Mitra Mahajana: Jurnal Pengabdian Masyarakat 7(1), 2026, 158-164
ISSN 2747-1861 (print), ISSN 2747-187X (online)
https://doi.org/10.37478/mahajana.v7i1.7808 **mahajana@uniflor.ac.id**
Available online at: https://e-journal.uniflor.ac.id/index.php/mahajana/7808

COMMUNITY-BASED NUTRITION INTERVENTION TO REDUCE STUNTING IN TENGANAN VILLAGE: A COLLABORATION BETWEEN UNIVERSITAS WARMADEWA AND WASEDA UNIVERSITY

Sri Masyeni[1*], Gita Pritayanti Dinar[2], Pasek Mangku[3], Saraswati Laksmi Dewi[4], Tomoko Wake[5]
[1,2,3,4] Warmadewa University, Denpasar-Bali, Indonesia
[5]Waseda University, Tokyo, Japan
*Corresponding author, email: sri.masyeni@warmadewa.ac.id

Received: 21/03/2026 *Revised: 23/03/2026* *Accepted: 04/04/2026*

Abstract. *Stunting is a chronic, nutrition-related growth disorder that impacts both physical growth and cognitive development, with varying prevalence across different regions. Tenganan Village in Karangasem faces significant challenges regarding stunting, which necessitate integrated interventions. The objective of this project is to improve nutrition knowledge, promote balanced dietary practices using locally available foods, and enhance community capacity to reduce the risk of stunting in Tenganan Village. This includes socializing with partners, conducting Focus Group Discussions (FGDs), providing interactive nutrition education on stunting prevention, showing educational videos, demonstrating the Isi Piringku plates, and distributing stunting prevention materials such as chickens, fish, vegetables, and groceries. The pre-test mean score was 21.2, while the post-test mean score increased to 67.6, indicating a 68.6% improvement in knowledge about the Isi Piringku method. This study was supported by local food security materials provided by Japanese partners. In conclusion, the intervention successfully enhanced nutrition knowledge and practical skills for preparing nutritious meals using locally sourced ingredients, with the potential to reduce stunting rates if these efforts are sustained.*

Keywords: *food security, maternal and child nutrition, stunting*

Abstrak. Stunting adalah gangguan pertumbuhan kronis terkait nutrisi yang memengaruhi pertumbuhan fisik dan perkembangan kognitif, dengan prevalensi yang bervariasi di berbagai wilayah. Desa Tenganan di Karangasem menghadapi tantangan signifikan terkait stunting, yang memerlukan intervensi terpadu. Tujuan dari proyek ini adalah untuk meningkatkan pengetahuan gizi, mempromosikan praktik diet seimbang menggunakan makanan yang tersedia secara lokal, dan meningkatkan kapasitas masyarakat untuk mengurangi risiko stunting di Desa Tenganan. Ini termasuk bersosialisasi dengan mitra, melakukan Focus Group Discussion (FGD), memberikan edukasi gizi interaktif tentang pencegahan stunting, menayangkan video edukasi, mendemonstrasikan piring Isi Piringku, membagikan materi pencegahan stunting seperti ayam, ikan, sayuran, dan sembako. Skor rata-rata pra-tes adalah 21,2, sedangkan skor rata-rata pasca-tes meningkat menjadi 67,6, menunjukkan peningkatan pengetahuan tentang metode Isi Piringku sebesar 68,6%. Penelitian ini didukung oleh materi ketahanan pangan lokal yang disediakan oleh mitra Jepang. Kesimpulannya, intervensi berhasil meningkatkan pengetahuan gizi dan keterampilan praktis untuk menyiapkan makanan bergizi menggunakan bahan-bahan yang bersumber dari lokal, dengan potensi untuk mengurangi tingkat stunting jika upaya ini dipertahankan.

