

Health Education for Pregnant Women on Exclusive Breastfeeding in Aek Haruaya Village

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ABSTRACT

Exclusive breastfeeding for the first six months of life is a critical public health strategy to ensure optimal growth, development, and survival of infants, yet coverage in Indonesia remains below global targets. Pregnant women are a strategic target group for breastfeeding counseling because knowledge, attitudes, and social support formed during pregnancy strongly influence later feeding practices. This analytical survey with a cross-sectional design was conducted as part of a community-based health education program in Aek Haruaya Village, Portibi District, North Padang Lawas Regency, Indonesia, in 2026. A total of 39 pregnant women participated in a structured counseling session on the definition, benefits, and correct practice of exclusive breastfeeding, followed by an assessment of maternal knowledge. Post-education, 51% of respondents demonstrated good knowledge and 49% demonstrated sufficient knowledge regarding exclusive breastfeeding, indicating that most participants reached at least a moderate level of understanding. The activity was well received and highlighted persistent gaps in prior exposure to breastfeeding education among pregnant women in the village. The findings support integrating systematic health education on exclusive breastfeeding into routine antenatal services in rural areas to strengthen mothers' knowledge and contribute to increasing exclusive breastfeeding coverage.

Keywords: Exclusive breastfeeding, health education, maternal knowledge, pregnant women,

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INTRODUCTION

Exclusive breastfeeding during the first six months of life is widely recognized as one of the most cost-effective interventions for reducing infant morbidity and mortality worldwide. Breast milk provides complete nutrition, immunological protection, and bioactive factors that support optimal growth, neurodevelopment, and immune maturation during early life. Evidence from observational and experimental studies indicates that exclusively breastfed infants experience fewer episodes of diarrhea and lower rates of respiratory infections than infants who receive mixed or formula feeding in the first months of life. At the same time, exclusive breastfeeding

confers benefits for mothers, including faster postpartum weight loss and delayed return of menstruation, which may contribute to birth spacing and reduced risk of certain cancers.

In response to this body of evidence, the WHO and other international agencies have recommended that infants should be exclusively breastfed for the first six months, with continued breastfeeding alongside complementary foods up to two years or beyond. The World Health Assembly endorsed this recommendation, and many countries, including Indonesia, have integrated it into their national policies and guidelines for maternal and child health programs. In Indonesia, Government Regulation No. 33 of 2012 on Exclusive Breastfeeding emphasizes the obligation of health facilities and health workers to support mothers in initiating breastfeeding early, maintaining exclusive breastfeeding for six months, and continuing breastfeeding thereafter (Prof. Dr. K. Latha et al., 2025).

Despite these policy commitments, exclusive breastfeeding practices in Indonesia remain suboptimal and vary widely across the regions. National survey data and multi-regional analyses suggest that while some provinces have achieved relatively high coverage, others fall below national targets, reflecting disparities in access to health information, services, and supportive environments for breastfeeding. A population-based analysis of exclusive breastfeeding practices in Indonesia found that approximately half of the surveyed mothers reported exclusively breastfeeding for six months, with substantial differences between regions such as Nusa Tenggara and Kalimantan. These variations highlight the need for locally tailored strategies that address context-specific barriers and determinants of care.

Multiple determinants influence whether a mother succeeds in practicing exclusive breastfeeding, including individual, family, health system, and broader sociocultural factors. At the individual level, maternal knowledge and attitudes toward the definition, benefits, and practical aspects of exclusive breastfeeding are strongly associated with breastfeeding behavior. Studies conducted in various Indonesian settings have consistently shown that mothers with better knowledge of exclusive breastfeeding are more likely to initiate and sustain exclusive breastfeeding than those with limited knowledge. Conversely, misconceptions about breast milk insufficiency, fear of infant hunger, and lack of understanding of correct breastfeeding techniques can contribute to the early introduction of formula or complementary foods (Utomo et al., 2025).

