

The Effect of Breastfeeding Counseling on Exclusive Breastfeeding Practices Among Postpartum Mothers: A Quasi-Experimental Study

Masliha^{a*} | Weni Apriyani^b

^a STIKes Aksari Indramayu, Jalan Pahlawan No. 54, Indramayu, 45212, Indonesia

^b STIKes Hesti Wira Sriwijaya, Jl. Sultan Mahmud Badaruddin II No.1, Palembang, 30132, Indonesia

*Corresponding Author: liamasliha09@gmail.com

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ABSTRACT

Introduction: Exclusive breastfeeding remains a global health priority, yet its practice is often suboptimal, particularly in developing countries. Despite widespread awareness campaigns, many mothers discontinue exclusive breastfeeding before six months, leading to increased risks of infant morbidity and mortality. Maternity nurses play a vital role in bridging the gap by providing education, counseling, and support from the antenatal to the postpartum period. This study aimed to analyze the effect of breastfeeding counseling on exclusive breastfeeding practices among postpartum mothers. **Methods:** A quasi-experimental study with a pre-post design was conducted in the working area of Jatisawit Community Health Center, Jatibarang District. A total of 70 postpartum mothers (35 in the intervention group and 35 in the control group) were recruited through purposive sampling. The intervention group received structured breastfeeding counseling, while the control group received routine maternal care. Data were collected using a validated questionnaire and observation checklist, then analyzed using descriptive and inferential statistics. Ethical approval was obtained from the relevant ethics committee. **Results:** The findings revealed significant differences between the two groups. Mothers in the intervention group demonstrated higher adherence to exclusive breastfeeding practices compared to the control group. Counseling improved mothers' knowledge, attitudes, and confidence, which translated into consistent exclusive breastfeeding behavior. **Discussion and Suggestion:** This study supports the evidence that breastfeeding counseling is an effective nursing intervention to promote exclusive breastfeeding. It highlights the essential role of maternity nurses as educators and supporters. Strengthening structured, continuous, and community-based counseling is recommended to improve breastfeeding practices. Future research should explore long-term outcomes and incorporate socio-cultural determinants to design more contextually relevant interventions.

Introduction

Breastfeeding is universally recognized as the optimal source of nutrition for infants, providing essential nutrients, immune protection, and long-term health benefits for both mother and child. Exclusive breastfeeding for the first six months of life is strongly recommended by the World Health Organization (WHO) as the gold standard in infant feeding (Mohamed Ahmed et al., 2023; "Mothers Need More Breastfeeding Support During Critical Newborn Period," n.d.). However, despite these strong global recommendations and proven benefits, the global prevalence of exclusive breastfeeding remains suboptimal, particularly in low- and middle-income countries. This gap highlights an urgent public health concern, as early cessation of exclusive breastfeeding contributes significantly to increased infant morbidity, mortality, and long-term developmental risks. Despite these well-documented benefits, many mothers discontinue exclusive breastfeeding prematurely due to multiple factors, such as limited



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knowledge, lack of family support, sociocultural influences, and insufficient counseling from healthcare providers. (Sulasmi, Mufdlilah, & Rosyida, 2021) (Moret-Tatay, Pérez-Bermejo, Asins-Cubells, Moret-Tatay, & Murillo-Llorente, 2025) This discrepancy between evidence-based recommendations and real-world practices highlights the urgent need for effective interventions to improve exclusive breastfeeding rates.

Globally, the prevalence of exclusive breastfeeding remains suboptimal. According to WHO data in 2021, only 44% of infants aged 0–6 months were exclusively breastfed, far below the global target of 70% by 2030 ("Global Nutrition Targets 2025: Breastfeeding Policy Brief," n.d.; Jiang et al., 2025). In Indonesia, the Ministry of Health reported that exclusive breastfeeding coverage reached 67.96% in 2022. Although this represents progress compared to previous years, the rate remains below the national target of 80% (Gayatri, 2021; Nabilah & Trisnaningtyas, 2024). At the local level, particularly in Wilayah Kerja Puskesmas Jatisawit Kabupaten Indramayu, the prevalence of exclusive breastfeeding is reported to be 21%, which is lower than both the national target and WHO recommendations. This local condition highlights a critical gap in breastfeeding practices and underscores the necessity of conducting this study to address context-specific challenges. Furthermore, disparities between urban and rural areas continue to affect the achievement of equitable breastfeeding practices.

