



ARTICLE INFORMATION

Received: September, 19, 2026

Revised: October, 07, 2026

Available online: October, 09, 2026

at: <https://e-jurnal.ipphorr.com/index.php/mhc>

Effect of digital educational videos on maternal knowledge of acute respiratory infection prevention

Syafira Aulia Syifa*, Budi Antoro, Annisa Agata

Universitas Mitra Indonesia

Corresponding author: *E-mail: syafiraauliasyifa5@gmail.com

Abstract

Background: Acute Respiratory Infection (ARI) remains a common health problem among children under five, and adequate maternal knowledge is important for preventing ARI. Improving maternal knowledge through accessible digital health education may support preventive practices.

Purpose: To determine the impact of a digital educational video innovation on mothers' knowledge regarding ARI prevention within the working area.

Method: This study employed a quantitative approach with a pre-experimental one-group pretest-posttest design. The study involved 40 mothers of children aged 0–59 months who were selected using purposive sampling. Maternal knowledge regarding ARI prevention was assessed using a knowledge questionnaire administered before and after the intervention. The intervention consisted of a digital educational video covering the definition, causes and risk factors, signs and symptoms, potential consequences, and preventive measures for ARI. Data were analyzed using univariate analysis and the Wilcoxon signed-rank test, with a significance level of $\alpha = 0.05$.

Results: The study results showed an increase in mothers' knowledge following the provision of education via digital educational videos. The knowledge level shifted from the "sufficient" category prior to the intervention to the "good" category after the intervention. The Wilcoxon test yielded a p-value of $p < 0.001$ ($p < 0.05$), indicating a significant effect of the digital educational video on mothers' knowledge regarding ARI prevention. Maternal knowledge increased following the digital educational video intervention, with knowledge shifting from the sufficient category before the intervention to the good category after the intervention. The Wilcoxon signed-rank test showed a statistically significant difference in maternal knowledge between the pretest and posttest scores ($p < 0.001$).

Conclusion: The digital educational video innovation is effective in improving mothers' knowledge regarding ARI prevention.

Keywords: ARI Prevention; Digital Educational Video; Maternal Knowledge.

INTRODUCTION

Acute respiratory infection (ARI) remains a common health problem among children under five years of age and contributes substantially to childhood morbidity and mortality. The World Health Organization reported that approximately 4 million deaths occur annually due to respiratory infections, involving both upper and lower respiratory tract infections World Health Organization, 2020). Most respiratory infections are associated with viral or bacterial pathogens (Sutopo, Antoro, & Stiexs, 2025).

The high burden of ARI among young children highlights the importance of preventive strategies that not only address clinical management but also strengthen caregivers' knowledge, health literacy, and capacity to adopt appropriate health behaviours. The burden of respiratory infections among children under five remains a concern in many Asian and African countries. Respiratory infections were associated with approximately 49% of deaths among children under five in Africa and 24% in Southeast Asia. These

findings emphasize the importance of preventive and promotive approaches, particularly those involving parents or primary caregivers. In Indonesia, ARI also remains an important health concern among children. According to the 2018 Basic Health Research (BHR), ARI prevalence varied considerably across provinces, with Papua reporting the highest prevalence at 10.5% and Central Java at 4.6%. More recent data from the 2023 Indonesian Health Survey (IHS) indicated that ARI prevalence among children under five reached 34.2% nationally, with considerable variation across provinces, including Lampung at 26.1%. In Lampung Province, ARI continues to contribute to healthcare utilization. In 2023, approximately 417.100 ARI cases were recorded in the province, with North Lampung, Pesawaran, and Bandar Lampung among the areas reporting substantial numbers of cases. Data from Community Health Center Kedaton also indicated a considerable burden among children under five, including 994 new cases among boys and 991 among girls, with additional ongoing cases reported through October 2024.

