

Effectiveness of Video Education, Attitudes And Long-Term Contraceptive Use

Esthi Pujiati¹⁾ Esti Handayani²⁾ Masini³⁾

Email : esthimadita@gmail.com

ABSTRACT

Background: One indicator of the success of the national program was the coverage of the use of long-term contraceptive methods. Muntlan Regional Hospital had implemented a family planning service program in the hospital, but the coverage of the use of long-term contraceptive methods was still low. Video media is a digital-based media that is effectively used to provide health education. The goals of this study was to determine the effectiveness of health education trough video on attitudes and use of long-term contraceptive methods.

Methods: The type of research is quasi-experimental quantitative research nonequivalent control group design. The independent variable in this study is health education through video media, the dependent variable in this study is the attitude and use of long-term contraceptive methods (LTCM). This research was conducted on February - March 2024. The sampling technique was used purposive sampling. The research sample consisted of 66 respondents. The intervention group was given an animated video, and the control group was given leaflet. Data analyzed used Mann Whitney and Chi-Square.

Results: The majority of respondents had a high school education of 43 people (65.15%). The majority of mothers did not work as many as 55 people (83.33%). The majority of respondents had 2 children, namely 14 people (21.21%). The majority of respondents were <28 years old as many as 41 people (62.12%). The majority of respondents used LTCM as many as 46 people (69.70%). The results of the study showed that there was a significant difference before and after the intervention was given, stated with a p value of 0.000 and the mean rank of the video was greater than the leaflet of 43.68. The results of the chi square analysis showed that there was a difference in the use of LTCM for mothers giving birth before and after the intervention was given, stated with a p value of 0.007 (<0.05).

Conclusion: Video is an educational media that can increase attitudes and choices of birth control after childbirth

Keyword : Contraception, Long-term Contraceptive Methods, Video

¹RSUD Muntlan, Magelang, Central Java, Indonesia

Jl. Kartini No.13, Balemulyo, Muntlan, Magelang, Jawa Tengah Indonesia

^{2,3}Department of Midwifery Magelang, Poltekkes Kemenkes Semarang, Indonesia

Jl. Perintis Kemerdekaan, Magelang Utara, Jawa Tengah, Indonesia

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Background. Long-Term Contraceptive Methods (LTCM) are a practical approach to fulfilling reproductive rights. LTCM has the highest effectiveness among contraceptive methods, providing protection from three years to a lifetime (Kemenkes RI, 2021). LTCM helps in pregnancy planning, determining the desired number of children, preventing unwanted pregnancies, and terminating fertility (Sari, Sopiani and Irawati, 2020).

Pregnancy planning is essential, as unplanned pregnancies can lead to complications affecting maternal and infant

health and increasing maternal and infant mortality rates. LTCM is ideally provided during the postpartum period, immediately after delivery up to 42 days postpartum, before sexual activity resumes (Darmastuti *et al.*, 2021). Fertility return is unpredictable; it can occur as early as 45-94 days postpartum or even earlier in non-breastfeeding mother (Awwaliah, Salmah and Ikhsan, 2021).

The government considers postpartum LTCM usage a key indicator of national program success. Of the 70% of postpartum mothers using contraception, 50% should

ideally opt for LTCM (BKKBN, 2020). However, target achievements remain suboptimal. In 2022, the national LTCM coverage was 22.6%, with Central Java at 22.9% and Magelang Regency at 22.3% in 2021.

Hospitals play a crucial role in increasing LTCM adoption due to their large pool of postpartum mothers. Muntilan Regional Hospital implements hospital-based family planning services, including counseling, health education, and postpartum contraception services. However, postpartum LTCM coverage in the hospital was 21.02% in 2021 and 25.22% in 2022. Although increasing, this remains below the program success indicator.

The quality of health education provided by healthcare providers directly affects LTCM adoption (Sulistiyani, 2021). Effective health education during prenatal and postnatal periods helps clients recognize their needs, choose the most suitable contraceptive method, and maintain consistent use (Sulistiyanto, 2022). The lack of knowledge regarding contraceptive methods, their safety, and suitability often results in difficulty choosing the right contraceptive, leading to high parity rates, which are associated with increased maternal and infant morbidity and mortality (Holila *et al.*, 2020).

Healthcare providers play a crucial role in improving health education, knowledge, attitudes, and the acceptance of LTCM (Qoimah *et al.*, 2023). Health education delivery should incorporate engaging media to enhance understanding and behavior change. Various educational media include lectures, audio, printed materials, visual media, and audiovisual media (Kartikawati, 2020).

