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Community-Based Family Education and Assistance for Improved Nutrition

Andi Mukarramah[1]*, Lestari Lorna Lolo[2], Nancy Sylvia Bawiling[3], Suprapto[4]
[1] Department of Midwifery, Stikes Gunung Sari Makassar, South Sulawesi, Indonesia
[2] Universitas Kurnia Jaya Persada, South Sulawesi, Indonesia
[3] Universitas Negeri Manado, North Sulawesi, Indonesia
[4] Departement of Nursing, Politeknik Sandi Karsa, South Sulawesi, Indonesia

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ABSTRACT
Malnutrition remains a major public health problem, particularly in communities where families have limited access to nutrition information and health services. Family knowledge and daily dietary practices play a crucial role in determining nutritional status, especially among children and vulnerable household members. This community service program aimed to improve family nutrition through community-based education and assistance implemented at a primary healthcare center in Makassar, Indonesia. The program involved 30 family respondents and used a structured five-stage approach: preparation, baseline assessment, nutrition education, family assistance and mentoring, and monitoring and evaluation. Educational activities focused on balanced nutrition, local food utilization, family meal planning, and food hygiene, supported by practical demonstrations and continuous mentoring. The program's effectiveness was evaluated using pre- and post-test assessments of nutrition knowledge, balanced diet practices, and food hygiene awareness. The results showed consistent improvements across all indicators after the intervention, indicating enhanced understanding and adoption of healthy nutritional behaviors at the household level. These findings demonstrate that integrating structured nutrition education with hands-on assistance can effectively translate knowledge into practice. Overall, the program highlights the importance of family-centered and participatory approaches in addressing community nutrition problems. Community-based family education and assistance represent a feasible and sustainable strategy to strengthen family capacity, promote healthy dietary behaviors, and support nutrition improvement within primary healthcare settings.

Keywords: Community-based intervention; Family education; Nutrition assistance; Primary healthcare; Public health nutrition

*Corresponding Author:
Andi Mukarramah, Department of Midwifery, Stikes Gunung Sari Makassar, South Sulawesi, Indonesia
Email: ammah28@gmail.com

INTRODUCTION

Malnutrition remains a persistent public health challenge, particularly in low- and middle-income communities where families face multifaceted socioeconomic, educational, and environmental constraints (Adam et al., 2024). In many developing regions, inadequate nutritional status among children and vulnerable family members is closely linked to limited parental knowledge, poor dietary practices, food insecurity, and restricted access to health information (Akuu & Amagnya, 2023). These conditions contribute to adverse outcomes, including stunting, undernutrition, micronutrient deficiencies, and increased susceptibility to illness, which collectively hinder human development and long-term community well-being (Arda et al., 2023).

At the household level, families play a central role in determining dietary behaviors, food preparation patterns, and health-related decision-making. However, many caregivers lack sufficient understanding of balanced nutrition, appropriate portion sizes, age-specific dietary needs, and hygienic food handling (Bader et al., 2023). Cultural beliefs, misinformation, and reliance on traditional feeding practices further exacerbate the problem. In some communities, economic constraints compel families to prioritize food quantity over nutritional quality, leading in diets dominated by energy-dense, nutrient-poor foods. These challenges are often intensified by limited engagement with formal health services and insufficient community-based nutrition education initiatives (Bhutta, 2021).

The consequences of inadequate family nutrition extend beyond physical health. Poor nutritional status is associated with delayed cognitive development, reduced academic performance in children, decreased productivity among adults, and increased healthcare costs for households and communities (Bidira et al., 2022). From a broader perspective, malnutrition undermines national development goals by perpetuating cycles of poverty and inequality. Despite ongoing government and institutional programs, gaps remain in translating nutritional knowledge into daily household practices, particularly in marginalized or rural populations (Chapman et al., 2024).

Addressing these challenges requires approaches that move beyond clinical or facility-based interventions and actively engage families within their social and cultural contexts. Community-based family education and assistance emerge as a strategic solution to bridge the gap between knowledge and practice. By empowering families with practical, context-sensitive nutrition education and continuous support, such programs foster sustainable behavioral change. Community-based approaches emphasize participation, local ownership, and the use of existing social networks, making them particularly suitable for community service initiatives (Cohen & Cassidy, 2021).

Family-centered nutrition education focuses on improving caregivers' understanding of balanced diets, the use of local foods, child-feeding practices, and nutrition across the life course. When combined with hands-on assistance such as cooking demonstrations, meal-planning guidance, and personalized counseling, education becomes more actionable and relevant. Moreover, integrating community health workers, local leaders, and volunteers enhances trust, cultural appropriateness, and program sustainability. This participatory model allows communities to identify their own nutritional challenges and co-develop solutions aligned with local resources and preferences.

