



The Effect of Galactagogue Education Using Video Media on The Knowledge, Attitudes and Behaviors of Postpartum Mothers

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ABSTRACT

Background: According to the Basic Health Research (RISKESDAS) data, the exclusive breastfeeding rate in Indonesia in 2022 was 67.96%. Data from 2021 indicated that Jambi Province had a rate of exclusive breastfeeding below the national average. Providing counseling to breastfeeding mothers and offering additional support through the use of galactagogues aims to enhance knowledge, attitudes, and practices among postpartum mothers to support the process of milk production.

Purpose: To assess the impact of educational videos about galactagogues on the knowledge, attitudes, and behaviors of postpartum mothers.

Methods: A quasi-experimental design with a pretest-posttest control group was used. Sampling was conducted using probability sampling with a systematic sampling technique based on odd-even selection, with an average sample size of 16 postpartum mothers per group. The instruments used included questionnaires for knowledge, attitudes, and behaviors, and educational videos. Data analysis employed the Wilcoxon test, Mann-Whitney test, and MANCOVA.

Results: The study found significant p-values for the educational video media in pretest-posttest assessments: knowledge (p-value = 0.001), attitudes (p-value = 0.001), and behaviors (p-value = 0.002). Educational videos were found to be more effective than lecture-based media, with p-values of 0.000 for knowledge, 0.005 for attitudes, and no significant effect on behavior with a p-value of 0.137. The test MANCOVA showed that age, education, and occupation did not significantly affect changes in knowledge, attitudes, and behaviors.

Conclusion: There is a significant impact of providing galactagogue education through video media on the knowledge and attitudes of postpartum mothers. Although there were

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changes in behavior before and after the video intervention, no significant difference was found between the video and lecture media regarding behavior. It is recommended to use video media as an educational tool in classes for pregnant and postpartum mothers, because it is more interesting, efficient, and easily accessible to mothers.

Keywords: Education; Galactagogue; Postpartum mothers

BACKGROUND

Exclusive breastfeeding for six months is a global strategy to improve infant development, growth, health and survival (Schobinger et al., 2022). According to Government Regulation of the Republic of Indonesia Number 33 of 2012 concerning exclusive breastfeeding is breast milk given to babies from birth to six months, without adding and replacing with other foods or drinks (except medicines and vitamins) (Brown et al., 2016). The Government Regulation of the Republic of Indonesia discusses the success of exclusive breastfeeding, which is influenced by the role and support of families, health workers, communities and governments towards exclusive breastfeeding (Wicaksono et al., 2020).

According to global data, breastfeeding rates are still far from the world target, namely from 2015 to 2021 the rate of breastfeeding in newborns within one hour of birth is 47% while the target in 2030 is 70%. Exclusive breastfeeding is 48% and has increased 10% from the previous decade, in 2030 exclusive breastfeeding is targeted at 70% and is still far from the exclusive breastfeeding target (World Health Organization, 2020). According to Basic Health Research (RISKESDAS) data, in 2022 exclusive breastfeeding in Indonesia amounted to 67.96%, while the rate of Early Breastfeeding Initiation (IMD) also decreased in 2019 from 58.2% to 48.6% in 2021 (UNICEF & WHO, 2023).

Based on statistical data in 2021, it is said that Jambi Province has a breastfeeding rate that is still below the national level, with a percentage of 71.37 and has not reached the national target of 80% (World Health Organization Regional Office for the Eastern Mediterranean, 2022). West Tanjung Jabung Regency is one of the districts in Jambi Province that experienced a decrease in exclusive breastfeeding coverage from 2019 at 77.6% and in 2022 with a coverage of 72.2% (UNICEF & WHO, 2023).

Problems that can occur due to lack of breastfeeding in children can have an impact on the incidence of stunting for growth and development (Sampe, 2020). Stunting in West Tanjung Jabung Regency with a prevalence rate of 19.7% in 2021, and in Betara sub-district is one of the sub-districts that has not reached the exclusive breastfeeding

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target and the highest incidence of stunting in West Tanjung Jabung Regency (Yeboah et al., 2019).

The cause of the failure of exclusive breastfeeding is mothers who feel that there is little milk production so that mothers feel unable to provide breast milk according to the needs of their babies (Maonga et al., 2016). the lack of maternal knowledge affects the perceptions and beliefs of mothers to provide exclusive breastfeeding to toddlers (Ernawati et al., 2023). The lack of maternal nutrition is one of the causes of the failure of exclusive breastfeeding, babies who do not get enough nutrition can affect growth and development and due to lack of nutrition in breastfeeding mothers can have a negative impact on maternal health and the incidence of stunting in children (de Onis et al., 2013; Vir, 2016).

One study said that exclusive breastfeeding can reduce the risk of stunting, toddlers who are not exclusively breastfed have a greater chance of experiencing stunting than toddlers who are exclusively breastfed (Hendaus et al., 2018). Some efforts that can be made to improve the success of exclusive breastfeeding are by providing information, family support, community and health service systems. Government Regulation No. 33/2012 also states that a health service facility is a tool or place used to organize health service efforts, both promotive, preventive, curative and rehabilitative carried out by health workers, the Government, and the community.

