

Risk Factors of Stunting Incidence Among Children in the Working Area of Berampu Public Health Center, Berampu District, Dairi Regency, 2024

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ABSTRACT

Stunting remains a significant global public health challenge, affecting millions of children under five worldwide, particularly in Asia and Africa. In Indonesia, the prevalence of stunting has shown a gradual decline in recent years, including in Dairi Regency, North Sumatra. This study aimed to identify factors associated with stunting and to establish the Gerakan Desa Sehat Atasi Stunting (Deshat) in Berampu District, Dairi Regency, as a convergent cross-sectoral strategy to accelerate stunting reduction through specific and sensitive interventions, particularly by improving access to safe drinking water and sanitation. This beginner research scheme employed a quantitative observational analytic design with a cross-sectional approach. The study examined the relationships between parenting patterns, hygiene practices, water quality, water treatment, sanitation, and stunting incidence among toddlers. Total sampling was applied, involving stunted toddlers in Berampu District. Data were analyzed using chi-square tests and logistic regression. The findings demonstrated significant associations between parenting patterns, physical quality of drinking water, and water treatment practices with stunting incidence. Children raised without democratic parenting practices were more likely to experience stunting. Likewise, poor physical quality of drinking water and inadequate water treatment practices were associated with a higher prevalence of stunting among children. These findings highlight the importance of appropriate parenting practices, safe drinking water quality, and proper household water treatment in supporting sustainable stunting prevention and reduction efforts.

Introduction

Stunting is a condition of poor nutrition starting from the womb and continuing during early childhood, resulting in suboptimal height, delayed brain development, learning difficulties in school, lower earning potential in adulthood, and limited participation in community life (Fauziah et al., 2024).

Globally, in 2022, there were 148.1 million stunted children under five years old. Asia contributed 52% of this total, while Africa contributed 43%. Indonesia has targeted reducing stunting prevalence to 14% by 2024. According to the Indonesian Nutritional Status

Survey (SSGI) 2022, the prevalence was 21.6%, down from 24.4% in 2021. In 2023, the prevalence decreased slightly again to 21.5%. Nine provinces recorded prevalence below 20%, including North Sumatra (18.9% in 2023). In Dairi Regency, the prevalence fell from 34.2% in 2021 to 28.6% in 2022, representing a 5.6% reduction (Kemenkes, 2020).

Globally, 4.2 billion people still live without access to safely managed sanitation. In Indonesia, 72.22% of households had access to safe drinking water in 2023, meeting the national target of 72%. However, North Sumatra

Province had only 70.08%, below the expected level (Agustia & Rosyada, 2023).

The Ministry of Health reported that in 2023, 70.02% of villages and urban neighborhoods had achieved Open Defecation Free (ODF) status, meeting the target of 70%. According to the Indonesian Health Survey (2023) in North Sumatra, physical drinking water quality was as follows: turbid (3.6%), colored (1.8%), bad taste (1.9%), foamy (0.8%), and bad odor (1.2%). The most common household water treatment was boiling (67.5%) (Kementerian Kesehatan, 2023).

The direct causes of stunting include inadequate parenting and poor environmental sanitation. The underlying household-level causes include maternal factors and home environmental conditions, such as inadequate sanitation, unsafe water, and limited caregiver education. The indirect causes are related to Water, Sanitation, and Hygiene (WASH) factors—drinking water sources, physical water quality, toilet ownership, and hygiene practices (Rah et al., 2015).

A preliminary study and interviews with the Head of Berampu Public Health Center identified 58 stunted children across the villages of Berampu, Karing, Banjar Toba, Psi, and Sambaliang. This represented a stunting prevalence of 15.8%. The Berampu Public Health Center oversees a total population of 8,589 households, of which 237 still practice open defecation, giving a sanitation access rate of 87.56% (Cahyono & Manongga, 2016). These findings underline the urgent need for this study.

Methodology

This study employed a quantitative analytic observational design with a cross-sectional approach to examine the relationship between parenting practices, hygiene, water quality, household water treatment, sanitation, and the incidence of stunting among children under five in Berampu District, Dairi Regency.

The study population comprised all children aged 1–5 years in the district, with a

total of 58 stunted children included using a total sampling technique. Data were collected through structured questionnaires, environmental observations, and laboratory tests of household drinking water (assessing physical, chemical, and microbiological parameters).

