

Implementation of supplementary feeding (PMT) and education programs in efforts to prevent stunting in toddlers in RW 03 Notoprajan

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Abstract

Stunting remains one of the major public health problems in Indonesia, particularly among children under five. According to UNICEF, one in three Indonesian children experience stunting, with rural areas being the most affected. In Yogyakarta, the prevalence of stunting in 2024 was recorded at 14.8%, showing a decrease from 16.8% in 2023. Although this indicates progress, the figure is still above the national target, requiring continuous intervention. This community service program was implemented through a Student Community Service (KKN) project in RW 03 Notoprajan, aiming to prevent stunting by providing Supplementary Feeding and nutrition education for parents of at-risk children. The activities consisted of three main stages: observation and needs assessment, nutrition education through leaflets, and menu assistance for PMT based on local food resources. In addition, a Supplementary Feeding Menu Booklet was distributed as a practical guide for parents. The findings revealed that supplementary feeding distribution alone was not sufficient, as several children did not receive optimal benefits due to parents' limited knowledge and practices in food preparation. Nutrition education and menu guidance played a crucial role in improving parents' understanding and awareness of balanced diets. Therefore, this program highlights the importance of combining supplementary feeding with continuous parental education and community participation. The intervention is expected to contribute to reducing stunting prevalence and serve as a model for sustainable community-based health promotion efforts.

Keywords: community service; nutrition education; stunting, supplementary feeding; toddler

1. Introduction

Stunting is a nutritional problem that is widely found in developing countries, one of which is Indonesia. Data from the United Nation's International Children's Emergency Fund (UNICEF) shows that one in three children is stunted and almost 40% of children in rural areas experience stunted growth (Dinas Kesehatan Kota Yogyakarta, 2024). Stunting is a growth disorder of toddlers that is characterized by a lower length or height compared to children of their age, which is below minus two standard deviations from the WHO growth standard. Based on data from the World Health Organization (WHO), Indonesia is included in the third country with the highest prevalence in the Southeast Asia/South-East Asia Regional (SEAR) (United Nations Children's Fund (UNICEF), 2020). One of the regions in Indonesia is Yogyakarta, where the average prevalence of stunting under five in Yogyakarta in 2024 is 14.8%, this figure shows a decrease of 2% compared to the previous year, which was 16.8%. This figure shows an improvement, but continuous efforts are still needed to achieve the national stunting reduction target (Dinas Kesehatan Kota Yogyakarta, 2024).

Notoprajan Village RW 03 as an area where the Real Work Lecture (KKN) activities are located is still facing problems related to the nutritional status of toddlers. The diverse socio-economic conditions of the community, limited parental knowledge about healthy diets, and lack of use of local food have the potential to increase the risk of stunting in the region (Rahmadi, Rusyantia, & Wahyuni, 2023). The existence of stunting conditions in RW 03 Notoprajan, KKN students provide assistance in the distribution of PMT as well as provide menu books and leaflets related to balanced nutrition to parents who have toddlers at risk of stunting (Ariyani, Primasari, Sari, Lestari, & Yusnela, 2024; Kumala Dewi, Patria Jati, & Suryoputro, 2024; Malinda, Mugianti, & Mujito, 2022; Mutmainah, Saharuddin, Utsany, & Warastri, 2023; Sari & Rahyanti, 2022; Setiawati et al., 2025; Suryaningsih, Fauzia, & Sudiyasih, 2023).

The PMT program is designed to provide additional nutritional intake that meets the needs of toddlers, especially for children with undernutrition status or at risk of stunting (Putro et al., 2024; Rika Widianita, 2023; Sari & Rahyanti, 2022; Suryaningsih, Fauzia, et al., 2023). In addition, education for parents, especially mothers under five, is the main supporting factor in the success of the PMT program (Ariyani et al., 2024). Nutrition education is expected to be able to increase family awareness in selecting, processing, and serving balanced nutritious food that is easily accessible from local food (Mutmainah et al., 2023). The implementation of the PMT program and nutrition education in RW 03 Notoprajan is expected to increase public understanding of the importance of nutritional fulfillment in toddlers while reducing the incidence of stunting. This study aims to describe the implementation of PMT and education programs as an effort to prevent stunting in the region (Rahmadi et al., 2023).

