

Education and Immunization Counseling as Efforts to Improve Public Health in Lamklat Village, Darussalam Subdistrict, Aceh Besar Regency

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Abstract

Immunization is an important measure in preventing infectious diseases, but coverage in Lamklat Village, Aceh Besar is still low due to limited access, low health literacy, and the prevalence of misinformation. This activity aims to increase community knowledge and participation through education and outreach. A door-to-door program was implemented using a participatory approach involving village midwives, posyandu cadres, community leaders, and students. Activities included cadre training, interactive counseling, child education, distribution of brochures/leaflets, home visits to 23 families with toddlers, and a quiz competition between villages. Evaluation was conducted through observation and informal interviews. A total of 235 participants were involved with a high participation rate (85–95%). Cadres were more confident in conveying information, children were enthusiastic about learning through games and songs, and parents actively asked questions about immunization schedules and hoaxes. Door-to-door education strengthened relationships with families and increased their commitment to completing their children's immunizations. Community-based health education using participatory methods has been proven to increase awareness and acceptance of immunization in Lamklat Village. Continuous collaboration between health workers, village officials, and the community is important to support the sustainable improvement of complete basic immunization coverage (IDL).

Keywords: immunization; health education; community empowerment; rural health; Aceh

Introduction

Immunization is an important public health intervention in the prevention of infectious diseases, especially for infants and young children. The Complete Basic Immunization (IDL) program, which includes BCG, DTP, polio, hepatitis B, and measles/rubella vaccines, is a national program of the Indonesian Ministry of Health that aims to reduce morbidity and mortality from vaccine-preventable diseases (PD3I). However, despite the long-standing implementation of this program, many regions have not yet achieved optimal IDL coverage. Reports from the Indonesian Ministry of Health indicate that some children still do not receive the scheduled complete immunization (Indonesian Ministry of Health, 2022).

At the local level, similar challenges can occur, especially in rural or remote areas such as Lamklat Village, Aceh Besar Regency. This village faces various obstacles, including limited access to health information, suboptimal immunization services, and low community motivation due to the prevalence of hoaxes and negative perceptions about

immunization. The issue to be examined in this study is how immunization education and counseling can help increase the awareness, knowledge, and participation of the Lamklat Village community in the Complete Basic Immunization (IDL). Thus, this study is based on the theoretical aspect that health education interventions through health promotion can influence changes in health behavior (WHO, 2020).

The decline in immunization coverage in Indonesia, including in Aceh, following the COVID-19 pandemic has prompted the need for a more intensive educational approach to the community. The Ministry of Health, through the 2022–2025 National Immunization Communication Strategy, emphasizes the importance of effective public communication, the involvement of local leaders, and community-based education in increasing vaccine acceptance. This approach is based on the principle that educational interventions should not only be informative, but also contextualized to the needs of the community (Indonesian Ministry of Health, 2022).

A number of studies show that immunization counseling interventions have been proven effective in increasing public knowledge and attitudes. Research in Sudirejo Village reported an increase in mothers' understanding of the importance of immunization after direct counseling was conducted (Zega et al., 2022). Similar results were also shown in direct outreach approaches, including door-to-door education, which was able to increase vaccination acceptance in rural communities in Indonesia (Anggraeni, 2022). These findings are in line with research at the Kedungjambe Singgahan Village Health Post, which highlights the importance of education because low basic immunization coverage remains a problem due to hoaxes and limited access (Safa'ah, 2022).

In addition, increasing the capacity of health cadres through training and the use of educational media has also proven effective in strengthening the delivery of information to the community. A study in Semarang showed that training cadres with flipcharts was able to improve their educational skills so that immunization messages could be better received (Indriani et al., 2024).

In addition, several studies have highlighted the role of cadres and community leaders in improving immunization literacy, but there is still little research that integrates this approach in the context of rural Aceh, which has unique challenges such as low health literacy, the influence of hoaxes, and limited access to health services (Safa'ah, 2022). This gap highlights the need for community service activities that not only focus on increasing knowledge but also tailor educational approaches to local conditions and actively involve village midwives, health cadres, and Lamklat community leaders to improve the sustainability of immunization programs.