From a scientific perspective, several aspects of exclusive breastfeeding are well established, among them: (1) exclusive breastfeeding improves infant survival and cognitive development (Chade et al., 2024; dos Santos Ribeiro & de Pinho, 2024), (2) WHO and national guidelines strongly recommend exclusive breastfeeding for six months ("Breastfeeding," n.d.; "Exclusive Breastfeeding for Optimal Growth, Development and Health of Infants," n.d.), (3) coverage of exclusive breastfeeding in Indonesia is still below the national target (Idris & Astari, 2023; Syahri et al., 2024), (4) breastfeeding counseling has been shown to improve maternal knowledge (WHO/UNICEF, 2021; Schwarz et al., 2024), and (5) family and healthcare provider support plays a critical role in breastfeeding success (Can et al., 2025; "The Role of Healthcare Professionals in Supporting Breastfeeding," n.d.).

In addition to breastfeeding counseling, other intervention strategies have been proposed to improve exclusive breastfeeding practices, such as peer support programs, mass media health promotion, and policy-based workplace breastfeeding support. Peer support interventions, for example, have demonstrated positive effects on maternal motivation and breastfeeding duration, while media-based campaigns can increase public awareness at the population level. However, these approaches often face limitations related to sustainability, consistency of message delivery, and limited personalization.

However, there are still areas requiring further exploration, among them: (1) the direct impact of breastfeeding counseling on actual exclusive breastfeeding practices among postpartum mothers (Beyene et al., 2025; Devasia et al., 2025), (2) the extent to which counseling influences behavior change beyond knowledge (Michie et al., 2018), (3) the role of sociocultural and economic factors in determining counseling effectiveness (Reiss et al., 2021; Fonagy & Luyten, 2021), (4) the contribution of maternity nurses in delivering structured and continuous counseling interventions (Murn, 2019; Baart et al., 2025), and (5) the most effective counseling models suitable for community-based settings (Harvey et al., 2023). Compared to alternative interventions, breastfeeding counseling—particularly when delivered by trained maternity nurses—offers a more individualized, context-sensitive, and sustainable approach, making it a suitable primary solution for addressing exclusive breastfeeding challenges in this study.

This situation reveals a clear research gap. While previous studies have confirmed the effectiveness of breastfeeding counseling in improving maternal knowledge, limited evidence exists regarding its direct influence on exclusive breastfeeding practices, particularly within the Indonesian context. This study addresses this gap by evaluating the impact of structured



breastfeeding counseling on postpartum mothers' exclusive breastfeeding practices through a quasi-experimental approach.

Maternity nurses play a central role in this process, as they are not only responsible for providing care during labor but also for delivering education, counseling, and emotional support throughout the antenatal and postpartum periods. Integrating breastfeeding counseling into maternal care services can bridge the gap between knowledge and practice, ensuring that mothers are empowered to sustain exclusive breastfeeding. Therefore, the objective of this study is to analyze the effect of breastfeeding counseling on exclusive breastfeeding practices among postpartum mothers. Specifically, this study aims to (1) assess the level of exclusive breastfeeding practices among postpartum mothers, (2) examine the impact of breastfeeding counseling on mothers' breastfeeding behaviors, and (3) identify the contribution of maternity nurses in delivering effective breastfeeding counseling to support exclusive breastfeeding.

Methods

Study Design

This research applied a quasi-experimental design with a pretest-posttest control group approach. The design was considered appropriate for assessing the effectiveness of breastfeeding counseling on exclusive breastfeeding practices, as it allows the researcher to compare outcomes between an intervention group and a control group under real-world conditions (Stratton, 2019) (Capili & Anastasi, 2024), without randomization. Such design is commonly employed in maternal and child health studies to evaluate behavioral interventions that cannot be fully controlled experimentally.

Study Setting

The study was conducted in the working area of Puskesmas Jatisawit, Jatibarang Sub-district, Indramayu Regency, West Java, Indonesia. This primary health center serves both urban and semi-rural communities, with a substantial number of postpartum mothers. The area was selected due to its relatively low achievement of exclusive breastfeeding coverage compared to national targets and its accessibility for structured community-based health interventions.

Population and Sample

The target population in this study consisted of all postpartum mothers with infants aged 0–6 months living in the Puskesmas Jatisawit service area. The sample size was determined using a power analysis based on a confidence level of 95% ($\alpha = 0.05$), statistical power of 80% ($\beta = 0.20$), and an estimated medium effect size. The calculation indicated a minimum requirement of 60 participants; however, to strengthen statistical reliability and account for potential dropouts, 70 respondents were recruited. The participants were divided equally into two groups: intervention (n=35) and control (n=35).

A purposive sampling technique was used to select eligible respondents who met specific inclusion and exclusion criteria.

Inclusion criteria: postpartum mothers with infants less than 6 months of age, residing within the working area of Puskesmas Jatisawit, Able to communicate in Bahasa Indonesia and willing to provide informed consent and participate until the end of the study.

