Literature Review

Indonesian Journal of Health Administration
(Jurnal Administrasi Kesehatan Indonesia)
p-ISSN 2303-3592, e-ISSN 2540-9301
10.20473/jaki.v13i1.2025.110-124

SYSTEMATIC LITERATURE REVIEW: EXCLUSIVE BREASTFEEDING AND STUNTING – A PREVENTIVE APPROACH FOR HEALTH POLICY

Kajian Pustaka Sistematis: ASI Eksklusif dan Stunting - Pendekatan Pencegahan untuk Kebijakan Kesehatan

***Lamtiur Junita Bancin[1], Dumora Jenny Margaretha Siagian[2], Jonni Sitorus[2], Silvia Darina[2], Anton Parlindungan Sinaga[2]**
[1]North Sumatra Provincial Health Office, Medan, Indonesia
[2]North Sumatra Regional Planning, Research and Development Regency, Medan Indonesia
Correspondence*:
Address: Jl. Prof. H.M Yamin No. 41 AA Medan, Indonesia | e-mail: lamtiurjunitabancin@gmail.com

Abstract

Background: Stunting negatively impacts children's growth, cognitive development, and future productivity. A frequently overlooked yet critical risk factor is the absence of exclusive breastfeeding (EBF). Many studies continue to explore and update the critical role and the urgency of EBF.
Aims: This research aimed to identify and analyze the previous studies on the relationship between EBF and stunting to capture a comprehensive understanding of EBF's role in stunting prevention and various associated factors.
Methods: A Systematic Literature Review with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analysis) protocol was employed through four steps – identification, screening, inclusion, and eligibility. A total of 865 articles were initially retrieved from electronic databases (Google Scholar and PubMed). Following the inclusion and exclusion criteria, 18 studies resulted in the final review.
Results: There was a significant relationship between EBF and stunting incidents. Key contributing barriers are predominantly observed in families with low socioeconomic status and limited educational attainment. In addition, prevailing public perceptions and traditional cultural practices—such as pre-lacteal feeding and CF-were also identified as influential factors.
Conclusion: he failure to practice EBF contributes to increased stunting, primarily due to the absence of optimal nutrition and immune protection provided by breast milk. The ignorance of EBF stems from customs and culture that have been applied from era to era. Addressing this issue requires multidimensional interventions, particularly focusing on educational and environmental support. Future research should adopt a multi-sectoral approach to inform evidence-based policy-making for more effective stunting prevention.

Keywords: Children aged under 5 years, chronic nutrition, exclusive breastfeeding, stunting, systematic literature review.

Abstrak

Latar Belakang: *Stunting berdampak negatif pertumbuhan, perkembangan kognitif, dan produktivitas anak di masa depan. Salah satu faktor risiko utama yang sering diabaikan adalah pemberian Air Susu Ibu Eksklusif (ASI eksklusif). Berbagai studi terus meneliti dan menegaskan pentingnya peran ASI Eksklusif.*
Tujuan: *Kajian ini bertujuan mengidentifikasi dan menganalisis hasil penelitian terdahulu mengenai hubungan antara ASI Eksklusif dan stunting guna memperoleh pemahaman yang komprehensif terkait peran ASI Eksklusif dalam pencegahan stunting serta faktor-faktor yang mempengaruhinya.*
Metode: *Studi ini menggunakan metode Systematic Literature Review dengan Protokol* PRISMA (Preferred Reporting Items for Systematic Reviews and Meta Analysis) *dengan empat tahap, yaitu" identifikasi, skrining, kelayakan dan hasil yang diterima." Sebanyak 865 artikel dikumpulkan dari database elektronik (Google Scholar dan Pubmed), dan setelah diseleksi berdasarkan kriteria iklusi dan eksklusi, 18 artikel dipilih untuk dianalisis lebih lanjut.*
Hasil: *Adanya hubungan signifikan antara ASI eksklusif dengan kejadian stunting. Hambatan utama ditemukan pada keluarga dengan status sosial ekonomi rendah dan tingkat pendidikan rendah. Persepsi masyarakat serta praktik budaya tradisional seperti pre-lactael feeding dan pemberian MPASI dini berperan dalam peningkatan resiko stunting.*
Kesimpulan: *Ketidak-berhasilan ASI eksklusif meningkatkan resiko stunting akibat tidak terpenuhinya nutrisi optimal dan perlindungan imun dari ASI. Penanganan stunting memerlukan intervensi multidimensional, terkhusus aspek pendidikan dan lingkungan. Kajian lebih komprehensif untuk future research di perlukan terkait faktor tersebut dalam mengadopsi pendekatan multisectoral untuk menghasilkan kebijakan berbasis bukti.*

