

The Relationship Between Mothers' Knowledge of Nutritional Status and Supplementary Feeding Practices (PMT) For Toddlers in Mangunrejo Village

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ABSTRACT

Background & Objective: Nutritional problems in toddlers remain a public health issue in Indonesia. According to WHO (2022), approximately 42 million toddlers worldwide are underweight. Based on SSGI 2024, the prevalence of underweight among Indonesian toddlers reached 16.8%. In Grobogan Regency, underweight toddlers based on the BB/A index in 2025 was 7.12% (5,046 cases), while in the Pulokulon II Community Health Center working area, there were 178 toddlers below the red line (BGM). **Method:** This quantitative study used a cross-sectional design with a correlation approach. The sample was 42 mothers of BGM toddlers in Mangunrejo Village, selected using total sampling. Data were collected using questionnaires on maternal knowledge about nutritional status and supplementary feeding practices (PMT). Bivariate analysis used the Spearman-Rank test. **Result:** The Spearman Rank Test showed a p-value of 0.000 (<0.05) with a correlation coefficient of $r = 0.566$, indicating H_a was accepted and H_0 was rejected. There was a relationship between maternal knowledge about nutritional status and supplementary feeding practices (PMT) for BGM toddlers in Mangunrejo Village. **Conclusion:** There is a relationship between maternal knowledge about nutritional status and supplementary feeding practices (PMT) for BGM toddlers in Mangunrejo Village, Grobogan Regency.

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Introduction

Nutritional problems in toddlers remain a public health issue, as toddlers are vulnerable due to rapid growth and development. Based on the 2024 Indonesian Nutritional Status Survey (SSGI), the prevalence of underweight among toddlers in

Indonesia reached 16.8%, while in Grobogan Regency, the percentage of underweight toddlers based on the BB/U index in 2025 was 7.12% with 5,046 cases. In the working area of Mangunrejo II Community Health Center, there were 178 toddlers Below the Red Line (BGM), indicating that nutritional problems still require attention, especially through efforts to improve food intake and feeding practices at the family level.

Mothers play an important role in meeting toddlers' nutritional needs, including selecting food types, amounts, frequency, and supplementary feeding (PMT) practices. Maternal knowledge about nutritional status is one factor that can serve as the basis for forming health behaviors. Mothers with good knowledge are expected to recognize their children's nutritional condition, understand their nutritional needs, and implement appropriate feeding, whereas limited knowledge can lead to inappropriate feeding practices.

Several previous studies have shown varied results. Puspasari and Andriani (2017) found a significant relationship between maternal knowledge about nutrition and toddler nutritional status ($p=0.000$), and Adawiyah et al. (2025) showed a significant relationship between maternal behavior in supplementary feeding and the nutritional status of children aged 6–24 months ($p=0.010$). However, Anantha and Widiyarti (2025) found no significant relationship between maternal nutritional knowledge and toddler nutritional status ($p=0.859$; $r=-0.025$), indicating that the relationship between knowledge and children's nutritional conditions is not always consistent and other factors may influence feeding practices. A preliminary study on 5 mothers with BGM toddlers in Mangunrejo Village showed that 1 mother had good knowledge, 2 had sufficient knowledge, and 2 had poor knowledge; in terms of PMT practices, 1 mother had good behavior, 2 had sufficient behavior, and 2 had poor behavior, with mothers having good knowledge tending to be more regular in providing supplementary food.

The difference in this study lies in its focus on the relationship between maternal knowledge about nutritional status and PMT supplementary feeding practices for BGM toddlers, especially in Mangunrejo Village, which has not been specifically examined before. Therefore, this study aims to analyze the relationship between maternal knowledge about nutritional status and PMT supplementary feeding practices for BGM toddlers in Mangunrejo Village, Mangunrejo District, Grobogan Regency. Specifically, it aims to identify the level of maternal knowledge about the nutritional status of BGM toddlers, identify maternal behavior in PMT supplementary feeding, and analyze the relationship between the two variables.

Method

This study used a quantitative method with a cross-sectional design and a correlation approach in Mangunrejo Village, Grobogan Regency, involving 42 mothers of toddlers Below the Red Line (BGM) selected through total sampling. Data were collected using a structured questionnaire covering demographic data, maternal knowledge about toddler nutrition (20 multiple-choice questions), and PMT supplementary feeding practices (10 Likert-scale questions). The knowledge questionnaire was scored 1 for correct and 0 for incorrect answers, then categorized as good (76–100%), sufficient (56–75%), or poor (<56%). Data collection involved explaining the research purpose and procedures, assisting respondents as needed, and conducting home visits for absent respondents, followed by editing, coding, entry,

and cleaning before SPSS analysis. Data analysis consisted of univariate analysis to describe respondent characteristics and variable distributions, and bivariate analysis using the Spearman Rank test with $\alpha = 0.05$ to determine the relationship between maternal knowledge and PMT feeding practices.

Results

This study involved 42 respondents, namely mothers who had BGM toddlers in Mangunrejo Village. The research results include respondent characteristics, maternal knowledge levels, PMT supplementary feeding practices, and the relationship between maternal knowledge about nutritional status and PMT supplementary feeding practices.