The occurrence of ARI among children is influenced by multiple intrinsic and extrinsic factors. Intrinsic factors include low birth weight, nutritional status, immunization status, and age, whereas extrinsic factors include inadequate household ventilation, residential crowding, exposure to cigarette smoke, use of solid fuels, and environmental sanitation (Ali, Rosniati, Ifadah, Sari, Sujati, Larasati, & Pendet, 2025). Maternal knowledge is also an important factor because mothers play a central role in childcare, health decision-making, and the implementation of preventive practices at home. Adequate maternal knowledge may support the recognition of risk factors, early symptoms, appropriate preventive practices, and timely healthcare-seeking when respiratory symptoms occur (Novita, Rikandi, & Saputri, 2025). Conversely, limited knowledge may reduce mothers' ability to respond appropriately to potential health problems. From a health promotion perspective, strengthening maternal health knowledge is therefore relevant not only to disease prevention but also to mothers' confidence and capacity to make appropriate health-related decisions for their children (Adil, Usman, & Jalil, 2021).

The development of digital technology has created opportunities to strengthen health education and

health literacy through accessible and flexible communication media. Digital health education can improve knowledge and support changes in health-related behaviours (Gold, Hu, Denford, Xia, Towler, Groot, & Yardley, 2021). Digital health literacy is also increasingly recognized as an important component of preventive health behaviour and decision-making, particularly when individuals obtain health information through digital platforms (Elechi, Chibueze, Golor, Omobolanle, & Elechi, 2025). One potentially useful digital medium is educational video, which combines visual, auditory, and textual information to facilitate the delivery of health messages. Educational videos could improve parents' knowledge regarding respiratory diseases in children (Srivastava & Harinath, 2023). Video-based education was more effective than leaflets or conventional lectures in improving mothers' knowledge regarding ARI (Santia & Umar, 2021). Similar findings have supported the use of video and other audiovisual approaches to improve maternal health literacy (Prawesti, Haryanti, & Lusmilasari, 2018). These findings suggest that audiovisual education may provide an alternative approach for delivering preventive health information in primary healthcare settings.

Digital video also provides practical advantages for health education because information can be accessed repeatedly through platforms such as WhatsApp, social media, and digital health education services at primary healthcare facilities. The use of digital interventions to support parents in managing children's health has received increasing attention, although the effectiveness and implementation of such interventions may vary according to context and user needs (Carey, Peters, Chick, Carter, Bray, Roland, & Neill, 2025). Digital health literacy interventions have also been developed to support maternal, child, and family health within primary healthcare settings (Jafree, Bukhari, Muzamill, Tasneem, & Fischer, 2021). The ability to replay educational material may allow mothers to review information according to their individual learning needs. This characteristic is particularly relevant for health education that involves several behavioural recommendations, such as hand hygiene, respiratory etiquette, recognition of early respiratory symptoms, environmental control, and appropriate healthcare-seeking. The accessibility and repeatability of digital information may also support a more active learning

Syafira Aulia Syifa*, Budi Antoro, Annisa Agata

Universitas Mitra Indonesia

Corresponding author: *E-mail: syafiraauliasyifa5@gmail.com

DOI: <https://doi.org/10.56922/mhc.v5i7.4547>

process than one-time verbal counselling. Digital literacy programmes have demonstrated the potential to strengthen individuals' ability to access and use digital information, which is relevant to the delivery of health education through digital media (Gogoi, Manoranjini, & Gupta, 2025).

Previous studies have demonstrated mothers' acceptance of audiovisual health education. Mothers preferred audiovisual media to printed materials because videos were perceived as more interesting, memorable, and accessible for repeated viewing. Educational videos have also been used to communicate preventive practices, including handwashing, respiratory etiquette, early management of ARI symptoms, and timely healthcare-seeking for young children. Video-based health education could facilitate faster and more consistent delivery of information in primary healthcare settings. In contrast, conventional education methods such as verbal counselling and leaflets may have limitations in maintaining attention and accommodating differences in educational backgrounds. Only 34% of mothers read health education leaflets provided by healthcare workers, while visual materials were more preferred. Demonstrated the potential of educational videos to influence handwashing behavior among mothers and young children. The integration of visual, auditory, and textual stimuli may facilitate the reception and comprehension of health information. That 72% of mothers of young children preferred watching educational videos rather than reading lengthy leaflets or modules. These characteristics indicate that digital educational videos may be a feasible medium for strengthening mothers' understanding of ARI prevention. Evidence concerning digital health literacy also indicates that the ability to access, understand, and use digital health information is relevant to preventive health practices (Patel, Sreelal, Kalyani, Joy, Pravalika, Ramya, & Gandhi, 2024).

