

THE IMPORTANCE OF EDUCATION ON KNOWLEDGE AND FATIGUE MANAGEMENT IN IMPROVING EXCLUSIVE BREASTFEEDING PRACTICES AMONG WORKING MOTHERS

Aisya Fikritama Aditya^{1*}, Farida Nugrahani², Asmawati³, Jerry Maratis⁴, Diniatik⁵

¹Department of Child Health, Faculty of Medicine, Universitas Sebelas Maret
Jl. Ir. Sutami No.36 A, Kentingan, Jebres, Kota Surakarta, Jawa Tengah - Indonesia

²Universitas Veteran Bangun Nusantara, Jawa Tengah - Indonesia

³Universitas Muhammadiyah Palopo, Sulawesi Selatan - Indonesia

⁴Universitas Esa Unggul, DKI Jakarta - Indonesia

⁵Universitas Muhammadiyah Purwokerto, Jawa Tengah - Indonesia

*Corresponding Author: aisyafikritama@staff.uns.ac.id

Article history:

Received: April 2026

Revised: April 2026

Accepted: April 2026

ABSTRACT Exclusive breastfeeding is an essential intervention to support optimal infant growth and development. However, working mothers often encounter challenges in maintaining exclusive breastfeeding due to fatigue and limited knowledge. This community service activity aims to improve exclusive breastfeeding practices through educational interventions focusing on breastfeeding knowledge and fatigue management among working mothers. The program was implemented through educational counselling, practical assistance, and interactive discussions. The target participants were working mothers with infants aged 0–6 months. The results showed an increase in participants' understanding of breastfeeding practices and improved confidence in providing breast milk despite work-related fatigue. Knowledge was identified as the dominant factor influencing breastfeeding practices, while fatigue remained the primary barrier. This program demonstrates that community-based education is effective in improving exclusive breastfeeding practices among working mothers.

KEYWORDS: *Exclusive Breastfeeding; Working Mothers; Fatigue; Knowledge.*

1. INTRODUCTION

Exclusive breastfeeding is one of the most effective interventions for improving infant health, supporting optimal growth and development, and reducing morbidity and mortality rates ((Victora *et al.*, 2008; WHO, 2011). The World Health Organization recommends exclusive breastfeeding during the first six months of life because breast milk contains essential nutrients and immunological components that cannot be replaced by other food sources (North *et al.*, 2022). However, the coverage of exclusive breastfeeding remains suboptimal in many communities, particularly among working mothers (Kementerian Kesehatan RI, 2022).

Working mothers face unique challenges in maintaining exclusive breastfeeding. Their dual roles as employees and caregivers result in limited time, work-related stress, and physical as well as mental fatigue, which can affect breastfeeding consistency (Tang *et al.*, 2020; Nurjanah *et al.*, 2023). In addition, limited knowledge regarding breastfeeding techniques, expressed breast milk management, and strategies for breastfeeding while working also acts as a significant barrier (Rajak *et al.*, 2023).

Recent studies have shown that maternal knowledge is strongly associated with successful exclusive breastfeeding practices, while fatigue contributes to decreased consistency ((Lokko *et al.*, 2025; Putri, Anissa and Sari, 2025). Adequate knowledge enables mothers to understand proper breastfeeding techniques, manage expressed breast milk, and maintain milk production effectively (Miranti, Indriyani and Sari, 2025). Conversely, unmanaged fatigue can reduce motivation and the ability to breastfeed optimally. Therefore, interventions that integrate knowledge enhancement and fatigue management are crucial in supporting exclusive breastfeeding among working mothers (Ulya, Pradanie and Nastiti, 2020).

Conceptually, health behaviour change is influenced by knowledge, attitudes, and environmental support (Kumala *et al.*, 2025). In the context of working mothers, increased knowledge is expected to improve awareness and capacity to overcome breastfeeding barriers, while effective fatigue management helps maintain behavioural consistency. Environmental support, especially from family and the workplace, also plays a critical role in sustaining exclusive breastfeeding (Pramono *et al.*, 2021).

Various efforts have been made to improve exclusive breastfeeding coverage, including counselling and health promotion programs. However, general approaches often fail to address the specific needs of working mothers. Therefore, a contextual, participatory, and community-based empowerment approach is required.

This community service activity was designed by involving working mothers as both subjects and active partners in the learning process. Community participation included involvement in problem identification through interviews and discussions, participation in educational sessions and focus group discussions (FGDs), and active engagement in mentoring sessions to address breastfeeding challenges.

Based on this background, this community service activity aims to improve exclusive breastfeeding practices among working mothers through education on breastfeeding knowledge and fatigue management. This program is expected to enhance the capacity of working mothers to overcome breastfeeding challenges and contribute to increasing exclusive breastfeeding coverage in the community.

2. METHOD

This community service activity began with a survey phase to identify problems related to exclusive breastfeeding practices among working mothers in Surakarta. The survey involved 50 working mothers with infants aged 0–6 months. Data were collected through in-depth interviews, observations, and documentation to explore breastfeeding knowledge, fatigue levels, and barriers in breastfeeding practices.

