



## Nusantara Hasana Journal

*Multidisciplinary Knowledge*

Letter of Acceptance  
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Editor In Chief Nusantara Hasana Journal menyatakan dengan sebenarnya bahwa:

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Instansi : Universitas Baiturrahmah

memang benar yang bersangkutan telah mengirimkan artikel yang berjudul "THE RELATIONSHIP BETWEEN EXCLUSIVE BREASTFEEDING AND THE INCIDENCE OF STUNTING IN TODDLERS" dan telah dinyatakan layak untuk dimuat (dipublikasikan) pada Nusantara Hasana Journal Volume 3 Nomor 7, Edisi bulan Desember 2023 di <https://nusantarahasanajournal.com/index.php/nhj> dengan E-ISSN : 2798-1428. Demikian Letter of Acceptance ini dibuat untuk dapat dipergunakan sebagaimana mestinya.

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Editor In Chief



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### THE RELATIONSHIP BETWEEN EXCLUSIVE BREASTFEEDING AND THE INCIDENCE OF STUNTING IN TODDLERS


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**Abstract:**  
**Motivation/Background:** Stunting represents a prevalent health issue, particularly in lower to middle-income countries, including Indonesia. Occurring predominantly among infants, stunting is influenced by various factors such as genetics and nutritional status, primarily derived from direct dietary intake like breastfeeding. Additionally, socioeconomic factors, including household income, economic status, and food security, also contribute to stunting in young children. The adverse effects of stunting manifest in compromised growth and intellectual development, potentially impeding productivity, elevating the incidence of low birth weight, and increasing the risk of degenerative diseases. These consequences may subsequently heighten the risk of future poverty. This study aims to explore the relationship between exclusive breastfeeding and the incidence of stunting in infants.  
**Methods:** The research adopts a (narrative/systematic) review methodology, guided by the PRISMA 2020 framework. Data was gathered through searches on Google Scholar and PubMed, focusing on publications from 2019 to 2023. The search keywords included "Relationship between Exclusive Breastfeeding and Stunting," "Exclusive Breastfeeding," and "Stunting." Out of 100 results from Google Scholar and 756 from PubMed, five studies were selected for inclusion in this review.  
**Results:** The review indicates that the incidence of stunting is significantly associated with the lack of exclusive breastfeeding during the first six months of life.  
**Conclusions:** There is a significant correlation between exclusive breastfeeding and the incidence of stunting in infants, underlining the importance of promoting and supporting exclusive breastfeeding to mitigate the risk of stunting and its long-term consequences

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Gambar 1. 1

Based on data from the Indonesian Toddler Nutrition Status Survey (SSGI), there was a decrease in stunting rates from 24.4% in 2021 to 21.6% in 2022 based on sources from the Indonesian Ministry of Health. In 2007 the stunting rate was 36.8%; in 2010 35.6%; in 2013 37.2%; in 2016 34%; in 2018 30.8%; in 2019 27.7%; the year 2020 was not detected; in 2021 24.4%; in 2022 21.6%; in 2023 17.8%; and the target stunting rate in Indonesia in 2024 is 14%.<sup>2</sup>

Data in West Sumatra Province shows the incidence of stunting per age group in 2021-2022 according to the Indonesian Ministry of Health. In the age group less than one month, it was 17.31% in 2021 and there was an increase to 21.15% in 2022. In the Age group of 0-5 months in 2021 it was 8.93%; and rose to 11.66% in 2022. In the age group of 6-11 months, PDI in 2021 was 25.99%; In 2022, it decreased to 24.48%. In the age group of 24-35 months in 2021 it was 25.31%; and in 2022 it rose dramatically to 33.19%. In the Age group of 36-47 months in 2021 25.21%; In 2022, it rose to 26.83%. In the Age group of 48-59 months in 2021 27.40%; In 2022, it fell to 26.89%.<sup>3</sup>

Based on the prevalence of stunting in toddlers (height according to age) in West Sumatra Province by district/city, SSGI 2022 data shows the following figures: West Pasaman Regency 35.5%; Mentawai Islands Regency 32%; South Solok Regency 31.7%; Sijunjung Regency 30%; South Coastal District 29.8%; Pasaman Regency 28.9%; Padang Pariaman District 25%; Dharmasraya District 24.6%; Agam District 24.6%; Fifty City District 24.3%; Solok Regency

