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**SOCIAL POLICY, FOOD SECURITY, AND EDUCATIONAL
MOTIVATION: ANALYZING THE IMPLEMENTATION
OF THE FREE NUTRITIOUS MEAL PROGRAM IN
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27, Sengkang 90918, Indonesia*Correspondence E-Mail: zf.fadli12@gmail.comDOI: <https://doi.org/10.30598/baileofisipvolXissXpp407-425>**ABSTRACT**

This study examines the implementation of Indonesia's Free Nutritious Meal (MBG) Program as a national social policy aimed at strengthening children's food security and improving educational motivation in urban settings, focusing on Panakkukang District, Makassar City. The research aims to evaluate the operational mechanisms of the MBG program in urban schools, assess its effects on students' learning motivation, and identify social-institutional factors shaping policy effectiveness. A literature-informed field simulation design was employed, integrating systematic review findings, policy document analysis, and secondary data interpretation to construct an evidence-based model of implementation dynamics. Findings indicate that MBG delivery follows a multi-actor governance pattern involving local authorities, schools, parents, and community groups, producing positive impacts on student concentration, attendance, and classroom engagement, particularly among low-income households. Beyond nutritional gains, the program fosters social inclusion, strengthens school-community relations, and enhances intrinsic and extrinsic learning motivation, though sustainability challenges persist related to coordination, food quality, and funding. The study's novelty lies in applying simulation-based inquiry to an emerging welfare policy and conceptualizing MBG as a hybrid model linking food security, educational welfare, and community-based protection. The research contributes to sociological scholarship by advancing theoretical understanding of school-based social policy and offering evidence-informed recommendations to strengthen welfare interventions in urban Indonesia.

Keywords: Food Security, Policy Implementation, School-Based Welfare, Social Policy, Student Well-Being

INTRODUCTION

Adequate nutritional availability for school-aged children constitutes a critical foundation for healthy growth, cognitive capacity, and future social advancement. In Indonesia, fulfilling children's nutritional needs remains a pressing challenge, particularly in urban settings marked by socioeconomic disparities, high living costs, and the often-overlooked phenomenon of hidden hunger (Adwiah et al., 2025; Wiliyanarti et al., 2022). Various reports indicate that children from low-income urban households frequently face limited access to nutritious food, directly affecting their energy levels, physical health, concentration, and academic performance (Colozza, 2024;

Darmawan et al., 2023; Syafiq et al., 2022). This issue extends beyond public health; it intersects with social justice, children's rights, and equitable access to quality education (Tanziha et al., 2025). Accordingly, school-based social interventions that ensure food security for children have become increasingly urgent to scrutinize.

In recent years, the Government of Indonesia launched the Free Nutritious Meal (Makan Bergizi Gratis/MBG) initiative as a social policy designed not only to supplement food intake but also to serve as a long-term social investment to build a healthy, intelligent, and competitive generation. In urban areas such as Panakkukang District, Makassar City, this policy becomes particularly salient given the dynamic urban landscape characterized by social heterogeneity, urban poverty, and fast-food consumption patterns that frequently overlook nutritional value (Saragi, 2025; Soraya et al., 2025). Limited household socioeconomic capacity often results in students arriving at school hungry or consuming low-quality food, which influences classroom participation, learning discipline, and academic motivation (Suprpto et al., 2025; Tambunan, 2023).

The relationship between nutrition and education has long been examined across disciplines. From a sociology of education perspective, fulfilling basic physical needs such as nutrition is a prerequisite for supporting higher-order learning needs. Razza and Brann (2025) and Skouteris et al. (2022) demonstrate that students with adequate nutritional intake exhibit stronger academic engagement and socio-emotional learning. These findings align with Bassuoni et al. (2021) and Samson et al. (2022), who report positive correlations between nutritional status, concentration, memory, and academic performance. Thus, school nutrition programs should be viewed not only as health interventions but also as socio-educational strategies to improve learning quality, particularly among vulnerable urban populations.

International literature further reinforces the relevance of school feeding programs. In Bangladesh, Akter et al. (2025) and J. F. W. Cohen et al. (2021) show significant improvements in student attendance due to school meal provision. Other studies similarly find that school meals enhance academic achievement, health, and children's well-being in various developing countries (J. F. W. Cohen et al., 2021; Gelli et al., 2019; Precious et al., 2023). Research in Ethiopia highlights improved academic attainment and stronger emotional attachment to school (Desalegn et al., 2021; Destaw et al., 2022), while in Cameroon, regular school meal access fosters social participation and a sense of belonging (Boh et al., 2023; Niyibizi, 2024). These patterns indicate the dual function of school nutrition programs: enhancing children's nutritional status and strengthening social capital within educational environments.

In the Indonesian context, scholarship on school-based nutrition programs has gained momentum. Sarjito (2024) positions the MBG initiative as a sustainable human-capital development strategy targeting children's basic needs. Suprpto et al. (2025) highlight the role of school nutrition interventions in reducing socioeconomic disparities in education. From a social policy sociology perspective, MBG can be conceptualized as state investment in strengthening educational welfare by fostering conducive learning conditions from early school years.

Policy implementation, however, is inherently contextual. Successful execution depends on clarity of objectives, resource allocation, inter-institutional communication, implementing agents, and target-group responses (Nabila & Putri, 2024; Scott & Boyd, 2023). Implementation challenges for MBG include logistical coordination, food-quality standards, monitoring mechanisms, and family–school engagement (Koswara & Herlina, 2025; Maulana et al., 2025). Urban complexity adds layers of bureaucracy, mobility, and resource competition across stakeholders.

Psychological aspects of learning are also crucial. Grounded in Self-Determination Theory, Evans et al. (2024) and Gagné et al. (2022) argue that fulfilling basic physiological needs supports intrinsic and extrinsic motivation. Nutritious school meals can serve as positive extrinsic stimuli that create supportive learning environments, enhancing discipline and strengthening student–school relationships. Accordingly, the interaction between nutrition intervention, school social climate, and learning motivation offers a valuable lens within sociology of education.

Recent scholarship also emphasizes inclusive and adaptive policy design. Septian and Khomariah (2025) and Wagana (2024) advocate creative-collaborative approaches to generate transformative impact, while Litaay and Batjo (2024) and Rijal (2024) stress co-production across government, institutions, and communities. Magnusson et al. (2020) introduce the concept of ambidextrous policy design, balancing innovation and stability, appropriate for MBG’s demands for adaptability, accountability, and sustainability.

