
THE RELATIONSHIP BETWEEN KNOWLEDGE, PARENTING STYLES, FATHER'S SMOKING HABITS AND STUNTING INCIDENCE AMONG CHILDREN AGED 24–59 MONTHS AT DINOYO COMMUNITY HEALTH CENTER IN MALANG CITY

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Abstract

Background: The latest data from 2024 shows that the stunting rate in Malang City has increased by 5.4%, with the Dinoyo Community Health Center reporting the highest prevalence among the 16 community health centers, at 15.3%. Stunting is a national priority health issue due to its long-term impact on children's physical and cognitive development. Indirect factors such as parental knowledge, parenting styles, and fathers' smoking habits also contribute to the occurrence of stunting. This study aims to analyze the relationship between these factors and the incidence of stunting at the Dinoyo Community Health Center in Malang City. **Methods:** This observational study employed a quantitative cross-sectional design involving 106 respondents selected through purposive sampling. Data were collected via anthropometric measurements and validated, reliable questionnaires, and analyzed using the chi-square test at a significance level of $\alpha = 0.05$. **Results:** The results showed significant association between knowledge ($P=0.004$), parenting style ($P=0.004$), and the father's smoking habits ($P=0.025$) with the prevalence of stunting. **Conclusion:** that the parenting style variable was the most significant risk factor for stunting, with an *Odds Ratio* (OR) of 3.9 (95% CI: 1.489–10.719). The conclusion of this study is that sensitive interventions focused on improving parenting *practices*—particularly regarding *feeding practices*, sanitation, and psychosocial stimulation—play a crucial role in the growth of infants and toddlers.

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Keywords: Stunting, knowledge, parenting practices, father's smoking habits

Introduction

Stunting is a national priority health issue in Indonesia. Stunting is a critical concern due to its long-term effects on children's physical and cognitive development (Sulastrri et al., 2023). According to *the World Health Organization (WHO)*, stunting is a developmental disorder in children caused by malnutrition, recurrent infections, and inadequate psychosocial stimulation, characterized by height-for-age < -2 SD on the WHO growth curve. The prevalence of stunting impacts national development. As noted in Priyono (2020)'s study, Indonesia's goals of leveraging the projected demographic dividend by 2030 and achieving "Indonesia Unggul" by 2045 risk failure if the stunting problem is not resolved.

Globally, the prevalence of stunting remains relatively high. According to the 2023 Indonesia Health Survey (SKI), there was a 0.1% decrease in the national prevalence of stunting, with the prevalence in 2023 standing at 21.5% (Fitri et al., 2024). According to the 2024 Indonesian Nutrition Status Survey (SSGI), the incidence of stunting in Indonesia also decreased by 1.7% from the previous year, reaching 19.8% in 2024. The prevalence of stunting in East Java Province is not particularly high, ranking as the second-lowest among Indonesia's 38 provinces (Ministry of Health of the Republic of Indonesia, 2025). However, according to the 2024 Indonesia Nutrition Status Survey (SSGI), the prevalence of stunting in East Java Province was 14.7%, a figure that has not yet met the national target for stunting reduction in 2024 of 14%. According to WHO threshold criteria, the prevalence of stunting in East Java falls into the moderate category. This situation indicates that the reduction in stunting has not been evenly distributed across all regions.

According to the latest 2024 data, stunting in Malang City has increased by 5.4%. One of the areas with a relatively high stunting rate is the service area of the Dinoyo Community Health Center. From 2022 to 2024—or for three consecutive years—the Dinoyo Community Health Center has experienced an increase in cases of stunted toddlers and has not yet met the stunting reduction targets set by the government. In 2024, the Dinoyo Community Health Center had the highest stunting prevalence among the 16 Community Health Centers in Malang City, at 15.3%. The 24–59-month-old age group (2 to 5 years) has a higher prevalence of stunting compared to other age groups (0–59 months). The prevalence of stunting among

children aged 24–59 months in April 2025 at the Dinoyo Community Health Center in Malang City was 8.75%. This indicates that cases of stunting are still present and continue to require attention and sustained efforts. In the Malang Mayor's Decree regarding the designation of locations for the 2024 Integrated Stunting Prevention and Management Focus, two areas within the Dinoyo Community Health Center were designated as Stunting Focus Locations (Lokus Stunting): Tlogomas Village in the super-priority category and Dinoyo Village in the priority category. This necessitates more targeted interventions to effectively reduce stunting cases.