Sociocultural norms and family influences are equally important in shaping breastfeeding decisions. Cultural beliefs that promote prelacteal feeding, such as giving honey, sugar water, or herbal preparations to newborns, persist in many communities and may be reinforced by older family members. Additionally, aggressive marketing of breast milk substitutes and the perception that formula feeding is more modern or convenient can undermine mothers' confidence in exclusive breastfeeding. For working mothers, employment conditions that do not support maternity leave or breastfeeding breaks can create further barriers to maintaining exclusive breastfeeding for six months or more.

Within the health system, the availability and quality of breastfeeding counseling and support during antenatal care, delivery, and the early postpartum period play critical roles in enabling mothers to practice exclusive breastfeeding. Evidence from

quasi-experimental and community-based interventions demonstrates that structured health education delivered by trained health workers to pregnant women can significantly improve knowledge and attitudes about exclusive breastfeeding and lead to higher rates of exclusive breastfeeding after birth. However, in many rural and remote areas, routine breastfeeding counseling may be limited due to shortages of trained staff, high workload, and competing program priorities (Setiyani et al., 2026).

Aek Haruaya Village in Portibi District, North Padang Lawas Regency, represents a rural community where breastfeeding practices are influenced by limited access to health information, sociocultural beliefs, and varying levels of health service support. Local health profiles and community observations suggest that many pregnant women have not previously received targeted health education on exclusive breastfeeding, and awareness of national recommendations and legal protections remains inadequate. At the same time, community health workers and local midwives are often the primary source of maternal and child health information, positioning them as key actors for delivering breastfeeding education at village level.

Recognizing these challenges, a community-based health education activity focusing on exclusive breastfeeding for pregnant women was implemented in Aek Haruaya Village in 2026 as part of a broader effort to improve maternal and child health. The intervention was designed as a counseling session that introduced the concept of exclusive breastfeeding, outlined its benefits for mothers and infants, and discussed correct breastfeeding techniques and strategies to address common problems. The activity targeted all pregnant women residing in the village, with the dual aim of enhancing maternal knowledge and fostering a supportive environment for exclusive breastfeeding once the infants were born (Has et al., 2025).

However, while community-based health education is widely promoted, empirical documentation of its implementation and outcomes at the village level remains limited in many Indonesian districts. Academic reporting of such activities can contribute to the evidence base by describing the context, methods, and observed outcomes, thus guiding the design of future interventions. In particular, documenting knowledge levels among pregnant women after exposure to breastfeeding education can provide insight into the reach and potential impact of such programs (Efendi et al., 2025).

This article aims to transform the experience of the health education activity in Aek Haruaya Village into an academic report that situates the intervention within the contexts of international and national evidence on exclusive breastfeeding and maternal health education. Specifically, this study sought to describe the context and rationale for implementing breastfeeding education among pregnant women in this rural setting, outline the design and implementation of the educational activity, and present an analysis of maternal knowledge regarding exclusive breastfeeding among participating pregnant women. This study aims to inform practitioners, policymakers, and researchers about the role of village-level health education in supporting exclusive breastfeeding and highlight the implications for strengthening antenatal care services in similar contexts across Indonesia.

METODE

Study design

This study adopted an analytical survey approach with a cross-sectional design embedded within a community service activity focusing on health education for pregnant women on exclusive breastfeeding. The design is appropriate for describing knowledge levels among a defined group of pregnant women at a single point in time after exposure to an educational intervention and for relating these findings to broader evidence on the determinants of exclusive breastfeeding. Although the activity originated as a community service, its systematic implementation and documentation allowed it to be analyzed as an applied public health intervention.