Despite substantial international literature on school feeding programs, research addressing MBG within Indonesia’s urban context through a sociological lens, especially its influence on learning motivation and inter-actor implementation dynamics, remains limited. Even fewer studies integrate empirical literature with contextual simulation to offer a comprehensive perspective on policy implementation. This study fills this gap by examining MBG not merely as a nutrition policy, but as a socio-educational intervention shaping relationships among the state, schools, families, and children.

The study aims to provide an in-depth understanding of MBG implementation in urban Indonesia, specifically Panakkukang District, and its effects on student motivation and school social dynamics. Employing a literature-informed field simulation approach, the research connects empirical findings and theory with local context to generate insights that are reflective, realistic, and relevant to the advancement of social policy sociology in education. Ultimately, the study conceptualizes school nutrition policy not only as a health intervention but as a strategic effort to enhance learning quality and child well-being grounded in social equity.

RESEARCH METHOD

This study employs a literature-informed field simulation approach (Jacobsen & McKenney, 2024; Kallia et al., 2021) to develop a comprehensive understanding of Free Nutritious Meal (MBG) implementation in urban Indonesia. This method synthesizes existing

empirical evidence while generating context-specific interpretations relevant to Panakkukang, a district characterized by pronounced social heterogeneity and distinctive urban challenges, without relying solely on primary field surveys, which may be difficult to conduct or insufficiently representative within limited time frames (Yusriadi, 2025a, 2025b). Methodologically, this approach balances theoretical rigor with local contextual sensitivity, producing reflective and policy-oriented insights.

The research began with a systematic literature review encompassing more than twenty scholarly sources, including peer-reviewed journal articles, international institutional reports (e.g., UNESCO, World Food Programme), and local policy documents. Database searches used keywords such as school feeding, school meals Indonesia, nutrition and learning motivation, and policy implementation, with inclusion criteria emphasizing thematic relevance, recency, and methodological robustness. Each source underwent critical evaluation regarding research design, sample size, analytical strategy, and geographic context to ensure validity and strengthen empirical credibility.

The analysis applied iterative thematic content analysis, coding core findings and categorizing them into policy implementation dimensions, institutional support, effects on learning motivation, and barriers and policy recommendations. Secondary contextual data, including government reports, school education statistics, local media coverage, and public datasets, were incorporated to construct realistic implementation simulations for Panakkukang. These contextual inputs were integrated with cross-study patterns to formulate narrative policy scenarios assessed for theoretical coherence.

To ensure analytic rigor, triangulation was applied across data sources, theoretical perspectives, and methodological approaches. International and local literature was compared with administrative and contextual data; policy implementation theory and motivation theory guided interpretation; and quantitative–qualitative literature synthesis was combined with narrative simulation. Reflexivity was maintained through documented researcher assumptions, data limitations, and potential interpretive bias. Findings are presented in a narrative synthesis supported by thematic tables and a logical policy framework, enabling readers to trace evidence-based reasoning toward policy recommendations. Although not a substitute for primary fieldwork, this method offers a rational, ethical, and contextually grounded analytical framework for examining how MBG functions and generates impact in urban Indonesian settings (Scott & Boyd, 2023; Yusriadi, 2025b).

RESULTS AND DISCUSSION

General Analysis of the Implementation of the MBG Policy

The implementation of public policy is shaped not only by regulatory clarity but also by the capacity of implementing actors to operationalize policy objectives within specific social environments. As Milhorange et al. (2022) note, policy success depends on how effectively

institutional actors interpret and translate policy goals into context-sensitive actions. Within this analytical frame, the Free Nutritious Meal (MBG) Program in Panakkukang District, Makassar City, represents a strategic social-welfare intervention designed to improve the nutritional well-being of school-age children while simultaneously enhancing their motivation and academic performance.

Drawing from contextual observations and theoretical synthesis, the MBG initiative demonstrates complex cross-sectoral dynamics involving structured collaboration among education, health, and social-welfare authorities. This configuration reflects global models of school-feeding programs, which seek to reduce nutritional disparities while strengthening educational outcomes for children from socio-economically vulnerable households. Consistent with international evidence, the effectiveness of such programs hinges on inter-institutional coordination, administrative capacity, and financial sustainability.

In Panakkukang, program governance is governed through an inter-agency scheme involving the Education Office, the Health Office, and the Social Affairs Office. Each unit assumes complementary functions ranging from nutritional menu planning and food distribution logistics to monitoring school-level learning outcomes. However, administrative reviews and local documentation reveal persistent challenges that risk weakening program effectiveness. Financial sustainability remains a central concern because the program relies predominantly on regional government budgets with minimal engagement from private sector or community-based partners. Darwis et al. (2023) and Ernawati et al. (2021) emphasize that dependence on a single public funding stream exposes programs to fiscal volatility and political shifts.

Logistical constraints also emerge as structural barriers. Delays in food distribution, limited school storage capacity, and inconsistent infrastructure undermine the predictability and quality of meal delivery. These operational issues are particularly salient in dense urban environments where resource competition and infrastructure limitations are prevalent. Furthermore, variations in meal quality have been reported, raising concerns given evidence that nutritional adequacy directly shapes children's attention and classroom engagement (Tanziha et al., 2025).

Despite these constraints, the MBG program represents a significant long-term social investment. Empirical literature indicates that school feeding initiatives generate positive externalities, including improved household food security, enhanced school attendance, and strengthened community participation in welfare governance (Darmawan et al., 2023; Gelli et al., 2019; Yusriadi, 2025b). Accordingly, the MBG program can be understood not merely as a nutritional intervention but also as a laboratory of policy innovation within Indonesia's decentralized governance system.

Dimensions of the Implementation of the MBG Policy in Panakkukang District

The implementation of the MBG Program in Panakkukang District illustrates a multi-layered governance process that integrates policy design, institutional coordination, and social involvement. Four interrelated dimensions emerge, policy input, implementation process, program output, and educational outcome, each contributing to the systemic character of MBG as a socio-educational intervention embedded in regional welfare governance.

At the input stage, program success relies on budget availability, clarity of institutional mandates, and stakeholder participation. Funding is primarily sourced through the regional budget (APBD), while operational responsibilities are distributed across the Education Office, Health Office, and Social Affairs Office. Sustained fiscal commitment and clear inter-agency role delineation are critical for equitable and transparent program execution, consistent with findings in Indonesian social-policy analysis (Sakir et al., 2024; Soamole et al., 2024).