Kata kunci*: Balita, gizi kronis, ASI eksklusif, stunting, kajian pustaka sistematis.*

Indonesian Journal of Health Administration (*Jurnal Administrasi Kesehatan Indonesia*)
p-ISSN 2303-3592, e-ISSN 2540-9301, Volume 13 No.1 2025, DOI: 10.20473/jaki.v13i1.2025.xxx-xxx
Received: 2025-05-08, Revised: 2025-07-02, Accepted: 2025-07-18, Published: 2025-07-25.
Published by Universitas Airlangga in collaboration with *Perhimpunan Sarjana dan Profesional Kesehatan Masyarakat Indonesia (Persakmi)*.
How to cite:
Bancin, L.J., Siagian, D.J.M., Sitorus, J., Darina, S., and Sinaga, A.P. (2025). Systematic Literature Review: Exclusive Breastfeeding and Stunting – Addressing Prevention for Health Policy. *Indonesian Journal of Health Administration*, 13(1), pp. xxx–xxx. https://doi.org/10.20473/jaki.v13i1.2025.xxx-xxx

Indonesian Journal of Health Administration
(Jurnal Administrasi Kesehatan Indonesia)
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10.20473/jaki.v13i1.2025.110-124

Introduction

As a public health issue in developing countries, stunting is defined as having a low height for age if the growth curve condition is below minus two Standard Deviation (<-2SD) (Lestari and Fitriyana, 2023). Most of the stunted children are found in Asia (51%) and Africa (43%) (UNICEF, WHO and The World Bank, 2023). In Asia, countries with high prevalence are India, Afghanistan, and Indonesia. India reports 30% of stunted children, where the Mehrauli area (South India) had been identified as the highest stunting cases (Dabar *et al.*, 2020).

The first 1.000 days of life – from post-conception period through the first two years – represent a critical window for stunting prevention and must be prioritized. Despite its importance, this period is overlooked. Ensuring adequate nutritional intake for both pregnant women and newborns is essential for supporting optimal growth, cognitive development, and the immune system. Failure to address these needs may result in long-term impact, including reduced cognitive and physical development, decreased productivity in adulthood, and potential risk of non-communicable disease.

The causes of stunting are multifactorial. One key determinant in early life is the provision of exclusive breastfeeding (EBF) during the first six months. EBF is defined as providing an infant with only breastmilk – without any additional food or drink, including water.

In principle, EBF is highly acceptable to infant's digestive system, as providing easily absorbable nutrients and posing minimal strain on the kidneys. Notably, iron absorption from breast milk is around 75%, in contrast to only 5-10% iron absorption from infant formula (Wulandari *et al.*, 2024). Additionally, fat globules in breast milk, secreted by mammary epithelial cells, are rich in bioactive substances that are well tolerated and have no adverse effect (Sánchez *et al.*, 2021). Consequently, EBF has been consistently associated with a reduced risk of stunting (Azizah, Dewi and Murti, 2022).

Many studies have been acknowledged to identify the relationship between EBF and stunting. Stunting consistently indicated that children who are exclusively breastfed are less likely to experience stunted growth. (Andika *et al.*, 2020; Bustami and Ampera, 2020; Chawla *et al.*, 2020; Kahssay *et al.*, 2020; Krisnana, Widiani and Sulistiawati, 2020; Rachim, Salam and Thaha, 2020; Safaah, 2022; Wulandari *et al.*, 2024). A study revealed that the odds of stunting were 47.32 times greater among children who did not receive EBF (Husna and Farisni, 2022; Dewi Agustin *et al.*, 2024). Similarly, a study by (Azizah, Dewi and Murti, 2022) found that the risk of stunting among exclusively breastfed children was only 0.62 times that of non-EBF children. Nonetheless, achieving optimal EBF practice is influenced by various contextual factors, including ethnicity, cultural beliefs, and family habits (Sari, Fatmaningrum and Suryawan, 2021).