Stunting is a form of malnutrition that poses a serious problem because it can affect children's health and development. According to the conceptual framework of *the United Nations Children's Fund* (UNICEF), indirect factors such as parental knowledge, parenting practices, and the father's smoking habits play a significant role in the occurrence of stunting through inadequate nutritional intake and recurrent infections. In a study by Riski Nirmala Sari & Yusi Ratnawati (2018), it was stated that the lower a mother's knowledge of feeding practices for infants, the poorer the infants' nutritional status. Additionally, inappropriate parenting practices can hinder nutritional fulfillment during the first 1,000 days of life (HPK). According to a study by Sabtian et al. (2023), the Dinoyo region has a high number of couples of reproductive age (PUS). This is linked to child-rearing practices regarding the provision of nutritious food, as the high number of couples of reproductive age (PUS) tends to have limited knowledge about nutrition and child-rearing practices for their infants. Additionally, fathers' smoking habits can create an unhealthy environment. A study by Astuti et al. (2020) found that smoking for more than 3 hours daily increases the incidence of stunting by 10.316 times, as prolonged exposure to cigarette smoke raises nicotine levels in the body, which can interfere with the absorption of essential nutrients such as calcium, minerals, and vitamin C needed for a child's growth.

Knowledge, parenting practices, and father's smoking habits in sensitive interventions focus on family behavioral change. Sensitive interventions play a crucial role in preventing stunting as they address the root causes of the problem. Therefore, research on the relationship between these three factors and stunting incidence at the Dinoyo Public Health

Center in Malang City is essential. Although the prevalence of stunting is generally declining, it has increased by 5.4% in Malang City. This discrepancy provides an opportunity for researchers to identify the factors causing stunting in that region. This study aims to analyze the relationship between knowledge, parenting practices, and father,s smoking habits and the incidence of stunting among children in the working are of the Dinoyo Public Health Center, Malang City.

Method

This study employs an observational design with a quantitative approach using a *cross-sectional* design to analyze each variable. The study was conducted in January 2026 within the service area of the Dinoyo Public Health Center in Malang City. The study population consists of children aged 24–59 months in the service area of the Dinoyo Public Health Center in Malang City. The sample was determined using the *Lemeshow* formula, which yielded 96 respondents, with an additional 10% added to account for *dropouts*. Thus, the total sample size was 106 respondents. Subject selection was conducted using a *non-probability sampling* approach with *purposive sampling* according to predetermined criteria. The sample was distributed proportionally according to the number of stunting cases in each sub-district within the service area of the Dinoyo Community Health Center in Malang City.

The sample must meet both the inclusion and exclusion criteria established for this study. The inclusion criteria for this study are parents or caregivers and infants aged 24–59 months residing within the Dinoyo Public Health Center’s service area, as well as parents or caregivers of infants aged 24–59 months who are willing to participate in the study by signing an *informed consent form*. Exclusion criteria include infants aged 24–59 months with congenital abnormalities or physical disabilities, such as congenital heart disease (*CHD*), short stature due to genetic conditions (*Turner syndrome, Down syndrome, congenital hypothyroidism*), neurological disorders (*Cerebral Palsy*), and skeletal abnormalities (skeletal dysplasia/dwarfism); toddlers aged 24–59 months with chronic diseases, such as congenital heart disease, cancer, tuberculosis, HIV/AIDS, and hormonal/endocrine disorders; and toddlers aged 24–59 months who do not have a father, or whose parents or caregivers declined to participate in the study.

