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Counseling and Demonstration of Supplementary Feeding for Toddlers as an Effort to Prevent Stunting in Randegansari Village

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A B S T R A C T

Stunting is a disorder that occurs due to the accumulation of bad nutrition. Stunting carries a risk of causing pain, slowing motor development and can even cause death. Since the last 10 years, people around the world have seen Moringa as a tropical plant that is easy to cultivate because it can be used in all types of soil and does not need intensive care. Service activities are one of the efforts made by tertiary institutions through the KKN-T (Thematic Real Work Lecture) program which aims to educate the public about stunting knowledge. This community service activity is one of the KKN-T work programs (Thematic Real Work Lectures) which was held at the Tlapak Hamlet Posyandu, Randegansari Village, on Tuesday, August 1, 2023 at 08.00 WIB. In improving human quality, it must start early, namely from infancy. In order to realize and build quality human resources, many of the mothers have implemented and practiced the activities of how to make PMT.

INTRODUCTION

Stunting is a disorder caused by the accumulation of inadequate nutritional intake over time. It increases the risk of morbidity, delayed motor development, and even mortality. For this reason, stunting remains a critical public health issue that requires comprehensive solutions. Stunting, also known as growth faltering, occurs during the “golden period,” from pregnancy until 24 months of age. This period is considered crucial because it determines an individual’s future quality of life; disruptions during infancy may result in permanent impairments, making adequate nutrition during this phase essential (Syamsuri, 2023).

Both internal and external factors contribute to the development of stunting. Internal factors are directly related to infant growth and development and include exclusive breastfeeding, parenting practices, complementary feeding (MP-ASI), mineral and protein intake, infectious diseases, and genetic factors. External factors involve socioeconomic conditions, such as maternal employment status, family income, and maternal educational level. Therefore, addressing stunting extends beyond the health sector and encompasses broader socioeconomic dimensions (Utari, 2023).

Indonesia is one of the Asian countries with a high number of stunted children under five. According to the 2022 Indonesian Nutritional Status Survey (SSGI), the prevalence of stunting among children under five was 21.6%, equivalent to approximately 4,558,889 children with height-for-age below the standard.

This figure exceeds the WHO threshold of 20%, while the prevalence in East Java Province reached 19.2%.

Efforts to address undernutrition in Indonesia include not only food diversification based on innovation but also the development of supplementary food formulations that meet nutritional standards, enhance immunity in toddlers, and utilize food processing technologies that optimize the advantages of local food resources.

Over the past decade, moringa (*Moringa oleifera*) has been widely recognized as a tropical plant that is easy to cultivate because it grows in various soil types and requires minimal maintenance (Lamona & Rikandi, 2023). Moringa is readily available and has been shown to help alleviate malnutrition in children at relatively low cost. Its high nutritional value makes moringa leaves suitable for meeting the nutritional needs of breastfeeding mothers and growing toddlers (Sultana, 2020).

Various moringa leaf-based products have been developed, including moringa tea, moringa leaf powder, and moringa pudding. Pudding is considered a suitable complementary food for children due to its soft texture and appealing taste. The addition of moringa leaf extract to pudding is expected to help meet children's daily nutritional requirements and support stunting prevention (Sujadalillah, 2023). The use of fresh moringa leaves and the incorporation of the entire leaf are recommended to maximize nutritional benefits (Sari, 2022). Moringa leaf pudding has also been reported to improve children's appetite (Maria et al., 2020). Its sweet taste and attractive appearance further enhance its acceptability among toddlers (Zuhelviyani et al., 2021).

This community service activity was conducted as part of the Thematic Community Service Program (KKN-T) organized by the university. The program aimed to educate the community about stunting and the nutritional benefits of moringa leaf pudding for toddlers, as well as to empower residents to cultivate moringa plants to support daily nutritional needs sustainably.

