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Association between Access to Clean Water and Health Services and the Incidence of Stunting in Sungai Landas Village, Banjar District, South Kalimantan

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A B S T R A C T

Stunting among infants and toddlers in Sungai Landas Village, Banjar Regency, remains above the national target. Access to clean water and healthcare services plays a crucial role in preventing stunting, but the relationship between these two factors in this area has not yet been studied simultaneously. The study aim to analyze the association between access to clean water and access to healthcare services with the incidence of stunting among children under five in Sungai Landas Village. A quantitative cross-sectional study was conducted involving 30 children under five selected through purposive sampling. Data were obtained using an adapted Indonesian Nutritional Status Survey (SSGI) questionnaire, which assessed water source quality and the frequency of access to healthcare services. Stunting status was determined by measuring height-for-age according to Regulation of the Minister of Health No. 2 of 2020. Bivariate analysis was run with Fisher's Exact test to assess the association between access to clean water and healthcare services and stunting incidence. Bivariate analysis revealed no significant association between access to clean water and stunting (p = 0.267), nor between access to healthcare services and stunting (p = 0.469). There is no significant association between the type of drinking water source or the frequency of healthcare service access and stunting among children under five in Sungai Landas Village. Other factors, such as a balanced diet and hygienic practices, also play a role. Recommendations include strengthening education on water treatment and family nutrition, improving the quality of healthcare services, and implementing multisectoral programs for more effective stunting reduction.

Stunting pada bayi dan balita di Desa Sungai Landas, Kabupaten Banjar, memiliki prevalensi tinggi dan masih di atas target nasional. Akses air bersih dan layanan kesehatan berperan penting dalam mencegah stunting, namun hubungan kedua faktor tersebut di wilayah ini belum diteliti secara simultan. Penelitian bertujuan menganalisis hubungan antara akses air bersih dan akses pelayanan kesehatan dengan kejadian stunting pada balita di Desa Sungai Landas. Penelitian kuantitatif dengan desain *cross-sectional* melibatkan 30 balita yang dipilih secara *purposive sampling*. Data diperoleh melalui adaptasi kuesioner Survei Status Gizi Indonesia (SSGI) yang menilai kualitas sumber air dan frekuensi akses ke layanan kesehatan. Status stunting ditentukan berdasarkan pengukuran tinggi badan menurut umur sesuai Permenkes Nomor 2 Tahun 2020. Analisis bivariat menggunakan uji *Fisher Exact* untuk menilai hubungan antara akses air bersih dan pelayanan kesehatan dengan kejadian *stunting*. Hasil analisis bivariat menunjukkan tidak terdapat hubungan yang signifikan antara akses air bersih dengan kejadian stunting (P= 0,267) maupun antara akses pelayanan kesehatan dengan kejadian stunting (P= 0,469). Tidak terdapat hubungan signifikan antara jenis sumber air minum ataupun frekuensi akses layanan kesehatan dengan stunting pada balita di Desa Sungai Landas. Faktor lain seperti pola makan seimbang dan praktek hidup bersih turut berperan. Rekomendasi mencakup penguatan edukasi pengolahan air, nutrisi keluarga, peningkatan kualitas layanan kesehatan, serta program multisektoral untuk penurunan stunting yang lebih efektif.

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1. Introduction

Nutrition problems in Indonesia, particularly among infants and toddlers, remain a significant concern because the first 1,000 days of life represent a golden period of child growth that critically determines the quality of human resources in the future (Aurelia, 2024; Pratiwi et al., 2021). One form of chronic malnutrition that continues to pose a major challenge is stunting, which can begin prenatally and have long-lasting impacts on cognitive development, education, and productivity (Wiyono, 2022; World Health Organization, 2024). Stunting does not only result in shorter stature but also contributes to reduced competitiveness of individuals and undermines the achievement of Sustainable Development Goals (SDG) Target 2.2, namely ending all forms of malnutrition by 2030 (Imeldawati, 2025; United Nations, n.d.).

