

The Relationship Between Mothers' Frequency of Visits to the Posyandu and the Nutritional Status of Toddlers in Jemah Village, West Java, Indonesia

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Abstract

Introduction: Nutrition is a key determinant of human health and development, especially in the toddler period, when inadequate intake can quickly lead to growth and health problems. **Objective:** To determine the relationship between the frequency of maternal visits to integrated health posts (Posyandu) and the nutritional status of toddlers in Jemah Village, Jati Gede District, Sumedang Regency. **Method:** This descriptive analytic study used a cross-sectional design. Data were collected through observation with an accidental sampling technique from 50 mothers and toddlers registered at Posyandu Mawar I–IV in Jemah Village. **Result and Discussion:** Most mothers were 26–35 years old, had a high school education, and were housewives. Most toddlers had good nutritional status, and 82% of respondents routinely visited the integrated health posts. Statistical analysis showed a significant positive relationship between visit frequency and toddler nutritional status ($p = 0.001$), indicating a very strong correlation. **Conclusions:** Routine maternal visits to integrated health posts are strongly associated with better nutritional status among toddlers in Jemah Village.

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Introduction

Optimal nutrition is a fundamental determinant of human health and development across the life course and is particularly critical during the first years of life (Anjani, 2019). Adequate intake of macro- and micronutrients in early childhood supports survival, linear growth, brain development, immune function, and long-term productivity, while poor nutrition increases the risk of morbidity, mortality, and impaired cognitive outcomes. In toddlers, rapid growth and high metabolic demands make them especially vulnerable to both undernutrition and overnutrition, making timely prevention and intervention essential (Apriliani, 2023; Pristiwanti, 2022; Rahmanindar, 2020).

Globally, malnutrition remains a major public health problem, with many low- and middle-income countries experiencing a “double burden” of undernutrition and rising overweight. In Indonesia, undernutrition in children under five remains a priority issue (Elnifara, 2024). The Survei Status Gizi Indonesia (SSGI) 2022 reported a national stunting prevalence of 21.6%, a decline from 24.4% in 2021 but still above national and global targets. This persistence indicates that improvements in child nutrition require sustained community-level interventions beyond national policy commitments (Dahlia, 2023; Nadeak, 2025).

At the sub-national level, disparities are evident. In 2022, West Java Province recorded a stunting prevalence of 20.2%, while Sumedang Regency was identified as the district with the highest prevalence in the province at 27.6% (Ariyani, 2020). Although data from the 2023 Survei Kesehatan Indonesia (SKI) show a decline in stunting prevalence in Sumedang to 14.4%, the burden remains concerning given the long-term consequences of early-life undernutrition on health, education, and economic productivity. These trends highlight the importance of identifying modifiable, locally actionable determinants of child nutrition in high-priority areas such as Sumedang Regency (Destiadi, 2015; Prentice, 2006).

In Indonesia, integrated health posts (*Pos Pelayanan Terpadu* / Posyandu) function as a key community-based platform for maternal and child health services, including growth monitoring, immunization, health education, and nutrition counseling (Anumpitan, 202). Regular attendance at Posyandu enables early detection of growth faltering through routine weighing and provides repeated opportunities for nutrition counseling and caregiver engagement. Maternal knowledge, attitudes, and caregiving practices—partly shaped through Posyandu participation—are known to influence toddler dietary intake and nutritional status (Hidayah, 2020). However, in many communities, Posyandu utilization remains inconsistent, and visit frequency varies widely among mothers, raising questions about its measurable impact on child growth outcomes (Handayani R., 2017; Rahmanindar, 2020; Samino, 2020).

Previous studies have examined a broad range of risk factors for child undernutrition, including birth weight, breastfeeding practices, maternal nutritional status, infections, and socioeconomic conditions (Agustiawan, 2020; Norviana, 2022). While these studies provide important contextual understanding, fewer have isolated the specific contribution of routine Posyandu attendance—particularly visit frequency—as an independent factor associated with anthropometric outcomes. Moreover, empirical evidence examining whether a minimum threshold of routine visits (for example, ≥ 8 visits per year) is associated with better weight-for-age (BB/U) status among toddlers remains limited, especially in rural priority villages such as Jemah Village in Jatigede District, Sumedang Regency (Jauhari, 2(1), 29–35).