Data processing involved editing, coding, and computerized entry, followed by statistical analysis. Univariate analysis described variable distributions, bivariate analysis used the Chi-Square test ($\alpha = 0.05$) to determine associations, and multivariate logistic regression identified the most dominant risk factors (Yuwanti et al., 2021).

The independent variables examined were parenting practices, hygiene, household water treatment, toilet ownership, wastewater disposal, and waste management. The dependent variable was stunting, based on anthropometric measurements.

Research instruments included structured questionnaires, observation checklists, and laboratory testing kits for water quality. Ethical clearance was obtained through the Poltekkes Medan Ethics Committee.

This methodological framework ensured rigorous data collection and analysis to identify key environmental and behavioral determinants of stunting in the study area, while also providing evidence to support the proposed Healthy Village Movement to Address Stunting (DESHAT).

Result

This study revealed that stunting among children in Berampu District, Dairi Regency, is influenced by a combination of parenting practices, hygiene behaviors, drinking water quality, household water treatment, and sanitation conditions.

Variable	Stunting (n)	Amount %	Non Stunting (n)	%	Total n	%	p- value	PR
Democratic Parenting								
No	17	85	3	15	20	100	0.000	8.5
Yes	1	10	9	90	10	100		
Authoritarian Parenting								
No	17	65.4	9	34.6	26	100	0.274	2.615
Yes	1	25	3	75	4	100		
Permissive Parenting								
No	16	59.3	11	40.7	27	100	1.000	0.889
Yes	2	66.7	1	33.3	3	100		

Children raised under non-authoritative parenting styles were more likely to experience stunting. Authoritative parenting, characterized by balanced discipline and supportive communication, appears to foster better feeding practices, hygiene, and overall care, which reduce stunting risk.

Environmental factors were also significant. Families lacking safe toilets, proper wastewater disposal, and effective waste management demonstrated higher stunting prevalence. These poor sanitation conditions increase exposure to pathogens, especially those causing diarrhea, which directly interferes with nutrient absorption and growth.

Similarly, unsafe drinking water emerged as a risk factor. Households that did not boil or properly treat water were more likely to have stunted children. Laboratory results indicated contamination in physical, chemical, and microbiological parameters, reinforcing the evidence that waterborne diseases contribute to chronic malnutrition.

These findings align with global research emphasizing that Water, Sanitation, and Hygiene (WASH) are critical determinants of child growth. Poor WASH environments elevate the risk of repeated infections and environmental enteric dysfunction (EED), both strongly linked to stunting.

The results underscore the importance of cross-sectoral collaboration, as mandated in Presidential Regulation No. 72/2021 and Dairi Regency Regulation No. 1/2023, to accelerate stunting reduction. The proposed Healthy Village Movement to Address Stunting (DESHAT) represents an innovative strategy to integrate parenting education, hygiene

promotion, safe water access, and sanitation improvements at the community level.

In conclusion, reducing stunting requires more than nutritional interventions; it demands a convergent approach that addresses both behavioral and environmental determinants. By improving parenting practices and ensuring access to safe water and sanitation, sustainable progress in child health and development can be achieved.

Discussion

Bivariate Analysis

Table 1. Results Bivariate Analysis of Parenting Risk Factors for Stunting in Berampu Village in 2025

Variable	Stunting (n)	Amount %	Non Stunting (n)	%	Total n	%	p- value	PR
Democratic Parenting								
No	17	85	3	15	20	100	0.0	8.5
Yes	1	10	9	90	10	100	0.00	
Authoritarian Parenting								
No	17	65.4	9	34.6	26	100	0.2	2.6
Yes	1	25	3	75	4	100	0.74	15
Permissive Parenting								
No	16	59.3	11	40.7	27	100	1.0	0.8
Yes	2	66.7	1	33.3	3	100	0.00	89

Bivariate analysis conducted in Berampu Village (2025) identified both parenting style and water quality as important determinants of childhood stunting. Among parenting variables, democratic parenting showed a statistically significant association with stunting ($p=0.000$). Families who did not adopt a democratic parenting style were found to have an 8.5 times higher risk of having stunted children compared to those who applied this approach. This finding supports previous studies which suggest that democratic parenting fosters optimal child growth and development by balancing parental control with responsiveness, thereby enhancing communication, independence, and psychosocial well-being.

