

The Influence of Education with Audio Visual Media on the Knowledge and Attitude of Postpartum Mothers

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ABSTRACT

Objective: Stunting is a condition of failure to thrive in children under five years of age because of chronic malnutrition. This results in children needing to be longer for their age. Malnutrition in children who experience stunting occurs from when the baby is in the womb until after birth co, commonly called the First 1,000 Days of Life (HPK). Children who experience stunting until the age of five will find it difficult to correct so that it continues into adulthood and can increase the risk of offspring with LBW. This study aimed to analyze the effect of Audiovisual Media on stunting on the knowledge and attitudes of postpartum mothers. **Method** This study used a Quasi-experimental design with a pretest-posttest control group design approach. The sample taken in this study were all postpartum mothers on days 1-14 and met the inclusion requirements in Setia Negara Village, Siantar Sitalasari District, amounting to 30 respondents. **Results:** The study showed that respondents' knowledge increased by 7.27 and attitudes by 23.7. The statistical test results showed a significant effect of audiovisual media on knowledge and attitudes ($p < 0.001$). Audiovisual media can increase mothers' knowledge by attracting respondents' attention and increasing understanding in mothers with toddlers. Providing health education to the community can increase knowledge and skills in health behavior. **Novelty:** Providing education using modern technology through audiovisuals can provide new scientific contributions to maternal health education.

INTRODUCTION

Stunting is a condition of failure to thrive in children under five years of age as a result of chronic malnutrition. This results in children needing to be longer for their age. Malnutrition in children who experience stunting occurs from when the baby is in the womb until after birth co, commonly called the First 1,000 Days of Life (i.e. HPK). Children who experience stunting until the age of five will find it difficult to correct so that it continues into adulthood and can increase the risk of offspring with LBW (Apriluana & Fikawati, 2018).

Improving maternal and child health is an investment for a country. Children with good health status will provide a higher rate of return in the short and long term. Beattie et al. (2016) mentions that healthy children will have better learning abilities. Meanwhile, in the long term, children will be more productive and healthy than adults, thus driving economic growth. Healthy children can reduce mortality rates so that the proportion of the working-age population in the future can increase. Purba et al. (2023) mentions that Asia's economic growth is due to demographic and health changes resulting from declining infant and child mortality, birth rates, and improvements in reproductive health. These reasons make it essential to work on children's health.

Global estimates state that reducing child and maternal mortality rates will save seven billion dollars in yearly health costs (Organization, 2021; Kirigia et al., 2015). Conversely, deaths due to preventable diseases in children and mothers can result in losses of 15 billion dollars per year due to lost productivity globally (Asian Development Bank, 2009).

Removing direct and indirect barriers to accessing health services can increase access to essential services to improve well-being, especially for children and mothers (Lungu et al., 2016). In 2016, globally, approximately 23 percent of children under five were stunted. Stunting refers to a child being too short for their age. This condition describes chronic malnutrition due to poor nutritional quality in the womb, during childhood, and infection or disease. Stunting is of great concern because of its long-term effects, which result in children not reaching their total growth capacity, having lower cognitive abilities, and being more susceptible to disease (Unicef & WHO, 2020).

In the future, it will affect work productivity and workability, resulting in low household income at the micro level and national economic development at the macro level (Black et al., 2013). Handling stunting has become a priority target both globally and in Indonesia. In the 2020-2024 National Medium-Term Development Plan (RPJMN), reducing the prevalence of stunting in toddlers has become one of the major projects, with a target of 14.00 percent in 2024. Achieving this target requires hard work from the Government and various parties. Although it has shown a significant decline compared to the prevalence of stunting from the 2018 Basic Health Research (Kemenkes RI, 2018), which was 30.80 percent (Ministry of Health, 2021), the results of the 2021 Indonesian Nutritional Status Study (SSGI) still show that the prevalence of stunting in toddlers in Indonesia is 24.41 percent. In order to achieve the 2024 stunting target, the Government has issued Presidential Regulation of the Republic of Indonesia Number 72 of 2021 concerning the Acceleration of Stunting Reduction. The Presidential Regulation explains that accelerating stunting reduction in Indonesia is carried out holistically, integratively, and with quality through coordination between parties.

Many studies have shown that poverty, sanitation, and environmental health are other factors that have consequences for stunting in toddlers. In addition, low maternal education and knowledge also have a significant influence on the incidence of stunting in toddlers (Ali et al., 2017; Sarma et al., 2017). The socio-economic conditions of the community, the characteristics of the mother during pregnancy, parenting patterns, and the environment and geographical conditions (population density, inadequate climate, and sanitation conditions) are also factors that contribute (Awosolu et al., 2021; Gupta & Santhya, 2020).