Globally, the prevalence of stunting remains high, with 149 million cases among children under five and significant economic losses each year (World Health Organization, 2024). Meanwhile, according to the 2023 Indonesian Health Survey (Survei Kesehatan Indonesia, SKI), the prevalence of stunting in Indonesia reached 21.5% (Kementerian Kesehatan Republik Indonesia, 2024b). Compared to the 2018 Basic Health Research (Riskesdas) findings, the incidence of stunting among infants and toddlers has shown a downward trend from 30.8% (Kementerian Kesehatan Republik Indonesia, 2019). Although there was improvement between 2018 and 2023, this achievement still falls short of the national stunting reduction target of 14% (Kementerian Kesehatan Republik Indonesia, 2024a). SKI 2023 data also indicate that in South Kalimantan Province, the prevalence of stunting is higher than the national figure, at 24.7%. Meanwhile, in Banjar Regency, the prevalence of stunting reaches 30.1%. These percentages are still far from the Banjar Regency's stunting reduction target of 17%, as stipulated in the Banjar Regency Regulation Number 32 of 2021 (Pemerintah Kabupaten Banjar, 2021). This issue requires greater attention from the government, healthcare workers, and the community (Kementerian Kesehatan Republik Indonesia, 2024b). Data from the Karang Intan 2 Community Health Center (UPTD Puskesmas Karang Intan 2) in August 2024 recorded a stunting prevalence of 29.38%. In Sungai Landas Village, the stunting prevalence was recorded at 23.28%. Field observations from January to February 2025 showed that 26.7% of toddlers in the study area experienced stunting, consistent with earlier data, indicating the need for intervention on this issue.

Previous research indicates that the the cause of stunting are highly complex. One contributing factor is inadequate nutrient intake combined with repeated exposure to infections due to poor sanitation, including substandard water quality (Razaq & Y.E. Soekatri, 2022; Rahayuwati et al., 2022; Yuwanti, Himawati, & Susanti, 2022). Observations in Sungai Landas Village show that although 70% of residents use water from the Community-Based Drinking Water Supply and Sanitation Program (PAMSIMAS), the water quality is disrupted by mining activities. Only 34% of mothers utilized health counseling, indicating low utilization of promotive and preventive services (Arifuddin et al., 2023). These factors increase the risk of stunting, which should be preventable through access to clean water and optimal healthcare services.

However, previous studies have shown mixed results. Nisa et al. (2021) found a relationship between clean water sanitation and stunting, whereas Lestari et al. (2025) did not find a significant association, possibly because they did not consider physical and environmental indicators of water source quality. These differing results highlight the importance of a more detailed approach in assessing access to and quality of clean water (Nisa, Lustiyati, & Fitriani, 2021; Lestari, Rahmah, & Mutmainah, 2025). A similar pattern is observed for the variable of healthcare service access, where Kamilah and Ramadhaniah (2022) found a significant association, while Griayasa et al. (2024) did not, due to limitations in measuring service quality and frequency (Kamilah & Ramadhaniah, 2022; Griayasa et al., 2024).

This study fills an information gap by conducting a more in-depth analysis of two important factors—access to clean water and access to healthcare services—that are suspected to contribute to stunting incidence in Sungai Landas Village, Banjar Regency. In this area, studies examining both variables simultaneously are still very limited. Yet, access to adequate clean water

plays an important role in preventing gastrointestinal infections, while healthcare services can assist with early detection and nutrition education, which are vital for stunting prevention. Therefore, the objective of this research is to analyze the relationship between access to clean water and access to healthcare services with the incidence of stunting in children under five in Sungai Landas Village. The results of this study are expected to serve as evidence-based reference material for policy-making regarding stunting interventions through improving access to clean water and optimizing healthcare services in Banjar Regency.

2. Methods

Nutrition problems in Indonesia, particularly among infants and toddlers, remain a significant concern because the first 1,000 days of life represent a golden period of child growth that critically determines the quality of human resources in the future (Aurelia, 2024; Pratiwi et al., 2021). One form of chronic malnutrition that continues to pose a major challenge is stunting, which can begin prenatally and have long-lasting impacts on cognitive development, education, and productivity (Wiyono, 2022; World Health Organization, 2024). Stunting does not only result in shorter stature but also contributes to reduced competitiveness of individuals and undermines the achievement of Sustainable Development Goals (SDG) Target 2.2, namely ending all forms of malnutrition by 2030 (Imeldawati, 2025; United Nations, n.d.).

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3. Results

The study findings (Table 1) indicate that the majority of children in this research were classified as non-stunted, accounting for 73.3%, while the remaining 26.7% experienced stunting. Regarding access to clean water, most families (96.7%) were categorized as having inadequate access. Meanwhile, 93.3% of households had irregular access to health services, making this the most predominant group in the study.

