



Critical Review Article

Free Nutritious Meals and Food Availability: Strengthening Community Nutrition for Indonesian Children

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Abstract

Child malnutrition remains a major public health issue in Indonesia, particularly among children under five years old. In response, the government launched the Makan Bergizi Gratis (MBG) or Free Nutritious Meals program to provide balanced meals and reduce disparities in food access. However, its success depends on the integration of food availability, nutrition education, and community participation. This paper aims to describe the role of free nutritious meal programs and food availability in improving child nutrition and strengthening community food systems within the MBG framework. A descriptive qualitative approach was used through literature-based and policy analysis. Data and insights were synthesized from government reports, academic publications, and international references related to child nutrition, food systems, and public health programs from 2018–2025. The analysis highlights that the MBG program has the potential to improve children's nutritional status when supported by local food production and consistent nutrition education. Community involvement is essential to ensure food diversity, safety, and sustainability. Strengthening partnerships among schools, health centers, and local producers can enhance program efficiency and long-term impact. The MBG initiative serves as more than a feeding program, it is a strategic approach to strengthen community nutrition. Integrating continuous education, local food empowerment, and community ownership can transform the program into a sustainable ecosystem for improving children's health and achieving Indonesia's vision of a healthy generation.

Keywords: MBG program; child nutrition; food availability; nutrition education; public health; community nutrition.

1. Introduction

Nutrition is a fundamental pillar of child growth, development, and long-term health. In Indonesia, malnutrition and stunting remain persistent public health concerns that hinder children's physical and cognitive potential. Despite various interventions, disparities in food access and nutrition education continue to challenge the nation's efforts toward achieving equitable health outcomes [1]. These challenges are particularly evident among children under five years old, whose nutritional needs are critical for supporting brain development and immunity [2]. The complexity of child malnutrition lies not only in food scarcity but also in the quality, diversity, and balance of daily meals consumed by families [3].

To address these issues, the Indonesian government has launched the Makan Bergizi Gratis (MBG) or Free Nutritious Meals program [4]. The initiative aims to ensure that all children, especially those from low-income or vulnerable households receive balanced, nutritious, and safe meals regularly. The MBG program represents a large-scale public nutrition strategy that links food security, health promotion, and educational participation. Beyond feeding children, the program seeks to cultivate healthy eating habits, encourage local food utilization, and empower communities to understand the importance of diverse and balanced diets [5]. It aligns with the broader national vision of improving human capital through better health and education outcomes.

However, the implementation of such a comprehensive program requires more than food distribution. The sustainability and impact of MBG depend on the availability of nutritious food sources and the effectiveness of nutrition education at the community level [6]. Many rural and remote areas face challenges related to limited agricultural diversity, high food prices, and dependency on carbohydrate-based staples. Without parallel efforts to improve local food systems and community knowledge about nutrition, the benefits of free meal programs may not reach their full potential [7]. In this sense, food availability acts as both a physical and social determinant of health influenced by local production, distribution channels, and cultural food preferences [8].

Nutritional education is equally vital in shaping dietary behavior and improving the outcomes of meal programs. Parents, caregivers, and teachers play central roles in determining what children eat and how they understand food [9]. Effective nutrition education can help families make informed choices, manage limited food resources wisely, and recognize the importance of protein, vegetables, and rich micronutrient foods in child growth. Studies have shown that interventions combining school meals with family-based nutrition education tend to achieve greater improvements in children's nutritional status compared to food programs alone [10]. Thus, integrating educational strategies within MBG implementation could multiply its impact across generations.

The MBG program also reflects a shift in Indonesia's public health paradigm from reactive treatment of malnutrition to preventive community-based nutrition promotion. It emphasizes inclusivity, collaboration, and sustainability [11]. By involving schools, community health centers (*posyandu*), and local governments, the program establishes a multi-sectoral framework that bridges agriculture, education, and health sectors [12]. Moreover, by prioritizing locally sourced ingredients, MBG supports small farmers and contributes to regional food resilience. These synergies demonstrate that improving child nutrition is not merely a medical challenge but also an economic and social one [13].