Community Health Center Kedaton, as a primary healthcare facility in Bandar Lampung, has an important role in delivering promotive and preventive health services for children under five. Differences in educational backgrounds and social circumstances among community members require health education approaches that are clear, accessible, and easy to understand. Digital video-based education may therefore provide an alternative approach to

complement conventional health education by enabling mothers to access and review preventive information beyond the immediate counselling session. Such an approach is also relevant to health literacy because it facilitates the acquisition and use of health information in everyday decision-making (Mukhtar, Babur, Abbas, Irshad, & Kiran, 2025). Digital approaches may also support the dissemination of health information in primary healthcare and community settings by providing flexible access to educational materials (Gogoi, Manoranjini, & Gupta, 2025). A preliminary survey conducted at Community Health Center Kedaton on October 10, 2025, indicated that ARI remained a considerable health problem among children under five. Service-visit records documented 496 ARI cases among children under five in September 2025. In addition, interviews with 10 respondents showed that seven had never received digital video education concerning ARI, while three reported having received ARI-related information through leaflets. These findings indicate a gap between the continuing burden of ARI and the availability of accessible audiovisual health education for mothers. Therefore, the development and use of digital educational videos may represent a relevant health promotion strategy for improving mothers' knowledge regarding ARI prevention. The use of educational videos has also demonstrated potential for improving mothers' understanding and attitudes toward respiratory disease prevention among children under five (Wijayanti, Oktarina, & Trimawati, 2025).

RESEARCH METHOD

This study employed a quantitative approach with a pre-experimental one-group pretest-posttest design. The study involved a single group without a control group. Maternal knowledge regarding acute respiratory infection (ARI) prevention was measured before and after the intervention. The intervention consisted of a digital educational video containing information on ARI prevention. The pretest was administered before the intervention, followed by the digital educational video intervention and a posttest to assess changes in maternal knowledge. The study was conducted at Community Health Center Kedaton, Bandar Lampung, Indonesia, a primary healthcare facility providing health services for mothers and

Syafira Aulia Syifa*, Budi Antoro, Annisa Agata

Universitas Mitra Indonesia

Corresponding author: *E-mail: syafiraauliasyifa5@gmail.com

DOI: <https://doi.org/10.56922/mhc.v5i7.4547>

children under five. Data collection was conducted from December 26, 2025, to January 1, 2026.

The study population consisted of 496 mothers with children under five who were recorded in the relevant service population. A total of 40 respondents were recruited using purposive sampling based on predetermined inclusion and exclusion criteria. The inclusion criteria were mothers with children aged 0–59 months, visiting Community Health Center Kedaton, able to read and write and complete the questionnaire, willing to participate by signing informed consent, and willing to receive the digital educational video intervention. The exclusion criteria were respondents who did not complete either the pretest or posttest, experienced conditions that interfered with questionnaire completion, or had received intensive ARI education within the previous month. The independent variable was a digital educational video on ARI prevention, while the dependent variable was maternal knowledge regarding ARI prevention. The educational video presented information on the definition of ARI, causes and risk factors, signs and symptoms, potential consequences, and preventive measures through clean and healthy living behaviours. The primary instrument was a maternal knowledge questionnaire concerning ARI and its prevention, administered before and after the intervention. The study also used a respondent characteristics form and informed consent form.

Data collection began with an explanation of the study objectives, procedures, potential benefits, and

participation requirements. Eligible mothers who agreed to participate provided written informed consent. The pretest was then administered to assess baseline knowledge. Respondents subsequently received the digital educational video on ARI prevention. After the intervention, the same knowledge questionnaire was administered as a posttest to assess knowledge following the intervention. Completed questionnaires were checked for completeness and consistency before data processing and analysis. Data were analyzed using univariate and bivariate analyses. Univariate analysis was used to describe respondent characteristics and the distribution of maternal knowledge before and after the intervention. The Shapiro-Wilk test was used to assess the normality of the knowledge scores. Because the data were analyzed using a non-parametric approach, the Wilcoxon signed-rank test was used to examine differences in maternal knowledge between the pretest and posttest measurements. Statistical significance was determined at $\alpha = 0.05$, with $p < 0.05$ considered statistically significant. The study adhered to relevant research ethics principles, including informed consent, voluntary participation, confidentiality, and protection of respondents' privacy and comfort throughout the research process. Respondents were informed of their right to participate voluntarily, and their identities were kept confidential. The collected data were used solely for research purposes.