According to the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), more than 50% of infant and toddler deaths are related to malnutrition. Two-thirds of these deaths are related to inappropriate feeding practices in infants and children, such as not initiating early breastfeeding within the first hour after birth and giving complementary foods too early or too late. This condition will weaken the immune system, often getting sick and failing to grow (Kemenkes, 2019). According to (Hartuti et al., 2021), the knowledge and role of mothers are significant factors, and knowledge is dominant in the incidence of stunting in children under five years of age. If a mother has good nutrition knowledge and health, she will have the proper healthy behavior in choosing to consume balanced nutritious food for herself and her baby. High educational status also increases breastfeeding in the first hour after delivery. Mothers with less knowledge tend to throw away the first colostrum, which has many benefits for the baby. Early breastfeeding in the first hour after delivery mutually influences colostrum expenditure (Abdelhady et al., 2022; Monroe et al., 2021; Yeshambel Wassie et al., 2020).

The novelty of this study is the utilization of modern audiovisual media for postpartum mother education: This study uses a modern approach with audiovisual media to provide health education to postpartum mothers about stunting, which is still

rarely applied in direct interventions in postpartum groups. The focus of this research is on postpartum mothers as targets for stunting prevention education. The majority of previous studies focused on pregnant women or mothers with children under five. This research is unique because it targets postpartum mothers in the early postpartum phase when they are still in the adaptation period and really need basic health information, especially regarding nutrition and stunting. Contribution towards Technology-Based Health Education Models: This research paves the way for the development of multimedia-based health education, including possible integration with technology for the future of maternal and child health education.

The novelty of this research is supported by several other researchers : According to this research (Cheng et al., 2025), one of the main risk factors for stunting in children is that pregnant women do not know about proper nutrition, prenatal care, and how to feed babies and children appropriately. Therefore, this article emphasizes the importance of interventions that focus on increasing awareness and understanding of pregnant women through good educational programs. This study found that providing comprehensive and ongoing education to pregnant women has excellent potential to reduce stunting. By increasing mothers' knowledge about health and nutrition during pregnancy, it is hoped that they can improve better prenatal care practices, which will ultimately result in optimal child growth and development, reducing the prevalence of stunting.

The culture of early marriage is associated with the risk of stunting, according to this research (Wardani & Sholika, 2025). This article suggests that psychoeducational interventions can be an effective method to prevent adolescents from marrying prematurely. Psychoeducation can teach teenagers about the risks of early marriage, provide knowledge about reproductive health, help them make better future choices, and increase psychological resilience. It is hoped that the risk factors for stunting in the next generation will be reduced by preventing early marriage.

This research (Follona et al., 2025) aims to find out whether using the "Regating" application as an educational medium can significantly increase teenagers' understanding and views about stunting and how to prevent it. The results show that this application effectively increases teenagers' knowledge and positive attitudes towards stunting prevention. These results show that the use of technology and digital media, such as applications, can be a practical approach to increasing teenagers' understanding of stunting and how to prevent it.

This research (Trisnawati et al., 2025) aims to find methods that can increase the effectiveness of educational programs aimed at preventing stunting. The material presented, delivery techniques, target audience, and frequency of intervention are some of the elements that can be discussed in this article. This research found that the key to success in reducing stunting rates is improving the quality of care and nutritional balance for children in stunting prevention education programs. Perhaps this article provides specific suggestions to improve the design and implementation of such programs.

This research (Trianinsi & Ridwan, 2025) aims to test how effective the use of illustration media that can be accessed via Android devices is in increasing women of childbearing age's understanding of stunting and methods of preventing it. The results show that the use of illustrative videos that can be accessed via Android devices significantly increases women of childbearing age's understanding of stunting prevention. This suggests that visual media that is easily accessible on mobile devices can be an effective tool for providing health information to this target group. Illustrative videos can make complex information more interesting and easier to understand.

