



## Determinants of Low Exclusive Breastfeeding Coverage in Indonesia

Nirna Dwi Anggraini, Ghaisani Putri Budhiharto\*, Azzahra Putri Nurkholis,  
Rouzatul Fitri, Chahya Kharin Herbawani

Public Health Study Program, Faculty of Health Sciences, Universitas Pembangunan  
Nasional "Veteran" Jakarta, Jakarta, Indonesia

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**Email Corresponding:**  
2310713039@mahasiswa.u  
pn.vj.ac.id

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### Abstract

**Background:** Exclusive breastfeeding (EBF) coverage in Indonesia has not yet reached the national target of 80%, despite a gradual increase from 73.79% in 2023 to 74.73% in 2024. Several determinants contribute to this condition, including maternal employment, educational level, socio-cultural beliefs, and delayed early initiation of breastfeeding (IMD). Suboptimal EBF practices increase the risk of stunting, hinder optimal growth and development, and reduce overall child health outcomes. **Objective:** This study aims to identify key factors associated with low EBF coverage in Indonesia and to formulate evidence-based strategies for improvement by considering demographic, socio-economic, cultural, and occupational challenges, particularly among working mothers. **Methods:** An integrative literature review was conducted by analyzing 11 peer-reviewed articles retrieved from the GARUDA, Springer, DOAJ, and ScienceDirect databases. Inclusion criteria were open-access articles published between 2021 and 2025 using quantitative or qualitative research designs. Thematic analysis was applied to synthesize determinants influencing EBF coverage. **Results:** The review identified maternal education, employment status, family support, IMD implementation, place of delivery, and access to breastfeeding counseling as major determinants of EBF practices. **Conclusion:** EBF coverage in Indonesia is shaped by multifactorial influences, highlighting the need for integrated educational, familial, and policy-based interventions.

**Keywords:** Exclusive Breastfeeding; Determinants; Maternal Employment; Health Education; Stunting Prevention.

## Introduction

Breast milk is the perfect and best food for infants, provided from birth until six months of age, as it contains essential nutrients for their growth and development. During this critical period, the quality and provision of breast milk are paramount to ensure optimal infant development, considering the first six months of life, known as the "golden period," which extends until the child is two years old<sup>1</sup>. According to the Government Regulation of the Republic of Indonesia No. 33 of 2012 concerning Exclusive Breastfeeding, EBF is defined as providing breast milk to infants from

birth until they are six months old, without any additional food or drinks, including water<sup>2</sup>. The World Health Organization (WHO) recommends that for the first six months, infants should be exclusively breastfed, initiated within the first hour of life, due to the vital nutrients breast milk provides for infant growth and development<sup>3</sup>. EBF facilitates the transfer of beneficial bacteria from mother to child, which plays a role in fighting infections, aiding digestion, and strengthening the immune system<sup>4</sup>.

In Indonesia, the coverage of EBF remains a significant public health challenge. Although

it has increased, it still falls short of the national target. As of 2024, the national EBF coverage for infants aged 0-5 months reached 74.73%, a modest increase of approximately 1% from 73.79% in 2023<sup>5</sup>. This figure, however, does not meet the target of 80% set for 2024 by the Presidential Regulation of the Republic of Indonesia No. 72 of 2021 on Accelerating Stunting Reduction and the Ministry of Health's 2022 guidelines<sup>6</sup>. There are also significant regional disparities; for instance, while Bali had one of the highest coverage rates at nearly 80%, Gorontalo lagged behind with only 54% of infants receiving EBF<sup>5</sup>. The failure to meet this target has detrimental short- and long-term health consequences for infants<sup>7</sup>. Infants who are not exclusively breastfed face a higher risk of stunting due to suboptimal nutrition during the first 1000 days of life<sup>8</sup>. Furthermore, a lack of EBF can disrupt metabolic processes, leading to impaired physical growth and development, and increasing vulnerability to infections such as acute respiratory infections<sup>9</sup>. In the long term, this impacts the quality of health and human resource productivity, reflecting weak implementation and support for breastfeeding mothers<sup>7</sup>.

