

ENHANCING COMMUNITY-BASED BREASTFEEDING SUPPORT: IMPACT OF STRUCTURED LACTATION MANAGEMENT EDUCATION FOR POSYANDU CADRES

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ABSTRACT

*Breastfeeding plays an essential role in improving maternal and child health; however, many mothers encounter difficulties in maintaining optimal breastfeeding practices due to limited knowledge and insufficient support. Posyandu cadres serve as community-based health volunteers who provide education and assistance to breastfeeding mothers. This community service program aimed to improve the knowledge and capacity of Posyandu cadres regarding lactation management to strengthen breastfeeding support in the community. The program was conducted in collaboration with the Jumapolo Public Health Center and involved 30 Posyandu cadres. Educational activities included lectures, interactive discussions, demonstrations of proper breastfeeding techniques, and the distribution of educational materials. Program evaluation employed a pretest–posttest design using a structured questionnaire consisting of 20 true–false questions on lactation management. Prior to the intervention, more than half of the respondents (53.4%) had a low level of knowledge regarding lactation management, while only a small proportion demonstrated good knowledge. After the training, all participants (100%) achieved a good level of knowledge. Statistical analysis using a paired sample *t*-test showed a significant increase in knowledge scores following the intervention ($p < 0.001$). The mean score increased from 10.6 ± 2.4 before the training to 18.1 ± 1.3 after the training. These findings indicate that lactation management education effectively enhances the knowledge and capacity of Posyandu cadres in providing breastfeeding support and strengthening community-based breastfeeding promotion.*

Kata Kunci: *lactation management; breastfeeding support; Posyandu cadres; community health education; maternal health*

BACKGROUND

Exclusive breastfeeding during the first six months of life is widely recognized as a fundamental strategy for ensuring optimal infant growth and development. Breast milk provides complete nutrition and contains antibodies that protect infants from various infectious diseases. Adequate breastfeeding practices also contribute to improved cognitive development and reduce the risk of malnutrition and stunting. Despite its well established benefits, the coverage of exclusive breastfeeding in Indonesia has not yet reached the national target of 80%. According to the Indonesian Ministry of Health, the national coverage of exclusive breastfeeding was 66.06% in 2020, but declined to 56.9% in 2021, indicating ongoing challenges in maintaining optimal breastfeeding practices. In recent years, the coverage has shown gradual improvement, with the Indonesian Nutritional Status Survey (SSGI) reporting a rate of 74.73% in 2024, although disparities between regions still exist. These findings highlight the need for strengthened breastfeeding support programs and community-based interventions to improve breastfeeding practices in Indonesia (Dinas Kesehatan Provinsi Jawa Tengah, 2023; Kementerian Kesehatan Republik Indonesia, 2024). According to the Karanganyar District Health Profile, the coverage of exclusive breastfeeding in 2021 reached 71.13%, with 6,963 infants receiving exclusive breastfeeding out of 9,789 infants. This figure indicates an improvement

compared with previous years. In several subdistricts, including Jumapolo, the coverage of exclusive breastfeeding was reported to be relatively high, reflecting strong community participation and support for breastfeeding programs (Dinas Kesehatan Kabupaten Karanganyar, 2022). Although these figures indicate encouraging progress, the sustainability and quality of breastfeeding practices remain a concern. High breastfeeding coverage does not necessarily reflect optimal breastfeeding practices, as many mothers continue to experience difficulties in breastfeeding management (Neves *et al.*, 2021).

Several factors contribute to these challenges. Breastfeeding mothers frequently encounter problems related to incorrect breastfeeding techniques, misconceptions or myths about breast milk, perceived insufficient milk production, and limited access to accurate information (Mislu *et al.*, 2024; Yilak, 2024). In addition, inadequate family and community support may reduce mothers' confidence and motivation to continue breastfeeding. These issues highlight the importance of strengthening community-based support systems to assist mothers in overcoming breastfeeding challenges (Arsil, 2023; Kusumaningtiar and Wahidah, 2023). Within the Indonesian community health system, Posyandu (Integrated Health Service Posts) cadres play a strategic role in promoting maternal and child health at the grassroots level. Posyandu cadres are community volunteers who serve as health promoters, educators, and facilitators in delivering health information and services. Due to their close social relationships and cultural familiarity with community members, cadres are well-positioned to influence maternal health behaviors, including breastfeeding practices (Lassi, Bhutta and Salam, 2020; Trisnantoro, Suwandono and Dartanto, 2022). However, the effectiveness of cadres in providing breastfeeding support largely depends on their knowledge, skills, and confidence in lactation management. Without adequate training, cadres may face limitations in providing accurate information and appropriate assistance to breastfeeding mothers (Damayanti and Triyanti, 2021).