Based on the research gap described above, the research question is: Can immunization education and outreach increase the knowledge and awareness of the Lamklat Village community regarding the importance of immunization? The objective of this community service research is to improve the community's health literacy regarding immunization through education and outreach activities designed in accordance with the local context of the village.

The uniqueness of this study lies in its community service-based approach in rural areas of Aceh, which had previously been rarely studied, by directly involving village midwives, health cadres, and community leaders, so that it is expected to have a more sustainable impact on increasing immunization coverage at the community level.

Methods

The implementation of this Field Learning Practice activity was carried out using a participatory and collaborative approach involving village midwives, posyandu cadres, village officials, community leaders, and students. This method

was systematically arranged in several stages:

1. Preparation Stage

The preparation stage began with coordination through meetings with village heads, village midwives, posyandu cadres, and community leaders to convey the objectives of the activity and obtain support. This was followed by the identification of problems and needs by collecting preliminary data on immunization coverage, obstacles encountered in the field, and community perceptions. Based on this information, the team develops an activity plan that includes the form of intervention to be carried out, the implementation schedule, and the division of tasks among members. Preparations also include logistical needs such as stationery, attendance sheets, and documentation. In addition, the team prepares educational media in the form of posters, leaflets, and brochures so that health messages can be conveyed more effectively to the community. Tahap Pelaksanaan

a. Training and Capacity Building for Cadres

Special training sessions were held for village midwives and posyandu cadres to improve their literacy and communication skills on immunization issues. The training covered how to respond to parents' concerns, how to use educational media effectively, and techniques for monitoring and reminding parents of immunization schedules in a humane and persuasive manner.

b. Education for Children at School

Children are educated through visual media (pictures, videos), songs, and educational games to introduce the importance of immunization in a simple and fun way.

c. Socialization and Outreach

Conducted in the form of interactive lectures, group discussions, and question-and-answer sessions. Materials cover the importance of complete basic immunizations, immunization schedules, and clarification of hoaxes and myths circulating in the community.

d. Inter-Village Smart League

As a form of educational innovation, a quiz competition was held between villages, involving health cadres and community representatives. Questions about immunization, nutrition, and child health were asked in a competitive quiz format. This activity aimed to increase knowledge, foster a spirit of collective learning, and strengthen collaboration between villages in supporting immunization programs..

e. Distribution of Brochures and Leaflets

As part of the education strategy, the community was provided with brochures and leaflets containing information about complete basic immunizations, vaccination schedules, the benefits of immunization, and clarification of myths or hoaxes that often circulate. The materials are printed in simple language and visual illustrations so that they are easily understood by parents and children. The brochures and leaflets are distributed directly to participants during outreach activities, community assistance, and inter-village competitions.

f. Digital Campaign

In an effort to expand the reach of education, digital educational content about immunization was created and then disseminated through social media. The content was designed in the form of digital posters, infographics, and short videos containing information about the benefits of immunization and clarification of hoaxes. This strategy is intended to make health messages more widely accessible, including to people who did not attend

the event in person, so that they can take the materials home as a reference and reminder to follow their children's immunization schedule regularly.

g. Door to door education

Door-to-door education in Lamklat Village was conducted by visiting 23 households with toddlers. This activity was personalized so that the material could be tailored to the needs of each family. Topics covered included the importance of complete basic immunizations and balanced nutrition, delivered in simple language and illustrated with examples of nutritious everyday foods. Parents were enthusiastic, listened attentively, asked questions, and even took notes on important information. Through this direct approach, a close relationship was formed between the implementation team and the residents, while also fostering awareness and commitment to maintaining the health of their toddlers. The evaluation phase involved home visits after the outreach program to conduct direct questions and answers about immunization and encourage parents to understand the importance of child immunization. Field observations were used to assess community understanding and response to the information provided.