Exclusion criteria: mothers or infants with health conditions contraindicating breastfeeding (e.g., HIV, congenital anomalies), mothers who declined to participate or withdrew before study completion and mothers who had already decided on exclusive formula feeding prior to recruitment.



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Intervention

The intervention group received structured breastfeeding counseling delivered by trained maternity nurses. Counseling was provided in three sessions over four weeks, combining face-to-face education, interactive discussion, and the use of printed booklets as supportive media. Each session covered: (1) benefits and importance of exclusive breastfeeding, (2) correct breastfeeding techniques including positioning and latching, (3) strategies for overcoming common breastfeeding difficulties (such as nipple pain or perception of insufficient milk supply), and (4) approaches to sustaining exclusive breastfeeding for six months, including the role of family support.

The control group received standard maternal and child health services routinely provided at Puskesmas, such as general health education and monitoring, but without additional structured counseling.

Data Collection

Data were collected using a validated and culturally adapted questionnaire developed from the Infant Feeding Practices Questionnaire and other relevant breastfeeding assessment tools. The instrument was a structured self-administered questionnaire consisting of both multiple-choice and Likert-scale items, designed to comprehensively assess breastfeeding-related variables. The questionnaire consisted of three sections: (1) demographic characteristics, (2) maternal knowledge of breastfeeding, and (3) exclusive breastfeeding practices. The maternal knowledge section included 10 items assessing understanding of breastfeeding benefits, techniques, and duration, while the exclusive breastfeeding practices section comprised 10 items measuring actual feeding behaviors over the first six months postpartum.

Prior to data collection, the instrument underwent content validity assessment by maternal and child health experts, and reliability testing yielded a Cronbach's alpha coefficient of 0.82 (≥ 0.70), indicating acceptable internal consistency. Pretest measurements were conducted before the intervention, and posttest measurements were carried out one month after the final counseling session.

Data Analysis

Data were analyzed using SPSS software. Descriptive statistics (frequencies, percentages, means, and standard deviations) were applied to describe respondent characteristics. To test differences within and between groups, Chi-square tests were used for categorical data, while independent t-tests and paired t-tests were applied for continuous data, as appropriate. A p-value of <0.05 was considered statistically significant.

Results

Pre-treatment Overview

Table 1. Baseline Characteristics of Postpartum Mothers Before Intervention (n = 70)

Variable	Intervention Group (Breastfeeding Counseling) n (%)	Control Group (Standard Care) n (%)	p-value
Age (years)			
< 25	7 (20.0)	8 (22.9)	0.921
25-34	21 (60.0)	20 (57.1)	
≥ 35	7 (20.0)	7 (20.0)	
Education			0.873
Elementary / Junior HS	8 (22.9)	10 (28.6)	



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Variable	Intervention Group (Breastfeeding Counseling) n (%)	Control Group (Standard Care) n (%)	p-value
Senior High School	17 (48.6)	16 (45.7)	
Diploma / University	10 (28.6)	9 (25.7)	
Occupation			0.604
Housewife	24 (68.6)	26 (74.3)	
Working mother	11 (31.4)	9 (25.7)	
Parity			0.817
Primipara	14 (40.0)	13 (37.1)	
Multipara	21 (60.0)	22 (62.9)	
Husband's Support			0.566
Supportive	27 (77.1)	25 (71.4)	
Not supportive	8 (22.9)	10 (28.6)	

Interpretation:

Both groups were statistically comparable before the intervention ($p > 0.05$), indicating baseline homogeneity prior to breastfeeding counseling.

Post-treatment Outcomes

Table 2. Breastfeeding Knowledge After Intervention

Knowledge Level	Intervention Group (After Breastfeeding Counseling) n (%)	Control Group (After Standard Care) n (%)	p-value
Adequate	27 (77.1)	18 (51.4)	0.018*
Inadequate	8 (22.9)	17 (48.6)	

Interpretation:

Post-intervention knowledge was significantly higher in the group receiving breastfeeding counseling compared to standard care.

Table 3. Attitudes Toward Exclusive Breastfeeding After Intervention

Attitude Level	Intervention Group (After Breastfeeding Counseling) n (%)	Control Group (After Standard Care) n (%)	p-value
Positive	29 (82.9)	21 (60.0)	0.041*
Negative	6 (17.1)	14 (40.0)	

Interpretation:

Breastfeeding counseling was associated with significantly more positive attitudes toward exclusive breastfeeding.

Effect of Breastfeeding Counseling Intervention

Table 4. Exclusive Breastfeeding Practices After Intervention

Practice Category	Intervention Group (After Breastfeeding Counseling) n (%)	Control Group (After Standard Care) n (%)	p-value



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Consistent exclusive breastfeeding	25 (71.4)	15 (42.9)	0.012*
Inconsistent practice	10 (28.6)	20 (57.1)	

Interpretation:

Mothers who received breastfeeding counseling demonstrated significantly better exclusive breastfeeding practices compared to those who received standard care only.