RESEARCH RESULTS

Table 1. Characteristics of Respondents (N= 40)

Variable	Results
Age (n/%) (Mean±SD) (Range) (Year)	(26.7±3.8) (20-40)
20-30	33/82.5
31-40	7/17.5
Education (n/%)	
Junior High School	5/12.5
Senior High School	26/65.0
University	9/22.5
Occupation (n/%)	
Laborer	7/17.5

Syafira Aulia Syifa*, Budi Antoro, Annisa Agata

Universitas Mitra Indonesia

Corresponding author: *E-mail: syafiraauliasyifa5@gmail.com

DOI: <https://doi.org/10.56922/mhc.v5i7.4547>

Effect of digital educational videos on maternal knowledge of acute respiratory infection prevention

Farmer	14/35.0
Entrepreneur	12/30.0
Tailor	3/7.5
Civil Servant	4/10.0

Table 1 shows the characteristics of the 40 respondents. The mean age was 26.75 ± 3.85 years, with an age range of 20–40 years. Most respondents were aged 20–30 years (33/82.5%). Regarding education, the majority had completed senior high school (26/65.0%), followed by university education (9/22.5%) and junior high school (5/12.5%). In terms of occupation, most respondents were farmers (14/35.0%), followed by entrepreneurs (12/30.0%), laborers (7/17.5%), civil servants (4/10.0%), and tailors (3/7.5%).

Table 2. Mean Maternal Knowledge Score

Variable	Minimum	Maximum	Mean	SD
Pretest	5	11	8.15	1.528
Posttest	13	15	14.85	0.483

Table 2 shows the mean maternal knowledge scores before and after the intervention. The mean pretest score was 8.15 ± 1.528 , with scores ranging from 5 to 11. After the intervention, the mean score increased to 14.85 ± 0.483 , with scores ranging from 13 to 15.

Table 3. Results of the Normality Test

Maternal Knowledge Level	Shapiro–Wilk		
	Statistic	df	Sig.
Pretest	0.937	40	0.028
Posttest	0.346	40	<.001

Table 3 presents the results of the Shapiro–Wilk normality test for maternal knowledge scores. The significance values for both the pretest ($p = 0.028$) and posttest ($p < 0.001$) were below 0.05, indicating that the data were not normally distributed. Therefore, a non-parametric statistical test was used to compare maternal knowledge scores before and after the intervention.

Table 4. Effect of the Intervention on Maternal Knowledge

Maternal Knowledge Level	Mean	Mean Difference	Range	SD	Z	P-value
Pretest	8.15	6.7	5-11	1.528	-5.539	< 0.001
Posttest	14.85		13-15	0.483		

Table 4 shows the difference in maternal knowledge scores before and after the intervention. The mean score increased from 8.15 ± 1.528 at pretest to 14.85 ± 0.483 at posttest, with a mean difference of 6.70 points. The Wilcoxon signed-rank test showed a statistically significant difference between pretest and posttest maternal knowledge scores ($Z = -5.539$, $p < 0.001$).