Video media is an effective digital-based educational tool kesehatan (Nur Djannah *et al.*, 2020). Video as an audiovisual medium engages both hearing and sight, making learning easier and more memorable, thus facilitating behavioral and attitudinal change (Kartikawati, 2020). Compared to leaflets, video-based education is expected to be more effective in increasing knowledge, fostering

positive attitudes, and encouraging LTCM use at Muntilan Hospital. Previous studies indicate that animated video counseling effectively improves knowledge and attitudes towards IUD contraception and postpartum contraceptive uptake (Pramudita, Widyasih and Estiwidani, 2022).

The government supports efforts to increase the number of LTCM acceptors by increasing the fulfillment of access to contraception, including emphasizing officers to provide health education from the beginning of pregnancy, pregnancy, childbirth and postpartum, as well as encouraging all health facilities to provide contraceptive services, especially LTCM (BKKBN, 2020). This study examines the effectiveness of health education through video in shaping attitudes and LTCM use at Muntilan Hospital

Methods. The type of research is quasi-experimental quantitative research nonequivalent control group design. The variables of this study consist of independent variables and dependent variables. The independent variable in this study is health education through video media, the dependent variable in this study is the attitude and use of long-term contraceptive methods (LTCM). This research was conducted for 3 months from February - March 2024. The sampling technique that was used in this study was purposive sampling. The sample size was determined using the Slovin formula. Based on this formula, the research sample consisted of 66 respondents, divided into 33 respondents in the intervention group and 33 respondents in the control group. The intervention group was given an animated video, and the control group was given leaflet. This study used a questionnaire distributed through Google Forms to assess respondents' attitudes, consisting of 20 questions covering beliefs, feelings, and tendencies to use long-term contraceptive methods (LTCM). In this study, a validity test was performed on the respondents' attitude aspect through expert judgment. The validator in this study was a lecturer in the Midwifery Study Program at Poltekkes Kemenkes

Semarang. The validated instrument was a question designed to measure attitudes toward long-term contraceptive methods. This research was conducted with careful attention to research ethics, including informed consent to participate as a respondent, excluding the respondent's name, and maintaining the confidentiality of information and the identity of the research subjects. Data were analyzed with Mann Whitney and Chi-Square.

Result and Discussion. The following are the results and discussions based on the research that has been carried out.

Table 1. Frequency distribution of attitudes about LTCM before and after health education was given through video media and leaflets

Variable	N	Median	SD	Min	Max
Pretest					
Video	33	45.00	4.14	40	59
Leaflet	33	45.00	3.77	39	59
Posttest					
Video	33	60.00	3.16	55	69
Leaflet	33	57.00	4.69	40	63

Based on Table 1, it is evident that the median attitude score before receiving video education was 45.00, increasing to 60.00 post-intervention. In contrast, the median attitude score before receiving a leaflet was 45.00, rising to 57 after the intervention. The minimum attitude score before the video intervention was 40, with a maximum of 59, which increased to a minimum of 55 and a maximum of 69. This indicates an increase in attitude scores before and after receiving health education via video. Respondents who received leaflet education also showed an increase, with the maximum score rising from 59 to 63.

Health education is a systematic process of providing objective and comprehensive information, guided by interpersonal communication skills, mentoring techniques, and clinical knowledge mastery, aimed at helping individuals recognize their current condition, the issues they face, and determine solutions or actions to address them (Maftuha, Purnamasari and Hariani, no date). Through this process, communities, groups, or individuals can acquire better health

knowledge, ultimately influencing their attitudes, perceptions, motivation, confidence, and behavior (Almaiah *et al.*, 2021).

An individual's attitude is influenced by the information they receive. If a mother has never received accurate information about LTCM, she may form beliefs based on personal perceptions or external influences. A lack of understanding about the importance of contraception contributes to a less supportive attitude towards health maintenance (Hanifah Kusuma, 2023). Other studies also indicate that changes in postpartum mothers' attitudes towards contraception occur due to increased knowledge (Sulistiyanto, 2022). This aligns with theories suggesting that attitudes are formed after obtaining information, observing, or experiencing an object firsthand (Irwan, 2017).

Table 2. Distribution of frequency of LTCM use after health education was provided through video media and leaflets

Variable	Groups					
	Video		Leaflet		Total	
	n	%	n	%	n	%
Use of LTCM						
Not using	5	15.2	15	45.5	20	30.30
Using	28	84.8	18	54.5	46	69.70
Total	33	100	33	100	66	100

Based on Table 2, it can be seen that the variable of long-term contraceptive method (LTCM) usage in the video group shows that 28 respondents (84.8%) used LTCM, whereas in the leaflet group, 18 respondents (54.5%) used LTCM. Overall, the total number of respondents using LTCM was 46 (69.70%).