Health education media used in providing information can be provided in various forms, including electronic media such as videos and lectures (Simarmata et al., 2024). Previous research stated that the provision of health education education services using audiovisual media had an effect on the knowledge, attitudes and behavior of postpartum women in finding danger signs during the postpartum period (Setiawati et al., 2022).

One way to increase mothers' confidence in providing exclusive breastfeeding, and overcome any maternal problems related to breastfeeding and stimulate breast milk production can use foods that contain galactagogues (Ghammachi et al., 2022). Galactagogue is a substance found in food or medicine that is used to stimulate, maintain and increase breast milk production (Gyamfi et al., 2021).

The use of local plants as a source of natural galactagogue is believed to be used by mothers in overcoming problems in breast milk production, some traditional and easily found plants such as bangun-bangun plants (*coleus amboinicus* Lour), katuk leaves, cassava leaves, green beans, moringa, bitter melon, and papaya leaves (UNICEF/WHO/WORLD BANK, 2021; Wemakor et al., 2018).

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Based on these data, researchers are interested in conducting research on “the effect of galactagogue education through video media on the knowledge, attitudes and behavior of postpartum women at the Sukarejo Health Center”.

OBJECTIVE

The main objective of this study was to determine the effect of educational videos on galactagogue content on the knowledge, attitudes and behavior of postpartum women.

METHODS

This study employed a quasi-experimental research design with a nonequivalent control group design, using a two-group pre-test–post-test design. The intervention group received educational material through video media, while the control group received lecture-based education. The population in this study consisted of postpartum mothers in the working area of Sukarejo Public Health Center (Puskesmas Sukarejo). The study was conducted from April 2024 until completion. Sampling was carried out using probability sampling with an even–odd systematic selection technique, based on predetermined inclusion and exclusion criteria. The sample size was calculated using the formula for mean differences between two groups. Data collection methods included both primary and secondary data. Primary data were obtained from questionnaires, while secondary data were collected from postpartum records at Sukarejo Public Health Center. The questionnaire used in this study was tested for validity and reliability by distributing it to postpartum mothers who shared similar characteristics with the study respondents. To minimize confounding variables, the researcher established clear inclusion and exclusion criteria, conducted random group assignments, and provided educational interventions in the same manner and under the same conditions for both groups. Data analysis was performed using univariate, bivariate, and multivariate analyses, with the Wilcoxon test, Mann–Whitney test, and MANCOVA as the statistical methods applied. The ethical considerations in this study included obtaining informed consent, ensuring anonymity, maintaining confidentiality, and adhering to the ethical principles of non-maleficence, beneficence, and justice for all postpartum participants.

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RESULTS

Table 1. Wilcoxon test results pretest and posttest knowledge, attitude and behavior

	Posttest of knowledge video media-pretest of knowledge video media	Posttest of knowledge lecture media-pretest of knowledge lecture media	Posttest of attitude video media-pretest of attitude video media	Posttest of attitude lecture media-pretest of attitude lecture media	Posttest of behavior video media-pretest of behavior video media	Posttest of behavior lecture media-pretest of behavior lecture media
Z	-3,435 ^b	-3,429 ^b	-3,413 ^b	-2,512 ^b	-3,104 ^b	-3,108 ^b
Asymp. Sig (2-tailed)	,001	,001	,001	,012	,002	,002

Table 1. shows that video media on the knowledge pretest-posttest with a sig value. 0.001, video media on the attitude pretest-posttest with a sig value. 0.001, and video media on the behavior pretest-posttest with a sig value. 0,002. Lecture media on the knowledge pretest-posttest with a sig value. 0.001, lecture media on the attitude pretest-posttest with a sig value. 0.012, and lecture media on the behavior pretest-posttest with a sig value. 0,002.

Table 2: Differences in knowledge scores between video and lecture groups

Variable	Mean	Knowledge	
		Difference	P-Value
Pretest result			
Pretest video media	15,87	0,74	0,838
Pretest lecture media	15,13		
Posttest result			
Posttest video media	21,33	12,76	0,000
Posttest lecture media	8,57		

Based on table 2. it can be interpreted that between the pretest knowledge groups with a p-value of $0.838 > 0.05$, which means that there is no significant difference between video media and lecture media. While based on the results of the posttest p-value, the p-value is $0.000 < 0.05$, which means that there is a significant difference between video media and lecture media, this states that video media is more effective than lecture media in increasing the knowledge of postpartum women.

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Table 3. Differences in attitude scores between video and lecture groups

Variable	Mean	Difference	Attitude P-Value
Pretest result			
Pretest video media	15,63	0,26	0,935
Pretest lecture media	15,37		
Posttest result			
posttest video media	19,93	8,86	0,005
posttest lecture media	11,07		

Based on table 3. it can be interpreted that between the pretest attitude groups with a p-value of $0.935 > 0.05$ which means that there is no significant difference between video media and lecture media. While based on the results of the posttest p-value, the p-value is $0.005 < 0.05$, which means that there is a significant difference between video media and lecture media, this states that video media is more effective than lecture media in improving the attitude of postpartum women.