RESEARCH METHOD

This study used a Quasi-experimental design with a pretest-posttest control group design approach. The study was conducted in Setia Negara Village, Siantar Sitalasari District, and the research subjects were mothers born 1-14 days postpartum. The sample taken in this study were all postpartum mothers on days 1-14 and met the inclusion requirements in Setia Negara Village, Siantar Sitalasari District, amounting to 30 respondents. This study has obtained ethical approval from the Medan Health Polytechnic Research Ethics Committee Number: 01.26 590 / KEPK / POLTEKKES KEMENKES MEDAN 2024. The study began with a pretest conducted on the treatment group regarding the audiovisual method of assessing the knowledge and attitudes of postpartum mothers about stunting in infants and toddlers. Then, the researcher demonstrated through audiovisual topics to the participants: Postpartum Mother Nutrition, Balanced Diet, Meal Menu for Postpartum Mothers, Exclusive Breastfeeding, Stunting, Impact of Stunting, and Preventing Stunting. The researcher also provided socialization to the respondents from the audiovisual material. After the intervention was given, a post-test was conducted to evaluate the results and determine the increase in knowledge and attitudes after the intervention. Before the questionnaire was given, the knowledge and attitude questionnaires were tested for validity and reliability. The results of knowledge and attitudes were processed, and data was analyzed using Statistical Package and Service Solution (SPSS) version 25.0 for Windows.

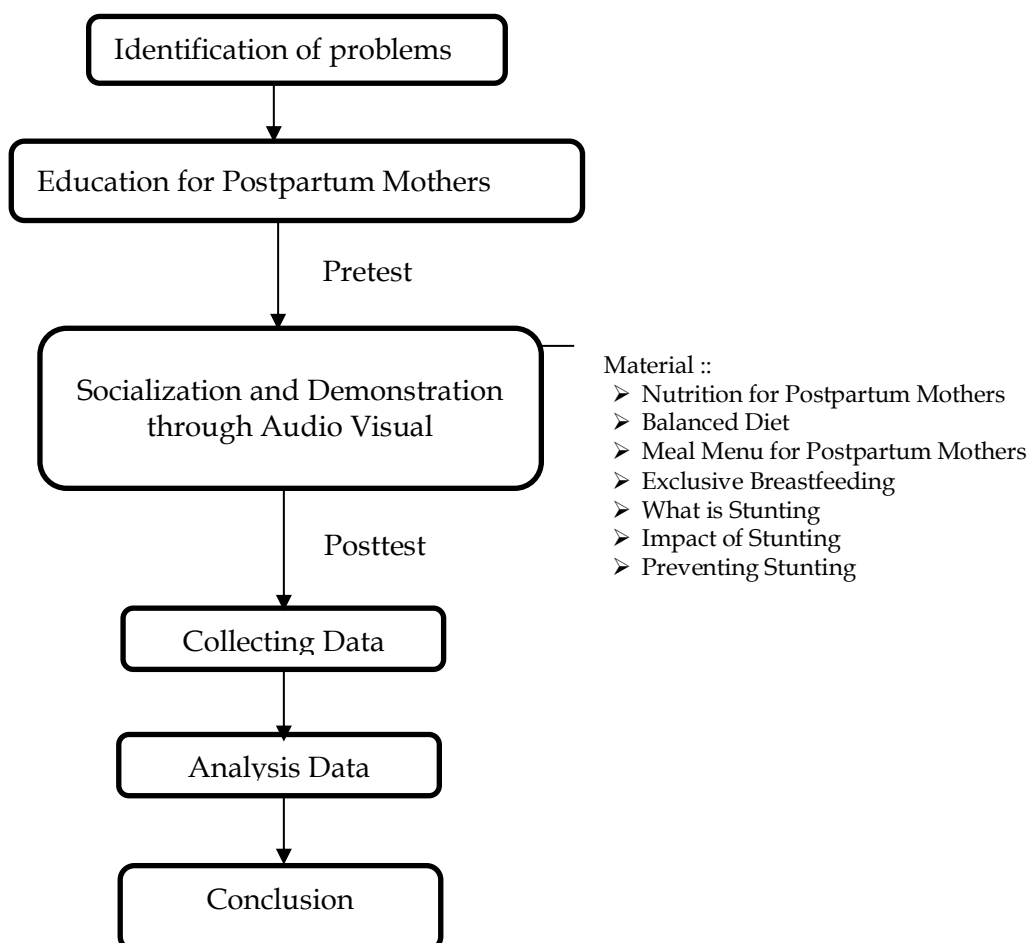


Figure 1. Research Flowchart

RESULTS AND DISCUSSION

Results

Characteristics of Research Subjects

The results of this study include descriptive analysis (univariate) that describes the data on respondent characteristics. The characteristics of respondents here are age, education, occupation, and income of the respondents. Respondents in this study amounted to 30 postpartum mothers in the audiovisual media intervention group. The characteristics of respondents are in the following Table 1.

