

ASSOCIATION BETWEEN MATERNAL KNOWLEDGE OF THE LACTATIONAL AMENORRHEA METHOD AND STUNTING PREVENTION PRACTICES IN SIKUMANA, INDONESIA

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ASSOCIATION BETWEEN MATERNAL KNOWLEDGE OF THE
LACTATIONAL AMENORRHEA METHOD AND STUNTING
PREVENTION PRACTICES IN SIKUMANA, INDONESIA

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ABSTRACT

Stunting remains a major public health challenge in Indonesia, with maternal factors, including knowledge of postpartum family planning methods such as the Metode Amenore Laktasi (LAM), potentially influencing prevention practices. This study highlights LAM knowledge as an underexplored determinant of stunting prevention behavior. This study aimed to examine the association between maternal knowledge of LAM and stunting prevention practices in Sikumana, Indonesia. An analytical cross-sectional design was employed involving 60 mothers with children aged 0–24 months selected through simple random sampling. Data were collected using a structured questionnaire assessing socio-demographic characteristics, maternal knowledge of LAM, and stunting prevention practices. Data analysis included univariate and bivariate analysis using the chi-square test with a significance level of $p < 0.05$. The results showed that most mothers had moderate (41.7%) and poor (33.3%) knowledge of LAM, while only 25.0% had good knowledge. More than half of respondents (56.7%) demonstrated adequate stunting prevention practices. A statistically significant association was found between maternal knowledge of LAM and stunting prevention practices ($p = 0.003$), with mothers who had good knowledge more likely to exhibit adequate practices compared to those with lower knowledge levels. In conclusion, maternal knowledge of LAM is significantly associated with stunting prevention practices, highlighting the importance of strengthening maternal education as part of integrated strategies to prevent Stunting.

Keywords: Maternal knowledge; Lactational Amenorrhea Method (LAM); Stunting; Stunting prevention practices.

INTRODUCTION

Stunting remains a major global public health challenge, particularly in low- and middle-income countries, where it reflects chronic nutritional deprivation during early life (Hutajulu & Ditaelis, 2025). The prevalence of stunting is notably high in regions such as Africa and Asia, with rates reaching approximately 31.28% in low and lower-middle-income African countries (Tamir et al., 2024). Contributing factors include maternal undernutrition, low socioeconomic status, and inadequate healthcare access, which collectively exacerbate the risk of stunting (Soliman et al., 2024)(Elmighrabi et al., 2026). Effective interventions, such as nutritional supplementation during pregnancy and education on maternal dietary practices, have shown promise in reducing stunting rates by up to 28% (Hutajulu & Ditaelis, 2025). Furthermore, the interplay of demographic, socioeconomic, and environmental factors necessitates a multifaceted approach to

address this issue, emphasizing the need for integrated public health strategies that target both immediate nutritional needs and broader socioeconomic determinants (Soliman et al., 2024)(Ssentongo et al., 2021).

The persistence of stunting in Indonesia, despite ongoing interventions, highlights significant gaps in addressing maternal behavioral and reproductive health determinants. Research indicates that maternal factors such as education, nutritional status, and health conditions during pregnancy are crucial in influencing stunting rates among children under five (Ariyanti et al., 2025). Additionally, inadequate maternal parenting practices, including suboptimal feeding and hygiene behaviors, further exacerbate the issue (Akmal et al., 2025). While the prevalence of stunting has shown a decline from 30.8% in 2018 to 24.4% in 2021, it remains above the global average of 22% (Sunarya et al., 2024). This suggests that existing strategies may not sufficiently engage with the socio-economic and cultural contexts affecting maternal behaviors, necessitating a more comprehensive approach that includes enhancing maternal knowledge and community support systems (Deviatin et al., 2022).

LAM is a natural contraceptive method based on lactational infertility during exclusive breastfeeding. It works through hormonal suppression of ovulation, particularly elevated prolactin levels, and is effective when three conditions are met: exclusive breastfeeding, amenorrhea, and infant age below six months. Through these mechanisms, LAM supports exclusive breastfeeding and contributes to optimal birth spacing. Adequate birth spacing allows maternal recovery and improves nutritional allocation for the child, thereby reducing the risk of stunting. Emerging evidence underscores the significance of optimal birth spacing and postpartum fertility regulation, particularly through LAM, in enhancing maternal recovery and child nutritional outcomes. LAM leverages the natural infertility associated with exclusive breastfeeding during the first six months postpartum, achieving over 98% effectiveness in preventing pregnancy when specific conditions are met. Studies indicate that integrating LAM into community health initiatives can improve birth-to-pregnancy intervals, thereby reducing adverse maternal and neonatal health outcomes (Ahmed et al., 2023). Furthermore, the promotion of LAM not only supports effective child spacing but also encourages breastfeeding, which is crucial for infant nutrition and health. Despite its benefits, there remains a gap in awareness and application among healthcare providers, highlighting the need for improved education and support for postpartum women (Sridhar & Salcedo, 2017). LAM a natural and effective postpartum family planning method, not only serves as contraception but also supports exclusive breastfeeding practices, which are essential for infant nutrition and immunity. Through its dual role, LAM has the potential to contribute indirectly to stunting prevention by promoting adequate birth intervals and improving early-life feeding practices.