Respondents who received information about LTCM postpartum gained an understanding of its definition, types, side effects, advantages, and disadvantages, which served as a foundation for their decision to use LTCM. As a result, respondents became aware of and understood their current condition, enabling them to determine the most appropriate contraceptive method to use. Information is a crucial component of services that significantly influences both prospective and current contraceptive acceptors in determining whether the chosen contraceptive

method aligns with their health condition and reproductive goals. Comprehensive information about contraception is essential in guiding individuals to make informed decisions regarding their preferred contraceptive method (Mularsih, S., Munawaroh, L., & Elliana, 2018). A person's knowledge can be acquired from various sources, including information (media, counseling), education, and personal experience (D'Souza et al., 2022). The results of this study align with the theory that learning media can serve as a supporting tool that stimulates the thoughts, feelings, attention, and interest of the material (Rilyani et al, 2019). The low usage of contraceptive devices is largely influenced by public knowledge and misconceptions about contraception. This finding is consistent with previous research stating that after receiving clear and accurate information about birth planning and contraception, most mothers decided to use postpartum contraception (Herawati et al., 2018). Another study also found that mothers with good knowledge about contraception were more likely to use an intrauterine device (IUD), with an adoption rate of 54.5% (Anggrainy, Amalia and Effendi, 2022).

Table 3. Differences in Attitudes Before and After Being Given Health Education Through Video Media

Attitude	N	Mean	SD	P value
Pre Test Video Media	33	45.36	3.77	0.000
Post Test Video Media	33	60.91	3.16	

Based on Table 3, it can be seen that the p-value is 0.000 (<0.05), which indicates a significant difference in attitudes before and after receiving health education through video media. Health education is conducted by disseminating information and instilling trust so that the community becomes aware, knowledgeable, and understands the information, enabling them to follow recommendations that suit their health conditions. Video media is at the fourth level in Edgar Dale's Cone of Experience, which illustrates the intensity of each visual aid within a hierarchy kerucut (Syarifuddin and Utari, 2022). The use of video media as a tool for delivering health education on long-term contraceptive methods (LTCM) was well

received by respondents. This is evidenced by the increase in attitude scores before and after the intervention. The results of this study are consistent with previous research, which found that videos can enhance attitudes and knowledge about IUD contraception. Additionally, there is a difference in mothers' interest in using LTCM before and after receiving health education through audiovisual media (Sulistiyan, 2021). Video media is effective in improving respondents' knowledge, and as knowledge increases, their mindset and attitude toward LTCM also improve (Qoimah et al., 2023).

Table 4. Differences in Attitudes Before and After Being Given Health Education Through Leaflet

Attitude	N	Mean	SD	P value
Pre Test Leaflet	33	45.18	4.14	0.000
Post Test Leaflet	33	55.00	4.70	

Based on the Wilcoxon test results, the p-value was found to be 0.000 (<0.05), indicating a significant difference in attitudes before and after receiving health education through leaflet media. A leaflet is an engaging health education medium used as an educational aid for the control group. It allows respondents to study independently at their own pace, revisit the information during their free time, and share it with their close environment, such as friends and family. Additionally, respondents do not need to take notes, as all necessary information is already provided. One of the advantages of leaflets is that the information contained within them is highly reliable, as they are usually printed or issued by official institutions. The findings of this study align with previous research, which stated that there is a significant difference in mothers' knowledge and attitudes regarding the selection of long-term contraceptive methods (LTCM) (Utami, 2023). Health education plays a crucial role in understanding various contraceptive tools, their usage, and side effects, ultimately influencing attitudes and the selection of appropriate and effective contraception (Pramudita, Widyasih and Estiwidani, 2022).

Table 5. The Effectiveness of Video Media and Leaflets in Improving WUS Attitudes towards LTCM

	n	Mean Rank	P value	Z
Difference				
Leaflet	33	23.22	0.000	-
Video	33	43.68		4.322

Based on the Mann-Whitney test results, health education using video and leaflet media influenced attitudes toward long-term contraceptive methods (LTCM). There was a significant difference between video-based and leaflet-based health education in shaping attitudes among women of reproductive age (WUS), as indicated by a p-value of 0.000 (<0.05). The mean rank for the video group was 43.68, which was higher than that of the leaflet group (23.22), meaning that video-based health education was more effective than leaflet-based education in improving attitudes toward LTCM. This study utilized video and leaflet media in delivering health education to encourage respondents to develop a supportive attitude toward LTCM usage. The analysis results showed an increase in attitudes before and after the intervention, with a significant improvement in post-intervention attitudes. This attitude change was likely influenced by exposure to educational videos as a form of health education.

