

INFORMASI ARTIKEL

Received: December, 10, 2025

Revised: December, 27, 2025

Available online: December, 31, 2025

at : <https://e-jurnal.iphorr.com/index.php/mchc>

Factors Affecting the Perception of Insufficient Breast Milk Among Breastfeeding Mothers

Inez Maria Winny, Marleni*

Bachelor's Degree Program in Midwifery, Citra International Institute of Bangka Belitung

Corresponding author: *Email: wynnez89@gmail.com

Abstract

Background: The coverage of exclusive breastfeeding in Indonesia has not yet reached the national target of 80%, despite a gradual increase over recent years. One of the main barriers to successful exclusive breastfeeding is the Perception of Insufficient Breast Milk (PIM), a psychological condition in which mothers believe that their breast milk production is inadequate to meet their infants' needs.

Purpose: To analyze factors associated with the perception of insufficient breast milk among breastfeeding mothers.

Metdod: This study employed a quantitative analytic design with a cross-sectional approach. A total of 63 breastfeeding mothers who met the inclusion criteria were selected using purposive sampling. Data were collected using a structured questionnaire and analyzed using the Chi-square test with a significance level of $\alpha = 0.05$.

Results: The results showed that 57.1% of respondents experienced the perception of insufficient breast milk. Significant associations were found between maternal knowledge ($p = 0.004$; POR = 4.750), employment status ($p = 0.014$; POR = 0.256), family support ($p = 0.007$; POR = 4.202), and exposure to formula milk ($p = 0.031$; POR = 3.520) with the perception of insufficient breast milk. Support from health workers was not significantly associated with this perception ($p = 0.303$).

Conclusion: Poor maternal knowledge, maternal employment, low family support, and exposure to formula milk contribute to an increased perception of insufficient breast milk. Continuous breastfeeding education, optimal family involvement, and stricter supervision of formula milk promotion are essential to strengthen mothers' confidence in breastfeeding and to improve exclusive breastfeeding achievement.

Keywords: Breastfeeding Mothers; Exclusive Breastfeeding; Family Support; Formula Milk Exposure; Perception of Insufficient Breast Milk.

INTRODUCTION

The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) recommend early initiation of breastfeeding within the first hour after birth and exclusive breastfeeding for the first six months of life, followed by continued breastfeeding with appropriate complementary feeding until two years of age or beyond (World Health Organization, 2023). Exclusive breastfeeding is recognized as a key

intervention for improving infant survival, growth, and development.

Despite its well-established benefits, global exclusive breastfeeding coverage remains suboptimal. In 2020, only 43.8% of infants worldwide received exclusive breastfeeding, increasing modestly to approximately 48% between 2022 and 2024 (World Health Organization, 2023; UNICEF, 2023). These

figures remain below the global target of 50% by 2025. In Indonesia, exclusive breastfeeding coverage has shown a gradual increase from 56.9% in 2021 to 68.1% in 2024; however, this achievement is still far below the national target of 80% set by the Ministry of Health.

At the regional level, exclusive breastfeeding coverage in the Bangka Belitung Islands Province and West Bangka Regency has fluctuated over the past five years. Although improvements were observed in 2023, a decline in 2024 at both district and primary healthcare levels indicates persistent challenges in achieving sustainable exclusive breastfeeding practices, particularly within primary care settings such as the Kelapa Community Health Center.

One of the main barriers to exclusive breastfeeding is the perception of insufficient breast milk (PIM), a psychological condition in which mothers believe that their breast milk supply is inadequate to meet their infants' needs. PIM is frequently reported as a primary reason for early cessation of exclusive breastfeeding, leading mothers to introduce supplementary feeding before six months of age (Prabasiwi, Fikawati, & Syafiq, 2015; Bakkara & Fikawati, 2022).

Previous studies have identified several factors associated with PIM, including inadequate maternal knowledge, maternal employment, limited family support, exposure to formula milk promotion, and suboptimal support from healthcare providers. Mothers with poor breastfeeding knowledge and working mothers are more likely to experience doubts about milk adequacy, while strong family support has been shown to enhance maternal confidence and breastfeeding self-efficacy. Furthermore, exposure to aggressive formula milk promotion may undermine mothers' trust in their ability to breastfeed successfully. Preliminary observations in the working area of Kelapa Community Health Center revealed that many mothers who failed to exclusively breastfeed experienced PIM, influenced by a combination of internal and external factors. Although breastfeeding education and counseling programs have been implemented, exclusive breastfeeding coverage in this area remains below the national target, suggesting

that existing interventions have not fully addressed maternal perceptions of milk insufficiency.

