

Supplementary feeding program for stunted toddlers in RW 04 Tejkusuman Notoprajan

Annisa Warastri^{1*}, Citra Aulia², Fikriyah Futik Ayu¹, Isneini Mewanda Putri²

¹Psychology Study Program, Faculty of Economics, Social Sciences and Humanities, Universitas Aisyiyah Yogyakarta, Indonesia

²Study Program of Midwifery, Faculty of Health Sciences, Universitas Aisyiyah Yogyakarta, Yogyakarta, Indonesia

*Email: annisawarastri@unisayogya.ac.id

Abstract

Stunting remains one of the major nutritional problems among children in Indonesia, including in Notoprajan Village, particularly RW 04 Tejkusuman. This study aims to examine the implementation of the Supplementary Feeding Program for stunted children and its impact on their nutritional status. The research employed a participatory observation method consisting of initial observation, participation, monitoring, reflection, and analysis. Data were collected through direct assistance, weight/height monitoring, and interviews with parents. The findings revealed that among the two stunted children identified, one child experienced weight gain while the other showed no significant change. Neither child demonstrated an increase in height during the June–August 2025 observation period. The Supplementary Feeding Program played an important role in improving parents' knowledge about nutrition and encouraging active community involvement in stunting prevention efforts. However, continuous monitoring and sustainable interventions are required to achieve more optimal outcomes.

Keywords: stunting; supplementary feeding; toddlers

1. Introduction

Stunting remains a nutritional problem experienced by children in Indonesia to this day and also occurs in several other developing countries. Stunting is a child growth and development problem that causes the body and mind to not develop normally due to long-term nutritional deficiencies, resulting in children being shorter than their peers and experiencing delays in thinking (Anjani *et al.*, 2024). This problem is a public health issue that needs to be addressed seriously and continuously.

Children suffering from stunting typically exhibit various signs, particularly slower physical growth compared to their peers. These children often exhibit shorter height for their age, a result of prolonged malnutrition. With shorter stature, stunted children typically weigh less than other children, a clear sign of nutritional deficiency. These children are observed not to achieve the expected weight gain during their growth phase (Fauziah *et al.*, 2024).

Based on data from the World Health Organization (WHO) in 2024, the global prevalence of stunting reached 22.3% (WHO, 2025). The results of the Indonesian Nutrition Status Survey (SSGI) show that the prevalence of stunting in Indonesia in 2024 was 19.8%. This figure is 0.3 percentage points lower than the stunting prevalence target set for 2024, which is 20.1% (Kemenkes, 2025). In the Special Region of Yogyakarta (DIY), the prevalence of stunting rose from 16.4% to 18% according to the latest data from the National Population and Family Planning Agency (BKKBN) in 2024. In Notoprajan Village, the prevalence of stunting in July was 12.82%. In RW 04 Tejkusuman, there were 2 toddlers with stunting with weight/height below their age.

Stunting is caused by low nutritional intake received by children from the food they eat, the mother's lack of knowledge about stunting and the mother's inability to provide a balanced diet, infections suffered by the child, limited exclusive breastfeeding, and the father's limited income (Fauziah *et al.*, 2024).

The impact of stunting not only disrupts children's physical growth but also affects their brain development. Children who experience stunting tend to have lower IQs than children who grow well. The effects of stunting can last a lifetime. Stunting worries parents because its effects can be long-lasting (Tanzil & Hafriani, 2021).

Community involvement, including families and health workers, is crucial in stunting prevention efforts. In RW 04 Tejokusuman, education on balanced diets and regular monitoring can prevent new cases. Through collaboration between the government, communities, and nutrition experts, Indonesia can achieve its stunting reduction targets in accordance with the Sustainable Development Goals (SDGs). This conclusion emphasizes that stunting is not simply a health issue, but an investment in the nation's future (UNICEF, 2022).