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18.1%; Payakumbuh City 17.8%; Padang Panjang City 16.8%; Bukittinggi City 16.8%; Sawahlunto City 13.7%. Based on the data, overall, the prevalence of stunting in West Sumatra Province reached 25.2%.<sup>2</sup>

Stunting is a health obstacle that can occur in toddlers in today's world. Stunting is the most common form of child malnutrition and is identified by measuring a child's length/height (lying length for <2 years old and standing height for 2 years old). Stunting is defined as length/height according to age, by sex, below -2 standard deviations (SD) from the median WHO child growth standard referred to as the *LGA*-z-score, meaning that a child's length/height is too low for their child's growth.<sup>3</sup>

Often stunting is not realized by the community, where short stature is common so it is considered normal.<sup>4</sup> Based on World Health Organization (WHO) data on the prevalence of stunting in the Southeast Asia region in 2005-2017, it shows that Indonesia ranks third for the highest stunting prevalence with an average prevalence of 36.4% (WHO, 2018).

The impact of stunting in toddlers is a level of intelligence that is not optimal, susceptible to disease, and at risk of decreased future productivity levels. Therefore, it is important to provide exclusive breastfeeding to infants at least in the first 6 months of life to meet nutritional needs and prevent stunting. Breast milk contains various components that play an important role in supporting early human growth and development. The first 6 months of exclusive breastfeeding can reduce mortality from infectious diseases by 88% and lower the likelihood of death compared to partial breastfeeding as a dose-dependent effect.<sup>5</sup>

Serious nutritional conditions in Indonesia are manifested in an increase in cases of undernutrition in children under five and those entering school age, both men and women. Malnutrition includes the impact of nutritional status in both the short and long term. Stunting, as a form of malnutrition, is closely linked to a lack of nutritional intake in the past, making it a chronic nutritional problem. Stunting assessment involves measuring the height or length, age, and sex of toddlers. Not measuring the height/length of children in the community is a bad habit and can make it difficult to realize the incidence of stunting. Therefore, stunting is one of the main focuses in efforts to improve global nutrition until 2025.<sup>6</sup>

Based on data from UNICEF 2022, it is known that the success of Exclusive Breastfeeding in South Asia 60%, East & South Africa 58%, Latin America & Caribbean 43%, East Asia & Pacific 41%, West & Central Africa 40%, Eastern Europe and Central Asia 36%, Middle East and North Africa 35%. Based on data on the prevalence of infants <6 months in Indonesia, 69.7% of the target of 45% (percentage of performance achievement of 154.9%) who received exclusive breastfeeding intake was achieved.<sup>7</sup> Meanwhile, the realization of coverage for infants <6 months in West Sumatra Province who received exclusive breastfeeding intake in 2020 has exceeded the set target of 77.6% of the target of 53%, with a percentage of achievement of 145%.<sup>8</sup>

From a molecular biology perspective, there are four risk factors for stunting: Hereditary factors contribute as much as 80%, while the rest involves hormonal signals, malnutrition, and

structure of the growth plate, and therefore, these macro- and micronutrients can also regulate the expression of genes involved in bone formation, as explained by nutrigenetics.<sup>9</sup>

## 2. MATERIALS AND METHODS

This research was conducted using the method of literature review / journal review by collecting various existing research. Information is obtained from a variety of sources and references, including PubMed and Google Scholar. In the reference search, the author uses keywords such as Exclusive Breastfeeding, Child Nutritional Needs, and Stunting. The goal is to help authors find sources relevant to the focus of the study. The data collected covers a five-year period, i.e. from 2019 to 2023. This study refers to the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) diagram to guide the process of selecting suitable references.

### Study Search And Selection Strategy

The strategy for writing this article is to use literature reviews by searching journals on Google Scholar and PubMed with keywords: (1) Exclusive Breastfeeding (2) Child Nutritional Needs (3) Stunting.

### Research Inclusion Criteria

The inclusion criteria of this study are considered appropriate to conduct a systematic review are: (1) Target group: Toddlers, (2) Results: The relationship between exclusive breastfeeding and the incidence of stunting in toddlers, (3) Research Methods: Literature Review, (4) Studies discussed in Indonesian.

### Research Exclusion Criteria

The author filters out irrelevant research titles and abstracts. The author has a sampling, and a method, if the journal does not discuss the relationship between breastfeeding and the incidence of stunting in toddlers, the document is excluded. The author examines research written in English and Indonesian, with a publication year range of 2019 – 2023.