RESEARCH METHOD

This study employed a quantitative analytical design with a cross-sectional approach to examine factors associated with the perception of insufficient breast milk among breastfeeding mothers. The study was conducted in the working area of Kelapa Community Health Center, West Bangka Regency, Indonesia, in 2025. The study population consisted of breastfeeding mothers who had infants born in 2024 and did not practice exclusive breastfeeding.

A total of 63 breastfeeding mothers were included in the study. Participants were selected using purposive sampling based on predefined inclusion criteria, including mothers with infants aged 0–6 months who were willing to participate and able to complete the questionnaire. Data were collected using a structured questionnaire developed by the researchers. The questionnaire assessed the perception of insufficient breast milk as the dependent variable and maternal knowledge, employment status, family support, exposure to formula milk, and healthcare provider support as independent variables. The questionnaire was administered directly to respondents after obtaining informed consent.

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 27. Univariate analysis was performed to describe the frequency and distribution of each variable. Bivariate analysis was conducted using the Chi-square test to determine the association between independent variables and the perception of insufficient breast milk. The level of statistical significance was set at $\alpha = 0.05$. The strength of associations was expressed using Prevalence Odds Ratios (POR) with 95% confidence intervals. This study was conducted in accordance with ethical research principles. Participation was voluntary, and informed consent was obtained from all respondents. Confidentiality and anonymity of participants' data were strictly maintained throughout the research process.

Inez Maria Winny, Marleni*

Bachelor's Degree Program in Midwifery, Citra International Institute of Bangka Belitung
Corresponding author: *Email: wynnez89@gmail.com

RESEARCH RESULTS

Tabel 1. Univariate Distribution of Study Variables among Breastfeeding Mothers (n = 63)

Variable	Results	P-value	POR (95% CI)
Perception of Insufficient Breast Milk (PIM) (n/%)			
Yes	36/57.1		
No	27/42.9		
Maternal Knowledge (n/%)		0.004	4.750 (1.616–13.962)
Poor	32/50.8		
Good	31/49.2		
Employment Status (n/%)		0.014	0.256 (0.084–0.782)
Employed	25/39.7		
Unemployed	38/60.3		
Family Support (n/%)		0.007	4.202 (1.441–12.250)
Yes	31/49.2		
No	32/50.8		
Exposure to Formula Milk (n/%)		0.031	3.520 (1.090–11.371)
Exposed	21/33.3		
Not exposed	42/66.7		
Healthcare Provider Support (n/%)		0.303	0.567 (0.191–1.679)
Yes	19/30.2		
No	44/69.8		

Table 1. show among the 63 breastfeeding mothers included in this study, more than half experienced a perception of insufficient breast milk (PIM). A total of 36 respondents (57.1%) reported PIM, while 27 respondents (42.9%) did not. Slightly more than half of the mothers had poor breastfeeding knowledge (50.8%). Most respondents were unemployed (60.3%) and received support from healthcare providers (69.8%). Family support was almost equally distributed between supportive and non-supportive families, and approximately one-third of mothers reported exposure to formula milk promotion (33.3%).

Bivariate analysis using the Chi-square test showed significant associations between maternal knowledge, employment status, family support, and exposure to

formula milk with the perception of insufficient breast milk ($p < 0.05$). Mothers with poor knowledge were more likely to experience PIM compared to those with good knowledge ($p = 0.004$; POR = 4.750; 95% CI: 1.616–13.962). Employed mothers had a higher likelihood of experiencing PIM than unemployed mothers ($p = 0.014$; POR = 0.256; 95% CI: 0.084–0.782). Lack of family support was also significantly associated with PIM ($p = 0.007$; POR = 4.202; 95% CI: 1.441–12.250). In addition, exposure to formula milk promotion increased the likelihood of PIM ($p = 0.031$; POR = 3.520; 95% CI: 1.090–11.371). In contrast, support from healthcare providers was not significantly associated with PIM ($p = 0.303$).