Kata kunci: ketahanan pangan, nutrisi ibu dan anak, *stunting*

How to Cite: Masyeni, S., Dinar, G. P., Mangku, P., Dewi, S. L. & Wake, T. (2026). COMMUNITY-BASED NUTRITION INTERVENTION TO REDUCE STUNTING IN TENGANAN VILLAGE: A COLLABORATION BETWEEN UNIVERSITAS WARMADEWA AND WASEDA UNIVERSITY. *Mitra Mahajana: Jurnal Pengabdian Masyarakat, 7*(1) 158-164. doi: https://doi.org/10.37478/mahajana.v7i1.7808

INTRODUCTION

Stunting, defined as height-for-age more than two standard deviations below the median, remains a sentinel indicator of chronic undernutrition and repeated infections in early life. Its causes are multi-dimensional and interdependent, spanning maternal nutrition, infectious disease burden, caregiving practices, food security, and environmental conditions (De Onis & Branca, 2016). Desa Tenganan, Kecamatan Manggis, Karangasem Regency, shows a stunting rate of 10.3%. The target group comprises 165–177 under-five children measured in 2024, across four hamlets: Bukit Kauh, Bukit Kaja, Gumung, and Tenganan Dauh Tukad. Primary livelihoods include

Copyright (c) 2026 Sri Masyeni, Gita Pritayanti Dinar, Pasek Mangku, Saraswati Laksmi Dewi, Tomoko Wake. This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

farming, trading, private enterprises, tourism, and teaching. Stunting is a multifactorial condition resulting from chronic malnutrition, especially during the first 1,000 days of life, that affects height-for-age. The World Health Organization (WHO) notes that stunting impacts not only physical growth but also cognitive development and later productivity (World Health Organization, 2025). Riskesdas reports an overall stunting prevalence of around 24.4% among Indonesian under-fives, with regional variation (Badan Kebijakan Pembangunan Kesehatan, 2023).

Stunting in children can result from various factors. Key contributors include inadequate feeding practices for infants and young children, ongoing infections and inflammation during childhood, and poor nutritional status during pregnancy (Ebrahim & Manji, 2025). The underlying causes are complex and include limited access to health services, poor dietary diversity, ongoing food insecurity, inadequate water, sanitation, and hygiene, persistent poverty, differences between urban and rural areas, and gender inequalities (Black et al., 2013). Inadequate feeding practices primarily stem from a lack of breastfeeding, especially exclusive breastfeeding during the first six months of life, as well as limited complementary feeding in terms of quantity, quality, and variety (Harrison et al., 2023). Chronic infections can lead to reduced appetite, hinder nutrient absorption, weaken the gut's ability to act as a barrier against disease-causing organisms, and increase nutrient requirements (Prendergast et al., 2014).

The Community Service Program focuses on nutrition education, improving access to health services, and enhancing the community's ability to maintain nutritious diets using local ingredients (Ziso et al., 2022). This holistic and participatory approach aims to reduce stunting rates by increasing knowledge, changing family nutritional behaviors, and enhancing food security (Aryastuti et al., 2024; Masyeni et al., 2025; Masyeni et al., 2025). The sustainability of the programs needs to be maintained to continue reducing stunting in Indonesia.

The program aims to provide nutrition education, raise awareness of healthy eating, and train community members to prepare nutritious dishes from affordable local ingredients. Nationally, despite progress, further efforts are needed to reach the government’s target of around 14% stunting by 2024. Government strategies emphasize maternal/child nutrition, routine health checks, diversified diets for feeding challenges, sanitation, nutrition education and parenting, and complete vaccination.

METHOD

The activities included focus group discussions to identify barriers and collaboratively develop solutions, nutrition education sessions that featured interactive dialogues on the causes, signs, detection, and prevention of stunting, and screenings of health-related videos (Nurhaeni, et al., 2024). Additionally, there were demonstrations of Isi Piringku, along with the distribution of stunting-prevention packages that included livestock for home rearing, grocery packages, and red rice provided for two months to the affected children (Basit & Said, 2025; Basit & Arisanty, 2025).

