

Strengthening Posyandu Cadres through an Oketani Massage E-Booklet to Support Exclusive Breastfeeding

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ABSTRACT

Exclusive breastfeeding remains an important public health strategy to support infant growth and development during the first 1,000 days of life. In Dusun VIII, Bangun Rejo Village, Deli Serdang Regency, exclusive breastfeeding coverage is estimated at 65–70%, which is still below the national target of 80%. Several contributing factors include limited breastfeeding management skills, mothers' perception of insufficient milk production, limited family support, and the lack of standardized educational media for Posyandu cadres. This community service programme aimed to strengthen the role of Posyandu/PKK cadres in supporting breastfeeding mothers through education, practical introduction to Oketani Massage, and the use of an Oketani Massage E-Booklet as digital educational media. The programme was implemented in Bangun Rejo Village from 20 February to 25 March 2026 using a participatory and descriptive community empowerment approach. The activities included socialization, exclusive breastfeeding literacy education, Oketani Massage simulation using a breast phantom, distribution of the E-Booklet, and descriptive evaluation through attendance records, activity documentation, observation, and informal feedback from cadre representatives. A total of 15 Posyandu/PKK cadres participated in the activity. The programme produced an Oketani Massage E-Booklet and received positive responses from cadres, particularly regarding its usefulness as a practical reference that can be accessed repeatedly through mobile phones. This programme contributes to community-based breastfeeding support by providing cadres with basic lactation education, practical simulation experience, and reusable digital learning material.

Keywords: Oketani Massage; Breastfeeding Cadres; E-Booklet; Exclusive Breastfeeding; Community Empowerment.

INTRODUCTION

Exclusive breastfeeding during the first six months of life is widely recognized as an essential strategy to support infant health, growth, and survival. Breast milk provides complete nutrition, strengthens the immune system, and contributes to optimal growth and development during the first 1,000 days of life. The World Health Organization recommends early initiation of breastfeeding, exclusive breastfeeding for the first six months, and continued breastfeeding with appropriate complementary foods up to two years or beyond (World Health Organization, 2023). Despite these recommendations, exclusive breastfeeding remains a continuing public health concern because many infants still do not receive exclusive breastfeeding for the full recommended period.

In Indonesia, breastfeeding practices have shown progress, but stronger support systems are still needed. UNICEF Indonesia reported that exclusive breastfeeding among infants under six months increased from 52% in 2017 to 66.4% in 2024. However, this progress does not mean that all infants receive exclusive breastfeeding for the complete six-month period (UNICEF Indonesia, 2025). The Indonesia Health Profile also serves as an important national reference for monitoring maternal and child health indicators and guiding local health programmes (Kementerian Kesehatan Republik Indonesia, 2024). These conditions indicate that efforts to improve exclusive breastfeeding should involve not only mothers, but also families, health workers, and community-based support systems.

Bangun Rejo Village, located in Tanjung Morawa District, Deli Serdang Regency, is a semi-urban area with a high proportion of productive-age families. In Dusun VIII, the target

location of this programme, exclusive breastfeeding coverage is estimated at only 65–70%, which remains below the national target. Based on the partner situation, several contributing factors include limited breastfeeding management skills, mothers' perception of insufficient milk production, breast discomfort, and limited family support, especially when mothers return to work. Previous studies have shown that knowledge, attitude, family support, co-worker support, access to information, and healthcare worker support are associated with exclusive breastfeeding practices (Pratiwi et al., 2024; Rapingah et al., 2021).

One important factor in breastfeeding success is maternal confidence in the ability to breastfeed. Breastfeeding self-efficacy influences the initiation and continuation of exclusive breastfeeding up to six months postpartum (Saavedra Sanchez et al., 2024). Psychological conditions may also affect breastfeeding practices because postpartum depression has been associated with decreased breastfeeding self-efficacy (Ahmadinezhad et al., 2024). Therefore, breastfeeding support at the community level needs to combine practical assistance, education, and emotional encouragement so that mothers feel more confident and supported.