Inez Maria Winny, Marleni*

Bachelor's Degree Program in Midwifery, Citra International Institute of Bangka Belitung
Corresponding author: *Email: wynnez89@gmail.com

DISCUSSION

This study identified several factors significantly associated with the perception of insufficient breast milk (PIM) among breastfeeding mothers, namely maternal knowledge, employment status, family support, and exposure to formula milk. These findings indicate that PIM is influenced by a combination of individual, social, and environmental factors, as reported in both national and global breastfeeding studies (World Health Organization, 2020; UNICEF 2023; World Health Organization, 2023).

Maternal knowledge was significantly associated with PIM, with mothers who had poor knowledge being more likely to perceive their breast milk as insufficient. This finding supports the Health Belief Model, which emphasizes that knowledge influences individual perceptions of benefits and barriers related to health behaviors (Glanz, Rimer, & Viswanath, 2015). Mothers with adequate breastfeeding knowledge are better able to understand lactation physiology, recognize normal infant feeding patterns, and interpret signs of milk sufficiency appropriately (Riordan & Wambach, 2022).

This result is consistent with previous studies conducted in Indonesia, which reported that inadequate maternal knowledge increases anxiety and negative perceptions regarding milk supply (Prabasiwi et al., 2015; Bakkara & Fikawati, 2022; Dewi et al., 2022; Sari & Dewi, 2022). Previous studies have also emphasized that the perception of breast milk deficiency often does not reflect actual breast milk production, but rather a lack of maternal confidence and understanding (Kent, Perrella, & Geddes, 2021; Hidayana, Prawindarti, Umar, Ambarwati, & Rosatriani, 2023). Similarly, other studies have highlighted that psychological factors, including low maternal confidence and anxiety, play an important role in shaping the perception of breast milk deficiency, even when physiological breast milk production is adequate (Ahmad & Haque, 2025).

Maternal employment status was significantly associated with PIM. Working mothers were more likely to experience doubts about breast milk adequacy compared to non-working mothers. Employment-related constraints, such as limited time for

breastfeeding, inadequate workplace lactation facilities, and work-related stress, may disrupt breastfeeding practices, increase maternal stress, and reduce confidence in milk adequacy (Septiani, Susanti, Harnani, & Lusiana, 2022; Ahmad, Sulaiman, Nik Hussain, & Mohd Noor, 2022; Haque et al., 2022).

Similar findings have been reported in previous studies, indicating that unsupportive workplace environments contribute to early breastfeeding cessation and increased perception of milk insufficiency (Rahmawati & Lestari, 2021; Brugailières, Deguen, Lioret, Haidar, Delamaire, Counil, & Vandentorren, 2024; American Academy of Pediatrics, 2022). These findings highlight the importance of breastfeeding-friendly workplace policies to support lactating mothers (World Health Organization, 2020).

Family support was identified as a strong protective factor against PIM. Mothers who lacked family support were significantly more likely to experience PIM. Emotional and practical support from family members, particularly spouses, can reduce maternal stress and enhance breastfeeding self-efficacy, thereby strengthening positive perceptions of milk adequacy (Dennis, Brennenstuhl, & Abbass-Dick, 2018).

This finding is consistent with previous research demonstrating that family support plays a crucial role in breastfeeding success and maternal confidence (Fitriani & Widyaningrum, 2020; Febriyanti, Sari, & Handayani, 2020; Nurfatimah, Rahman, & Nurhayati, 2021; Sulistyowati, Cahyaningsih, & Alfiani, 2020). Supportive family environments help mothers cope with breastfeeding challenges and reduce psychological barriers to exclusive breastfeeding.

Exposure to formula milk promotion was significantly associated with PIM. Mothers who were exposed to formula marketing were more likely to doubt their ability to produce sufficient breast milk. Formula promotion may create misleading perceptions that formula milk is nutritionally equivalent or superior to breast milk, thereby undermining maternal confidence.

Inez Maria Winny, Marleni*

Bachelor's Degree Program in Midwifery, Citra International Institute of Bangka Belitung
Corresponding author: *Email: wynnez89@gmail.com

This finding aligns with previous studies showing that exposure to formula advertising increases maternal anxiety and the likelihood of early formula introduction (Sari & Rahman, 2021; Jayadi, Rusiati, & Saleh, 2022). WHO has emphasized that uncontrolled promotion of breast milk substitutes negatively affects breastfeeding practices and maternal perceptions of milk sufficiency (World Health Organization, 2021; UNICEF, 2024).