TABLE 1. Respondent Characteristics - Maternal Education

Education	Frequency	Percentage
Elementary School Graduate	9	21.1%
Junior High School Graduate	16	38.1%
Senior High School Graduate	13	31.0%
Bachelor's Degree Graduate	4	9.5%
Total	42	100%

TABLE 2. Maternal Occupation

Occupation	Frequency	Percentage
Farmer	12	28.6%
Housewife	21	50%
Entrepreneur	6	14.3%
Employee	3	7.1%
Total	42	100%

TABLE 3. Frequency of Toddler Age

Toddler Age	Frequency	Percentage
1	7	16.7%
2	20	47.6%
3	6	14.3%
4	9	21.4%

TABLE 4. Gender of Toddlers in Mangunrejo Village

Gender	Frequency	Percentage
Female	26	61.9%
Male	16	38.1%
Total	42	100%

TABLE 5. Maternal Knowledge Level

Knowledge Category	Frequency	Percentage
Good	20	47.6%
Sufficient	8	19.0%
Poor	14	33.3%
Total	42	100%

TABLE 6. Maternal Behavior in PMT Supplementary Feeding

Behavior	Frequency	Percentage
Good	19	45.2%

Behavior	Frequency	Percentage
Sufficient	12	28.6%
Poor	11	26.2%

TABLE 7. Bivariate Analysis Results - Relationship between Maternal Knowledge about Nutritional Status and PMT Supplementary Feeding Practices for BGM Toddlers in Mangunrejo Village

Knowledge	PMT Feeding Behavior				
	Poor	Sufficient	Good	Total	
Poor	7 (16.7%)	4 (9.5%)	3 (7.1%)	14 (33.3%)	
Sufficient	2 (4.8%)	4 (9.5%)	2 (4.8%)	8 (19.0%)	
Good	2 (4.8%)	4 (9.5%)	14 (33.3%)	20 (47.6%)	
Total	11 (26.2%)	12 (28.6%)	19 (45.2%)	42 (100%)	
Total Knowledge				p-value	r
14 (33.3%), 8 (19.0%), 20 (47.6%), 42 (100%)				0.000	0.566

The Spearman Rank test results showed a p-value = 0.000 (<0.05) with a correlation coefficient of $r = 0.566$. These results indicate that there is a significant relationship between maternal knowledge about nutritional status and PMT supplementary feeding practices for BGM toddlers, with a positive relationship direction and moderate relationship strength.

Discussion

The research results showed that most respondents had good knowledge about nutritional status, namely 20 respondents (47.6%), while 8 respondents (19.0%) had sufficient knowledge and 14 respondents (33.3%) had poor knowledge. Regarding PMT supplementary feeding practices for BGM toddlers, 19 respondents (45.2%) had good behavior, 12 respondents (28.6%) had sufficient behavior, and 11 respondents (26.2%) had poor behavior. These results indicate that although most mothers already had good knowledge and behavior, there are still mothers with sufficient and poor knowledge as well as those who need to improve their PMT supplementary feeding practices.

The Spearman Rank test results showed a p-value of 0.000 ($p < 0.05$) with a correlation coefficient (r) of 0.566, indicating a significant positive relationship with moderate strength between maternal knowledge about nutritional status and PMT supplementary feeding practices for BGM toddlers in Mangunrejo Village. This means that the better the maternal knowledge about nutritional status, the better the maternal behavior in PMT supplementary feeding for BGM toddlers tends to be. The cross-tabulation results also supported this tendency, where of the 20 mothers with good knowledge, 14 respondents (33.3%) had good PMT feeding behavior, while of the 14

mothers with poor knowledge, 7 respondents (16.7%) had poor PMT feeding behavior, showing that maternal knowledge is one factor related to PMT supplementary feeding practices.

This study has several limitations. First, the cross-sectional design can only describe the relationship between maternal knowledge and PMT supplementary feeding practices at one time and cannot explain cause-and-effect relationships. Second, the limited number of respondents (42 respondents) means the results describe conditions at the research location and cannot be generalized widely. Third, data collection using a questionnaire depends on respondents' honesty, understanding, and ability to provide answers, and since several respondents were not present during data collection, the researcher conducted direct home visits to ensure data collection could still be carried out.

Conclusion

Based on the research results, maternal knowledge about nutritional status and PMT supplementary feeding practices for BGM toddlers in Mangunrejo Village were mostly in the good category, with 20 respondents (47.6%) and 19 respondents (45.2%) respectively. The Spearman Rank test showed a significant positive relationship between the two variables ($p\text{-value} = 0.000$; $p < 0.05$) with a correlation coefficient (r) of 0.566 and moderate strength, indicating that the better the maternal knowledge about nutritional status, the better the PMT supplementary feeding practices.

References

- Casando, N. I. (2022). The relationship between maternal education, knowledge, attitude and parenting on children's nutritional status.
- Evtiasari, E., Nuzuliana, R., & Kesehatan, F. I. (2024). The relationship between nutritional provision practices and nutritional status in toddlers.
- Fatira, I., Septiani, B. D. S., & Naelasari, D. N. (2024). The relationship between maternal nutritional knowledge and PMTP provision compliance with food intake in wasting toddlers in the working area of Tanjung Karang Community Health Center, Mataram City.
- Prasetyo, Y. B., Permatasari, P., & Susanti, H. D. (2023). The effect of mothers' nutritional education and knowledge on children's nutritional status: A systematic review. *International Journal of Child Care and Education Policy*. <https://doi.org/10.1186/s40723-023-00114-7>
- Puspasari, N., & Andriani, M. (2017). The relationship between maternal knowledge about nutrition and toddler food intake with toddler nutritional status (BB/U) aged 12–24 months. *Amerta Nutrition*, 1(4), 369-378. <https://doi.org/10.20473/amnt.v1.i4.2017.369-378>
- Permatasari, D. I. (2019). The relationship between maternal knowledge level and MP-ASI provision in infants aged less than 6 months in the working area of Gemarang Community Health Center [Thesis]. Madiun, Indonesia: STIKes Bhakti Husada Mulia.