Knowledge gains were evaluated using pre- and post-tests, which included a 10-item Isi Piringku assessment. The food security content was delivered by staff from the Faculty of Agricultural Science, in collaboration with Japanese partners. The program adhered to ethical standards, including obtaining informed consent and anonymizing data, and integrated participant feedback to facilitate continuous improvement. Ongoing monitoring and a concise process evaluation tracked attendance, engagement, and the practicality of incorporating Isi Piringku into household routines. The overarching goal was to translate knowledge into tangible dietary changes that could help reduce stunting over time (Yusriadi et al., 2024).

RESULTS AND DISCUSSION

The activity was held at Balai Banjar in Gumung Dusun, Desa Tenganan, Karangasem, a location chosen for its strong engagement with families of stunted children (*Figure 1*). The cohort comprised 17 participants, including the children's mothers and fathers. The program began with a pre-test to assess baseline knowledge of the Isi Piringku initiative. This was followed by a series of participatory activities aimed at reinforcing learning and facilitating practical application.



Figure 1. *The process of community service program for stunting at Br Gumung, Tenganan Village*

The results indicate significant improvements in nutrition knowledge through the Isi Piringku program. The mean score on the pre-test was 21.2, increasing to 67.6 on the post-test, reflecting a difference of 46.4 points and an overall increase of 68.6% in knowledge related to Isi Piringku. These numbers demonstrate a meaningful enhancement in understanding balanced nutrition (Hermawati et al., 2024). Qualitatively, participants reported greater awareness of healthy eating patterns, increased family involvement in meal planning, and positive feedback regarding the materials provided by Japanese partners (Liu et al., 2022; Liu et al., 2023).

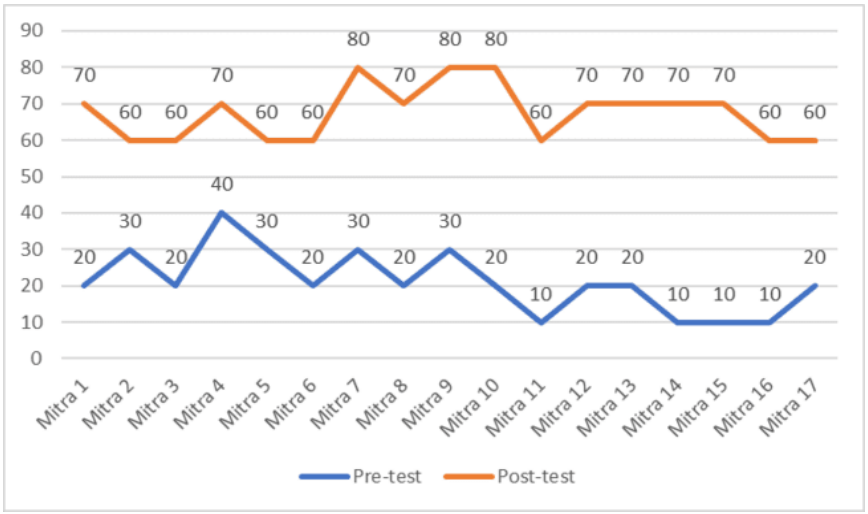


Figure 2. *Improvements in nutrition knowledge through the isi piringku program*

The program positively impacted the community by enhancing family-level nutrition education, improving access to nutrition information, and strengthening food security through initiatives such as home gardening and support for raising chickens (Nisbet et al., 2022). The community service process involved iterative and participatory engagement, starting with baseline pre-tests, followed by various activities including focus group discussions (FGDs), nutrition education sessions, interactive dialogues on the causes and prevention of stunting, video screenings, demonstrations of Isi Piringku, and the distribution of preventive packages. Continuous feedback was used to refine these activities.