Based on the explanations above, it may address a significant relationship between EBF and stunting incidents. However, several barriers persist, including low maternal education level, early complementary feeding (CF), and socio-economic constraints. Therefore, community education, cultural sensitivity, and policy support from local government are important to improve EBF coverage and to reduce stunting prevalence.

This systematic literature review (SLR) aims to identify and analyze the results of previous studies that discuss the relationship between EBF and stunting. This approach aims to obtain a more comprehensive understanding of the EBF role in preventing stunting and the factors related. By elaborating the factors regarding this issue, it may depict the strategic interventions needed in terms of formulating more effective health policies to increase the coverage of EBF in the community.

Method

A Systematic Literature Review Method on this paper using the PRISMA Protocol (Preferred Reporting Items for Systematic Reviews and Meta-Analysis)

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10.20473/jaki.v13i1.2025.110-124

through four stages - Identification, screening, eligibility, and results received.

The research question was "Is there a relationship between Exclusive Breastfeeding and Stunting?". The inclusion criteria involved: (i) peer-reviewed research published in English and/or Bahasa Indonesia, (ii) quantitative studies, (iii) statistical analysis of the relationship between EBF and stunting. Meanwhile, the exclusion criteria included: (i) qualitative studies, reports, book chapters, dissertations, editorial letters, (ii) incomplete or non-full text articles, (iii) literature reviews, (iv) studies conducted before 2020, (iv) no statistical tests between EBF and stunting, (v) samples ages <6 months, (vi) the number of samples or respondents <100 participants.

Information Sources and Search Strategies

The electronic journal databases (Google Scholar and Pubmed) were employed for searching the paper. The Boolean Logic "AND" were used in both journal databases with keywords "Stunting and Exclusive Breastfeeding."

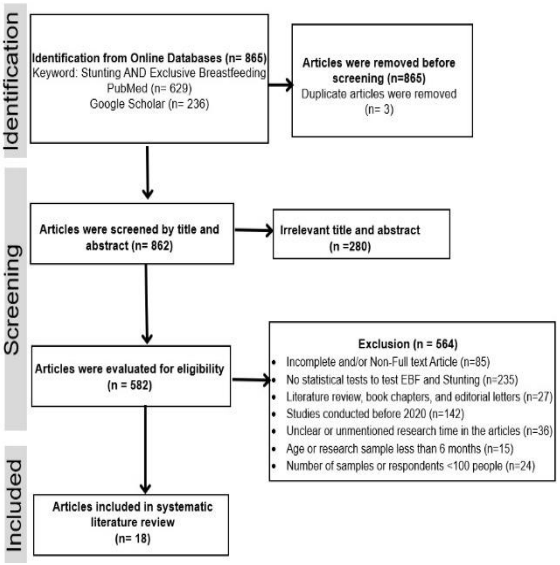

Figure 1. Prisma Flow Chart

Study Selection

Out of 865 studies, three duplicates were removed, leaving 862 articles. The first screening excluded 280 irrelevant studies and resulted in 582 articles. Then, the second screening for eligibility by exclusion criteria narrowed the selection to 18 articles eligible studied.

Article Quality Assessment

To assess the quality of the article, a Journal Article Reporting Standards (JARS) was used (Appelbaum *et al.*, 2018) with 12 criteria as follows. C1- Hypothesis and Objectives. C2- Inclusion and Exclusion List Criteria. C3- Respondent Demography Characteristics. C4- Sampling Procedures, portrayed method, samples, informed consent, and research code ethics. C5- Sample size, contained methods used to measure the accuracy of parameter estimates and power analysis. C6- Data collection elaboration. C7- Measurement quality method improvement explained training in data collection and data reliability. C8- Instrumentation, detailed the validated research instruments. C9- Conditions and Design, observed and presented tabular data in line with the research aim C10- Data Diagnostics and Analysis, elaborated data transformation, post-data collection criteria for excluded respondents, criteria for determining the time for missing data decision and imputation methods. C11- Recruitment, presented the recruitment time/period and repeated measurement for follow-up. C12- Statistics and Data Analysis, also included results and assumptions regarding research finding validity

The assessment scale was scored 0-2 for each criterion. Score "0" (criteria are not included in the article), "1" (incomplete criteria and limitations), and "2" (complete detail).