Several studies have identified that EBF practices are influenced by a range of demographic factors, including maternal age, marital status, education level, employment status, household wealth index, number of living children, and place of residence<sup>10</sup>. These factors have a significant relationship with the successful implementation of EBF. In low-income families, mothers are often compelled to work outside the home to support the family, which reduces the time and focus they can dedicate to child care. Research indicates a correlation between maternal employment status and the incidence of stunting in toddlers<sup>11</sup>. The low coverage of EBF in Indonesia is not solely influenced by economic and educational factors but also by traditional

breastfeeding practices in some indigenous communities. For example, certain ethnic groups in Indonesia, such as the Gayo, Javanese, and Muyu, have customs of introducing food or drinks to newborns, like honey, sugar solutions, or sago porridge<sup>12</sup>. Additionally, understanding the patterns of delayed breastfeeding initiation based on birth order and spacing is crucial for designing strategies to ensure all infants receive the benefits of IMD, which is proven to support successful EBF and reduce the risk of early infant mortality<sup>13</sup>.

The urgency of this research lies in the persistent gap between policy targets and on-the-ground reality. Despite clear national guidelines and global recommendations, the multifaceted nature of the determinants indicates that a one-size-fits-all approach is ineffective. The novelty of this study is its comprehensive, integrative review approach that synthesizes recent evidence from diverse methodologies to not only identify the determinants but also to formulate context-specific, evidence-based strategies. Unlike previous studies that may focus on a single determinant or region, this review provides a broader perspective on the interplay of factors, offering a more holistic understanding of the problem.

This study is guided by the main research question: What are the key determinants of low exclusive breastfeeding coverage in Indonesia, and what strategies can be formulated to address them? The objectives are: 1) To identify the various demographic, socio-economic, and cultural factors that influence EBF coverage in Indonesia; 2) To analyze the challenges faced by working mothers in practicing EBF; and 3) To formulate evidence-based strategies to increase EBF coverage, considering the importance of Early Initiation of Breastfeeding (IMD) and support systems.

The findings of this study have significant

implications for academia, healthcare policy, and medical practice. For academia, it provides a synthesized overview of the current evidence on EBF determinants, which can serve as a foundation for future research. For policymakers, the results offer a clear direction for designing more targeted and effective interventions, such as maternity protection policies for working mothers and community-based education programs to shift cultural norms. For healthcare providers, this research underscores the need for personalized counseling and support, particularly for mothers identified as high-risk for not practicing EBF, ultimately contributing to the reduction of stunting and the improvement of child health nationwide.

## **Materials and Methods**

### ***Study Design***

This study employed an integrative literature review design. This design was chosen for its suitability in synthesizing and analyzing a diverse range of studies (both quantitative and qualitative) on EBF, with the aim of obtaining a comprehensive understanding of the factors influencing its practice and the strategies to improve its coverage<sup>14</sup>. The goal was to move beyond mere summarization to integrate findings and present a more holistic interpretation of the existing literature.

### ***Sample***

The sample consisted of 11 scientific articles selected from an initial pool of 1,792 articles found in the preliminary search across four databases: GARUDA, Springer, ScienceDirect, and DOAJ. The selection process adhered to specific inclusion criteria: (1) articles written in Indonesian or English; (2) published between January 2021 and December 2025; (3) utilizing quantitative, qualitative, or mixed-method research designs; (4) focusing on the topic of EBF and its influencing factors; and (5)

available in full-text and open-access format. Exclusion criteria included articles not relevant to the topic, literature reviews or systematic reviews, studies not using quantitative or qualitative methods, publications outside the specified timeframe, non-open-access full texts, and duplicate articles.

### ***Data Collection Technique***

Data were collected through a systematic literature search. The keywords used in the GARUDA database were "asi eksklusif," "cakupan asi eksklusif," "determinan," and "ibu menyusui." In the DOAJ and ScienceDirect databases, the keywords "exclusive breastfeeding" and "Indonesia" were used. The search and selection process followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines for scoping reviews to ensure transparency and replicability, as illustrated in Figure 1.

### ***Data Analysis Technique***

Data analysis was conducted descriptively and thematically. Each selected article was analyzed based on key information such as title, year of publication, language, study scale, data collection methods, and research objectives. A thematic analysis was then performed to identify, analyze, and report patterns (themes) within the data, specifically focusing on the determinants of EBF coverage. This technique allowed for the description of relationships between variables related to EBF coverage and its determinants, as reported in the included studies<sup>15</sup>.

