Jurnal Epidemiologi Kesehatan Komunitas
11 (4), 2026, 355-364

JEKK

Determinant of Stunting Infants Aged 0 – 23 Months : A Cross-Sectional Study in Tangerang

Melly Kristanti[1]*, Putu Erma Pradnyani[1], Fatta Muhtadiy[2], Pratiwi Soni Redha[3]

[1*]Department of Public Health, Faculty of Medicine, Universitas Pembangunan Nasional Veteran Jakarta, Jakarta, Indonesia
[2]Bachelor's Degree Programe, Faculty of Medicine, Universitas Pembangunan Nasional Veteran Jakarta, Jakarta, Indonesia
[3]Bachelor Degree of Applied Science in Occupational Safety and Health, Institut Kesehatan and Teknologi Pondok Karya Pembangunan DKI Jakarta

Article Information : Received 21 May 2026 ; Last Revised 29 July 2026 ; Accepted 05 August 2026 ; Available Online 01 November 2026 ; Published 01 November 2026

ABSTRACT

Background: Stunting is the most prevalent form of childhood malnutrition, affecting approximately 22% or 148.1 million children under five years old in 2022. Stunting remains a significant public health challenge in Indonesia, affecting approximately 30% of children under five.
Methods: This study employed an analytical observational design with a cross-sectional approach. The sampling process utilized a non-probability technique through consecutive sampling. Participants were recruited sequentially based on their attendance at Integrated Health Posts (Posyandu) within the North Larangan Public Health Center's working area until the minimum required sample size of 70 respondents was achieved. Data analysis was conducted using multiple logistic regression with a statistical significance level set at *p-value*<0.05.
Result: The bivariate analysis revealed that low birth weight was significantly associated with stunting (*p-value*<0.001), with an Odds Ratio (OR) of 8.88 (95% CI: 2.41–32.68). Maternal education also showed a significant association (*p-value*=0.032; OR=4.10; 95% CI: 1.06–15.8). Furthermore, the multivariate analysis confirmed that low birth weight was the most dominant factor related to the incidence of stunting in children aged 0–23 months, yielding an adjusted Odds Ratio (aOR) of 7.34 (95% CI: 1.83–29.37; *p-value*=0.005).
Conclusion: The incidence of stunting is not solely determined by postnatal conditions; rather, it is significantly influenced by the intrauterine environment. It is imperative to monitor and optimize maternal nutritional status during pregnancy to mitigate the risk of low birth weight, which subsequently increases the vulnerability to stunting in infants aged 0–23 months.

Keywords: Low Birth Weight ; Maternal Education ; Stunting ; Postnatal.

Copyright © 2026 by Jurnal Epidemiologi Kesehatan Komunitas. This is an open-access article under the CC BY-SA License (https://creativecommons.org/licenses/by-sa/4.0)
DOI : https://doi.org/10.14710/jekk.v11i4.32325

*Corresponding author, mellyk@upnvj.ac.id

Introduction

Stunting is the most prevalent form of childhood malnutrition, affecting proximately 22% or 148. Million children under five years old in 2022. Defined by the World Health Organization (WHO) as impaired growth and development experienced in children due to inadequate nutrition and repeated infections, it is often reported as a height for age more than two standard deviations below the standard child growth median.[1] Stunting remains a significant public health challenge in Indonesia, affecting approximately 30% of children under five (Mediani, 2020). This high prevalence has serious long-term health and cognitive implications for the nation's future.[2] Stunting is a significant issue in Indonesia, with prevalence rates far exceeding national targets. The prevalence of stunting in various cities, including South Tangerang City, underscores the need for greater attention to early childhood nutrition.[3]

Based on the selected model, children under five with malnutrition and poor nutrition, receiving Vitamin A, and the average monthly per capita expenditure on food have a significant effect on the percentage of stunting in children under five in Indonesia. Low birth weight was associated with >2-fold increased risk of childhood stunting (pooled OR: 2.32; 95% CI, 2.05–2.62). The cohort studies predicted a higher risk of childhood stunting. low birth weight (LBW), which is defined as a weight below 2500 g at birth. Exclusive breastfeeding is recommended for the first six months of life, but many infants receive pumped milk, formula, donor human milk, or other nutritional sources during this critical period. Substantive evidence shows early nutrition influences development of the microbiome and immune system, affecting lifelong health.(4) The results of the analysis with a random effect model were obtained from the forest plot which showed a pooled Odds Ratio of 2.90 (95% CI: 2.07-4.08), meaning that babies who did not receive exclusive breastfeeding had a 2.9 times higher risk of stunting compared to babies who received exclusive breastfeeding.(5)

