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THE RELATIONSHIP BETWEEN EXCLUSIVE BREASTFEEDING HISTORY AND STUNTING INCIDENCE IN CHILDREN AGED 7-36 MONTHS IN THE KERA AREA OF PESANTREN I HEALTH CENTER, KEDIRI CITY

Rahma Kusuma Dewi[1], Lindha Sri Kusumawati [2], Mayasari Putri Ardela[3], Siti Aminah[4], Erna Zuli Oktavia[5], Dwi Ayu Lestari[6]
[1 2 3 4] Program Studi Pendidikan Profesi Bidan, Fakultas Ilmu Kesehatan, Universitas Kadiri
[5 6] Mahasiswa Program Studi Sarjana Kebidanan, Fakultas Ilmu Kesehatan, Universitas Kadiri
Email: [1]rahmakusumadewi@unik-kediri.ac.id, [2]lindhasrikusumawati@unik-kadiri.ac.id, [3]mayasariputriardela@unik-kadiri.ac.id, [4]sitiaminah@unik-kadiri.ac.id, Phone: +62 812-2944-0101

ABSTRACT
Stunting results from nutritional deficiencies during pregnancy and early childhood, hindering physical growth and brain development. Risk factors for stunting include maternal, child, and environmental conditions, which, if unaddressed, can lead to impaired physical, cognitive, and motor development, affecting a child's future quality of life. This study aims to examine the relationship between risk factors and stunting among children aged 24–59 months in the working area of Puskesmas Semen, Kediri Regency, in 2023. A correlational approach was used with a sample of 189 randomly selected children, and data were analyzed using the Chi-Square test. Low maternal education increased the risk of stunting (RR 0.3, $p < 0.05$), while middle and higher education levels were not significant. Non-exclusive breastfeeding (RR 2.9, $p < 0.05$), low birth weight (RR 2.6, $p < 0.05$), and short birth length (RR 2.2, $p < 0.05$) were associated with higher stunting risk. Mothers shorter than 150 cm were also at greater risk (RR 1.6, $p < 0.05$). Enhancing maternal education, promoting exclusive breastfeeding, and monitoring birth weight, birth length, and maternal height during pregnancy are essential for stunting prevention.

Keywords: Children Aged 24-59 Months, Incidence, Risk Factors, Stunting

1. INTRODUCTION

Stunting is a condition of growth failure caused by chronic malnutrition, both during pregnancy and early childhood. Children who experience stunting are at risk of not reaching their optimal height potential and maximum brain development. Globally, approximately 151 million children under five suffer from stunting due to poor nutritional intake and diseases that hinder their growth. These children require medical attention and adequate nutritional intake to survive.

According to UNICEF, one of the causes of stunting is an unbalanced diet. This includes the failure to provide exclusive breastfeeding for the first six months of life. Exclusive breastfeeding is the practice of feeding infants only breast milk, without any additional liquids or food, for the first six months. Breast milk contains all the essential nutrients a baby needs for proper growth and development. Moreover, breast milk provides protection against infectious diseases and allergies due to its antibody content (Mufdlilah, 2017).

However, in Indonesia, the coverage of exclusive breastfeeding is still far from the target. In 2021, only 71.58% of infants received exclusive breastfeeding, while the government's target was 80% (Kemenkes, 2018). In East Java, the exclusive breastfeeding coverage in 2020 was recorded at 61% (Profil Dinkes Jatim, 2020). The low coverage is caused by a lack of public awareness about the importance of exclusive breastfeeding, the introduction of complementary foods before the age of six months, and poor maternal nutrition, which affects breast milk production.

Exclusive breastfeeding is one of the key factors in preventing stunting, and this study aims to analyze the relationship between a history of exclusive breastfeeding and the incidence of stunting in children aged 7-36 months in the working area of Pesantren I Public Health Center, Kediri City, in 2022. Additionally, stunting in early childhood can affect motor development, academic achievement, and long-term economic potential (Islam et al., 2020). Stunted children also have an increased risk of mortality and infectious morbidity, impaired cognitive development, and a higher likelihood of developing non-communicable diseases in adulthood (Kang & Kim, 2019).

