

Health Education With Video Increases Compliance With Exclusive Breastfeeding Among Mothers

Nurul Pujiastuti^{1*}, Ririn Indriani², Eny Sendra³

¹ Nursing Department, Poltekkes Kemenkes Malang, Indonesia

^{2,3} Midwifery Department, Poltekkes Kemenkes Malang, Indonesia

* Corresponding author: nurul_pujiastuti@poltekkes-malang.ac.id

ABSTRACT

The prevalence of breastfeeding in Indonesia is still low. This is due to low public awareness of the importance of breastfeeding, socio-cultural factors, lack of knowledge among pregnant women, families, and the community about the importance of breastfeeding, and incomplete support for increasing breastfeeding. This issue is exacerbated by the continuous promotion of infant formula. A mother's knowledge about breastfeeding plays a crucial role as it can increase compliance with breastfeeding. One effort to enhance mothers' knowledge and compliance with exclusive breastfeeding is through health education with video. This study aims to determine whether there is an effect of health education with video on mothers' compliance with exclusive breastfeeding. The research design used is pre-experimental with a one-group pre-test post-test design to compare mothers' compliance with exclusive breastfeeding before and after being provided with health education through video. This research was conducted from June to July 2023. The sample size of 30 respondents was calculated using the Slovin formula. The results of the Wilcoxon Signed Rank Test showed a Sig. (2-tailed) value of $0.000 < 0.05$, indicating that there is an effect of health education with video on mothers' compliance with exclusive breastfeeding. It is hoped that health education with video can become an alternative learning method to provide more engaging and efficient information that can be accepted by the community, especially for pregnant and breastfeeding mothers.

Keywords: Exclusive breastfeeding, health education, audiovisual

INTRODUCTION

Exclusive breastfeeding is essential during the first six months of life as it provides various nutrients and is not contaminated by any substances. Exclusive breastfeeding means that the mother only gives breast milk to the baby, without providing any other liquids or solid foods, not even water, except for drops/syrups of vitamins, minerals, or medications. After the baby reaches six months of age, complementary foods (MPASI) are introduced while the mother continues to breastfeed until the child is two years old. Introducing complementary foods too early, especially if they are prepared unhygienically and have low nutritional and energy content, can lead to malnutrition and infections in the child. This is because the child has a low immune response to diseases (Kemenkes, 2018, 2019; Pujiastuti et al., 2022).

The main issue behind the low prevalence of breastfeeding in Indonesia is the relatively low public awareness about breastfeeding, socio-cultural factors, lack of knowledge among pregnant women, families, and the community regarding the importance of breastfeeding, and incomplete support for increasing breastfeeding rates. This problem is exacerbated by the continuous promotion of infant formula, which contrasts with the fact that every drop of breast milk contains minerals, disease-preventing enzymes, and stronger antibodies than those found in formula milk. There is also a lack of community support, including from institutions that employ women. These institutions do not provide spaces and facilities for breastfeeding mothers at work (such as lactation rooms). A mother's ability to continue breastfeeding her baby heavily depends on the support from her husband, family, healthcare providers, community, and workplace environment (Untari, 2017; Pujiastuti, 2021).

WHO data indicates that the global average rate of exclusive breastfeeding is 38%. According to the 2021 health profile data in Indonesia, the coverage of exclusive breastfeeding among infants is 56.9%, with East Java at 56.3%. This is still below the national target of 80% (DinkesprovJatim, 2022; Kemenkes RI, 2022). Exclusive breastfeeding is crucial for infants aged 0 to 6 months because all the nutrients in breast milk are highly beneficial. According to the Basic Health Research (Risikesda) data from 2014 to 2018, the coverage of exclusive breastfeeding in Indonesia was 37.3% in 2014, 55.7% in 2015, 54% in 2016, 61.33% in 2017, and saw a significant drop to 37.3% in 2018. The achievement of exclusive breastfeeding in Indonesia still does not meet the target (Badan Litbang Kesehatan, 2018).