Although democratic parenting is regarded as a protective factor, its effectiveness is still influenced by other determinants such as dietary intake, food security, and breastfeeding practices. In contrast, authoritarian ($p=0.274$) and permissive ($p=1.000$) parenting styles did not show a statistically significant relationship with stunting, indicating that parenting style alone may not directly determine child growth outcomes without the interplay of nutritional and environmental factors.

Table 2. Results Bivariate Analysis of Risk Factors for Stunting Incidence in Berampu Village in 2025

Variable	Amount		Non Stunting (n)	%	Total		p- value	PR
	Stunting (n)	%			n	%		
Physical Quality of Drinking Water								
Bad	14	93.3	1	6.7	15	100	0.001	3.5
Good	4	26.7	11	73.3	15	100		
Drinking Water Treatment								
Bad	11	91.7	1	8.3	12	100	0.007	2.357
Good	7	38.9	11	61.1	18	100		
Waste Processing								
Bad	16	64	9	36	25	100	0.364	1.6
Good	2	40	3	60	5	100		
Wastewater Processing								
Bad	16	69.6	7	23.3	23	100	0.084	2.435
Good	2	28.6	5	71.4	7	100		
Toilet Ownership								
Bad	10	71.4	4	28.6	14	100	0.411	1.429
Good	8	50	8	50	16	100		

Environmental conditions also emerged as critical risk factors. Poor physical quality of drinking water was significantly associated with stunting ($p=0.001$; $PR=3.5$), while inadequate household water treatment practices increased the risk by 2.4 times ($p=0.007$). These results are consistent with prior evidence indicating that unsafe water contributes to repeated episodes of diarrheal diseases, intestinal infections, and nutrient malabsorption, all of which compromise child growth. On the other hand, waste management ($p=0.364$), wastewater disposal ($p=0.084$), and latrine ownership ($p=0.411$) were not significantly associated with stunting in this study. This suggests that while general sanitation infrastructure is important, the quality and treatment of drinking water play a more

direct role in determining child nutritional outcomes.

Table 3. Results Microbiology Examination Results of Water in Berampu Village in 2025

No	Variable	Maximum Level	Result	
			Examination Result	
	Parameter		MS	TMS
1	E.Coli (CFU/100 ml)	0	0	30
2	Total Coliform (CFU/100 ml)	0	0	30

Microbiological testing further confirmed that the drinking water consumed in the study area exceeded safety standards for *Escherichia coli* and total coliform, surpassing the permissible threshold of zero colony-forming units per 100 ml as stipulated in national health regulations. The presence of pathogenic microorganisms in household water supplies highlights the potential for gastroenteritis and recurrent diarrhea, which significantly hinder nutrient absorption and can lead to growth faltering. This evidence underscores the importance of integrating water quality management into stunting prevention strategies.

Effective interventions should therefore address both behavioral and environmental risk factors. On the household level, improving parenting practices through education on democratic parenting can promote healthier feeding patterns, better caregiving behaviors, and stronger parent-child interactions that support growth. At the same time, ensuring access to safe drinking water is essential. Recommended measures include chlorination, ozonation, ultraviolet disinfection, membrane-based filtration, reverse osmosis, distillation, or a combination of these technologies, each offering different strengths in eliminating pathogens and improving water safety. Such integrated approaches are expected to not only reduce exposure to waterborne diseases but also improve overall nutritional status, thereby lowering the prevalence of stunting.

Taken together, the findings emphasize that stunting is a multifactorial condition

influenced by both social and environmental determinants. Parenting style, particularly the democratic approach, can act as a protective factor, while poor water quality and inadequate treatment practices increase risk. Therefore, future stunting prevention programs should combine health education on parenting and nutrition with infrastructural improvements in water and sanitation systems. By addressing these risk factors simultaneously, public health efforts can achieve more sustainable reductions in stunting prevalence and improve child health outcomes in rural communities.