Stunting that occurs during the first 1,000 days of life, from pregnancy to the age of two years, has significant immediate and long-term consequences. Therefore, it is crucial to understand the factors influencing stunting, one of which is exclusive breastfeeding, which has been proven to reduce the risk of stunting.

The objective of this study is to determine the relationship between the history of exclusive breastfeeding and the incidence of stunting in children aged 7-36 months in the working area of Pesantren I Public Health Center, Kediri City.

2. METHODS

This study adopts a cross-sectional design. The research population includes all children aged 7-36 months residing in the working area of Pesantren I Public Health Center, Kediri City. The sample was randomly selected from children who visited the posyandu (integrated health service post) between January and June 2022. A total of 150 children were included in the study.

Data analysis was conducted using the chi-square test to determine whether there is a significant relationship between the history of exclusive breastfeeding and the incidence of stunting..

3. RESULTS

Table 1 presents the distribution of respondents based on the research variables.

Tabel 1. Distribution of respondent

Variable	n=189	%
Incidence Stunting		
Stunting	55	29.1
Not Stunting	134	70.9
Maternal Education		
Low	30	15.9
Middle	137	72.5
High	22	11.6
Exclusive Breastfeeding History		
Not Exclusive Breastfeeding	61	32.3
Exclusive Breastfeeding	128	67.7
Birth Weight		
Low birth weight	54	28.6
Normal	135	71.4
Maternal High		
Short (≤ 150 cm)	66	34.9
Tall (> 150 cm)	123	65.1
Birth Length		
Short (≤ 50 cm)	67	35,5
Tall (> 50 cm)	122	64,5

Based on the distribution of respondents, the majority of children did not experience stunting, while some were classified as stunted. Regarding maternal education levels, most mothers had a secondary education, followed by those with lower and higher education levels.

In terms of breastfeeding history, the majority of children received exclusive breastfeeding, while some did not. For birth weight, most children had a normal birth weight, while others fell into the low birth weight category.

Regarding maternal height, most mothers were taller than 150 cm, while some had a height of 150 cm or less. In terms of birth length, most newborns had a birth length greater than 50 cm, while some were born with a length of 50 cm or less.

The results of the chi-square test analysis to examine the relationship between risk factor variables—including maternal education, breastfeeding history, birth weight, maternal height, and birth length—and the incidence of stunting are presented in Table 2 below.

Table 2. The Relationship Between Risk Factors and the Incidence of Stunting in Children Aged 24-59 Months

Variable	Incidence stunting				RR	CI 95%	p
	Stunting		Not Stunting				
	n	%	n	%			
Maternal Education							
Low	3	5.4	27	20.1	0.3	0.12-0.92	0.004
Middle	42	76.4	95	70.9	0.9	0.78-1.05	0.169
High	10	18.2	12	9.0			

Exclusive Breastfeeding History							
Not Exclusive Breastfeeding	33	60.0	28	20.9	2.9	1.94-4.26	0.000
Exclusive Breastfeeding	22	40.0	106	79.1			
Birth Weight							
Low birth weight	28	50.9	26	19.4	2.6	1.70-4.04	0.000
Normal	27	49.1	108	80.6			
Maternal High							
Short (≤ 150 cm)	26	47.3	40	29.8	1.6	1.08-2.31	0.023
Tall (> 150 cm)	29	52.7	94	70.2			
Birth Length							
Short (≤ 50 cm)	32	58.2	35	26.1	2.2	1.55-3.20	0.000
Tall (> 50 cm)	23	41.8	99	73.9			

The analysis results in Table 2 indicate a significant relationship between several risk factors and the incidence of stunting in children aged 24-59 months. Statistically, a low maternal education level is associated with a higher risk of stunting in children, with a p-value < 0.05 and a risk ratio (RR) of 0.3, indicating that mothers with lower education levels are more likely to have stunted children. In contrast, maternal education at the secondary and higher levels did not show a significant association with stunting incidence.

The history of breastfeeding is also strongly associated with stunting. Children who did not receive exclusive breastfeeding have a higher risk of experiencing stunting compared to those who were exclusively breastfed, with an RR of 2.9 and a p-value < 0.05. This finding highlights the crucial role of exclusive breastfeeding in preventing stunting.