These programs align with another community services program in reducing the stunting number in Indonesia (Oktafiani et al., 2023; Masyeni et al., 2025). In which the programs are implemented through Kader Posyandu. Another program, by improving hygiene and sanitation,

is also provided to reduce stunting in Indonesia (Hasan & Kadarusman, 2019; Herawati et al., 2020). Intervention in nutrition is also provided in another part of Indonesia to alleviate the impact of stunting on children (Asmawati et al., 2021; Parinduri, 2022). Treating the infection among children was also reported as a program in reducing the occurrence of stunting (Mitra et al., 2025) including the prevention of warm infection (Riadi et al., 2026). Hygiene and sanitation education is also in line to prevent infections associated with stunting (Day et al., 2025). Stunting prevention from the early age through nutrition optimization has been reported as a way to reduce stunting in Gersik (Day et al., 2025). Revitalization of Posyandu Cempaka programs in Selulung Village, Kintamani, Bali, was also provided to reduce the number of stunting cases in Bali (Trisnia & Ekayanti, 2024). The stunting programme can also start in pregnant woman (Ekayanti & Trisnia, 2025).

Challenges such as time constraints and the workload on community cadres were addressed by implementing clearer task divisions and ensuring ongoing partner involvement (Phiri et al., 2017). The results align with the program's objectives and support existing literature that suggests community-based nutrition education and family involvement enhance knowledge and practices (Wright et al., 2012; Sari et al., 2025). Furthermore, they illustrate how lecturer-led community service initiatives can contribute to broader national efforts to improve nutrition literacy and strengthen community capacity from the village to the district level (Mankar et al., 2025).



Figure 3. *The situation of the community services program at Gumung, Tenganan Village*

However, the study has limitations, most notably the small sample size (n = 17) and the short-term nature of the assessment. These highlight the need for longer follow-up to observe sustained behavior change and measurable declines in stunting at the community level (Darajat et al., 2022). Future work should consider expanding the program to additional villages, integrating Isi Piringku more deeply into routine household practices and local gardening programs, and strengthening monitoring systems in collaboration with local health centers and family welfare and empowerment networks to ensure a lasting impact (Dushkova & Ivlieva, 2024)

CONCLUSION

The prevention of stunting through the PKM program will focus on integrating adolescent health education with nutrition-sensitive actions. These actions include improving dietary practices, promoting hygiene, increasing access to maternal and child health services, and improving water, sanitation, and hygiene (WASH) to reduce infections that contribute to growth faltering. This initiative, grounded in a life-course approach and strong cross-sector collaboration, aims to reduce the prevalence of stunting among children under 5, improve birth

outcomes, strengthen health literacy among adolescents, and empower families to adopt sustainable nutrition practices.

In the short term (12–24 months), we expect to see early improvements in health-seeking behaviors, increased adolescent nutrition literacy, and more referrals for growth monitoring. In the medium term (3–5 years), we anticipate potential reductions in stunting rates, better birth weights, and higher exclusive breastfeeding rates as the program components mature. Key follow-up actions include forming a cross-sector PKM Steering Committee, updating educational curricula to include preconception nutrition, coordinating with local health and nutrition services for growth monitoring and maternal care referrals, implementing school- and community-based improvements, conducting family-based nutrition workshops, and facilitating adolescent-led, nutrition-linked income-generating activities.

REFFERENCES

Aryastuti, A. A. S. A., Udiyani, D. P. C., Trisnia, P. A., & Permatananda, P. A. N. K. (2024). Pemberdayaan Kader Posyandu di Desa Bayung-Gede Bangli dalam Pencegahan Stunting Melalui Edukasi Makanan Bergizi Seimbang. *Warmadewa Minesterium Medical Journal*, *3*(3), 252-256. https://doi.org/10.22225/wmmj.3.3.2024.252-256

Asmawati, A. S. D., Ihromi, S., Nurhayati, P. S., & Danela Luthfiah, T. (2021). Cegah Stunting Dan Gizi Buruk Pada Balita Dengan Edukasi Gizi Bagi Tumbuh Kembang Anak Di Desa Banyumulek Kabupaten Lombok Barat. *J Agro Dedik Masy*, *2*(2), 7-12. DOI: https://doi.org/10.31764/jadm.v2i2.5989

Badan Kebijakan Pembangunan Kesehatan. (2023). *Survei Kesehatan Indonesia (SKI) 2023 Dalam Angka*. Kementerian Kesehatan Republik Indonesia.