The independent variables studied include knowledge, parenting practices, and fathers' smoking habits, while the dependent variable in this study is the incidence of stunting. Stunting is determined using the height-for-age (HFA) indicator, with stunting defined as < -2 SD and non-stunting as ≥ -2 SD. Physical growth data, such as height and weight for each toddler, were collected in this study. Additionally, to measure fathers' knowledge, parenting styles, and smoking habits, a structured questionnaire was used. All questionnaires were tested for validity and reliability, with results indicating that all questions exceeded the r-table threshold.

Knowledge levels were measured using a research instrument from Putry (2023), which employed a *Multiple Choice Question* (MCQ) questionnaire consisting of 16 questions. The instrument demonstrated that the validity test results were valid because the coefficient value exceeded the threshold of 0.632. Furthermore, reliability was tested at 0.762, which is > 0.60 . Therefore, based on the statistical test results, it can be concluded that the research questionnaire meets the reliability criteria. For the parenting style variable, the research instrument used was developed by Puspita (2023), employing a *Multiple Choice Question* (MCQ) questionnaire consisting of 20 valid and reliable questions, where the calculated r value exceeded the table threshold of 0.374. Furthermore, the reliability test showed that the *Cronbach's alpha* value was 0.904 or > 0.60 . Based on these test results, this questionnaire is reliable and suitable for research. For the smoking habits variable, the research instrument from Bimantara (2022) was used, which consists of a *Multiple Choice Question* (MCQ) questionnaire comprising 5 items. The validity test indicated validity because all 5 items were deemed valid, as the calculated r-value exceeded the table r-threshold of 10. Furthermore, the research questionnaire underwent a reliability test, yielding reliable results. The *Cronbach's alpha* value was 0.851, which is > 0.60 .

The collected data were then processed through *editing, coding, data entry, cleaning*, and tabulation using *Microsoft Excel*. Subsequently, the data were statistically analyzed using SPSS version 25. The data analysis steps included univariate analysis to describe the frequency distribution of the data and the characteristics of the subjects across all study variables. Subsequently, bivariate analysis was performed to identify the relationship between the

independent variables (knowledge, parenting style, and the father’s smoking habits) and the dependent variable (stunting). The *chi-square* statistical test with a significance level of $\alpha = 0.05$ was used in the bivariate analysis. The entire research procedure has received ethical approval no. 25.12.03/UN32.14.2.8/LT/2025 from the State University of Malang.

Results

Table 1. Respondent Characteristics

Characteristics	Frequency (n)	Percentage (%)
Parents’ Age		
≤32 Years	53	50
>32 Years	53	50
Highest Level of Education		
Elementary (Elementary School/Madrasah Ibtidaiyah–Junior High School/Madrasah Tsanawiyah)	18	17
High (High School/MA/Vocational High School–Higher Education)	88	83
Employment		
Private Sector Employees	19	17.9
Housewives	78	73.6
Civil Servant	7	6.6
Labor	1	0.9
Students	1	0.9
Toddler		
≤37 months	54	50.9
>37 months	52	49.1
Gender of Toddler		
Male	48	45.3
Female	58	54.7
Nutritional Status (Height-for-Age)		
Stunting	48	45.3

Characteristics	Frequency (n)	Percentage (%)
Not Stunted	58	54.7
Knowledge		
Good Knowledge	55	51.9
Sufficient Knowledge	39	36.8
Insufficient Knowledge	12	11.3
Parenting Style		
Good Parenting	82	77.4
Adequate Parenting	24	22.6
Father's Smoking Habits		
Does Not Smoke	20	18.9
Light Smoking Habit	19	17.9
Moderate Smoking Habit	38	35.8
Heavy Smoking Habit	29	27.4

The data presented in Table 1 show that 53 (50%) of the parents or caregivers were in the age group ≤ 32 years, while (50%) were in the age group >32 years. Additionally, the most common highest level of education among respondents was higher education (high school/vocational school–university), accounting for 88 individuals (83%). The majority of parents or caregivers were homemakers (78 individuals, 73.6%). Based on the age characteristics of the toddlers, the majority were in the ≤ 37 -month age group (50.9%), with females dominating at 58 toddlers (54.7%). The distribution of nutritional status indicates that the prevalence of toddlers with normal growth or not experiencing stunting (54.5%) exceeds the percentage of toddlers identified as stunted (45.3%). Based on the distribution of the knowledge variable, the majority of respondents (51.9%) demonstrated good knowledge. Furthermore, the results of this study indicate that the majority of respondents exhibit good parenting practices (77.4%). Additionally, regarding the variable of fathers' smoking habits, the proportion of fathers who smoke is significantly higher (81.1%).

