

Factor Influencing the Provision of Locally Produced Supplementary Foods (A Study on Improving the Nutritional Status of Underweight Toddlers in The Batauga Community Health Center Work Area)

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ABSTRACT

Providing supplementary feeding (PMT) based on local foods is an important strategy for improving the nutritional status of underweight toddlers. However, its implementation may be influenced by mothers' knowledge, family support, and socio-cultural factors. This study aimed to determine the factors influencing local food-based supplementary feeding in improving the nutritional status of underweight toddlers in the Batauga Community Health Center work area in 2025. This quantitative study used a cross-sectional design. The population consisted of 100 mothers of underweight toddlers, with a sample of 80 mothers selected using simple random sampling. Data were analyzed using multiple linear regression with a significance level of $\alpha = 0.05$. The results showed that mothers' knowledge ($p = 0.000$), family support ($p = 0.000$), and socio-cultural factors ($p = 0.011$) significantly influenced local food-based supplementary feeding. Mothers are encouraged to attend nutrition education, involve family members, and utilize local food resources to support improved toddler nutrition.

Keywords: Knowledge, Family Support, Socio-Cultural, Local Food-Based PMT, Nutritional Status of Toddlers

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INTRODUCTION

A toddler's body weight is a key indicator for assessing nutritional status. Conceptually, this weight reflects physical growth influenced by nutritional intake, health, and environmental factors. An ideal weight must be evaluated against the child's age to determine whether their nutritional status is adequate, insufficient (undernutrition), or severely deficient (severe malnutrition). Nutritional status categories—such as undernutrition—are determined using weight-for-age percentiles or Z-scores. Children falling below minus two Standard Deviations (SD) are considered undernourished, while those below minus three SD are categorized as severely malnourished (Kementerian Kesehatan RI, 2020).

Imbalanced nutritional status can have harmful physiological effects, potentially leading to toxicity (Fauzi, 2019). Nutritional issues in toddlers require special attention, as they can result in vitamin A deficiency, protein-energy malnutrition (PEM), iodine deficiency disorders, and anemia, while also impacting brain development and behavior (Setiawati, 2021).

Poor nutritional status in toddlers can impair brain development, physical growth, and cognitive ability, as well as disrupt metabolic processes. Failure to address undernutrition promptly can have fatal consequences. Insufficient nutritional intake can lead to stunted growth, preventing children from reaching the ideal height and weight for their age (Noeraini, 2020).

The prevalence of undernutrition among toddlers in the Batauga Community Health Center (Puskesmas) service area is suspected to stem from mothers' limited knowledge regarding the identification, understanding, and processing of local ingredients into supplementary foods. Additionally, factors such as a lack of family support and socio-cultural issues—including dietary patterns, typical food choices, and family consumption habits—appear to play a significant role. Interviews with mothers of toddlers suffering from undernutrition revealed that 12 out of 20 (60%) did not know how to prepare local food ingredients; instead, they tended to cook in their usual manner. Economic constraints led them to purchase only standard, staple foods—specifically rice and fish—resulting in monotonous, unvaried diets. Furthermore, some mothers paid insufficient attention to their toddlers' nutritional needs due to work commitments and the demands of caring for other family members. Interviews with health workers—specifically midwives—indicated that these mothers lacked training in food preparation. Factors such as family dietary habits and cultural norms, maternal employment, and a lack of family support hindered the effective implementation of local food-based supplementary feeding, ultimately contributing to the prevalence of undernutrition and underweight status, as reported by the Batauga Community Health Center (Puskesmas) in 2026.

METHOD

This study employed a quantitative approach with a cross-sectional design. Multiple linear regression was used for statistical analysis, with a significance level of $\alpha = 0.05$. The study population consisted of mothers of underweight toddlers ($n=100$) identified as the target group. A sample of 80 mothers was selected using simple random sampling.

The results indicate that maternal knowledge ($p=0.000$), family support ($p=0.000$), and socio-cultural factors ($p=0.011$) significantly influence the use of local food-based supplementary feeding (PMT) to improve the nutritional status of underweight toddlers in the Batauga Community Health Center (Puskesmas) working area in 2025.