In addition to birth weight, infant sex has emerged as a potential predictor of stunting. Several multicenter studies and meta-analyses suggest that male children are at higher risk of stunting, particularly during the first two years of life.[6, 15, 16] In the other hand, the results of a meta-analysis study concluded that mothers with low education levels were at risk of 3,01 times having stunted children compared to being highly educated. The lower the level of education in mothers, the more influential it will be on the incidence of stunting in children under five.[7] In addition, another study shows that Families with income under the UMP (Upah Minimum Provinsi) have a risk of 2,3 times giving birth of stunting children compared to income families above the UMP.[8] From a theoretical standpoint, the ecological model of child development provides a useful lens to understand how child growth outcomes, including stunting, are shaped by interactions between individual, familial, community, and societal factors. At the individual level, biological factors such as sex and birth weight set the foundation for growth potential. At the familial level, maternal health, caregiving practices, and household food security influence whether that potential is realized.[6]

The causes of stunting are multifactorial and related to insufficient nutritional intake or increased nutritional needs. Stunting has irreversible short-term and long-term impacts. The World Health Organization says that stunting can cause cognitive or intelligence, motor, and verbal development that is not optimal, increase the risk of obesity and other degenerative diseases, improve health costs, and increase the incidence of morbidity and death due to nutritional problems, causing severe consequences. Ultimately, stunting can hinder economic growth, increase poverty, and widen inequality in a country because children have less than optimal levels of intelligence.[9] Indonesia, as the fourth most populous country in the world, bears a disproportionate share of this global burden.[6] According to the Indonesia Health Survey (Survei Kesehatan Indonesia, SKI) in 2023, the prevalence of stunting in Indonesia remains substantial at 21,5%, indicating that

Copyright ©2026 JEKK, ISSN 2614-4854

about 1 in 5 children ages 5 years and younger is affected, with the highest incidence observed among children aged 24 to 35 months.[10] Understanding the factors contributing to stunting in Indonesia, a country with one of the highest prevalence rates globally, is crucial for informing effective prevention and intervention strategos in regions facing similar challenges. Accordingly, this study seeks to identify and analyze the underlying determinants of stunting in Tangerang City, located in West Java Province, which represents one of the areas with the highest stunting incidence in Indonesia.

Despite a steady decline in its incidence, stunting remains a global issue. In 2022, UNICEF, the WHO, and The World Bank reported that 148,1 million children under the age of 5, representing 22,3% of this population, were affected by stunting. Although its incidence continues to decrease, further performance is needed to meet the target prevalence of 13,5% by 2030.[11] Indonesia, one of the most populous countries in the world have a significant role in this number of stunting prevalence. The 2024 SSGI results indicate that the prevalence of stunting among toddlers in Indonesia is 19,8% which was also a significant decrease compared to a year prior.[12] In the other hand, According to SSGI 2024, Tangerang city has a prevalence of stunting at 11,2%. This number of prevalence shows a significant decrease compared to data published by SKI 2023 a year prior health survey done by the Indonesian minister of health department (17,6%).[13] Although aggregate national and municipal statistics indicate a downward trend in stunting prevalence across Tangerang City, city-wide averages often mask micro-level disparities and localized risk clusters, particularly in rapidly urbanizing communities with high socioeconomic diversity. Furthermore, while existing literature in Indonesia has broadly examined stunting among children under five years (0–59 months), a critical knowledge gap remains regarding how intrauterine factors (such as birth weight) interact with maternal socioeconomic determinants specifically during the narrow, most vulnerable window of infants aged 0–23 months in urban primary care settings. Most previous studies treat the under-five population homogeneously, thereby obscuring age-specific risk profiles during the first 1,000 days of life. To address this gap, the present study specifically evaluates the determinants of stunting among infants aged 0–23 months within a localized urban public health center catchment area (North Larangan). By isolating this critical developmental phase in a socioeconomically diverse urban setting, this study provides novel empirical evidence needed to design hyper-local, targeted interventions rather than relying on generalized macro-level policies.

Methods

This study is a quantitative analytic observational research employing a cross-sectional design. The sampling technique utilized was non-probability sampling with a consecutive sampling method, where subjects were recruited sequentially based on their attendance at the Integrated Health Post (Posyandu) within the North Larangan Health Center (Puskesmas) working area.

