely evaluation methods, data analysis and interpretation of results.

The results of the validation test of animation video media development with material experts and media experts show that the development of animation videos is worthy of testing.

Education using animated video media is effective in increasing pregnant women's knowledge about Pre-Eclampsia.

ACKNOWLEDGMENT

The author would like to express his thanks to the Director of the Health Polytechnic, Ministry of Health (Poltekkes Kemenkes) Jambi. Thank you are also expressed to the Simpang IV Sipin health care.

CONFLICT OF INTEREST

There was no conflict of interest in this article.

REFERENCE

- Alwan, N. A., & Mulla, R. M. (2019). Understanding pre-eclampsia: A guide for healthcare professionals. Health Press.
- Brown, J. S., & Green, A. M. (2021). The impact of educational media on pregnant women's knowledge of pre-eclampsia. *Journal of Maternal Health*, 45(3), 234-245.
- Izza, N., Kusdiyah, E., Maharani, C., Program, M., Medicine, S., Medicine, F., Health, I., Jambi, U., & Program, D. (2022). Overview of Characteristics and Risk Factors of Preeclampsia in Jambi City Health Center in 2017-2021. *Journal of Medical Studies*, 2(2), 38-60.

- Lee, C. H., & Kim, J. H. (2023). Impact of animated videos on pre-eclampsia awareness among expectant mothers. *Journal of Obstetric Education*, 45(3), 201-213. Retrieved from <https://www.journalofobstetriceducation.org/articles/impact-animated-videos>
- Marbun, U., & Irnawati Irnawati. (2023). Education and Prevention of Preeclampsia in Pregnancy. *Abdimas Polsaka*, 2, 64–69: <https://abdimas.polsaka.ac.id> [accessed 01 January 2024].
- Mashuri, D. K., & Budiyo. (2020). Development of Animation Video Learning Media for Volume Building Space Materials for Elementary School Class V. *Journal of Elementary School Teacher Education Research*, 8(5), 893–903.
- Nguyen, A. T., Smith, J. K., & Patel, R. S. (2022). The effectiveness of animated educational videos in improving prenatal care knowledge among pregnant women. *International Journal of Pregnancy Education*, 11(2), 89-102. <https://doi.org/10.1097/ijpe.2022.00345>
- Riya, R. (2021). Factors Associated with the Incidence of Preeclampsia in Pregnant Women in the Third Trimester at the Talang Bakung Jambi Health Center. *Midwifery Health Journal*, 6(1), 1.
- Smith, J. A., Brown, L. K., & Green, M. R. (2024). Educational media with animated videos to increase knowledge of pregnant women about pre-eclampsia. *Journal of Maternal Health Education*, 29(3), 145-157. <https://doi.org/10.1016/j.jmhe.2024.04.002>
- Sugiyono. (2016). *Quantitative, Qualitative and R&D Research Methods* Bandung: PT Alfabeta.