DISCUSSION

The present study found a statistically significant increase in maternal knowledge regarding acute respiratory infection (ARI) prevention following the digital educational video intervention. The mean knowledge score increased from 8.15 ± 1.528 before the intervention to 14.85 ± 0.483 after the intervention, representing a mean increase of 6.70 points. The Wilcoxon signed-rank test demonstrated

Syafira Aulia Syifa*, Budi Antoro, Annisa Agata

Universitas Mitra Indonesia

Corresponding author: *E-mail: syafiraauliasyifa5@gmail.com

DOI: <https://doi.org/10.56922/mhc.v5i7.4547>

a significant difference between pretest and posttest scores ($Z = -5.539$, $p < 0.001$). These findings indicate that maternal knowledge was higher after receiving the digital educational video than before the intervention. The improvement in knowledge is important in the context of maternal health literacy. Mothers play an important role in obtaining health information, recognizing symptoms, making decisions regarding child care, and implementing preventive practices at home. Adequate knowledge regarding ARI may help mothers understand risk factors, recognize early respiratory symptoms, and identify appropriate preventive measures. However, because this study measured knowledge rather than subsequent health behaviour or clinical outcomes, the increase in knowledge should not be interpreted as direct evidence of improved ARI-prevention practices. Respiratory infections remain an important concern in child health, particularly in relation to the recognition and management of respiratory symptoms and the implementation of preventive measures (World Health Organization, 2020).

Before the intervention, the mean knowledge score was 8.15, with scores ranging from 5 to 11. The variation in baseline scores indicates that respondents entered the intervention with different levels of understanding regarding ARI prevention. Limited baseline knowledge may represent a potential barrier to effective health information processing and preventive decision-making. This finding is relevant to primary healthcare because mothers may receive health information through different sources and with varying levels of accessibility and comprehensibility. Previous research has also identified maternal knowledge as an important consideration in relation to ARI among children under five (Novita, Rikandi, & Saputri, 2025). Similarly, health education has been reported to improve mothers' knowledge regarding the prevention of acute respiratory infections in toddlers, indicating the importance of maternal knowledge as an educational target in ARI prevention (Salma, Herdiani, & Nurmahmudah, 2024).

Following the intervention, the mean score increased to 14.85, with a narrower score range of 13–15 and a standard deviation of 0.483. The lower variability after the intervention indicates that the respondents' knowledge scores became more concentrated at the higher end of the measurement scale. This pattern suggests that the educational

material was followed by a relatively consistent improvement across participants. Nevertheless, the absence of a control group means that factors other than the intervention, such as exposure to other information or familiarity with the questionnaire, cannot be completely excluded as explanations for the observed change.

Knowledge can be understood as the result of receiving and processing information through the senses. In the present study, the educational material was delivered through an audiovisual format, allowing respondents to receive information through visual and auditory stimuli. The video presented information concerning the definition of ARI, causes and risk factors, signs and symptoms, potential consequences, and preventive measures. This format may have facilitated comprehension by presenting health concepts together with concrete visual examples. The use of audiovisual health education has previously been associated with improvements in maternal health literacy (Prawesti, Haryanti, & Lusmilasari, 2018). Evidence from maternal health education research also indicates that educational videos can improve knowledge, supporting the use of audiovisual media as an approach for communicating health information to women (Lertpongsoaporn, Limsiri, & Pinnington, 2025).

The findings are also consistent with Mayer's multimedia learning theory, which proposes that people process information through separate but interacting visual and auditory channels. When verbal and visual information are appropriately coordinated, learners may be able to construct a more integrated understanding of the presented material. In this study, the digital educational video combined narration, written information, visual illustrations, and practical demonstrations such as cough etiquette and handwashing. These elements may have helped respondents connect verbal explanations with observable examples of ARI-prevention practices. The use of animated and audiovisual content has also been reported as a potentially useful approach for improving maternal health literacy (Wang, 2025).

The role of audiovisual media is particularly relevant when health information needs to be communicated to individuals with different educational backgrounds. Most respondents in the present study had completed senior high school, while others had junior high school or higher education. Although

Syafira Aulia Syifa*, Budi Antoro, Annisa Agata

Universitas Mitra Indonesia

Corresponding author: *E-mail: syafiraauliasyifa5@gmail.com

DOI: <https://doi.org/10.56922/mhc.v5i7.4547>

educational level was not analyzed as a predictor of knowledge improvement, the diversity of educational backgrounds highlights the importance of using health education materials that do not rely exclusively on complex written information. Video may provide an alternative means of presenting information in a more concrete and accessible form. Digital health literacy may similarly influence how individuals access, understand, and use health information across different educational and sociodemographic backgrounds (Patel, Sreelal, Kalyani, Joy, Pravalika, Ramya, & Gandhi, 2024). More broadly, digital approaches to infection prevention have been explored as a means of improving access to health information among populations with different vulnerabilities (Moreal, Dobrowolska, Ozdoba, Szara, Velikonja, Šimec, & Chiappinotto, 2025).