Table 2. Relationship Between Knowledge and the Prevalence of Stunting at the Dinoyo Community Health Center, Malang City

Knowledge	Incidence of Stunting				Total	<i>P-value</i>	<i>OR</i>	95%- <i>CI</i>	
	Stunting		Not Stunted						
	N	%	N	%					N
Good	17	30.9	38	69.1	55	100	0.004	2.703	1.453–5.028
Fair	22	56.4	17	43.6	39	100			
Less	9	75	3	25	12	100			
Total	48	45.3	58	54.7	106	100			

The results of the bivariate analysis presented in Table 2 show that the *chi-square* test yielded a *p-value* of 0.004, which is smaller than the significance level of $\alpha = 0.05$. This suggests a significant association between knowledge and the incidence of stunting among children aged 24–59 months at the Dinoyo Public Health Center in Malang City, with the results showing a direct associations between knowledge levels and stunting cases.

Table 3. Relationship Between Parenting Styles and the Prevalence of Stunting at the Dinoyo Community Health Center, Malang City

Parenting Styles	Incidence of Stunting				Total	<i>P-value</i>	<i>OR</i>	95% <i>CI</i>	
	Stunting		Not Stunted						
	N	%	N	%					N
Good	31	37.8	51	62.2	82	100	0.004	3.995	1.489–10.719
Fair	17	70.8	7	29.2	24	100			
Total	48	45.3	58	54.7	106	100			

The chi-square statistical test presented in Table 3 concludes that there is a significant correlation between parenting styles and the incidence of stunting among children aged 24–59 months at the Dinoyo Community Health Center in Malang City, with a p-value of 0.004. The results of this study indicate that parenting styles are directly proportional to the risk of stunting in infants.

Table 4. Relationship Between Fathers’ Smoking Habits and the Prevalence of Stunting at the Dinoyo Community Health Center, Malang City

Father’s Smoking Habits	Incidence of Stunting				Total	P-value	OR	95% CI	
	Stunting		Not Stunted						
	N	%	N	%					
None	4	20	16	80	20	100			
Light	7	36.8	12	63.2	19	100			
Moderate	19	50	19	50	38	100	0.025	1.826	1.224–2.725
Weight	18	62.1	11	37.9	29	100			
Total	48	45.3	58	54.7	106	100			

The results of the *chi-square* statistical test presented in Table 4 conclude that the father’s smoking habit is a determinant factor with a significant association regarding the incidence of stunting among children aged 24–59 months at the Dinoyo Public Health Center in Malang City, with a *p-value* of 0.025. These findings indicate that the father’s smoking habit is directly proportional to the risk of stunting in infants.

Discussion

Based on the characteristics of the respondents, the majority of parents or caregivers of toddlers fall within the productive age group, specifically those aged ≤ 32 years and >32 years, each accounting for 50% of the total. The productive age is the period during which individuals possess relatively good physical, psychological, and social capacities to fulfill their child-rearing roles. In this age group, parents are expected to be able to make appropriate decisions

regarding the fulfillment of children's basic needs, including nutritional and health needs. Additionally, the majority of respondents have a high level of education, ranging from high school or equivalent to college (83%).