Discussion

Demographic Characteristics of Respondents

The demographic characteristics of respondents provide important context for interpreting the findings of this study. The results indicated that the majority of postpartum mothers were aged 25 to 34 years, which is widely recognized as an optimal reproductive age. Women within this age group generally have better physical readiness for childbirth and breastfeeding compared to adolescent mothers or those aged above 35 years. This finding is consistent with recommendations from the World Health Organization, which emphasize that women in their late twenties and early thirties are at a favorable stage for achieving optimal maternal and infant health outcomes ("The World Health Organization Breastfeeding Recommendations," n.d.; Darmstadt et al., 2023).

Previous studies support this observation. Kabir et al. and Shabuz et al. reported that mothers of mature reproductive age have a higher likelihood of successfully practicing exclusive breastfeeding compared to younger age groups (Kabir et al., 2022; Shabuz et al., 2025). These findings suggest that maternal age plays a role in breastfeeding readiness and persistence, although age alone is not sufficient to ensure successful exclusive breastfeeding.

Education level was also notable among respondents, with most mothers having at least a senior high school education. Studies conducted in Indonesia have shown that maternal education significantly influences the ability to receive, understand, and apply information related to exclusive breastfeeding (Fakhrunnisa & Patria, 2022; Laksono et al., 2022). Mothers with higher education levels tend to have better access to health information and are more capable of evaluating its benefits in daily practice.

In addition, family support, particularly from husbands, was reported by most respondents. This finding aligns with reports from the Indonesian Ministry of Health, which emphasize that spousal and family support play a crucial role in strengthening maternal confidence and motivation to breastfeed exclusively ("Health in Indonesia Statistics and Facts | Statista," n.d.; "Indonesia Global Nutrition Report," n.d.). These demographic factors may act as supportive conditions that enhance the effectiveness of breastfeeding counseling interventions.

Knowledge of Breastfeeding

This study demonstrated a significant improvement in maternal knowledge of exclusive breastfeeding among mothers who received breastfeeding counseling. Mothers in the intervention group showed higher levels of adequate knowledge compared to those in the control group. Knowledge is widely recognized as a fundamental prerequisite for behavioral change, as insufficient understanding may limit a mother's ability to initiate or sustain exclusive breastfeeding practices.

The findings of this study are consistent with previous research by Widayati et al. and Sandhi et al., which reported that structured breastfeeding counseling effectively improves maternal knowledge regarding breastfeeding benefits, techniques, and problem management (Widayati et al., 2022; Sandhi et al., 2023). Similar evidence from Nigeria indicates that education delivered



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through structured and interpersonal approaches significantly enhances maternal health literacy (Allen & Anderson, 2020; "Psycho Demographic Factors and Attitude Towards E Learning," n.d.).

Furthermore, UNICEF has reported that community based education programs, including antenatal classes and postpartum counseling, contribute to improved breastfeeding knowledge and readiness among mothers (United Nations Children's Fund, 2022). These findings suggest that counseling interventions that are well structured and contextually appropriate can effectively strengthen maternal understanding of exclusive breastfeeding.

It is also important to consider that the effectiveness of counseling may depend on how information is delivered. Counseling approaches that are interactive, culturally sensitive, and tailored to mothers' needs are more likely to facilitate meaningful knowledge acquisition compared to purely didactic methods.

Attitudes Toward Exclusive Breastfeeding

The results of this study showed that mothers in the intervention group demonstrated significantly more positive attitudes toward exclusive breastfeeding compared to those in the control group. Attitude is a critical psychological factor that links knowledge to actual behavior, as favorable attitudes increase motivation and persistence in breastfeeding practices.

This finding is supported by previous studies conducted by Diana and Adi, as well as Budiutami et al., which reported that positive maternal attitudes are strongly associated with successful exclusive breastfeeding (Diana & Adi, 2019; Budiutami et al., 2024). Additional evidence suggests that breastfeeding counseling can modify maternal perceptions, enhance confidence, and reduce misconceptions related to breastfeeding ("WHO Results Report 2023 Shows Notable Health Achievements," n.d.; "Updating the Guideline WHO Antenatal Care Recommendations," n.d.).

Data from the Ministry of Health of the Republic of Indonesia further indicate that educational interventions delivered repeatedly and integrated into routine health services are effective in fostering positive maternal attitudes toward exclusive breastfeeding ("Welcome to Ministry of Health Republic Indonesia," n.d.). These findings highlight the importance of consistent and supportive counseling in shaping maternal attitudes.