Result and Discussion

Quality Appraisal Results

Eighteen articles were appraised using 12 quality criteria derived from the Journal Article Reporting Standards (JARS) framework (see Table 1). Criteria 9 (conditions and design) and C12 (statistics and data analysis) received the highest scores across all studies. In contrast, criteria C11 (recruitment time and repeated measurements) was the least frequently reported.

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Table 1. Quality Appraisal by using JARS Criteria

Author	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	Total
Chawla *et al.* (2020)	1	1	1	2	2	2	2	1	2	2	0	2	19
Rachim, Salam and Thaha (2020)	0	0	0	1	1	0	1	0	2	0	0	2	7
Asmin and Abdullah (2021)	1	2	0	0	0	0	0	0	2	0	0	2	7
Sahdani, Isaura and Sumarmi (2021)	1	2	2	0	0	0	1	1	2	1	0	2	12
Ramli *et al.* (2022)	1	0	2	1	0	0	1	1	2	0	0	2	10
Safaah (2022)	1	1	1	1	1	0	1	1	2	0	0	2	11
Asprika (2023)	1	0	0	1	1	0	2	1	2	0	0	2	10
Fatihunnajah and Budiono (2023)	1	2	2	2	2	1	2	1	2	0	1	2	18
Lia, Sd and Ririn (2023)	1	0	1	1	0	0	0	1	2	0	0	2	8
Lubis, Ahmad and Abdurrahman (2023)	1	0	2	1	0	0	1	0	2	0	0	2	9
Agussalim *et al.* (2024)	1	0	2	1	0	0	2	0	2	0	0	2	10
Dendy *et al.* (2024)	0	2	1	0	0	0	1	0	2	0	0	2	8
Dolang, Pelamonia and Simanjuntak (2024)	1	1	2	0	0	0	0	0	2	0	0	2	8
Rezaee *et al.* (2024)	1	2	1	2	2	1	2	1	2	2	0	2	18
Saputri and Ermi (2024)	1	0	1	1	0	0	1	1	2	0	0	2	9
Sipayung, Nababan and Silitonga (2024)	1	0	1	2	1	1	1	0	2	0	0	2	11
Sulistyawati and Rokhaidah (2024)	1	2	1	1	0	1	1	2	2	0	1	2	14
Wulandari *et al.* (2024)	1	2	2	1	1	0	2	0	2	1	1	2	15

Table 2. Results Finding of Systematic Literature Review

Author	Population Age (months)	Sample Size (N)	Location (Country)	Study Design*	Year	Stunting Incidents	Relationship Result (Between EBF and Stunting)	p-value
Chawla *et al*. (2020)	12-59	600	India	CS	2020	248	Children who receive EBF have a lower prevalence of stunting compared to non EBF children	Yes (0.000)
Rachim, Salam and Thaha (2020)	6-23	260	Malili, Indonesia	CS	2020	83	Non EBF children are 2.533 times more likely to experience stunting than EBF children	Yes (0.000)

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Author	Population Age (months)	Sample Size (N)	Location (Country)	Study Design*	Year	Stunting Incidents	Relationship Result (Between EBF and Stunting)	p-value
Asmin and Abdullah (2021)	9-24	559	Ambon, Indonesia	CS	2020	152	EBF is associated with a low incidence of stunting	Yes (0.001)
Sahdani, Isaura and Sumarmi, (2021)	24-60	141	Surabaya, Indonesia	CS	2020	77	Children who do not receive EBF have a higher risk of experiencing stunting (Odd Ratio/OR 1.97)	Yes (0.047)
Ramli *et al*. (2022)	12-60	161	Banggai, Indonesia	CS	2020	83	A significant relationship	Yes (0.000)
Safaah (2022)	24-59	150	Tuban, Indonesia	CS	2021	72	A significant relationship showed that non-EBF children had a high risk of stunting	Yes (0.001)
Asprika (2023)	24-59	164 (82 cases and 82 control)	Sumatera Selatan, Indonesia	CC	2023	82	Toddler who did not receive EBF had the high chance of stunting	Yes (0.000)
Fatihunnajah and Budiono (2023)	24-59	98 (49 cases and 49 control)	Tegal, Indonesia	CC	2023	49	A significant relationship (OR 2.510) showed toddlers who do not receive EBF had high chance of stunting	Yes (0.043)
Lia, Sd and Ririn (2023)	24-59	118 (59 cases and 59 control)	Cimahi, Indonesia	CC	2022	59	A significant relationship (OR 15.750) showed toddlers who do not receive EBF had high risk of stunting	Yes (0.001)
Lubis, Ahmad and Abdurrahman (2023)	24-59	386	Aceh, Indonesia	CS	2020	150	Non EBF toddlers are 2.81 times more likely to experience	Yes (0.010)