### ***Ethical Consideration***

This research was conducted in the form of a literature review and did not involve direct interaction with human subjects; therefore, it did not require ethical clearance. However, the literature selection was performed systematically, adhering to the principles of

scientific ethics by using sources with high validity, testable credibility, and strong relevance to the research topic<sup>16</sup>.

## Results

### Characteristics of Included Studies

The initial search across four databases yielded 1,792 articles. After screening based on publication year and accessibility, 248 articles proceeded to the selection phase. From this

number, 194 articles were excluded due to duplication or irrelevance. A total of 54 articles were then assessed for eligibility by reviewing their full texts. Following an evaluation based on research design and methodology, 43 articles did not meet the inclusion criteria. Ultimately, 11 articles were deemed suitable and used as material for this study. The key findings from these articles are summarized in Table 1.

**Table 1.** Summary of Articles on Determinants of Exclusive Breastfeeding in Indonesia

No.	Author/Year	Location	Title	Method	Key Findings
1	Anggraeni et al. (2023)	Indonesia	Hubungan Tingkat Pengetahuan Ibu Menyusui dengan Teknik Pemberian ASI Secara Eksklusif	Cross-Sectional	Maternal knowledge plays a crucial role in EBF; better knowledge leads to more optimal breastfeeding techniques.
2	Sari & Aisyah (2021)	Indonesia	Analisis Determinan Pemberian ASI Eksklusif	Cross-Sectional	Significant relationship found between education ( $p=0.000$ ), employment ( $p=0.028$ ), and IMD ( $p=0.038$ ) with EBF.
3	Kasmawati et al. (2021)	Poso, Indonesia	Pendidikan Kesehatan untuk Meningkatkan Cakupan Pemberian ASI Eksklusif	Pretest-Posttest	Educational interventions significantly increased maternal knowledge from 70% to 83%.
4	Permatasari & Ritanti (2021)	Indonesia	Determinan Praktik Pemberian ASI Eksklusif	Quantitative Descriptive	Maternal employment and ANC frequency ( $<4$ visits) were dominant negative factors.
5	Kaparang et al. (2021)	Indonesia	Evaluasi Keberhasilan Kelompok Pendukung ASI Eksklusif (KP-ASI)	Qualitative (FGD)	KP-ASI participants had an EBF rate of 82.1% vs. 14.3% for non-participants.
6	Wardiah et al. (2021)	Bandar Lampung, Indonesia	Hubungan Dukungan Keluarga Terhadap Efikasi Diri Ibu Menyusui	Cross-Sectional	A significant relationship ( $p=0.011$ ) exists between family support and maternal self-efficacy.
7	Nurfajrillah et al. (2025)	Indonesia	The Effect of Exclusive Breastfeeding Education...	Quasi-Experimental	Combined audio-visual and e-booklet education was most effective in improving knowledge and attitudes.
8	Sakti et al. (2025)	Indonesia	Enhancing Breastfeeding Self-Efficacy through Counselling	Pretest-Posttest	Counseling significantly increased breastfeeding self-efficacy scores ( $p<0.05$ ).
9	Syahri et al. (2024)	Indonesia	Exclusive breastfeeding among Indonesian working mothers...	Cross-Sectional	Working mothers who practiced IMD were twice as likely to exclusively breastfeed.
10	Triansyah et al. (2021)	Poso, Indonesia	The effect of oxytocin massage and breast care...	Pretest-Posttest	Oxytocin massage and breast care significantly increased milk production ( $p=0.016$ ).
11	Yoto et al. (2025)	Madura, Indonesia	Encouraging Healthcare Childbirth to Increase Exclusive Breastfeeding	Cross-Sectional	Mothers who delivered in health facilities were 1.939 times more likely to practice EBF.

**Source:** Synthesized from scoping review data, 2025

**Variables** The 11 articles analyzed consistently identified several key determinants of EBF coverage in Indonesia. These variables can be broadly categorized into maternal factors, healthcare system factors, and socio-environmental factors. Maternal factors included education level, employment status, and knowledge. Healthcare system factors comprised the practice of Early Initiation of Breastfeeding (IMD), frequency of Antenatal Care (ANC) visits, and place of delivery. Socio-environmental factors were primarily represented by family support and participation in support groups like KP-ASI.