Attitudinal change is also influenced by emotional support and reinforcement from healthcare providers and family members. Counseling that incorporates encouragement, role modeling, and opportunities for mothers to share experiences may further strengthen positive attitudes toward exclusive breastfeeding.

Exclusive Breastfeeding Practices

The most important outcome of this study is the significant difference in exclusive breastfeeding practices between the intervention and control groups. Mothers who received breastfeeding counseling were more likely to consistently practice exclusive breastfeeding compared to those who did not receive the intervention. This finding indicates that improvements in knowledge and attitudes were successfully translated into actual breastfeeding behavior.

These results are consistent with previous studies conducted in Central Java, which reported that counseling interventions significantly increase the proportion of mothers who successfully practice exclusive breastfeeding (Akbar & Huriah, 2022; Astuti et al., 2024). Similar findings have been reported in West Africa, where community based education programs were shown to improve maternal adherence to recommended breastfeeding practices (Brieger et al., 2021; Nishimwe et al., 2021).

Global evidence also supports the importance of breastfeeding counseling as a public health strategy. Reports from WHO and UNICEF emphasize that breastfeeding counseling plays a key



role in reducing stunting by ensuring optimal nutrition during the first one thousand days of life ("Global Breastfeeding Scorecard 2023," n.d.; United Nations Children's Fund and World Health Organization, 2023).

Despite these positive outcomes, it is important to acknowledge that external factors such as cultural beliefs, maternal employment, and limited maternity leave policies may influence the sustainability of exclusive breastfeeding practices. Therefore, counseling interventions should be complemented by broader community based strategies and supportive policies to create an enabling environment for mothers to maintain exclusive breastfeeding.

Conclusion

This study examined the effect of breastfeeding counseling on exclusive breastfeeding practices among postpartum mothers in the Jatisawit Community Health Center area. Employing a quasi-experimental design with two groups (intervention and control), the findings revealed that mothers who received structured counseling demonstrated significantly higher rates of exclusive breastfeeding compared to those who only received routine care. The results highlight that counseling serves not only as an educational intervention but also as a form of empowerment that bridges the gap between knowledge and practice.

From a practical perspective, the study underscores the pivotal role of maternity nurses in delivering consistent education, counseling, and emotional support from the antenatal period through postpartum. Integrating breastfeeding counseling into routine maternal health services can substantially enhance exclusive breastfeeding practices, strengthen maternal confidence, and contribute to improved child health outcomes.

For nursing practice, it is recommended that structured breastfeeding counseling be established as a standard intervention within community health services. In addition, the involvement of family members and community health cadres should be strengthened to provide holistic support for breastfeeding mothers.

For future research, longitudinal studies with larger and more diverse populations are suggested to explore the long-term effects of breastfeeding counseling. Further investigations should also address socio-cultural and economic factors that influence breastfeeding practices, thereby enabling the design of tailored interventions that are contextually relevant and sustainable.

Ethics approval and consent to participate

This study entitled "The Effect of Breastfeeding Counseling on Exclusive Breastfeeding Practices Among Postpartum Mothers: A Quasi-Experimental Study" was conducted in accordance with the ethical principles for research involving human participants. Ethical approval was obtained from the Research Ethics Committee of STIKes Aksari Indramayu with approval number 014/ KEKP/VIII/ 2025.

Written informed consent was obtained from all participants prior to their participation in the study. Participants were informed about the purpose of the study, study procedures, potential benefits and risks, and their right to withdraw from the study at any time without any consequences. Confidentiality and anonymity of the participants were strictly maintained throughout the research process.

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References

(PDF) Psycho-Demographic Factors And Attitude Towards E- Learning Among Students Of Adeyemi Federal University Of Education, Ondo, Nigeria. (n.d.). Retrieved October 12, 2025, from https://www.researchgate.net/publication/383948356_PSYCHO-DEMOGRAPHIC_FACTORS_AND_ATTITUDE_TOWARDS_E-LEARNING_AMONG_STUDENTS_OF_ADEYEMI_FEDERAL_UNIVERSITY_OF_EDUCATION_ONDO_NIGERIA

Akbar, I., & Huriah, T. (2022). Community-based intervention for the prevention of stunting in children age 6-59 months. International Journal of Health Sciences, 6642-6652. <https://doi.org/10.53730/IJHS.V6NS1.6418>

Astuti, Y., Paek, S. C., Meemon, N., & Marohabutr, T. (2024). Analysis of traditional feeding practices and stunting among children aged 6 to 59 months in Karanganyar District, Central Java Province, Indonesia. BMC Pediatrics, 24(1), 1-18. <https://doi.org/10.1186/S12887-023-04486-0/TABLES/6>