Previous findings have reported significant improvements in mothers' knowledge regarding ARI following video-based education. These findings support the potential of audiovisual media to facilitate understanding of respiratory infection prevention. Previous studies have also reported improvements in mothers' knowledge regarding ARI following educational video exposure, including among mothers with lower educational attainment. These findings suggest that visual representation may complement written or verbal explanations when communicating information related to child respiratory health. In particular, a video-assisted teaching programme among mothers of children under five was reported to improve knowledge regarding the prevention of acute respiratory tract infections (Malla, Bhatia, & Mishra, 2026). Health education has likewise been shown to improve mothers' knowledge about ARI prevention in toddlers (Salma, Herdiani, & Nurmahmudah, 2024). Similar educational video approaches have been reported to improve mothers' attitudes toward pneumonia prevention among children under five (Wijayanti, Oktarina, & Trimawati, 2025).

Animated educational videos may improve parents' understanding and retention of information regarding respiratory diseases in children. The use of animation and visual examples may attract attention and provide concrete representations of information that might otherwise be difficult to understand through verbal explanations alone. The present findings are consistent with this perspective because the posttest scores demonstrated a substantial increase after

respondents received the audiovisual material. The use of animated content has also been investigated as a new-media approach for improving maternal health literacy (Wang, 2025), while digital literacy interventions have demonstrated potential for strengthening the ability to obtain and use digital information (Gogoi, Manoranjini, & Gupta, 2025). Evidence from an educational video intervention among pregnant women further supports the potential of video-based education to improve health-related knowledge (Lertpongsaporn, Limsiri, & Pinnington, 2025).

The accessibility of digital video may provide an additional advantage in primary healthcare education. Video-based education can offer flexibility because educational information can be accessed according to users' time and learning needs. Interactive video-based education could support attention and knowledge retention compared with printed educational materials. In the context of maternal health, the ability to access and replay digital educational material may allow mothers to review information that was not fully understood during the initial viewing. Digital healthcare interventions have increasingly been explored as a means of supporting parents in managing children's health information and decision-making at home (Carey, Peters, Chick, Carter, Bray, Roland, & Neill, 2025). The use of digital approaches is also consistent with broader efforts to promote equitable access to infection-prevention information among people with different vulnerabilities (Moreal, Dobrowolska, Ozdoba, Szara, Velikonja, Šimec, & Chiappinotto, 2025).

The findings may also be interpreted from a health communication perspective. Effective health communication emphasizes the importance of presenting health messages in ways that are understandable, relevant, and connected to everyday health practices. The digital video used in this study presented ARI-prevention information together with practical examples. Such contextualized communication may help mothers relate the information to their daily responsibilities in caring for children. This may be particularly useful for preventive health education, in which understanding the information is an important initial step before individuals can consider adopting recommended practices. Digital health literacy interventions have similarly emphasized the importance of making health

Syafira Aulia Syifa*, Budi Antoro, Annisa Agata

Universitas Mitra Indonesia

Corresponding author: *E-mail: syafiraauliasyifa5@gmail.com

DOI: <https://doi.org/10.56922/mhc.v5i7.4547>

information accessible and usable within everyday maternal and family health contexts (Jafree, Bukhari, Muzamill, Tasneem, & Fischer, 2021).

The findings also have implications for community nursing practice. Health education is an important component of promotive and preventive nursing services, particularly at the primary healthcare level. The significant difference between pretest and posttest knowledge scores suggests that digital educational video can be considered a complementary medium for delivering maternal health education concerning ARI prevention. Rather than replacing direct communication between healthcare workers and mothers, digital materials can supplement face-to-face counselling and provide an opportunity for repeated exposure to preventive health information. Digital health literacy has been increasingly recognized as an important component of preventive health behaviour and health decision-making (Elechi, Chibueze, Golor, Omobolanle, & Elechi, 2025). The findings of previous research on video-assisted teaching for ARI prevention among mothers further support the potential role of video as a complementary educational medium in primary healthcare settings (Malla, Bhatia, & Mishra, 2026).