Oketani Massage is introduced in this programme as a practical lactation support technique to help cadres understand basic breastfeeding assistance, particularly in relation to breast comfort and milk flow. Previous studies on lactation support and breastfeeding education have shown that structured education and practical guidance can strengthen breastfeeding self-efficacy and support breastfeeding practices (Metin et al., 2024; Saavedra Sanchez et al., 2024). However, at the community level, Posyandu cadres generally have limited access to structured training and standardized educational media related to lactation support. This condition creates a practical gap between the need for breastfeeding assistance and the availability of trained community-based supporters.

Posyandu cadres play an important role as frontline community health supporters who are close to mothers and families. Their involvement is strategic because they can provide basic education, encourage mothers to seek appropriate support, and help connect breastfeeding mothers with health workers when needed. To strengthen this role, accessible and practical educational media are needed. An Oketani Massage E-Booklet can serve as a digital guide that is easy to access through mobile phones, can be reviewed repeatedly, and can support cadres in recalling the main steps of the technique after training.

Based on these problems and needs, this community service programme was designed to strengthen Posyandu cadres using an Oketani Massage E-Booklet. The programme aimed to introduce cadres to basic lactation education, provide practical exposure to Oketani Massage through simulation, and distribute a digital educational medium that can support their role in assisting breastfeeding mothers. This programme is expected to contribute to community-based breastfeeding support in Bangun Rejo Village, particularly by improving cadre readiness to provide basic information and practical assistance related to exclusive breastfeeding.

METHOD

Study Site and Target Community

This community service programme was conducted in Dusun VIII, Bangun Rejo Village, Tanjung Morawa District, Deli Serdang Regency. The target community consisted of Posyandu/PKK cadres and nursing mothers in the area. Dusun VIII has 884 residents in 237 households, with an estimated 18–22 nursing mothers of infants aged 0–6 months each year. Community health resources in the area include an active village midwife, one Poskesdes, and

Posyandu and PKK cadres who regularly support maternal and child health activities. The main participants of this activity were 15 Posyandu/PKK cadres of Bangun Rejo Village, while village officials and other community stakeholders were involved as supporting participants.

Programme Design

This programme used a participatory and descriptive community empowerment approach. The activity focused on strengthening the role of Posyandu/PKK cadres in supporting exclusive breastfeeding through lactation education, introduction to Oketani Massage, practical simulation, distribution of the Oketani Massage E-Booklet, and descriptive evaluation of participant involvement. The programme was not designed as an experimental study; therefore, it did not measure changes in knowledge or skills through pre-test and post-test analysis.

Socialization and Exclusive Breastfeeding Literacy Education

The first stage was carried out through a community meeting involving village officials, the village midwife, Posyandu/PKK cadres, and the community service team. This session introduced the importance of exclusive breastfeeding, common breastfeeding problems experienced by mothers, and the role of cadres in providing basic support for breastfeeding mothers. The discussion also addressed local barriers to exclusive breastfeeding, including limited lactation management skills, lack of practical assistance for breastfeeding mothers, and the need for accessible educational media.

Cadre Training and Oketani Massage Simulation

The second stage focused on cadre training and practical simulation. The material was delivered through direct presentation, discussion, and demonstration of Oketani Massage using a breast phantom. The training covered basic lactation management, the role of prolactin and oxytocin hormones, breastfeeding comfort, and the function of Oketani Massage in supporting breast milk flow. After the demonstration, cadres were invited to observe and practise the basic steps of Oketani Massage under the guidance of the facilitator.

The Oketani Massage procedure was introduced through a step-by-step explanation so that cadres could understand the massage area, movement direction, and basic safety principles before practising the technique. The illustration below presents the main steps used as a guide during the training.