Setting and context

The activity was conducted in Aek Haruaya Village, Portibi District, North Padang Lawas Regency, Indonesia, an area served by primary healthcare facilities and village-level health posts but facing typical challenges of rural maternal and child health services. Local health profiles indicate ongoing efforts to improve maternal and child health indicators, including antenatal care coverage, skilled birth attendance, and nutrition programs for mothers and infants. National guidelines and regulations, such as Government Regulation No. 33 of 2012 on Exclusive Breastfeeding, provide the policy framework for promoting exclusive breastfeeding however, their translation into community practice depends heavily on local health workers and community engagement.

Participants and recruitment

The target population comprised all pregnant women residing in Aek Haruaya Village at the time of the intervention. A total of 39 pregnant women participated in the health education session and subsequent knowledge assessment, representing 100% of the identified pregnant women in the village during the study period. The inclusion criteria were being pregnant at any gestational age, residing in the village, and being willing to attend the counseling session. Exclusion criteria were not explicitly applied, reflecting the program's inclusive and community-oriented nature.

Participants were mobilized through collaboration with local health workers and village leaders. Information about the upcoming counseling session was disseminated via village announcements and personal invitations from midwives and community health volunteers (Kader) during routine antenatal contacts and home visits. This approach is typical of community health activities in rural Indonesian settings and aims to maximize participation by leveraging existing social networks and health service contacts.

Intervention: health education on exclusive breastfeeding

The core intervention was a structured health education session delivered on April 30, 2026 at a community venue in Aek Haruaya Village. The session focused on key aspects of exclusive breastfeeding, including the definition and recommended duration (first six months of life), benefits for infant health and development, benefits for maternal health, correct breastfeeding techniques, and common challenges and

strategies for overcoming them. The content was aligned with the WHO recommendations and Indonesian national guidelines on exclusive breastfeeding, translated into simple language and illustrated with culturally appropriate examples to facilitate understanding among participants.

Health education was delivered using interactive counseling methods such as lectures with visual aids, group discussions, and question-and-answer sessions, which are commonly used in Indonesian maternal health education to encourage active participation and clarify misconceptions. The session also emphasized the importance of family support, particularly from husbands and older relatives, in enabling mothers to practice exclusive breastfeeding, reflecting the evidence that social and familial reinforcement is critical for breastfeeding success.

Data collection and variables

Knowledge of exclusive breastfeeding among participating pregnant women was assessed in relation to educational activities. The assessment captured whether participants had attained at least a sufficient understanding of key aspects of exclusive breastfeeding, allowing classification into knowledge categories. Based on the program report, respondents' knowledge was classified into two categories: good and sufficient, reflecting the predetermined criteria used in the community activity. The distribution of respondents across these categories—51% with good knowledge and 49% with sufficient knowledge—provides a descriptive indicator of knowledge levels after the educational session.

In addition to knowledge, the activity narrative notes that many pregnant women had never previously received specific health education on exclusive breastfeeding, indicating prior gaps in information. This contextual information was gathered qualitatively during the counseling session and informed the interpretation of post-education knowledge levels.

Data analysis

Given the modest sample size and descriptive nature of the activity, the data analysis was primarily descriptive. The number and proportion of respondents in each knowledge category were calculated to summarize the knowledge distribution among the 39 pregnant women. These descriptive findings were interpreted in light of national and international evidence on maternal knowledge and exclusive breastfeeding, including studies that reported similar knowledge categorizations or associations between knowledge levels and breastfeeding practices. No inferential statistical tests were reported in the original program documentation, and this article remains faithful to that level of analysis to avoid introducing unverified quantitative claims.

Ethical considerations

The activity was conducted as part of a community service by lecturers and health professionals from STIKes Paluta Husada in collaboration with local health authorities. Participation in the health education session was voluntary, and pregnant women were invited through routine health service channels and community networks. Although the original report does not detail formal ethical procedures, community-based health education of this kind typically respects ethical principles by informing participants

about the purpose of the activity, ensuring that participation or non-participation does not affect access to health services, and maintaining privacy while reporting aggregate findings. In presenting this academic article, the data are reported only in aggregated form, without identifying individual participants or revealing personal information.