Table 1. Univariate analysis results

Variable	n	%
Stunting Status		
Normal	22	73.3
Stunting	8	26.7
Access to Clean Water		
Adequate	1	3.3
Inadequate	29	96.7
Access to Health Services		
Routine	2	6.7
Not Routine	28	93.3

Table 2. Association between clean water access and the incidence of stunting

Water Source	Normal	Stunting	N	P
	n (%)	n (%)		
Adequate	0 (0)	1 (100)	1	0.267
Inadequate	22 (75.8)	7 (24.2)	29	

Based on Table 2, only one child had adequate access to clean drinking-water source, and that child experience stunting. In contrast, among children with inadequate access to clean drinking-water source, 22 children (75.8%) had normal nutritional status and 7 children (24.2%) experienced stunting.

Based on Table 3, among children who routinely accessed health services, 1 child (50%) had normal nutritional status and 1 child (50%) experienced stunting. Meanwhile, among children who did not routinely access health services, 21 children (75%) had normal nutritional status and 7 children (25%) experienced stunting.

Table 3. Association between access to health services and the incidence of stunting

Access to Health Services	Normal	Stunting	N	P
	n (%)	n (%)		
Adequate	1 (50.0)	1 (50.0)	2	0. 469
Inadequate	21 (75.0)	7 (25.0)	28	

4. Discussion

4.1 Association between access to clean water and stunting incidence

Univariate analysis revealed that 96.7% of families had inadequate access to clean water. Fisher's Exact Test yielded a p-value of 0.267. As this value exceeds the conventional significance threshold (α = 0.05), it suggest no statistically significant association between the type of water source (adequate vs. inadequate) and the incidence of stunting among the respondents. This finding is aligns with field observations,where residents of Sungai Landas Village have adopted water management practices—such as boiling water prior to consumption—to reduce microbial contamination. This practice is consistent with WHO guidelines, which identify boiling as an effective intervention to reduce the burden of diarrheal diseases in children. Boiling water reduces concentrations of pathogens such as coliforms and *E. Coli*, thereby mitigating the adverse effects of inadequate water sources (World Health Organization, 2017).

Adequate drinking-water sources help prevent infectious diseases such as diarrhea, which can impair nutrient absorption—an immediate factor directly causing stunting (Hasanah et al., 2025). However, this finding contradicts previous studies. For example, Nisa et al. (2021) reported a significant association between access to clean-water and sanitation and the incidence of stunting: children with inadequate water sanitation were more likely to be stunted (p = 0.047, OR = 2.705). This discrepancy may be attributed to the data distribution in this study. Only one child had access to an adequate drinking-water source and was stunted, while the remaining 29 children relied on inadequate sources, yet the majority had normal nutritional status. This highly skewed distribution limits the statistical power to detect a true association. In addition, residents of Sungai Landas Village routinely boil water from inadequate sources and have adopted proper hygiene and sanitation practices. These conditions effectively reduce the risk of infection, thereby minimizing the negative impact of inadequate water and obscuring any apparent relationship between water source type and stunting.

A comparable study conducted in Sukoharjo in June 2024 involving 30 toddlers yielded similar results. The study employed total sampling, used a maternal caregiving questionnaire to collect data, and tested drinking-water samples for coliform content at the Sukoharjo Regional Health Laboratory. Chi-square analysis yielded a p-value of 0.511 with a prevalence ration (PR) of 2.200 (95% CI : 0.201–24.086), indicating no significant association between coliforms presence in drinking water and stunting in toddlers. This supports the current finding that, although the microbiological quality of water (coliform content) is an important health indicator, simple interventions—such as boiling water and good caregiving practices—can minimize infection risk. As a result, a direct link between microbial contamination and stunting may be difficult to detect in a small sample (Ardhiyanto & Sari, 2024).

Interestingly, one child in this study who came from a household with access to an adequate drinking-water source who still experienced stunting. This finding suggests that merely having access to an adequate water source may not be sufficient to guarantee optimal nutritional status in children. There is a possibility that the child may have been exposed to other risk factors—such as insufficient nutritional intake for the child and low birth weight (LBW) (Hasanah et al., 2025). In addition, various indirect factors may contribute to stunting, including exclusive breastfeeding practices, food availability, immunization status, maternal nutritional status, and family income. Other relevant factors include caregiving patterns, maternal education and socioeconomic status, utilization of healthcare services and environmental sanitation (Paramasatya & Wulandari, 2023).