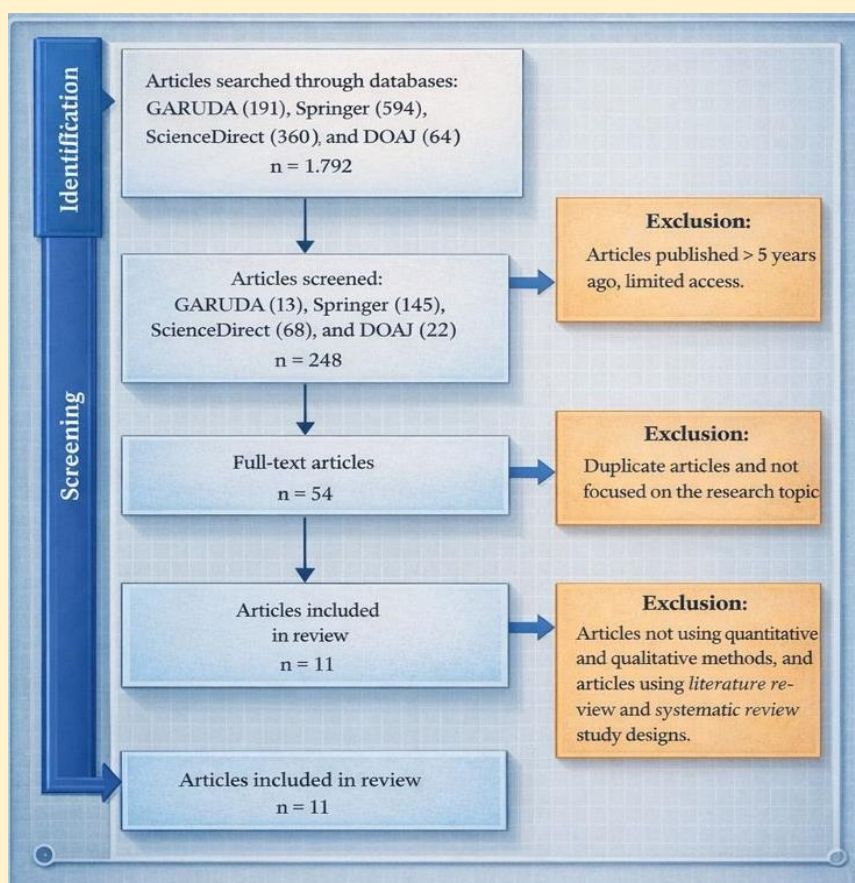
The reviewed studies employed various statistical tests to establish relationships between variables. Sari & Aisyah (2021) used the Chi-Square test and found significant associations between EBF and maternal education ( $p=0.000$ ), employment ( $p=0.028$ ), and IMD ( $p=0.038$ )<sup>17</sup>. Permatasari & Ritanti (2021) also reported that working mothers were three times less likely to practice EBF, while mothers with  $\geq 4$  ANC visits were six times more likely to do so<sup>18</sup>. Wardiah et al. (2021) confirmed a significant link between family support and maternal self-efficacy ( $p=0.011$ )<sup>19</sup>. Syahri et al. (2024) demonstrated that for

working mothers, IMD was a strong predictor, doubling the likelihood of EBF<sup>20</sup>. Yoto et al. (2025) found that delivering in a health facility increased the odds of EBF by 1.939 times<sup>21</sup>.

The systematic selection process of the 11 articles is visualized in Figure 1, following the PRISMA flow diagram, which outlines the identification, screening, eligibility, and inclusion phases.

The research results indicate that EBF coverage in Indonesia is influenced by a

complex interplay of factors. Higher maternal education, non-employment status, successful IMD, adequate ANC visits, delivery in health facilities, strong family support, and participation in educational interventions or support groups are all positively and significantly associated with successful EBF practices. Conversely, lower education, maternal employment, lack of IMD, and insufficient family support are major barriers.



**Figure 1.** PRISMA Flow Diagram of Study Selection

## Discussion

The findings of this integrative review confirm that the low coverage of EBF in Indonesia is a multifactorial issue. The results align with the initial hypothesis that demographic, socio-economic, and healthcare-related factors collectively determine a mother's ability and decision to exclusively breastfeed. The

significant role of maternal education is consistent across studies, suggesting that education enhances a mother's understanding of the benefits of EBF and equips her to navigate challenges<sup>22</sup>. The negative impact of maternal employment is a critical finding, highlighting the conflict between economic necessity and infant care, a common dilemma in developing countries<sup>23</sup>. The strong positive

influence of IMD and facility-based deliveries underscores the importance of the healthcare environment in the immediate postpartum period in establishing successful lactation<sup>24</sup>. These findings collectively paint a picture where a mother's choice is not made in a vacuum but is shaped by her knowledge, circumstances, and the support systems around her.

