

EFFECTIVENESS OF AUDIOVISUAL MEDIA ON MOTHER'S KNOWLEDGE OF BASIC COMPLETE IMMUNIZATION IN SALOPA COMMUNITY HEALTH CARE TASIKMALAYA

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ABSTRACT

The World Health Organization (2022) reported that 14.3 million children had not received the initial dose of DPT immunization, while another 6.2 million children received only partial immunization. Banjarwaringin Village, located within the working area of Salopa Community Health Care, has the lowest immunization coverage at 70%. Several toddlers have not completed basic immunization because mothers lack knowledge regarding complete basic immunization. Therefore, the use of audiovisual media in health education may improve mothers' knowledge and attitudes toward immunization. This study aimed to determine the effectiveness of audiovisual media on mothers' knowledge of complete basic immunization in Banjarwaringin Village, Salopa Community Health Care, Tasikmalaya. This study used a pre-experimental method with a one-group pretest-posttest design. The sample consisted of 30 respondents, and the data were analyzed using normality and Wilcoxon signed-rank tests. The results showed improved knowledge before intervention, with 56.7% having moderate knowledge and 21.6% low knowledge, and after intervention, 86.3% had good knowledge while only 2.0% remained low. Audiovisual media was proven effective with a p-value of 0.000 (<0.05). In conclusion audiovisual health education significantly increased mothers' understanding of complete basic immunization in Banjarwaringin Village and may support childhood immunization coverage in the Salopa Community Health Care.

Keywords: Audiovisual Media, Knowledge, Immunization

INTRODUCTION

Imunisasi Dasar Lengkap is one of the most effective public health interventions to prevent infectious diseases that can lead to disability and death in infants and toddlers. The Indonesian government has made immunization a national priority to reduce infant morbidity and mortality. Based on Undang – Undang Kesehatan No. 7 Tahun 2023, every infant and child has the right to receive immunization to protect against vaccine-preventable diseases (VPDs). The basic immunization program includes Hepatitis B, BCG, Polio, DPT-HB-Hib, Measles-Rubella (MR), and additional vaccines such as PCV and Rotavirus introduced in 2023. Although national immunization coverage increased and reached 94.6% in 2024, some regions still have low coverage and remain at risk of outbreaks of preventable diseases. In Tasikmalaya Regency, basic complete immunization coverage was only 50.9% in 2023 and increased to 60.20% in early 2024, which is still far below the national target of 100%. One of the lowest-coverage areas is Desa Banjarwaringin, under the Puskesmas Salopa, with only 70% coverage. Out of 170 toddlers, 51 children have not received complete basic immunization, including DPT, Polio, IPV, Measles, PCV, and booster vaccines. This village has also been designated as a GAVI focus area in 2025. The low immunization coverage is influenced by several factors, particularly mothers' low knowledge about the importance of immunization. Preliminary interviews showed that some mothers are concerned about side effects such as fever, doubt the halal status of vaccines, and have limited trust in immunization benefits. Other contributing

factors include low education levels, lack of health information, and socio-cultural influences. Insufficient maternal knowledge can lead to non-compliance with immunization schedules, increasing the risk of preventable diseases. One effort to improve maternal knowledge is through health education using audiovisual media. Audiovisual media is considered more effective because it combines visual and auditory elements, making information easier to understand and more engaging. Previous studies have shown that maternal knowledge is closely related to the completion of basic immunization in children, and audiovisual media is an effective educational tool. Research titled "The Effectiveness of Audiovisual Education on Mothers' Knowledge of Basic Immunization at PMB Suratni" (2025) found that audiovisual media was more effective than lecture-based methods in improving maternal knowledge (Sylvia & Yustina, 2025). In addition, studies by Sakinah Qurrotul et al. ("The Effectiveness of Video Education on Parents' Knowledge and Attitudes Toward Complete Basic Immunization at Bandarharjo Health Center") also demonstrated significant improvements in knowledge after video-based education (Qurrotul, S., Setyawan, M. H., Pandu, M., & Kusuma W, 2023). Furthermore, research by Eka Saptawulan et al. confirmed that health promotion using a combination of video and leaflets effectively increased maternal knowledge about basic immunization (Saptawulan, E., Ensia, M. A., & Widuri, 2025). Based on this literature review, audiovisual media can be concluded as an effective educational method to improve mothers' knowledge regarding basic complete immunization. Therefore, this study was conducted to examine the effectiveness of audiovisual media on mothers' knowledge of basic complete immunization in Banjarwaringin Village, Salopa Community Health Care Tasikmalaya in 2025, considering the low immunization coverage and the presence of inadequate maternal knowledge and misconceptions about immunization. However, the use of audiovisual educational methods has not yet been implemented in the Puskesmas Salopa. Based on this condition, the study aims to determine the effectiveness of audiovisual media in improving mothers' knowledge of basic complete immunization in Banjarwaringin Village. This study is expected to benefit healthcare workers, especially midwives and the Salopa Community Health Care, as an evaluation tool and strategy to improve immunization coverage. In addition, it is also expected to increase mothers' awareness of the importance of complete basic immunization in preventing diseases and improving child health.