Findings of this study are consistent with those of Lestari et al. (2025), who reported a p-value of 0.643, indicating no statistically significant association between stunting incidence and the availability of clean water. Similarly, Orisinal et al. (2025) reported a p-value of 0.352 with an odds ratio (OR) of 0.33, and a 95% confidence interval (CI) of 0.031–5.357, also found no statistically significant relationship between stunting incidence and clean-water quality. The agreement between the current study and those by Lestari et al. (2025) and Orisinal et al. (2025) may be be explained by

the fact that access to clean water is not the sole factor influencing stunting. Moreover, almost all respondents in those studies used protected water sources—such as dug wells, springs, and rainwater catchments—resulting in limited in water variation in water source quality among participants. This is also supported by data from the Central Statistics Agency (BPS), which show a continued increase in the percentage of households with access to adequate drinking-water sources in Indonesia (Orisinal et al., 2025). Meanwhile, the difference in results compared to Nisa et al. (2021) may be attributed to greater variability in sanitation conditions in that study. The researchers also used more detailed measurements of water quality, such as assessing the physical condition of wells and the surrounding environment of water sources.

The findings of this study demonstrate that although the water source may technically be classified as inadequate, proper management (such as boiling before consumption) can reduce health risks that contribute to stunting. Therefore, while the type of water source is important for public health, its impact on children's nutritional status is also influenced by how community treat and utilize it in daily life (Munthe et al., 2024). Consequently, clean-water policies should not only focus on technical access but also emphasize public education on water treatment, sanitation practices, and healthy living behaviors (PHBS). This aligns with government programs such as the Community-Based Health Development Program (PIS-PK) and the National Strategy for Accelerating Stunting Reduction, both of which emphasize the importance of promotive-preventive approaches and cross-sector collaboration (Sardina et al., 2022).

4.2 Association between access to health services and stunting incidence

Univariate analysis revealed that 93.3% of households had irregular access to health services. Fisher's Exact Test returned a p-value of 0.469, indicating no statistically significant association between health-service access (routine vs. non-routine) and the incidence of stunting. This situation may be explained by the presence of other protective factors in family that do not routinely access healthcare services, such as good dietary habits at home, balanced nutritional intake, and attentive caregiving. Those factors may help maintain normal nutritional status in children, even in the absence of regular health service utilization.

However, this finding does not align with research by Jannah et al. (2024), which reported a p-value of 0.020, indicating a significant relationship between access to health-services and the incidence of stunting among toddlers in the Jeulingke Community Health Center service area, Banda Aceh City. The discrepancy may be attributed to the unbalanced distribution of respondents between the groups in the current study. Specifically, only two children had regular access to health services, while the majority did not. This imbalance may cause percentage differences that appear meaningful but statistically unreliable due to the small sample size in one group. Such disproportion reduces the sensitivity of the statistical test in detecting a true association. Therefore, future studies with a more balanced group size are recommended.

This study is consistent with research by Griayasa et al. (2024), which reported a p-value of 1.00, indicating no statistically significant association between access to health services and incidents of stunting (OR = 0.49; 95% CI: 0.04–5.58). The similarity in findings may be attributed to the homogeneity in that study, where 97% of respondents had already utilized health services leaving minimal variation for statistical comparison. Furthermore, other more dominant factors were identified in the study, such as child feeding practices, parental education level, and history of premature birth which may had a stronger effect on stunting outcomes.

The results of this study indicate that, although regular access to health services is generally considered important for preventing stunting, no significant association was found in this context between health-service access and the incidence of stunting. Notably, most children who did not regularly access health services maintained normal nutritional status. This suggest that utilization of health services is not the only determining factor in stunting. Other influential elements—such as balanced diet, good caregiving, and family knowledge on nutrition—also play a critical role in supporting optimal nutritional status (Paramasatya & Wulandari, 2023). Therefore, interventions aimed at reducing stunting should not focus solely on

expanding access to health-services, but must also prioritize service quality, nutrition education at the family level, and multi-sectorial collaboration.

5. Conclusions

This study demonstrates no significant association between the type of drinking-water source nor health service access and stunting incidence in Sungai Landas Village. Although most residents use water source deems technically inadequate, proper water management (such as boiling water) and the implementation of healthy living behaviors (PHBS) appear to mitigate health risks related to stunting. A similar pattern emerge in the context of health-service access, where many children with infrequent access to health services maintain normal nutritional status. This suggests that other factors—such as dietary patterns, nutritional intake, and home caregiving—also play important roles in stunting prevention.