Table 1. Characteristics of Research Subjects

Characteristics	n	%
General		
< 20 and > 35 Years	8	26.7
20 - 35 Years	22	73.3
Education		
Base	2	6.7
Intermediate	18	60
Tall	10	33.3
Income		
<Rp. 2,433,381/Month	15	50
≥Rp. 2,433,381/Month	15	50
Work		
Housewife	20	66.7
Work	10	33.3
Amount	30	100

Table 1 shows that 22 respondents (73.3%) in the audiovisual media group) are aged 20-35 years. Only a few respondents, namely two (6.7%) in the audiovisual media group, have primary education (elementary/junior high school). Regarding job characteristics, in the audiovisual media group, some respondents, namely 20 respondents (66.7%), are housewives. Regarding income characteristics, half of the respondents, namely 15 (50%), have an income of <Rp for the audiovisual media group. 2,433,381/month.

The Influence of Audiovisual Media on Stunting on Postpartum Mothers' Knowledge

Analyzing differences in pretest and post-test aims to see the differences and improvements in knowledge between pretest and post-test scores caused by audiovisual media. The aspects assessed in this study were differences and improvements in maternal knowledge about stunting. The pretest and post-test scores were analyzed using the paired T-test (Wilcoxon test, an alternative test used because the data was not normally distributed). Pre-, post-test, and knowledge differences were tested for normality, resulting in data that were not normally distributed with a p-value <0.05 (using Shapiro-Wilk if the sample in the study was <50). Differences in knowledge values can be seen in Table 2.

Table 2. The influence of Audio-Visual media on stunting on the knowledge of postpartum mothers (maximum score = 20)

Variable	Mean ± SD	Average change	P Value*
Knowledge			
Before	10.86 ± 1.382	- 7.27 ± 0.918	0.001
After	18.13 ± 2,300		

*Wilcoxon test

Table 2 shows that the knowledge variable experienced an increase in median value between before and after being given audiovisual media. Statistically, there was a significant influence of audiovisual media on knowledge ($p < 0.001$). Respondents' knowledge increased by 7.27.

The Influence of Audiovisual Media on Stunting on the Attitude of Postpartum Mothers

Analyzing the differences in pretest and post-test aims to see the differences and improvements in attitudes between the pretest and post-test scores caused by audiovisual media. The aspects assessed in this study were the differences and improvements in mothers' attitudes regarding stunting. The pretest and post-test scores were analyzed using the paired T-test (Wilcoxon test, an alternative test used because the data was not normally distributed). The pre-, post-, and attitude difference data were tested for normality; the results showed that the data was not normally distributed with a p-value < 0.05 (using Shapiro-Wilk if the sample in the study was < 50). The difference in knowledge values can be seen in Table 3.

Table 3. The influence of Audio Visual media on stunting on the attitudes of postpartum mothers (maximum score = 40)

Variable	Mean \pm SD	Average change	P Value*
Attitude			
Before	7.26 \pm 2.531	- 23.7 \pm 0.02	0.001
After	30.96 \pm 2.511		

*Wilcoxon test

Table 3 shows that the attitude variable experienced an increase in median value between before and after being given audiovisual media. Statistically, there is a significant influence of audiovisual media on attitudes ($p < 0.001$). Respondents' attitudes increased by 23.7.

Discussion

The mother's education level is related to the mother's ease in receiving information about nutrition and health from outside. Mothers with a higher level of education will more quickly receive information from outside, compared to mothers with a lower level of education. The level of education in low-income families is mainly in the low category due to the economic limitations experienced, which make them unable to continue their education at a higher level. Higher education will make it easier for someone to absorb and understand the information provided, and the information received can be applied in everyday life. The mother's education level can affect the degree of health because the mother's education can affect safe pregnancy planning and the fulfillment of good nutrition in good parenting patterns for mothers to children (Haerunnisa, 2019). Good maternal knowledge about stunting since pregnancy is expected to improve good attitudes and behavior in efforts to prevent stunting, including in efforts to fulfill nutrition since pregnancy (Deviyanti, 2022; Herawati et al., 2024). Adequate nutritional needs support good nutritional status in toddlers. Nutrients are essential for regulating body functions, such as immune function, growth, and cognition (Polverino et al., 2021; Sekartini et al., 2023). Knowledge about stunting is essential for a mother because a mother's lack of knowledge about stunting can put a child at risk of experiencing stunting. Mothers who have good knowledge are expected to be able to apply the

knowledge they have in everyday life. However, behavior is not only influenced by the level of knowledge but also by other factors, such as socio-economic, socio-cultural, and environmental factors (Notoatmodjo, 2005).