Previous studies have shown that educational and counseling programs for cadres can improve their knowledge regarding breastfeeding support. For instance, a breastfeeding counseling training program conducted at the Nania Health Center in Ambon City significantly improved cadres' knowledge and counseling abilities, with 67.5% of cadres achieving a good level of knowledge after the training (Damayanti and Triyanti, 2021; Hidayati, 2021). Another studies reported that training on exclusive breastfeeding assistance significantly increased the knowledge levels of Posyandu cadres. However, many of these programs mainly focused on theoretical education and knowledge transfer, while the development of practical skills and counseling competencies for cadres has often been limited. This indicates a gap in the implementation of comprehensive lactation management education that integrates theoretical knowledge, practical demonstrations, and interactive learning approaches. Strengthening the competence of Posyandu cadres through structured and practical training is therefore essential. Training programs that combine lectures, demonstrations of proper breastfeeding techniques, and counseling simulations can enhance cadres' ability to provide effective assistance and emotional support to mothers experiencing breastfeeding difficulties. Such approaches can also improve cadres' communication skills, enabling them to deliver more empathetic and responsive counseling to mothers in the community (Pérez-Escamilla, 2023).

The urgency of this community service activity lies in the need to strengthen community-based breastfeeding support systems. Although exclusive breastfeeding coverage in several areas has improved, the sustainability of breastfeeding practices still depends on continuous education, accessible information, and effective assistance for mothers. Empowering Posyandu cadres with adequate competencies in lactation management can help address breastfeeding challenges at the community level and contribute to improving maternal and child health outcomes, including the prevention of malnutrition and stunting. The novelty of this community service program lies in the implementation of a structured lactation management education model that integrates theoretical learning, practical demonstrations of breastfeeding techniques, and participatory counseling simulations specifically designed for Posyandu cadres. This integrated approach not only improves cadres' knowledge but also strengthens their practical skills and confidence in providing breastfeeding support to mothers. Therefore, this community service activity aims to improve the knowledge and capacity of Posyandu cadres in lactation management through structured education and practical training. By strengthening the competence of cadres, this program is expected to enhance community-based breastfeeding support and contribute to the sustainability of exclusive breastfeeding practices.

METHODS

This community service program employed an educational approach using lectures, hands-on training, and pretest–posttest questionnaires to evaluate the effectiveness of the intervention. The activity was conducted at the Jumapolo Public Health Center, Karanganyar Regency, Central Java, in 2025 and involved 30 Posyandu cadres as participants. The participants were selected in coordination with the Village midwives, considering her active role in community health services. A pretest was administered prior to the educational session to assess the initial knowledge of cadres regarding lactation management. The educational session covered several important topics, including proper breastfeeding techniques, identification and management of common lactation problems, and effective communication strategies for supporting breastfeeding mothers. After the educational intervention, a posttest was conducted to evaluate the improvement in participants’ knowledge. Educational tools used during the activity included PowerPoint presentations, demonstrations of proper breastfeeding techniques, and printed leaflets to reinforce the learning materials. The instrument used in this program was a structured knowledge questionnaire on lactation management adapted from previous studies, consisting of 20 true–false questions. The questionnaire assessed participants’ understanding of breastfeeding techniques, common breastfeeding problems, and appropriate lactation management practices. Each correct answer was scored as 1, while an incorrect answer was scored as 0, resulting in a maximum possible score of 20. The total score was then converted into percentage values and categorized into three levels of knowledge: good 76–100%, moderate 56–75%, and low $\leq 55\%$.

Prior to the implementation of the program, coordination with local partners was conducted to identify suitable participants and organize the implementation schedule. The partner organization, namely the Jumapolo Public Health Center, also assisted in facilitating the training process and mobilizing Posyandu cadres to participate in the activity. This community service activity aimed to improve the knowledge and awareness of Posyandu cadres regarding lactation management as a community-based strategy to support optimal breastfeeding practices and prevent stunting. The team leader served as the main educator and trainer, while other team members assisted in preparing educational materials, facilitating training sessions, and providing logistical support during field activities. Data obtained from the pretest and posttest questionnaires were analyzed using descriptive statistics and a paired sample t-test with the help of SPSS software to determine the effect of the training intervention on participants’ knowledge.