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Focusing on visit frequency is important because it represents a measurable, programmatically actionable indicator of service utilization, distinct from service quality or counseling content, which may vary across settings. Demonstrating a clear association between routine visit frequency and nutritional status would strengthen the evidence base for promoting consistent Posyandu attendance as a core strategy, while also informing the prioritization of monitoring indicators within community nutrition programs (Handayani S. R., 2022; Nikmah, 2024).

Method

This study used a descriptive analytic approach with a cross-sectional observational design. The research was conducted at all integrated health posts (Posyandu) in Jemah Village—Bakom, Sabeulit, Jatimekar, and Burujul—from 13 to 20 January 2025. The target population comprised all children aged 0–59 months living in Jemah Village. A total of 50 mother–toddler pairs who met the inclusion criteria (residents of Jemah, child under five years of age, and mother possessing a Maternal and Child Health handbook) and were present at the Posyandu during data collection were selected using accidental sampling. Mothers who did not attend Posyandu during the study period or declined participation were excluded. Data on maternal socio-demographic characteristics, frequency of Posyandu visits from January 2024 to January 2025, and child anthropometry were obtained from the Maternal and Child Health handbooks and Posyandu records using a structured extraction sheet. Nutritional status was assessed using the weight-for-age index and categorized according to World Health Organization z-score cut-off points. Maternal visit frequency was classified as routine (≥ 8 visits per year) or non-routine (< 8 visits per year). Data were analyzed using univariate statistics to describe sample characteristics and chi-square tests to examine the association between visit frequency and child nutritional status, with $p < 0.05$ considered statistically significant and odds ratios with 95% confidence intervals reported.

Result and Discussion

This study showed that most mothers in Jemah Village visited Posyandu routinely (80%), supported by favorable sociodemographic factors: the majority were in the productive age group (26–35 years), had at least senior high school education, and were predominantly housewives. These characteristics are known to increase health service utilization and allow mothers more time to attend Posyandu and care for their children, which aligns with previous findings that maternal age, education, and employment status influence Posyandu attendance and child health.

Nutritional assessment using the weight-for-age index indicated that most toddlers had good nutritional status, while only a small proportion were undernourished or overnourished. Cross-tabulation revealed that good nutritional status was more frequent among children whose mothers routinely attended Posyandu, whereas poor nutritional status was more common among those with non-routine attendance. Chi-square analysis confirmed a significant association between visit frequency and nutritional status ($p = 0.000$), with routine Posyandu visits acting as a strong protective factor against poor nutrition (OR 0.017; 95% CI: 0.002–0.180).

These findings are consistent with earlier studies showing that regular Posyandu attendance, combined with adequate maternal knowledge, education, and caregiving practices, improves child nutritional outcomes. Thus, the results support the research hypothesis (H_1) that the frequency of maternal visits to Posyandu is significantly

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associated with toddler nutritional status in Jemah Village, and the null hypothesis (H_0) is rejected.

1. Discussion

Table 1
Frequency Distribution of Maternal Age

Maternal Age (years)	Frequency (n =50)	Percentage (%)
a. 17-25	16	32%
b. 26-35	24	48%
c. 36-45	10	20%
Total	50	100%

Based on Table 1, respondents in the 26–35-year age group were more numerous than those in other age groups, totaling 24 mothers (48%).

Table 2
Frequency Distribution of Maternal Education

Maternal Education	Frequency (n = 50)	Percentage (%)
Elementary School	5	10%
Junior High School	14	28%
Senior High School/Vocational School	28	56%
Diploma	2	4%
Bachelor's Degree (S1/S2/S3)	1	2%
Total	50	100%

Based on Table 2, the majority of mothers who participated as respondents, namely 28 respondents (56%), had a senior high school or vocational school (SMA/SLTA/SMK) education.