2. Follow-up Stage

Following the completion of the program, ongoing coaching was conducted involving village midwives and integrated health post (Posyandu) cadres. They were given an active role in monitoring, providing immunization schedule reminders, and consistently disseminating health information to the community.

With this structured implementation method, community service activities are expected to improve public health literacy, strengthen the role of integrated health post (Posyandu) cadres, and encourage the achievement of complete basic immunization coverage in Lamklat Village in a more sustainable manner.

Results

Immunization education and outreach activities in Lamklat Village involved various parties, including mothers of toddlers, school-aged children, integrated health post (Posyandu) cadres, village midwives, village officials, and community leaders. All activities proceeded according to plan, including cadre training, outreach and outreach, child education, distribution of brochures and leaflets, and an inter-village "Certi" league. Participation in each activity demonstrated high levels of engagement (Table 1).

Table 1. Level of Participation in Education and Counseling Activities

Type of activity	Number of participants	Attendance Percentage (%)
Socialization & Counseling	65	92
Children's Education	40	88
Cadre Training	10	85
Inter-Village Careful League	75	95
Total	235	-

Source: Primary data, 2025

Deskripsi kegiatan dan hasil observasi:

1. Training and Capacity Building of Cadres

Training for integrated health post (Posyandu) cadres and village midwives was conducted in several

sessions to improve health literacy and communication skills regarding immunization. Observations showed increased confidence among cadres in delivering materials, answering parents' questions, and monitoring children's immunization schedules. Cadres were able to effectively use educational media and convey information in easy-to-understand language.



Figure 3.1 Children's Education at Lam Klat State Elementary School

2. Children's Education

Children were educated through visual media such as pictures and videos, songs, and educational games. These activities fostered their interest in immunization materials in an interactive way. Active participation in quizzes and group discussions demonstrated their understanding of the importance of early immunization.



Figure 3.2 Children's Education at Lam Klat State Elementary School

3. Community Outreach and Education

The outreach took the form of interactive lectures and group discussions. Observations noted active questions from parents regarding the immunization schedule, vaccine benefits, and clarification of myths and hoaxes. This indicates increased public awareness of the importance of immunization for their children.



Figure 3.3 Community Outreach and Education

4. Inter-Village Careful League

The interactive inter-village competition involved integrated health post (Posyandu) cadres and community representatives. High participation was evident in the participants' enthusiasm in answering questions about immunization, nutrition, and child health. This activity strengthened collaboration among residents and fostered a spirit of collective learning in support of the immunization program.



Figure 3.4 Inter-Village Careful League

5. Distribution of Brochures and Leaflets

Educational materials were printed in simple language and illustrated with visuals. They were distributed throughout the program, providing the community with a resource for independently understanding immunization. Observations showed that participants read the materials thoughtfully and asked further questions to village cadres and midwives, strengthening their understanding of the importance of immunization..



Figure 3.4 Distribution of Brochures and Leaflets

6. Door to Door Education

The door-to-door educational program was conducted over two days in Lamklat Village, targeting families with toddlers. The home visits method was chosen to ensure personalized information delivery tailored to the circumstances and needs of each family. The student team, along with community health post (Posyandu) cadres, visited a total of 23 homes, following a pre-agreed schedule. The material presented focused on two main topics: the importance of complete basic immunizations and the implementation of balanced nutrition for toddlers. The information was delivered in simple language and accompanied by illustrated leaflets to make it easier for mothers and other family members to understand.



Figure 3.5 Door to Door Education

Overall, this activity demonstrated that a participatory, collaborative, and locally context-based approach successfully encouraged community engagement, improved health literacy, and strengthened the role of integrated health post (Posyandu) cadres in supporting the immunization program. Although quantitative knowledge measurements were not conducted, observational evidence and participant interactions provided a positive indication of the activity's effectiveness.

Discussion

The results of community service activities in Lamklat Village demonstrate that a participatory and collaborative approach can encourage the active involvement of various parties, including mothers of toddlers, children, integrated health post (Posyandu) cadres, village midwives, village officials, and community leaders. The high level of participation in all activities, particularly in the inter-village meticulous league (95%), demonstrates that interactive and competitive methods can attract attention and increase community motivation to participate.