The results of this study prove that delivering information about stunting through audiovisual media can change the level of knowledge and attitudes of postpartum mothers about stunting in the Setia Negara sub-district, Siantar Sitalasari district. According to Notoatmodjo (2005), knowledge results from knowing and occurs after people sense a particular object. Sensing occurs through the five human senses: smell, sight, hearing, and touch. Knowledge is usually obtained from information from formal education or other information such as radio, TV, internet, newspapers, magazines, counseling, etc. Learning using audiovisual media is related to the senses of sight and hearing, so it effectively utilizes the child's sensory abilities. Children can easily capture the material presented in the video. The goal is to develop cognitive abilities by providing stimulation through moving images and sounds and conveying messages to influence attitudes and emotions (Sanaki, 2011).

Health promotion media should follow the development of the times. Currently, video-type audiovisual media is widely used to increase public knowledge. The advantages of video include conveying objects or events as they are in their original state. The audiovisual method can also present theoretical material into practice. Therefore, the information conveyed through video can be understood quickly and comprehensively, motivating learning. (Anggraini et al., 2020; Mayasari, 2017). The previous research results showed a difference in knowledge in the target after being given health education using audiovisual or video media (Ginting et al., 2022 Shah et al., 2016 Sitorus et al., 2025). Audiovisual media is a medium for conveying messages that activate the target's sense of sight and hearing. Audio visual media is a type of media that contains elements of sound that can be heard and elements of images that can be seen. Forms of audiovisual media include video recordings, films, sound slides, etc. Audiovisual educational media provides good results for recognizing, recalling, and connecting facts and concepts of something (Ernawati, 2020).

The study's results in the table show that before being given education with audiovisual media, the knowledge variable experienced an increase in the median value between before and after being given audiovisual media. Statistically, audiovisual media significantly influenced knowledge ($p < 0.001$). Respondents' knowledge increased by 7.27. This type of media has better capabilities because it includes auditory (hearing) and visual (seeing) media, which means materials or tools used in learning situations to help writing and spoken words transmit knowledge, attitudes, and ideas.

The study's results in the table show that the attitude variable experienced an increase in median value before and after being given audiovisual media. Statistically, there was a significant influence of audiovisual media on attitudes ($p < 0.001$). Respondents' attitudes increased by 23.7. Attitude is a response to something and is influenced by many factors, often emotional and a subconscious reaction to social stimuli Health education can change a person's attitude by increasing knowledge and understanding, influencing readiness to have a positive attitude (Leonita Cania, 2022).

In this study, respondents who had received audiovisual videos about stunting, balanced nutrition, and its prevention could experience and could change from the results of the counseling that had been obtained so that the counseling could change the mother's attitude from disagreeing to agreeing in preventing children from stunting. In addition, mass media can also influence a person's attitude because, in the current era of globalization, many people use mass media. Hence, mothers find it very easy to get

various information about stunting and nutrition. The findings of this study support research conducted by Souza et al. (2022) in Brazil, which showed that the educational video approach effectively increased the knowledge of pregnant and postpartum mothers regarding newborn care. Another factor influencing attitudes is the influence of other people considered essential, such as health workers who provide health education regarding balanced nutrition and stunting; this will influence the mother's attitude towards her child to stay healthy and avoid various diseases.

Audiovisual media can increase mothers' knowledge by attracting respondents' attention and increasing understanding in mothers with toddlers. Knowledge is a process after sensing a particular object that produces a sense of knowing in a person. Sensing can come from several sources, namely sight, hearing, smell, and the sense of taste or touch. Most of a person's knowledge is obtained according to sight and hearing (Julita et al., 2023). Other studies show that there is a significant influence of knowledge on stunting prevention that is not possessed by mothers who have children with stunting disorders. Messages delivered through audiovisual media are easier to understand and comprehend and will impact learning outcomes in the cognitive, affective, and psychomotor domains. (Winarni, 2016). Audiovisual media involves all the senses, so the more senses are involved in receiving and processing information, the greater the possibility of the content of the information being obtained and understood (Winarto et al., 2020). The eyes are the senses that transmit the most knowledge into the brain. Around 75%-87% of human knowledge is obtained through the eyes, while the other 13%-25% is transmitted through other senses. Media should be able to stimulate or input information through the senses; the more stimulated the information is, the easier the information will be entered (Julita et al., 2023).

Providing health education to the community can improve health behavior knowledge and skills. In addition, higher education also affects thinking skills and facilitates a person's understanding of information (Kholisotin et al., 2019). Researchers argue that audiovisual media can increase knowledge because it involves sight and hearing, with exciting images and sounds to understand the material. In addition, most respondents are highly educated, which can help them absorb the information provided better than those with low levels of education.