In addition to having an impact on individuals, the high rate of stunting also provides a social and economic burden for the community (Suryaningsih, Fauzia, et al., 2023). Children who experience stunting have the potential to have lower productivity in the future, so it can affect the quality of overall human resource development (Malinda et al., 2022). Therefore, stunting prevention is one of the main priorities in public health development (Aliefia et al., 2024). The community-based approach is considered effective in stunting prevention efforts because it involves the active role of the local community (Suryaningsih, Fauzia, et al., 2023). The involvement of parents, health cadres, and community leaders is an important factor in ensuring the sustainability of nutrition intervention programs (Kumala Dewi et al., 2024; Mutmainah et al., 2023). Programs implemented at the community level also allow for adjustments to social, cultural, and local food availability (Suryaningsih, Astuti, & Hidayah, 2023). The use of local food as a source of nutrition is a relevant strategy in supporting family food security (Ruel & Alderman, 2013). Local food is generally easier to obtain, affordable, and in accordance with the consumption habits of the local community (de Onis & Branca, 2016). With proper processing, local food can meet the nutritional needs of toddlers and support stunting prevention efforts (Supariasa, Arianto, & Muthi, 2024).

Based on this, the implementation of the PMT program accompanied by nutrition education and mentoring is expected to have a more optimal impact. This program is not only oriented towards fulfilling short-term nutritional needs, but also on increasing family understanding and independence in maintaining the nutritional status of toddlers in a sustainable manner.

2. Method

Supplementary Feeding (PMT) assistance activities at RW 03 Notoprajan are carried out through the Real Work Lecture Program (KKN) with a participatory approach, where the community is actively involved in each stage of activities. The methods used in this service activity include several stages as follows:

- a. **Observation and Identification of Needs** The initial stage was carried out with direct observation at RW 03 Notoprajan to identify the nutritional conditions of children, feeding patterns, and obstacles faced by schools and parents in providing PMT. Interviews and discussions with parents were also conducted to understand the specific needs in the program.
- b. **2. Nutrition Education and Counseling** After the needs are identified, nutrition education sessions are carried out to parents. The material provided includes the importance of balanced nutrition, the selection of nutritious food ingredients, and healthy and interesting food processing techniques for early childhood. This education is delivered through supporting media, namely balanced nutrition leaflets.
- c. **3. Assistance in the preparation of the PMT Menu** for KKN students in collaboration with RW 03 Notoprajan in compiling a PMT menu that is in accordance with the nutritional needs of children and considering the availability of local foodstuffs. This assistance involves designing a weekly menu, calculating nutritional needs, and recommending food variations to keep them attractive and nutritious.

3. Results and Discussion

3.1. Observation and Identification

Based on the results of observation and identification through joint interviews with Posyandu RW 03 Gendingan Notoprajan cadres, there are 2 types of PMT given to toddlers at risk of stunting and toddlers with malnutrition, namely PMT obtained from the Health Office and the Special Fund. PMT from the Health Office is cooked food that has been processed while PMT from the Special Fund (DaIs) is raw food that needs to be processed first such as fish and eggs. Supplementary Feeders (PMT) from the Health Office are given every day totaling 8 toddlers at risk of stunting. Supplementary Feeding (PMT) from the Privilege Fund is given once a week totaling 13 toddlers with malnutrition. The results of the interviews found that some children still experience limitations in good nutritional intake (Vaivada et al., 2020). There are several factors including the limited understanding of parents about how to process food that varies and some parents who do not give these additional foods to their children but parents who consume them (Bhutta et al., 2013; Black et al., 2013).