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Author	Population Age (months)	Sample Size (N)	Location (Country)	Study Design*	Year	Stunting Incidents	Relationship Result (Between EBF and Stunting)	p-value
							stunting than EBF toddlers	
Agussalim *et al*. (2024)	6-23	260 (130 cases and 130 control)	Sulawesi Selatan, Indonesia	CC	2024	130	EBF is a dominant risk factor for stunting. Non-EBF children have a risk of stunting 2.675 times higher than children who receive EBF after controlling factors of maternal anemia and birth weight history	Yes (0.0053)
Dendy *et al*. (2024)	12-60	113	Yogyakarta, Indonesia	CS	2022	65	A significant relationship with OR 0.159 showed that non EBF children have a higher incidence of stunting compared to EBF children	Yes (0.00)
Dolang, Pelamonia and Simanjuntak, (2024)	24-59	113	Maluku, Indonesia	CS	2022	27	A correlation between EBF and stunting	Yes (0.013)
Rezaee *et al*. (2024)	6- 36	385	Afghanistan	CS	2022	149	Children with EBF have a lower chance of experiencing stunting (OR 0.4999; 95% CI 0.222 – 1.51) indicating a protective effect of EBF against stunting	Yes (0.041)

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Author	Population Age (months)	Sample Size (N)	Location (Country)	Study Design*	Year	Stunting Incidents	Relationship Result (Between EBF and Stunting)	p-value
Saputri and Ermi (2024)	6-59	201 (67 cases and 134 control)	Ogan Ilir, Indonesia	CC	2023	67	There is no statistically significant correlation between EBF and the incidence of stunting, where EBF does not have a significant impact on stunting in this population	No (0.647)
Sipayung, Nababan and Silitonga (2024)	6-24	248 (124 cases and 124 control)	Labuhan Batu Selatan, Indonesia	CC	2023	124	A significant relationship with the risk of stunting in toddlers is 2.5 times higher in the group that does not receive EBF compared to the group given EBF	Yes (0.00)
Sulistyawati and Rokhaidah (2024)	24-59	140	Cipedak, Indonesia	CS	2023	29	A significant relationship showed EBF children have a lower incidence of stunting compared to non EBF children	Yes (0.008)
Wulandari *et al*. (2024)	24-59	179	Aceh, Indonesia	Co	2023	126	Non EBF Children have a 0.285 times greater risk of experiencing stunting compared to EBF children.	Yes (0.01)

** CS: Cross -Sectional, CC: Case Control, Co: Cohort*

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Table 3. Latest Surveys of Stunting Prevalence and EBF Coverage in Three Countries

Country	Stunting Prevalence	EBF coverage	Survey (Year)
India	36%	64%	India National Family Health Survey (2019-2021)
Afghanistan	32.9%	63.3 %	• Afghanistan National Nutrition Smart Survey Report (2022) • Afghanistan MICS Summary Findings Report (2022-2023)
Indonesia	21.6%	55.5%	• Indonesian Nutrition Status Survey (2022) • Indonesian Health Survey (2023)

Systematic Literature Review Findings

The main findings are summarized in Table 2. All 18 studies investigated the correlation between Exclusive Breastfeeding (EBF) and stunting in children under five. The majority of studies (94.44%) reported a statistically significant relationship, indicating that children who were not exclusively breastfed were more likely to experience stunting.

Study Designs and Geographic Distribution

Of the 18 studies, 11 (61.11%) employed a cross-sectional design, 6 (33.33%) were case-control studies, and 1 (5.56%) was a cohort study. Sixteen studies were conducted in Indonesia, and one each in India and Afghanistan. Regarding publication years, six were published in 2020, one in 2021, four in 2022, six in 2023, and one in 2024.

