Implementation of Social and Behavioral Change Communication in an Effort to Increase Immunization Coverage in Lam Asan Village

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Abstract

Immunization is an effective public health intervention to reduce the number of illnesses and deaths due to infectious diseases. However, complete basic immunization coverage in Indonesia is still uneven, including in Aceh which is below the national target. In Lam Asan Village, before the intervention, only 26,5% of children under five had been immunized. The low coverage is influenced by limited parental knowledge, busyness, lack of socialization, and socio-cultural factors that make immunization not yet a priority, especially among mothers as decision-makers. This activity aims to improve community knowledge, attitudes, and practices through the Social and Behavioral Change Communication (SBCC) approach. The program lasted three weeks and involved 27 heads of families and 34 toddlers through five activities, namely home visit counseling, the Teman Ibu program, smart competitions, educational posters, and educational videos. The results showed an increase in immunization coverage to 47,1% and a change in the positive attitude of mothers under five, proving the effectiveness SBCC in strengthening community participation and supporting the achievement of national immunization targets.

Keywords: Immunization; SBCC; Community Service;

Introduction

Immunization is one of the public health interventions that has been proven to be effective in reducing the number of illnesses and deaths due to infectious diseases. Vaccination works by stimulating the immune system so that individuals are protected from diseases that can be prevented by vaccines. (WHO, 2024) affirms that immunization is among the most efficient strategies in preventing outbreaks, while (Kemenkes RI, 2025) emphasizes the benefits of immunization not only for individuals, but also for creating community protection. (UNICEF, 2023) adding that high immunization coverage is able to form herd immunity so that the spread of the disease can be significantly suppressed.

Although global basic immunization coverage reached 85%, the COVID-19 pandemic had hampered the sustainability of immunization programs in various countries, especially in low- and middle-income groups. WHO targets a minimum of 90% complete basic immunization coverage, but this has not been evenly (WHO, 2024) In Indonesia, the Ministry of Health (2023) reported that complete basic immunization coverage is around 80%, still below the national target. Inequality is more clearly seen in some provinces, including Aceh, which according to the report (Dinas Kesehatan Provinsi Aceh, 2022) only reaches the range of 70–75%.

A similar condition occurred in Aceh Besar Regency, where the achievement of complete basic immunization is still fluctuating with an average of below 80%(Dinas Kesehatan Provinsi Aceh, 2022) In fact, data in Gampong Lam Asan shows a considerable gap: out of 34 children, only 9 have received complete basic immunization (73.5% have not been immunized). This low number is influenced by various factors, such as limited parental knowledge, busyness, lack of socialization, and socio-cultural factors that cause immunization to not be considered a priority, especially among mothers as the main decision-makers in child care.

To answer these challenges, an approach is needed that is not only medical, but also touches on social and behavioral aspects of society. Communication of Social and Behavioral Change (SBCC) is present as a strategy that focuses on improving knowledge, attitudes, and community practices through a combination of mass media, interpersonal communication, and community mobilization. Research shows that SBCC can significantly increase immunization coverage, for example in Sambas Regency which has succeeded in increasing the coverage rate from 63% to 85% through face-to-face socialization and social media (Badi'ah, 2020) The active involvement of the community in monitoring has also been shown to support the success of immunization programs (Yunita, 2024).

Based on these conditions, the implementation of SBCC in Lam Asan Village is very important. This approach is expected to increase public awareness of the urgency of immunization, so that immunization coverage can be increased, the risk of disease transmission decreases, and the overall health status of the community is improved.

The purpose of this activity is to increase community knowledge, attitudes, and practices related to immunization and encourage an increase in complete basic immunization coverage through the Social and Behavioral Change Communication (SBCC) approach in Lam Asan Village.

Methods

Field practice activities in Lam Asan Village, Darussalam District, Aceh Besar Regency were carried out using the Social and Behavioral Change Communication (SBCC) approach. This approach was chosen because it is able to encourage changes in knowledge, attitudes, and behavior in a participatory manner. The program will be held on July 14–August 6, 2025 with the following stages,

1. Preparation Stage
    - Initial coordination with village heads, village midwives, and local posyandu cadres to obtain permits as well as determine the target of activities.
    - Identify problems through initial discussions with the community to find out immunization-related constraints, such as lack of knowledge, parental busyness, and cultural factors.
    - Planning activities that include preparing schedules, dividing the role of student teams, making educational materials, and designing media in the form of posters and videos.
    - Socialization of the program to the community to find out the form of activities and implementation schedule.
2. Stages of Implementation

    The implementation of the activity involved 27 heads of families with the main target of mothers under five. A total of 34 toddlers were indirectly targeted as immunization beneficiaries, while families with

toddlers were also involved as supporters to create an environment that cared and was aware of the importance of immunization. The form of activity includes:

- Counseling through home visits. The team visited target homes to provide information about immunization, discuss obstacles, and build interpersonal closeness with families.
- TEMAN IBU Program (Testimonials and Discussion of Immunization Issues). It is carried out by gathering mothers of toddlers in one location. The activity was in the form of sharing positive experiences, discussing obstacles, and motivation to complete child immunization.
- A smart competition about immunization. This interactive activity aims to increase public knowledge in a fun way while strengthening the understanding of counseling.
- Creation and distribution of educational posters. Posters containing short messages and interesting visuals about immunization are placed in strategic areas of villages such as posyandu, meunasah, and village halls.
- Immunization educational video making. Short videos containing educational messages are disseminated through social media, such as WhatsApp and Facebook groups of villagers, in order to reach a wider audience.

3. Evaluation and Follow-up Stage

The evaluation was carried out by re-monitoring mothers who previously refused immunization and then were willing after participating in a series of activities. This change in attitude is noted as an indicator of the success of the program. Follow-up is carried out through:

- Re-data collection of children under five who have not received immunization.
- The implementation of immunization directly, both by visiting homes and through posyandu, in collaboration with village midwives and health cadres.

Flowchart

Time & Venue	Field Practice activities were carried out in Lam Asan Village, Darussalam District, Aceh Besar Regency. The implementation time is for three weeks. On July 14 – August 06, 2025.
Target Group	The target group in this study was 27 households in Lam Asan Village who had children with incomplete immunization status.
Data Collection Techniques	The data collection technique involves initial observation of the main target house, direct interaction between students, cadres and mothers of toddlers, and data collection of posyandu/KIA books.
Data Analysis	The effectiveness of the program was evaluated by *following up* on mothers who previously refused immunization and then agreed after participating in a series of activities. Furthermore, immunization services are cData Presentation arried out directly, both through home visits and at posyandu involving village midwives, cadres, and students. The change is then calculated in the form of a percentage to illustrate the increase in immunization
Penyajian Data	The results of the immunization implementation are presented in a table containing the child's name, mother's name and what antigen (vaccine)
Tools and Materials	Posters and leaflets as immunization education media and inspirational videos to strengthen parents' understanding.
Ethics of collaboration	The success of this program is thanks to the support of the Public Health Study Program, Faculty of Health Sciences, Teuku Umar University, facilities from UNICEF, permits and cooperation from the village government, as well as the dedication of posyandu cadres and the active participation of the community in Lam Asan Village.

Results

The community service program through the Communication of Social and Behavioral Change (SBCC) approach which was carried out in Lam Asan Village on July 14-August 6, 2025 succeeded in reaching 27 heads of families with a focus on mothers under five who have not received immunization. The five main activities carried out include counseling through *home visits*, the TEMAN IBU program (testimonials and discussions on immunization issues), smart competitions about immunization, making and distributing educational posters, and making immunization education videos. A summary of the outputs and outcomes of the five activities can be seen in Table 1**.**

Table 1. Output and Outcome of PBL Activities in Lam Asan Village

Activity Name	Output	Outcome
Counseling through *home visits*	27 Parents have been given counseling on immunization	The knowledge of 27 parents increased regarding immunization and 10 parents showed a change in attitude from not wanting their children to be immunized to wanting their children to be immunized. Village midwives, cadres and students immunized through home visits and directly at the posyandu to 7 children with DPT 1, Polio 1-4, Rotavirus, and BCG antigens and 3 more children will be immunized waiting for the schedule.
TEMAN IBU (Testimonials and Discussion of Immunization Problems)	20 parents have participated in the activity. 5 mothers gave positive testimonials.	The discussion encouraged 7 mothers who initially refused to agree to their children being immunized.
Smart competition about immunization	6 cadres and 6 parents of toddlers participated in the competition. And ± 50 people were also present to watch the competition.	The participants' knowledge increased, cadres were more confident in providing education, and the parents who attended increasingly understood the importance of immunization.
Creation and distribution of educational posters	6 educational posters were distributed through social media and pasted at strategic points in the village	Public knowledge is increased through exposure to easily accessible visual messages.
Immunization education video creation	1 educational video on the theme of immunization has been disseminated on social media and WhatsApp Groups	Immunization information reaches residents who are not present at face-to-face activities.

Source: Data on the results of the implementation of activities

Based on these results, it can be seen that there is an increase in knowledge and a change in people's attitudes.

Some mothers who initially refused immunization then willing their children to be immunized. After all activities were carried out, students together with village midwives and posyandu cadres evaluated and re-collected data on mothers under five, then immunization services were carried out directly both through *home visits* and at posyandu.