The conclusion of this interview was that the success of the PMT program does not only depend on the availability of food, but also on parents' knowledge of healthy diets and varies in their presentation. Therefore, PMT assistance in the form of education and the provision of the PMT Menu Book is very necessary, so that the sustainability of the benefits of this program can run optimally. The results of these observations show that the availability of PMT in the RW 03 Notoprajan area is actually quite adequate. However, the difference in the form of PMT given requires the knowledge and skills of parents in food processing. Without adequate assistance, the PMT provided has the potential to not be optimally utilized by the target toddlers.

This condition reinforces the view that the success of the PMT program is determined not only by the amount and type of food provided, but also by the family's behavior in feeding practices. Parental knowledge, habits, and understanding of program objectives are important aspects that affect the effectiveness of nutrition interventions at the household level.

3.2. Effectiveness of Nutrition Education and Counseling

This educational and counseling activity is provided through balanced nutrition leaflet media to make it easier for parents to understand the basic principles of nutrition (Susanto, Amaris, Zayani, Afriozza, & Nugraha, 2023). The material includes balanced portions, the importance of animal protein, and menu variations. After education, some parents began to try to process local ingredients into more interesting menus for toddlers (Hoddinott, Alderman, Behrman, Haddad, & Horton, 2013). Nutrition education provided to parents serves as an effort to improve family nutrition literacy (Mutmainah et al., 2023). Information conveyed through simple media such as leaflets can help parents understand basic nutrition concepts without requiring a special knowledge background (Organization, 2018). With this increased understanding, parents are expected to be able to make better decisions in the selection and processing of food for toddlers (Rini Widiastuti, Ratna, & Amin, 2025).

3.3. PMT Assistance and Distribution of PMT Toddler Menu Books

PMT assistance for toddlers from the Health Office is distributed every day to 8 toddlers in RW 03. The need for this PMT assistance is so that the distribution of PMT is given right to the target and the benefits can be obtained together (Supriasa et al., 2024). There were some concerns from the cadres, the PMT distributed was not given according to the target (Rini Widiastuti et al., 2025). Therefore, KKN students contribute to the distribution and accompany parents in providing PMT to toddlers along with cadres. Not only assisting in providing PMT, KKN students also distributed toddler PMT Menu books to 13 toddlers, including toddlers with no weight gain and toddlers who tend to experience stunting. The PMT Menu Book was made by students together with the supervisor. This PMT Menu Book explains various types of Toddler Supplementary Food menus with the hope that this book can help parents provide varied food to their toddlers. The provision of PMT and the distribution of PMT through cadres and students not only increases the growth and development of toddlers, but this is also able to improve mothers' skills in providing additional food to optimize the growth and development of children (Ira Humairah, Adit Alfian, Michaelia Septiyani, Anis Natasya Putri, Annisa Aulia Salsabila, Rafni Nuranda Sabir, 2025).

The existence of the PMT Menu Book also plays a role in supporting the sustainability of nutritious feeding practices at the family level. This book can be used as a long-term reference by parents in compiling the daily menu for toddlers. Thus, the benefits of the PMT program are not only felt during the activity, but also after the mentoring program is completed.

4. Conclusion

The implementation of the Supplementary Feeding (PMT) program and nutrition education at RW 03 Notoprajan shows that the success of stunting prevention efforts does not only depend on the availability of additional food, but also on the knowledge, attitudes, and behaviors of parents in providing balanced nutritional intake to children under five. The results of the observation found that there are still obstacles in the form of limited understanding of parents in processing food, as well as cases where PMT is not consumed by the target children. Through nutrition education activities using leaflets, assistance in providing PMT, and the distribution of PMT Menu Books based on local food, parents' knowledge and awareness have increased. Therefore, this program can be one of the effective strategies in supporting efforts to reduce stunting rates, especially in urban areas with limited resources.

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