Despite its promising design, several questions remain about how the MBG program will operate effectively nationwide. Differences in geographic, cultural, and economic conditions across Indonesia may influence implementation success [14]. Urban areas may benefit from better logistics and food variety, while rural regions might face limited infrastructure and supply chains. Ensuring quality control, food safety, and balanced nutrient composition across diverse local menus presents another major challenge [15]. Therefore, continuous evaluation, community involvement, and local adaptation are crucial for the program's success.

In summary, the Free Nutritious Meals and Food Availability framework highlights that national efforts to improve child nutrition cannot rely solely on free meal distribution. It requires a holistic approach that integrates nutrition education, community food systems, and policy coordination. By strengthening both supply (food availability) and demand (nutrition awareness), Indonesia can move closer to ensuring that every child regardless of region or socioeconomic status has access to nutritious, affordable, and culturally relevant food. The MBG program, if implemented effectively and inclusively, has the potential to reshape the landscape of child nutrition and contribute to the creation of a healthier, more resilient generation.

2. Materials and Methods

This study employed a descriptive qualitative approach using a literature-based and policy analysis design. Rather than collecting primary data through surveys or field observations, this



method focuses on synthesizing existing information from credible secondary sources to explain how free nutritious meal programs, food availability, and nutrition education interact to improve child nutrition in Indonesia [16].

The research process began with a comprehensive review of official government documents, academic journal articles, and policy reports related to child nutrition, food access, and the Makan Bergizi Gratis (MBG) program. Data sources included publications from the Ministry of Health, the National Development Planning Agency (Bappenas), UNICEF, and relevant studies indexed in databases such as Scopus, ScienceDirect, and Google Scholar. Priority was given to publications from 2018–2025 to ensure relevance to current national policies and post-pandemic recovery efforts in nutrition and education.

The analytical framework of this paper is grounded in public health nutrition theory, which views nutritional status as the outcome of three interrelated dimensions: (1) food availability, (2) nutrition education and behavior, and (3) policy and environmental support. Through this lens, the paper explores how the MBG program serving as a national policy intervention connects with local food systems and community nutrition practices.

Data interpretation followed narrative analysis technique. Key concepts and patterns were identified, categorized, and discussed in relation to their implications for child nutrition. The discussion highlights both opportunities and challenges in implementing the MBG program across diverse Indonesian regions. Specific attention was given to rural and low-income communities, where food accessibility and nutrition knowledge tend to be limited.

Ethical considerations were respected through responsible citation and acknowledgment of all secondary data sources. No human participants were directly involved in this study. Instead, the synthesis aims to contribute a conceptual understanding and evidence-informed perspective that can guide future empirical research and policy implementation related to the MBG initiative and community nutrition strengthening [17].

In summary, this qualitative descriptive methodology allows for a broad yet in-depth examination of Indonesia's MBG policy within the context of public health nutrition, providing insights into the relationships among government programs, community food systems, and children's nutritional well-being.

3. Results and Discussion

The analysis of the Makan Bergizi Gratis (MBG) or Free Nutritious Meals program reveals that Indonesia's recent efforts to address child malnutrition mark a significant shift from curative to preventive public health nutrition. The program's conceptual design integrates three critical pillars: free access to nutritious meals, local food system empowerment, and nutrition education for behavioral change [18]. Although still in its early stages, the MBG initiative demonstrates a coherent national strategy aimed at achieving sustainable improvements in child nutritional status and reducing inequality in food access [19].

3.1 Strengthening Child Nutrition through Free Nutritious Meals

The provision of free nutritious meals represents a direct intervention to alleviate calorie and micronutrient deficiencies, especially among children from low-income households. Evidence from similar programs in other countries, such as India's Mid-Day Meal Scheme and Brazil's School Feeding Program, shows that government-supported meal initiatives can improve school attendance, dietary diversity, and child growth outcomes [20].