A high level of education generally influences an individual's ability to receive, understand, and process health information. However, a high level of formal education does not always translate into the ability to apply that knowledge in daily child-rearing practices. The majority of respondents were also stay-at-home mothers (73.6%), which allows them to have more time to accompany, supervise, and meet their children's needs during their growth period. Regarding the characteristics of the toddlers, the majority were aged ≤ 37 months (50.9%) and were female (54.7%). Although the proportion of toddlers not experiencing stunting is greater than that of stunted toddlers, the stunting prevalence of 45.3% is still considered very high according to WHO classification. These findings indicate that stunting remains a public health issue requiring serious attention because it is influenced by various interrelated factors, including individual, family, and environmental aspects.

The results of the study show that the majority of respondents had a good level of knowledge (51.9%). However, there were still respondents with levels of knowledge classified as adequate and insufficient. These findings indicate that knowledge regarding nutrition and stunting is not yet evenly distributed among all parents or caregivers of toddlers. These findings align with the study by Hasnawati et al. (2021), which states that low knowledge of healthy eating patterns and stunting can influence mothers' behavior in meeting their children's nutritional needs. Research by Dewi and Ariani (2021) also indicates that mothers' understanding plays a crucial role in ensuring nutritional needs are met, thereby supporting children's optimal growth and development.

Based on the results of the questionnaire item analysis, most respondents still had difficulty answering questions related to the nutritional content of a balanced diet for toddlers. This indicates that although the majority of respondents have a high level of education, their understanding of appropriate feeding practices has not yet been fully implemented in daily life. A person's knowledge is not only related to the ability to receive information, but also to the ability to interpret and apply that information in practical ways. Therefore, enhancing

knowledge through practical and context-specific education remains essential so that parents can properly apply the principles of balanced nutrition in raising their children. In this way, knowledge can serve as a vital asset in shaping health behaviors that support efforts to prevent stunting.

The study results also indicate that the majority of respondents practice good parenting (77.4%). However, this high proportion of good parenting practices has not yet been fully reflected in low stunting rates among toddlers. This finding aligns with the research by Fauziyah et al. (2023), which states that stunting can still be observed in children raised with parenting practices classified as good. Research by Thayeb et al. (2024) also indicates that good parenting practices do not necessarily prevent stunting if certain aspects of care are not optimally implemented, such as supervision and guidance during mealtimes. In addition, Christiana et al. (2022) explain that inappropriate parenting styles, particularly permissive parenting, can increase the risk of stunting in toddlers. In this study, good parenting is demonstrated through the practice of providing nutritious food, maintaining personal and environmental hygiene, showing affection, and utilizing health services. However, there are still parents who provide food with limited variety, which has the potential to cause nutritional deficiencies during the growth period.

These findings reinforce the view that stunting is a multifactorial problem influenced not only by parenting practices but also by other factors such as dietary quality, environmental sanitation, the incidence of infectious diseases, and access to health care. Therefore, efforts to prevent stunting must be comprehensive and not focus solely on a single risk factor. Strengthening parenting practices during the first 1,000 days of life is crucial because this period is a critical phase that determines the quality of a child's future growth and development.

Regarding the variable of fathers' smoking habits, the study results indicate that the majority of fathers of toddlers smoke (81.1%). This finding suggests that exposure to secondhand smoke within the family environment remains quite high and has the potential to negatively impact children's health. These findings are consistent with the study by Effendy et al. (2026), which found a strong association between fathers' smoking habits and the

incidence of stunting in toddlers. A study by Weiha et al. (2025) also reported that children exposed to secondhand smoke are at greater risk of growth disorders than those who are not exposed. Furthermore, most of the fathers who smoked in this study were classified as moderate smokers. Exposure to secondhand smoke can affect children's growth through various mechanisms, both directly and indirectly. Biologically, the harmful substances contained in cigarettes can increase the risk of respiratory tract infections, disrupt the body's metabolism, and inhibit the absorption of nutrients necessary for the growth process. Nicotine is also known to affect the function of cartilage cells, which play a role in children's bone growth.