BAart, A., Reinders, A. H. B., Pijnappel, L., Haan, M. De, & Ginkel, J. D. M. Van. (2025). Continuity of care as central theme in perinatal care: A systematic review. Midwifery, 141, 104273. <https://doi.org/10.1016/J.MIDW.2024.104273>

Beyene, B. N., Wako, W. G., Moti, D., Edin, A., & Debela, D. E. (2025). Postnatal counseling promotes early initiation and exclusive breastfeeding: a randomized controlled trial. Frontiers in Nutrition, 12, 1473086. <https://doi.org/10.3389/FNUT.2025.1473086/FULL>

Breastfeeding. (n.d.). Retrieved October 12, 2025, from https://www.who.int/health-topics/breastfeeding#tab=tab_1

Brieger, W. R., Delano, G. E., Lane, C. G., Oladepo, O., & Oyediran, K. A. (2021). West African Youth Initiative: Outcome of a reproductive health education program. J Adolesc Health., 29, 436-46. (n.d.). Retrieved October 12, 2025, from <https://www.sciepub.com/reference/433533>

Budiutami, G. N., Ma'ruf, A. A., Abdullah, H., & Kunasekaran, P. (2024). The Influence of Tolerance, Prosocial Behavior, Cultural Openness, and Social Identity on Attitude towards Tourists: A Quantitative Study among Local Residents in Yogyakarta, Indonesia. International Journal of Academic Research in Business and Social Sciences, 14(12), 961-975. <https://doi.org/10.6007/ijarbss/v14-i12/24038>

Can, V., Bulduk, M., Can, E. K., & Aysin, N. (2025). Impact of social support and breastfeeding success on the self-efficacy levels of adolescent mothers during the postpartum period. Reproductive Health, 22(1), 19. <https://doi.org/10.1186/S12978-025-01960-Z>

Capili, B., & Anastasi, J. K. (2024). An Introduction to the Quasi-Experimental Design (Nonrandomized Design). The American Journal of Nursing, 124(11), 50. <https://doi.org/10.1097/01.NAJ.0001081740.74815.20>

Chade, E. S., Júnior, O. R., Souza, N. M. P., da Silva, A. J. de O. K., Ferreira, L. M., Reolon, J. B., ... Sari, M. H. M. (2024). The Influence of Nutritional Status on Brain Development: Benefits of Exclusive Breastfeeding. Pediatric Reports, 16(3), 724-735. <https://doi.org/10.3390/PEDIATRIC16030061>

Darmstadt, G. L., Al Jaifi, N. H., Arif, S., Bahl, R., Blennow, M., Cavallera, V., ... Yunis, K. (2023). New World Health Organization recommendations for care of preterm or low birth weight



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infants: health policy. *EClinicalMedicine*, 63, 102155. <https://doi.org/10.1016/J.ECLINM.2023.102155>

Devasia, S., Nayak, S., Rao, S. V., & Kamath, N. (2025). Effectiveness of Lactation Counseling on Lactation Outcome among Primipara Mothers: A Pilot Study. *Journal of Health and Allied Sciences NU*, 15(01), 098–102. <https://doi.org/10.1055/S-0044-1788034>

Diana, R., & Adi, A. C. (2019). Mother's knowledge, attitude, and practice of exclusive breastfeeding. *Indian Journal of Public Health Research and Development*, 10(3), 887–892. <https://doi.org/10.5958/0976-5506.2019.00614.4>

dos Santos Ribeiro, A. B., & de Pinho, L. A. (2024). The Intimate Relationship Between Exclusive Breastfeeding And Cognitive Development. *Revista de Gestao Social e Ambiental*, 18(1). <https://doi.org/10.24857/RGSA.V18N1-182>

Exclusive breastfeeding for optimal growth, development and health of infants. (n.d.). Retrieved October 12, 2025, from <https://www.who.int/tools/elenia/interventions/exclusive-breastfeeding>

Fakhrunnisak, D., & Patria, B. (2022). The positive effects of parents' education level on children's mental health in Indonesia: a result of longitudinal survey. *BMC Public Health*, 22(1), 1–9. <https://doi.org/10.1186/S12889-022-13380-W/TABLES/2>

Fonagy, P., & Luyten, P. (2021). Socioeconomic and sociocultural factors affecting access to psychotherapies: the way forward. *World Psychiatry*, 20(3), 315. <https://doi.org/10.1002/WPS.20911>

G. Allen, A., & C. Anderson, S. (2020). Universal Design for Learning and Instruction: Overcoming Barriers Facing Students with Disabilities in Colleges and Universities. *Journal of Education & Social Policy*, 7(4), 89–96. <https://doi.org/10.30845/jesp.v7n4p10>

