



The Effect of the Local Supplementary Feeding Program (PMT) on Malnourished Toddlers at the Ajangale Community Health Center, Bone Regency

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ABSTRACT

Toddlers are an age group that is vulnerable to nutritional problems and requires special attention because malnutrition can cause serious negative impacts. To meet the nutritional needs of toddlers, the government has developed a local supplementary feeding program (PMT). This study aims to determine the effect of providing local PMT on malnourished toddlers at the Ajangale Community Health Center. This study is an observational analytical study with a cross-sectional approach. This study was conducted in July 2025 using secondary data. The sample was taken based on a total sampling of 49 samples, and analyzed using statistical analysis using the Wilcoxon signed rank test. The results of the study showed that the nutritional status of toddlers before PMT administration was malnourished status for 49 toddlers (100%). There was an increase in nutritional status in malnourished toddlers of 35 people (71.4%) with normal nutritional status. There was an effect of PMT administration on malnourished toddlers $p < (0.05)$. It can be concluded that there is an effect of providing local supplementary feeding (PMT) on malnourished toddlers at the Ajangale Community Health Center.

Key Messages:

- The prevalence of *wasting* in toddlers in Indonesia in 2024 was recorded at 7.4%.
- Malnutrition in toddlers is a public health problem that impacts children's growth, development, and immune system.
- The local Supplementary Feeding Program (PMT) is a community-based intervention that utilizes local food to improve the nutritional status of malnourished toddlers.

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INTRODUCTION

Achieving optimal nutritional status is a crucial factor in ensuring the success of human resource development. Pregnant women and toddlers, in particular, are particularly vulnerable to nutritional issues and therefore require extra attention, given the potential long-term impacts of malnutrition (1). Nutrition is a global health issue, affecting nearly every corner of the globe. Malnutrition can hinder children's growth. Children who experience growth difficulties will experience decreased intelligence, be more susceptible to disease, and be at risk of decreased productivity in the future, ultimately slowing a country's economic development. Therefore, it is crucial for countries to pay special attention to addressing current nutritional issues (2).

Nutritional issues have become a major focus in the health sector, including *undernutrition*. *Undernutrition* refers to an imbalance between food intake and body requirements, which generally results in insufficient energy and nutrient intake, particularly protein. In 2016, *undernutrition* was estimated to cause 1 million deaths, with a life loss rate of approximately 3.9% per year, and the incidence of disability of approximately 3.8% per year globally (3). *The World Health Organization* (WHO) classifies *undernutrition* into four categories: *wasting*, *stunting*, *underweight*, and micronutrient deficiencies (4).

To address these issues, the government has taken various comprehensive policies, including prevention, promotion, education, and management of malnutrition in children. One program initiated by the government is the Supplementary Feeding Program (PMT) for the recovery of wasted toddlers aged 6-59 months, based on measurements of

body weight relative to body length or height, which is below minus two standard deviations (<-2 SD) (5).

Based on research conducted by Putri on the effect of providing local PMT food on improving nutritional status in malnourished toddlers, it shows an increase in the weight of malnourished toddlers to normal nutrition (6). The 2024 Indonesian Nutritional Status Survey (SSGI) recorded a *wasting prevalence* of 7.4%, a decrease from 8.5% in 2023. At the provincial level, South Sulawesi contributed 8.0% of the *wasting rate*. (7) .

The prevalence of wasting in Bone Besar Regency is 8.9% (7). According to preliminary data collected in August 2024 from 38 Community Health Centers in Bone Regency, Ajangale Community Health Center has the highest *wasting prevalence* rate (7.37%) and Ajangale Community Health Center has completed the PMT Program for 2024. Therefore, researchers are interested in conducting this study to determine the effect of providing local supplementary food (PMT) on the nutritional status of malnourished toddlers at Ajangale Community Health Center.

METHOD

This study is a non-experimental quantitative study with an analytical observational approach. The design used is cross-sectional, that is, data collection is carried out at a certain time without direct intervention to the subjects. This study uses secondary data from the Ajangale Community Health Center document related to the local Supplementary Feeding (PMT) program for malnourished toddlers. The study was conducted in the working area of the Ajangale Community Health Center, Bone Regency. Data collection and analysis were carried out in June–July 2025. The population in this study were all toddlers aged 6–59 months who experienced malnutrition and were recorded as receiving the local PMT program at the Ajangale Community Health Center during 2024. The sample was taken based on the Total sampling technique of 49 samples. The sample determination used the following criteria; Included in the Inclusion Criteria are: Toddlers aged 6–59 months, malnutrition status (BB/TB - 3 SD to <-2 SD), Toddlers who received PMT for 30 days, and complete data on nutritional status before and after PMT. Exclusion criteria are: Toddlers with chronic diseases (such as congenital heart disease or tuberculosis) and incomplete or poorly documented data. This study used the SPSS program to process and analyze data. Univariate analysis was used to determine the frequency distribution and percentage of each study, including toddler gender, toddler age and nutritional status before receiving Supplementary Food Provision. Bivariate analysis was used to determine the effect of nutritional status after receiving Local Supplementary Food Provision. Data analysis used the *Wilcoxon Signed Rank Test* .