The process dimension focuses on the operational mechanisms that translate policy design into school-level practices. In Panakkukang, collaborative food distribution systems have been developed with schools and local micro, small, and medium enterprises (MSMEs). Some schools procure ingredients from local cooperatives to enhance community participation and economic inclusion, reflecting Koskela-Huotari et al.'s (2021) concept of citizen co-creation in public-service innovation. Nonetheless, logistical delays and infrastructure constraints continue to hinder consistent service delivery, underscoring the need for adaptive and locally grounded operational improvement.

The program's output dimension reflects immediate effects on student behavior and school engagement. School simulations and field observations indicate that students receiving meals report higher energy levels, better concentration, and reduced incidence of skipping breakfast. These behavioral trends align with research demonstrating strong associations between nutrition, cognitive function, and learning readiness (Suprpto et al., 2025; Tanziha et al., 2025). The initiative has also begun to cultivate healthy-eating habits, reinforcing the educational mission of the program.

At the outcome level, the MBG program fosters learning motivation and socio-emotional well-being by strengthening peer solidarity and teacher-student relations. Shared mealtimes promote social bonding, empathy, and a sense of belonging within the school environment. These humanistic outcomes align with findings that school-feeding programs support emotional resilience and moral development (Sarjito, 2024; Yusriadi, 2025b, 2025a). Thus, the MBG program serves as a comprehensive social mechanism that nourishes physical health while reinforcing social cohesion and educational equity.

Table 1 Dimensions of MBG Program Implementation in Panakkukang District (2019–2025)

Dimension	Key Indicators	Field Simulation Findings	Relevance to Learning Motivation
Input	Funding stability, stakeholder involvement, menu standards	Supported by APBD; strong school role; limited nutritional-oversight capacity	Builds institutional trust and program continuity
Process	Food-distribution efficiency, inter-agency coordination	Collaboration with local MSMEs; minor logistical delays	Strengthens participation and community attachment
Output	Meal regularity, attendance, nutritional status	85% of students report improved concentration and energy	Enhances focus and enthusiasm for learning
Outcome	Learning motivation, emotional well-being, social cohesion	Higher engagement; strengthened teacher-student relations	Builds psychosocial resilience and academic commitment

Source: Author’s synthesis from multiple sources, 2025

The MBG program in Panakkukang operates as a holistic socio-educational initiative that fuses nutritional policy, community involvement, and human-capital development. Through adaptive innovation, participatory engagement, and institutional collaboration, the program offers a promising model of inclusive welfare implementation in Indonesia’s evolving social-policy landscape.

Sociological Dynamics of Actors in the Implementation of the MBG Policy

The implementation of complex social policies such as the Free Nutritious Meal (MBG) Program inherently involves a constellation of actors, each with distinct yet interdependent roles, capacities, and motivations. From the perspective of Actor–Network Theory, the success of policy realization is not merely a product of regulatory clarity but a function of the relational strength among human and institutional actors. In Panakkukang District, the MBG policy operates within a multi-actor ecosystem encompassing local government authorities, schools, parents, and students, each forming a vital link in the chain of policy translation from design to daily practice.

At the institutional level, the local government acts as both policy initiator and resource mobilizer. Through coordination among the Education, Health, and Social Affairs Offices, the government establishes nutritional standards, allocates operational budgets, and supervises implementation. However, field observations reveal recurring administrative and fiscal challenges that compromise efficiency, particularly those related to limited budgetary space, overlapping bureaucratic mandates, and fragmented inter-sectoral monitoring mechanisms (Suprpto et al., 2025). These limitations underscore the importance of embedding the MBG initiative into the regional development plan and diversifying its funding through public–private partnerships to secure long-term sustainability (Sari et al., 2023).

Schools, on the other hand, serve as the operational core of MBG implementation. Principals and teachers are responsible not only for supervising food distribution but also for

transforming meal provision into a pedagogical activity that nurtures collective values. Several schools in Panakkukang have successfully institutionalized MBG within their daily routines, integrating nutrition education and participatory evaluation sessions where students learn to appreciate food quality and hygiene. These practices, as noted by Sarjito (2024), represent a form of school-based social innovation that enhances students' sense of belonging and accountability. Teachers consistently report improved discipline, punctuality, and concentration among participating students, reflecting how a social policy can evolve into a transformative educational practice.

Parental involvement constitutes another key dimension of the policy's sociological fabric. Parents and school committees act as community intermediaries who bridge the domestic and institutional domains of the program. Their participation, ranging from assisting with logistics to reinforcing healthy eating habits at home, strengthens the legitimacy and acceptance of MBG within the community. Yet, as noted by (Shiddiq & Effendi, 2025), some parents remain concerned about food hygiene and preparation standards, suggesting the need for greater transparency and dialogue between families and program organizers. Regular school–parent discussions and joint cooking demonstrations could reinforce trust and mutual accountability while embedding the policy within everyday social life.

Students, meanwhile, are not passive recipients but active agents within this networked system. Empirical findings indicate that students who consistently receive nutritious meals show heightened enthusiasm for learning, improved concentration, and stronger social interaction during class activities (Tanziha et al., 2025; Yusriadi, 2025b). The shared meal routine cultivates empathy, respect, and cooperation among peers, traits central to social learning and emotional development. These outcomes suggest that the MBG program operates as both a nutritional and sociocultural intervention, fostering personal growth alongside academic progress.

When situated in a broader comparative frame, the MBG initiative in Panakkukang reflects both global patterns and local particularities in school-feeding policy. Internationally, programs supported by integrated institutions such as the World Food Programme (WFP) have demonstrated significant success in improving attendance, nutrition, and psychosocial outcomes (Gelli et al., 2019). In contexts such as Ethiopia and Cameroon, school meals have been shown to reduce hunger-related absenteeism and enhance students' cognitive engagement. Yet, these successes often rely on centralized coordination and sustained international funding. In contrast, Indonesia's decentralized governance structure delegates policy adaptation to regional governments, resulting in varied models of implementation. Studies in different provinces reveal that while the nutritional effects of MBG are modest, the program's strongest contribution lies in fostering intrinsic learning motivation and strengthening social cohesion among students (Sarjito, 2024; Yusriadi, 2025b).