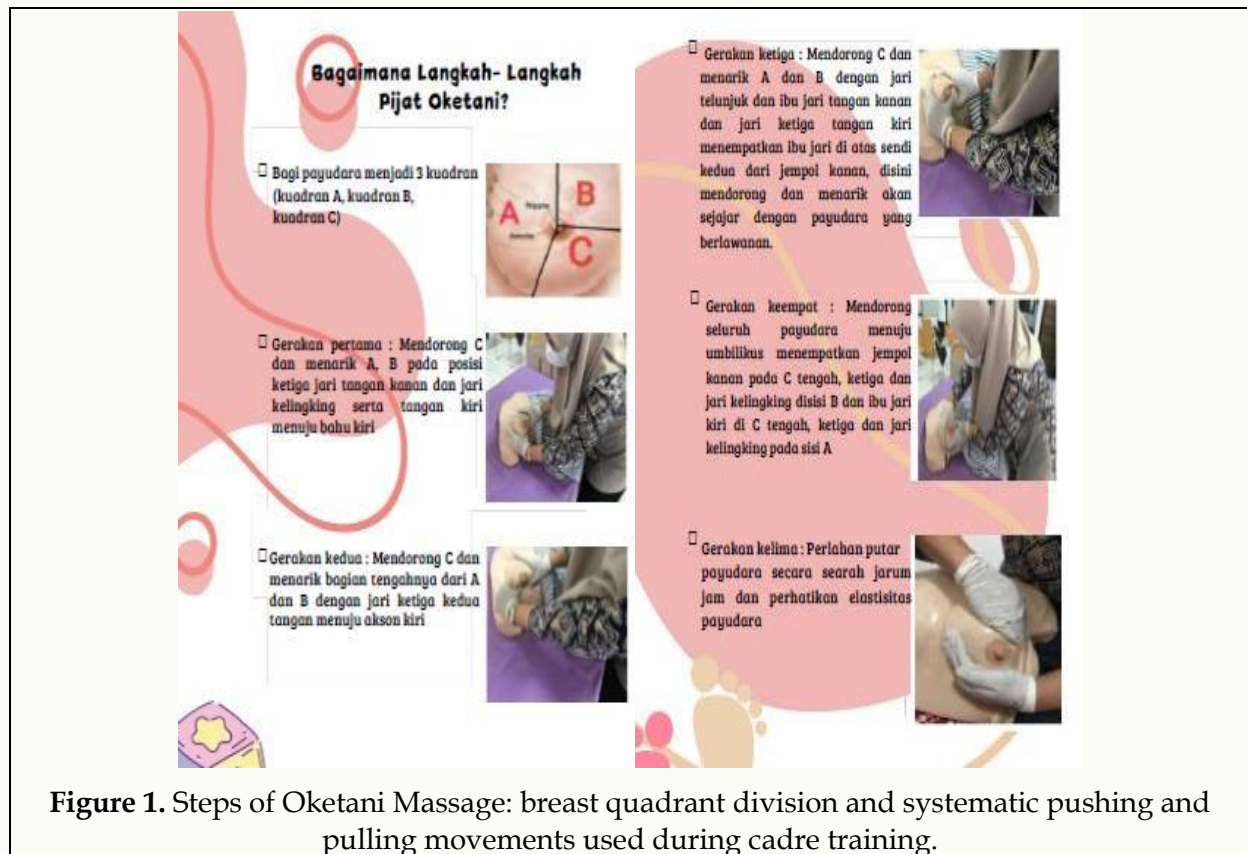


Figure 1. Steps of Oketani Massage: breast quadrant division and systematic pushing and pulling movements used during cadre training.

Application of Appropriate Technology: Oketani Massage E-Booklet

The E-Booklet titled “Oketani Massage: Safe Breastfeeding, Healthy Baby” was used as a digital educational medium in this programme. The E-Booklet contains information on breastfeeding physiology, benefits of breastfeeding, breast anatomy, indications and contraindications of massage, step-by-step Oketani Massage procedures, and reinforcement of breastfeeding self-efficacy. The E-Booklet was distributed to all participating cadres as an independent learning resource that could be accessed repeatedly through mobile phones.

The use of the E-Booklet was intended to help cadres recall the massage steps after the training and support them in providing basic education to breastfeeding mothers during Posyandu activities or informal community assistance. The cover of the E-Booklet used in this programme is presented below.