In the Indonesian context, MBG targets children across various age groups, including preschool and primary school levels. The inclusion of younger children is vital, as the first five years of life are the most critical for brain development and long-term health. A consistent supply of balanced meals containing carbohydrates, proteins, vegetables, and fruits helps close nutritional gaps caused by household poverty or limited food access [21].

However, the success of MBG relies heavily on ensuring quality, safety, and consistency.



between policy intent and field-level realities often determines success. When nutrition education, food availability, and free meal provision operate in harmony, the outcomes are synergistic; when one component fails, the system weakens.

For example, regions with strong agricultural capacity but limited education outreach may deliver sufficient food but fail to change eating behavior. Conversely, well-informed parents may struggle to implement healthy practices without access to diverse, affordable food. Therefore, holistic coordination across ministries, particularly the Ministries of Health, Education, and Agriculture, is essential to align messaging, logistics, and resource allocation [28].

The literature further suggests that decentralized management models, empowering local governments and communities, are more adaptive to contextual differences. Localized menu planning using regional ingredients can respect cultural preferences while maintaining nutritional standards. Additionally, routine monitoring and evaluation mechanisms supported by universities or local health offices can ensure program accountability and continuous improvement [29].

3.5 Socioeconomic and Cultural Dimensions

Socioeconomic inequality remains a powerful determinant of child nutrition outcomes. In low-income households, daily decisions about food often balance affordability and availability rather than nutritional value. Free meal programs such as MBG directly relieve this economic burden while creating social equity in access to nutritious food. However, sustained change also requires addressing broader social determinants such as parental education, income stability, and gender roles in food preparation [30].

Culturally, Indonesia's diverse dietary traditions offer both opportunities and challenges. Local foods such as tempeh, fish, leafy greens, and tubers provide excellent nutritional value but are sometimes undervalued compared to processed foods. Public campaigns that reframe traditional diets as sources of pride and health can reinforce MBG's goals. Additionally, celebrating local food festivals or "healthy meal days" in schools may encourage behavioral change in ways that are joyful and culturally rooted [31].

3.6 Opportunities and Future Directions

Looking forward, the MBG program can serve as a foundation for broader community nutrition initiatives. Integrating digital technologies such as mobile nutrition apps, online recipe databases, or digital monitoring systems could enhance communication and data collection. Involving universities and research centers in evaluating program outcomes can provide evidence-based feedback to policymakers [32], [33].

To strengthen long-term sustainability, MBG must evolve from a welfare-oriented initiative into a community-driven nutrition ecosystem. Encouraging local entrepreneurship in food processing, expanding partnerships with farmer cooperatives, and promoting child participation in food education can build resilience and ownership. Moreover, establishing nutrition indicators within school and community health monitoring systems will allow for continuous assessment of children's growth and well-being [34], [35].

4. Conclusions

The Makan Bergizi Gratis (MBG) program represents a major step forward in Indonesia's ongoing effort to strengthen child nutrition through an integrated, community-based approach. The synthesis of literature and policy analysis demonstrates that free nutritious meals alone are not enough to resolve malnutrition; rather, their success depends on the interaction between food availability, nutrition education, and community participation.

The MBG initiative has successfully drawn national attention to the importance of balanced, diverse diets for children. By linking local food systems, educational institutions, and health services, the program promotes both food security and behavioral change. Nevertheless, disparities remain



across regions, particularly in rural and remote areas where logistical constraints, limited agricultural diversity, and low nutrition literacy continue to hinder progress. To achieve its long-term goals, MBG must evolve from a centralized feeding effort into a sustainable nutrition ecosystem, where families, schools, and local producers work collaboratively to ensure continuous access to healthy and affordable food.

To ensure the long-term effectiveness of the Makan Bergizi Gratis (MBG) program, several strategic measures should be prioritized. First, the government and community institutions must integrate continuous nutrition education at multiple levels, involving parents, teachers, and community health workers. Regular nutrition learning sessions conducted through schools, community health centers, and local organizations can help reinforce knowledge about balanced diets and promote sustainable dietary behavior change among families.