### Data Extraction

The search for data on references and sources will begin in November 2023. Filtering is done based on relevant titles and abstracts from the full paper.

Based on the journals studied, there are several research results that found a significant relationship between exclusive breastfeeding and the incidence of stunting in toddlers. Exclusive breastfeeding can be useful to support the growth of babies, especially height, if babies do not get enough breastfeeding then they tend to have poor nutritional intake and can cause malnutrition, one of which can cause stunting.

Stunting is a chronic nutritional problem caused by lack of food intake in the long term due to a diet that does not meet needs. Stunting can be prevented by exclusive breastfeeding up to 6 months of age, nutritious diet, clean and healthy lifestyle, physical activity, and gradual monitoring of children's growth and development.

Based on the findings of the study "The Relationship of Exclusive Breastfeeding with Stunting" conducted at the **Hanaukurj** Health Center, **Sechaugan** District, **Langkat** Regency, this study found that there was a significant relationship between exclusive breastfeeding and the incidence of stunting babies. It turns out that there is a connection. Exclusive breastfeeding can protect your baby from stunting by 0.5 times. Therefore, this study provides a deeper understanding of the factors that cause stunting in children and the importance of exclusive breastfeeding in preventing stunting children.<sup>10</sup>

In addition, research in the working area of the **Medan-Belayan** Sub-District Health Center also found a significant relationship between nutritional status, duration of childbirth, and exclusive breastfeeding with the incidence of stunting in children aged 24 to 59 months in Medan. revealed that there is a relationship. The research conducted in **Belayan** District in 2023 uses survey methodology. Observational study with a cross-sectional design approach conducted in the working area of the **Medan Belayan** District Health Center.<sup>11</sup>

Meanwhile, based on the results of research conducted at the **Banjar I** Health Center in April, it showed that the prevalence of stunting reached 30.91%. Of the 34 stunting cases identified, 26 respondents had never received exclusive breastfeeding (88%), while 8 respondents had a history of exclusive breastfeeding (22%). Bivariate analysis using the chi-square test yielded a value of  $p = 0.536$  ( $p > 0.05$ ), indicating that there was no significant correlation between exclusive breastfeeding and the incidence of stunting.<sup>12</sup>

The occurrence of stunting can be caused by several factors, such as toddlers who have a history of low birth weight (BBLR), have experienced infectious diseases, parental parenting related to nutrition, exclusive breastfeeding, availability of food clothing, parental education level, social, cultural, and economic aspects. In addition, behaviors associated with poor or poor parenting can also specifically cause stunting. This can be explained in more detail, such as the lack of knowledge of mothers in fulfilling nutrition during pregnancy, as well as the preparation of nutrients needed before and after childbirth to increase optimal milk production.

Stunting often appears especially in the First 1000 Days of Life (HPK) as a result of malnutrition. Long-term malnutrition, especially during the first thousand days of life, can result in stunted growth. Children who experience this condition tend to have a shorter height compared to their peers. Poor nutritional conditions during pregnancy, growth period, and early

Postpartum bleeding, breastfeeding can also regulate birth spacing, because in mothers who breastfeed exclusively, breast milk has the impact of suppressing fertility, and reducing the risk of developing breast cancer. On the other hand, the benefits of breastfeeding for families involve convenience, because it does not require preparation as required by formula milk, and reducing the financial burden of families by eliminating the cost of purchasing formula milk and reducing medical costs as babies become more resistant to disease.

Exclusive breastfeeding provides many valuable benefits for both the baby and the mother. For infants, exclusive breastfeeding plays a role in preventing disease, supporting brain and physical development, boosting the immune system, and reducing the risk of allergies and chronic diseases. Breast milk is the gold standard source of nutrition at the beginning of life, so it is highly recommended to exclusively breastfeed newborns and during the first 6 months of life. Breast milk involves adequate macro and micronutrients and bioactive molecules, providing benefits for babies to meet their nutritional needs, promote optimal development, and reduce the risk of future infections and allergies. (KEMENKES RI, 2018)

#### 4. CONCLUSIONS & RECOMMENDATIONS

Exclusive breastfeeding is important to prevent stunting in children. It is expected that mothers provide adequate nutrition to their babies, especially through exclusive breastfeeding until reaching the age of 6 months, followed by a combination of breast milk and complementary foods (MPASI) until the child reaches the age of 2 years. In addition, it is expected that mothers will also carry out early detection of stunting by visiting health facilities, such as Puskesmas or the nearest health service.