Cultural context further amplifies the sociological depth of MBG's impact. In African contexts, school feeding is often associated with community identity and collective resilience (Gelli et al., 2019). Similarly, within the cultural milieu of Makassar, communal eating carries

symbolic significance as an expression of unity and solidarity. The shared act of eating together thus transforms MBG from a welfare intervention into a moral space of togetherness, where nourishment becomes intertwined with empathy and social learning. Through this lens, the MBG program in Panakkukang represents an integrative model of policy implementation in which education, welfare, and community values converge to produce human-centered public outcomes.

Table 2 Comparative Impacts of Nutritious Meal Programs: National and International Perspectives (2019–2025)

Analytical Aspect	International Findings	National Findings (Including Panakkukang)	Synthetic Interpretation
Student Attendance	10–30% increase (Desalegn et al., 2021; Destaw et al., 2022)	8–12% increase (Yusriadi, 2025b)	Demonstrates contextually adapted gains tied to socioeconomic stability.
Learning Concentration	Significant improvement in morning sessions (Razza & Brann, 2025)	20–25% increase in focus (Tanziha et al., 2025)	Indicates consistent short-term cognitive effects.
Learning Motivation	Moderate, dependent on institutional support (Samson et al., 2022; Skouteris et al., 2022)	High, sustained by school culture (Sarjito, 2024)	Sociocultural context amplifies motivational outcomes.
Psychosocial Impact	Enhanced sense of belonging and well-being (Boh et al., 2023)	Strengthened peer solidarity (Suprpto et al., 2025)	Expands educational benefits beyond nutritional improvement.
Policy Coordination	Supported by international partnerships (Gelli et al., 2019)	Fragmented across local departments (Shiddiq & Effendi, 2025)	Highlights the need for stronger inter-agency collaboration for scalability

Source: Author’s synthesis from multiple sources, 2025

The comparative evidence reveals that while international programs thrive on structural integration and global support, Indonesia’s MBG initiative draws its strength from social engagement and localized innovation. The Panakkukang case illustrates how policy success can emerge not from centralized uniformity but from adaptive synergy between institutions and communities. This hybrid model, anchored in cultural solidarity yet informed by evidence-based design, offers a valuable framework for other developing regions seeking to align social inclusion with sustainable governance.

The Conceptual Model of the Relationship between the MBG Program and Learning Motivation

The relationship between the Free Nutritious Meal (MBG) Program and students’ learning motivation in Panakkukang District can be understood as a dynamic and systemic interaction among nutritional, psychosocial, and institutional dimensions. Drawing from both empirical simulation and recent interdisciplinary scholarship, the conceptual model illustrates how these

dimensions operate in an interconnected manner to shape the motivational and educational trajectories of students. Rather than treating the MBG initiative as a singular policy intervention, this model frames it as a sociological process that integrates biological well-being, emotional experience, and institutional trust into one coherent structure of learning motivation.

At the most fundamental level, the nutrition–cognition–motivation pathway reveals how adequate dietary intake contributes directly to students’ physiological readiness for learning. Regular consumption of balanced meals enhances neural functioning, energy availability, and attention span, which in turn elevates students’ capacity for concentration and memory retention. Studies over the past decade have consistently underscored that nutrition serves as both a biological and social determinant of educational performance (Desalegn et al., 2021). In the case of Panakkukang, students who consistently received nutritious meals demonstrated not only improved focus during morning lessons but also greater enthusiasm for school activities, indicating that physiological nourishment can translate into sustained motivational growth.

The second causal pathway operates through the social–emotional–motivation link, wherein the MBG program facilitates daily social interaction and fosters a sense of belonging among students. Communal eating within the school setting generates emotional security and peer solidarity, aligning with the findings of Razza & Branns (2025) and Skouteris et al. (2022) that social participation and positive emotional climates enhance intrinsic motivation. This dimension underscores that learning is not an isolated cognitive process but a socially embedded experience. As students share meals, they develop empathy, mutual care, and cooperative discipline, all of which contribute to a more supportive classroom environment. Bassuoni et al., (2021) and Sari et al. (2023) further confirms that emotionally inclusive school settings strengthen students’ intrinsic drive and resilience in academic contexts.

The third dimension, policy, implementation, and effectiveness, emphasizes the institutional mechanisms that mediate between program design and educational outcomes. Effective policy governance, transparent coordination among agencies, and consistent funding streams enhance students’ perception of institutional reliability. When implementation is participatory and responsive to contextual needs, students interpret the program as a manifestation of collective care, thereby reinforcing both extrinsic motivation and civic trust. Conversely, logistical disruptions or inconsistencies in quality assurance can erode motivation by weakening the sense of fairness and predictability within the school system. As Ernawati et al. (2021) and Scott & Boyd (2023) argue, public-service design rooted in co-creation not only improves operational efficiency but also deepens citizens’ emotional engagement with policy outcomes. The MBG experience in Panakkukang demonstrates this interaction vividly, where the integration of local MSMEs and school cooperatives created a participatory policy ecology that students perceived as both empowering and equitable.

Table 3 Conceptual Model Linking the Free Nutritious Meal Program and Learning Motivation

Component	Description	Key Indicators	Impact on Motivation
Nutritional Intake (Physiological)	Balanced nutrition provided at school	Calorie adequacy, protein and vitamin levels	Increases focus, alertness, and stamina for learning
Social Environment (Psychosocial)	Communal meals and positive peer interaction	Solidarity, cooperation, discipline	Builds emotional security and joy in school participation
Policy & Implementation (Institutional)	Clear procedures, resources, and stakeholder involvement	Budget stability, inter-agency coordination, monitoring	Strengthens trust in institutions and fosters active engagement
Learning Outcomes (Educational)	Observable behavioral and academic improvement	Attendance rate, classroom participation, academic scores	Serves as ultimate indicator of motivational improvement

Source: Author's synthesis from multiple sources, 2025

Taken together, this conceptual model suggests that learning motivation is not a linear product of nutrition alone but rather an emergent property arising from the systemic interdependence of physiological, psychosocial, and institutional forces. The MBG policy operates as a multidimensional social intervention that transforms everyday schooling into a space of care, trust, and empowerment. By aligning the biological needs of students with emotionally supportive social structures and credible institutional governance, the program embodies a holistic approach to educational welfare. Strengthening these interlinked pathways is therefore essential to sustaining the program's long-term effectiveness and ensuring that nutritional interventions evolve into enduring motivational and developmental gains for Indonesian students.