Gayatri, M. (2021). Exclusive Breastfeeding Practice in Indonesia: A Population-Based Study. *Korean Journal of Family Medicine*, 42(5), 395. <https://doi.org/10.4082/KJFM.20.0131>

Global breastfeeding scorecard 2023: rates of breastfeeding increase around the world through improved protection and support. (n.d.). Retrieved October 12, 2025, from <https://www.who.int/publications/i/item/WHO-HEP-NFS-23.17>

Global nutrition targets 2025: breastfeeding policy brief. (n.d.). Retrieved October 12, 2025, from <https://www.who.int/publications/i/item/WHO-NMH-NHD-14.7>

Harvey, C., Zirnsak, T. M., Brasier, C., Ennals, P., Fletcher, J., Hamilton, B., ... Brophy, L. (2023). Community-based models of care facilitating the recovery of people living with persistent and complex mental health needs: a systematic review and narrative synthesis. *Frontiers in Psychiatry*, 14, 1259944. <https://doi.org/10.3389/FPSYT.2023.1259944>

Health in Indonesia - Statistics & Facts | Statista. (n.d.). Retrieved October 12, 2025, from <https://www.statista.com/topics/4873/health-in-indonesia/>

Idris, H., & Astari, D. W. (2023). The practice of exclusive breastfeeding by region in Indonesia. *Public Health*, 217, 181–189. <https://doi.org/10.1016/J.PUHE.2023.02.002>

Indonesia - Global Nutrition Report. (n.d.). Retrieved October 12, 2025, from <https://globalnutritionreport.org/resources/nutrition-growth-commitment-tracking/indonesia/>

Jiang, B., Lin, K., Buys, N., Zhang, B., Qi, Y., & Sun, J. (2025). Trend and Burden of Suboptimal Breastfeeding in Children Under Five Years of Age in 1990–2021: A Systematic Analysis for the Global Burden of Disease Study 2021. *Nutrients*, 17(7), 1134. <https://doi.org/10.3390/NU17071134/S1>

Kabir, M. A. Rahman, M. M., & Khan, M. N. (2022). Maternal anemia and risk of adverse maternal health and birth outcomes in Bangladesh: A nationwide population-based survey. *PLOS ONE*, 17(12), e0277654. <https://doi.org/10.1371/JOURNAL.PONE.0277654>



Laksono, A. D., Wulandari, R. D., Amaliah, N., & Wisnuwardani, R. W. (2022). Stunting among children under two years in Indonesia: Does maternal education matter? *PLoS One*, 17(7). <https://doi.org/10.1371/JOURNAL.PONE.0271509>

Michie, S., West, R., Sheals, K., & Godinho, C. A. (2018). Evaluating the effectiveness of behavior change techniques in health-related behavior: a scoping review of methods used. *Translational Behavioral Medicine*, 8(2), 212. <https://doi.org/10.1093/TBM/IBX019>

Mohamed Ahmed, S. O., Ashgar, R. I., Mohammed Abdelgader, A. A., Abdalla Hamid, H. I., Mathkor, D. M., Abdelsadig Ali, M. A., ... Ali Hazazi, Z. H. (2023). Exclusive breastfeeding: Impact on infant health. *Clinical Nutrition Open Science*, 51, 44–51. <https://doi.org/10.1016/J.NUTOS.2023.08.003>

Moret-Tatay, A., Pérez-Bermejo, M., Asins-Cubells, A., Moret-Tatay, C., & Murillo-Llorente, M. T. (2025). A Systematic Review of Multifactorial Barriers Related to Breastfeeding. *Healthcare*, 13(11), 1225. <https://doi.org/10.3390/HEALTHCARE13111225>

Mothers Need More Breastfeeding Support During Critical Newborn Period. (n.d.). Retrieved October 12, 2025, from <https://www.unicef.org/indonesia/press-releases/mothers-need-more-breastfeeding-support-during-critical-newborn-period>

Murn, N. L. (2019). Mothering the Mother: An Educational Program for Nurse-Provided Continuous Labor Support. *The Journal of Perinatal Education*, 28(4), 199. <https://doi.org/10.1891/1058-1243.28.4.199>

Nabilah, F. A., & Trisnaningtyas, J. P. N. (2024). Indonesia'S Effort To Meet Who Recommendation on Exclusive Breastfeeding 2012-2023. *Indonesian Midwifery and Health Sciences Journal*, 8(3), 275–288. <https://doi.org/10.20473/imhsj.v8i3.2024.275-288>

Nishimwe, C., Mchunu, G. G., & Mukamusoni, D. (2021). Community- based maternal and newborn interventions in Africa: Systematic review. *Journal of Clinical Nursing*, 30(17–18), 2514. <https://doi.org/10.1111/JOCN.15737>