The minimum sample size was determined a priori using the formula for hypothesis testing of two independent proportions to ensure adequate statistical power for the analytical cross-sectional design. The calculation was based on a 95% confidence level ($\alpha = 0.05$), 80% statistical power ($1 - \beta = 0.20$), and a 1:1 ratio between groups. Based on prior literature, the expected prevalence of stunting in the unexposed group (normal birth weight) was estimated at 15%, while the anticipated prevalence in the exposed group (low birth weight) was estimated at 45% to detect a clinically meaningful effect size (equivalent to an Odds Ratio of approximately 4.6). Using these parameters, the initial calculated sample size was 64 subjects. To account for a potential 10% non-response rate or incomplete maternal and child health (MCH) records, the final minimum target was rounded up, resulting in a total achieved sample size of 70 respondents.

The inclusion criteria consisted of children aged 0 – 23 months who possessed complete

Copyright ©2026 JEKK, ISSN 2614-4854

Maternal and Child Health (MCH) records and had resided in the North Larangan area for at least six months. Meanwhile, children whose mothers were aged under 20 or over 35 years during pregnancy were excluded from the study to control for extreme maternal age as a well – documented biological confounder. Since adolescent pregnancy (<20 years) and advanced maternal age (>35 years) independently elevate the risk of adverse birth outcomes, excluding these high – risk age groups allowed the study to isolate the independent effects of the primary determinants under investigation (e.g., birth weight and maternal education) on child stunting.

Data analysis was conducted using multiple logistic regression. The strategy for selecting variables for the multivariable model was based on a predefined statistical threshold (the Hosmer-Lemeshow criterion): all independent variables that demonstrated a p-value of <0,25 in the initial bivariate analysis were selected as candidates for the final multivariable logistic regression model. Statistical significance for the final multivariate.

Result

Table 1. Characteristic Responden

Variable	Frequency	Persentase
Sex		
Male	27	38,6
Female	43	61,4
Exclusive Breastfeeding		
No	28	40,0
Yes	42	60,0
Low Birth Weight		
Low	25	21,4
Normal	55	78,6
Stunting		
Yes	24	34,3
No	46	65,7
Knowledge of Stunting		
Low	33	47,1
High	37	52,9
Economic Status		
Low	12	17,1
Moderate	10	14,3
High	47	67,1
Education of Mother		
Low	50	71,4
High	20	28,6

As presented in Table 1, female infants constituted the majority of the children under two years of age (61,4%) and 60,0% of the infants received exclusive breastfeeding. Furthermore, among infants aged 0-24 months, the prevalence of stunting was 34,3%. The data history of low birth weight, 47,1% of the mothers had low nutritional knowledge, 17,1% of the households were categorized as having low socioeconomic status, and 71,4% of the mothers had a lower education level.

Table 2. Bivariate Analysis

Variable	Stunting		OR (95%CI)	p-value
	Yes	No		
Sex				
Male	13 (48,1)	14 (51,9)	2,70(0,97-7,48)	0,053
Female	11 (25,6)	32 (74,4)		
Exclusive Breastfeering				
No	12 (42,9)	16 (57)	1,87 (0,68-5,11)	0,217
Yes	12 (28,6)	30 (71,4)		

Copyright ©2026 JEKK, ISSN 2614-4854

Continued Table 2. Bivariate Analysis

Variable	Stunting		OR (95%CI)	p-value
	Yes	No		
Birth Weight				
Low	11 (73,3)	4 (26,7)	8,88(2,41-32,68)	<0,001*
Normal	13 (23,6)	42 (76,4)		
Knowledge of Stunting				
Low	13 (39,4)	20 (60,6)	1,53 (0,57-4,14)	0,395
High	11 (29,7)	26 (70,3)		
Economic Status				
Low	5 (41,7)	7 (58,3)	1,47 (0,51-4,21)	0,465
Moderate	4 (40)	6 (60)		
High	15 (31,9)	32 (68,1)		
Education of Mother				
Low	21 (42,0)	29 (58)	4,10 (1,06-15,8)	0,032*
High	3 (15,0)	17 (85)		

Based on the data presented in Table 2, it was found that low birth weight (LBW) and maternal education were significantly associated with the incidence of stunting among children under two years of age (baduta). Infatns with low birth weight exhibited an 8,88 times higher risk of stunting (95% CI ; 2,41-32,68) compared to those with normal birth weight. Furthermore, low maternal education was associated with a 4,10-fold increase in the risk of stunting (95% CI ; 1,06-15,8) relative to mothers with higher education levels.