Second, efforts should focus on strengthening local food systems by fostering partnerships with farmer cooperatives, small enterprises, and local markets. Utilizing locally sourced ingredients not only improves the freshness and cultural relevance of MBG meals but also supports rural livelihoods and stimulates local economies. Encouraging local production and diversification of nutritious food commodities will enhance both availability and affordability for communities.

Third, it is essential to enhance monitoring and evaluation systems to maintain food quality, safety, and program transparency. Implementing data-driven mechanisms that regularly assess menu diversity, nutrient adequacy, and child nutrition outcomes will allow policymakers to identify gaps and make timely improvements. Collaboration with universities and research institutions can further strengthen evidence-based evaluation.

Finally, the program's sustainability depends on promoting community ownership. Engaging local stakeholders, including schools, religious organizations, women's groups, and youth movements ensures that nutrition initiatives are culturally sensitive, widely accepted, and deeply rooted in community values. By fostering shared responsibility, the MBG program can evolve into a truly inclusive movement that strengthens Indonesia's commitment to building a healthy, intelligent, and resilient generation.

References

- [1] D. Ayuningtyas, D. Hapsari, R. Rachmalina, V. Amir, R. Rachmawati, and D. Kusuma, "Geographic and Socioeconomic Disparity in Child Undernutrition across 514 Districts in Indonesia," *Nutrients*, vol. 14, p., 2022, doi: 10.3390/nu14040843.
- [2] H. Andriani, E. Friska, M. Arsyi, A. Sutrisno, A. Waits, and N. Rahmawati, "A multilevel analysis of the triple burden of malnutrition in Indonesia: trends and determinants from repeated cross-sectional surveys," *BMC Public Health*, vol. 23, p., 2023, doi: 10.1186/s12889-023-16728-y.
- [3] I. Silva and S. Sumarto, "Child Malnutrition in Indonesia: Can Education, Sanitation and Healthcare Augment the Role of Income?," *J Int Dev*, vol. 30, pp. 837–864, 2018, doi: 10.1002/jid.3365.
- [4] A. Setiawan *et al.*, "Analisis Kebijakan SE Dirjen Pendis No. 10 Tahun 2024 Panduan Program Makan Bergizi Gratis di Lingkungan Pesantren: Implikasi terhadap Motivasi Belajar Santri," *Khatulistiwa: Jurnal Pendidikan dan Sosial Humaniora*, p., 2025, doi: 10.55606/khatulistiwa.v5i2.5796.
- [5] K. A. H. Tambunan, R. Nababan, R. A. Siagian, R. Naiborhu, S. Harianti, and J. Jamaludin, "Tinjauan Kritis Tentang Program Makan Bergizi Gratis Terhadap Produktivitas Belajar Siswa," *Katalis Pendidikan: Jurnal Ilmu Pendidikan dan Matematika*, p., 2025, doi: 10.62383/katalis.v2i2.1428.
- [6] D. Didi, M. Rosmida, M. Sa'diah, A. Kun, and P. Ratih, "Food packages and nutrition education improved pregnancy weight gain in Jagakarsa sub-District, Jakarta, Indonesia: a pilot study," *African Journal of Food, Agriculture, Nutrition and Development*, p., 2025, doi: 10.18697/ajfand.138.25430.