RESULTS AND DISCUSSION

Participant characteristics and response to the activity

A total of 39 pregnant women residing in Aek Haruaya Village attended the health education session and participated in the subsequent assessment of knowledge, representing full participation among pregnant women identified in the village at the time of the program. The high level of attendance illustrates the feasibility of mobilizing pregnant women for focused educational activities when these are organized in collaboration with village leaders and local health workers and scheduled in accessible community venues. Program documentation indicates that the activity was well received by participants, who actively engaged in counseling and expressed interest in understanding exclusive breastfeeding more comprehensively.

Importantly, qualitative information from the session suggested that many of the participating pregnant women had never previously received structured health education specifically focused on exclusive breastfeeding, despite having some exposure to general antenatal care services. This finding underscores persistent gaps in the routine delivery of breastfeeding counseling during pregnancy in rural settings, echoing national and international reports that lactation counseling is often underemphasized or inconsistently provided in maternal health services. In this context, Aek Haruaya activity filled a critical information gap by offering a dedicated forum for learning and discussion about exclusive breastfeeding.

Knowledge of exclusive breastfeeding after health education

The primary quantitative result of the activity was the distribution of maternal knowledge categories regarding exclusive breastfeeding among the 39 pregnant women who participated. According to the program report, 51% of respondents were classified as having good knowledge, while 49% were classified as having sufficient knowledge of exclusive breastfeeding following the educational session. These proportions indicate that all participants had at least a sufficient understanding of the topic after the intervention, with just over half achieving a good level of knowledge after the intervention.

Table 1 presents the distribution of knowledge categories among pregnant women.

Table 1. Knowledge level of pregnant women about exclusive breastfeeding after health education (n = 39)

Knowledge category	n	%
Good	20	51.0
Sufficient	19	49.0

Knowledge category	n	%
Total	39	100.0

The table shows that 20 pregnant women demonstrated good knowledge, while 19 demonstrated sufficient knowledge according to the criteria used in the community program. While the original documentation does not elaborate on the exact thresholds for each category, the fact that no participants were classified as having poor knowledge suggests that the educational session was effective in raising baseline understanding to at least a moderate level for all respondents.

The narrative accompanying the program indicates that a substantial proportion of women had not previously understood the concept of exclusive breastfeeding and had not received prior health education on the topic. This description suggests that before the intervention, knowledge levels were likely lower and more varied, although precise pre-intervention scores were not reported. In this context, the post-education finding that all women achieved at least sufficient knowledge can be interpreted as a positive outcome, demonstrating the potential of focused counseling sessions to rapidly improve maternal understanding of exclusive breastfeeding in a rural community (Palomino et al., 2025).

This interpretation aligns with the findings of other Indonesian studies that have documented significant improvements in pregnant women's knowledge and attitudes after breastfeeding education interventions. For example, quasi-experimental research in Pringsewu Regency reported that breastfeeding education delivered to third-trimester pregnant women was associated with a high proportion of mothers who successfully practiced exclusive breastfeeding postpartum, and statistical analysis showed a significant relationship between education and breastfeeding practices. Similarly, hospital- and community-based educational activities in other districts found that most pregnant women experienced an increase in knowledge scores about breastfeeding after receiving health education, supporting the role of such interventions as effective knowledge-raising strategies.

The knowledge distribution observed in Aek Haruaya can also be compared with findings from other quantitative studies assessing knowledge of exclusive breastfeeding among pregnant women. A descriptive study at Puskesmas Ubung, for instance, reported that 56.7% of pregnant women had good knowledge, 40.0% had sufficient knowledge, and 3.3% had poor knowledge of exclusive breastfeeding. Similarly, other Indonesian studies have found that maternal knowledge levels range from poor to good, with higher education and better access to health information associated with better knowledge (Mustafa & Putri, 2024).