METHOD

This study used a pre-experimental design with a one-group pretest–posttest approach, involving a single group of mothers of toddlers who were assessed before and after receiving an audiovisual intervention on basic complete immunization. The study was conducted in Desa Banjarwaringin, under the working area of the Salopa Community Health Care, Tasikmalaya, with a total of 51 respondents distributed across five integrated health posts (Girimukti 15, Palintang 8, Cibewok 9, Banjaran 8, and Panyiraman 11). The sample was selected using purposive sampling based on inclusion criteria (mothers attending the posyandu, willing to participate, having children who received immunization services, and able to read and write) and exclusion criteria (not attending the posyandu and not recorded in the posyandu registry). Data were collected using a checklist and a structured questionnaire consisting of 20 items covering knowledge of the definition, purpose, benefits, types, and schedule of basic immunization. The instrument was tested for validity and reliability on 10 respondents in Mandalawangi Village, showing that all items were valid and the Cronbach's Alpha value was 0.972, indicating very high reliability. The research procedure included a pretest, delivery of audiovisual education, discussion and question–answer session, followed by a posttest to measure changes in mothers' knowledge after the intervention.

Data analysis was performed using univariate analysis to describe knowledge distribution before and after the intervention, and bivariate analysis using a paired t-test with a significance level of $p \leq 0.05$. This design is strong in measuring direct changes in knowledge before and after the intervention; however, its limitation is the absence of a control group, meaning that external factors influencing the results could not be fully controlled.

RESULTS AND DISCUSSION

Table 1

The level of mothers' knowledge regarding complete basic immunization before the implementation of audiovisual media

Knowledge Level	Frequency	Percentage
Low Knowledge	11	21,6
Moderate Knowledge	30	58,8
High Knowledge	10	19,6
Total	51	100

Based on Table 1, most mothers (58.8%) in 2026 had a moderate level of knowledge regarding basic complete immunization before receiving audiovisual media intervention, while a small proportion (21.6%) had poor knowledge. This condition indicates that mothers' understanding is still not optimal, influenced by limited access to information, low participation in health education sessions, and cultural beliefs or misconceptions about immunization. According to Notoatmodjo (2018), knowledge is a key factor influencing human behavior and is affected by education, environment, experience, and access to information. Low maternal knowledge may lead to incomplete or delayed immunization and increase the risk of vaccine-preventable diseases, as stated by Renna (2021), who explained that poor parental awareness can result in incomplete immunization schedules. Furthermore, the Ministry of Health (2023) reported that maternal knowledge is a major determinant of immunization coverage, where mothers with better knowledge tend to be more compliant in completing their children's immunization (Ministry of Health of the Republic of Indonesia, 2023). Therefore, effective health promotion interventions are needed, one of which is audiovisual media that combines sound and visual elements to make information more engaging and easier to understand. According to Simanungkalit (2024) found that the combination of audiovisual media and leaflets was effective in increasing mothers' knowledge of complete basic immunization. This is because information delivered through videos is more interactive and enhances respondent's memory retention (Simanungkalit, 2024). Thus, the use of audiovisual media is expected to improve maternal knowledge and support the increase of basic complete immunization coverage.

Table 2

The level of mothers' knowledge regarding complete basic immunization after the implementation of audiovisual media

Knowledge Level	Frequency	Percentage
Low Knowlegde	1	2,0
Moderater Knowledge	6	11,8
High Knowledge	44	86,3
Total	51	100

Based on table 2, almost all mothers (86.3%) in 2026 had a good level of knowledge regarding basic complete immunization after receiving the audiovisual media intervention,

while a small proportion (2.0%) still had poor knowledge. This indicates an improvement in knowledge influenced by the use of audiovisual media, which helps mothers better understand health information by combining audio and visual elements. Building on these findings, Supadmi et al. (2025) demonstrated that video-based education on complete basic immunization led to a significant improvement in both parents' knowledge and attitudes following the intervention. Their results suggest that audiovisual media is particularly effective in health education, as it not only captures attention more effectively but also facilitates better comprehension and long-term retention of information compared to traditional instructional methods (Supadmi, S., Nuzulan, M. A. Z., Putri, A. C., Maulana, N. R., Rahmawati, P. A., Saputri, G. Z., Rizky, G., Qomariyah, N., Kristina, S. A., & Ahmed, 2025). This improvement can also be explained through the cognitive theory of Soekidjo Notoatmodjo (2018), which states that knowledge is formed through sensory processes, especially sight and hearing, which are optimized through audiovisual media (Notoatmodjo, 2018). A study by Novrinda (2024) highlighted that the completeness of childhood immunization is strongly influenced by maternal attitudes, family support, and the surrounding social environment. It further noted that a less supportive environment may hinder the acceptance of health information, which can ultimately lead to uneven outcomes in health education interventions (Novrinda, 2024). Lubis et al. (2025) found that video-based education is more effective than leaflet-based materials in improving mothers' knowledge of immunization. The study explained that videos integrate visual and auditory elements, making the information more engaging, easier to understand, and better retained by participants. In contrast, leaflets rely solely on static text and images, which require higher levels of reading comprehension and sustained attention, meaning that not all respondents are able to fully grasp the information presented. The results further indicated a greater increase in knowledge among participants who received video-based education compared to those who were given leaflets, highlighting audiovisual media as a more effective health promotion tool, particularly in the context of basic immunization education (Lubis, YDA., Agustina., 2025). Thus, audiovisual media is considered effective in enhancing mothers' understanding of immunization benefits and impacts by delivering information in a more engaging and easily understood format.