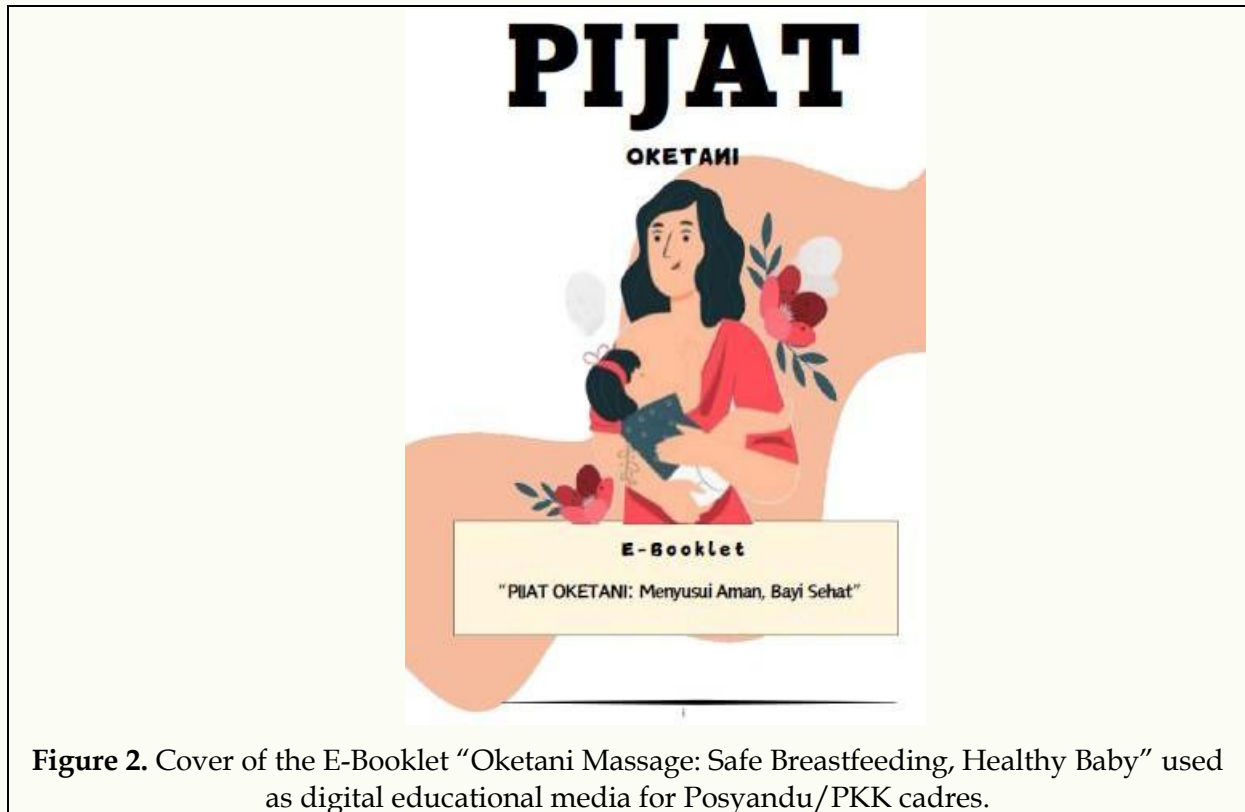


Figure 2. Cover of the E-Booklet “Oketani Massage: Safe Breastfeeding, Healthy Baby” used as digital educational media for Posyandu/PKK cadres.

Evaluation Technique

Evaluation in this programme was conducted descriptively through attendance records, activity documentation, observation during the Oketani Massage simulation, and informal feedback from cadre representatives. Attendance records were used to document participant involvement, while photographs were used to record the implementation process. Observation focused on cadre participation during the simulation, including attention to the demonstration, involvement in practice, and ability to follow the basic sequence of the massage technique. Informal feedback was obtained from the head of the village cadres to understand participants’ responses to the usefulness of the training and the E-Booklet.

Since no pre-test and post-test scores were analysed, the evaluation was limited to process-based and descriptive findings. Therefore, this programme does not claim quantitative improvement in cadres’ knowledge or skills, but rather describes the implementation process, participant involvement, practical simulation, distribution of the E-Booklet, and participants’ responses to the activity.

Programme Follow-Up

As a follow-up, cadres were encouraged to use the E-Booklet as a reference when assisting breastfeeding mothers in the community. The community service team also recommended continued coordination with the village midwife and Posyandu cadres so that breastfeeding education and Oketani Massage information could be integrated into routine maternal and child health activities. This follow-up was intended to support the sustainability of cadre empowerment and strengthen community-based breastfeeding assistance in Bangun Rejo Village.