In Indonesia, stunting prevention is now a national focus through initiatives such as the Accelerated Stunting Reduction Initiative, which involves cross-sector collaboration to improve access to nutrition and maternal and child health. This program was launched in 2018 as a form of government commitment to addressing stunting, by involving the ministries of health, education, and social affairs to ensure comprehensive intervention (Kemenkes RI, 2023).

Providing supplementary food is a very important measure to support improved nutrition in toddlers who have nutritional problems or are at risk of stunting (Devanka *et al.*, 2025). Providing nutrient-rich supplementary food can support recovery from malnutrition and also improve the body's ability to use nutrients efficiently. Providing nutritious and healthy complementary foods can help toddlers with poor nutritional status improve their health. With better health, including improved digestive and immune systems, toddlers will be more effective at absorbing nutrients from the food they eat, which can help them gain weight (Hartono & Saimi, 2024).

1. Method

This research method uses participatory observation, which is a method of observation in which the researcher is directly involved in community activities, so that they not only observe from the outside, but also experience the same things as the community. This approach helps researchers understand the behavior, habits, and social interactions that occur in the field (Widitya Qomaro *et al.*, 2024). Participatory observation is carried out in several stages, which in the context of this study are described as follows:

1.1. Initial Observation

At this stage, KKN students identified the conditions of the community in RW 04 Tejokusuman, Notoprajan, particularly in relation to toddler nutrition issues. Initial observations showed that there were two children with stunting. From this, KKN students gained an understanding of family backgrounds, children's eating patterns, and the support of the surrounding environment for health programs.

1.2. Participation

The KKN students participated in the implementation of the PMT Program, which was provided daily to stunted toddlers for a full month in August 2025. This involvement included assisting mothers of toddlers in the process of preparing food, accompanying children when they received additional food, and motivating families to consistently implement the program. Through this participation, the researchers experienced firsthand the challenges and dynamics of the community in implementing PMT.

1.3. Observation

This stage was carried out by recording the weight and height development of toddlers, with data collected through monthly Posyandu Balita (toddler health center) activities held on the 15th of each month, documenting PMT activities, and interviewing parents about changes in their children's eating patterns and health. The observation data also included toddler attendance in the program, the types of supplementary food provided, and the children's response to the food.

1.4. Reflection

KKN students review the results of their observations and experiences during the assistance period. This reflection helps identify factors that support and hinder the success of the PMT program, such as the active role of mothers in preparing food, toddler eating habits, and family economic limitations.

1.5. Analysis and Interpretation

The collected data was then analyzed to see the extent to which the PMT program had an impact on the development of stunted toddlers. The analysis was carried out by comparing the initial monitoring results with the developments after the program was implemented. From this, an understanding of the effectiveness of PMT was obtained, as well as how families and communities play a role in supporting toddler growth.

Data collection was carried out in RW 04 Tejokusuman, Notoprajan in August 2025. During the activity, KKN students provided direct assistance to the community, especially to families with stunted children. The results of the observation showed an increase in families' knowledge about the importance of nutrition and the active involvement of the community in supporting children's health.

In addition to these stages, the participatory observation activities were also supported by field documentation in the form of activity photos, daily activity logs of KKN students, and records of toddlers' nutritional monitoring results. This approach was carried out to obtain more complete and comprehensive information regarding the implementation of the Supplementary Feeding Program (PMT) within the community. The documentation not only served as evidence of the activities but was also used as material for reflection and evaluation of the success of the intervention. By combining various sources of information, the research results became more reliable and were able to clearly demonstrate the actual impact of the PMT program on changes in family nutritional behavior and the nutritional status of toddlers in RW 04 Tejokusuman.

2. Results and Discussion

The Notoprajan sub-district actively implements a Supplementary Feeding Program (PMT) every day as part of its intervention efforts to reduce stunting rates among toddlers. This program is designed to improve the nutritional status of toddlers who are indicated to be stunted by providing them with nutritious supplementary food that is appropriate for their needs. The implementation of PMT involves community health cadres spread across each neighborhood association (RW) in the subdistrict. These cadres are at the forefront of implementing activities in the field, including distributing PMT directly to target families in their respective working areas.