In addition to health impacts, smoking also has economic consequences for families. Household spending on cigarettes can reduce the funds available for purchasing nutritious food. For families with limited financial resources, this situation has the potential to worsen the quality of their diet and increase the risk of nutritional problems in children. Therefore, fathers' involvement in stunting prevention efforts is not only demonstrated through meeting the family's economic needs, but also through adopting healthy lifestyle behaviors by reducing or quitting smoking. Promotive and preventive efforts that target fathers as the primary recipients of health education need to be continuously strengthened to create a healthier family environment that optimally supports children's growth and development.

This study has strengths because it examines several family factors associated with stunting, namely parental knowledge, parenting practices, and the father's smoking habits, thereby providing a more comprehensive picture of the factors contributing to stunting in toddlers. However, this study has limitations, namely the use of a cross-sectional design that does not allow researchers to explain causal relationships between variables. Additionally, data were collected via questionnaires that rely on respondents' answers, which may introduce information bias. Therefore, future research is recommended to use a longitudinal design and consider other factors that may influence the occurrence of stunting to gain a deeper understanding of the determinants of stunting.

Conclusion

Conclusions This study concludes that there is a significant association between

knowledge ($P=0.004$), parenting style ($P=0.004$), and the father's smoking habit ($P=0.025$) with the incidence of stunting among children aged 24–59 months at the Dinoyo Community Health Center in Malang City. These findings suggest that knowledge, parenting practices and father's smoking habit may be an important area for intervention. Future research is recommended to combine quantitative and qualitative methods to explore in depth parents' or caregivers' knowledge, parenting practices, and fathers' smoking habits in relation to toddler nutritional status. Additionally, future researchers may expand the scope of identifying exposure to secondhand smoke to include all family members or others living in the same household.

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Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

References

1. Aghadiati, F., Ardianto, O., & Wati, S. R. (2023). Relationship Between Mother's Knowledge and Stunting Incidence in the Service Area of the Suhaid Health Center. In *Journal of Healthcare Technology and Medicine* (Vol. 9, No. 1).
2. Al-Haiban, U. W., & Gunarto, T. (2026). The Effect of Cigarette Consumption, Education Level, and Income on Calorie Intake in Lampung Province. *Journal of Community Service and Educational Research*, 4(3), 18892–18898. <https://doi.org/10.31004/jerkin.v4i3.4953>
3. Aliyati, N. N., & Mujiburrahman. (2024). Factors Influencing Mothers' Knowledge of Stunting in Toddlers at the Rasanae Timur Community Health Center, Bima City. *EKOMA*:

Journal of Economics, 3(2).

4. Angraini, W., Febriawati, H., & Amin, M. (2022). Access to Sanitary Toilets for Stunted Toddlers. *Silampari Nursing Journal*, 6(1), 117–123. <https://doi.org/10.31539/jks.v6i1.4069>
5. Arnita, S., Rahmadhani, D. Y., & Sari, M. T. (2020). The Relationship Between Mothers' Knowledge and Attitudes and Stunting Prevention Efforts Among Toddlers in the Service Area of the Simpang Kawat Community Health Center, Jambi City. *Jurnal Akademika Baiturrahim Jambi*, 9(1), 7. <https://doi.org/10.36565/jab.v9i1.149>
6. Astuti, D. D., Handayani, T. W., & Astuti, D. P. (2020). Cigarette smoke exposure and increased risks of stunting among under-five children. *Clinical Epidemiology and Global Health*, 8(3), 943–948. <https://doi.org/10.1016/j.cegh.2020.02.029>
7. Bella, F. D., Fajar, N. A., & Misnaniarti. (2019). The Relationship Between Parenting Styles and the Incidence of Stunting in Toddlers from Low-Income Families in Palembang City. In *The Indonesian Journal of Nutrition* (Vol. 8, No. 1).
8. Bimantara, A. M. (2022). *The Relationship Between Smoking Habits and the Incidence of Insomnia Among Adolescents at SMKN 1 Bendo Magetan*.
9. Christiana, I., Nazmi, A. N., & Anisa, F. H. (2022). *The Relationship Between Maternal Parenting Styles and the Prevalence of Stunting in Toddlers in Kertosari Village, Kertosari Public Health Center Service Area, Banyuwangi*.
10. Dewi, N. W. E. P., & Ariani, N. K. S. (2021). The Relationship Between Mothers' Nutritional Knowledge and Reduced Risk of Stunting in Toddlers in Gianyar Regency. *Jurnal Menara Medika*, 3(2). <https://jurnal.umsb.ac.id/index.php/menaramedika/index>
11. Dhiya, Habibi, U., Satiti, I. A. D., & Ramadhani, R. (2023). The Relationship Between Authoritarian Parenting Styles and Children's Academic Achievement. In *Media Husada Journal of Nursing Science* (Vol. 4, No. 3). <https://mhjns.widyagamahusada.ac.id>
12. Effendy, A., Silahi, R. D., & Syahrias, L. (2026). *The Relationship Between Family Smoking Behavior and the Incidence of Stunting in Toddlers in the Botania Community Health Center Service Area in 2025* (Vol. 16, No. 2). DOI.