Table 2. Results of Immunization Implementation in Lam Asan Village

No	Child's Name	Mother's Name	Type of Antigen Given
1.	Naifa Alaysa Noha	Nurul Huda	DPT 1 and Polio 3
2.	M. Fadhil Ramadhan	Mulyanti	DPT 1
3.	Muhammad Uzair	Nuraila	DPT 1, Rotavirus, and Polio 2
4.	Muhammad Hafizh	Safrinita	Polio 2
5.	Hila Salsabila	Rofiah	BCG, Rotavirus, and Polio 1
6.	Nur Azizah	Fatimah Zuhra	Polio 4
7.	Muhammad Zaidan	Safira	Polio 1

Source: Data on the results of the immunization implementation in Lam Asan Village

Based on the data in Table 2, as many as 7 children under five in Lam Asan Village managed to get immunizations according to their needs. The antigens given include DPT, Polio, Rotavirus, and BCG. Thus, the intervention through the SBCC approach succeeded in increasing immunization coverage from 26.5% (9 children) before the intervention to 47.1% (16 children) after the intervention from a total of 34 children under five. These findings show a real change in public knowledge, attitudes, and practices in supporting the immunization.

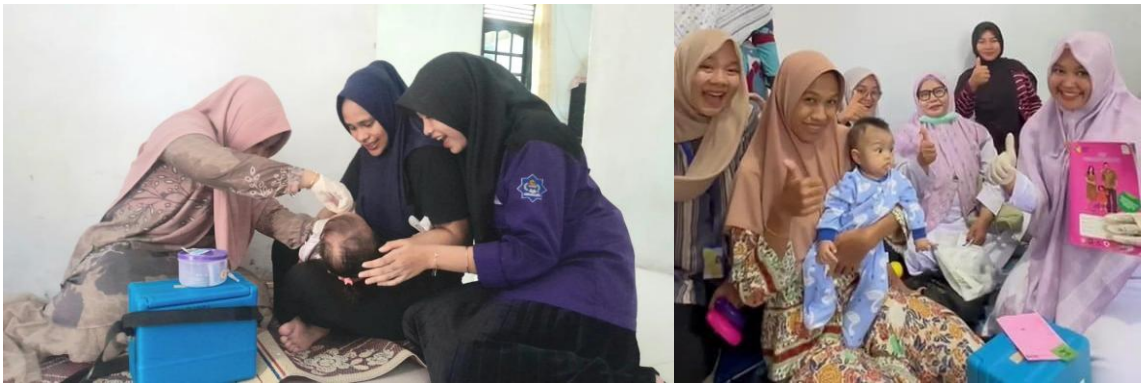

Figure 1. Implementation of Immunization in Lam Asan Village

Discussion

The results of the activity showed that the implementation of the Social and Behavioral Change Communication (SBCC) approach was able to increase immunization coverage in Lam Asan Village. Before the intervention, immunization coverage was only 26.5% (9 out of 34 children), then increased to 47.1% (16 out of 34 children) after the activity was carried out. This almost doubled increase shows that the combination of interpersonal communication, testimonials, visual media, and cross-sector collaboration is able to encourage changes in people's attitudes.

First, counseling through *home visits* has proven to be effective in increasing public understanding. Face-to-face interactions provide space for mothers of toddlers to express their doubts, while allowing educators to answer personally. In line with research (Udin Rosidin, Iceu Amira, 2025) which shows that health counseling and home

visits can increase community knowledge, it is proven in research in RW 18 Kotawetan Village, Garut Regency that succeeded in increasing community knowledge from before education was carried out by 67.27 and the average value of knowledge after carrying out education was 81.82.

Figure 2. Home Visit Guidelines

Second, the TEMAN IBU program has a great influence through positive testimonials from fellow mothers of toddlers. This is in line with research conducted by (Agus Iwhan Ariftian Zuhdi et al., 2025) which shows that community-based maternal and child health campaigns are effective in increasing public knowledge about immunization, evidenced by an increase in the average score from 55 in the pre-test to 81.8 in the post-test after the intervention was performed. Meanwhile, one's first-hand experience is easier to accept and imitate by his peers.

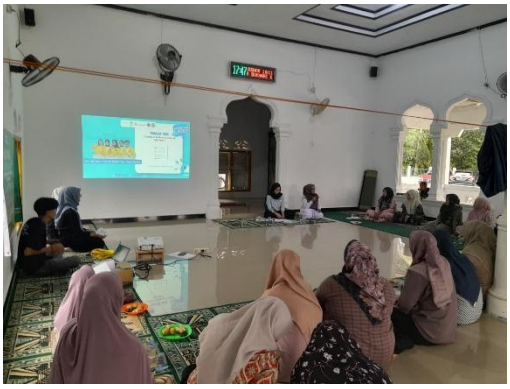

Figure 3. Mother's Friend Activities

Third, the smart immunization competition functions as a means of participatory education. These interactive activities not only increase knowledge, but also strengthen understanding in a fun way. This is in accordance with the concept *of reinforcement learning* that the repetition of information in a fun atmosphere can strengthen people's understanding and motivation to act.