Based on data released by the East Java Provincial Statistics Agency, while the rates of Infant Mortality Rate (IMR) and Neonatal Mortality Rate (NMR) are relatively low, the absolute numbers remain high. Specifically, there are 4,059 infant deaths and 4,464 child deaths annually. This translates to approximately 11 infant deaths and 12 child deaths per day (DinkesprovJatim, 2022). If all infants receive adequate nutrition, especially from breast milk, for the recommended duration, then all forms of malnutrition can be prevented (Bappenas, 2021; Eidelman & Schanler, 2013; Salim, 2018). To reduce infant morbidity and mortality, UNICEF and WHO recommend exclusive breastfeeding for the first six months, introducing complementary foods (MPASI) at six months, and continuing breastfeeding until the child is two years old.

Research by Wicaksono (2016) indicates that the dominant factors related to infant survival are knowledge and adherence to breastfeeding practices. The study also found that infants who do not receive breast milk have a mortality risk 26.19 times higher than those who are breastfed immediately. The research demonstrated that infants who are breastfed for six months have a higher survival rate compared to those who are not breastfed. One way health professionals can support successful breastfeeding is by informing mothers about the importance of breast milk and how to breastfeed correctly to ensure a smooth breastfeeding process. The success of exclusive breastfeeding largely depends on the mother's knowledge about breastfeeding, as it increases her awareness and commitment to breastfeeding. In line with the research by Huang, et al (2017), breastfeeding issues are associated with the level of understanding of breastfeeding benefits, neonatal birth weight, vaginal delivery, breast size, breastfeeding experience, use of pacifiers, and the need for family support in breastfeeding. Most mothers who intend to exclusively breastfeed initially choose to supplement with formula and experience breastfeeding issues after leaving the hospital. The success of breastfeeding relies on education about breastfeeding before and after delivery, as well as the support provided by healthcare professionals.

Research by Alimuddin & Mauludiyah (2020) titled "The Effect of Health Education Through Audiovisual Media on Maternal Knowledge and Attitudes Regarding Early Initiation of Breastfeeding (IMD)" found a significant change in knowledge and attitudes among the group that received intervention through audiovisual media. The audiovisual media was designed to be as engaging as possible, which helped respondents grasp the information more quickly and sparked their curiosity. Statistical tests showed that there was a difference in knowledge and

attitudes before and after receiving health education using audiovisual media in the intervention group ($p<0.05$). According to the research conducted by Safitri, et al (2021) titled "The Effect of Educational Videos on Maternal Knowledge and Attitudes Towards Exclusive Breastfeeding," the use of video-based education significantly improved mothers' knowledge (p -value = 0.001). This indicates that using video as a medium for health education was effective in enhancing mothers' understanding of breastfeeding. The study by Sari (2021) titled "The Effect of Health Education with Audiovisual Media on Knowledge and Motivation Regarding Exclusive Breastfeeding" found that knowledge increased by 1.72 points in the intervention group after receiving audiovisual education. The statistical test showed a p -value of 0.000, which is less than $\alpha = 0.05$, indicating a significant effect of audiovisual health education on knowledge about exclusive breastfeeding. In comparison, the knowledge in the leaflet group increased by 8.5 points after receiving leaflet-based education. The statistical test also showed a p -value of 0.000, which is less than $\alpha = 0.05$, indicating a significant effect of leaflet-based health education on knowledge about exclusive breastfeeding.

Audiovisual refers to media that combines both sound and visual elements, such as video recordings, films of various sizes, audio slides, and more. The benefits of using audiovisual media include its ability to easily attract and maintain viewers' attention. Audiovisual media allows a large audience to access information from experts or specialists, enabling viewers to focus on the presentation, save time, and replay recordings as needed (Fujiyanto et al., 2016). The audiovisual education strategy is a medium that stimulates both the auditory and visual senses during the educational process (Notoatmodjo, 2014). This media provides stimulation to both hearing and sight, resulting in more optimal outcomes. This is because the majority of knowledge is processed through the eyes (75% to 87%), while 13% to 25% comes from other senses. Besides being easy to implement, this type of education is very engaging due to its mixed approach and can be studied independently at home later (Fernalia, Busjra, 2019).