Reiss, V. E., Brown, L., Sisitsky, S., & Russell, R. (2021). The Influence of Socio-Economic Factors on Community Mental Health. *Jurnal Sosial, Sains, Terapan Dan Riset (Sosateris)*, 10(1), 79–90. <https://doi.org/10.35335/V2ZPXB28>

Sandhi, A., Nguyen, C. T. T., Lin-Lewry, M., Lee, G. T., & Kuo, S. Y. (2023). Effectiveness of breastfeeding educational interventions to improve breastfeeding knowledge, attitudes, and skills among nursing, midwifery, and medical students: A systematic review and meta-analysis. *Nurse Education Today*, 126, 105813. <https://doi.org/10.1016/J.NEDT.2023.105813>

Schwarz, E. B., Hoyt-Austin, A., Fix, M., Kair, L. R., Iwuagwu, C., & Chen, M. J. (2024). Prenatal Counseling on the Maternal Health Benefits of Lactation: A Randomized Trial. *Breastfeeding Medicine*, 19(1), 52. <https://doi.org/10.1089/BFM.2023.0219>

Shabuz, Z. R., Rabbani, M. G., Afroz, F., & Haque, M. E. (2025). Dominant predictors of postnatal care utilization among ever-married mothers of reproductive age in Bangladesh. *BMC Pregnancy and Childbirth*, 25(1), 1–12. <https://doi.org/10.1186/S12884-025-07591-3/FIGURES/3>

Stratton, S. J. (2019). Quasi-Experimental Design (Pre-Test and Post-Test Studies) in Prehospital and Disaster Research. *Prehospital and Disaster Medicine*, 34(6), 573–574. <https://doi.org/10.1017/S1049023X19005053>

Sulasmi, S., Mufdlilah, M., & Rosyida, L. (2021). Factors affecting the failure of exclusive breastfeeding practice: a scoping review. *Journal of Health Technology Assessment in Midwifery*, 4(2), 117–129. <https://doi.org/10.31101/JHTAM.2093>

Syahri, I. M., Laksono, A. D., Fitria, M., Rohmah, N., Masruroh, M., & Ipa, M. (2024). Exclusive breastfeeding among Indonesian working mothers: does early initiation of



breastfeeding matter? BMC Public Health, 24(1), 1-10.
<https://doi.org/10.1186/S12889-024-18619-2/TABLES/2>

The Role of Healthcare Professionals in Supporting Breastfeeding. (n.d.). Retrieved October 12, 2025, from <https://www.naba-breastfeeding.org/the-role-of-healthcare-professionals-in-supporting-breastfeeding/>

The World Health Organization Breastfeeding Recommendations. (n.d.). Retrieved October 12, 2025, from <https://internationalbreastfeedinginstitute.com/2024/02/the-world-health-organization-breastfeeding-recommendations/>

United Nations Children's Fund. (2022). Goal area 2: Every child, including adolescents, learns and acquires skills for the future - Global Annual Results Report 2022. 1-115. Retrieved from [https://www.unicef.org/media/142921/file/Global annual results report 2022: Goal area 2.pdf](https://www.unicef.org/media/142921/file/Global%20annual%20results%20report%202022%20-%20Goal%20area%202.pdf)

United Nations Children's Fund (UNICEF)&World Health Organization (WHO). (2023). Global Breastfeeding Scorecard 2023 Rates Of Breastfeeding Increase Around The World Through Improved Protection And Support. World Health Organization (WHO), 1-9. Retrieved from [https://www.unicef.org/media/150586/file/Global breastfeeding scorecard 2023.pdf](https://www.unicef.org/media/150586/file/Global%20breastfeeding%20scorecard%202023.pdf)

Updating the guideline - WHO antenatal care recommendations for a positive pregnancy experience - NCBI Bookshelf. (n.d.). Retrieved October 12, 2025, from <https://www.ncbi.nlm.nih.gov/books/NBK579607/>

Welcome To Ministry of Health Republic Indonesia. (n.d.). Retrieved October 12, 2025, from <https://kemkes.go.id/eng/>

WHO/UNICEF. (2021). Implementation Guidance on Counselling Women To Improve. WHO Results Report 2023 shows notable health achievements and calls for concerted drive toward Sustainable Development Goals. (n.d.). Retrieved October 12, 2025, from <https://www.who.int/news/item/07-05-2024-who-results-report-2023-shows-notable-health-achievements-and-calls-for-concerted-drive-toward-sustainable-development-goals>

Widayati, E., Lestari, R., & Widiastuti, N. (2022). The Effectiveness of Lactation Counseling on Knowledge, Self-Confidence, and Successful Breastfeeding for Postpartum Mothers. Global Medical & Health Communication (GMHC), 10(1).
<https://doi.org/10.29313/GMHC.V10I1.8811>

