

Case study

Newborn Care Education Through Audiovisual Media for Mothers with Readiness for Enhanced Knowledge

Septa Aji Prambudi¹, Lindesi Yanti^{2*}

1. Diploma III Nursing Study Program, STIKES Hesti Wira Sriwijaya, Indonesia
2. Bachelor of Nursing Study Program, STIKES Hesti Wira Sriwijaya, Indonesia

*Correspondence: Lindesi Yanti| STIKES Hesti Wira Sriwijaya desirozak@gmail.com

Abstract

Introduction: Newborns are in a transitional period that requires appropriate care to maintain their health, comfort, and safety. However, misconceptions and cultural influences are still found in newborn care practices, highlighting the need for health education to improve mothers' understanding of safe newborn care. This study aimed to describe the provision of newborn care education through audiovisual media for mothers with the nursing diagnosis of Readiness for Enhanced Knowledge at dr. AK Gani TK II Hospital, Palembang, in 2026.

Method: This study employed a descriptive method with a case study approach involving two respondents. Data were collected through assessment, interviews, observations, three health education sessions using audiovisual media, and knowledge measurements using a questionnaire before education on the first day and after education on the third day. Data were analyzed descriptively by comparing knowledge scores before and after the educational sessions.

Results: The case study showed an increase in knowledge scores in both respondents. Mrs. D's knowledge score increased from 58 to 91, while Mrs. N's score increased from 58 to 100. Both respondents were also able to explain the material on safe newborn care after completing all educational sessions.

Conclusion: This case study showed an increase in both mothers' knowledge scores following health education on safe newborn care through audiovisual media. Further research is recommended to involve more respondents and use instruments that have undergone validity and reliability testing to obtain more comprehensive findings.

Keywords: Health education; Readiness for Enhanced Knowledge; Audiovisual media; Newborn care; Level of knowledge.

Received September 14th, 2026; Received in revised form October 4th, 2026; Accepted October 10th, 2026; Available online October 17th, 2026

INTRODUCTION

A newborn is an infant aged 0–28 days who is in the early stages of adaptation to life outside the womb and is highly vulnerable to health problems. Therefore, appropriate care is essential to maintain vital functions, including breathing, circulation, and body temperature. Inappropriate newborn care practices may affect infant health and survival (Afrida & Aryani, 2022). The World Health Organization (WHO) reported that in 2022 there were approximately 2.3 million newborn deaths worldwide, or approximately 47% of all deaths of children under five years of age (World Health Organization, 2024).

In Indonesia, the neonatal mortality rate remains higher than that of several other countries in the ASEAN region (Soleman, 2020). One concern is the persistence of newborn care practices that do not align with medical recommendations, such as using traditional abdominal binders known as *gurita* and swaddling babies too tightly. Although these practices are intended to maintain infant health and comfort, they may pose risks, including breathing difficulties, impaired circulation, digestive problems, and skin irritation (Wigunantining Sih et al., 2020). Therefore, the Ministry of Health of the Republic of Indonesia does not recommend the use of *gurita* because it may restrict chest expansion, interfere with breathing, impair blood circulation, and cause skin irritation (Hadi et al., 2022).

Previous studies have shown that newborn care practices remain influenced by misconceptions and cultural traditions. Research in Pakistan found that some mothers continued to wrap their babies in ways that may pose health risks, including respiratory problems, hip dysplasia, and hyperthermia (In et al., 2023). Studies in East Nusa Tenggara reported that traditional newborn care practices were

maintained because of cultural traditions and family beliefs (Nahak et al., 2021). Research in Medan Belawan found that gurita was still used because it was believed to make babies look neater and prevent bloating (Nurhayati et al., 2024). Research in Aceh also reported that 64.9% of infants aged 0–4 weeks used gurita, and its use was associated with a 10.8-fold higher likelihood of regurgitation compared with infants who did not use it (Ismiati, 2024). In addition, some people believe that using gurita can make a baby's abdomen smaller and prevent bloating, although this belief is not supported by scientific evidence (T Jose Anoop, 2024).