In addition, community-based assistance provides an opportunity to identify nutritional risks early and to refer to health services when necessary. Regular monitoring, home visits, and group discussions reinforce learning outcomes and support families in overcoming barriers to behavior change. Such interventions not only improve nutritional knowledge and practices but also strengthen social cohesion and collective responsibility for community health. Therefore, this community service program aims to implement community-based family education and assistance as an integrated strategy to improve household nutrition. The program is designed to address identified nutritional problems through structured educational sessions, practical demonstrations, and continuous mentoring tailored to

community needs. By enhancing family capacity and fostering supportive community environments, the initiative seeks to improve nutritional outcomes, promote healthier family behaviors, and increase community awareness of the importance of nutrition for overall health and development. Ultimately, community-based family education and assistance represent a sustainable and scalable approach to nutrition improvement. Through collaborative engagement and empowerment of families, such initiatives align with the core principles of community service, offering practical solutions to complex public health challenges while promoting long-term community resilience and well-being.

METHOD of IMPLEMENTATION

This community service program was implemented using a structured, community-based approach to improve family nutrition through education and assistance. The program involved 30 family respondents and was conducted at a primary healthcare setting. The implementation was carried out in five sequential stages, as summarized in Table 1.

Table 1. Stages of the Method of Implementation

Stage	Implementation Phase	Activities Description	Participants / Respondents	Expected Outcomes
1	Preparation and Coordination	Initial coordination with health center staff and community representatives; identification of target families; development of educational materials and tools (leaflets, modules, and monitoring forms).	Community service team and health workers	Program readiness; agreed implementation plan; clear identification of 30 family respondents
2	Baseline Assessment	Assessment of respondents' socio-demographic characteristics, nutritional knowledge, and family dietary practices using structured questionnaires and interviews.	30 family respondents	Baseline data on nutritional knowledge and practices
3	Nutrition Education	Delivery of structured nutrition education sessions covering balanced diet concepts, local nutritious food sources, family meal planning, child and adult nutrition, and food hygiene. Sessions were conducted through interactive lectures and group discussions.	30 family respondents	Increased knowledge and awareness of family nutrition
4	Family Assistance and Mentoring	Provision of hands-on assistance, including cooking demonstrations, menu planning guidance, and personalized counseling during group sessions and home-based follow-up. Continuous mentoring was conducted to reinforce behavior change.	30 family respondents	Improved practical skills and adoption of healthy dietary behaviors
5	Monitoring and Evaluation	Monitoring changes in knowledge and dietary practices through post-intervention questionnaires and observation; evaluation of program effectiveness and documentation of outcomes.	Community service team and respondents	Improved nutritional practices: evaluation report for community service outcomes

RESULT

This section presents the outcomes of the community-based family education and assistance program implemented at Puskesmas Tamanlanrea Jaya. The results are based on data collected from 30 family respondents through baseline and post-intervention assessments. The findings highlight changes in participants' nutritional knowledge, dietary practices, and engagement in healthy family behaviors following the five-stage implementation process. Overall, the results demonstrate the program's effectiveness in improving family awareness and the practical application of balanced nutrition within the community setting. Figure 1. Comparison of pre-test and post-test scores on family nutrition indicators after the implementation of a community-based education and assistance program (n = 30).

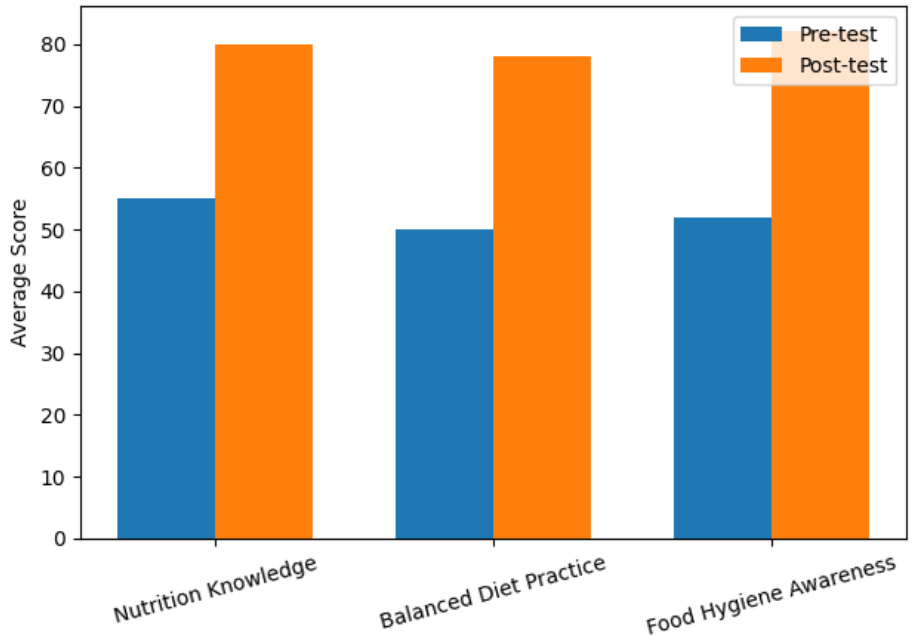

Figure 2. Pre-test and Post-test Comparison of Family Nutrition Indicators

Figure 1 shows a comparison between pre-test and post-test scores of family nutrition indicators among 30 respondents at Puskesmas Tamanlanrea Jaya. The results indicate a clear increase across all indicators following the implementation of the community-based family education and assistance program. Improvements were observed in nutrition knowledge, balanced diet practices, and food hygiene awareness, demonstrating that the intervention effectively enhanced both cognitive understanding and practical nutritional behaviors at the family level.