In contrast, no significant associations were observed regarding gender, exclusive breastfeeding, knowledge of stunting, or economic status. However, descriptively the prevalence of stunting was found to higher among male children at 48,1% compared to 25,6% in female children.

Table 3. Determinants of Stunting among Infants Aged 0-23 Months

Variabel	B	SE	OR (95%CI	P-value
Low Birth Weight (LBW)	1,994	0,707	7,34 (1,83-29,37)	0,005*
Exclusive Breastfeeding	0,227	0,599	1,25 (0,38-4,05)	0,705
Education of mother	0,748	0,751	2,11 (0,48-9,20)	0,319
Sex	0,896	0,594	2,45 (0,76-7,84)	0,131

Table 3 demonstrates that low birth weight (LBW) was the most dominant predictor for the incidence of stunting among children under two years of age. Infants with a history of low birth weight exhited a 7,34-fold increased risk of stunting (aOR = 7,34) after adjusting for exclusive breastfeeding, maternal education, and the child's gender. These results underscore the necessity of prioritizing prenatal care grom the onset of pregnancy to mitigate the risk of LBW and consequently prevent stunting.

Discussion

Stunting is defined as a condition where a child's height is significantly low for their age. It is typically characterized by a height for age z score (HAZ) of more than two standard deviations (SD) below the World Health Organization (WHO) Child Growth Standards

Copyright ©2026 JEKK, ISSN 2614-4854

median. This condition reflects chronic undernutrition and is often associated with long – term adverse effects on physical and cognitive development.[14] The results of this study indicated that the prevalence of stunting reached 34,3% among the 70 infants surveyed at the North Larangan Public Health Center. This figure significantly exceeds the national targets set by the Indonesian government, which aims to reduce stunting prevalence to 18,8% by 2025 and further down to 14,4% by 2029.[15] The findings reveal that the prevalence of stunting in this study (34,3%) significantly exceeds the national threshold. Stunting is identified through a comprehensive evaluation of a child's height, wherein measurements are meticulously assessed against universally recognized benchmarks, such as the WHO Child Growth Standards. Stunting is identified through a comprehensive evaluation of a child's height, wherein measurements are meticulously assessed against a set of predetermined and universally recognized benchmarks.[16] Prior studies have indicated a geographic clustering effect, whereby areas characterized by high stunting percentages are often contiguous with regions facing comparable nutritional challenges.[17] These findings underscore the urgent need for continuous nutritional monitoring of infants within the surrounding areas of the North Larangan Public Health Center. Such measures are essential to mitigate the long-term impacts of stunting, particularly regarding the impairment of physical growth and cognitive development in children.

The results of this study indicated that among several potential risk factors—including gender, exclusive breastfeeding, maternal knowledge, birth weight, socioeconomic status, and maternal education level—only birth weight and maternal education demonstrated a significant association in the initial bivariate analysis. However, after adjusting for confounding variables in the multivariable model, only birth weight remained significantly associated with the incidence of stunting. These findings are consistent with previous research, which reported that the prevalence of low birth weight (LBW) was significantly higher among children who subsequently experienced stunting (40%).[18] Children afflicted by stunting are predisposed to remaining stunted through adolescence and adulthood. Consequently, they face limited opportunities for achieving adequate education and sustainable income, representing the profound long-term socioeconomic consequences of this condition.[19] Overall, birth weight was identified as the most significant risk factor for stunting. Infants with a history of low birth weight (LBW) were 7,34 times more likely to experience stunting compared to those with normal birth weight. This finding is aligned with previous studies, which have established that low birth weight is a critical determinant with a profound impact on the incidence of stunting.[20] Furthermore, other studies have reported that infants with a history of low birth weight (LBW) carry a 9,3 times higher risk of stunting compared to those born with normal weight.[21]

While maternal education was identified as a factor significantly associated with the incidence of stunting in the initial bivariate analysis, this association was attenuated and lost its statistical significance in the multivariable model (*p-value* = 0,319). This loss of significance suggests that, within this study's specific sample, maternal education may not act as an independent determinant of stunting. Its initial effect was likely overshadowed by more direct biological factors, predominantly low birth weight. Therefore, while broader literature often links low maternal education to child stunting,[22, 23] our findings indicate that this variable should be interpreted cautiously in this localized setting, as its impact may be indirect rather than a primary driver.