South Sumatra Province has a substantial number of births, with Palembang City contributing the largest number of births in the province (Kurnia, 2025). Based on medical records from dr. AK Gani TK II Hospital, Palembang, the number of deliveries was 617 in 2023, 571 in 2024, and 721 in 2025. From January to May 2026, there were 313 deliveries. These figures highlight the ongoing need for education on appropriate newborn care. Interviews with two nurses in the maternal and infant care unit at dr. AK Gani TK II Hospital, Palembang, indicated that education on newborn care was routinely provided to mothers before discharge. The education covered umbilical cord care and recommendations against using gurita or swaddling babies too tightly. However, some mothers continued these practices because of family influences and cultural traditions passed down through generations. This situation suggests that the education provided may not fully address mothers' perceptions and practices regarding safe newborn care.

One approach to addressing this issue is health education using audiovisual media. Audiovisual media combines visual and auditory elements to present information in an engaging and accessible format that may help learners understand and remember the information (Syafuddin, 2023). In this study, the audiovisual media consisted of an educational video on safe newborn care. Previous research has reported that video-based health education can contribute to increased knowledge and changes in health-related behavior (Alfiana Rahmawati, 2024). Furthermore, nurses' role in providing health education supports the third Sustainable Development Goal (SDG), Good Health and Well-Being, which includes improving maternal and child health (Mohammed et al., 2025).

Although previous studies have examined traditional newborn care practices and the use of video media in health education, limited information is available on the application of newborn care education through audiovisual media for mothers with the nursing diagnosis of Readiness for Enhanced Knowledge at dr. AK Gani TK II Hospital, Palembang. This gap highlights the need to describe the implementation of such education in this setting. Therefore, this study aimed to describe the provision of newborn care education through audiovisual media for mothers with the nursing diagnosis of Readiness for Enhanced Knowledge at dr. AK Gani TK II Hospital, Palembang, and to describe changes in their knowledge scores following the educational sessions.

METHOD

Research Design

This study employed a descriptive method with a case study approach to describe the implementation of Health Education (I.12383) through audiovisual media for mothers with the nursing diagnosis of Readiness for Enhanced Knowledge (D.0113) regarding safe newborn care. The study was conducted at dr. AK Gani TK II Hospital, Palembang, South Sumatra, from June 4 to June 6, 2026.

Research Subjects

The study involved two mothers of newborns with the nursing diagnosis of Readiness for Enhanced Knowledge (D.0113) regarding safe newborn care. The inclusion criteria were primiparous mothers with newborns aged 0–2 days, willingness to participate in the educational sessions and sign an informed consent form, adequate literacy skills, and a history of receiving information about newborn care while still having misconceptions or following cultural practices related to newborn care. The exclusion criteria were communication or cognitive impairments, lack of cooperation, and failure to complete the educational sessions. The focus of this case study was the implementation of Health Education using audiovisual media for mothers with the nursing diagnosis of Readiness for Enhanced Knowledge (D.0113), with Knowledge Level (L.12111) as the expected nursing outcome.

Research Procedures

Data were collected through interviews, observations, documentation, and knowledge assessment using a 12-item questionnaire. The research instruments included a nursing assessment form, observation sheets, documentation forms, a knowledge questionnaire, an educational session plan (Satuan Acara Penyuluhan, SAP), and an audiovisual educational video on safe newborn care lasting approximately 4 minutes. The case study followed the nursing process, which comprised assessment,

nursing diagnosis, intervention planning, implementation of Health Education (I.12383) using audiovisual media, and nursing evaluation. The intervention was conducted over three consecutive days. Knowledge was assessed before the educational intervention on the first day (pre-education). Health education was then provided and reinforced through discussion. Knowledge was reassessed after the educational sessions on the third day (post-education) using the same questionnaire. All procedures were guided by the Indonesian Nursing Diagnosis Standards (SDKI), Indonesian Nursing Intervention Standards (SIKI), and Indonesian Nursing Outcome Standards (SLKI).