Recommendations include: mothers should regularly attend nutrition classes at the Integrated Health Post (Posyandu) to improve their skills in preparing local foods and involve husbands and other family members in nutrition education, regarding socio-cultural aspects, traditional leaders should be engaged to support the provision of local foods; and

the Community Health Center and health workers should optimize the supplementary feeding program and provide direct assistance to families.

Data collection was conducted using a questionnaire. The questionnaire covered respondent demographics, knowledge, family support, socio-cultural factors, and the nutritional status of underweight toddlers. The knowledge questionnaire was adapted from Novia Ganda Dewi A. (2018), the family support questionnaire was modified from Fitria Andriani (2021) and Friedman's theory (2013), the socio-cultural questionnaire was modified from Putri Wardani Zumratul Khasanah and Sri Sumarmi (2024), and the study also included measurements of changes in the nutritional status of underweight toddlers.

FINDING AND DISCUSSION

RESEARCH RESULT

Karakteristik	Frekuensi (n)	Persentase (%)
Tingkat Pendidikan		
SD	14	17,5
SMP	19	23,8
SMA	37	46,3
D3/S1/Profesi	10	12,5
Pekerjaan		
IRT	66	82,5
Wiraswasta	10	12,5
PNS	4	5,0
Jenis Kelamin		
Laki-laki	36	45,0
Perempuan	44	55,0
Status Gizi		
Normal	26	32,5
Kurang	54	67,5
Pengetahuan		
Baik	47	58,8
Kurang	33	41,3
Dukungan Keluarga		
Positif	44	55,0
Negatif	36	45,0
Sosial Budaya		
Positif	45	56,3
Negatif	35	43,8
Pemberian Makanan Tambahan (PMT)		
Diberikan	55	68,8
Tidak diberikan	25	31,3
Total	80	100,0

Source: Data 2026

Regarding education level, the largest proportion consists of respondents with a high school education (37 individuals or 46.3%), while the smallest group comprises those with a Diploma (D3), Bachelor's (S1), or professional degree (10 individuals or 12.5%). This situation may be influenced by limited public access and opportunities for pursuing higher education.

Regarding occupation, the largest proportion consists of housewives (66 individuals or 82.5%), while the smallest group comprises civil servants (4 individuals or 5.0%). The predominance of housewives may be attributed to family socioeconomic conditions and the role of mothers, who typically spend more time at home caring for and meeting the needs of their toddlers.

Regarding gender, the largest proportion consists of females (44 individuals or 55.0%), while the smallest group comprises males (36 individuals or 45.0%). This difference is relatively small, indicating a fairly balanced gender distribution.

Regarding nutritional status, the largest category is undernutrition (54 toddlers or 67.5%), while the smallest category is normal nutritional status (26 toddlers or 32.5%). The high prevalence of undernutrition among toddlers may be influenced by insufficient dietary intake, feeding practices, infectious diseases, socioeconomic conditions, as well as family knowledge and support.

Regarding knowledge, the largest category is good knowledge (47 respondents or 58.8%), while the smallest category is poor knowledge (33 respondents or 41.3%). This situation may be influenced by education level, the mother's experience in caring for toddlers, and access to information and health education.

Regarding family support, the largest category is positive support (44 respondents or 55.0%), while the smallest category is negative support (36 respondents or 45.0%). Family support may be influenced by the knowledge of family members, attention to the toddler's needs, economic conditions, and the involvement of husbands and other family members in meeting the toddler's nutritional needs. Regarding socio-cultural factors, the largest category was positive socio-cultural influences (45 respondents, 56.3%), while the smallest was negative socio-cultural influences (35 respondents, 43.8%). Influencing factors include family eating habits, beliefs or dietary taboos, community customs, and the influence of community figures and the surrounding environment.

Regarding the provision of supplementary feeding (PMT), the largest category was the provision of PMT (55 respondents, 68.8%), while the smallest was the non-provision of PMT (25 respondents, 31.3%). The provision of PMT can be influenced by maternal knowledge, the availability of local food sources, family support, economic conditions, access to healthcare services, and the involvement of health workers in providing education and guidance.