Training and capacity building for integrated health post (Posyandu) cadres and village midwives has proven crucial for improving health literacy and communication skills. Observations indicate that cadres are more confident in conveying information, answering parents' questions, and monitoring children's immunization schedules. This aligns with the findings of Indriani et al. (2024), who emphasized that training cadres using educational media increases the effectiveness of immunization outreach in the community.

Educating children through visual media, songs, and educational games successfully made immunization material easier to understand and more enjoyable. Children's active participation in quizzes and group discussions demonstrated their understanding of the importance of early immunization. This strategy supports the principle of experience-based education, which has been proven effective in improving children's understanding of health concepts (Anggraeni, 2022).

Interactive outreach and education also facilitated information exchange between health workers and the public. Observations showed that parents asked questions regarding immunization schedules, vaccine benefits, and the clarification of myths and hoaxes. This demonstrates the importance of two-way communication to increase public awareness and intention to participate in immunization programs, in line with the public communication strategy recommended by the Indonesian Ministry of Health (2022).

Inter-gampong "Certi" league activities not only informally increase knowledge but also strengthen collaboration and solidarity among residents. Competitive activities, presented in a fun way, can foster a culture of collective learning in rural communities, a previously rarely focused area of community service research in Aceh (Safa'ah, 2022).

The distribution of brochures and leaflets during the activity helped strengthen community understanding, as they could review the information at home. Follow-up observations showed that parents were able to articulate the

immunization schedule and the benefits of vaccination, although quantitative data on increased knowledge were not collected. This indicates that qualitative measurements through observation and interaction can provide insight into the effectiveness of activities, particularly in the context of community service in rural areas.

Overall, these results underscore the importance of an approach that combines education, community engagement, and capacity building for health workers to improve health literacy and community participation in the immunization program. This approach not only directly improves knowledge but also builds a foundation for program sustainability through the empowerment of integrated health post (Posyandu) workers and the involvement of local leaders, which are crucial for achieving complete basic immunization coverage in Lamklat Village.

Conclusion

The immunization education and outreach activities carried out in Lamklat Village went well and received full support from various parties, including elementary school students, mothers of toddlers, integrated health post (Posyandu) cadres, village midwives, and village officials. Community participation was quite high at each activity, with children attending 100% and the general public participating at over 85%. This demonstrates the community's strong enthusiasm for health issues, particularly immunization and balanced nutrition.

Educational activities, delivered through various methods, such as play-based learning, interactive lectures, group discussions, educational games, singing, and inter-village "kecer" (careful) league competitions, have proven effective in engaging participants and increasing understanding. Children more easily recognized the concepts of healthy eating and balanced nutrition, while parents became more confident in explaining the benefits of immunization and remembering their children's vaccination schedules. Through this interactive approach, health messages were not only conveyed but also more deeply embedded in participants' memories. Although this study did not conduct quantitative measurements in the form of pre- and post-tests, observations and documentation of the activities indicated positive changes in community attitudes and understanding. This confirms that health education efforts do not always have to be measured with formal instruments, but can also be seen through active participation, positive responses, and the community's ability to repeat the information provided.

This activity also demonstrated the importance of cross-sector collaboration between academics, health workers, village officials, and the community in improving health literacy. The implication of this activity is that community-based health education can be an effective strategy to support the complete basic immunization program and improve children's health status at the village level.

Going forward, similar activities need to be implemented sustainably and integrated with the integrated health post (Posyandu) program and other village activities. With regular mentoring from Posyandu cadres and support from village officials, it is hoped that the success of this program will not only increase knowledge but also have a tangible impact on community health behavior and child immunization coverage in Lamklat Village.