Data Analysis and Research Ethics

Data were analyzed descriptively by comparing the respondents' knowledge scores before and after the health education sessions. The analysis was also supported by observational findings and evaluations of each respondent's progress documented using the SOAP format (Subjective, Objective, Assessment, and Plan). The findings were presented narratively without statistical analysis because the study employed a descriptive case study approach. This study received ethical approval from the Health Research Ethics Committee of Hesti Wira Sriwijaya Health College (Approval Number: 003045/KEP STIKES HESTI WIRA SRIWIJAYA/2026). Permission to conduct the study was also obtained from Hesti Wira Sriwijaya Health College (Letter Number: B/121/IV/2026). Before data collection, all participants were informed about the purpose, benefits, and procedures of the study and signed an informed consent form.

RESULTS

This study was conducted from June 4 to June 6, 2026, in the Melati Room of dr. AK Gani TK II Hospital, Palembang. The study involved two mothers of newborns who met the inclusion criteria and received health education on safe newborn care through audiovisual media. Both respondents completed the study.

Respondent Characteristics

The respondents' characteristics included age, highest educational attainment, and occupation at the time of the study. These characteristics are presented in Table 1.

Table 1. Respondent Characteristics

Characteristics	Respondent 1	Respondent 2
Maternal age (years)	22	27
Highest educational attainment	Senior High School	Senior High School
Occupation	Housewife	Housewife

As shown in Table 1, Respondent 1 was 22 years old, while Respondent 2 was 27 years old. Both respondents had completed senior high school and were housewives. Thus, the respondents had the same educational attainment and occupation but differed in age.

Changes in Respondents' Knowledge Levels

Both respondents participated in health education on safe newborn care using audiovisual media over three consecutive days, in accordance with the research procedures. Their knowledge levels were assessed before (pretest) and after (posttest) the educational sessions. The results are presented in Table 2.

Table 2. Respondents' Knowledge Levels Before and After Health Education

Respondents	Pretest	Category	Posttest	Category
1	58	Enough	91	Good
2	58	Enough	100	Good

As shown in Table 2, both respondents' knowledge scores increased following the health education sessions. Respondent 1's score increased from 58 to 91, while Respondent 2's score increased from 58 to 100. These findings show that both respondents had higher knowledge scores after receiving health education on safe newborn care through audiovisual media.

Evaluation of Intervention Results

The final evaluation showed an increase in both respondents' knowledge scores, in line with the expected nursing outcome of Knowledge Level (L.12111). After completing the educational sessions, both respondents were able to explain the material on safe newborn care and distinguish between recommended and non-recommended newborn care practices. The evaluation also documented fewer inaccurate perceptions regarding newborn care practices. These findings describe the changes observed in the two respondents during the case study.

DISCUSSION

This case study showed an increase in both respondents' knowledge scores following health education on safe newborn care using audiovisual media. Respondent 1's score increased from 58 to 91, while Respondent 2's score increased from 58 to 100. These findings describe the changes observed in the two respondents after participating in the educational sessions. However, because this study involved only two respondents and used a descriptive case study design, the findings should be interpreted within the context of these individual cases.

Several aspects of the educational process may have supported the observed changes in knowledge. The audiovisual material presented information through images, sound, and demonstrations, while the three-day educational sessions provided opportunities to review the material and discuss questions. These activities may have helped the respondents understand the information about safe newborn care. Nevertheless, the contribution of each component cannot be determined separately from the findings of this case study.

The intervention was implemented with reference to Health Education (I.12383) in the Indonesian Nursing Intervention Standards (SIKI). Audiovisual media was used to communicate information about newborn care as part of the nursing intervention. The observed increase in knowledge scores is consistent with the expected nursing outcome of Knowledge Level (L.12111). These findings describe the implementation of standardized nursing care and the changes observed in the respondents during the educational sessions.