Table 4. Differences in behavioral scores between video and lecture groups

Variable	Mean	Difference	Behavior P-Value
Pretest result			
Pretest video media	17,27	4,04	0,285
Pretest lecture media	13,23		
Posttest result			
posttest video media	17,80	470	0,137
posttest lecture media	13,10		

Based on table 4. it can be interpreted that between the pretest behavior groups with a p-value of $0.285 > 0.05$, which means that there is no significant difference between video media and lecture media. While based on the results of the posttest p-value, the p-value is $0.137 > 0.05$, which means that there is no significant difference between video media and lecture media, this states that video media and lecture media are not effective in improving the behavior of postpartum women.

Table 5. MANCOVA analysis results

Source	Dependent variabel	Type III sum of squares	DF	F	Sig
Age	Knowlade	0,735	1	0,095	0,760
	Attitude	13,802	1	0,460	0,504
	Behavior	247,042	1	5,469	0,127
Education	Knowlade	7,907	2	0,511	0,606
	Attitude	115,925	2	2,127	0,139
	Behavior	608,885	2	9,228	0,101
Occupation	Knowlade	1,232	1	0,160	0,692
	Attitude	0,032	1	0,001	0,974
	Behavior	16,662	1	0,310	0,582

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Based on the MANCOVA test, age, education, and occupation did not have a significant influence on maternal knowledge, attitudes, and behavior with a $p\text{-value} > 0.05$.

DISCUSSION

The results of this study indicate that the use of video media is more effective in increasing the knowledge of postpartum women. This is in line with research (Kassa et al., 2021; Rice & Williams, 2021) that providing health promotion using video media is better for postpartum women to understand and understand.

In line with the study by (Fitriana et al., 2022; Melo et al., 2021) audio-visual media not only produce more effective learning in a shorter period of time but also result in information that is retained longer and remembered better. This finding indicates that presenting information through a combination of visual and auditory elements enhances the respondents' comprehension and retention of the material delivered. In the context of this study, the use of video media as a tool for galactagogue education proved effective in improving the knowledge, attitudes, and behaviors of postpartum mothers because the messages were engaging, easy to understand, and could be repeatedly viewed. Changes in attitude can also be influenced by several factors, such as age, education, and occupation of postpartum mothers, which determine the level of understanding and acceptance of health information. Therefore, video media serve as a precise and targeted health promotion tool that aligns with the needs and learning styles of postpartum mothers in obtaining relevant information about improving breast milk production.

The findings of this study are also consistent with (Legiati et al., 2020) who reported that nutrition education using video media on adolescents' fruit and vegetable consumption behavior influenced behavior change, although the improvement was not statistically significant. The authors emphasized the need for additional nutrition education to reinforce awareness of adequate dietary recommendations. This similarity indicates that the effectiveness of video-based education is not solely determined by its presentation format but also depends on the frequency of exposure and the reinforcement provided after the intervention.

Furthermore, this study is supported by (Ricchi et al., 2020) who found that age did not significantly affect the increase in knowledge among women of reproductive age after receiving health education through video media about breast self-examination (BSE), with a $p\text{-value}$ of $0.542 > 0.005$. This finding reinforces the current study's results, suggesting that improvements in knowledge and attitude are more strongly influenced by the effectiveness of the media and the method of delivery rather than by demographic factors such as age. This implies that video media have substantial potential to enhance the effectiveness of health promotion since they are universal and accessible to individuals of varying ages and educational backgrounds.

Overall, the results of this study strengthen the evidence that video media as a

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galactagogue education tool can serve as an effective strategy to enhance knowledge, foster positive attitudes, and encourage behavioral change among postpartum mothers in supporting the success of exclusive breastfeeding. These findings also emphasize that interactive, media-based educational approaches can be integrated into midwifery services to improve the quality of maternal and child health interventions.

CONCLUSION

The results of this study are expected to improve the knowledge, attitudes and behavior of postpartum women towards galactagogue which can increase exclusive breastfeeding and can prevent stunting in Indonesia, especially in the Sukarejo Health Center Working Area, Betara District, and can be a guide for health workers in making it easier to provide education about the influence of galactagogue to postpartum women.

This study demonstrated that video media significantly improved postpartum mothers' knowledge ($p = 0.001$), attitudes ($p = 0.001$), and behaviors ($p = 0.002$) toward galactagogues, showing greater effectiveness than lecture methods in enhancing knowledge ($p = 0.000$) and attitudes ($p = 0.005$) but not behavior ($p = 0.137$); despite limitations such as a limited study area and short observation period, the use of video-based education represents a practical and innovative approach that can be further developed through wider implementation, long-term follow-up, and integration with digital health platforms to strengthen exclusive breastfeeding promotion and stunting prevention programs.

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