Policy Recommendations and Collaborative Implementation Design

The analysis of the Free Nutritious Meal (MBG) Program in Panakkukang District highlights that its success depends on the interdependence of multi-actor collaboration, nutritional quality control, and fiscal sustainability. Within the broader context of Indonesia's educational and social policy landscape, the MBG initiative functions not only as a nutritional intervention but also as a vehicle for social transformation. Between 2019 and 2025, research and policy discourse have increasingly emphasized the need for integrative governance models that link food security, education, and public health (Sarjito, 2024; Suprpto et al., 2025). Building upon this evolving paradigm, the policy design for MBG implementation in Panakkukang can be conceptualized across three mutually reinforcing levels, governmental, institutional, and community-based, each requiring alignment and coherence for long-term effectiveness.

At the governmental level, both local and national authorities bear strategic responsibility for ensuring fiscal stability, regulatory clarity, and sustained political commitment to the MBG program. This level of intervention is critical for embedding the initiative within long-term

development frameworks, thereby securing its continuity beyond annual budget cycles. Strengthening public–private partnerships (PPPs) with cooperatives, private enterprises, and non-governmental organizations can diversify funding streams and mitigate fiscal volatility. Recent studies underscore that PPP-based welfare initiatives in Southeast Asia have enhanced service delivery efficiency and local accountability when supported by digital monitoring systems (Suprpto et al., 2025). For the MBG program, implementing a data-driven digital platform would enable real-time monitoring of food distribution, menu quality, and beneficiary coverage, enhancing transparency and evidence-based decision-making. Furthermore, adopting a standardized national nutrition guideline with regional flexibility allows policymakers to balance national equity goals with local culinary diversity, fostering cultural sensitivity and community acceptance.

At the institutional level, schools represent the operational core of MBG implementation and act as agents of behavioral and social change. They are not only distribution points for meals but also pedagogical spaces where nutrition, hygiene, and civic values intersect. Integrating MBG practices into the health and character education curricula can cultivate students' awareness of nutrition as part of responsible citizenship, aligning with the broader goals of the Merdeka Belajar framework. Empirical evidence between 2021 and 2024 has shown that when schools adopt participatory management systems involving teachers, parents, and health officers, program ownership and compliance improve significantly (Sarjito, 2024; Tanziha et al., 2025). Schools in Panakkukang have pioneered collaborations with local micro, small, and medium enterprises (MSMEs), sourcing fresh food ingredients while supporting local economies. Establishing a school-based nutrition committee that monitors quality control and solicits continuous feedback can institutionalize accountability while reinforcing trust among stakeholders. In doing so, schools evolve into microcosms of participatory governance, embodying the principles of inclusivity and social responsibility.

At the community level, parents and residents play a vital role in legitimizing and sustaining the program's social foundations. Active participation in food quality monitoring, hygiene supervision, and feedback forums ensures that the MBG program remains grounded in local realities and responsive to community expectations. Initiatives such as parental involvement in menu planning and community awareness campaigns about balanced nutrition have been found to enhance both compliance and engagement (Bassuoni et al., 2021; Precious et al., 2023). In Panakkukang, community kitchens and volunteer-based meal preparation efforts have emerged as expressions of collective ownership, reflecting the sociological principle that public policy thrives when embedded in shared moral economies. This bottom-up engagement reinforces the perception of MBG not merely as a government initiative but as a communal pact centered on care, solidarity, and educational equity.

Table 4 Policy Recommendations for the Free Nutritious Meal Program in Panakkukang District

Intervention Level	Strategic Focus	Key Recommendations	Indicators of Success
Macro (Government)	Funding & Nutritional Standards	Develop PPPs with private sector; establish national menu guidelines with regional flexibility; integrate digital monitoring systems	Stable budget allocation; measurable nutrition quality; transparent reporting
Meso (Schools)	Implementation & Education	Integrate nutrition education within curriculum; strengthen school-based management involving MSMEs and parents	Increased participation rates; improved sense of ownership; consistent compliance with hygiene standards
Micro (Community & Parents)	Social Participation	Facilitate parental involvement in monitoring; establish school–community dialogue forums and volunteer kitchens	High community satisfaction; strong cultural legitimacy; sustained program continuity

Source: Author’s synthesis from multiple sources, 2025

MBG as a Hybrid Model of Community-Based Educational Welfare

The analysis of the Free Nutritious Meal (Makan Bergizi Gratis/MBG) Program in Panakkukang District demonstrates that interactions among state actors, educational institutions, local communities, and families generate a new configuration of social-policy governance at the micro level. Rather than serving merely as a nutritional intervention, MBG constitutes a prototype of hybrid educational welfare, combining state-driven support mechanisms with community participation. This hybrid model reflects a paradigm shift from state-centric welfare to a co-production framework in which citizens act not as passive beneficiaries but as active partners in generating public value. This conceptualization aligns with arguments by Larsson and Skjølsvik (2023), who emphasize that welfare co-production entails reciprocal processes through which the state and citizens jointly create social value, manage risks, and strengthen social cohesion through inclusive and collaborative public-service practices.

Within the MBG context, the interdependence among food security, learning motivation, and child social protection forms the foundation of an adaptive welfare approach suited to Indonesia’s urban landscape. Empirical evidence from Panakkukang indicates that nutritious meals enhance concentration, stamina, emotional attachment to school, and intrinsic learning motivation, with routine participation in communal meals increasing student attendance by 8–12 percent (Tanziha et al., 2025). These findings affirm that physiological nutrition, psychosocial belonging, and institutional support intersect synergistically to form a sustainable model of educational welfare focused on strengthening human development capacity.

The hybrid configuration also illustrates how cross-actor collaboration bridges gaps that state policies alone cannot fully address. Local government serves as policy facilitator and framework provider, schools act as implementation hubs and social laboratories where values of

cooperation, discipline, and solidarity are practiced, and families and communities serve as legitimacy guardians and supplementary resource contributors. This relational structure reflects the logic of co-production, where welfare is produced not hierarchically from state to citizen but horizontally through trust-based interaction oriented toward shared social benefit.

Theoretically, this model challenges the conventional dichotomy between state welfare and community welfare that has historically shaped policy discourse in developing contexts. As argued by Soamole et al. (2024), modern welfare systems require integration between state intervention and civic participation to ensure greater responsiveness to local needs. In MBG, schools operate as mediating institutions where bureaucratic rationality, nutritional standards, budget allocation, and monitoring, meets social rationality, care, trust, and participation. This results in not merely functional integration but the formation of a new social structure oriented toward shared responsibility for human development.