CONCLUSION

Fundamental Finding: The results of the study showed that before audiovisual media was given education, median values of the variables of knowledge and attitude increased by 7.27 and 23.7 between before and after audiovisual media was given education. The results of the statistical test showed that audiovisual media can have a significant impact on knowledge. Audiovisual media can increase mothers' knowledge by Knowledge is a process that creates a sense of knowing in a person after sensing a specific object. **Implication:** This study can be a basis for health workers to use audiovisual media in providing health education for mothers. This study can be used to design multimedia-based education programs for mothers, especially in areas with limited access to health workers. **Limitation:** Samples are limited to one particular region or group. **Future Research:** Developing more interactive technology-based education models: For example, with augmented reality (AR) or artificial intelligence (AI)-based applications.

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REFERENCES

- Abdelhady, M., Alfeus, A., & Hamatui, N. (2022). Water and sanitation influence on child health in Namibia: using demographic and health surveys. *Journal of Water, Sanitation and Hygiene for Development*, 12(1), 116–128. <https://doi.org/10.2166/washdev.2021.186>
- Ali, Z., Saaka, M., Adams, A.-G., Kamwininaang, S. K., & Abizari, A.-R. (2017). The effect of maternal and child factors on stunting, wasting and underweight among preschool children in Northern Ghana. *BMC Nutrition*, 3, 1–13. <https://doi.org/10.1186/s40795-017-0154-2>
- Anggraini, S. A., Siregar, S., & Dewi, R. (2020). Pengaruh media audio visual terhadap tingkat pengetahuan dan sikap pada ibu hamil tentang pencegahan stunting di desa Cinta Rakyat. *Jurnal Ilmiah Kebidanan Imelda*, 6(1), 26–31. <https://doi.org/10.52943/jikebi.v6i1.379>
- Apriluana, G., & Fikawati, S. (2018). Analisis faktor-faktor risiko terhadap kejadian stunting pada balita (0-59 bulan) di negara berkembang dan asia tenggara. *Media Penelitian Dan Pengembangan Kesehatan*, 28(4), 247–256. <https://doi.org/10.22435/mpk.v28i4.472>
- Awosolu, O. B., Yahaya, Z. S., & Farah Haziqah, M. T. (2021). Prevalence, parasite density and determinants of falciparum malaria among febrile children in some peri-urban communities in southwestern Nigeria: A cross-sectional study. *Infection and Drug Resistance*, 3219–3232. <https://doi.org/10.2147/IDR.S312519>
- Beattie, A., Yates, R., & Noble, D. J. (2016). Accelerating progress towards universal health coverage in Asia and Pacific: improving the future for women and children. *BMJ Global Health*, 1(Suppl 2). <https://doi.org/10.1136/bmjgh-2016000190>
- Cheng, R., Zheng, Y., Feng, B., Qiu, C., Long, Z., Calderon, J. A., Zhang, X., Phillips, J. M., & Hahn, J. K. (2025). Maternal and Fetal Health Status Assessment by Using Machine Learning on Optical 3D Body Scans. *ArXiv Preprint ArXiv:2504.05627*. <https://doi.org/https://doi.org/10.48550/arXiv.2504.05627>
- Deviyanti, N. W. S. (2022). Gambaran Pengetahuan, Sikap Dan Perilaku Ibu Dalam Upaya Pencegahan Stunting Di Desa Mengani. *Fakultas Kesehatan Program Studi Sarjana Keperawatan Institut Teknologi Dan Kesehatan Bali Denpasar*. [Skripsi](#)
- Ernawati, A. (2020). Gambaran penyebab balita stunting di desa lokus stunting Kabupaten Pati. *Jurnal Litbang: Media Informasi Penelitian, Pengembangan Dan IPTEK*, 16(2), 77–94. <https://doi.org/10.33658/jl.v16i2.194>
- Follona, W., Fitriana, S., & Irawati, D. (2025). Effectiveness of the 'Regating' Application in Improving Knowledge and Attitudes Towards Stunting Prevention among Adolescents. *Women, Midwives and Midwifery*, 5(1), 31–44. <https://doi.org/https://doi.org/10.36749/wmm.5.1.31-44.2025>
- Ginting, S., Simamora, A. C. R., & Siregar, N. (2022). Pengaruh penyuluhan kesehatan dengan media audio visual terhadap perubahan pengetahuan, sikap dan praktik ibu dalam pencegahan stunting di Kecamatan Doloksanggul Kabupaten Humbang Hasundutan Tahun 2021. *Journal Of Healthcare Technology And Medicine*, 8(1), 390–399. <https://doi.org/10.33143/jhtm.v8i1.1996>