A preliminary study was conducted through interviews with 5 breastfeeding mothers in Ngancar Village. The results revealed that almost all of the mothers lacked knowledge about breastfeeding due to insufficient information on its benefits, leading to hesitation in breastfeeding. Additionally, some mothers cited work-related reasons that prevented them from breastfeeding, while others were deterred by negative breastfeeding experiences reported by others, such as weight gain, changes in body shape, or sore nipples. The mothers had not received any information about exclusive breastfeeding in audiovisual format.

Based on the description, the researcher is interested in conducting a study titled "The Effect of Health Education with Video on Exclusive Breastfeeding Compliance at Posyandu Ngancar Village, Ngancar District, Kediri Regency." This study distinguishes itself from others by using a custom-made educational video tailored to specific needs.

The research question is: "Is there an effect of health education with video on exclusive breastfeeding compliance?" The general objective of the study is to determine the impact of health education with video on exclusive breastfeeding compliance. The specific objectives include identifying exclusive breastfeeding compliance before and after the health education with video and analyzing the effect of health education with video on exclusive breastfeeding compliance.

METHOD

The research design used is a pre-experimental approach with a one-group pre-test post-test design. This design examines cause-and-effect relationships by involving one group or subject that is observed before and after the intervention (Nursalam, 2017). The study design uses a pre-test and post-test approach to compare exclusive breastfeeding compliance before and after health education with video. The pre-test is conducted on all respondents before the intervention, and the post-test is conducted after the intervention to assess the impact of the video-based education on breastfeeding compliance. The population for this study consists of breastfeeding mothers with infants aged 0-6 months in Ngancar Village, Ngancar District, Kediri Regency, totaling 33 individuals during the period of June-July 2023. A sample size of 30 respondents was determined using the Slovin formula (Rukinah, 2019). The inclusion criteria for the study are breastfeeding mothers with infants aged 0-6 months, mothers in good health, and mothers willing to participate as respondents. The exclusion criteria include mothers who leave the study before its completion. The sampling technique used in this study is purposive sampling.

The independent variable in this study is health education through video, while the dependent variable is mothers' compliance with exclusive breastfeeding. The research instrument is a questionnaire using a Likert scale with four response options: 4 for strongly agree (SS), 3 for agree (S), 2 for unsure (TS), and 1 for disagree (STS). The compliance questionnaire consists

of 10 questions. The study is conducted at Posyandu Mawar, Ngancar Village, Ngancar District, Kediri Regency, with data collection occurring from June to July 2023. Univariate analysis will produce frequency distributions and percentages for both the independent variable (health education with video) and the dependent variable (mothers' compliance with exclusive breastfeeding). Bivariate analysis will use the Wilcoxon Signed Rank Test to assess differences between paired ordinal data groups.

RESULTS

Table 1. Characteristics of Respondents

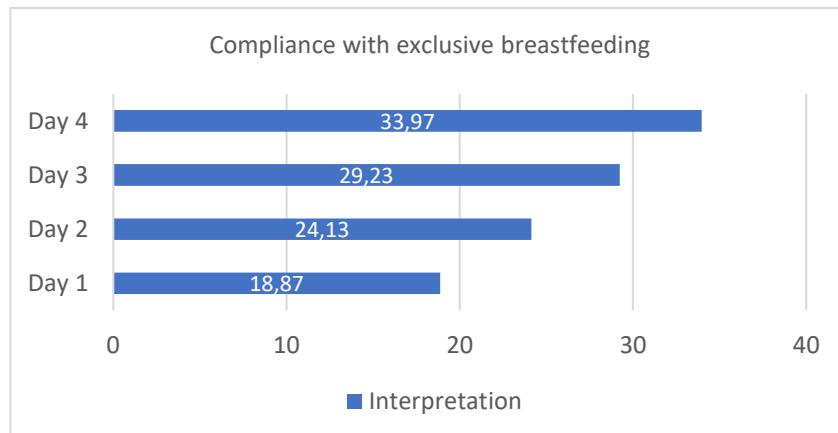
General Data	Frequency	%
1. Age		
20 - 25 years	19	63,3
26 - 35 years	11	36,7
2. Education		
Elementary school	4	13,3
Yunior high school	15	50,0
Senior high school	11	36,7
3. Job		
No work	24	80,0
Work	6	20,0
4. Income		
<Rp. 2.000.000,-	24	80,0
>Rp. 2.000.000,-	6	20,0

Based on Table 1, it is known that the majority of breastfeeding mothers are aged 20-25 years, totaling 19 individuals (63.3%). Of these mothers, 15 (50%) have completed junior high school education. Almost all of the mothers are not working, with 24 individuals (80%) being unemployed. Additionally, nearly all mothers have an income of less than Rp. 2,000,000, with 24 individuals (80%) falling into this category.