RESULT AND DISCUSSION

Partner Situation Analysis

Bangun Rejo Village is a semi-urban area with a relatively high proportion of women of reproductive age. In Dusun VIII, exclusive breastfeeding coverage remains around 65–70%, which is still below the national target of 80%. This condition reflects the need for continuous community-based breastfeeding support, particularly because breastfeeding problems are often influenced by physiological, psychological, and social factors. Physiologically, mothers may experience perceived insufficient milk production, breast engorgement, and latch-on difficulties. Psychologically, anxiety, lack of confidence, and low breastfeeding self-efficacy can also affect breastfeeding continuation. Previous studies have emphasized that breastfeeding support is more effective when mothers receive practical assistance, emotional reinforcement, and continuous guidance from people close to their community context (Gavine et al., 2022; Ho et al., 2024).

Priority Problems and Programme Solutions

Based on the partner situation, three main problems were identified: limited maternal lactation management skills, limited cadre competency in Oketani Massage, and the absence of standardized digital educational media that can be used repeatedly by cadres. To respond to these problems, the programme focused on empowering Posyandu/PKK cadres through exclusive breastfeeding education, practical introduction to Oketani Massage, simulation using a breast phantom, and distribution of an Oketani Massage E-Booklet. This approach is relevant because community-based and layperson-supported breastfeeding interventions have been shown to contribute positively to breastfeeding practices, especially when support is accessible, culturally appropriate, and delivered continuously (Gavine et al., 2022; Ho et al., 2024).

Programme Implementation and Participant Involvement

The programme was implemented in Bangun Rejo Village and involved 15 Posyandu/PKK cadres as the main participants. The activity was carried out through direct presentation, discussion, and practical simulation. The participants showed active involvement during the session, particularly when the facilitator demonstrated Oketani Massage using a breast phantom. Attendance records confirmed the participation of the targeted cadres, while village officials and other community stakeholders were also involved as supporting participants. This indicates that the programme received positive institutional and community support.

The active involvement of cadres is an important aspect of this programme because cadres function as community-level agents who can help bridge health information between professional health workers and breastfeeding mothers. Although cadres do not replace health professionals, their presence can strengthen early education, basic assistance, and referral awareness in the community. This is consistent with evidence showing that breastfeeding support delivered by trained laypersons or community supporters can help sustain exclusive breastfeeding practices when supported by adequate knowledge and practical guidance (Ho et al., 2024).

Oketani Massage Simulation

The practical simulation became the central component of the activity. During this session, the facilitator demonstrated the basic steps of Oketani Massage using a breast phantom, allowing cadres to observe the technique directly before practising it. The use of a phantom helped participants understand the massage area, movement direction, and basic

safety principles without directly involving breastfeeding mothers during training. This approach made the learning process more practical and safer because cadres could observe, ask questions, and repeat the basic movements under facilitator guidance.

The use of Oketani Massage in breastfeeding support is supported by previous studies showing that this technique may help reduce breast engorgement, support milk flow, and improve maternal comfort during breastfeeding (Çağan et al., 2025; Purnani & Darmining, 2025). In the Indonesian context, Nainggolan et al. (2024) also reported that an Oketani Massage E-Booklet was effective in improving breastfeeding self-efficacy and breast milk flow among postpartum mothers. In addition, evidence on breast massage and lactation-support interventions suggests that structured massage can help address breastfeeding-related problems when performed properly and safely (Munsittikul et al., 2022). Findings from Ndraha et al. (2024) on oxytocin massage further support the relevance of lactation massage approaches in promoting smoother breastfeeding among postpartum mothers, although oxytocin massage and Oketani Massage are not identical techniques. Therefore, introducing Oketani Massage to cadres through guided simulation is relevant as an initial effort to strengthen their understanding of supportive lactation practices.

Distribution and Use of the Oketani Massage E-Booklet

As a follow-up to the training, the Oketani Massage E-Booklet was distributed to all participating cadres. The E-Booklet was designed as a digital educational medium that can be accessed repeatedly through mobile phones. This medium helped cadres review the massage steps after the training and served as a practical reference when providing basic education to breastfeeding mothers.



Figure 3. Presentation and use of the Oketani Massage E-Booklet during cadre training.

