

**Evaluation Of The Nutrition Intervention Program
In Overcoming Stunting In Toddlers In The Area Of The Astambul Public
Health Center, Banjar District,
South Kalimantan**

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Abstract

This study aims to evaluate the effectiveness of the nutrition intervention program implemented by the Astambul Community Health Center in Pasar Jati Village and Pingaran Ilir Village in preventing stunting in toddlers. The study used a mixed-methods design with a quantitative approach using questionnaires and a qualitative approach through in-depth interviews and focus group discussions (FGDs) using Colaizzi analysis. A total of 32 mothers of toddlers participated as respondents. Quantitative results showed that the majority of respondents (68.8%) consumed nutritious food every day, although nutritional problems were still found with a proportion of malnutrition of 56.3% and stunting of 34.4%. Most respondents (96.9%) received PMT, and 65.6% considered the program to have a significant impact on child growth. However, the distribution of assistance was uneven, with 34.4% not receiving assistance in the last three months. Qualitative results showed that mothers experienced short-term benefits in the form of increased appetite and slight weight gain, but the effects were not sustained after the program was discontinued. Cadres played a significant role in nutrition counseling and changing family behavior, but data collection constraints led to inaccurate targeting. The integration of both data shows that nutrition intervention programs are beneficial in the short term, but have not had a significant impact on improving nutritional status without more consistent, multisectoral, and sustainable interventions.

Background

Stunting remains one of the most pressing public health issues in Indonesia. This condition not only reflects poor nutrition but is also related to environmental factors, infectious diseases, parenting patterns, and suboptimal health services during the First 1,000 Days of Life (HPK). According to the 2024 SSGI report, the national stunting prevalence reached 19.8%, indicating the need for more effective, targeted, and sustainable nutritional interventions to achieve the national stunting reduction target. Banjar Regency, as one of the areas still facing challenges in reducing stunting, continues to implement various efforts through its Community Health Centers (Puskesmas), including specific nutrition interventions such as Supplementary Feeding (PMT), counseling, vitamin administration, nutrition counseling, and routine growth monitoring at integrated health posts (Posyandu). The government, through its Puskesmas and

Posyandu, implementation Nutrition intervention programs include supplementary feeding (PMT) and growth and development monitoring. However, program effectiveness is greatly influenced by community acceptance, service quality, and ongoing field monitoring. This study aims to evaluate the implementation of the nutrition intervention program, including community knowledge levels, acceptance of assistance, impact on toddler nutritional status, implementation challenges, and the quality of health services.

The Astambul Community Health Center (Puskesmas) is a primary health care facility with a broad nutritional intervention program, particularly in Pasar Jati Village and Pingaran Ilir Village, its work areas. The intervention program includes PMT (Food and Nutritional Supplements), nutrition counseling, and supplementation, aimed at improving the nutritional status of toddlers and preventing stunting. Initial findings in the study area indicate a gap between families' relatively good nutritional knowledge and suboptimal nutritional status outcomes for toddlers. The majority of families reported consuming nutritious food daily, but nutritional status data indicates high rates of malnutrition (56.3%) and stunting (34.4%). Furthermore, although 96.9% of respondents reported receiving nutritional interventions, the distribution of assistance was uneven—with 34.4% not receiving any assistance in the past three months.

Evaluating the effectiveness of the nutrition intervention program is crucial. This evaluation not only assesses quantitative aspects such as the scope of aid received and food consumption patterns, but also explores family experiences, cadre perceptions, and obstacles encountered in the field through a qualitative approach. The use of mixed methods allows for a more comprehensive picture, resulting in integrative conclusions that reflect the program's effectiveness from both a numerical perspective and direct experience. The research is expected to provide more precise recommendations for strengthening nutrition programs at the Community Health Center (Puskesmas) level, particularly in ensuring that interventions are consistent, targeted, and integrated with other health programs to accelerate stunting reduction in the Astambul Community Health Center's work area

Methods

This research uses a mixed method with quantitative methods using a questionnaire as a measuring tool with 32 respondents.(purposive sampling) and in-depth interviews with seven participants to obtain qualitative data using the Colaizzi method, which emphasizes in-depth understanding, interpretation of respondents' authentic experiences, and the extraction of themes based on phenomenology. The integration of quantitative and qualitative data provides a comprehensive picture of stunting risk factors and the effectiveness of nutritional interventions.