Basit, A., & Said, L. R. (2025). Systematic Review: Empowerment of Pregnant Women Through" My Plate"("Isi Piringku") Education in Stunting Prevention and Nutritional Status Improvement Across the Life Cycle. *Journal of Scientific Insights*, *2*(3), 193-210. DOI: https://doi.org/10.69930/jsi.v2i3.382

Basit, A., & Arisanty, D. (2025). Maternal Nutritional Empowerment Through "Isi Piringku" Education: Longitudinal Analysis Of Stunting Prevention and Life-Cycle Nutritiona Outcomes (2018-2022 Cohort Study). *Journal of Scientific Insights*, *2*(3), 167-180. DOI: https://doi.org/10.69930/jsi.v2i3.363

Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., de Onis, M., Ezzati, M., Grantham-McGregor, S., Katz, J., Martorell, R., & Uauy, R. (2013). Maternal and child undernutrition and overweight in low-income and middle-income countries. *The Lancet*, *382*(9890), 427–451. https://doi.org/10.1016/S0140-6736(13)60937-X

Darajat, A., Sansuwito, T., Amir, M. D., Hadiyanto, H., Abdullah, D., Dewi, N. P., & Umar, E. (2022). Social Behavior Changes Communication Intervention for Stunting Prevention: A Systematic Review. *Open Access Macedonian Journal of Medical Sciences*, *10*(G), 209-217. DOI: https://doi.org/10.3889/oamjms.2022.7875

Day, W. O. S. H., Sulistyowati, R. W., & Harmawati, D. (2025). UPAYA KESEHATAN ANAK USIA DINI: PENCEGAHAN STUNTING MELALUI PRAKTIK PHBS TK SANTA MARIA FATIMAH MERAUKE. *Mitra Mahajana: Jurnal Pengabdian Masyarakat*, *5*(3), 438-445. https://doi.org/10.37478/mahajana.v5i3.5236

De Onis, M., & Branca, F. (2016). Childhood stunting: a global perspective. *Maternal & Child Nutrition*, *12*(S1), 12–26. https://doi.org/10.1111/mcn.12231

Dushkova, D., & Ivlieva, O. (2024). Empowering communities to act for a change: A review of the community empowerment programs towards sustainability and resilience. *Sustainability*, *16*(19), 8700. https://doi.org/10.3390/su16198700

Ebrahim, M., & Manji, K. (2025). Role of infant and early-childhood nutrition on gut inflammation, stunting, growth, and development in the African context: A narrative review. *Nutrition in Clinical Practice*, *40*(3), 534-542. https://doi.org/10.1002/ncp.11270

Ekayanti, N. W. S., & Trisnia, P. A. (2025). Pendampingan Keluarga Ibu Hamil Di Desa Selulung Kecamatan Kintamani. *Jurnal Abdi Mahosada*, *3*(1), 7-11. DOI:

https://doi.org/10.54107/abdimahosada.v3i1.338

Harrison, L., et al. (2023). Dietary strategies for complementary feeding between 6 and 24 months of age: the evidence. *Nutrients*, *15*(13), 3041. https://doi.org/10.3390/nu15133041

Hasan, A., & Kadarusman, H. (2019). Akses ke Sarana Sanitasi Dasar sebagai Faktor Risiko Kejadian Stunting pada Balita Usia 6-59 Bulan. *Jurnal Kesehatan*, *10*(3), 413–421. https://doi.org/10.26630/jk.v10i3.1451