Among children residing within the North Larangan Public Health Center's coverage area, descriptively, 48,1% of male infants were stunted compared to 25,6% of female infants. The multivariable analysis indicated an adjusted odds ratio of 2,45 for male infants; however, this association was not statistically significant (*p-value* = 0,131). Therefore, within this specific study population, a child's sex was not identified as a significant independent determinant of stunting. This lack

Copyright ©2026 JEKK, ISSN 2614-4854

of statistical significance is consistent with a study by Yushananta, which similarly reported no significant correlation between a child's gender and the incidence of stunting.[25] While other literature has explored potential gender vulnerabilities in stunting prevalence,[24] our empirical findings do not establish a significant gender-based disparity, emphasizing that both male and female infants in this area are vulnerable and require equal nutritional monitoring.

This study also examined exclusive breastfeeding as a potential factor for stunting. Descriptively, the data showed that 42,9% of infants who did not receive exclusive breastfeeding were stunted. However, the multivariable analysis revealed that this association was not statistically significant within this study population (aOR = 1,25; *p-value* = 0,705). Because of this lack of statistical significance, we cannot draw a causal conclusion that the absence of exclusive breastfeeding acts as an independent determinant of stunting in this specific sample. While a substantial body of broader literature consistently highlights the protective benefits of breast milk in preventing malnutrition and reducing morbidity,[26,27] our findings suggest that in this localized cohort, the direct impact of feeding practices may be statistically overshadowed by more dominant physiological variables, such as low birth weight.

Maternal knowledge regarding stunting whether categorized as high or low presents a potential risk for the occurrence of stunting. Although this study found no statistically significant impact, lower maternal knowledge was associated with a 1,5 times higher likelihood of a child becoming stunted. These findings contrast with previous research, which suggests that maternal knowledge is significantly correlated with a high risk of stunting. A lack of maternal knowledge can adversely affect a mother's attitudes and practical skills in caring for her child during the critical First 1,000 Days of Life (HPK). Furthermore, it plays a decisive role in shaping maternal behavior and decision-making regarding the provision of food to meet adequate nutritional requirements.[28] In this study, socioeconomic status was not significantly associated with the incidence of stunting (*p-value* = 0,465 based on Table 2). This finding is consistent with previous research by Pristya et al.[29] Which similarly reported no significant correlation between socioeconomic factors and stunting (*p-value* = 0,845). Despite broader literature indicating that economic conditions are intrinsically linked to the capacity to fulfill nutritional requirements and access healthcare services,[30] this lack of association in our findings can likely be attributed to specific sample characteristics and limited statistical power. As detailed in the respondent characteristics, the majority of the sample (67,1%) belonged to the high economic status category, creating a socioeconomically homogenous cohort. This skewed distribution, combined with the relatively small overall sample size (n=70), substantially limited the statistical power needed to detect significant disparities across income levels. Consequently, in this specific urban population, the immediate biological impact of low birth weight proved to be a far stronger overriding determinant than household economic status. Nevertheless, cross-sectoral collaboration to support families in the First 1,000 Days of Life remains imperative, as economic vulnerabilities often exacerbate nutritional risks in larger, more diverse populations.

An important limitation of this study is the remarkably wide confidence interval observed for the adjusted odds ratio of low birth weight (95% CI: 1,83–29,37). This wide interval indicates considerable statistical uncertainty regarding the precise magnitude of the effect. This limitation is primarily attributable to the relatively small overall sample size (n=70) and the limited number of infants presenting with a history of low birth weight in our study population. Although the positive association between low birth weight and stunting remains statistically significant and clinically relevant, future research utilizing larger sample sizes is required to provide a more precise point estimate of this risk.

Copyright ©2026 JEKK, ISSN 2614-4854

Conclusion

In conclusion, this study highlights low birth weight as the primary driver of stunting among infants aged 0–23 months in the observed population. Interestingly, while often emphasized in broader literature, factors like maternal education and exclusive breastfeeding did not demonstrate an independent statistical effect in our final model. Given these findings, local health interventions need to strongly prioritize the prenatal period rather than just focusing on postnatal care. Practical steps should include closer monitoring of maternal nutrition and targeted support for high-risk pregnancies to prevent babies from being born too small. By addressing this core biological risk early on, we have a much better chance of breaking the stunting cycle.