Stunting prevalence in the world started from 2000 (33.0%) to 2022 (22.3%) has decreased. The coverage of EBF in the three countries above did not reach 75% based on the latest demographic and health surveys in each country (Table 3)

Country-Specific Analysis

India

Stunting continuous to represent a major public health concern in India, with notable regional disparities. Among the 35 provinces/Union Territories (UT) in India, Meghalaya reported the highest prevalence at 47%, while Delhi reported a lower rate of 31% (International Institute for Population Science, 2022). EBF coverage stands at 64%, falling short of the recommended 75%. Despite being the second most populous country in the world, India's rapid population growth has not been accompanied by effective early planning for high quality human capital and reproductive health. The disadvantage will contribute to increase morbidity and a growing burden of healthcare costs.

Chawla *et al.* (2020) reported that 54.4% of stunted toddlers did not receive EBF. Furthermore, 72.1% of stunted toddlers were introduced to supplementary food within the first four days of life – a practice strongly associated with maternal illiteracy and inadequate antenatal care (ANC) attendance. The study also identified maternal and neonatal characteristics significantly associated with stunting, including maternal literacy, IFA tablets during pregnancy, birth weight, and pre-lacteal feeding.

That study in Haryana also underlined a significance of educated mothers who take in charge of conducting positive wellbeing behaviors as well as ANC visit. During these visits, mothers are better equipped to birth preparedness (by consuming Iron and IFA Tablet), EBF encouragement, and guidance on monitoring child growth curves.

Conversely, deficiencies in ANC visits are often linked to adverse maternal and child health outcomes such as stunting. A recent study by Nihal and Shekhar (2024) found that only 58.5% pregnant women in India had sufficient access of ANC (four or more visits, as the recommendation from WHO).

Pre-lacteal feeding practices-such as the administration of honey and animal milk- remain common and are associated with an increased risk of infection and

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inadequate nutrition (Gaidhane *et al.*, 2021). Early complementary feeding, sometimes, as early as one month old has also been documented. These practices are heavily influenced by maternal health literacy and cultural beliefs. Kumar and Singh (2015) also found that 68% of mothers did pre-lacteal feeding, which often results in the absence of colostrum feeding. Colostrum, the nutrient-rich first milk- is vital for providing antibodies and protecting the infant's digestive system from pathogens. Promoting EBF has been shown to significantly reduce the stunting incidence (Rachim, Salam and Thaha, 2020).

Furthermore, data suggested that children from wealthier families in India tend to have lower stunting prevalence. (International Institute for Population Science, 2022). These families are more likely to prioritize education, which promotes critical thinking and reduces the pre-lacteal feeding traditional practices within the first three days of life.

To address maternal and child health, the Government of India through the National Health Mission (NHM), has achieved commendable coverage, with 96% of pregnant women possessing a Mother and Child Protection (MCP) Card (International Institute for Population Science, 2022). However, the effectiveness of this initiative largely depends on the family's ability to read, interpret, and understand the health information provided in the MCP card. Without sufficient health literacy, such tools risk becoming underutilized and symbolic rather than functional.

Afghanistan

Afghanistan faces severe nutritional challenges. In 2021, approximately 12.4 million people experienced food insecurity ((World Food Program USA, 2023). Stunting prevalence remains high, with Kabul Province reporting 25.5% in urban areas and 31.1% in rural regions. National EBF coverage is 63.3% below the global target of 70% (Afghanistan National Nutrition Smart Survey Report, 2022).

Rezaee *et al.* (2024) reported that, among 385 children studied in Kabul, only 46.8% were exclusively breastfed, and 49.1% had mothers with no formal education. The study also identified parental illiteracy (both maternal and paternal), child gender, and inadequate handwashing practices as significant contributing factors to stunting.

A separate study observed in Kandahar, Afghanistan by (Rahimi *et al.*, 2019) emphasized the influence of cultural and family factors- such as gender bias favoring boys, social pressures from in-laws, and the use of sedatives like promethazine to infants to induce sleep (so that they can rest well) – as key contributing factors to the early discontinuation of EBF.

Given Afghanistan's protracted history of conflict and economic instability, home visits by community health workers (CHWs) have emerged as an effective strategy in reaching women with limited access to maternal and child health services (Edmond *et al.*, 2018). However, one of the major barriers faced by CHWs is their limited literacy and unable to read or write. Enhancing the quality of CHW services could potentially lead to increased ANC visits, thereby creating a more supportive environment to encourage and sustain EBF.