Therefore, interventions should not focus solely on increasing access to health services but must also emphasize the quality of care, comprehensive family nutrition education, and the promotion of hygienic practices, comprising training for health workers to deliver information about healthy eating patterns and hygiene practices. Strengthening clean-water consultation emphasizing on environmental sanitation and hygiene, as well as improving the quality and accessibility of health services, particularly in remote areas, are essential steps. Implementation of multisectoral programs involving health, education, and social sectors is strongly recommended to approach stunting holistically.

Additionally, continuous monitoring and evaluation of all stunting-related programs are vital to ensure effectiveness and accountability. Further research should employ larger and more diverse samples to explore the multifactorial determinants of stunting more comprehensively and to assess the impact of existing interventions. Finally, strategic investment in sanitation infrastructure and universal access to clean water remains foundational pillar to public health advancement.

References

Ardhiyanto, R. V., & Sari, D. P. (2024). Hubungan Keberadaan Coliform Dalam Air Minum Dan Pola Asuh Ibu Dengan Kejadian Stunting Di Kecamatan Nguter Kabupaten Sukoharjo. JKM (Jurnal Kesehatan Masyarakat) Cendekia Utama, 12(2), 212. doi: https://doi.org/10.31596/jkm.v12i2.2409.

Arifuddin, A., Prihatni, Y., Setiawan, A., Wahyuni, R. D., Nur, A. F., Dyastuti, N. E., & Arifuddin, H. (2023). Epidemiological model of stunting determinants in Indonesia. Healthy Tadulako Journal (Jurnal Kesehatan Tadulako), 9(2), 224–234. doi: https://doi.org/10.22487/htj.v9i2.928.

Aurelia, Y. (2024). 1000 HPK Kunci Cegah Stunting. ayosehat.kemkes. https://ayosehat.kemkes.go.id/1000-hpk-kunci-cegah-stunting

Griayasa, G. A. K., Juwita, D. A. P. R., & Kartinawati, K. T. (2024). Faktor-faktor yang mempengaruhi kejadian stunting pada anak balita di wilayah kerja Puskesmas Nulle Timor Tengah Selatan Nusa Tenggara Timur. Aesculapius Medical Journal, 4(1), 81–93. doi: https://doi.org/10.22225/amj.4.1.2024.81-93.

Hasanah, S., Noor, M. S., Rosida, L., Triawanti, T., & Al-Audhah, N. (2025). Hubungan berat badan lahir, asi ekslusif dan riwayat penyakit infeksi dengan kejadian stunting di Puskesmas Berangas. Homeostasis, 7(3), 639–648. doi: https://doi.org/10.20527/ht.v7i3.14600

Imeldawati, R. (2025). Dampak terjadinya stunting terhadap perkembangan kognitif anak: literature review. Jurnal Medika Nusantara, 3(1), 101–107. doi: https://doi.org/10.59680/medika.v3i1.1632.

Jannah, M., Ramadhaniah, R., & Aramico, B. (2024). Hubungan asi ibu, penyakit infeksi dan akses pelayanan kesehatan dengan kejadian stunting pada balita. Jurnal Promotif Preventif, 7(5), 1063–1069. doi: https://doi.org/10.47650/jpp.v7i5.1533.

Kamilah, A., & Ramadhaniah, T. D. S. (2022). Hubungan akses pelayanan kesehatan, bblr, asi eksklusif dan asupan protein dengan kejadian stunting pada balita usia> 6-59 bulan di wilayah kerja Puskesmas Baitussalam Kecamatan Baitussalam Kabupaten Aceh Besar tahun 2022. Journal of Health and Medical Science, 1(1), 171–177. URL: https://pusdikra-publishing.com/index.php/jkes/article/view/965.

Kementerian Kesehatan Republik Indonesia. (2019). Laporan Nasional Riset Kesehatan Dasar 2018.

Kementerian Kesehatan Republik Indonesia. (2024a). Panduan Kegiatan Hari Gizi Nasional ke-64 Tahun 2024.

Kementerian Kesehatan Republik Indonesia. (2024b). Survei Kesehatan Indonesia (SKI) 2023 dalam Angka. Badan Kebijakan Pembangunan Kesehatan.

Lestari, P. P., Rahmah, A., & Mutmainah, S. G. (2025). Analisis determinan masalah stunting di Kabupaten Banjar. INVOLUSI: Jurnal Ilmu Kebidanan, 15(1), 12–18. doi: https://doi.org/10.61902/involusi.v15i1.1456.