Acknowledgement

The authors would like to express their sincere gratitude to the North Larangan Public Health Center (Puskesmas Larangan Utara) for granting the permission and providing the necessary support to conduct this research on stunting among infants aged 0–24 months. We also extend our appreciation to all the staff and participants who contributed to the completion of this study.

References

1. Chibuye M, Mende DR, Spijker R, Simuyandi M, Luchen CC, Bosomprah S, Et Al. Systematic Review Of Associations Between Gut Microbiome Composition And Stunting In Under-Five Children. Npj Biofilms And Microbiomes. 2024. Doi:10.1038/S41522-024-00517-5
2. Lameky VY. Stunting In Indonesia: Current Progress And Future Directions. Journal Of Healthcare Administration. 2024;3(1). Doi:10.33546/Joha.3388
3. Kusumasari TF, Lathifah S, Thohiroh EL. Pemanfaatan Aplikasi INSIST (Integrated Solution For Stunting) Untuk Mendukung Penanganan Dan Prevalensi Stunting Di Kota Tangerang Selatan. Jurnal Abdimas Mandiri. 2024;8(2). Doi:10.36982/Jam.V8i2.4387
4. Ames SR, Lotoski LC, Azad MB. Comparing Early Life Nutritional Sources And Human Milk Feeding Practices: Personalized And Dynamic Nutrition Supports Infant Gut Microbiome Development And Immune System Maturation. Gut Microbes. 2023. Doi:10.1080/19490976.2023.2190305
5. Hossain S, Mihrshahi S. Effect Of Exclusive Breastfeeding And Other Infant And Young Child Feeding Practices On Childhood Morbidity Outcomes: Associations For Infants 0–6 Months In 5 South Asian Countries Using Demographic And Health Survey Data. International Breastfeeding Journal . 2024;19(1). Doi:10.1186/S13006-024-00644-X
6. Suhaid DN, Kadarsih M, Dini K, Anggraeni LD. Association Between Infant Sex And Birth Weight With Stunting. Hearty. 2025;13(3). Doi:10.32832/Hearty.V13i3.21180
7. Azizah AM, Nurmala I, Devy SR. The Effect Of Mother's Educational Level And Stunting Incidence On Toddler: A Meta-Analysis Meta. Amerta Nutrition. 2022;6(4).
8. Isnaeni, P. Ana, Iriantom A And A. Status Sosial Ekonomi Terhadap Status Stunting Pada Anak Baduta Di Wilayah Kerja Puskesmas Sewon I Bantul DIY. Jurnal Kesehatan. 2012;6(6).
9. Akbar RR, Kartika W, Khairunnisa M. The Effect Of Stunting On Child Growth And Development. Scientific Journal. 2023;2(4). Doi:10.56260/Sciena.V2i4.118
10. Arief YS, Yunita FC, Efendi F, Murti FAK, Pradipta RO, Mckenna L. Social And Environmental Determinants Of Childhood Stunting In Indonesia: National Cross-Sectional Study. JMIR Pediatr Parent. 2025 Oct 10;8:E68918. Doi:10.2196/68918 Pubmed PMID: 41084840.
11. Mulyani AT, Khairinis MA, Khatib A, Chaerunisaa AY.

Copyright ©2026 JEKK, ISSN 2614-4854

Understanding Stunting: Impact, Causes, And Strategy To Accelerate Stunting Reduction—A Narrative Review. Nutrients. 2025. Doi:10.3390/Nu17091493

12. Natasia K, Rahmawati DP, Ardianti RD. Gambaran Prevalensi Stunting Dan Praktik Pemberian ASI Eksklusif Di Indonesia Berdasarkan Data SSGI 2024. Ghidza: Jurnal Gizi Dan Kesehatan.2025;9(2). Doi:10.22487/Qzghht55

13.SKI. Survei Kesehatan Indonesia (SKI) 2023. Kemenkes. 2023.

14. Zamzamy HZ. Risk Factors Of Under-Fives Stunting In Low-Income Households Faktor-Faktor Risiko Stunting Pada Balita Keluarga Miskin Abstrak. Action: Aceh Nutrition Journal. 2024;9(2):247–58.

15. Lestari TRP. Evaluasi Kebijakan Dan Strategi Penurunan Angka Stunting Pada Tahun 2024. Jurnal Masalah - Masalah Sosial. 2025;16(1):71–86.