- Gupta, A. K., & Santhya, K. G. (2020). Proximal and contextual correlates of childhood stunting in India: A geo-spatial analysis. *PloS One*, 15(8), e0237661. <https://doi.org/10.1371/journal.pone.0237661>
- Haerunnisa, A. N. (2019). *Gambaran Pengetahuan Ibu Balita Tentang Stunting Di Wilayah Kerja Puskesmas Baregbeg Kabupaten Ciamis Tahun 2019*. <http://repository.unigal.ac.id/handle/123456789/525>
- Hartuti, H., Haryono, H., Rusdarti, R., & Pranoto, Y. K. S. (2021). The Role of Parenting in Improving Maternal Health Literature Against Stunting in District Pati. *International Conference on Science, Education, and Technology*, 7, 235–242.
- Herawati, W., Hadiyanto, H., & Abdillah, H. (2024). Hubungan Pengetahuan dan Sikap Ibu Dengan Upaya Penanganan Stunting Pada Anak di Wilayah Kerja Puskesmas Cireunghas. *Jurnal Ventilator*, 2(1), 237–247. <https://doi.org/10.59680/ventilator.v2i1.998>
- Julita, S., Kusumarini, N., & Aulia, N. (2023). Pendidikan Kesehatan dengan Media Audiovisual untuk Meningkatkan Pengetahuan tentang Pencegahan Stunting. *Jurnal Penelitian Kesehatan" SUARA FORIKES" (Journal of Health Research" Forikes Voice"*, 14(2), 254–256. <https://doi.org/10.33846/sf14203>
- Kemenkes, R. I. (2019). Peraturan Menteri Kesehatan Tentang Standar Teknis Pemenuhan Mutu Pelayanan Dasar Pada Standar Pelayanan Minimal Bidang Kesehatan. *Peraturan Menteri Kesehatan*, 4.
- Kemenkes RI. (2018). Riset Kesehatan Dasar Nasional. *Riskesdas*, 76.
- Kholisotin, K., Prasetyo, A. D., & Agustin, Y. D. (2019). Pengaruh penyuluhan berbasis video whatsapp tentang persalinan terhadap pengetahuan dan sikap ibu hamil trimester III di Puskesmas Klabang Kabupaten Bondowoso. *The Indonesian Journal of Health Science*, 11(2), 182–194. <https://doi.org/10.32528/ijhs.v11i2.2962>
- Kirigia, J. M., Muthuri, R. D. K., Nabyonga-Orem, J., & Kirigia, D. G. (2015). Counting the cost of child mortality in the World Health Organization African region. *BMC Public Health*, 15, 1–13. <https://doi.org/10.1186/s12889-015-2465-z>
- Leonita Cania, M. (2022). Efektivitas Edukasi Gizi Menggunakan Media Video dan Leaflet Terhadap Pengetahuan. Sikap Dan Perilaku Tentang Konsumsi Makanan Sumber Zat Besi Pada Ibu Hamil Di Wilayah Kerja Puskesmas Andalas. [Thesis](#)
- Lungu, E. A., Biesma, R., Chirwa, M., & Darker, C. (2016). Healthcare seeking practices and barriers to accessing under-five child health services in urban slums in Malawi: a qualitative study. *BMC Health Services Research*, 16, 1–11. <https://doi.org/10.1186/s12913-016-1678-x>
- Mayasari, K. (2017). *Efektivitas Penggunaan Media Audio Visual Disertai Booklet Dibandingkan Media Booklet Terhadap Pengetahuan Toilet Training Pada Ibu Yang Memiliki Balita Di Posyandu Karanganyar Sanden Bantul*. Universitas Gadjah Mada.
- Monroe, M., Linares, A. M., & Ashford, K. (2021). Women's Perceptions of Hospital-Based Breastfeeding Care and the Association With Exclusive Breastfeeding. *Nursing for Women's Health*, 25(4), 257–263. <https://doi.org/10.1016/j.nwh.2021.05.008>
- Notoatmodjo, S. (2005). *Metodologi penelitian kesehatan*.
- Organization, W. H. (2021). *Levels and trends in child malnutrition: UNICEF*.
- Polverino, A., Sorrentino, P., Pesoli, M., & Mandolesi, L. (2021). Nutrition and cognition across the lifetime: an overview on epigenetic mechanisms. *AIMS Neuroscience*, 8(4), 448. <https://doi.org/10.3934/Neuroscience.2021024>
- Purba, B., Azra, M. N., Waruwu, P. W. A., & Sitepu, Y. E. (2023). Penyebab Dan Dampak Kebijakan Mortalitas Terhadap Pertumbuhan Penduduk. *MIMBAR ADMINISTRASI*