1. Democratic Parenting and Stunting Incidence

The analysis showed a significant relationship between democratic parenting and stunting in children ($p\text{-value} = 0.000 < 0.05$). Families not using democratic parenting had 8.5 times higher risk of stunted children than those practicing democratic parenting. This finding aligns with research by Wifaqi Rifqin Nisa et al. (2024), which also reported a significant correlation between parental parenting style, especially democratic parenting, and stunting. The statistical test confirmed this relationship was not by chance.

Another study by Aboka, Domili, and Nuryani (2024) confirmed a significant link between parenting styles—including democratic parenting—and stunting. Among 89 toddlers studied, 24.7% of parents applied democratic parenting, yet most stunted children belonged to permissive parenting groups (86.7%). Statistical analysis showed a significant association ($p = 0.000$).

Similarly, research by Wiwin Lastyana et al. (2022) emphasized that although no single parenting style fits all developmental needs, democratic (authoritative) parenting consistently supports child growth. This style encourages positive psychosocial stimulation through rules balanced with praise, open communication, and opportunities for independence. The study highlighted democratic parenting's important role in

stunting prevention, though stunting remains influenced by nutrition, sanitation, environment, breastfeeding, and weaning practices.

Overall, democratic parenting is a protective factor against stunting, but parenting success also depends on adequate child nutrition and environment. Thus, stunting prevention should include education on good parenting and improved child nutrition quality.

2. Physical Water Quality and Stunting Incidence

The analysis showed a significant relationship between the physical quality of drinking water and stunting in children ($p\text{-value} = 0.001 < 0.05$). Children consuming poor physical quality water had a 3.5 times higher prevalence of stunting compared to those with good quality water. This aligns with Nisa et al. (2021), who found a significant association between physical water quality and stunting in Pangkajene Health Center's working area, with *keruh* (cloudy) and *berasa* (tasting) water being major factors.

However, Sulung et al. (2024) found no significant relationship ($p\text{-value} = 0.264 > 0.05$) between physical water quality and stunting. In contrast, Datunsolang et al. reported a significant link ($p\text{-value} = 0.002 < 0.05$) between clean water quality and stunting, based on chi-square analysis.

According to Indonesia's Ministry of Health Regulation No. 492/2010, safe drinking water must meet physical, microbiological, chemical, and radiological standards. Good physical water quality means water is clear, tasteless, odorless, and colorless.

Prasetyo and Asfur (2021) emphasized that children in poor sanitation environments are 4 times more likely to suffer stunting. Clean water, adequate sanitation, and good hygiene prevent diseases like diarrhea that cause nutrient malabsorption, dehydration, and weight loss, which over time can lead to stunting. Contaminated water quality (cloudy, colored, or foul-smelling) often indicates microbiological

or chemical contamination, increasing diarrhea risk and negatively impacting child nutrition and growth.

3. Water Treatment and Stunting Incidence

The analysis of water treatment by respondents with stunting cases showed a p-value of 0.007 (< 0.05), indicating a significant relationship between water treatment and stunting in children. The prevalence of stunting was 2.4 times higher among children whose drinking water was poorly treated compared to those with properly treated water.

This is consistent with the study by Nurpatwa Wilda Ningsi et al., which found a significant relationship between water treatment and stunting, with a p-value of 0.018 (< 0.05). Therefore, it can be concluded that water treatment is significantly related to stunting in toddlers.

Similarly, research by Sarnili et al. reported that among respondents, 29 (60.4%) who did not treat their drinking water experienced stunting, which was higher than the 12 (14.6%) stunting cases among those who did treat their water. The chi-square test showed a p-value of 0.000 (< 0.05), indicating a significant association between water treatment and stunting in the working area of Tanjung Agung Health Center, Muara Enim District, in 2023.

4. Microbiological Water Examination

Among 30 respondents with stunted children, water samples tested from Berampu Village, Dairi Regency, did not meet microbiological standards, as both *E. coli* and Total Coliform levels exceeded the permissible limit (0 CFU/100 ml). Contamination by *E. coli* can lead to gastrointestinal diseases like diarrhea, which in turn can impair nutrient absorption and contribute to growth failure, potentially causing stunting.

Water Treatment Methods to Address Microbiological Contamination:

- Chlorination: Adding chlorine to water to kill bacteria and pathogens. This method is

effective, low-cost, and easy to implement, but requires regular monitoring.