Table 2. Difference in Respondents' Compliance with Exclusive Breastfeeding Before and After Receiving Health Education with Video

No	Interpretation of Maternal Compliance	Before		After	
		Frequency	%	Frequency	%
1	Good (76-100%)	0	0,0	27	93,3
2	Sufficient (56-75%)	9	30,0	3	6,7
3	Insufficient (<56%)	21	70,0	0	0,0
	Total	30	100,0	30	100,0

Based on Table 2, there is a difference in compliance levels among mothers before and after receiving health education with video. Before the education, the majority of mothers had poor compliance, with an interpretation value of 70%. After receiving the health education, which was conducted four times, nearly all mothers showed good compliance, with an interpretation value of 93.3%.



Graph 1. Changes in Respondents' Compliance with Exclusive Breastfeeding Before and After Receiving Health Education with Video

Graph 1 shows that the average compliance with exclusive breastfeeding among respondents increased from 18.87 before the health education with video to 33.97 after receiving the education four times. Thus, there was an increase in compliance by 15.1 points.

Table 3. Results of the Wilcoxon Signed Rank Test on the Effect of Health Education with Video on Exclusive Breastfeeding Compliance

Category	n	Min - Max	Mean + SD	p-value
Before	30	15 - 24	18,87 + 2,300	0,000
After	30	29 - 40	33,97 + 3,378	

Based on Table 3, the measurement of compliance shows a difference between before and after receiving health education with video. There was an increase in maternal compliance. The results of the Wilcoxon Signed Rank Test analysis showed a significance value of 0.000, which means there is an effect of health education with video on exclusive breastfeeding compliance.

DISCUSSION

Identification of Exclusive Breastfeeding Compliance Before and After Receiving Health Education with Video

Before receiving health education with video, none of the respondents had 'good' compliance; they had 'sufficient' and 'poor' compliance. This was because the respondents had not previously received information about exclusive breastfeeding. After being given health education with video four times, respondents' compliance improved, with the majority achieving 'good' compliance and only a few having 'sufficient' compliance.

According to the researcher, health education with video significantly influences changes in breastfeeding behavior. This is because the delivery of messages in videos is more engaging, providing motivation for viewers. The message is more efficient due to moving images, which can communicate quickly and vividly. Mature individuals are highly responsive to stimuli, making them easier to guide, direct, and understand messages comprehensively. Audiovisual messages are also more effective because their presentation helps viewers concentrate better.

Factors that can influence a person's compliance, according to Pinayungan (2019), include understanding of instructions, education level, and social support. Maternal compliance with exclusive breastfeeding is still low due to a lack of knowledge and the belief that mothers have misconceptions about breast milk. In this study, respondents were given education on correct breastfeeding practices with the aim of improving mothers' compliance with exclusive breastfeeding. This is consistent with the research by Safitri, et al (2021), which found that after audiovisual-based health education, maternal compliance improved. Audiovisual media is a type of media that includes sound and visible images, such as videos, various sizes of films, voice slides, and others. The benefits of using audiovisual media include easily capturing people's attention. With audiovisuals, a large audience can obtain information from experts/specialists, allowing them to focus on the presentation, save time, and replay the recordings as needed (Fujiyanto et al., 2016).

Effect of Health Education with Video on Exclusive Breastfeeding Compliance

The data analysis conducted using the Wilcoxon Signed Rank Test yielded a Sig. (2-tailed) value of 0.000, which indicates that there is an effect of health education with video on exclusive breastfeeding compliance. This finding is consistent with the study by Safitri, et al (2021), which showed that providing interventions in the form of education about breast milk using video media can enhance mothers' knowledge and compliance.