The collected data were analysed using an interactive analysis approach, and data validity was ensured through triangulation of methods and sources. The results showed that most working mothers had limited knowledge of breastfeeding techniques, expressed breast milk management, and strategies for maintaining exclusive breastfeeding, as well as experiencing significant physical and mental fatigue.

Based on these findings, the program continued with educational and mentoring activities targeting working mothers aged 28–35 years with infants aged 0–6 months, both in formal and informal employment sectors. In addition, family members (husbands or caregivers) were involved as indirect targets to strengthen support for exclusive breastfeeding practices.

The activity was conducted on April 19, 2026, in Surakarta and involved a multidisciplinary team with the following roles:

- a) dr. Aisya Fikritama Aditya, Sp.A – Team leader and main speaker
Responsible for delivering educational materials on exclusive breastfeeding, breastfeeding techniques, and expressed milk management, as well as providing consultation during mentoring sessions.
- b) Prof. Dr. Farida Nugrahani, M.Hum – Team member and educational facilitator
Responsible for facilitating counselling activities, guiding discussions, and strengthening educational content using participatory communication approaches.
- c) Supporting team (health workers/students) – Field facilitators
Responsible for assisting in program implementation, mentoring participants in breastfeeding practices, and providing individual consultations.
- d) Moderator – Activity Coordinator
Responsible for managing the flow of activities, facilitating discussions (FGD), and ensuring active participant engagement.

The implementation methods included:

1. Educational counselling (lectures)

Covering topics such as the importance of exclusive breastfeeding, correct breastfeeding techniques, expressed milk management, breastfeeding strategies for working mothers, and fatigue management.

2. Focus Group Discussion (FGD)

Participants shared experiences, identified problems, and discussed solutions related to breastfeeding challenges.

3. Mentoring and consultation

Conducted directly to provide practical solutions tailored to participants' individual conditions.

Evaluation was carried out by comparing participants' knowledge before and after the intervention (pre-test and post-test), as well as collecting feedback regarding changes in understanding and breastfeeding practices.

3. RESULT AND DISCUSSION

a. Educational Session on Exclusive Breastfeeding and Fatigue Management

The activity began with an educational session delivered to all participants. The materials were divided into three main themes: (1) the importance of exclusive breastfeeding, (2) breastfeeding techniques and milk management for working mothers, and (3) fatigue management.

The first session explained that exclusive breastfeeding is the best source of nutrition for infants aged 0–6 months and plays a crucial role in optimal growth and development. Participants were informed about the benefits of breastfeeding for both infants and mothers.

The second session focused on breastfeeding techniques and expressed breast milk management, including pumping techniques, storage methods, and strategies to maintain milk production despite time constraints.

The third session addressed fatigue management, including time management, the importance of family support, and strategies to reduce work-related stress. Most participants reported fatigue as a major barrier to maintaining exclusive breastfeeding.

Evaluation results showed a significant increase in knowledge after the educational intervention.

Table 1. Mean score before and after educational intervention

Group	Mean ± SD
Pre-test	55.31 ± 3.03
Post-test	80.38 ± 2.87
p	0.013 < 0.001
a,b Significant ($p > 0.05$)	

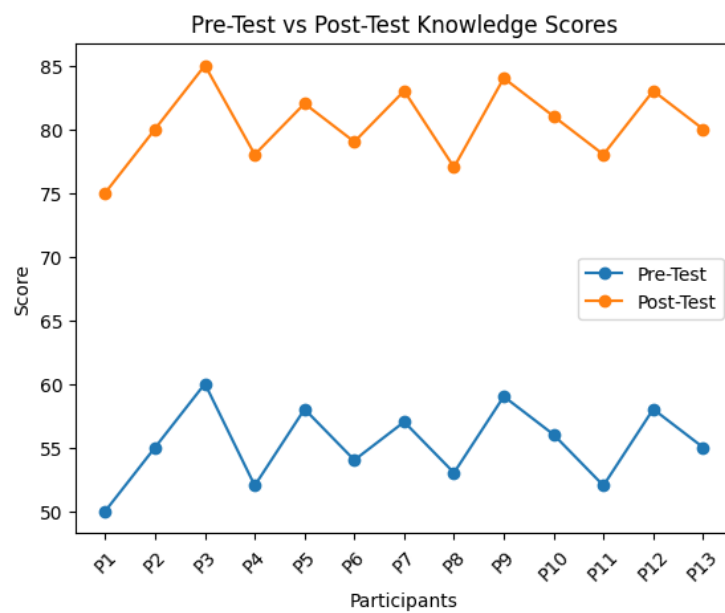


Figure 1. Comparison of Pre-test and Post-test Knowledge Scores

The increase in scores indicates that the educational intervention provided was effective in improving working mothers’ knowledge regarding exclusive breastfeeding practices. This improvement is also reflected in the comparison graph of pre-test and post-test scores, which shows an increasing trend among all participants.

b. Focus Group Discussion (FGD) and Mentoring

Following the educational session, activities continued with FGD and mentoring sessions. Participants actively shared their experiences and challenges, including fatigue, limited time for pumping, and lack of workplace support.