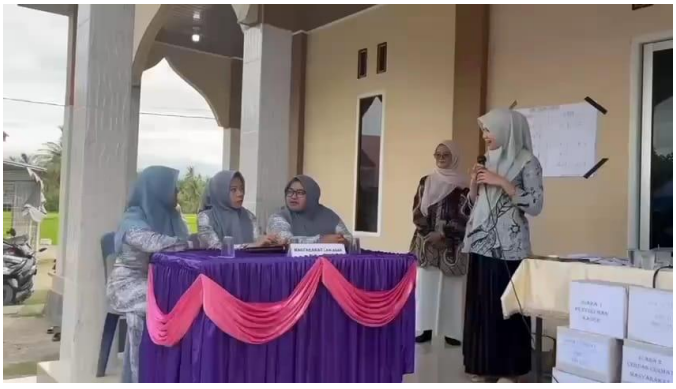

Figure 4. Smart Competition Activities

Fourth, the use of visual media in the form of posters plays a role in expanding the reach of immunization. Research conducted by (Tingkat et al., 2024) shows that the use of poster media is effective in improving teachers' knowledge, attitudes, and actions related to the prevention of measles rubella in elementary school students. The pre-test results showed an average knowledge score of 10.64, attitude 34.21, and action 6.58, which then increased significantly in the post-test to 14.48 for knowledge, 39.12 for attitude, and 9.55 for action. The Wilcoxon test also showed a value of $p = 0.000$ (<0.05) on all variables, confirming that poster media is suitable for use as an educational tool in efforts to prevent measles rubella.

Fifth, the dissemination of educational videos also has a role in this effort. (Qurrotul et al., 2023) shows that the complete basic immunization education video can increase public knowledge, for example, in the residents of Dadapsari Village, Semarang, with a total of 45 participants, mothers who have children under five who have succeeded in increasing parental knowledge of complete basic immunization before the intervention is carried out, most of them have a sufficient level of knowledge, namely as many as 28 respondents (62.2%), while the level of parental knowledge of complete basic immunization After the intervention, most of the respondents had a good level of knowledge, namely 35 respondents (77.8%). It also supports the theory of behavior change communication that emphasizes the importance of combining interpersonal media and mass media to amplify impact.

In addition, the success of increasing immunization coverage in Lam Asan Village is inseparable from cross-sectoral support, namely collaboration between students, village midwives, posyandu cadres, and the gampong government. This kind of support is very important to ensure the sustainability of the program, because immunization is a health service that must be carried out on a regular basis, not just a temporary activity.

However, challenges remain, namely that a small number of mothers still refuse immunization for reasons of certain cultures or beliefs, as well as limited manpower and health facilities in the village. This shows the need for a more intensive and sustainable communication strategy, including involving religious leaders or community leaders as trusted parties in conveying health messages.

Thus, the implementation of SBCC has proven to be effective in increasing awareness and coverage of immunization in Lam Asan Village. If done consistently and sustainably, this approach has the potential to help the government achieve the target of complete basic immunization coverage nationally. These results show that the SBCC strategy can be used as a model for effective community-based public health interventions, especially in areas with low immunization coverage.

Conclusion

Community service programs through the Communication of Social and Behavioral Change (SBCC) approach in Lam Asan Village have proven to be effective in increasing awareness and coverage of immunization. The intervention involved five main activities—home visit counseling, the TEMAN IBU program, the immunization smart competition, poster making, and the creation of educational videos—succeeded in increasing knowledge and changing the attitude of mothers under five from refusing to receiving immunizations.

Immunization coverage for toddlers increased from 26.5% (9 children out of 34) before the activity to 47.1% (16 children out of 34) after the intervention. These results show that SBCC's strategy that combines interpersonal communication, testimonials, and visual media is able to encourage changes in people's behavior.

Cross-sectoral support, including village midwives, posyandu cadres, gampong governments, and active community participation, are important factors for the success of the program. Therefore, the SBCC approach can be used as a model for community-based public health interventions, especially in areas with low immunization coverage, and has the potential to support the achievement of complete basic immunization targets nationally.

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Author Contribution and Competing Interest

All authors contributed substantially to the conception, design, data collection, analysis, and interpretation of the study. The authors declare no competing interests in relation to this study.

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