Result and Discussion

The research was conducted in Pasar Jati Village and Pingaran Ilir Village, within the Astambul Community Health Center (Puskesmas) jurisdiction, Banjar Regency. This study used a mixed methods approach, combining quantitative data through questionnaires and qualitative data. Through in-depth interviews, respondents consisted of 32 mothers of toddlers receiving nutritional intervention programs (PMT and counseling), as well as several Posyandu cadres and village midwives. The research implementation consisted of 3 stages: Stage I began with the implementation of permit processing from the Banjar Regency Kesbangpol, Community Health Center and Poskesdes. Determination of participants and the availability of questionnaire instruments and research interview guidelines and consent forms. Determination of participants based on the intervention was toddlers aged 6-59 months receiving PMT assistance, the data was provided by nutrition service staff at the Astambul Community Health

Center. Permit processing. Stage 2 was the implementation of data collection. Data collection was also assisted by the Astambul Community Health Center and Poskesdes officers in Pasar Jati Village and Poskesdes officers in Pingaran Ilir Village who are working area of Astambul Health Center, Banjar Regency. Data collection was carried out on July 1, 2025, at the Pasar Jati Village Health Post. The researcher first explained the objectives, procedures, benefits, respondent rights, and data confidentiality. Respondents were given the opportunity to ask questions until they understood what was conveyed. Furthermore, informed consent was signed for respondents who were willing to participate in the study. The data collection method first involved respondents filling out a questionnaire accompanied by the researcher and village health post officers, followed by an interview. Data collection continued in Pingaran Ilir village on July 4, 2025, at the Pingaran Ilir Village Health Post. The data collection method was the same as that implemented in Pasar Jati village. The researcher first explained the objectives, procedures, benefits, respondent rights, and data confidentiality. Respondents were given the opportunity to ask questions until they understood what was conveyed. Next, informed consent was signed for respondents who were willing to participate in the study. The data collection method first involved respondents filling out a questionnaire accompanied by the researcher and village health post officers, followed by an interview. After all data was collected from both villages, namely Pasar Jati and Pingaran Ilir, the research team checked the completeness of the questionnaire and then processed the data with quantitative data results according to the inclusion criteria. age 6 months - 59 months and the final result was 32 respondents who met the criteria. This mixed-method study employed in-depth interviews to obtain qualitative data using the Colaizzi method, which emphasizes in-depth understanding, interpretation of respondents' authentic experiences, and the extraction of themes based on phenomenology. The integration of quantitative and qualitative data provides a comprehensive picture of stunting risk factors and the effectiveness of nutritional interventions.

The following are the results of the data analysis presentation in the table:

Table 1. Cross Tabulation of Nutrition Counseling Sources (multiple answers allowed → binary data per category) with Frequency of Consumption of Balanced Nutritional Food

		Frequency of consuming balanced nutritious food			Total
		Every day	3–5 times a week	Seldom	
Nutrition counseling sources (multiple answers allowed → binary data per category)	Community Health Center	8	4	1	13
	Integrated Health Post Cadres	11	3	2	16
	Social media	2	0	0	2
	Other	1	0	0	1
Total		22	7	3	32

Table 1 shows a cross-tabulation of extension sources with the frequency of consumption of balanced nutritious food. From the table, 11 respondents consume nutritious food every day.

Based on the results in Table 1, respondents from the Posyandu cadre outreach program (11 respondents) consumed more nutritious food daily. This demonstrates the significant role of cadres in changing family consumption behavior.