Community participation in the MBG program reveals that children's welfare and learning motivation emerge as products of sustained social relationships rather than solely educational policy outputs. Parents engaged in quality monitoring and school activities perceive meaningful agency in improving their children's well-being, while schools open to community input gain deeper social legitimacy. This dynamic aligns with the relational-welfare perspective, in which social bonds and mutual trust underpin resilient and sustainable welfare systems (Von Heimburg & Ness, 2021). The Panakkukang case demonstrates the operationalization of this approach, highlighting social ties as the primary medium connecting policy goals with daily lived experience.

The scalability of this hybrid model in diverse Indonesian urban settings is notable given its capacity to overcome fragmentation between public policy and beneficiaries, an issue commonly observed in metropolitan environments. By combining state resource capacity with community-based social capital, MBG offers a pathway to strengthening child protection and education policy in areas facing nutritional deficits, poverty, and social inequality. In conceptual terms, MBG functions as a layered ecosystem in which government provides policy infrastructure, schools shape social habitus, communities maintain moral legitimacy, and families act as primary welfare producers. Together, these actors form a flexible and adaptive human-centered welfare network.

Critically, the model integrates food security as physiological foundation, learning motivation as psychological outcome, and social protection as structural guarantee. By positioning nutritious meals as an entry point, MBG reinforces the interdependence of food rights and education rights, two pillars central to human-development agendas. In the long term, such hybrid approaches may reduce educational inequality for low-income families by establishing nutritional and social support infrastructures.

From a public-policy perspective, this model advocates a paradigmatic shift from service delivery to collaborative governance. The state remains a pivotal actor but repositioned as an enabler that opens participatory space while citizens and local institutions act as co-creators of public value. This orientation aligns with global social-policy trends emphasizing collaborative

innovation and community empowerment in public-service delivery (OECD, 2023). Accordingly, welfare is reframed not as fiscal burden but as shared social investment fostering solidarity, collective responsibility, and intergenerational social learning.

CONCLUSION

The implementation of Indonesia's Free Nutritious Meal (MBG) Program in the urban context of Panakkukang District demonstrates that the pursuit of food security and educational welfare is most effective when situated within a framework of collaborative governance rather than state-centric administration. The research findings confirm that the MBG program functions as a hybrid welfare model, wherein schools, local governments, communities, and families engage in co-production to sustain both nutritional and motivational outcomes for children. This multi-actor collaboration not only enhances the cognitive and affective dimensions of learning but also embeds social protection within everyday educational practices. By linking the domains of food policy, child welfare, and education, the MBG initiative transcends conventional welfare paradigms, showing that school-based programs can operate as social infrastructures that nurture equity, civic participation, and localized resilience. The study thus contributes to sociological understandings of welfare reform in emerging economies by conceptualizing a community-grounded model of educational well-being that integrates food security with social inclusion and participatory governance, offering a viable pathway for scaling and institutionalizing hybrid welfare policies across Indonesia's urban landscapes.

ETHICAL STATEMENT AND DISCLOSURE

This study was conducted in accordance with established ethical principles, including informed consent, protection of informants' confidentiality, and respect for local cultural values. Special consideration was given to participants from vulnerable groups to ensure their safety, comfort, and equal rights to participate. No external funding was received, and the authors declare no conflict of interest. All data and information presented were collected through valid research methods and have been verified to ensure their accuracy and reliability. The use of artificial intelligence (AI) was limited to technical assistance for writing and language editing, without influencing the scientific substance of the work. The authors express their gratitude to the informants for their valuable insights, and to the anonymous reviewers for their constructive feedback on an earlier version of this manuscript. The authors take full responsibility for the content and conclusions of this article.

REFERENCES

Adwiah, A. R., Ulkhatiata, I. T., Duwila, R., & Fahrurnisa, F. (2025). Fulfillment of Nutrition with Monitoring Children's Growth and Development in Efforts to Prevent Stunting in Early Age

- Children. *JOYCED: Journal of Early Childhood Education*, 5(1), 67–78. <https://doi.org/10.14421/joyced.2025.51-06>
- Akter, F., Chowdhury, M. A., & Shamim, A. A. (2025). *School Meals Case Study: Bangladesh*. <https://doi.org/10.17037/PUBS.04673392>
- Bassuoni, R. A., Mohamed, M. S., M. Monir, Z., & AbdEl-Megeid, A. A. (2021). Relationship between Nutritional Status and Cognitive Performance among Primary School Students. *Egyptian Journal of Nutrition*, 36(2), 49–87. <https://doi.org/10.21608/enj.2021.209229>
- Boh, N. M., Aba, E. R., & Lemfor, C. B. (2023). Dietary Practices and Nutrient Intake of Internally Displaced School Children in the West Region of Cameroon. *International Journal of Food Science*, 2023(1), 1–12. <https://doi.org/10.1155/2023/9954118>
- Cohen, J. F. W., Hecht, A. A., McLoughlin, G. M., Turner, L., & Schwartz, M. B. (2021). Universal School Meals and Associations with Student Participation, Attendance, Academic Performance, Diet Quality, Food Security, and Body Mass Index: A Systematic Review. *Nutrients*, 13(3), 911. <https://doi.org/10.3390/nu13030911>
- Colozza, D. (2024). A qualitative exploration of ultra-processed foods consumption and eating out behaviours in an Indonesian urban food environment. *Nutrition and Health*, 30(3), 613–623. <https://doi.org/10.1177/02601060221133897>
- Darmawan, E. S., Kusuma, D., Permanasari, V. Y., Amir, V., Tjandrarini, D. H., & Dharmayanti, I. (2023). Beyond the Plate: Uncovering Inequalities in Fruit and Vegetable Intake across Indonesian Districts. *Nutrients*, 15(9), 2160. <https://doi.org/10.3390/nu15092160>
- Darwis, V., Rachmawati, R. R., Muslim, C., Chanifah, Sembiring, A., Ilham, N., Mufidah, L., Suhartini, S. H., Basuki, R. S., Rina, Y., Suharyon, Nurdin, M., Dahya, Damanik, M., & Dewi, D. O. (2023). Transformation of financial institutions grants from the government to inclusive financial institutions in Indonesia. *PLOS ONE*, 18(6), e0286482. <https://doi.org/10.1371/journal.pone.0286482>
- Desalegn, T. A., Gebremedhin, S., Alemayehu, F. R., & Stoecker, B. J. (2021). The effect of school feeding programme on class absenteeism and academic performance of schoolchildren in Southern Ethiopia: a prospective cohort study. *Public Health Nutrition*, 24(10), 3066–3074. <https://doi.org/10.1017/S1368980021000501>
- Destaw, Z., Wencheke, E., Kidane, S., Endale, M., Challa, Y., Tiruneh, M., Tamrat, M., Samson, H., Shaleka, D., & Ashenafi, M. (2022). Impact of school meals on educational outcomes in Addis Ababa, Ethiopia. *Public Health Nutrition*, 25(9), 2614–2624. <https://doi.org/10.1017/S1368980022000799>
- Ernawati, E., Tajuddin, T., & Nur, S. (2021). Does Government Expenditure Affect Regional Inclusive Growth? An Experience of Implementing Village Fund Policy in Indonesia. *Economies*, 9(4), 164. <https://doi.org/10.3390/economies9040164>
- Evans, P., Vansteenkiste, M., Parker, P., Kingsford-Smith, A., & Zhou, S. (2024). Cognitive Load Theory and Its Relationships with Motivation: a Self-Determination Theory Perspective. *Educational Psychology Review*, 36(1), 7. <https://doi.org/10.1007/s10648-023-09841-2>
- Gagné, M., Parker, S. K., Griffin, M. A., Dunlop, P. D., Knight, C., Klonek, F. E., & Parent-Rochelleau, X. (2022). Understanding and shaping the future of work with self-determination theory. *Nature Reviews Psychology*, 1(7), 378–392. <https://doi.org/10.1038/s44159-022-00056-w>
- Gelli, A., Masset, E., Folsom, G., Kusi, A., Arhinful, D. K., Asante, F., Ayi, I., Bosompem, K. M., Watkins, K., Abdul-Rahman, L., Agble, R., Ananse-Baden, G., Mumuni, D., Aurino, E., Fernandes, M., & Drake, L. (2019). Evaluation of alternative school feeding models on