In contrast, healthcare provider support was not significantly associated with PIM in this study. This finding suggests that the effectiveness of healthcare support depends not only on availability but also on the quality, continuity, and interpersonal approach of breastfeeding counseling. Counseling that focuses solely on information delivery without addressing emotional concerns and self-efficacy may have limited impact (Windari, Dewi, & Siswanto, 2017).

Although not statistically significant, healthcare providers remain important as cues to action in shaping positive breastfeeding perceptions (Glanz et al., 2015; UNICEF, 2018). Strengthening the quality and consistency of lactation counseling, particularly through personalized and continuous support, may enhance maternal confidence and reduce PIM (Bakkara & Fikawati, 2022).

Overall, this study demonstrates that the perception of insufficient breast milk is influenced by multiple interconnected factors. Interventions to reduce PIM should focus on improving maternal knowledge, strengthening family support, creating supportive workplace environments, regulating formula milk promotion, and enhancing the quality of breastfeeding counseling. A comprehensive and integrated approach at the primary healthcare level is essential to improve maternal confidence and sustain exclusive breastfeeding practices, particularly by addressing psychosocial and structural determinants of breastfeeding (World Health Organization, 2020; UNICEF & World Health Organization 2023; Haque et al., 2022).

CONCLUSION

This study concludes that the perception of insufficient breast milk remains a prevalent issue among

breastfeeding mothers in the working area of Kelapa Community Health Center, West Bangka Regency. Maternal knowledge, employment status, family support, and exposure to formula milk promotion were significantly associated with the perception of insufficient breast milk. Mothers with poor knowledge, those who were employed, those lacking family support, and those exposed to formula milk promotion were more likely to experience doubts about breast milk adequacy. In contrast, healthcare provider support was not significantly associated with this perception. These findings indicate that the perception of insufficient breast milk is influenced by multiple interconnected factors, encompassing individual, social, and environmental dimensions. Addressing this perception is essential to improving exclusive breastfeeding practices and achieving national breastfeeding targets

REFERENCES

- Ahmad, R. S., Sulaiman, Z., Nik Hussain, N. H., & Mohd Noor, N. (2022). Working mothers' breastfeeding experience: a phenomenology qualitative approach. *BMC Pregnancy and Childbirth*, 22(1), 85.
- Ahmad, R., & Haque, M. (2025). Breastfeeding, Human Milk and Infant Feeding Alternatives: Evidence, Barriers and Global Guidance. *Advances in Human Biology*, 15(4), 465-470.
- American Academy of Pediatrics. (2022). Breastfeeding and the Use of Human Milk. *Pediatrics*, 149(1), e2021053850.
- Bakara, S. M., & Fikawati, S. (2022). Persepsi Ketidakcukupan ASI (PKA) Sebagai Salah Satu Faktor Kegagalan ASI Eksklusif. *Jurnal Mutiara Kesehatan Masyarakat*, 7(2), 82-88.
- Brugaillères, P., Deguen, S., Lioret, S., Haidar, S., Delamaire, C., Counil, E., & Vandentorren, S. (2024). Maternal employment characteristics as a structural social determinant of breastfeeding after return to work in the European Region: A scoping review. *International Breastfeeding Journal*, 19(1), 38.

Inez Maria Winny, Marleni*

Bachelor's Degree Program in Midwifery, Citra International Institute of Bangka Belitung
Corresponding author: *Email: wynnez89@gmail.com