Table 2. Cross Tabulation of Assessment of the Benefits of the Intervention Program with the Effect of Assistance on Child Growth

		The influence of assistance on child growth
		Very influential
Assessment of the benefits of the intervention program	Very helpful	9
	Quite helpful	1
Total		10

Table 2 shows a cross-tabulation of the assessment of the benefits of the intervention program with the influence of assistance on child growth from 9 respondents.

The results of Table 2 show that respondents who rated the program as very helpful also mostly rated the assistance as having a significant impact on child development (9 respondents). Meanwhile, of those who rated the program as somewhat helpful, the majority felt the assistance was quite influential (16 respondents).

Table 3. Cross Tabulation of Ever stated to have had nutritional problems by officers with Type of nutritional problem (multiple answer → binary)

		Types of nutritional problems (multiple answer → binary)				Total
		Stunting	Malnutrition	Malnutrition	Other	
Have been declared to have nutritional problems by officers	Of	0	4	0	0	4
	No	11	14	2	1	28
Total		11	18	2	1	32

Table 3 shows that of the 32 respondents who were stated to have had nutritional problems by officers with the type of nutritional problem, there were 4 respondents with malnutrition.

Based on table 3, it shows that respondents who were declared to have nutritional problems by officers were predominantly malnourished (4 respondents).

Table 4. Cross Tabulation of Frequency of Visits to Posyandu with Posyandu Services Helping Growth and Development

		Posyandu services help growth and development		Total
		Of	No	
Frequency of going to Posyandu	Every month	29	1	30
	Sometimes	2	0	2
Total		31	1	32

Table 4 shows that with frequent visits to Posyandu, children's growth and development can be helped well by 29 respondents every month and sometimes by 2 respondents.

Based on table 4, it shows that 29 respondents who come to the integrated health post (Posyandu) every month assess that the Posyandu service helps growth and development. This shows a strong correlation between Posyandu activity and growth and development monitoring.

A. This quantitative discussion is based on the results of descriptive analysis and cross-tab testing of 32 respondents of toddlers aged 12–36 months in the work area of the Astambul Community Health Center.

1. Nutritious Food Consumption Patterns and Nutritional Status

The results of the study showed that the majority of respondents had implemented a nutritious food consumption pattern, indicated by 68.8% who consumed nutritious food every day. However, the high proportion of nutritious consumption was not directly proportional to the nutritional status of children because it was still found that 56.3% of children experienced malnutrition and 34.4% experienced stunting. This finding strengthens the concept (Olivia Febi Safitri1 et al., 2025) that stunting is a chronic condition that is not only influenced by diet, but also sanitation, infection, and long-term parenting patterns.

2. Participation in the PMT Program and its Impact

A total of 96.9% of respondents received PMT at least once in the past year. However, 34.4% did not receive PMT regularly in the past 3 months. The majority of respondents considered PMT to have a significant impact on their child's condition (65.6%). This result is in line with research (Fazid et al., 2024; Pibriyanti et al., 2024) which shows that PMT has been proven to increase appetite and body weight in the short term. Statistical interpretation: discontinuous provision of PMT has an impact on less than optimal improvement in nutritional status. Consistency in providing PMT is an important factor for long-term impact.

3. Nutrition and Behavior Change Counseling Resources

Regarding nutrition education, data shows that Posyandu (Integrated Service Post) cadres are the primary source of information (50%) compared to Community Health Centers (Puskesmas) (40.6%). Respondents who received more intensive counseling tended to provide more varied complementary foods and consume nutritious foods more frequently. This pattern suggests that cadres play a crucial role in changing family eating behaviors. These findings align with recent research by Rais et al., 2023; Wulandari & Kusumastuti, 2020), which confirms that cadres play a central role in transferring

nutritional knowledge within the community, and a study by Di et al., 2024, which found that community-based nutrition education is highly effective in improving parenting behaviors.