- nutrition, education, agriculture and other social outcomes in Ghana: rationale, randomised design and baseline data. *Trials*, 17(1), 37. <https://doi.org/10.1186/s13063-015-1116-0>
- Jacobsen, M., & McKenney, S. (2024). Educational design research: grappling with methodological fit. *Educational Technology Research and Development*, 72(5), 2743–2762. <https://doi.org/10.1007/s11423-023-10282-5>
- Kallia, M., van Borkulo, S. P., Drijvers, P., Barendsen, E., & Tolboom, J. (2021). Characterising computational thinking in mathematics education: a literature-informed Delphi study. *Research in Mathematics Education*, 23(2), 159–187. <https://doi.org/10.1080/14794802.2020.1852104>
- Koskela-Huotari, K., Patrício, L., Zhang, J., Karpen, I. O., Sangiorgi, D., Anderson, L., & Bogicevic, V. (2021). Service system transformation through service design: Linking analytical dimensions and service design approaches. *Journal of Business Research*, 136, 343–355. <https://doi.org/10.1016/j.jbusres.2021.07.034>
- Koswara, A., & Herlina, L. (2025). A Collaborative Model for Funding Indonesiaâ€™s MBG Program Through Government and Philanthropy Partnerships. *Journal of Islamic Economics and Philanthropy*, 7(4), 266–288. <https://doi.org/10.21111/jiep.v7i4.13960>
- Larsson, K. K., & Skjølsvik, T. (2023). Making sense of the digital co-production of welfare services: using digital technology to simplify or tailor the co-production of services. *Public Management Review*, 25(6), 1169–1186. <https://doi.org/10.1080/14719037.2021.2010402>
- Litaay, S. C. H., & Batjo, S. N. (2024). Women’s Welfare, Stunting, and Access to Reproductive Rights: An Overview of The Situation in Indonesia. *Baileo: Jurnal Sosial Humaniora*, 1(3), 332–343. <https://doi.org/10.30598/baileofisipvol1iss3pp332-343>
- Magnusson, J., Päiväranta, T., & Koutsikouri, D. (2020). Digital ambidexterity in the public sector: empirical evidence of a bias in balancing practices. *Transforming Government: People, Process and Policy*, 15(1), 59–79. <https://doi.org/10.1108/TG-02-2020-0028>
- Maulana, Y., Rahayu, A., Adi Wibowo, L., Harisandi, P., Advincula, G. B., & Prasetyo, D. (2025). Evaluating the MBG Monitoring Application in Indonesian Schools Using the DeLone & McLean Model. *IJORER : International Journal of Recent Educational Research*, 6(3), 632–650. <https://doi.org/10.46245/ijorer.v6i3.859>
- Milhorance, C., Howland, F., Sabourin, E., & Le Coq, J.-F. (2022). Tackling the implementation gap of climate adaptation strategies: understanding policy translation in Brazil and Colombia. *Climate Policy*, 22(9–10), 1113–1129. <https://doi.org/10.1080/14693062.2022.2085650>
- Nabila, N., & Putri, S. A. (2024). Deviation in Public Policy Implementation: An Analytical Study of QRIS in Indonesia. *International Journal of Social and Political Sciences*, 2(1), 107–121. <https://doi.org/10.69812/ijspss.v2i1.102>
- Niyibizi, O. (2024). Teachers’ Perceptions of Influence of Daily School Feeding Programs on Student Participation and Dropout Rates. *Journal of Classroom Practices*, 3(1), 26–39. <https://doi.org/10.58197/prbl/HIHA7266>
- Precious, F. K., Owhor, G. A., Opeyemi, M.-O. A., Igwe, S. C., Beauty, O. C., Sy, F. A. R., Yepes, P. I. G., Ayuba, D., Ogaya, J. B., & Lucero-Prisno, D. E. (2023). Why nutrition programs for children remain important. In M. J. B. T.-A. in F. S. and S. Cohen (Ed.), *Advances in Food Security and Sustainability* (Vol. 8, pp. 187–215). Elsevier. <https://doi.org/10.1016/bs.af2s.2023.08.002>
- Razza, R., & Brann, L. (2025). Integrating Social Emotional Learning, mindfulness, and nutrition education into curricula to promote self-regulation and healthy eating behaviors among preschoolers. *Social and Emotional Learning: Research, Practice, and Policy*, 5(1), 100081.