The findings are consistent with Wahyuni et al. (2026), who reported improvements in mothers' knowledge and skills regarding newborn care following education using animated video media. Both studies used audiovisual materials to present health information to mothers. However, differences in study design, participant numbers, and outcome measurements should be considered when comparing the findings. The present study describes changes in the knowledge scores of two respondents following health education using audiovisual media (Wahyuni et al., 2026).

Rahim (2023) also discussed the use of audiovisual media in health education, highlighting the combination of visual and auditory information in the learning process. This provides a relevant background for understanding the educational approach used in the present case study. However, the findings of the current study do not establish whether audiovisual media produces better outcomes than verbal explanations or other educational methods because no comparison group was included (Rahim, 2023).

An important feature of this study is its focus on the implementation of Health Education (I.12383) for mothers with the nursing diagnosis of Readiness for Enhanced Knowledge (D.0113) in the context of newborn care. The study also referred to the Indonesian Nursing Diagnosis Standards (SDKI), Indonesian Nursing Intervention Standards (SIKI), and Indonesian Nursing Outcome Standards (SLKI). Unlike studies designed primarily to compare educational methods, this case study describes the nursing process and the changes observed in the respondents' knowledge scores during the intervention.

From a practical perspective, the findings suggest that audiovisual materials can be used as a supporting medium when providing newborn care education to mothers. Nurses may use videos alongside explanations and discussion to present information about recommended newborn care practices. However, the present study did not directly assess whether the observed changes in knowledge led to sustained changes in caregiving behavior after the mothers returned home.

From a family and community perspective, providing mothers with information about safe newborn care is important because they make many day-to-day decisions concerning their babies' care. In this study, the educational sessions addressed information about newborn care, including distinguishing recommended practices from practices that may be inconsistent with health recommendations. Nevertheless, changes in actual caregiving practices and their effects on newborn health were not measured in this study.

This study had several limitations. First, it involved only two respondents and used a descriptive case study design; therefore, the findings cannot be generalized to a broader population. The study describes changes in the respondents' knowledge scores following health education using audiovisual media but does not establish a causal relationship between the intervention and the observed changes. Second, knowledge was assessed during the intervention period, and no follow-up assessment was conducted after the respondents returned home. Consequently, the study could not determine whether the knowledge gains were maintained or translated into daily newborn care practices. Third, data collection was conducted by a male researcher in a maternal and infant care ward. This required attention to the respondents' privacy, comfort, informed consent, and the hospital's procedures. The

study was conducted with the respondents' consent and with the involvement of the assigned healthcare worker, in accordance with the applicable procedures.

Future studies could involve more participants and use an experimental or quasi-experimental design if the aim is to compare educational methods or evaluate intervention effects. Follow-up assessments after mothers return home could also examine whether knowledge is retained and whether recommended newborn care practices are implemented in daily life. Further development of audiovisual educational materials may be considered to support the delivery of newborn care information in different healthcare settings.

CONCLUSION

This case study showed an increase in knowledge scores among both mothers following health education on safe newborn care using audiovisual media. Respondent 1's score increased from 58 to 91, while Respondent 2's score increased from 58 to 100. These findings describe the changes in knowledge observed in the two respondents during the implementation of Health Education (I.12383), with reference to the nursing outcome of Knowledge Level (L.12111).

This study was conducted within the framework of the Indonesian Nursing Diagnosis Standards (SDKI), Indonesian Nursing Intervention Standards (SIKI), and Indonesian Nursing Outcome Standards (SLKI). However, because the study involved only two respondents and used a descriptive case study design, the findings are limited to describing changes in the respondents' knowledge scores and cannot be generalized to a wider population. Future research may involve more respondents and include follow-up assessments after mothers return home to examine whether knowledge is retained and whether recommended newborn care practices are applied in daily life.

ACKNOWLEDGEMENT

The author would like to express sincere gratitude to the Head of dr. AK Gani TK II Hospital, Palembang, and all healthcare workers in the Melati Room for granting permission and providing assistance during the research. The author also extends gratitude to all respondents who voluntarily participated in this study and to the supervising lecturers for their guidance, valuable feedback, and support throughout the research process and the preparation of this article..