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Author Contribution and Competing Interest

Mardi Fadillah contributed to the conceptualization, research design, supervision, and final review of the manuscript. Sasrianda Waruwu, Ida Meliza, Aula Rahmatika, Suci Ramadani, Vina Erliana, and Nia Ramadani contributed to the fieldwork, data collection, and drafting of the article. All authors participated in data interpretation and revision, and approved the final manuscript. The authors declare no conflict of interest.

References

- Anggraeni, R., Feisha, A. L., Muflihah, T., Muthmainnah, F., Syaifuddin, M. A. R., Aulyah, W. S. N., ... & Rachmat,
- Astria Fransiska Butarbutar, Yohana Tetty Gultom, Lisnawati Tumanggor, & Meta Agrifina. (2024). Socialization and Education on Balanced Nutrition for Toddlers at the Padang Bulan Selayang II Community Health Center. *Eka Prasetya Community Service Journal*, 3(1), 1-8.
- Firrahmawati, L., & Wahyuni, E. S. (2019). Empowerment of Cadres in the Immunization Awareness Movement (Gesamun) Program "Diphtheria". *Gemasika: Journal of Community Service*
- Harahap, M. A., Rangkuti, J. A., Rangkuti, N. A., & Gintings, A. F. (2024). Counseling on the importance of complete basic immunization for children in Simasom Village, Padangsidempuan Angkola Julu District. *Aufa Community Service Journal (JPMA)*, 5(3), 1169.
- Ministry of Health of the Republic of Indonesia (2022). National Immunization Communication Strategy 2022-2025.
- Muchlisa, N., & Bausad, A. A. P. (2022). Mothers' Knowledge and Awareness of Complete Basic Immunization: A Cross-sectional Study. *Indonesian Health Scientific Journal*, 7(2), 156–160.
- Maria Haryanti Butar-Butar, Byba Melda Suhita, Siska Saidi Rizali, Sri Yuni Windu Puri, & Nurwijayanti Nurwijayanti. (2023). Socialization of Immunization Education and Child Growth and Development to Increase Mothers' Knowledge at the Integrated Health Post (Posyandu) of the PB Selayang II Community Health Center, Medan. *Indonesian Journal of Community Service and Devotion*, 2(3), 170–177.
- Nining Tunggal Sri Sunarti, Retno Heru Setyorini, & Fitriani Mediastuti. (2024). Balanced Nutrition Education to Prevent Malnutrition in Children. *Journal of Community Partnership*, 1(3), 38–47.
- Padmiswari, A. A. I. M., Wulansari, N. T., & Antari, N. W. S. (2022). The Effectiveness of Balanced Nutrition Education Through Picture Storybooks. *National Health Research Journal*, 6(1), 19–24.
- Romdhoningsih, D., Sukmawati, S., & Mahpudoh, M. (2025). Community Service Through Balanced Nutrition Education Activities for Early Childhood. *Journal of Human and Education (JAHE)*, 5(1), 768–774.
- Safaah, N., Astuti, N. D., Utami, A. P., & PS, D. K. (2021). Health Education on Immunization for Mothers at the Integrated Health Post (Posyandu) in Kedungjambe Singgahan Village. *Abdimasnu: Journal of Community Service*
- Widhidewi, N. W., Paramasatiari, A. A. A. Lila, Suryanditha, P. A., & Kapti, I. N.engah. (2022). Empowerment of integrated health post cadres in the Sukawati II Community Health Center work area in increasing mandatory immunization coverage during the Covid-19 pandemic. *Warmadewa Ministerium Medical Journal*, 1(1), 7-11.
- WHO. (2025). Innovative vaccine research through the lens of implementation science: fulfilling the strategic goals of the Immunization Agenda 2030. *BMC Global and Public Health*, 3, 19.
- World Health Organization (WHO) (2020). Public Health Promotion and Health Behavior Change.
- Zega, D. F., Singarimbun, N. B., Simbolon, F. R. N., & Simanjuntak, H. A. (2022). Counseling on the Importance

of Immunization in the Sudirejo Village Area, Namorambe District. *Jompa Abdi: Journal of Community Service*, 1(2), 51-57.