<http://ejurnal.univbatam.ac.id/index.php/Keperawatan>

13. Fauziyah, N. A., Rosidin, U., Purnama, D., Mardiah, W., Susanti, R. D., & Rahayuwati, L. (2023). The Relationship Between Parental Child-Rearing Practices and the Incidence of Stunting in Toddlers. *Malahayati Nursing Journal*, 5(5), 1412–1427. <https://doi.org/10.33024/mnj.v5i5.8554>
14. Fitri, Lailiyana, & Oktariani, F. (2024). Establishment of the “Smart Mothers for Healthy Children” Community for Stunting Prevention in Ranah Singkuang Village, Kampar Regency. *PITIMAS: Journal of Community Engagement in Health*.
15. Hasanah, U., Maria, I. L., Jafar, N., Hardianti, A., Mallongi, A., & Syam, A. (2020). Water, sanitation, and hygiene analysis, and individual factors for stunting among children under two years in Ambon. *Open Access Macedonian Journal of Medical Sciences*, 8(T2), 22–26. <https://doi.org/10.3889/oamjms.2020.5177>
16. Hasnawati, Latief, S., & AL, J. P. (2021). The Relationship Between Maternal Knowledge and the Incidence of Stunting in Toddlers Aged 12–59 Months. In *Journal of Nursing and Midwifery Education* (Vol. 01, No. 1).
17. Hayat, A. P. (2022). Perceptions of Parenting Styles Among Working and Non-Working Mothers: A Case Study in Gondokusuman, Yogyakarta City. *Jurnal Pelita PAUD*, 6(2), 310–320. <https://doi.org/10.33222/pelitapaud.v6i2.1986>
18. HM, K. D., Susaldi, & Munawaroh, M. (2024a). *The Relationship Between Exposure to Secondhand Smoke, Dietary Patterns, and Medical History Factors with the Incidence of Stunting*.
19. HM, K. D., Susaldi, & Munawaroh, M. (2024b). *The Relationship Between Exposure to Cigarette Smoke, Dietary Patterns, and Medical History Factors with the Incidence of Stunting*. Ministry of Health of the Republic of Indonesia. (2025). *2024 Indonesia Nutrition Status Survey*.
20. Khofiyah, N. (2019). The relationship between nutritional status and feeding practices with the development of children aged 6–24 months. In *Indonesian Journal of Midwifery Research* (Vol. 3, No. 1).