The findings of this community service program demonstrate that community-based family education and assistance significantly improved family nutrition outcomes. The comparison between pre-test and post-test results among 30 respondents showed consistent increases in nutrition knowledge, balanced diet practices, and food hygiene awareness. These improvements indicate that structured education combined with practical mentoring effectively supports positive behavioral change at the household level. Overall, the program highlights the importance of family-centered and community-based approaches as sustainable strategies to enhance nutritional awareness and promote healthier family practices within primary healthcare settings.

DISCUSSION

The findings of this community-based family education and assistance program demonstrate a positive impact on family nutrition outcomes, as reflected in the significant improvement between pre-

test and post-test scores across all assessed indicators. The observed increases in nutrition knowledge, balanced diet practices, and food hygiene awareness among the 30 participating families indicate that structured educational interventions combined with continuous mentoring can effectively influence household-level health behaviors. These results align with community nutrition theories emphasizing empowerment, participation, and contextual learning as key drivers of sustainable behavior change (Verma et al., 2024).

The improvement in nutrition knowledge following the intervention underscores the importance of targeted, context-specific educational activities delivered at the community level (Suprapto, 2022). Before the program, many families exhibited limited understanding of balanced nutrition concepts, appropriate food selection, and daily dietary requirements across the life course (Siti Maria Ladia Paradisa Syitra et al., 2025). Through interactive education sessions, group discussions, and simple educational materials, participants were able to understand essential nutrition messages better and apply them to their daily household practices. This finding is consistent with health education models, which emphasize that learning is more effective when information is relevant, practical, and culturally appropriate (Hairuddin et al., 2026).

Beyond cognitive improvement, the increase in balanced diet practices indicates successful translation of knowledge into action (Widaryanti et al., 2025). Families demonstrated improved meal planning, greater dietary diversity, and increased utilization of locally available nutritious foods after the intervention (Sada et al., 2025). Practical components, such as cooking demonstrations and menu-planning guidance, played a critical role in this process, helping participants overcome common barriers to food affordability, availability, and preparation skills. This supports previous community-based nutrition interventions, which show that hands-on assistance is essential to bridge the gap between nutritional knowledge and daily behavior (Irnawati et al., 2025).

Improvements in food hygiene awareness further strengthen the program's overall impact. Safe food handling and preparation practices are closely linked to both nutritional status and disease prevention, particularly among children and vulnerable family members (Ayu Rahmadani et al., 2025). By emphasizing simple, low-cost hygiene behaviors such as proper handwashing, safe food storage, and clean cooking environments, the program addressed multiple determinants of health simultaneously. This integrated approach reflects public health perspectives that nutrition interventions are most effective when combined with hygiene and sanitation education (Khomsan & Rifayanto, 2024).

The program's participatory, family-centered design contributed substantially to its effectiveness. Active involvement of families, support from primary healthcare staff, and implementation within a familiar community setting enhanced trust, engagement, and acceptance of program activities {Formatting Citation}. Group-based learning and shared experiences encouraged peer support and collective problem-solving, which are important elements in sustaining behavioral change. Such findings are consistent with community empowerment frameworks that emphasize social support and local ownership as foundations for long-term impact. Several limitations of this program should be acknowledged. The relatively small sample size and short duration of implementation may limit the generalizability of the findings. In addition, outcome measurements were primarily based on self-reported data, which may be subject to response bias (Orsango et al., 2021). However, the consistent improvement observed across all indicators suggests that the intervention produced meaningful changes in family nutrition behaviors. Future community service programs may benefit from longer follow-up periods, inclusion of objective nutritional indicators, and expansion to a broader population (Ode Novi Angreni et al., 2024).

Overall, the discussion of findings confirms that community-based family education and assistance represent an effective and feasible strategy for improving nutrition-related knowledge and practices. The integration of educational, practical, and participatory components contributed to positive

outcomes and supports the incorporation of similar approaches into routine community service and primary healthcare programs. By strengthening family capacity and fostering supportive community environments, such interventions can contribute to sustainable improvements in nutrition and overall family health.

CONCLUSION

The community-based family education and assistance program demonstrated a positive impact on improving nutrition knowledge, balanced diet practices, and food hygiene awareness among participating families. The consistent improvement observed between pre-test and post-test results indicates that integrating structured nutrition education with practical mentoring is an effective approach to promoting healthy family behaviors within primary healthcare settings. This program highlights the importance of family-centered and participatory strategies in addressing community nutrition challenges.

Based on these findings, it is recommended that similar community-based nutrition programs be integrated into routine activities at primary healthcare centers. Future initiatives should involve broader community participation, longer implementation periods, and regular follow-up to ensure the sustainability of behavior change. Strengthening collaboration between healthcare providers, community volunteers, and families is also essential to maximize the long-term impact of nutrition improvement programs.

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