Indonesia

Based on the 2023 Indonesia Health Survey, the national stunting prevalence is 21.5%, with 23 of 38 provinces exceeding this rate. EBF coverage is 55.5%, with substantial variation- South Papua at 33.4% and Yogyakarta at 71.4%.

Multiple studies across Aceh, Sumatera, Java, Jakarta, Yogyakarta, Maluku, and Sulawesi reported high stunting rates. Key contributing factors included: (a) the use of pre-lacteal feeds such as water, honey, and/or porridge, (b) early complementary foods, (c) limited maternal education and awareness regarding nutrition, (d) low family income and food insecurity.

Stunting in Indonesia is influenced by the complex determinants, as evidenced by numerous empirical studies found in this review. Early infant feeding practice, such as lack of colostrum and pre-lacteal feeding, increasing stunting while immunization is protective (Rachim, Salam

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and Thaha, 2020; Asmin and Abdullah, 2021). Socioeconomic disparities-low household income, limited maternal education, and inadequate health care access- are consistently linked to stunting (Sahdani, Isaura and Sumarmi, 2021; Fatihunnajah and Budiono, 2023). Additional factors include low birth weight, poor maternal nutrition, and inadequate CF practices, poor sanitation, household smoking, infectious disease, and insufficient ANC further exacerbate the risk(Ramli *et al.*, 2022; Lia, Sd and Ririn, 2023; Lubis, Ahmad and Abdurrahman, 2023; Dolang, Pelamonia and Simanjuntak, 2024; Sipayung, Nababan and Silitonga, 2024). Taken together, these studies collectively highlighted its multifactorial nature and the need for integrated, multisectoral strategies to address stunting.

Despite increased awareness of EBF, its early cessation and inappropriate introduction of CF remain prevalent in Indonesia. One significant contributing factor is limited maternal education regarding appropriate dietary patterns for toddlers. A well-educated mother is expected to have a better positive awareness in maintaining health and nutrition, and thus more likely to make informed decisions (Mahudeh, Rohmah and Adriani, 2023).

Lubis, Ahmad, and Abdurrahman (2023) mentioned *Peucicap*, a tradition introducing infants to taste foods at 40 days. Cultural beliefs, such as the assumption that stunting is a genetic condition, combined with household economic instability and low levels of nutritional knowledge, further influence parental decisions on child nutrition (Sairah, Nurcahyani and Chandra, 2023). Financial constraints significantly limit the ability of families to consistently provide nutritious food, with stunting incidence being notably higher in low-income households (Amalo and Davidz, 2023).

Fatihunnajah and Budiono (2023) highlighted that 65% of stunted children belonged to low-income families and non-EBF children. Their finding also linked low maternal education and inadequate dietary intake with increased risk of stunting.

Despite national efforts to promote EBF through Government Regulation No. 33 of 2012, provisions allowing the use of formula milk under certain cases have led to ambiguities regarding exceptions. Specifically, the regulation permits formula feeding in medically indicated cases; however, these conditions are not well defined in advance whether verbal medical advice or formal written protocols are required to justify the use of formula milk. Consequently, public perception frequently views EBF as optional rather than a priority.

Programs such as *Taburia*, which combine breastfeeding promotion with micronutrient supplementation, have demonstrated the potential to reduce stunting by up to 20% when coverage exceeds 90% (Ramli *et al.*, 2022). Nonetheless, persistent barriers -- such as maternity leave, inadequate breastfeeding-friendly workplaces, and cultural misconceptions (e.g., that stunting is hereditary) continue to hinder progress (Gebrekidan *et al.*, 2021). Breastfeeding mothers also need a comfortable atmosphere and positive motivation to stay relaxed while breastfeeding at least from spouses and/or other family individuals who may assist with family chores (Sukarni *et al.*, 2024).

This review is subject to certain limitations, primarily due to its narrow focus on EBF and selected maternal and cultural factors. While these factors are critical, stunting is a multifactorial condition also shaped by sanitation, immunization, food security, maternal education, and dietary diversity factors, which were not explored in depth. Consequently, this may limit the comprehensiveness and applicability of the findings. Future research should adopt a multisectoral approach that integrates public health, nutrition, education, and social protection to better understand the underlying causes of stunting and to design more effective and context-specific interventions.