According to the researcher, health education with video, particularly about exclusive breastfeeding for pregnant or breastfeeding mothers, is very important to convey. This is a crucial step towards successful breastfeeding. It means that during pregnancy, mothers are already exposed to information about the significant benefits of breast milk for the mother, baby, and family. With this education, it is hoped that pregnant women will gain good knowledge and confidence, enabling them to provide exclusive breastfeeding after delivery.

Video is an audiovisual medium that can depict objects and events as they are. Through video, anyone can understand educational messages more meaningfully, allowing the information conveyed through the video to be comprehensively understood. Audiovisual media is considered an appropriate tool when used in education for various audiences. The advantages of audiovisual media include providing reality that may be difficult to capture by the eyes and minds of the audience, serving as a trigger for discussions about attitudes and behaviors, being effective for large audiences, allowing for repetition, being easy to use, and not requiring a dark room. The increase in knowledge among respondents who participated in education with audiovisual media is higher compared to those who attended education using modules and control (Safitri et al., 2021; Sulistiowati et al., 2022).

Limitations of the Study

The sample size obtained is small due to time constraints, so it needs to be increased in order to be generalizable.

CONCLUSIONS

The results of measuring maternal compliance with exclusive breastfeeding show that after 4 sessions of health education with video, almost all respondents experienced an improvement from the 'sufficient' category to 'good.' There is an effect of health education with video on

maternal compliance with exclusive breastfeeding. It is hoped that video education can be disseminated through social media as an additional resource for mothers' knowledge and compliance with exclusive breastfeeding. This could serve as a new educational method that is more efficient and effective, and better accepted.

ACKNOWLEDGE

We express our gratitude to the midwife and health cadres who assisted in conducting the research, as well as to the respondents who participated in the study.

REFERENCES

Badan Litbang Kesehatan, K. K. R. (2018). Laporan_Nasional_RKD2018_FINAL.pdf. In *Badan Penelitian dan Pengembangan Kesehatan* (p. 198).

Bappenas. (2021). *Penetapan Perluasan Kabupaten/Kota Lokasi Fokus Intervensi Penurunan Stunting Terintegrasi Tahun 2022*. <https://jdih.bappenas.go.id/peraturan/detailperaturan/2488>

DinkesprovJatim. (2022). Profil Kesehatan Dinas Kesehatan Provinsi Jawa Timur 2021. In *Dinas Kesehatan Provinsi Jawa Timur*. Dinas Kesehatan Provinsi Jawa Timur. <https://dinkes.jatimprov.go.id/userfile/dokumen/PROFIL KESEHATAN 2021 JATIM.pdf>

Eidelman, A. I., & Schanler, R. J. (2013). Breastfeeding and The Use of Human Milk. *Pediatrics*, 129(3), e826–e841. <https://doi.org/10.1542/peds.2011-3552>

Fernalia, Busjra, W. J. (2019). Efektivitas Metode Edukasi Audiovisual Terhadap Self Management Pada Pasien Hipertensi. *Jurnal Keperawatan Silampari*, 8(5), 55.

Fujiyanto, A., Jayadinata, A. K., & Kurnia, D. (2016). Penggunaan Media Audiovisual untuk Meningkatkan Hasil Belajar Siswa pada Materi Hubungan Antarmakhluk Hidup. *Jurnal Pena Ilmiah*, 1(1), 841–850. <https://ejournal.upi.edu/index.php/penailmiah/article/view/3576>

Handriyani, Alimuddin, A., Sundari, Musliha, & Mauludiyah, I. (2020). Pengaruh Edukasi Kesehatan Melalui Media Audiovisual Terhadap Pengetahuan dan Sikap Ibu Tentang IMD di Puskesmas Barabara dan Kas- si-Kassi Kota Makassar Sulawesi Selatan. *Jurnal Keperawatan Muhammadiyah*, Edisi Khus. <https://journal.um-surabaya.ac.id/JKM/article/view/4121/2648>

Huang, P., Ren, J., Liu, Y., Luo, B., & Zhao, X. (2017). Factors Affecting Breastfeeding Adherence Among Chinese Mothers: A Multicenter Study. *Medicine (United States)*, 96(38), 1–6. <https://doi.org/10.1097/MD.0000000000007619>

Kemenkes. (2018). *Manfaat ASI Eksklusif untuk Ibu dan Bayi*.