Table 3

Effectiveness of Audiovisual Media in Improving Mothers' Knowledge of Complete Basic Immunization.

Knowledge Level	Low Knowledge n %	Moderate Knowledge n %	High Knowledge n %	Total n %	P.Value
Pre Intervention	11 21,6	30 58,8	10 19,6	51 100.00	0,000
Post Intervention	12,0	6 11,8	44 86,3	51 100.00	

Based on table 3, the non-parametric statistical analysis using the Wilcoxon Signed Rank Test showed a p-value of 0.000. The univariate results indicated that before the audiovisual intervention, most mothers (58.8%) had a moderate level of knowledge regarding basic complete immunization, while a small proportion (21.6%) had poor knowledge. After the intervention, almost all mothers (86.3%) had good knowledge, and only a small proportion (2.0%) remained in the poor category. This demonstrates an overall improvement in maternal knowledge following the audiovisual education. The bivariate analysis confirmed that p-value $0.000 < 0.05$, meaning the hypothesis was accepted and audiovisual media was effective in improving mothers' knowledge of basic complete immunization. This improvement indicates that audiovisual media helps respondents understand information more easily. The study

conducted by Syilvia, Yustina Ananti, and Zesika Intan Navelia (2025) demonstrated a significant improvement in mothers' knowledge among participants who received audiovisual-based health education compared to those in the control group (Syilvia & Yustina, 2025). This is also supported by Soekidjo Notoatmodjo (2018), who stated that media play an important role in health education by strengthening information delivery and improving comprehension (Notoatmodjo, 2018). Eka Saptawulan et al. (2025) reported that health education delivered through a combination of video and leaflet media significantly improved mothers' understanding of complete basic immunization in children. The study further emphasized that audiovisual media enhances learning effectiveness by creating a more engaging educational experience and strengthening respondents' ability to retain health-related information (Saptawulan, E., Ensia, M. A., & Widuri, 2025). Overall, audiovisual media is proven effective in improving maternal knowledge, although a small proportion of mothers still showed limited understanding due to information constraints and limited access to health education.

LIMITATION OF THE STUDY

This study has several limitations. First, it used a one-group pretest–posttest design without a control group, so external factors that may influence changes in respondents' knowledge could not be fully controlled. Second, the sample size was limited to 51 mothers in Banjarwaringin Village, which restricts the generalizability of the findings to a wider population. In addition, knowledge was measured using a questionnaire and checklist that depended on respondents' honesty and understanding in answering the questions. The relatively short intervention period is also a limitation, as the study only assessed immediate changes in knowledge after the audiovisual intervention and did not evaluate long-term knowledge retention or behavioral changes.

CONCLUSIONS AND SUGGESTIONS

Conclusions

This study shows that before the audiovisual intervention, most mothers in Banjarwaringin, Village within the working area of Salopa Community Health Care, Tasikmalaya in 2026, had a moderate level of knowledge regarding basic complete immunization, although a small proportion still had poor knowledge. This condition indicates that mothers' understanding of the importance of basic complete immunization was not yet optimal, highlighting the need for more effective health education to improve awareness and compliance in completing child immunization schedules. After the audiovisual intervention, almost all mothers demonstrated an improvement in knowledge, reaching a good category, although a small proportion still had poor knowledge. This finding indicates that audiovisual media is effective in helping mothers understand health information more easily by combining visual images, sound, and more engaging delivery compared to conventional educational methods.

Based on the results of the analysis and discussion, it can be concluded that the use of audiovisual media is effective in improving mothers' knowledge of basic complete immunization in Banjarwaringin Village, within the working area of Salopa Community Health Care, Tasikmalaya. This study contributes to the development of health promotion strategies, particularly the use of audiovisual media as an effective educational method to improve maternal knowledge and support the increase of basic complete immunization coverage among children.

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ETHICAL CONSIDERATIONS

The author declares that there was no support from any organization in the preparation of this manuscript. This study also did not receive any funding, grants, or other financial assistance, either for the preparation of the manuscript or for the conduct of the research. Therefore, the entire research process was carried out independently without any conflicts of interest related to funding.

Conflict of Interest Statement

The author declares that there are no conflicts of interest in this study. During the past three years since the beginning of the research and manuscript preparation, the author has had no financial, professional, or personal relationships with any organization or party that could influence the research process, data analysis, or the presentation of the findings. This study also did not receive any funding, grants, or financial support from any external party. Therefore, the entire research process was conducted independently without any potential bias related to specific interests.

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