Table 3
Frequency Distribution of Maternal Occupation

Maternal Occupation	Frequency (n = 50)	Percentage (%)
Housewife	42	84%
Self-employed	2	4%
Civil Servant	3	6%
Entrepreneur	3	6%
Total	50	100%

Based on Table 3, the most common occupation among mothers was housewife, with 42 respondents (84%).

Table 4.
Frequency Distribution of Toddler Nutritional Status

Nutritional Status	Frequency (n = 50)	Percentage (%)
Poor Nutrition	7	14%
Good Nutrition	43	86%
Total	50	100%

Based on Table 4, it is known that among the 50 children in Jemah Village who participated in this study, the majority had good nutritional status, totaling 43 children (86%).

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Table 5
Frequency Distribution of Maternal Visits to Posyandu

Maternal Visits to Posyandu	Frequency (n = 50)	Percentage (%)
Posyandu Visits :		
● Routine (mother's visits to Posyandu ≥ 8 consecutive times during 2024)	40	82%
● Non-routine (mother's visits to Posyandu < 8 consecutive times during 2024)	10	18%
Total	50	100%

Based on Table 5, it can be seen that of the 50 mothers and children in Jemah Village who took part in this study, 40 respondents (80%) routinely brought their children to the Posyandu and 10 respondents (20%) did not routinely bring their children to the Posyandu.

Table 6
Cross-Tabulation of Maternal Visit Frequency to Posyandu and Child Nutritional Status in Jemah Village

Frequency of Posyandu Visits	Poor Nutrition n (%)	Good Nutrition n (%)	Total n (%)
Routine	1 (2%)	39 (78%)	40 (80%)
Non-routine	6 (12%)	4 (8%)	10 (20%)
Total	7 (14%)	43 (86%)	50 (100%)

Table 6 shows that good nutritional status is consistent with higher visit frequency, as children with good nutritional status form the majority compared to those with poor nutritional status, namely 39 children (78%) out of 40 (80%) whose mothers routinely visited the Posyandu. In contrast, among the 10 children (20%) whose mothers did not visit the Posyandu routinely, poor nutritional status was more common, with 6 children (12%) compared to 4 children (8%) who had good nutritional status.

Table 7
Relationship Between Posyandu Visits and Toddler Nutritional Status in Jemah Village

Posyandu Visit Frequency	Poor Nutritional Status n (%)	Good Nutritional Status n (%)	p-value	Odds Ratio (OR)	95% Confidence Interval
Routine	1 (2%)	39 (78%)	0.000	0.017	0.002–0.180
Non-routine	6 (12%)	4 (8%)		Reference	
Total	7 (14%)	43 (86%)	50 (100%)		

Based on Table 7, the results of this study show a significant relationship between the frequency of Posyandu visits and the nutritional status of children at Posyandu Mawar I–IV in Jemah Village, as indicated by a p-value of 0.000, which is lower than $\alpha = 0.05$. Statistically, routine Posyandu visits act as a protective factor against poor nutritional status among the 50 toddlers in Jemah Village (OR 0.017, 95% CI: 0.002–0.180).

Conclusion

Based on the findings of this study, most mothers of toddlers in Jemah Village were in the productive age group of 26–35 years and predominantly worked as housewives, providing them with greater opportunity to utilize Posyandu services. The majority of

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toddlers demonstrated good nutritional status based on the weight-for-age (WFA/BB-U) indicator, indicating generally favorable growth conditions within the community.

In terms of service utilization, 40 respondents were classified as routine Posyandu visitors (≥ 8 visits per year), while 10 respondents were classified as non-routine visitors (< 8 visits per year). The results showed that good nutritional status was more frequently observed among toddlers whose mothers attended Posyandu routinely, whereas poor nutritional status was more common among toddlers whose mothers did not attend regularly. Statistical analysis confirmed a significant association between the frequency of maternal Posyandu visits and toddler nutritional status, with routine visits acting as a protective factor against poor nutritional status.

Overall, this study demonstrates that consistent maternal attendance at Posyandu is significantly associated with better nutritional status among toddlers, particularly in supporting growth monitoring and early identification of nutritional problems. These findings highlight the importance of strengthening strategies to promote routine Posyandu visits as part of community-based efforts to improve toddler nutritional outcomes in Jemah Village.

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