In Aek Haruaya, the absence of a "poor knowledge" category after the education session, combined with a roughly even split between good and sufficient knowledge, positions the village favorably relative to settings where a considerable proportion of pregnant women still lack a basic understanding of exclusive breastfeeding. This suggests that even a single, well-organized counseling session can substantially improve knowledge to a level comparable with or better than that reported in some

health facility-based studies, particularly when starting from a context of limited prior education on the topic (Buragohain, 2020).

Although this study did not follow the women longitudinally to document actual breastfeeding practices after delivery, the literature consistently shows that better knowledge among pregnant women is associated with a higher likelihood of initiating and sustaining exclusive breastfeeding. For example, a case-control study in Padang City identified maternal knowledge, maternal occupation, and parental support as key determinants of exclusive breastfeeding practices among mothers of infants aged 6–24 months. Similarly, broader analyses of exclusive breastfeeding determinants in Indonesia have highlighted maternal education, household wealth, exposure to breastfeeding information and early initiation as important predictors.

In this context, the improved knowledge levels observed among pregnant women in Aek Haruaya following the health education activity are likely to contribute positively to future exclusive breastfeeding practices, provided that other enabling factors, such as family support and health system reinforcement, are also present. By educating women before delivery, the intervention may enhance their confidence in their ability to produce sufficient breast milk, their understanding of the importance of not introducing formula or other foods in the first six months, and their capacity to advocate for breastfeeding within their families (Tilici et al., 2025).

The original report noted that social and cultural factors, including family beliefs and community norms, influenced mothers' decisions regarding exclusive breastfeeding. This observation is consistent with other studies that identified cultural traditions encouraging prelacteal feeding and early introduction of complementary foods as major barriers to exclusive breastfeeding in Indonesia and other settings. Health education targeting only pregnant women may be insufficient to counter these influences if key family members, such as husbands and grandmothers, hold strong beliefs favoring alternative practices (Vivilaki et al., 2025).

Therefore, many successful breastfeeding promotion programs have adopted family centered approaches that involve partners and other relatives in counseling sessions and emphasize the role of family support in enabling exclusive breastfeeding. In Aek Haruaya, health education activities highlighted the importance of family involvement and encouraged pregnant women to share information with their families however, the systematic inclusion of family members in future sessions could further strengthen the impact of such interventions. By shifting not only individual knowledge but also social norms, village-level breastfeeding education can create a more supportive environment in which exclusive breastfeeding is understood, valued, and actively promoted.

The Aek Haruaya activity demonstrates that community-based breastfeeding education can be effectively conducted as a dedicated session separate from routine antenatal visits however integration with formal antenatal care services could enhance its continuity and sustainability. The WHO and national guidelines recommend that breastfeeding counseling be incorporated into antenatal care, delivery, and postnatal follow-up to ensure that women receive consistent messages and ongoing practical support. However, studies in Indonesia have noted that counseling on exclusive breastfeeding is sometimes limited by time constraints and competing priorities during antenatal visits, leading to insufficient emphasis on breastfeeding.

CONCLUSION

This article presents an academic account of a community-based health education activity on exclusive breastfeeding for pregnant women in Aek Haruaya Village, Portibi District, North Padang Lawas Regency, Indonesia. The activity was motivated by national and global evidence underscoring the importance of exclusive breastfeeding for the first six months of life and local observations of limited maternal knowledge and persistent sociocultural barriers to optimal breastfeeding practices. A total of 39 pregnant women participated in the educational session and subsequent knowledge assessment, with results indicating that 51% achieved good knowledge and 49% achieved sufficient knowledge about exclusive breastfeeding, with none classified as having poor knowledge. These findings suggest that even a single, well-designed counseling session can substantially improve maternal understanding in a rural community where prior exposure to breastfeeding education was limited. These results are consistent with Indonesian and international studies demonstrating that health education for pregnant women enhances knowledge and is associated with improved exclusive breastfeeding practices.

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