The results should, however, be interpreted within the methodological limitations of the study. The one-group pretest-posttest design does not include a control group, so the observed increase in knowledge cannot be attributed exclusively to the digital educational video. Testing effects, external information exposure, and other uncontrolled factors may have contributed to the change in scores. In addition, the study assessed knowledge immediately following the intervention and did not measure long-term knowledge retention, maternal preventive behaviour, healthcare-seeking behaviour, or the incidence of ARI among children. Therefore, further studies using a controlled design, larger samples, and longer follow-up are needed to determine whether the observed improvement in knowledge is sustained and whether it is accompanied by changes in preventive practices.

CONCLUSION

The findings demonstrate a significant increase in maternal knowledge regarding ARI prevention following exposure to a digital educational video. The mean knowledge score increased by 6.70 points from

pretest to posttest, and the Wilcoxon signed-rank test indicated a statistically significant difference between the two measurements ($Z = -5.539$, $p < 0.001$). The increase in knowledge may be related to the audiovisual presentation, which integrates verbal explanations, visual information, and practical examples in a format that can be accessed by mothers. From a health literacy and community nursing perspective, digital educational video may serve as a useful complementary medium for strengthening mothers' understanding of ARI prevention in primary healthcare settings.

REFERENCES

- Adil, A., Usman, A., & Jalil, A. (2021). Qualitative analysis of digital health literacy among university students in Pakistan. *Journal of Human Behavior in the Social Environment*, 31(6), 771–781.
- Ali, A., Rosniati, R., Ifadah, E., Sari, N. M. S., Sujati, N. K., Larasati, A. D., & Pendet, N. M. D. P. (2025). *Buku ajar keperawatan medikal bedah*. PT Sonpedia Publishing Indonesia.
- Carey, M. C., Peters, J., Chick, A., Carter, B., Bray, L., Roland, D., & Neill, S. (2025). Digital healthcare interventions to support parents with acutely ill children at home: A systematic review. *PLOS Digital Health*, 4(9), e0000998.
- Elechi, U. S., Chibueze, E. S., Golor, H. E., Omobolanle, A. A., & Elechi, K. (2025). Digital health literacy and its impact on preventive healthcare behaviors in resource-limited Nigerian communities. *Journal of Pharma Insights and Research*, 3(3), 365–378.
- Gogoi, A., Manoranjini, M., & Gupta, M. (2025). Design and implementation of digital literacy training programme: Findings of a quasi-experimental study from rural India. *PLOS Digital Health*, 4(4), e0000617.

Syafira Aulia Syifa*, Budi Antoro, Annisa Agata

Universitas Mitra Indonesia

Corresponding author: *E-mail: syafiraauliasyifa5@gmail.com

DOI: <https://doi.org/10.56922/mhc.v5i7.4547>

Effect of digital educational videos on maternal knowledge of acute respiratory infection prevention