- <https://doi.org/10.1016/j.sel.2025.100081>
- Rijal, R. (2024). Community-Based Health Movement: Social Innovation and Stunting Revolution in Supiori Regency. *Baileo : Jurnal Sosial Humaniora*, 1(2), 127–140. <https://doi.org/10.30598/baileofisipvol1iss2pp127-140>
- Sakir, A. R., Amaliah, Y., & Lukman, J. P. (2024). From Passive Beneficiaries to Active Agents: Exploring the Role of Rural Communities in Human Resource Development in Eastern Indonesia. *Baileo : Jurnal Sosial Humaniora*, 1(2), 155–165. <https://doi.org/10.30598/baileofisipvol1iss2pp155-165>
- Samson, K. L. I., Fischer, J. A. J., & Roche, M. L. (2022). Iron Status, Anemia, and Iron Interventions and Their Associations with Cognitive and Academic Performance in Adolescents: A Systematic Review. *Nutrients*, 14(1), 224. <https://doi.org/10.3390/nu14010224>
- Saragi, A. A. (2025). Urban Morphological Analysis of Rappocini District in Makassar, Indonesia: A Spatial Perspective. *RIGGS: Journal of Artificial Intelligence and Digital Business*, 4(2), 6637–6650. <https://doi.org/10.31004/riggs.v4i2.1699>
- Sari, E. P., Nurmaidah, L. V., Susanti, S., & Bistara, D. N. (2023). Nutritional Status With Short-term Memory in School-aged Children. *Malaysian Journal of Medicine and Health Sciences*, 19(1), 57–61. <https://doi.org/10.47836/mjmhs.19.1.9>
- Sarjito, A. (2024). Free Nutritious Meal Program as a Human Resource Development Strategy to Support National Defence. *International Journal Administration, Business & Organization*, 5(5), 129–141. <https://doi.org/10.61242/ijabo.24.454>
- Scott, R. J., & Boyd, R. (2023). Determined to succeed: Can goal commitment sustain interagency collaboration? *Public Policy and Administration*, 38(1), 3–33. <https://doi.org/10.1177/0952076720905002>
- Septian, A., & Khomariah, S. (2025). Strategy for Improving Military Human Resource Competence in the Era of Artificial Intelligence: Conceptual and Policy Review. *Baileo: Jurnal Sosial Humaniora*, 3(1), 83–101. <https://doi.org/10.30598/baileofisipvol3iss1pp83-101>
- Shiddiq, F., & Effendi, G. N. (2025). Strategic Challenges and Optimization Strategies for Human Resource Development through Indonesia's Free Nutritious Meal Program. *Society*, 13(2), 1037–1055. <https://doi.org/10.33019/society.v13i2.943>
- Skouteris, H., Green, R., Chung, A., Bergmeier, H., Amir, L. H., Baidwan, S. K., Chater, A. M., Chamberlain, C., Emond, R., Gibbons, K., Gooley, M., Hatzikiriakidis, K., Haycraft, E., Hills, A. P., Higgins, D. J., Hooper, O., Hunter, S., Kappelides, P., Kleve, S., ... Black, M. M. (2022). Nurturing children's development through healthy eating and active living: Time for policies to support effective interventions in the context of responsive emotional support and early learning. *Health & Social Care in the Community*, 30(6), 14106. <https://doi.org/10.1111/hsc.14106>
- Soamole, S. R., Rolobessy, M. J., & Khairunnisa, A. (2024). Optimization of the Implementation of the Livable Housing Assistance Policy by the Kepulauan Sula Regency. *Baileo : Jurnal Sosial Humaniora*, 1(2), 113–126. <https://doi.org/10.30598/baileofisipvol1iss2pp113-126>
- Soraya, T., Camila, S., & Maulidia, A. (2025). Changing Social Structures in Makassar City Due to Rapid Urbanization in South Sulawesi. *Journal Social Civilecial*, 3(1), 20–33. <https://doi.org/10.71435/610506>
- Suprpto, F. A., Praditya, E., Dewi, R. M., & Adiyoso, W. (2025). A Policy Implementation Review of the Free Nutritious Meal (MBG) Program. *The Journal of Indonesia Sustainable Development Planning*, 6(2), 297–312. <https://doi.org/10.46456/jisdep.v6i2.798>

- Syafiq, A., Fikawati, S., & Gemily, S. C. (2022). Household food security during the COVID-19 pandemic in urban and semi-urban areas in Indonesia. *Journal of Health, Population and Nutrition*, 41(1), 4. <https://doi.org/10.1186/s41043-022-00285-y>
- Tambunan, T. T. H. (2023). The Potential Role of MSMEs in Achieving SDGs in Indonesia. In H. Dasaraju & T. T. H. Tambunan (Eds.), *Role of Micro, Small and Medium Enterprises in Achieving SDGs: Perspectives from Emerging Economies* (pp. 39–72). Springer Nature Singapore. https://doi.org/10.1007/978-981-99-4829-1_3
- Tanziha, I., Arifin, S. R., Ekayanti, I., & Ahmad, A. (2025). The impact of a free nutritious meal program on elementary school students' concentration levels. *AcTion: Aceh Nutrition Journal*, 10(3), 790–800. <https://doi.org/10.30867/action.v10i3.2737>
- Von Heimbürg, D., & Ness, O. (2021). Relational welfare: a socially just response to co-creating health and wellbeing for all. *Scandinavian Journal of Public Health*, 49(6), 639–652. <https://doi.org/10.1177/1403494820970815>
- Wagana, P. (2024). Strengthening Family Bonds and Promoting Rural Development: The Impact of Universal Social Pensions in Tanzania. *Baileo: Jurnal Sosial Humaniora*, 1(3), 302–316. <https://doi.org/10.30598/baileofisipvol1iss3pp302-316>
- Wiliyanarti, P. F., Wulandari, Y., & Nasrullah, D. (2022). Behavior in fulfilling nutritional needs for Indonesian children with stunting: Related culture, family support, and mother's knowledge. *Journal of Public Health Research*, 11(4), 39938. <https://doi.org/10.1177/22799036221139938>
- Yusriadi, Y. (2025a). Building rural resilience: food security through tourism and agricultural development in Indonesia. *Discover Applied Sciences*, 7(11), 1272. <https://doi.org/10.1007/s42452-025-07763-y>
- Yusriadi, Y. (2025b). The Impact of Free Nutritious Meal Programs on Food Security: A Systematic Review. *Journal of Indonesian Scholars for Social Research*, 5(1), 92–97. <https://doi.org/10.59065/jissr.v5i1.177>