RESULTS

Table 1. Distribution Toddler Gender Frequency

Variable	Category	Frequency (n)	Percentage (%)
Gender	Man	28	57.1
	Woman	21	42.9
Age	6-11 months	1	2.0
	12- 23 months	12	24.5
	24-35 months	16	32.7
	36- 47 months	11	22.4
	48-59 months	9	18.4
Nutritional Status Before	Malnutrition	49	100
Nutritional Status After	Malnutrition	14	28.6
	Good nutrition	35	71.4

DISCUSSION

Based on results study obtained that nutritional status toddler nutrition not enough before implementation of the PMT program is as many as 49 toddlers (100%). In accordance with results study This known that giving food additional (PMT) is carried out on toddlers nutrition less . Condition This show that incident nutrition not enough Still Lots found in toddlers nutrition lacking in Ajangale Health Center . Similar with research conducted by Rini et al. in his research states that that presentation toddler very thin category before given PMT-P was 100% (8). and the results research conducted by Hosang found that 70 respondents (100%) were toddler nutrition less (9).

From the results research , the most common age suffer nutrition not enough is 24-35 months namely 16 toddlers (32.7%) and 12-23 months a total of 12 toddlers (24.5%). Problems nutrition at age This in accordance with Turnip research which states that ages 12-24 months is in the development period brain , so that need the good However Because various problem result in emergence problem nutrition in children . This is also compared straight looking at data from UNICEF that one third children who experience nutrition not enough is at under age 3 years (9). In addition problem nutrition toddlers are

also influenced by two factors main, namely factor direct and factors No direct. Direct factors covers pattern Eat children and disease infection, whereas factor No direct covering resilience food family, pattern foster care children, service health, as well as environmental health conditions (9).

Based on results study can explained that Of the 49 respondents, some big toddler experience improving nutritional status become nutritional status Good that is a total of 35 toddlers (71.4%). Meanwhile part with nutritional status fixed (nutritional status less) or No experience improvement that is a total of 14 toddlers (28.6%). In accordance with results study This known that part big toddler experience improving nutritional status become nutritional status good. Condition This show that with giving food addition local nutritional status can improved. Local recovery PMT is given one day for 30 consecutive days.

This study is also in line with the results of research conducted by Putri which showed that the average toddler experienced a weight gain of 0.6 kg. Of the 8 malnourished toddlers who were given intervention, 7 children experienced an increase in nutritional status to normal nutrition $0.032 < \alpha (0.05)$ (6). Research conducted by Nelista and Fembi also showed similar results from the intervention, namely that all malnourished toddlers experienced an increase in weight as indicated by a p-value of $0.000 < 0.05$ (10). In addition, research conducted by Aspatria shows that there is a significant ($p < 0.05$) effect of changes in nutritional status for the better, there is an increase in the nutritional status of toddlers with BB/TB indicators (11).

There are two types of supplementary feeding (PMT): recovery supplementary feeding (PMT) and counseling. Recovery PMT is intended to meet the nutritional needs of toddlers and also serves as a learning experience for mothers of target toddlers. Recovery PMT is provided in the form of food or local food ingredients. It is a supplement to daily meals, not a substitute for staple foods. Priority is given to sources of animal and plant protein, along with sources of vitamins and minerals, particularly vegetables and fruits.

Based on the majority of the results obtained from PMT toddlers in the study after experiencing a change in nutritional status for the better, namely 35 toddlers (71.4%) with good nutritional status out of 49 toddlers were found. Meanwhile, toddlers who did not experience an increase in nutritional status were 14 toddlers (28.6%). The results of the *Wilcoxon signed rank test* using SPSS with a significant degree of $p < (0.05)$ then H1 was accepted, which means that there is an effect of providing local supplementary food (PMT) on malnourished toddlers at the Ajangale Health Center.

If malnutrition is not promptly and appropriately intervened, it can significantly contribute to severe malnutrition, which can ultimately lead to stunting in toddlers (12). Malnutrition can reduce a child's ability to explore. In the long term, malnourished children can also experience decreased intelligence, productivity, and the quality of human resources (13). To address malnutrition in toddlers, a supplementary feeding program (PMT) is necessary. This program aims to improve children's nutritional status and meet their nutritional needs, thus achieving good nutritional conditions appropriate to their age. PMT for children aged 6-59 months serves as a supplement, not a substitute for daily staple foods, and is based on local ingredients with regional specialties adapted to local conditions (9).

CONCLUSION

Based on the results of a study of 49 malnourished toddlers in the Ajangale Community Health Center working area. Most of the toddlers who became respondents were male (57.1%) and the majority were aged 24–35 months (32.7%). All toddlers studied were in the malnourished category before receiving the local Supplementary Feeding (PMT) intervention. After the implementation of the local PMT for 30 days, 35 toddlers (71.4%) experienced an increase in nutritional status to good nutrition, while 14 toddlers (28.6%) remained in the malnourished status. The results of the Wilcoxon Signed Rank Test statistical test showed a significance value of $p < 0.05$, so H1 was accepted. This proves that the provision of local PMT has a significant effect on changes in the nutritional status of malnourished toddlers.

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