- FISIP UNTAG Semarang*, 20(2), 262–279. <https://doi.org/10.56444/mia.v20i2.1137>
- Sarma, H., Khan, J. R., Asaduzzaman, M., Uddin, F., Tarannum, S., Hasan, M. M., Rahman, A. S., & Ahmed, T. (2017). Factors influencing the prevalence of stunting among children aged below five years in Bangladesh. *Food and Nutrition Bulletin*, 38(3), 291–301. <https://doi.org/10.1177/0379572117710103>
- Sekartini, R., Surapsari, J., Oktarina, M. D., Wiguna, T., Pasiak, T. F., Basrowi, R. W., Kartjito, M. S., & Wasito, E. (2023). Experts' opinion on immunity and nutrition to support key cognitive functions. *World Nutrition Journal*, 6(S2), 1–11. <https://doi.org/10.25220/WNJ.V06.S2.0001>
- Shah, N., Mathur, V. P., Kathuria, V., & Gupta, T. (2016). Effectiveness of an educational video in improving oral health knowledge in a hospital setting. *Indian Journal of Dentistry*, 7(2), 70. <https://doi.org/10.4103/0975-962X.184646>
- Sitorus, R. S., Sirait, R. A., & Sinambela, M. (2025). The Influence of Health Education with Video Media on Stunting Prevention on Mothers' Knowledge. *Jurnal Keperawatan Priority*, 8(1), 84–95. <https://doi.org/10.34012/jukep.v8i1.6299>
- Souza, V. P. de, Perrelli, J. G. A., Brandão, W., Pereira, M. B. F. L. de O., Guedes, T. G., & Monteiro, E. M. L. M. (2022). Elaboration and validation of an educational video for the prevention of sexual violence in adolescents. *Texto & Contexto-Enfermagem*, 31, e20210171. <https://doi.org/10.1590/1980-265X-TCE-2021-0171en>
- Trianinsi, N., & Ridwan, E. S. (2025). The Impact of Providing Android-Based Illustrated Videos on Knowledge of Stunting Prevention in Women of Childbearing Age. *Jurnal Gizi Dan Kesehatan Keluarga*, 2(02), 45–50. <https://doi.org/https://doi.org/10.69632/jgkk.v2i02.41>
- Trisnawati, K. D., Lestari, M., Syawali, W., Muklis, F. A., Jayadinata, A. K., Muqadas, I., & Nikawanti, G. (2025). Optimization of Stunting Prevention Education Programs in Improving The Quality of Parenting and Nutritional Balance of Children. *TAAWUN*, 5(01), 108–122. <https://doi.org/https://doi.org/10.37850/taawun.v5i01.896>
- Unicef, & WHO, W. (2020). Levels and trends in child malnutrition: key findings of the 2019 Edition of the Joint Child Malnutrition Estimates. *Geneva: World Health Organization*.
- Winarni, W. (2016). Efektifitas Ceramah dan Audio Visual dalam Peningkatan Pengetahuan Dismenorea pada Siswi SMA. *Gaster*, 14(2), 90–99. <https://doi.org/10.30787/gaster.v14i2.120>
- Winarto, W., Syahid, A., & Saguni, F. (2020). Effectiveness the use of audio visual media in teaching islamic religious education. *International Journal of Contemporary Islamic Education*, 2(1), 81–107. <https://doi.org/10.24239/ijcied.Vol2.Iss1.14>
- Yeshambel Wassie, A., Atnafu Gebeyehu, N., & Abebe Gelaw, K. (2020). Knowledge, attitude, and associated factors towards colostrum feeding among antenatal care attendant mothers in gununo health centre, Wolaita zone, Ethiopia 2019: cross-sectional study. *International Journal of Pediatrics*, 2020(1), 3453502. <https://doi.org/10.1155/2020/3453502>
- Wardani, N. E. K., & Sholika, S. M. (2025). The Role of Psychoeducation in Preventing Stunting: Tackling Early Marriage Culture in Adolescent. *Journal La Medihealthico*, 6(1), 20–25. <https://doi.org/https://doi.org/10.37899/journallamedihealthico.v6i1.1708>

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