Herawati, H., Anwar, A., & Setyowati, D. L. (2020). Hubungan Sarana Sanitasi, Perilaku Penghuni, dan Kebiasaan Cuci Tangan Pakai Sabun (CTPS) oleh Ibu dengan Kejadian Pendek (Stunting) pada Batita Usia 6-24 Bulan di Wilayah Kerja Puskesmas Harapan Baru, Samarinda. *Jurnal Kesehatan Lingkungan Indonesia*, *19*(1), 7. https://doi.org/10.14710/jkli.19.1.7-15

Hermawati, L., Irawati, N. B. U., Zulfa, H. A., & Diana, W. A. (2025). The role of balanced nutrition knowledge in influencing nutritional status and health risks: A literature review. *International Journal of Medicine and Public Health*, *2*(1), 1-14. DOI: http://dx.doi.org/10.62870/inomed.v2i1.31567

Liu, K. S., Chen, J. Y., Sun, K. S., Tsang, J. P., Ip, P., & Lam, C. L. (2022). Adolescent knowledge, attitudes and practices of healthy eating: findings of qualitative interviews among Hong Kong families. *Nutrients*, *14*(14), 2857. https://doi.org/10.3390/nu14142857

Liu, K. S., Chen, J. Y., Sun, K. S., Tsang, J. P., Ip, P., & Lam, C. L. (2023). Family facilitators of, barriers to and strategies for healthy eating among Chinese adolescents: qualitative interviews with parent–adolescent dyads. *Nutrients*, *15*(3), 651. https://doi.org/10.3390/nu15030651

Mankar, A., Kawalkar, U., Quazi Syed, Z., & Gaidhane, A. (2025). Nutrition literacy: a key factor in public health improvement in India. *Frontiers in Nutrition*, *12*, 1643629. https://doi.org/10.3389/fnut.2025.1643629

Masyeni, S., Permatananda, P. A. N., Mangku, I. G. P., Pritayanti, I. G. A. A. G., Rajistha, I. G. N. A., Dewi, S. L., & Miyazawa, N. (2025). Strategi Penurunan Angka Stunting Melalui Peningkatan Ketahanan Pangan di Dusun Pengalusan Desa Ban Karangasem. *Jurnal Abdimas Kartika Wijayakusuma*, *6*(4), 2205-2217. DOI: https://doi.org/10.26874/jakw.v6i4.723

Masyeni, S., Yuniekawati, Y., Lestarini, I. A., Kadriyan, H., Sahadewa, S., Rismawaty, I., Pinatih, J. P., & Asparini, R. R. (2025). Pengentasan Stunting di Lombok Barat Untuk mencapai Sustainable Development Goals Ketiga. *Jurnal Pengabdian Masyarakat Dharma Andalas*, *4*(1), 279–284. https://doi.org/10.47233/jpmda.v3i2.1897

Mitra, M., Rany, N., Herniwanti, H., & Syifa, E. D. A. (2024). Pencegahan Penularan Penyakit Infeksi dan Pemantauan Pertumbuhan Balita untuk Mengatasi Stunting di Tempat Penitipan Anak. *Mitra Mahajana: Jurnal Pengabdian Masyarakat*, *5*(3), 429-437. DOI: https://doi.org/10.37478/mahajana.v5i3.4988

Nisbet, C., Lestrat, K. E., & Vatanparast, H. (2022). Food security interventions among refugees around the globe: a scoping review. *Nutrients*, *14*(3), 522. https://doi.org/10.3390/nu14030522

Nurhaeni, N., et al. (2024). Exploring the strategies and components of interventions to build adolescent awareness about stunting prevention in West Java: A qualitative study. *PloS one*, *19*(12), e0314651. https://doi.org/10.1371/journal.pone.0314651