- Dennis, C. L., Brennenstuhl, S., & Abbass-Dick, J. (2018). Measuring paternal breastfeeding self-efficacy: A psychometric evaluation of the Breastfeeding Self-Efficacy Scale–Short Form among fathers. *Midwifery*, 64, 17-22.
- Febriyanti, N., Sari, P., & Handayani, L. (2020). Peran dukungan sosial keluarga terhadap keberhasilan menyusui pada ibu postpartum. *Jurnal Kesehatan Masyarakat*, 15(1), 33–41.
- Fitriani, D., & Widyaningrum, A. (2020). Hubungan dukungan keluarga dengan pemberian ASI eksklusif di wilayah kerja Puskesmas Jetis. *Jurnal Ilmu Kesehatan*, 11(1), 89–96.
- Glanz, K., Rimer, B. K., & Viswanath, K. (2015). *Health behavior: Theory, research, and practice*. John Wiley & Sons.
- Hidayana, I., Prawindarti, L., Umar, N., Ambarwati, K., & Rosatriani, F. (2023). Marketing of commercial milk formula during COVID-19 in Indonesia. *Maternal & Child Nutrition*, 19(3), e13491.
- Jayadi, A., Rusiati, R., & Saleh, A. J. (2022). Paparan Promosi Susu Formula Terhadap Pemberian ASI Eksklusif. *Jurnal Ilmu Gizi Indonesia (JIGZI)*, 3(1).
- Kent, J. C., Perrella, S. L., & Geddes, D. T. (2021). Measurement of human milk production and infant milk intake challenges and opportunities. *Human Milk*, 35-66.
- Nurfatimah, S., Rahman, A., & Nurhayati, N. (2021). Hubungan dukungan keluarga dengan persepsi kecukupan ASI di wilayah kerja Puskesmas Tamalanrea. *Jurnal Kesehatan Reproduksi*, 8(3), 152–159.
- Prabasiwi, A., Fikawati, S., & Syafiq, A. (2015). ASI eksklusif dan persepsi ketidakcukupan ASI. *Kesmas*, 9(3), 282-287.
- Putri, F. D., & Hartono, D. (2020). Pengaruh promosi susu formula terhadap perilaku pemberian ASI eksklusif di Indonesia. *Jurnal Ilmu Kesehatan*, 10(2), 101–110.
- Rahmawati, D., & Lestari, W. (2021). Pengaruh status pekerjaan ibu terhadap praktik menyusui dan persepsi kecukupan ASI di wilayah kerja Puskesmas Bantul. *Jurnal Kebidanan dan Kesehatan*, 12(3), 120–128.
- Sari, C. R., & Dewi, I. P. (2022). Determinan Persepsi Ketidakcukupan ASI (PKA) pada Ibu Menyusui. *Jurnal Ilmiah Gizi Kesehatan (JIGK)*, 3(02), 53-61.
- Sari, N., & Rahman, A. (2021). Hubungan paparan iklan susu formula dengan persepsi kecukupan ASI pada ibu menyusui di Kota Padang. *Jurnal Kesehatan Masyarakat Andalas*, 16(3), 221–228.
- Septiani, W., Susanti, N., Harnani, Y., & Lusiana, N. (2022). Hubungan Pola Pemberian ASI dan MP-ASI terhadap Pertumbuhan Anak Usia 6-24 Bulan di Wilayah Kerja Puskesmas Harapan Raya
- Sulistyowati, I., Cahyaningsih, O., & Alfiani, N. (2020). Dukungan Keluarga dalam Pemberian ASI Eksklusif. *Jurnal SMART Kebidanan*, 7(1), 47.
- UNICEF (2023). *Global Breastfeeding Scorecard 2023*. Retrieved from: <https://www.unicef.org/documents/global-breastfeeding-scorecard-2023>
- UNICEF. (2024). *Global Breastfeeding Scorecard 2024*. Retrieved from: <https://knowledge.unicef.org/child-nutrition-and-development/resource/global-breastfeeding-scorecard-2024>
- Wambach, K., & Spencer, B. (2019). *Breastfeeding and human lactation*. Jones & Bartlett Learning.

Inez Maria Winny, Marleni*

Bachelor's Degree Program in Midwifery, Citra International Institute of Bangka Belitung
Corresponding author: *Email: wynnez89@gmail.com

Factors Affecting the Perception of Insufficient Breast Milk Among Breastfeeding Mothers

Windari, E. N., Dewi, A. K., & Siswanto, S. (2017). Pengaruh dukungan tenaga kesehatan terhadap pemberian ASI eksklusif di wilayah kerja puskesmas sisir kelurahan sisir kota batu. *Journal Of Issues in Midwifery*, 1(2), 19-24.

World Health Organization. (2023). Infant and young child feeding. Retrieved from: <https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding>

World Health Organization. (2020). Protecting, Promoting and Supporting Breastfeeding in Facilities Providing Maternity and Newborn Services. Retrieved from: https://new.aidsdatahub.org/sites/default/files/resource/protecting-promoting-and-supporting-breastfeeding-facilities-providing-maternity-and-newborn_1.pdf

Inez Maria Winny, Marleni*

Bachelor's Degree Program in Midwifery, Citra International Institute of Bangka Belitung
Corresponding author: *Email: wynnez89@gmail.com

DOI: 10.56922/mchc.v4i9.2002