Munthe, S. N., Silalahi, R. M., Pertiwi, K. C., Permanasari, V. Y., & Andriani, H. (2024). Kajian literatur: pengaruh konsumsi air bersih terhadap stunting pada anak yang berasal dari keluarga berpendapatan rendah. MAHESA: Malahayati Health Student Journal, 4(2), 566–580. doi: https://doi.org/10.33024/mahesa.v4i2.13301.

Nisa, S. K., Lustiyati, E. D., & Fitriani, A. (2021). Sanitasi penyediaan air bersih dengan kejadian stunting pada balita. Jurnal Penelitian Dan Pengembangan Kesehatan Masyarakat Indonesia, 2(1), 17–25. doi: https://doi.org/10.15294/jppkmi.v2i1.47243.

Orisinal, O., Yasni, H., Rasima, R., Usrina, N., & Raisah, P. (2025). Faktor-faktor yang berpengaruh terhadap kejadian stunting pada balita usia 24-59 bulan yang tinggal di pesisir pantai. MAHESA: Malahayati Health Student Journal, 5(4), 1723–1740. doi: https://doi.org/10.33024/mahesa.v5i4.17224.

Paramasatya, A., & Wulandari, R. A. (2023). Korelasi akses sanitasi dan akses air minum dengan kejadian stunting pada balita di wilayah Kabupaten Serang tahun 2022. Jambura Journal Of Health Science And Research, 5(2), 695–706. doi: http://dx.doi.org/10.35971/jjhsr.v5i2.19145.

Pemerintah Kabupaten Banjar. (2021). Peraturan Bupati Banjar Nomor 32 Tahun 2021 tentang Strategi Percepatan Penurunan angka Prevalensi STUNTING melalui Kelompok Relawan Menuju Anak Indonesia Sehat Bebas Stunting (Kawan Manis Best) di Kabupaten Banjar.

Pratiwi, R. D., Martini, N. K., & Nyandra, M. (2021). Peran Ibu dalam Pemberian Makanan Bergizi Pada Balita Status Gizi Baik yang Kesulitan Makan. Jurnal Kesehatan, 14(2), 119–125. doi: https://doi.org/10.23917/jk.v14i2.11759.

Rahayuwati, L., Ibrahim, K., Hendrawati, S., Sari, C. W. M., Yani, D. I., Pertiwi, A. S. P., & Fauziyyah, R. N. P. (2022). Pencegahan stunting melalui air bersih, sanitasi, dan nutrisi. Warta Lpm, 25(3), 356–365. doi: https://doi.org/10.23917/warta.v25i3.1031.

Razaq, A. A., & Y.E. Soekatri, M. (2022). Relationship of worm infection and hemoglobin levels to stunting in toddlers aged 3-5 years in Indramayu. SANITAS: Jurnal Teknologi dan Seni Kesehatan, 13(2), 100–109. doi: https://doi.org/10.36525/sanitas.2022.10.

Sardina, S., Riadi, S., & Natsir, N. (2022). Implementasi program penanggulangan stunting pada anak bawah lima tahun (balita) di Kabupaten Donggala. Katalogis, 10(2), 121–128. doi: https://doi.org/10.22487/katalogis23022019.2022.v10.i2.pp121-128.

United Nations. (n.d). End hunger, achieve food security and improved nutrition and promote sustainable agriculture. Retrieved June 2, 2025, from https://sdgs.un.org/goals/goal2.

Wiyono, S. (2022). Modelling of toddlers stunting prevention in the first thousand days of urban area life. SANITAS: Jurnal Teknologi Dan Seni Kesehatan, 13(2). doi: https://doi.org/10.36525/sanitas.2022.17.

World Health Organization. (2017). Guidelines for drinking-water quality, 4th edition, incorporating the 1st addendum. https://www.who.int/publications/i/item/9789241549950.

World Health Organization. (2024). Stunting in focus: challenges, successes, and a path forward to 2030. https://www.who.int/news-room/events/detail/2024/11/21/default-calendar/stunting-in-focus-challenges-successes-and-a-path-forward-to-2030.

Yuwanti, Y., Himawati, L., & Susanti, M. M. (2022). Pencegahan stunting pada 1000 HPK. Jurnal ABDIMAS-HIP Pengabdian Kepada Masyarakat, 3(1), 35–39. doi: https://doi.org/10.37402/abdimaship.vol3.iss1.166.