DISCUSSION

The Influence of Knowledge on the Provision of Local Food-Based Supplementary Feeding

Research results indicate a significant influence of maternal knowledge on the provision of local food-based supplementary feeding (PMT), with a p-value of 0.000 ($p <$

0.05). These findings demonstrate that the better a mother's knowledge regarding nutrition and the utilization of local food, the greater her ability to select, prepare, and provide meals that meet the needs of toddlers. Conversely, limited knowledge can result in less dietary diversity and a preference for convenient, ready-to-eat foods.

These results align with studies by Ahmad & Saini (2023), Rahmadinda et al. (2024), Trisasmitha & Harsoyo (2025), and Sari & Putri (2020), all of which highlight the crucial role of maternal knowledge in feeding practices and meeting toddlers' nutritional needs. Field observations also reveal that some mothers continue to provide ready-to-eat foods—such as instant noodles and biscuits—while toddlers sometimes show a dislike for fish, vegetables, and local fruits.

A limitation of this discussion is that knowledge was measured based on the respondents' status at the time of the study; thus, it does not capture long-term changes in knowledge. Furthermore, other factors—such as family income, food availability, and the toddler's own food preferences—may also influence the provision of supplementary feeding.

Consequently, there is a need for regular nutrition education and training, particularly regarding the use of local food ingredients and innovations in food form, flavor, and presentation to make meals more appealing to toddlers.

The Influence of Family Support on the Provision of Local Food-Based Supplementary Feeding

Research results indicate a significant influence of family support on the provision of local food-based supplementary feeding (PMT), with a p-value of 0.000 ($p < 0.05$) and a partial r-value of 0.603, indicating a strong correlation. This means that support—whether in the form of motivation, information, assistance in procuring food ingredients, or the active involvement of husbands and other family members—can assist mothers in providing nutritious, local food-based meals to their toddlers. These findings align with research by Sindri et al. (2024), which demonstrates a link between family support and maternal behavior in meeting the nutritional needs of toddlers. The results also accord with health behavior concepts explaining that social support can strengthen an individual's capacity to engage in health-promoting behaviors. In this study, families could assist by providing local food sources—such as fish, moringa leaves, bananas, papayas, and pumpkins—and by offering motivation to the mothers.

A limitation is that the data on family support, obtained through interviews, may be influenced by the respondents' subjective perceptions. Furthermore, the form and quality of support received can vary from family to family.

The implication is that Supplementary Feeding (PMT) interventions should not target mothers alone; they also need to involve husbands and other family members through counseling or family nutrition classes. In this way, the family can serve as a supportive environment for meeting toddlers' nutritional needs.

Sociocultural Influence on Local Food-Based Supplementary Feeding

The study results indicate a significant influence of sociocultural factors on the provision of local food-based supplementary feeding (PMT), with a p-value of 0.011 ($p < 0.05$). However, the partial r-value of 0.235 indicates a very weak correlation strength. This suggests that while sociocultural factors are indeed linked to PMT practices, their influence is not as strong as that of the other factors examined.

Sociocultural factors can influence eating habits through traditions, beliefs, food taboos, family customs, and the influence of the surrounding environment and community figures. Interview results revealed that some mothers followed eating habits passed down within the family, including feeding toddlers the same meals consumed by adults. These findings align with research by Khasanah & Sumarmi (2024) and Fauziah & Krianto (2022), which shows that culture and local dietary habits can influence dietary patterns and food acceptance within the community.

CONCLUSION

The results of the study indicate that mothers' knowledge of toddlers has an influence (p-value = 0.000), family support has an influence (p-value = 0.000), and socio-cultural influence (p-value = 0.011) on local food-based PMT (Food-Based Nutrition) in improving the nutritional status of underweight toddlers in the Batauga Community Health Center work area in 2025.

Suggestions include: Mothers of toddlers should regularly hold and attend regular nutrition classes at the Integrated Health Post (Posyandu) to improve their understanding of processing local ingredients, involve husbands and other family members in nutrition counseling, engage traditional leaders to support the provision of local food, and optimize the PMT program and provide direct assistance to families.

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