One of the community service activities carried out by UNISA KKN students was to participate directly in the PMT distribution process with cadres in the RW 04 area of Notoprajan Village. This activity not only focused on the distribution of supplementary food, but also included health education aimed at parents of toddlers who were recipients of the PMT program. This education aimed to increase parents' knowledge and understanding of the importance of balanced nutrition for child growth and development, as well as efforts to prevent and treat stunting.

In addition to the PMT distribution program in RW 04, Notoprajan Village, routine growth monitoring of toddlers is also carried out by UNISA KKN students together with health cadres. This monitoring is carried out by measuring the children's weight, height, and head circumference, which are then recorded on health cards to monitor their nutritional development. Students also actively contribute by providing practical recommendations to parents, such as cooking methods for supplementary foods to ensure nutritional security, as well as suggestions for incorporating PMT into the family's daily diet. This activity not only serves to address the risk of stunting in the long term but also raises public awareness of the important role of families in supporting children's health, making this program an example of sustainable nutrition intervention in the sub-district zone.



Figure 1. Provision of PMT and Counseling Using Leaflets

Based on data obtained from RW 04 cadres, in June 2025, there were two toddlers in the RW 04 area who were indicated to be stunted. The two toddlers became the main targets of the PMT program and received additional food regularly every day from June to August 2025. The involvement of cadres in the distribution of PMT, as well as the implementation of direct counseling to parents, is an important strategy in a community-based intervention approach that aims to reduce the prevalence of stunting in a sustainable manner.

The sub-district organizes PMT activities in a manner appropriate to local conditions, namely by distributing ready-to-eat meals. On other days, dry food items are provided, such as eggs, shredded beef, peanut crackers, dried anchovies, biscuits, UHT milk, fruits, etc. The number of feeding days (HMA) is 90 consecutive days. Recovery PMT is provided in the morning between breakfast and lunch (around 10:00-11:00 a.m.), every day.

The nutritional status of toddlers (weight/height or weight/length) was recorded at the beginning and end of the PMT implementation. Recovery was reported to the Head of the Community Health Center. Height measurements were taken by the toddlers' mothers, who reported them to the cadres every day after PMT administration and also used the data available at the health center every month. Two toddlers with stunting in RW 04 Notoprajan, An. Hafsah experienced an increase in weight and An. El Fattan showed no change in July-August after receiving PMT daily, and neither experienced an increase in height, so they still require close monitoring by the sub-district.

This highlights the importance of a comprehensive evaluation of the effectiveness of the PMT program, including an analysis of the child's daily nutritional intake and possible other factors such as infection or underlying health problems, so that interventions can be tailored to achieve maximum recovery. RW 04 cadres are expected to increase the intensity of counseling for the parents of the two toddlers, with an emphasis on fostering developmental parenting, such as motor stimulation and vitamin supplementation if needed, to avoid the risk of chronic stunting in the future.

The results of this activity are consistent with the results of the study (Darubekri, 2021), which showed significant changes in the nutritional status of toddlers before and after PMT-P administration, based on both the BB/TB ($p=0.000$) and BB/U ($p=0.002$) indicators. After the PMT-P intervention, the proportion of severely underweight toddlers based on BB/TB decreased from 100% to 40.9%, with an increase in the number of underweight (40.9%) and normal (18.2%) toddlers. Meanwhile, based on BB/U, there was an improvement from 86.4% of malnourished toddlers to 40.9% of undernourished toddlers. In addition to its impact on nutritional status, PMT-P also contributed $54.60\pm 15.42\%$ of energy intake and $79.17\pm 37.75\%$ of protein intake from the daily requirements of toddlers.