RESULTS AND DISCUSSION

A total of 30 respondents participated in the lactation management training. The results of this community service program present the characteristics of the participants, including age distribution, educational background, and baseline knowledge levels prior to the training.

Table 1. Age Distribution of Respondents

Age group (years)	Frequency (n)	Percentage (%)
25-30	12	40
31-40	18	60
Total	30	100

Source : Data Primer 2025

Based on the table 1, the majority of respondents were aged 31–40 years (60%), which represents a productive and socially active age group. Individuals within this age range tend to have greater emotional maturity, communication ability, and experience in community activities, which may enhance the effectiveness of training programs (Susiloretni, 2020). As community health

volunteers, Posyandu cadres are not only recipients of health information but also act as facilitators and educators who disseminate health messages to mothers within their communities. Age maturity may contribute to the effectiveness of cadres in delivering health education (Perry, 2021). Previous studies have shown that experienced community health workers are more capable of providing counseling and health promotion activities because they possess stronger interpersonal skills and a better understanding of community dynamics. Cadres with greater maturity and experience are also more likely to be trusted by mothers when providing guidance related to breastfeeding practices. Trust and interpersonal relationships are important components in community-based health promotion, particularly in addressing breastfeeding challenges such as incorrect latching techniques, nipple pain, and perceived insufficient milk production (Shakya, 2023; Wati, 2024).

Table 2. Educational Background of Respondents

Educational Level	Frequency (n)	Percentage (%)
Elementary to Junior High School	21	70
Senior High School	9	30
Total	30	100

Source : Data Primer 2025

In many communities, cadres are often perceived as approachable and culturally familiar figures, making them more effective in influencing maternal health behavior (Shakya, 2023). In terms of educational background, based on table 2, most respondents had an elementary to junior high school education (70%). This finding highlights the importance of designing training programs using simple, practical, and participatory educational approaches. Interactive learning methods such as demonstrations, visual aids, and discussions can facilitate better understanding among participants with diverse educational backgrounds. Despite having relatively low formal education, Posyandu cadres often possess strong social connections within the community. These close relationships enable them to communicate health messages in ways that are culturally appropriate and easily understood by community members. Community health workers are often trusted because they come from the same community and share similar social and cultural backgrounds with the people they serve. This trust and social embeddedness allow them to effectively influence health behaviors and facilitate the adoption of recommended health practices (Ferrer, 2022). Community-based health education delivered by trusted local actors has therefore been widely recognized as a key strategy in promoting sustainable health behavior change and improving community health outcomes (Liu, 2024; Nida, 2024).

Table 3. Knowledge Level of Posyandu Cadres Before and After Training

Knowledge Level	Pretest(n)	Pretest(%)	Posttest(n)	Posttest(%)
Good (76-100 %)	4	13.3	30	100
Moderate (56-75 %)	10	33.3	0	0
Low (\leq 55%)	16	53.4	0	0
Total	30	100	30	100

Source : Data Primer 2025

The findings of this program also revealed a substantial improvement in cadres' knowledge after participating in the lactation management training. Prior to the intervention, the results presented in Table 3 showed that more than half of the respondents (53.4%) had a low level of knowledge

regarding lactation management, while only a small proportion demonstrated good knowledge. However, following the training session, all participants (100%) demonstrated a good level of knowledge, indicating the effectiveness of the educational intervention in improving cadres' understanding of lactation management.

Table 4. Comparison of Knowledge Scores Before and After Training

Variable	Mean ± SD	t-value	p-value
Pretest Knowledge Score	10.6 ± 2.4	14.72	<0.001
Posttest Knowledge Score	18.1 ± 1.3		

Source : Data Primer 2025

A paired sample t-test was conducted to determine the effectiveness of the lactation management training. The results presented in Table 4 showed a statistically significant increase in the mean knowledge scores of participants after the intervention ($p < 0.001$). The mean score increased from 10.6 ± 2.4 before the training to 18.1 ± 1.3 after the training. These findings indicate that the training program significantly improved the knowledge of Posyandu cadres regarding lactation management.

The improvement in knowledge may be explained by the participatory learning strategies used during the training. The sessions included lectures, demonstrations of correct breastfeeding techniques, and discussions of common breastfeeding problems such as improper latching, nipple pain, and perceived insufficient milk supply. Participatory training methods encourage active involvement of participants, which enhances both understanding and retention of knowledge. Previous studies have similarly reported that structured training for community health workers can significantly improve their knowledge and competence in providing breastfeeding counseling and maternal health education. Strengthening the knowledge base of cadres is an important step in ensuring that accurate and evidence-based information reaches mothers at the community level (Perry, 2021).