- [7] M. Muliadi, S. N. Lubis, H. Harahap, B. Slamet, and A. Lubis, "Sustainable Food Systems and Regional Development: Analyzing Food Security in Medan City's Underprivileged Areas, Indonesia," *Journal of Ecohumanism*, p., 2024, doi: 10.62754/joe.v3i6.4023.
- [8] D. S. Effendy, P. Prangthip, N. Soonthornworasiri, P. Winichagoon, and K. Kwanbunjan, "Nutrition education in Southeast Sulawesi Province, Indonesia: A cluster randomized controlled study," *Matern Child Nutr*, vol. 16, p., 2020, doi: 10.1111/mcn.13030.
- [9] M. T. Ulker, A. Şimşek, G. E. Hacıoglu, A. Kurt, S. Erken, and B. Yildiz, "Growth and development impact of sustainable nutrition education: An experimental study.," *J Food Sci*, p., 2023, doi: 10.1111/1750-3841.16891.
- [10] J. Kuchenbecker, A. Reinbott, B. Mtimuni, M. Krawinkel, and I. Jordan, "Nutrition education improves dietary diversity of children 6-23 months at community-level: Results from a cluster randomized controlled trial in Malawi," *PLoS One*, vol. 12, p., 2017, doi: 10.1371/journal.pone.0175216.
- [11] S. Holschneider *et al.*, "Improving the Quality of Frontline Nutrition Services in Indonesia's Health Sector," p., 2021, doi: 10.1596/36941.
- [12] Z. Wardani, D. Sukandar, Y. Baliwati, and H. Riyadi, "Intervention strategies for stunting based on analytic network process in Bangka Belitung province of Indonesia," *African Journal of Food, Agriculture, Nutrition and Development*, vol. 21, pp. 17656–17668, 2021, doi: 10.18697/ajfand.98.19395.
- [13] M. Yusnita, I. Kurniawan, and A. Hakim, "Public Policy Analysis in Stunting Reduction: A Review of National Programs and Strategies," *Jurnal Indonesia Sosial Sains*, p., 2024, doi: 10.59141/jiss.v5i05.1109.
- [14] A. Kiftiyah, F. A. Palestina, F. U. Abshar, and K. Rofiah, "Program Makan Bergizi Gratis (MBG) dalam Perspektif Keadilan Sosial dan Dinamika Sosial – Politik," *Pancasila: Jurnal Keindonesiaan*, p., 2025, doi: 10.52738/pjk.v5i1.726.
- [15] A. Setiawan *et al.*, "Analisis Kebijakan SE Dirjen Pendis No. 10 Tahun 2024 Panduan Program Makan Bergizi Gratis di Lingkungan Pesantren: Implikasi terhadap Motivasi Belajar Santri," *Khatulistiwa: Jurnal Pendidikan dan Sosial Humaniora*, p., 2025, doi: 10.55606/khatulistiwa.v5i2.5796.
- [16] A. Andin *et al.*, "Penerapan Nilai Pancasila Melalui Program Makan Bergizi Gratis," *Indonesian Journal of Education and Development Research*, p., 2024, doi: 10.57235/ijedr.v3i1.4684.
- [17] Y. Yusriadi, "The Impact of Free Nutritious Meal Programs on Food Security: A Systematic Review," *Journal of Indonesian Scholars for Social Research*, p., 2025, doi: 10.59065/jissr.v5i1.177.
- [18] R. Rimbawan, R. Nurdiani, P. H. Rachman, Y. Kawamata, and Y. Nozawa, "School Lunch Programs and Nutritional Education Improve Knowledge, Attitudes, and Practices and Reduce the Prevalence of Anemia: A Pre-Post Intervention Study in an Indonesian Islamic Boarding School," *Nutrients*, vol. 15, p., 2023, doi: 10.3390/nu15041055.
- [19] R. A. D. Mardani, W.-R. Wu, Z. Hajri, Z. Thoyibah, H. Yolanda, and H.-C. Huang, "Effect of a Nutritional Education Program on Children's Undernutrition in Indonesia: A Randomized Controlled Trial.," *J Pediatr Health Care*, p., 2024, doi: 10.1016/j.pedhc.2024.02.006.
- [20] G. Fang and Y. Zhu, "Long-term impacts of school nutrition: Evidence from China's school meal reform," *World Dev*, p., 2022, doi: 10.1016/j.worlddev.2022.105854.
- [21] A. Holford and B. Rabe, "Going universal. The impact of free school lunches on child body weight outcomes," *Journal of Public Economics Plus*, p., 2022, doi: 10.1016/j.pubecp.2022.100016.
- [22] A. Holford and B. Rabe, "Universal free school meals and children's bodyweight. Impacts by age and duration of exposure.," *J Health Econ*, vol. 98, p. 102937, 2024, doi: 10.1016/j.jhealeco.2024.102937.
- [23] H. Hikmawati and S. Sutami, "Empowering Communities through Culinary Innovation: Enhancing Nutritional Status in Toddlers with Tempe-Based Supplementary Foods," *Communaire: Journal of Community Service*, p., 2024, doi: 10.61987/communaire.v3i1.468.