Through mentoring, participants received practical solutions such as scheduling pumping sessions, proper milk storage techniques, optimizing family support, and stress management strategies.

The discussions also revealed a gap between theoretical knowledge and practical implementation. Participants gained new insights and began adopting practical strategies, such as consistent pumping schedules and involving family members in support roles.

b. Impact of the Program on Exclusive Breastfeeding Practices

Before the intervention, most participants had limited knowledge and poorly managed fatigue, leading to suboptimal breastfeeding practices. After the program, there was a significant improvement in knowledge, confidence, and behaviour.

Participants became more confident in breastfeeding, implemented better milk management strategies, and improved fatigue management. The intervention contributed not only to cognitive improvement but also to behavioural changes.

From a community empowerment perspective, the program enhanced mothers' capacity to overcome breastfeeding challenges. However, long-term success still requires workplace support, such as lactation rooms and flexible time for milk expression. The program also had broader impacts at the family and community levels by encouraging family involvement and creating a multiplier effect, where participants share knowledge with others.



Figure 2. Activity documentation

4. CONCLUSION

This community service activity successfully improved knowledge, confidence, and behavior related to exclusive breastfeeding among working mothers. The combination of education, discussion, and mentoring proved effective in addressing knowledge gaps and fatigue-related barriers.

The program not only enhanced cognitive understanding but also promoted positive behavioural changes. However, sustainable success requires continued support from families and workplace policies that are friendly to breastfeeding mothers.

Future programs should be expanded and implemented continuously to reach a wider population of working mothers..

REFERENCES

- Kementerian Kesehatan RI (2022) *Profil Kesehatan Indonesia 2022*. Edited by F. Sibuea. Jakarta: Kementerian Kesehatan Republik Indonesia.
- Kumala, C.M. *et al.* (2025) *Promosi Kesehatan dan Ilmu Perilaku*. I. Edited by M.S. Sari. Padang: AKIOPEDIA PRESS.
- Lokko, C. *et al.* (2025) ‘Factors associated with exclusive breastfeeding among infants of working mothers in Ghana : a secondary analysis of the 2022 demographic and health survey’, *BMC Public Health*, 25:, p. 25:4132.
- Miranti, I.P., Indriyani, N.N. and Sari, S.K. (2025) ‘Nutrition Education on Nutrient Content, Bioactive Compounds, and Breast Milk Storage Techniques as well as Complementary Feeding for Child Health’, *Jurnal ABDIMAS Indonesia*, 3, pp. 40–48.
- North, K. *et al.* (2022) ‘Breastfeeding in a Global Context : Epidemiology, Impact, and Future Directions’, *Clinical Therapeutics*, 44(2), pp. 228–244. Available at: <https://doi.org/10.1016/j.clinthera.2021.11.017>.
- Nurjanah, S. *et al.* (2023) ‘Predictors of breastfeeding duration on mothers who return to work: a systematic review’, *Journal of Public Health in Africa*, 14. Available at: <https://doi.org/10.4081/jphia.2023.2569>.
- Pramono, A.Y. *et al.* (2021) ‘Case Report The Social Value of Implementing the Ten Steps to Successful Breastfeeding in an Indonesian Hospital : A Case Study’, *Yale Journal of Biology and Medicine*, 94, pp. 429–458.
- Putri, D.A., Anissa, K. and Sari, L.Y. (2025) ‘Hubungan Pengetahuan Ibu Dengan Pemberian Asi Eksklusif Di Rs Ibu Dan Anak Dwi Sari Lubuklinggau Tahun 2024 Relationship Between Mother ’ s Knowledge And Exclusive Breastfeeding In Infants Of 6-12 Months In Rs Ibu Dan Anak Dwi Sari Lubuklinggau Year 2024’, *Jurnal Kesehatan Mitra Sekawan*, 1(2), pp. 71–76.
- Rajak, P. *et al.* (2023) ‘Knowledge of Breastfeeding Practices Among Mothers Attending a Tertiary

Care Setting in East India', *Cureus*, 15(4), pp. 1–12. Available at: <https://doi.org/10.7759/cureus.37146>.

Tang, X. *et al.* (2020) 'Workplace programmes for supporting breast-feeding : a systematic review and meta-analysis', *Public Health Nutrition*., 24(6), pp. 1501–1513. Available at: <https://doi.org/10.1017/S1368980020004012>.

Ulya, R.A., Pradanie, R. and Nastiti, A.A. (2020) 'Effect of Workload and Breastfeeding Motivation of Working Mothers', *Indian Journal of Forensic Medicine & Toxicology*, 14(2), pp. 1858–1865.

Victora, C.G. *et al.* (2008) 'Maternal and Child Undernutrition 2 Maternal and child undernutrition : consequences for adult health and human capital', *Lancet*, 371, pp. 340–357. Available at: [https://doi.org/10.1016/S0140-6736\(07\)61692-4](https://doi.org/10.1016/S0140-6736(07)61692-4).

WHO (2011) *Infant and Young Child Feeding*. New York.