- Gold, N., Hu, X. Y., Denford, S., Xia, R. Y., Towler, L., Groot, J., & Yardley, L. (2021). Effectiveness of digital interventions to improve household and community infection prevention and control behaviours and to reduce incidence of respiratory and/or gastro-intestinal infections: A rapid systematic review. *BMC Public Health*, 21(1), 1180.
- Jafree, S. R., Bukhari, N., Muzamill, A., Tasneem, F., & Fischer, F. (2021). Digital health literacy intervention to support maternal, child and family health in primary healthcare settings of Pakistan during the age of coronavirus: Study protocol for a randomised controlled trial. *BMJ Open*, 11(3), e045163.
- Lertpongsaporn, O., Limsiri, P., & Pinnington, T. R. (2025). Effectiveness of an educational video on the knowledge of influenza and pertussis vaccination among pregnant women: A randomized controlled trial. *Thai Journal of Obstetrics and Gynaecology*, 408–418.
- Malla, A., Bhatia, N., & Mishra, V. D. (2026). A study to evaluate the effectiveness of video assisted teaching programme on prevention of acute respiratory tract infections among mothers of under five age group children at selected rural areas in Visakhapatnam District, Andhra Pradesh. *International Journal of Pharmacy Research & Technology*, 16(1), 4253–4260.
- Moreal, C., Dobrowolska, B., Ozdoba, P., Szara, M., Velikonja, N. K., Šimec, M., & Chiappinotto, S. (2025). Promoting equitable access to infection prevention for people with different vulnerabilities: A scoping review. *BMC Nursing*, 24, 1236.
- Mukhtar, T., Babur, M. N., Abbas, R., Irshad, A., & Kiran, Q. (2025). Digital health literacy: A systematic review of interventions and their influence on healthcare access and Sustainable Development Goal 3 (SDG-3). *Pakistan Journal of Medical Sciences*, 41(3), 910.
- Novita, E., Rikandi, M., & Saputri, M. (2025). Hubungan pengetahuan ibu dengan kejadian ISPA (infeksi saluran pernapasan akut) pada balita usia 0–59 bulan di Puskesmas X. *Jurnal Kesehatan Lentera 'Aisyiyah*, 8(1), 24–29.
- Patel, S., Sreelal, B. S., Kalyani, S., Joy, S. G., Pravalika, T., Ramya, T., & Gandhi, A. P. (2024). Digital health literacy among the ageing population: A comparative cross-sectional study between rural and urban Telangana, India. *Medical Journal Armed Forces India*, 80(3), 313–319.
- Prawesti, I., Haryanti, F., & Lusmilasari, L. (2018). Effect of health education using video and brochure on maternal health literacy. *Belitung Nursing Journal*, 4(6), 612–618.
- Salma, L. A., Herdiani, I., & Nurmahmudah, E. (2024). The influence of health education on mothers' knowledge about prevention of acute respiratory infections (ARI) in toddlers at Majalengka Public Health Center. *HealthCare Nursing Journal*, 6(1), 33–38.
- Santia, M., & Umar, A. (2021). Efektivitas media booklet dan video terhadap peningkatan pengetahuan ibu tentang pencegahan ISPA pada balita. *Jurnal Kesehatan Medika Saintika*, 12(2), 149–158.
- Srivastava, T., & Harinath, S. (2023). Benefit of educational video on parental knowledge, attitude and practice about middle ear infection in children. *Indian Journal of Otolaryngology and Head & Neck Surgery*, 75(Suppl 1), 23–31.
- Sutopo, P. T., Antoro, B., & Stiexs, A. (2025). Peningkatan pengetahuan ibu balita untuk pencegahan infeksi saluran pernafasan akut (ISPA) dengan edukasi self management: Improving the knowledge of mothers of toddlers for the prevention of acute respiratory tract infection with self management education. *Jurnal Keperawatan Bunda Delima*, 7(2), 8–17.

Syafira Aulia Syifa*, Budi Antoro, Annisa Agata

Universitas Mitra Indonesia

Corresponding author: *E-mail: syafiraaulyasyifa5@gmail.com

DOI: <https://doi.org/10.56922/mhc.v5i7.4547>

Effect of digital educational videos on maternal knowledge of acute respiratory infection prevention

- Wang, L. (2025). New media interventions for improving maternal health literacy: An experimental study in China using animated content. *African Journal of Reproductive Health*, 29(12), 18–25.
- Wijayanti, F., Oktarina, N. D., & Trimawati, T. (2025). Effectiveness of educational videos in improving mothers' attitudes toward pneumonia prevention in toddlers. *Journal of Integrated Health Research*, 1(3), 111–118.
- World Health Organization. (2020). *Clinical management of severe acute respiratory infection (SARI) when COVID-19 disease is suspected: Interim guidance, 13 March 2020*. World Health Organization.
<https://www.who.int/europe/publications/i/item/WHO-2019-nCoV-clinical-2020-4>

Syafira Aulia Syifa*, Budi Antoro, Annisa Agata

Universitas Mitra Indonesia

Corresponding author: *E-mail: syafiraauliasyifa5@gmail.com

DOI: <https://doi.org/10.56922/mhc.v5i7.4547>