REFERENCE

- Afrida, BR, & Aryani, NP (2022). Textbook Of Midwifery Care For Neonates, Infants, Toddlers, And Preschool Children. NEM Publisher.
- Alfiana Rahmawati, A. (2024). The Effect Of Health Education With Video Media On Knowledge Of Stunting Prevention In Toddlers At Posyandu Dayu Gondangrejo Karanganyar. Kusuma Husada University Surakarta.
- Hadi, EN, Tambunan, ES, Pratomo, H., Priyohastono, S., & Rustina, Y. (2022). Health Education To Improve Low-Birthweight Infant Care Practices In Central Jakarta, Indonesia. *Health Education Research*, 37(2), 133–141.
- In, TH, Country, AD, Rehman, A., Qazi, U., Abdullah, A., Shah, AZ, Khan, AJ, & Zeb, M. (2023). Original Article. June, 71–74.
- Ismiati, I. (2024). The Relationship Between Octopus Use And Spitting Up Frequency In Infants Aged 0-4 Weeks In The Jeumpa Community Health Center Work Area, Bireun Regency. *Scientific Journal Of Health*, 16(1), 48–56. <https://doi.org/10.37012/Jik.V16i1.1929>
- Kurnia. (2025). Births In South Sumatra Reach 137 Thousand. Akurat.Co. https://sumsel.akurat.co/sumsel/1866351310/Kelahiran-Bayi-Di-Sumsel-Capai-137-Ribu-Beberapa-Wilayah-Masih-Hadapi-Masalah-Gizi?utm_source
- Mohammed, HH, Hamed, AAA El, Afefy, NAE-F., Sherif, NA, & Ibrahim, SM (2025). The Effectiveness Of Nurse-Led Antenatal Education On Maternal Self-Efficacy: An Evidence-Based Approach. *BMC Nursing*, 24(1), 895.
- Nahak, M. P. M., Rohan, E., & Gatum, A. M. (2021). Practice Of Tetun Tribe Culture In Maternity Care In Silawan, Belu, East Nusa Tenggara, Indonesia: A Qualitative Study. *The International Conference On Public Health Proceedings*, 6(01), 170.
- Nurhayati, N., Jauhari, A., Damanik, SM, & Ramadhani, NS (2024). Health Traditions For Pregnant Women And Perspectives On Postpartum Visits In The Coastal Area Of Fishermen's Villages, Medan Belawan District. *AURELIA: Indonesian Journal Of Research And Community Service*, 3(2), 1671–1675.

- Rahim, B. (2023). Educational Media. PT. Rajagrafindo Persada-Rajawali Pers.
- Soleman, S.R. (2020). The Trends Of Neonatal Mortality Rate Among South East Asia Countries From 2000-2017. *Disease Prevention And Public Health Journal*, 14(2), 90.
- Syafuddin, K. (2023). The Use Of Audio Visual Media (Slides, Films) And Folk Media As Extension Tools. *Sanskara Of Social Sciences And Humanities*, 1(01), 1–9.
- T Jose Anoop, S. (2024). Beliefs And Practices On Infant Care Among Mothers; A Systematic Review. *International Journal Of Science And Research (IJSR)*, 13(2), 927–932. <https://doi.org/10.21275/Sr24210135428>
- Wahyuni, S., Budiyati, A., & Musdalifah, U. (2026). Effect Of Animated Video-Based Education On Mothers' Skills In The Early Detection Of Growth And Development In Children Aged 1 – 5 Years. 24(1), 7–10.
- Wigunantiningsih, A., Putri, NKSE, & Fakhidah, LN (2020). The Effect Of Octopus Use On Spitting Up Frequency In Infants In Karanganyar Regency. *Journal Of Health*, 2.
- World Health Organization. (2024). Newborn Mortality. WHO. <https://www.who.int/news-room/fact-sheets/detail/newborn-mortality>