Kemenkes. (2019). *Berikan ASI untuk Tumbuh Kembang Optimal*.

Kemenkes RI. (2022). Profil Kesehatan Indonesia 2021. In F. Sibuea, B. Hardhana, & W. Widiantini (Eds.), *Kemenkes RI*. Kementerian Kesehatan Republik Indonesia. <https://www.kemkes.go.id/downloads/resources/download/pusdatin/profil-kesehatan-indonesia/Profil-Kesehatan-2021.pdf>

Mahardhika, A. (2014). Tingkat Kepatuhan Pelaksanaan PP 33 Tahun 2012 Tentang Pemberian ASI Eksklusif terhadap Penggunaan Susu Formula Bayi [Universitas Diponegoro]. In *Universitas Diponegoro*. http://eprints.undip.ac.id/44422/1/BAB_0.pdf

Notoatmodjo, S. (2014). *Ilmu perilaku kesehatan*.

Nursalam, N. (2017). *Metodologi Penelitian Ilmu Keperawatan* (4th ed.). Salemba Medika.

Pujiastuti, N. (2021). Grandmother's Role as a Personal Reference toward Exclusive Breastfeeding Behavior. *Media Karya Kesehatan*, 4(1), 109–117. <https://doi.org/10.24198/mkk.v4i1.31459>

Pujiastuti, N., Ain, H., & Budiono. (2022). Position and attachment model of expenditure colostrum and breast milk production using the triangular of love theory approach. *The Indonesian Journal of Public Health*, 17(1), 106–118. <https://doi.org/10.20473/ijph.v17il.2022.106-118>

Rukinah. (2019). Gambaran Pengetahuan Wanita Usia Subur Tentang Pencegahan Kanker Payudara Di Puskesmas Maccini Sawah Makassar 2019. *Jurnal Farmasi Sandi Karsa*, 5(1), 84–89. <https://jurnal.farmasisandikarsa.ac.id/ojs/index.php/JFS/article/view/47/47>

Safitri, V. A., Pangestuti, D. R., & Kartini, A. (2021). Pengaruh Video Edukasi Terhadap Pengetahuan dan Sikap Ibu dalam Pemberian ASI Eksklusif di Puskesmas Bulu Lor 2021. *Media Kesehatan Masyarakat Indonesia*, 20(5), 342–348. <https://doi.org/10.14710/mkmi.20.5.342-348>

Salim, L. (2018). *Breastfeeding from The First Hour of Birth: What Works and What Hurts*. UNICEF. <https://www.unicef.org/stories/breastfeeding-first-hour-birth-what-works-and-what-hurts>

Sari, D. P. (2021). *Pengaruh Pendidikan Kesehatan Dengan Audio Visual Terhadap Pengetahuan dan Motivasi Tentang ASI Eksklusif Di Wilayah Kerja Puskesmas Angut Atas Kota Bengkulu Tahun 2020* [Poltekkes Kemenkes Bengkulu]. repository.poltekkesbengkulu.ac.id/537/1/SKRIPSI DIAH PUSPITA SARI.pdf

Sulistiyowati, E., R, H. S. E., & Wijayanti, K. (2022). The Effectiveness of Breastfeeding Education Through Videos on the Behavior of Neonate's Breastfeeding Mother's. *University Research Colloquium*, 498–505. <https://repository.urecol.org/index.php/proceeding/article/view/2469/2430>

Untari, J. (2017). Hubungan Antara Karakteristik Ibu Dengan Pemberian Asi Eksklusif Di Wilayah Kerja Puskesmas Minggir Kabupaten Sleman. *Jurnal Formil (Forum Ilmiah) KesMas Respati*, 2(1), 17–23.

Wicaksono, D. (2016). Pengaruh Media Audio-Visual MPASI terhadap Pengetahuan, Sikap dan Perilaku Ibu Baduta Di Puskesmas Kelurahan Johar Baru. *ETHOS (Jurnal Penelitian Dan Pengabdian)*, 4(2), 291–298. <https://doi.org/10.29313/ethos.v0i0.1974>