16. Fauziah J, Trisnawati KD, Rini KPS, Putri SU. Stunting : Penyebab , Gejala , Dan Pencegahan. Jurnal Parenting Dan Anak. 2024;1(2):1–11.

17. Pramoedyo H, Mudjiono M, Fernandes AA, Ardianti D, Septiani K. Determination Of Stunting Risk Factors Using Spatial Interpolation Geographically Weighted Regression Kriging In Malang. Mutiara Medika: Jurnal Kedokteran Dan Kesehatan. 2020;20(2):98–103. Doi:10.18196/Mm.200250

18. Islam MZ, Chowdhury MRK, Kader M, Billah B, Islam MS, Rashid M. Determinants Of Low Birth Weight And Its Effect On Childhood Health And Nutritional Outcomes In Bangladesh. Journal Of Health, Population And Nutrition. 2024;43(1):1–11. Doi:10.1186/S41043-024-00565-9 Pubmed PMID: 38741173.

19. Suratri MAL, Et Al. Risk Factors For Stunting Among Children Under Five Years In Indonesia. Journal Of Preventive Medicine & Public Health. 2023;8(11):5–9.

20. Amatullah TA, Sang Ayu Kompiyang Indriyani. Literature Review: Risk Factors Of Stunting In Children Under Five Years Old And How To Prevent. Jurnal Biologi Tropis. 2024;24(1b):746–57. Doi:10.29303/Jbt.V24i1b.7911

21. Ribka,A T. Hubungan BBLR Dengan Kejadian Stunting Pada Anak Balita Di Puskesmas Gebang, Kabupaten Langkat. Ibnu Sina. 2025;24(2):446–53.

22. Azizah AM, Nurmala I, Devy SR. The Effect Of Mother's Educational Level And Stunting Incidence On Toddler: A Meta-Analysis Meta. Amerta Nutrition. 2022;6(4):369–75. Doi:10.20473/Amnt.V6i4.2022.369-375

23. Fayola, D., Zuraida R., Nuraisa, A, J.Darwis I. Hubungan Tingkat Pendidikan Akhir Ibu Terhadap Status Gizi Balita. Penelitian Perawat Profesional. 2025;7(April):943–56.

24. Atamou L, Rahmadiyah DC, Hassan H, Setiawan A. Analysis Of The Determinants Of Stunting Among Children Aged Below Five Years In Stunting Locus Villages In Indonesia.

25. Healthcare (Switzerland). 2023;11(6):1–12. Doi:10.3390/Healthcare11060810

26. Yushananta P, Ahyanti M. Risk Factors Of Stunting In Childrenaged 6–59 Months: Acase-Control Study In Horticulture Area. Open Access Macedonian Journal Of Medical Sciences. 2022;10(E):1–5. Doi:10.3889/Oamjms.2022.7768

27. Setiawati A, Arda D, Nordianiwati, Tyarini IA, Indryani I. Faktor Yang Berhubungan Dengan Status Gizi Pada Anak Balita. Factors Associated With Nutritional Status In Children Under Five. Jurnal Edukasi Ilmiah Kesehatan. 2023;1(3):99–106.

28. Soraya A, Kirana R. Hubungan Riwayat Pemberian Asi Eksklusif Dengan Kejadian Stunting Pada Baduta Usia 7-24

Copyright ©2026 JEKK, ISSN 2614-4854

Bulan Di Puskesmas Alalak Selatan Tahun 2024. Amirul Bangun Bangsa. 2025;1(8):1184–90.

29. Atamou L, Rahmadiyah DC, Hassan H, Setiawan A. Analysis Of The Determinants Of Stunting Among Children Aged Below Five Years In Stunting Locus Villages In Indonesia. Healthcare (Switzerland). 2023;11(6):1–12. Doi:10.3390/Healthcare11060810

30. Pristya TYR, Fitri AM, Wahyuningtyas W. Analysis Of Relationship Between Socioeconomic And Sex With Stunting Among Children Under Five Years In Sangiangtanjung, Lebak Banten. Jurnal Kesehatan Komunitas. 2021;6(3):285–91. Doi:10.25311/Keskom.Vol6.Iss3.581

31. Nurlianna, F.,Siswati, T.,Okatasari R. Pemetaan Status Ekonomi Dengan Malnutrisi Pada Anak Berusia 0-59 Bulan. Kesmas Indonesia. 2021;13(1):111–25.

Copyright ©2026 JEKK, ISSN 2614-4854