3. Conclusion

The Supplementary Feeding Program (PMT) in RW 04 Tejokusuman, Notoprajan is one of the community-based nutritional interventions aimed at reducing stunting rates. Observation results show that although there was an improvement in the weight of one toddler, the height of the two stunted children did not experience significant changes during the June–August 2025 period. This program has proven to increase parents' knowledge about the importance of nutrition and involve the community in supporting child growth and development. However, these results also emphasize that PMT interventions need to be carried out consistently, accompanied by long-term monitoring and support from relevant agencies so that stunting can be handled more effectively.

Furthermore, this program highlights the importance of collaboration between community members, health cadres, and local governments in addressing public health issues such as stunting. The involvement of KKN students also demonstrates the role of higher education institutions in contributing to community empowerment and improving public health literacy. Sustainable partnerships among these stakeholders can enhance the continuity and effectiveness of nutritional interventions in the future.

In addition, the success of the PMT program depends not only on food distribution but also on behavioral changes among families. Strengthening awareness of balanced nutrition, proper feeding practices, and sanitation is crucial to prevent stunting recurrence. Therefore, future programs should integrate educational components that focus on changing family habits to build a healthy lifestyle from an early age.

Lastly, this study is expected to serve as a reference for similar community-based health interventions in other regions. Further research with a larger number of respondents and longer observation periods is recommended to measure the long-term impact of supplementary feeding programs. Continuous evaluation and adaptation will ensure that the program remains relevant and effective in improving child health and achieving Indonesia's stunting reduction targets.

References

- Anjani, D.M. et al. (2024) 'The Application of Health Education on Mothers' Knowledge about Stunting in Toddlers in the Working Area of the Banjarsari Metro Utara Inpatient Health Center UPTD', *Drugs of the Future*, 4(1), pp. 62–69. Available at: <https://doi.org/10.1358/dof.1985.010.01.66960>.
- Darubekri, N. (2021) 'Provision of Supplementary Food (PMT) for the Recovery of Malnourished Toddlers. Proceedings of the 2021 National Seminar on Research and Community Service', pp. 978–623.
- Devanka, N.A. et al. (2025) 'Community Empowerment through Nutrition Education on Supplementary Feeding (PMT) Based on Leaflets in Padasuka Village', *Proceedings of the National Seminar on Community Empowerment (SENDAMAS)*, 4(1), p. 269. Available at: <https://doi.org/10.36722/psn.v4i1.3568>.
- Fauziah, J. et al. (2024) 'Stunting: Causes, Symptoms, and Prevention', *Journal of Parenting and Children*, 1(2), pp. 1–11.
- Hartono, L. & Saimi, S. (2024) 'PMT Local Food Ingredients for Malnourished Toddlers in Kuta Village, Pujut District, Central Lombok Regency in 2023', *Darussalam Nutrition Journal*, 8(2), pp. 96–107. Available at: <https://doi.org/10.21111/dnj.v8i2.11663>.
- Kemendes RI. (2023). *National Action Plan for Accelerating Stunting Reduction 2021-2024*. Ministry of Health of the Republic of Indonesia.
- Ministry of Health (2025) Indonesian Nutrition Status Survey 2024.
- Tanzil, L. and Hafriani, H. (2021) 'Factors Affecting Stunting in Children Aged 24-59 Months', *Midwifery Journal*, 7(1), pp. 25–31. Available at: <https://doi.org/10.33024/jkm.v7i1.3390>.
- UNICEF. (2022). *Nutrition in Indonesia: Progress and Challenges*. UNICEF Indonesia.
- WHO (2025) Joint child malnutrition estimates.
- Widitya Qomaro, G. et al. (2024) 'Participatory Observation in the Prevention of Dengue Hemorrhagic Fever in Gili Anyar Bangkalan Village', *Keris: Journal of Community Engagement*, 4(1), pp. 64–74. Available at: <https://doi.org/10.55352/keris.v4i1.890>.