4. Impact of Intervention on Stunting Risk

Although the nutrition program has been implemented, the consistency of aid receipts has not been optimal, as 34.4% of respondents have not received aid in the last three months. This irregular distribution of aid has the potential to reduce the program's long-term effectiveness in improving children's nutritional status. This indicates that the intervention has not achieved a significant impact. These results align with the Indonesian Ministry of Health's report (Kemenkes, 2024) that reducing stunting requires specific and sensitive nutrition interventions (sanitation, immunization, infection). Nutrition programs alone are not sufficient to reduce stunting without improving the supporting environment. The finding that 65.6% of respondents felt the aid had a significant impact on child growth. However, the benefits felt by the majority of families were still short-term. This fact is consistent with the results of studies by (Averina & Widagda, 2021; Munir & Audyna, 2022; Refisiliyani, 2025) which found that PMT increases body weight in the short term but does not have a significant impact on reducing stunting if not implemented sustainably.

B. Qualitative discussion with focus group discussions (FGD) and in-depth interviews

The results of qualitative analysis using the Colaizzi method produced the following themes:

1. Program Knowledge and Acceptance Excellent

Mothers of toddlers learned about the PMT program, its benefits, and the goal of stunting prevention. They obtained this information from community health center (Puskesmas) cadres and staff.

"We know that this PMT program is to increase the weight of children and prevent stunting."

(W3, FGD of Mothers of Toddlers)

This finding supports (Indah & Sihidi2, 2023; Pibriyanti et al., 2024; Rais et al., 2023) that knowledge is a key factor towards behavioral change.

2. Program Impact: Increased Appetite, Slight Weight Gain

Mothers reported that PMT made their children more active, less sick, and had an increased appetite. However, weight gain was only 0.2–0.3 kg, and tended to decrease after the program was discontinued.

"If you take PMT, your weight will increase, but after you stop, it will go down again."

(W5, In-depth interview)

Research (Fazid et al., 2024) also states that PMT often only provides short-term effects.

3. Uneven Distribution & Data Collection Problems

The cadre said that there were children who were not included in the data and therefore did not receive PMT.

"There are some who should have received it, but their data wasn't entered, so they didn't."

(K2, FGD Kader)

This is the main obstacle to the program. Research results (Rusydi, 2025) also highlight that data collection is often the cause of the failure of equitable distribution of nutrition programs.

4. Excellent Cadre & Community Health Center Services
Participants felt comfortable and helped by the services of cadres and health workers.
"The staff are good, fast, if anything happens we get help straight away."
(W4)
Good service has been proven to increase the attendance of mothers at integrated health posts (Yunola & Anggraini, 2024)

C. Mixed Method Integration (Meta-Inference)

The integration of quantitative and qualitative data produces a comprehensive picture of the effectiveness of nutrition intervention programs.

1. The program was very well received, but the effects were not sustainable.
Quantitative: 65.6% rated the program as having quite an impact.
Qualitative: the mother felt an increase in appetite and a small increase in weight.
However, the children's weight returned when the program stopped. This finding aligns with a study (Triuspita et al., 2024) that found that PMT is only effective in increasing weight in the short term without changes in the environment and parenting patterns.
2. High nutritional knowledge changes eating behavior quite well
Quantitative: 68.8% of daily nutritional intake.
Qualitative: mothers understand the benefits of PMT.
in line with the study (Wulandari & Kusumastuti, 2020) Cadre education is the main driver of behavioral change, in line with research
3. Uneven distribution of aid → program effectiveness decreases
Quantitative: 34.4% did not receive assistance in the last 3 months.
Qualitative: some children were "not included in the data".
Data collection problems are the main obstacle to reducing stunting.
4. The role of cadres is very strong in producing positive behavior.
Quantitative: the largest source of information (50%).
Qualitative: mothers feel helped and trust the cadres.
This is consistent with the findings of (Rais et al., 2023) and the 2023 Indonesian Stunting Policy.

Conclusion

Overall, the nutrition intervention program at the Astambul Community Health Center was well received and provided short-term benefits, but has not yet resulted in significant improvements in nutritional status and stunting due to data collection issues, inconsistencies in assistance, and a lack of sustained multisectoral interventions.

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