- Ozonization: Using ozone gas (O_3) to disinfect water. It is highly effective against various pathogens without leaving harmful residues but requires specialized equipment.
- UV Treatment: Ultraviolet light is used to damage microbial DNA, preventing reproduction. It is effective without chemicals but requires clear water for optimal performance.
- Membrane Filtration: Physically removing bacteria using microfiltration or ultrafiltration membranes. This method is chemical-free but requires regular maintenance.
- Reverse Osmosis (RO): Uses a semi-permeable membrane to remove most contaminants, including bacteria. It is effective but costly and produces wastewater.
- Distillation: Involves heating water to produce steam and condensing it, leaving contaminants behind. It removes most contaminants but is slow and energy-intensive.
- The application of combined technologies involves using methods such as filtration followed by chlorination or ozonation to ensure higher effectiveness. The advantage of this approach is that it can improve the reliability and safety of drinking water. However, the limitation is that it requires higher costs and more maintenance.

CONCLUSION

This study highlights that stunting among children in Berampu District is influenced by both behavioral and environmental determinants. Parenting practices, particularly the democratic style, demonstrated a significant protective effect, with children from non-democratic households being at substantially higher risk of stunting. In addition, poor physical quality of drinking water and inadequate household water treatment were

strongly associated with increased prevalence of stunting, while other sanitation factors such as waste management, wastewater disposal, and latrine ownership were not statistically significant. Microbiological findings further confirmed widespread contamination of household drinking water with *Escherichia coli* and coliform bacteria, underscoring the role of unsafe water in recurrent infections and impaired nutrient absorption.

The findings emphasize that efforts to reduce stunting cannot rely solely on nutritional interventions but must integrate improvements in parenting, water safety, and sanitation. Cross-sectoral programs, such as the Healthy Village Movement to Address Stunting (DESHAT), offer an innovative model by combining parental education, hygiene promotion, and the provision of safe drinking water and sanitation facilities. Strengthening these interventions in accordance with Presidential Regulation No. 72/2021 and Dairi Regency Regulation No. 1/2023 will be essential to accelerate stunting reduction and improve child health outcomes sustainably in rural communities.

Referensi

1. Aboka, A. O., Domili, I., & Nuryani. (2024). Hubungan Pola Asuh Orang Tua Dengan Kejadian Stunting Pada Balita. *Journal Health and Nutritions*, 10(2), 72–76.
2. Agustia, V., & Rosyada, A. (2023). Hubungan Air, Hygiene, Dan Sanitasi Terhadap Kejadian Stunting. *PREPOTIF : Jurnal Kesehatan Masyarakat*, 7(3), 16946–16956.
3. Andini, S., & Fazria, A. N. (2022). Strategi Pengolahan Sampah dan Penerapan Zero Waste di Lingkungan Kampus STKIP Kusuma Negara. 2(1), 273–281.
4. Cahyono, F., & Manongga, S. (2016). Faktor Penentu Stunting Anak Balita Pada Berbagai Zona Ekosistem Di Kabupaten Kupang. 11(1), 9–18.
5. Fauziah, J., Trisnawati, K. D., Rini, K. P. S., & Putri, S. U. (2024). Stunting : Penyebab , Gejala , dan Pencegahan. 2, 1–11.
6. Huntayungo, Y. (2021). Sinergitas Kebijakan Dan Perencanaan Program Gerakan Pkk Dengan Tema “ Peranan Tim Penggerak Pkk Dalam Percepatan Penurunan Stunting .”
7. Kemenkes. (2020). Profil Kesehatan Indonesia 2020. In *IT - Information Technology* (Vol. 480, Issue 1). <https://doi.org/10.1524/itit.2006.48.1.6>
8. Kementerian Kesehatan. (2023). Peraturan Menteri Kesehatan Republik Indonesia Nomor 2 Tahun 2023. In *Kemenkes Republik Indonesia* (p. Hal 1-175). www.peraturan.go.id
9. Khoirun Nisa, D. M., & Sukei, T. W. (2022). Hubungan Antara Kesehatan Lingkungan dengan Kejadian Stunting di Wilayah Puskesmas Kalasan Kabupaten Sleman. *Jurnal Kesehatan Lingkungan Indonesia*, 21(2), 219–224. <https://doi.org/10.14710/jkli.21.2.219-224>
10. Lastyana, W., Rahmiati, B. F., Naktiany, W. C., Soleha, N. Z., & Jauhari, M. T. (2023). Parenting Feeding Style and Child’s Stunting: Literature Review. *Media Publikasi Promosi Kesehatan Indonesia*, 6(9), 1703–1707. <https://doi.org/10.56338/mppki.v6i9.3083>