Beyond improving knowledge, the training program also has potential implications for improving breastfeeding practices within the community. When cadres are equipped with adequate knowledge and practical skills, they can provide early guidance to pregnant and postpartum mothers regarding breastfeeding preparation, positioning techniques, and management of common lactation problems. Continuous support from cadres can increase mothers' confidence and motivation to maintain exclusive breastfeeding (Rollins, 2016). Evidence from community-based breastfeeding interventions indicates that support provided by trained community members can significantly increase exclusive breastfeeding rates and improve breastfeeding duration. Therefore, strengthening cadre capacity through targeted training can contribute indirectly to improving breastfeeding outcomes at the population level (Morrow, 1999; Haider, 2000). This community service activity also contributes to strengthening community empowerment in maternal and child health programs. Community empowerment involves increasing the capacity of local community members to participate actively in solving health problems. By equipping Posyandu cadres with adequate knowledge and practical skills, this program empowers them to function as agents of change who can influence health behaviors within their social environment. Cadres serve as a bridge between formal health services and the community, ensuring that health information and breastfeeding support are accessible to mothers who may have limited interaction with health professionals. Strengthening community-based support systems is particularly important in promoting sustainable maternal and child health interventions (Yulidasari, 2017; Kusumaningsih, 2025; Wandini, 2025).

From a policy perspective, strengthening the capacity of Posyandu cadres through lactation management training aligns with national and global strategies to improve maternal and child health outcomes. Exclusive breastfeeding is recognized as one of the most effective interventions to reduce child morbidity, mortality, and the risk of stunting (Simbolon and Putri, 2024). In Indonesia, efforts to increase exclusive breastfeeding coverage are closely linked to national programs addressing stunting prevention and the first 1,000 days of life (1000 HPK). By empowering cadres to provide

breastfeeding counseling and support, community-based interventions can complement formal healthcare services and strengthen the implementation of national nutrition policies. Another important contribution of this program lies in its integration of academic knowledge with community-based practice. As part of the implementation of the Tri Dharma of Higher Education, particularly in community service, this activity demonstrates how universities can play an active role in strengthening community health systems. Collaboration between academic institutions, health centers, and Posyandu cadres enables the transfer of evidence-based knowledge into practical community interventions that directly benefit mothers and infants (Coker, 2024).

The novelty of this activity lies in the structured integration of lactation management education with community empowerment strategies targeting Posyandu cadres as key actors in breastfeeding promotion. While many health programs focus primarily on mothers as the target of breastfeeding education, this program emphasizes strengthening the capacity of community health volunteers who interact with mothers on a daily basis. By focusing on cadres as intermediaries between health services and the community, the intervention creates a sustainable support system that can extend beyond the duration of the training program. This approach enhances the potential for long-term impact on breastfeeding practices within the community.

Nevertheless, several limitations should be considered when interpreting the results of this program. First, the evaluation focused mainly on the improvement of knowledge among cadres and did not directly measure changes in breastfeeding practices among mothers in the community. Second, the study used a pretest–posttest design without a control group, which may limit the ability to determine causality. Future programs are recommended to include longer follow-up evaluations, additional indicators such as breastfeeding self-efficacy among mothers, and monitoring of exclusive breastfeeding rates. Despite these limitations, the results demonstrate that lactation management training can effectively strengthen the capacity of Posyandu cadres in supporting breastfeeding mothers. Continuous training, supervision, and collaboration with healthcare providers are essential to sustain these improvements. Expanding similar training initiatives across communities may contribute to strengthening breastfeeding support systems, increasing exclusive breastfeeding coverage, and ultimately improving maternal and child health outcomes.

CONCLUSION

The lactation management training program effectively improved the knowledge and understanding of Posyandu cadres regarding breastfeeding support. Through structured educational sessions and practical demonstrations, cadres gained better comprehension of breastfeeding techniques, identification of common lactation problems, and strategies to assist mothers during the breastfeeding period. Strengthening the capacity of cadres through training plays an important role in enhancing community-based breastfeeding support, as cadres serve as trusted community members who provide education, counseling, and encouragement to breastfeeding mothers.

This community empowerment approach contributes to strengthening maternal and child health promotion efforts at the grassroots level. However, this program primarily evaluated improvements in cadres' knowledge and did not directly assess changes in breastfeeding practices among mothers in the community. Therefore, future programs are recommended to include longer-term monitoring and broader community involvement to examine the sustainability of the intervention and its potential impact on breastfeeding practices and maternal and child health outcomes.

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