The use of a digital booklet is relevant to current developments in maternal and child health education. WHO (2019) emphasizes that digital health interventions can support health system strengthening by improving access to health information and service delivery. Previous studies have also shown that e-booklet-based education can improve access to breastfeeding information and support mothers' knowledge and attitudes toward exclusive breastfeeding (Purba et al., 2024). Digital health interventions have been reported to support exclusive breastfeeding practices by making educational materials more accessible, flexible, and reusable for postpartum mothers and community supporters (Thepha et al., 2024). In this programme, the E-Booklet served not only as a training aid but also as a practical learning resource for cadres after the activity ended.

Cadre Response and Programme Contribution

The activity received a positive response from the cadres. Hariati, as the Head of Cadres in Bangun Rejo Village, stated that Oketani Massage could help cadres become an extension of health workers in assisting breastfeeding mothers so that breast milk production remains smooth. She also emphasized that the E-Booklet was useful because it could be accessed repeatedly through mobile phones, making it easier for cadres to recall massage movements that might be forgotten. This response indicates that the combination of direct simulation and digital educational media was considered practical and relevant to the needs of cadres.

Although this programme did not quantitatively measure changes in knowledge or skills, it contributed to strengthening cadres' exposure to breastfeeding support practices. The programme provided cadres with basic lactation education, practical simulation experience, and reusable digital material. This contribution is important because breastfeeding self-efficacy is influenced not only by mothers' personal confidence but also by the quality of support received from their surroundings. Interventions that combine education, counselling, peer support, and follow-up assistance have been reported to improve breastfeeding self-efficacy and breastfeeding success (Tanriverdi et al., 2025). Therefore, empowering cadres with practical and accessible educational tools may indirectly support mothers' confidence and breastfeeding continuation in the community.

Integration with SDGs, Higher Education KPI, and Programme Sustainability

This programme supports SDGs Goal 3 by contributing to maternal and child health promotion and SDGs Goal 4 by strengthening community health literacy through educational activities. It also supports higher education Key Performance Indicators, particularly student involvement in off-campus activities, lecturer engagement in community programmes, and the utilization of academic products by society. The programme also has potential for sustainability because the E-Booklet can continue to be used by cadres during Posyandu activities or informal assistance for breastfeeding mothers.

For sustainability, continued coordination with the village midwife and Posyandu/PKK cadres is needed so that breastfeeding education and Oketani Massage information can be integrated into routine maternal and child health activities. Sustainable support is important because breastfeeding success is not determined by a single training session, but by continuous assistance, repeated education, and supportive community interaction (Gavine et al., 2022; Thepha et al., 2024).

Limitation

This programme has several limitations. First, the evaluation was descriptive and focused on attendance records, activity documentation, observation during simulation, and informal feedback from cadre representatives. Second, the programme did not analyse pre-test and post-test scores; therefore, it cannot claim a quantitative increase in cadres' knowledge or skills. Third, the impact of the programme on exclusive breastfeeding coverage has not yet been measured through long-term follow-up. Future community service programmes should include structured pre-test and post-test assessment, skill observation rubrics, validated participant feedback instruments, and follow-up monitoring of breastfeeding mothers to evaluate the effectiveness of the intervention more comprehensively.

CONCLUSION

This community service programme was implemented in Dusun VIII, Bangun Rejo Village, by involving 15 Posyandu/PKK cadres in exclusive breastfeeding education and an introduction to Oketani Massage through direct presentation, discussion, and practical simulation using a breast phantom. The activity received positive participation from the cadres and was supported by the distribution of the Oketani Massage E-Booklet as a digital educational medium that can be accessed repeatedly through mobile phones.

The programme contributed to strengthening cadres' exposure to basic lactation support and provided them with practical learning resources to assist breastfeeding mothers in the community. However, this programme was evaluated descriptively through attendance records, activity documentation, observation during the simulation, and informal feedback from cadre representatives. Therefore, the findings do not claim a quantitative increase in cadres' knowledge or skills, nor do they confirm an increase in exclusive breastfeeding coverage.

In the future, similar programmes should include structured pre-test and post-test assessment, skill observation rubrics, validated feedback instruments, and follow-up monitoring of breastfeeding mothers. These improvements are needed to measure the effectiveness of the programme more comprehensively and to strengthen its potential as a replicable model for community-based breastfeeding support.

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