11. Manik, R., & Makainas, I. (n.d.). Sistem pengelolaan sampah di pulau bunaken.
12. Marisdayana, R. (2022). Faktor yang Berhubungan dengan Kualitas Air Minum Rumah Tangga di Kota Jambi. *GALENICAL : Jurnal Kedokteran Dan Kesehatan Mahasiswa Malikussaleh*, 1(2), 1.<https://doi.org/10.29103/jkmm.v1i2.8108>
13. Mukhlisin, & Solihudin, E. N. (2020). Kepemilikan Jamban Sehat Pada Masyarakat. 7(3), 119–123.
14. Mzumara, B., Bwembya, P., Halwiindi, H., Mugode, R., & Banda, J. (2018). Factors associated with stunting among children below five years of age in Zambia : evidence from the 2014 Zambia demographic and health survey. 1–8.
15. Ningsi, N. W., Mayangsari, R., & Abdullah, A. D. (2024). Sanitasi Air dengan Kejadian Stunting di Kecamatan Banggae , Kabupaten Majene , Sulawesi Barat. 6(1), 97–105.
16. Nisa, W. R., Setyowati, L., & Rohmatin, H. (2024). Pengaruh Pola Pengasuhan terhadap Kejadian Stunting. *Jurnal Bidan Komunitas*, 7(2), 53–59. <https://doi.org/10.33085/jbk.v7i2.6055>
17. Nolia, H., & Harnat, R. (2025). Analysis of Sensitive Interventions through Drinking Water Supply and Access to Sanitation in Accelerating the Reduction of Stunting in Sempung Polling Village , Lae Parira Subdistrict , Dairi Regency , 2023. 5(3), 247–254.
18. Nursidiq, M., Hadii, M. S., Lubisi, M. M., & Riza, F. (2021). Pengelolaan Limbah Industri Sebagai Upaya Pencegahan Pencemaran Lingkungan Pada Masyarakat Kelurahan Tangkahan Di Kawasan Industri Modern Medan. *Ihsan*, 3(1), 90–102.
19. Rah, J. H., Cronin, A. A., Badgaiyan, B., Aguayo, V. M., Coates, S., & Ahmed, S. (2015). Household sanitation and personal hygiene practices are associated with child stunting in rural India : a cross-sectional analysis of surveys. <https://doi.org/10.1136/bmjopen-2014-005180>
20. Sarnili, Novitry, F., Sarwoko, S., & Maulana, M. (2025). HUBUNGAN AIR DENGAN KEJADIAN STUNTING PADA BALITA DI WILAYAH KERJA PUSKESMAS TANJUNG AGUNG KABUPATEN MUARA ENIM TAHUN 2023. 5(1), 1–12.
21. Sulung, N., Hasnita, E., & et all. (2024). Hubungan Kualitas Fisik, Bakteriologis dan Higiene Pengolahan Air Minum Dengan Kejadian Stunting. *Jurnal Pembangunan Nagari*, 9(1), 25–36. <https://doi.org/10.30559/jpn.v9i1.443>
22. Sunarsih, E. (2014). KONSEP PENGOLAHAN LIMBAH RUMAH TANGGA DALAM UPAYA CONCEPT OF HOUSEHOLD WASTE IN ENVIRONMENTAL POLLUTION *Jurnal Ilmu Kesehatan Masyarakat*. 5(November), 162–167.
23. Wirdawati, & Dewi, R. R. (2021). The Indonesian Journal of Public Health.

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- Jurnal Kesehatan Masyarakat, 16(2), 1–5.
24. Yuwanti, Y., Mulyaningrum, F. M., & Susanti, M. M. (2021). Faktor – Faktor Yang Mempengaruhi Stunting Pada Balita Di Kabupaten Grobogan. Jurnal Keperawatan Dan Kesehatan Masyarakat Cendekia Utama, 10(1), 74.
<https://doi.org/10.31596/jcu.v10i1.704>