The findings of this review are consistent with extensive global literature on EBF determinants. Studies from various developing countries have similarly identified maternal education and employment as primary predictors<sup>25, 26</sup>. For instance, a meta-analysis by Victora et al. (2016) highlighted the powerful influence of socioeconomic status, which encompasses education and employment, on breastfeeding practices globally<sup>27</sup>. However, the influence of cultural practices, such as pre-lacteal feeding, is a context-specific challenge that may be more pronounced in certain Indonesian communities, as noted by Siregar et al. (2021)<sup>12</sup>. Our findings also align with Arifuddin et al. (2023), who developed an epidemiological model showing that EBF is a key upstream determinant in the complex web of factors leading to stunting in Indonesia<sup>28</sup>. Furthermore, the direct link between a lack of EBF and negative health outcomes, such as increased rates of infection, is supported by the work of Rahman & Fahira Nur (2015), who found a significant association between not exclusively breastfeeding and the incidence of acute respiratory infections in toddlers<sup>29</sup>. Similarly, Maryam et al. (2023) provided strong evidence of the direct relationship between EBF and reduced stunting rates in their study<sup>30</sup>.

The findings have profound implications for public health policy and practice. Policymakers must move beyond simple health promotion messages and implement structural interventions. This includes strengthening and

enforcing maternity protection laws that provide paid maternity leave and lactation rooms in the workplace, addressing the employment barrier<sup>23</sup>. For healthcare providers, the results emphasize the need for consistent, high-quality counseling during ANC visits, focusing not only on the benefits of EBF but also on practical techniques for overcoming common challenges. The importance of IMD and facility-based delivery suggests that interventions should target the first hour of life and the immediate postpartum period. The positive impact of support groups like KP-ASI indicates that community-based, peer-led models are effective and should be scaled up with government support. These strategies, when combined, can create a supportive ecosystem that empowers mothers to choose and sustain EBF.

The strength of this integrative review lies in its comprehensive synthesis of recent evidence from both quantitative and qualitative studies, providing a holistic view of the EBF landscape in Indonesia. By including studies from various regions, it captures a diversity of contexts. However, the study has limitations. First, the search was restricted to four databases, potentially missing relevant articles from other sources like PubMed or Scopus-indexed journals not included in those databases. Second, the review did not formally assess the quality of the included studies, which introduces a risk of bias. Third, by focusing on the last five years, it may have excluded foundational older studies. Finally, as a review of existing literature, it is limited by the scope and quality of the primary research it includes.

Future research should aim to address the limitations of this study and the gaps in the current literature. First, a systematic review and meta-analysis of quantitative studies on EBF determinants in Indonesia is needed to provide more precise estimates of effect sizes. Second, qualitative studies are crucial to gain deeper

insights into the cultural beliefs, personal experiences, and nuanced challenges faced by mothers, particularly working mothers and those from specific ethnic groups. Third, longitudinal studies are recommended to track changes in EBF practices over time and evaluate the long-term impact of interventions. Finally, implementation research is needed to test the effectiveness and scalability of combined interventions, such as workplace policies paired with community support groups, in different Indonesian contexts.

### Conclusion

In conclusion, this integrative review has identified that the low coverage of exclusive breastfeeding in Indonesia is determined by a complex interplay of factors, including maternal education and employment, the practice of early initiation of breastfeeding, family support, and access to quality healthcare services. These factors are interconnected and play a pivotal role in a mother's ability to successfully practice EBF. To overcome these challenges, a multi-pronged strategy is essential. This strategy must include targeted education through various media and counseling to build maternal confidence, direct support like oxytocin massage, and the strengthening of community and family support systems through programs like KP-ASI. Addressing these determinants holistically is not only crucial for increasing EBF rates but is also a fundamental investment in preventing stunting and ensuring the healthy development of Indonesia's future generation.

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**Conflict of Interest Statement**

The author(s) declare no commercial, financial, or personal conflicts of interest related to this research. All authors approved the final manuscript and consented to its publication in *Healthy Tadulako Journal*.

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