Birth weight has also been proven to be related to stunting. Children with low birth weight (LBW) are more likely to experience stunting, with an RR of 2.6 and a p-value < 0.05. Additionally, maternal height significantly influences stunting risk, as mothers with a height of 150 cm or less are more likely to have stunted children (RR = 1.6, p < 0.05).

Birth length is another significant risk factor for stunting. Children born with a birth length of 50 cm or less have a higher risk of experiencing stunting compared to those with a longer birth length (RR = 2.2, p < 0.05). Practically, these findings emphasize the importance of these factors in stunting prevention, underscoring the need for attention to maternal education, exclusive breastfeeding, as well as monitoring birth weight, maternal height, and birth length to reduce stunting prevalence..

4. DISCUSSION

The first factor associated with stunting incidence is maternal education level. Mothers with lower education levels are more likely to have stunted children compared to those with secondary or higher education. Maternal knowledge plays a significant role in stunting incidence (Husnaniyah et al., 2020). This finding is supported by a study in South Sumatra, which found that the most relevant maternal risk factor for stunting in young children was maternal education level (Susyani et al., 2022).

Practically, this indicates that maternal education greatly influences parenting styles and their understanding of the importance of proper child nutrition, as well as access to health information. Children of mothers with higher education levels tend to receive better parenting compared to those with less-educated mothers (Hanifah & Oviyanti, 2022). Therefore, improving maternal education, particularly at the basic and secondary levels, is essential in reducing the risk of stunting in children.

The history of breastfeeding is also strongly associated with stunting. A study conducted at Mekarsari Public Health Center in Banyuasin Regency showed a significant relationship between exclusive breastfeeding and stunting in children aged 24-59 months (Rumingsih et al., 2022). Exclusive breastfeeding provides essential nutrients to support children's growth and development while also protecting against infectious diseases that can impact nutritional status. Exclusive breastfeeding has been shown to protect children from low-income families against stunting (Hadi et al., 2021). The nutritional composition of breast milk at each lactation stage (colostrum, transitional milk, and mature milk) helps mitigate key causes of stunting, such as infant morbidity and inadequate nutrient intake (Safaah et al., 2022). Therefore, promoting exclusive breastfeeding is crucial for stunting prevention, highlighting the importance of educating mothers about breastfeeding from pregnancy through the postpartum period.

Birth weight is another significant factor associated with stunting. Children with low birth weight (LBW) are at a greater risk of experiencing stunting. Infants with a birth weight of less than 2,500 grams have a significantly higher risk of stunting, with a 5.96 times greater likelihood compared to those born with a weight of ≥2,500 grams (Lukman et al., 2021). Low birth weight can result from various factors, such as maternal malnutrition during pregnancy, infections, or other health complications in pregnant women (Damayanti et al., 2022). Proper management of maternal health issues during pregnancy, including monitoring maternal weight and ensuring adequate antenatal care, is crucial in preventing LBW and stunting in children.

Additionally, maternal height significantly influences the incidence of stunting. This finding aligns with research in Wonomerto District, Probolinggo Regency, which showed a significant relationship between maternal height and stunting in children aged 24-59 months (Sholeha, 2023). Maternal height is a key risk factor for stunting in children aged 0-59 months (Baidho et al., 2021). Mothers

with a height of 150 cm or less are at a higher risk of giving birth to stunted children. This may be related to genetic factors or maternal nutrition, which impact child growth and development. Therefore, mothers with shorter stature should receive special attention regarding optimal nutrition during pregnancy and after childbirth.

Birth length has also been identified as a significant risk factor for stunting. A study at Purwosari Public Health Center found a significant relationship between birth length and stunting incidence (Putri et al., 2024). Children born with a length of 50 cm or less are at higher risk of experiencing stunting. Birth length reflects maternal nutritional status during pregnancy and is an important indicator of potential growth restrictions in children. Monitoring birth length from birth and ensuring adequate nutrition during early growth stages are essential for supporting optimal child development.

Overall, factors such as maternal education, breastfeeding history, birth weight, maternal height, and birth length have shown significant associations with stunting in children aged 24-59 months. Therefore, greater attention to these factors is essential in stunting prevention efforts, including public health programs, increased maternal knowledge about nutrition and health, and improved access to quality healthcare services.