Oktafiani, V., Yanti, S. D., Yunita, K. S., Putra, H. F. T. S., Darmawan, I., Alam, P. F., & Octaviany, V. (2023). PEMBERDAYAAN KADER POSYANDU MELALUI PENYULUHAN STUNTING DAN PELATIHAN PENGGUNAAN "INTEGRATED SOLUTION FOR STUNTING" DI DESA BARANGKA. *Community Development Journal: Jurnal Pengabdian Masyarakat*, *4*(6), 13611-13617. http://journal.universitaspahlawan.ac.id/index.php/cdj/article/view/23849

PARINDURI, N. C. (2022). Cegah stunting dan gizi buruk pada balita dengan edukasi gizi bagi tumbuh kembang anak di Puskesmas Batahan Kabupaten Mandailing Natal Tahun 2022. *Jurnal Kesehatan Ilmiah Indonesia (Indonesian Health Scientific Journal)*, *7*(1), 216-221. DOI: https://doi.org/10.51933/health.v7i1.797

Phiri, S. C., Prust, M. L., Chibawe, C. P., Misapa, R., van den Broek, J. W., & Wilmink, N. (2017). An exploration of facilitators and challenges in the scale-up of a national, public sector community health worker cadre in Zambia: a qualitative study. *Human resources for*

health, *15*(1), 40. https://doi.org/10.1186/s12960-017-0214-3

Prendergast, A. J., Rukobo, S., Chasekwa, B., Mutasa, K., Ntozini, R., Mbuya, M. N. N., Jones, A., Moulton, L. H., Stoltzfus, R. J., & Humphrey, J. H. (2014). Stunting Is Characterized by Chronic Inflammation in Zimbabwean Infants. *PLoS ONE*, *9*(2), e86928. https://doi.org/10.1371/journal.pone.0086928

Riadi, D., Hadiwiardjo, Y. H., Hasibuan, S. R., Pradnyani, P. E., Kristanti, M., Saputra, D. A. Y., & Aprilicia, G. (2026). HEALTH EDUCATION IN THE PREVENTION OF WORM INFESTATION USING BOOKLETS FOR TODDLERS. *Mitra Mahajana: Jurnal Pengabdian Masyarakat*, *7*(1), 18-25. DOI: https://doi.org/10.37478/mahajana.v7i1.7435

Sari, D. N., Hilmanto, D., Sunjaya, D. K., & Sari, P. (2025). Community-based interventions to improve adolescent nutrition: a scoping review. *BMC Public Health*, *25*(1), 4394. https://doi.org/10.1186/s12889-025-25617-5

Trisnia, P. A., & Ekayanti, N. W. S. (2024). Pendampingan/Revitalisasi Posyandu Cempaka 1 Banjar Taked Desa Selulung Kecamatan Kintamani. *Warmadewa Minesterium Medical Journal*, *3*(3), 218-223. DOI: https://doi.org/10.22225/wmmj.3.3.2024.218-223

World Health Organization, W. (2025). Stunting brief. *WHO*, *4*, 1–10. https://www.who.int/publications/i/item/B09383

Wright, K., Norris, K., Newman Giger, J., & Suro, Z. (2012). Improving healthy dietary behaviors, nutrition knowledge, and self-efficacy among underserved school children with parent and community involvement. *Childhood Obesity*, *8*(4), 347-356. https://doi.org/10.1089/chi.2012.0045

Yusriadi, Y., Sugiharti, S., Ginting, Y. M., Sandra, G., & Zarina, A. (2024). Preventing stunting in rural Indonesia: A community-based perspective. *African Journal of Food, Agriculture, Nutrition and Development*, *24*(9), 24470-24491. https://doi.org/10.22004/AG.ECON.348069

Ziso, D., Chun, O. K., & Puglisi, M. J. (2022). Increasing access to healthy foods through improving food environment: a review of mixed methods intervention studies with residents of low-income communities. *Nutrients*, *14*(11), 2278. https://doi.org/10.3390/nu14112278