Conclusion

Stunting requires a comprehensive prevention strategy that begins as early as the prenatal phase. The prevention does

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p-ISSN 2303-3592, e-ISSN 2540-9301
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not require expensive costs (even free) by providing EBF. In this SLR, a significant relationship was found between EBF and stunting. The failure of EBF contributes to an increased risk of stunting, as infants are deprived of optimal nutrition and essential antibodies provided through breast milk.

Across the three developing countries analyzed, a common pattern emerged: EBF is often deprioritized or neglected due to entrenched cultural norms and traditional beliefs passed down through generations. To overcome this, stunting prevention must be paired with strong public health advocacy. Community-level systems should be empowered to disseminate accurate information and promote behavioural change through health educational campaigns of EBF. Effective intervention requires both educational outreach and environmental support.

Parental education plays a critical role. Mothers and fathers with higher literacy and educational attainment are more likely to question and resist outdated customs—such as pre-lacteal feeding and early introduction of complementary food—when armed with the right knowledge. However, education alone is insufficient to drive behaviour change. Economic constraints remain a critical barrier when it comes to limited financial resources and purchasing nutritional food during the CF phase. In conclusion, stunting is a multifactorial issue requiring multi-level interventions that integrate nutrition education, cultural transformation, economic empowerment, and systemic support.

Recommendation

Health education may not stand without strong intervention from health advocacy policy. To meaningfully reduce stunting, breastfeeding must be promoted as a fundamental right and primary nutritional need for infants during the first six months. Given the strong correlation between non-EBF and higher stunting rates, the communication, information, and education (CIE) strategies must be reinforced through enforceable regulations that mandate and support EBF practices.

These regulations should be integrated into the Maternal and Child Health (well known as KIA in Bahasa Indonesia- Kesehatan Ibu dan Anak) handbook and reiterated during every antenatal care (ANC) visit. Furthermore, family engagement should be formalized as a shared responsibility, requiring spouses or support persons to sign a commitment form/sheet acknowledging their role in supporting the mother's breastfeeding journey. This approach aims to shift the burden away from mothers as sole caregivers and foster a supportive home environment for EBF.

Health workers should be proactively empowered to respond appropriately to early infant feeding challenges and to prevent the normalization of formula milk or any other kinds of pre-lacteal feeding in the first week of a baby's birth. Regulations should mandate clear, comparative information about the benefits of EBF versus formula feeding to be included in all health promotion and dissemination materials.

In setting such as Afghanistan, where access to maternal and child health services is limited, community health workers play a vital role. Their capacity should be enhanced through regular, quarterly training programs focused on maternal health monitoring, safe pregnancy practices, and infant feeding counselling. Enhancing the quality and consistency of CHW services can contribute to better maternal and child health in underserved regions.

Lastly, integrating all the health promotion strengthening must also address literacy barriers. Women with limited or no formal education often face challenges in accessing reliable health information. Therefore, several policies should mandate that all women and/or couples complete at least a basic level of education before marriage. Pre-marital health programs, delivered through community health centers, should go beyond routine health screening to include comprehensive education on EBF and infant care. These sessions should be a prerequisite for the issuance of marriage certificates, ensuring that families are adequately prepared for

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parenthood from both a health and knowledge perspective.

Abbreviations

EBF: Exclusive Breastfeeding; CF: Complementary Feeding; SD: Standard Deviation; OR: Odd Ratio; HR: Human Resources; PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-Analysis; JARS: Journal Article Reporting Standards; SLR: Systematic Literature Review; CI: Confidence Interval; UT: Union Territories; ANC: Antenatal Care; CHW: Community Health Worker; CIE: Communication, Information, and Education.

Ethics Approval and Consent Participant

Not applicable.

Conflict of Interest

The authors declare no conflicts of interest with any party in this paper.

Availability of Data and Materials

The data used in this study is sourced from online journals available.

Authors' Contribution

LJB conceptualized the research; LJB and DJMS designed the methodological framework for the systematic literature review; LJB, DJMS, and JS developed the research execution; LJB, DJMS, JS, SD, and APS interpreted the data, wrote, reviewed, and edited the manuscript.

Funding Source

Not Applicable

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