Based on these findings, several practical steps can be implemented to prevent and reduce stunting in children. Enhancing maternal education, particularly for those with lower education levels, can be achieved through counseling programs on balanced nutrition and proper parenting. Additionally, exclusive breastfeeding promotion should be strengthened through educational programs for pregnant women and families, focusing on antenatal healthcare services and posyandu (integrated health service posts). Efforts to manage low birth weight should also be reinforced through routine maternal health monitoring during pregnancy. Special attention should be given to mothers with a height of less than 150 cm to ensure optimal nutrition during pregnancy and postpartum. Moreover, monitoring birth length from birth is crucial for supporting optimal growth and development.

This study has several limitations that should be considered. First, the observational study design cannot establish causal relationships between risk factors and stunting incidence. Second, data collection using retrospective data sheets carries the risk of bias, particularly recall bias. Additionally, other potential factors influencing stunting, such as genetic and environmental aspects, were not included in the analysis. Another limitation is that the study sample was restricted to the Semen Public Health Center area, which may not be representative of a broader population. Therefore, further research with larger sample sizes and more robust methodologies is needed to strengthen these findings.

5. REFERENSI

Baidho, F., Sucihati, F., & Pratama, Y. Y. (2021). Hubungan Tinggi Badan Ibu Dengan Kejadian Stunting Pada Balita usia 0-59 Bulan Di Desa Argodadi Sedayu Bantul. *Jurnal Kesehatan Komunitas Indonesia*, *17*(1).

Damayanti, T., Gunanegara, R. F., & Hidayat, M. (2022). Determinant Factors Associated with Low Birth Weight Babies at Sakit Khusus Ibu dan Anak Kota Bandung From January-December 2019. *Journal of Medicine and Health*, *4*(2), 131-144.

Hadi, H., Fatimatasari, F., Irwanti, W., Kusuma, C., Alfiana, R. D., Asshiddiqi, M. I. N., Nugroho, S., Lewis, E. C., & Gittelsohn, J. (2021). Exclusive Breastfeeding Protects Young Children from Stunting in a Low-Income Population: A Study from Eastern Indonesia. *Nutrients*, *13*(12). https://doi.org/10.3390/nu13124264

Hanifah, I., & Oviyanti, F. (2022). Child cognitive development based on the maternal education. *Atfaluna: Journal of Islamic Early Childhood Education*, *5*(1), 15-24.

Husnaniyah, D., Yulyanti, D., & Rudiansyah, R. (2020). Hubungan tingkat pendidikan ibu dengan kejadian stunting. *The Indonesian Journal of Health Science*, *12*(1), 57-64.

Lukman, T., Anwar, F., Riyadi, H., Harjomidjojo, H., & Martianto, D. (2021). Birth weight and length associated with stunting among children under-five in Indonesia. *J Gizi Pangan*, *16*(1), 99-108.

Putri, Y. R. W., Mulyani, S., & Wiboworini, B. (2024). Relationship of Birth Weight and Birth Length With the Incidence of Stunting Proceedings of the International Conference on Nursing and Health Sciences, Volume 5 No 1, January - June 2024,

Rumingsih, S., Hasbia, H., & Afrika, E. (2022). Hubungan Status Gizi, Bblr Dan Pemberian Asi Ekslusif Dengan Kejadian Stunting Pada Balita Di Puskesmas Mekarsari. *PREPOTIF: Jurnal Kesehatan Masyarakat*, *6*(1), 575-582.

Safaah, N., Yunitasari, E., Efendi, F., Sunanita, S., & Suhartono, S. (2022). Relationship between exclusive breastfeeding and stunting among children aged 2-5 years in Indonesia. *Gaceta Medica de Caracas*, *130*(5S).

Sholeha, A. (2023). Hubungan Tinggi Badan Ibu dengan Kejadian Stunting Pada Anak Usia 24-59 Bulan di Kecamatan Wonomerto Kabupaten Probolinggo Tahun 2022. *Healthy Tadulako Journal (Jurnal Kesehatan Tadulako)*, *9*(1), 19-26. https://doi.org/10.22487/htj.v9i1.575

Susyani, S., Febry, F., Margarhety, I., Sadiq, A., Sartono, S., Sari, I. P., & Ni'mah, T. (2022). Maternal risk factor on incidence of stunting in South Sumatera. *Open Access Macedonian Journal of Medical Sciences*, *10*(E), 1599-1604.