- [24] A. Wasiah, B. M. Algama, and F. Fatmasari, "Training In The Production Of Additional Food Based On Local Food As A Stunting Prevention Effort In Kuro Village, Karangbinangun," *Healthy-Mu Journal*, p., 2024, doi: 10.35747/hmj.v8i1.804.
- [25] H. Rasni, T. Susanto, K. R. M. Nur, and N. Anoeграjekti, "Pengembangan budaya masak abereng dalam peningkatan status gizi balita stunting di Desa Glagahwero, Kecamatan Panti, Kabupaten Jember dengan pendekatan agronursing," *Journal of Community Empowerment for Health*, p., 2019, doi: 10.22146/jcoemph.42852.
- [26] K. O'Brien *et al.*, "School-Based Nutrition Interventions in Children Aged 6 to 18 Years: An Umbrella Review of Systematic Reviews," *Nutrients*, vol. 13, p., 2021, doi: 10.3390/nu13114113.
- [27] Y. Han, H. Kim, and S. Park, "The Roles of Nutrition Education and Food Vouchers in Improving Child Nutrition: Evidence from a Field Experiment in Ethiopia.," *J Health Econ*, vol. 80, p. 102545, 2021, doi: 10.1016/j.jhealeco.2021.102545.
- [28] E. Muehlhoff, R. Wijesinha-Bettoni, E. Westaway, T. Jeremias, S. Nordin, and J. Garz, "Linking agriculture and nutrition education to improve infant and young child feeding: Lessons for future programmes," *Matern Child Nutr*, vol. 13, p., 2017, doi: 10.1111/mcn.12411.
- [29] I. Angeles-Agdeppa, E. Monville-Oro, J. Gonsalves, and M. Capanzana, "Integrated school based nutrition programme improved the knowledge of mother and schoolchildren," *Matern Child Nutr*, vol. 15, p., 2019, doi: 10.1111/mcn.12794.
- [30] A. Okutse and H. Athiany, "Socioeconomic disparities in child malnutrition: trends, determinants, and policy implications from the Kenya demographic and health survey (2014 - 2022)," *BMC Public Health*, vol. 25, p., 2025, doi: 10.1186/s12889-024-21037-z.
- [31] Z. Li, R. Kim, R. Kim, R. Kim, S. Vollmer, and S. Subramanian, "Factors Associated With Child Stunting, Wasting, and Underweight in 35 Low- and Middle-Income Countries," *JAMA Netw Open*, vol. 3, p., 2020, doi: 10.1001/jamanetworkopen.2020.3386.
- [32] A. Rosales, S. Young, T. Mendez, K. Sheldon, and M. Holdaway, "Collaborative Strategies to Improve Nutrition Security and Education: Lessons Learned During a Pandemic," *J Sch Health*, vol. 93, pp. 148–152, 2022, doi: 10.1111/josh.13247.
- [33] M. A. A. Saci, I. Yuliana, and F. Harwanto, "Innovation in Nutrition Promotion : Literature Analysis to Increase Community Awareness and Healthy Practices," *Journal of Nutrition Science*, p., 2024, doi: 10.35308/jns.v5i1.9365.
- [34] H. Nicastro *et al.*, "Opportunities to advance implementation science and nutrition research: a commentary on the Strategic Plan for NIH Nutrition Research.," *Transl Behav Med*, p., 2022, doi: 10.1093/tbm/ibac066.
- [35] L. Williams, C. Wallace, and T. Filipponi, "A Realist Scoping Review of Community Nutrition Interventions in the UK: Implications for the 'Nutrition Skills for Life' Programme," *Journal of Human Nutrition and Dietetics*, vol. 38, p., 2025, doi: 10.1111/jhn.70008.