A positive attitude toward an object emerges when an individual has a good level of knowledge about it. Therefore, midwives or other healthcare providers should enhance health education efforts to inform the community, especially women of reproductive age, about the benefits of using LTCM. These findings are in line with previous research, which demonstrated a significant statistical relationship between knowledge and contraceptive choice ($\text{sig}=0.001$) (Sari, Y. N. I., Abidin, U. W. and Ningsih, 2019). The process of attitude formation also depends on how stimuli are received. The delivery of engaging, easy-to-understand, and memorable information affects how individuals process and retain the information provided. Video media contains moving images, sound, and a

combination of colors that attract attention. It can be replayed multiple times, engaging both visual and auditory senses, making it easier for individuals to absorb, recall, and comprehend the information. Educational videos can be played selectively by choosing specific frames, making digital-based educational videos, such as those used in this study, effective, efficient, and precise.

According to Edgar Dale's Cone of Experience, video media provides a higher level of experience and information retention compared to leaflet media. Visual media alone allows individuals to remember 30% of the information provided, whereas media involving both visual and auditory senses enables individuals to retain up to 50% of the received information (Syarifuddin and Utari, 2022).

This finding is consistent with previous studies, which found that educational video media significantly improves the knowledge, attitudes, and behavior of postpartum contraceptive users (Sulistiyanto and Ediyono, 2022). Additionally, video media is more effective in enhancing attitudes toward intrauterine device (IUD) use compared to leaflet media (Kartikawati, 2020). Attitudes toward LTCM usage are influenced by individuals' beliefs regarding its consequences. These beliefs are related to an individual's understanding of LTCM, including its various benefits or potential drawbacks. Video media is more effective than leaflets because it enables stronger visualization compared to static text or images. This allows messages and information to be conveyed in a more engaging and easily understandable manner. Furthermore, people tend to retain information presented through video more effectively than that presented through static text or images.

Table 6. Differences in the Use of LTCM after Health Education is Provided Through Video Media and Leaflets

Video Media and Leaflets							
Variable	Use of LTCM				Total		P value
	Using		Not Using				
	n	%	n	%	n	%	
Video Media	28	84.8	5	15.2	33	100	0.007
Leaflet	18	54.5	15	45.5	33	100	

Based on these values, it is known that more mothers who received health education through video used long-term contraceptive methods (LTCM) compared to those who received health education through leaflets, with a total of 28 mothers (84.8%). The chi-square analysis results show a difference in the use of LTCM after receiving health education through video and leaflet media, as indicated by a p-value of 0.007 (<0.05). Video is an informative, objective, engaging, comprehensive, and systematic health education medium that helps individuals recognize their conditions and problems and determine solutions to address them. Videos about LTCM allow prospective acceptors to understand whether the chosen contraceptive method is suitable for their health conditions and aligns with their goals in using contraception (Kartikawati, 2020).

The results of this study align with previous research, which found that counseling pregnant women about contraception usage showed significant results (Herawati *et al.*, 2018). Family planning behavior or practices showed significant differences in mothers who received education through video media (Sulistiyanto, 2022). This study supports the theory that learning media can serve as a supporting tool that stimulates the recipient's thoughts, emotions, attention, and interest (Rilyani *et al.*, 2019). One type of media used in education is video. The use of media that contains text and images accompanied by audio can enhance educational effectiveness. This media prioritizes messages that usually consist of words, images, or photos arranged in color schemes (Paraga, 2017).

As explained in theoretical concepts, the goal of health education is to help clients see their problems more clearly so they can choose their own solutions (Rilyani *et al.*, 2019). Through proper health education about contraception, clients can confidently determine their contraceptive choices according to their preferences, ensuring they do not regret their decisions in the future (Paraga, 2017). The follow-up plan for this research is to develop new methods and

applicable health education approaches to improve the knowledge and attitudes of postpartum mothers in obtaining long-term contraceptive services at RSUD Muntilan, Magelang Regency.

Conclusion and Suggestions. Based on the results of the study, it can be concluded that video media is effective in improving attitudes and use of Long-Term Contraceptive Methods. Midwives at Muntilan Hospital are advised to use media in providing health education about family planning by combining videos and leaflets as a method to improve knowledge in the selection and use of long-term contraceptives.

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