METHOD

This community service activity was one of the work programs of the Thematic Community Service Program (KKN-T) conducted at the Posyandu in Tlapak Hamlet, Randegansari Village, on Tuesday, August 1, 2023, at 08:00 a.m. The activity was attended by approximately 30–40 mothers and their toddlers. The program aimed to prevent stunting through education and training on the preparation of supplementary food made from local ingredients, specifically moringa leaves. The literacy intervention included the distribution of leaflets, interactive discussions, and a live demonstration of moringa leaf pudding preparation. The implementation stages included: (1) coordination with the Head of Randegansari Village, the midwife, and Posyandu cadres in Tlapak Hamlet; (2) educational sessions on stunting and the health benefits of moringa leaves, particularly in stunting prevention; and (3) a

demonstration of how to prepare moringa leaf pudding. The indicators of success were increased knowledge and skills related to supplementary feeding (PMT) using moringa leaf pudding for toddlers at risk of stunting. Evaluation was conducted using pre-test and post-test assessments administered during the activity, and the results were analyzed using a paired t-test statistical method.

RESULT AND DISCUSSION

RESULTS

Coordination with the Village Head, Midwife, and Health Cadres of Randegansari Village

The issue of stunting in Randegansari Village was discussed during coordination meetings with village officials. Based on interviews with the Village Head, midwife, and health cadres, cases of stunting were identified in the village. Therefore, the objective of the KKN-T program was to assist the village in addressing this issue by providing nutritional literacy to mothers in order to prevent and reduce stunting in Tlapak Hamlet, Randegansari Village, through the utilization of moringa leaves processed into moringa pudding. Coordination was conducted to obtain guidance and cooperation from the Village Head regarding the implementation of the activity, including the schedule and venue for the community service program.

Education on Stunting and the Benefits of Moringa Leaves

The second stage involved providing education on stunting and the nutritional benefits of moringa leaves in preventing and reducing stunting. This activity aimed to benefit toddlers, pregnant women, and breastfeeding mothers by increasing their awareness of the high nutritional value contained in moringa leaves.

Demonstration of Moringa Leaf Pudding Preparation

The third stage consisted of demonstrating the preparation of moringa leaf pudding as a supplementary food option for toddlers. The activity involved explaining and demonstrating the preparation steps to participating mothers. Fresh moringa leaves were used as the main ingredient. The preparation process began with separating the leaves from the stems, washing them thoroughly, and soaking them to remove any impurities.

The equipment used included a pot, strainer, blender, pudding molds, spoon or stirrer, and a bowl. The ingredients consisted of 50 grams of fresh moringa leaves, one packet of agar powder, sugar to taste, one egg, 200 ml of water, and 500 ml of coconut milk.

The preparation steps were as follows: separate and wash the moringa leaves thoroughly; beat the egg in a bowl until frothy; blend the moringa leaves with 200 ml of water until smooth and strain the mixture; combine the filtered extract with the beaten egg, sugar, and coconut milk, and mix evenly; add the agar powder while heating the mixture; cook for approximately three minutes until boiling; pour the mixture into pudding molds; allow it to cool and solidify; then cut into portions and serve.

DISCUSSION

The results of this community service activity indicate that, following official permission from the village authorities and Posyandu health cadres, the group conducted educational sessions aimed at increasing knowledge among local residents, particularly mothers of toddlers, regarding the importance of balanced nutrition for child growth and development. Improving human quality must begin early in life, starting from infancy. To support the development of high-quality human resources, many mothers have begun to apply and practice the preparation of supplementary feeding (PMT) demonstrated during the activity. This initiative aims to improve children's nutritional intake within the community. Furthermore, the program enhanced mothers' knowledge and skills in providing appropriate supplementary foods to optimize toddlers' growth and development (Rahmiati et al., 2021, as cited in Rosyida, 2021).

A total of 37 participants attended the training and responded with great enthusiasm, reflecting strong community engagement. The participants showed particular interest in the processing of moringa leaves into nutritious pudding, likely due to the simplicity of the method and the accessibility of the required tools, most of which are commonly available in household kitchens. The successful implementation of this activity contributes to stunting prevention and reduction efforts. By increasing community awareness and skills in preparing nutritious foods, residents are better equipped to utilize moringa leaves effectively to support children's nutritional needs.

CONCLUSION

This activity improved mothers' knowledge regarding supplementary feeding to support optimal growth and development in toddlers, as well as enhanced their skills in providing appropriate and balanced nutrition for their children. Additionally, the program served as an educational platform to further strengthen their understanding of supplementary food preparation aimed at optimizing child growth and development. The community showed considerable interest in processing moringa leaves into nutritious pudding, likely due to the simplicity of the method and the use of easily accessible equipment, most of which is commonly available in household kitchens.

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