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21. Maharani, V., & Harsanti, T. (2017). *Variables Affecting Smoking Intensity Among Male Adolescents in Indonesia in 2017*.
 22. Marbun, A. H., Badi'ah, A., & Maimunah, S. (2024). *The Effect of Parenting Styles, Feeding Practices, and Maternal Nutritional Status During Pregnancy on the Incidence of Stunting in Toddlers Aged 12–59 Months*.
 23. Martony, O. (2023). Stunting in Indonesia: Challenges and Solutions in the Modern Era. *Journal of Telenursing (JOTING)*, 5(2), 1734–1745.
<https://doi.org/10.31539/joting.v5i2.6930>
 24. Masrikhiyah, R. (2025). *The Relationship Between Nutrition Knowledge Levels and the Adequacy of Macro-Nutrient Intake in Elementary School Children*.
<http://ejournal.urindo.ac.id/index.php/kesehatan>
 25. Nurhidayat, S. (2018). *The Relationship Between Smoking Frequency and the Incidence of Hypertension in the Community*.
 26. Prameswary, C. A., Masnadi, N. R., Adrial, Yulistini, & Nofita, E. (2025). Factors Associated with the Incidence of Stunting in Toddlers at the Anak Air Community Health Center. *Indonesian Journal of Health Sciences*, 6(3), 182–189.
<https://doi.org/10.25077/jikesi.v6i3.1316>
 27. Priyono. (2020). *Strategies for Accelerating the Reduction of Rural Stunting (Case Study of Support for Stunting Prevention Actions in Banyumundu Village, Pandeglang Regency)*.
 28. Puspita, S. D. (2023). *The Relationship Between Maternal Child-rearing Practices and Dietary Diversity with the Incidence of Stunting in Toddlers in the Service Area of the Sungai Guntung Public Health Center (UPT Puskesmas) in Indragiri Hilir Regency*.
 29. Putri, A. A. Y., Roslita, R., & Adila, D. R. (2022). *The Relationship Between Mothers' Knowledge Levels Regarding Stunting and Stunting Prevention Efforts in Preschool-Aged Children*. <https://doi.org/10.25311/jkh.Vol2.Iss3.849>
 30. Putry, S. A. F. (2023). *The Relationship Between Nutritional Knowledge, Illness Frequency, and Economic Status of Toddlers Aged 2–5 Years and the Incidence of Stunting in the Service Area of the Tanah Kali Kedinding Community Health Center*.

-
31. Riski Nirmala Sari, M., & Yusi Ratnawati, L. (2018). The Relationship Between Mothers' Knowledge of Feeding Practices and the Nutritional Status of Toddlers in the Service Area of the Gapura Public Health Center, Sumenep Regency. *Amerta Nutr*, 30–36. <https://doi.org/10.2473/amnt.v2i2.2018.182-188>
 32. Sabtian, Y. T., Nashihah, D., & Soffi, D. A. (2023). *Literature Review: A Map of Potential Strategies for Stunting Eradication in Malang City*.
 33. Sari, P., Sary, L., & Febriani, C. A. (2021). Community Awareness of Quitting Smoking in the Service Area of Penawar Jaya Community Health Center, Tulang Bawang District, in 2020. In *Jurnal Dunia Kesmas* (Vol. 96, No. 1). Online. <http://ejournalmalahayati.ac.id/index.php/duniakesmas/index>
 34. Silas, L., Rantetampang, A. L., Tingginehe, R., & Mallongi, A. (2018). Factors Affecting Stunting in Children Under Five Years of Age in Mimika Sub-Province. In *International Journal of Science and Healthcare Research (www.ijshr.com)* (Vol. 3, No. 2). www.ijshr.com
 35. Simamora, R. S., & Kresnawati, P. (2021). *Fulfilling a Balanced Diet in the Management of Stunting in* (Vol. 11, No. 1). <http://ejournal.urindo.ac.id/index.php/kesehatan>
 36. Sulastri, Mustikaningrum, A. C., & Anindito, T. (2023). *Determinants of Stunting Incidence in Toddlers in Kendal Regency*. 5(2).
 37. Thayeb, A. A., Brahmantia, B., Setiawan, A., Sholihat, N., & Badrudin, U. (2024). The Relationship Between Maternal Child-Rearing Practices and the Incidence of Stunting in the Service Area of the Singaparna Community Health Center, Tasikmalaya Regency. In *IHLJ | Indonesian Health Literacy Journal |* (Vol. 1, No. 2).
 38. Weiha, R. O., Solikhah, L. S., & Hardianti. (2025). The Relationship Between Smoking Behavior and Father Involvement and Stunting in Toddlers. In *Media Gizi Ilmiah Indonesia* (Vol. 3, No. 2).