Nevertheless, most existing research has focused on determinants of stunting from a nutritional and socioeconomic perspective rather than integrating reproductive health dimensions (Togatorop et al., 2024). Studies examining the linkage between birth spacing and stunting remain limited and context-specific (Essilfie et al., 2024). Furthermore, there

is a lack of evidence exploring how maternal knowledge of postpartum fertility regulation, particularly LAM, translates into stunting prevention practices at the household level (Togatorop et al., 2024). In addition, short birth intervals are recognized as a significant risk factor for stunting. Inadequate spacing between pregnancies may limit maternal recovery time and reduce the ability to meet nutritional needs, ultimately affecting the health of subsequent pregnancies and child growth outcomes. Therefore, appropriate family planning methods, including LAM, play a vital role in ensuring optimal birth spacing.

Maternal knowledge is recognized as a key determinant of health behavior, yet its translation into practice is influenced by multiple contextual factors (Ma et al., 2022). Stunting prevention involves a combination of practices, including appropriate feeding, healthcare utilization, and environmental hygiene (Fajriah et al., 2021) (Utami & Ummah, 2025). However, the integration of reproductive health knowledge into these practices remains insufficiently explored in current literature. This gap is particularly relevant in high-burden settings where multidimensional interventions are required.

This study offers a novel contribution by examining the association between maternal knowledge of the Lactational Amenorrhea Method and stunting prevention practices in Sikumana, Indonesia. It integrates reproductive health and child nutrition perspectives to provide a more comprehensive understanding of maternal determinants of stunting prevention behaviors. By doing so, the study addresses an important gap in the current evidence base.

Understanding this association is essential for informing more integrated public health interventions aimed at reducing stunting (Elmighrabi et al., 2026). It may support the development of strategies that utilize maternal knowledge of postpartum family planning as an entry point for improving child nutrition practices. Ultimately, such an approach has the potential to accelerate progress toward national and global stunting reduction targets.

Despite this potential, evidence regarding how maternal knowledge of LAM translates into actual stunting prevention practices at the household level remains limited, particularly in Indonesia. Existing studies have largely focused on general maternal knowledge or nutritional practices without specifically examining LAM as a reproductive health determinant. This represents both an empirical gap and a contextual gap, as local evidence is still insufficient to explain how LAM knowledge influences maternal behavior in stunting prevention.

Therefore, this study aims to examine the association between maternal knowledge of the Lactational Amenorrhea Method and stunting prevention practices in Sikumana, Indonesia. This study contributes novel evidence by focusing specifically on LAM knowledge as a reproductive health factor influencing child nutrition practices, an area that has received limited empirical attention in previous research.

RESEARCH METHODS

Research Design

This study employed an analytical cross-sectional design to examine the association between maternal knowledge of the Lactational Amenorrhea Method (LAM) and stunting prevention practices. The cross-sectional approach was chosen because it allows the measurement of exposure (maternal knowledge) and outcome (stunting prevention practices) simultaneously within a defined population. This design is appropriate for identifying relationships between variables and is commonly used in public health research to assess behavioral determinants.

Study Setting and Time

The study was conducted in Sikumana, a subdistrict of Kupang City, East Nusa Tenggara Province, Indonesia. The population in this area consists of diverse socioeconomic and educational backgrounds, making it suitable for examining maternal knowledge and health practices. Data collection was carried out for about two months, during which field data were obtained through direct household visits. The data collection process was conducted systematically to ensure consistency and completeness of responses.

Population and Sample

The target population of this study consisted of mothers who had children aged 0–24 months and resided in the Sikumana area. This age group was selected because it represents the critical period of the first 1,000 days of life, which is highly sensitive to nutritional intake and caregiving practices that influence child growth and development.

The inclusion criteria were: (1) mothers with children aged 0–24 months, (2) residing in the study area for at least six months prior to the study, and (3) willing to participate by providing informed consent. The exclusion criteria included mothers who were seriously ill, unable to communicate effectively, or had incomplete questionnaire data. The sample size was determined using the Slovin formula to ensure adequate representation of the population. Where n is the sample size, N is the total population, and e is the margin of error (set at 5%). Based on this calculation, the total sample obtained was 60 respondents. Sampling was conducted using a simple random sampling technique, in which each eligible mother had an equal probability of being selected. A sampling frame was constructed from community health records, and respondents were selected randomly to minimize selection bias.

Research Variables and Operational Definitions

The independent variable in this study was maternal knowledge of the Lactational Amenorrhea Method (LAM), defined as the level of understanding regarding the criteria and principles of LAM, including exclusive breastfeeding, postpartum amenorrhea, and infant age under six months. Knowledge was measured using a structured questionnaire and categorized into “good”, “moderate” and “poor” based on a predetermined cutoff

point. Maternal knowledge of LAM was measured using a structured questionnaire consisting of multiple items. Each correct answer was scored as 1 and incorrect answers as 0. The total score was then converted into percentages and categorized as follows: good ($\geq 76\%$), moderate (56–75%), and poor ($\leq 55\%$).

The dependent variable was stunting prevention practices, defined as maternal behaviors aimed at preventing stunting. The dependent variable is stunting prevention efforts measured through indicators such as exclusive breastfeeding practices, birth spacing, child nutrition, and utilization of health services. A composite score was calculated and categorized into “adequate” and “inadequate” practices. Confounding variables included maternal age, education level, occupation, parity, and family income.

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Data Collection Instruments and Procedures

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Data in this study were collected using a structured questionnaire developed based on an extensive review of the literature on maternal knowledge of the Lactational Amenorrhea Method (LAM) and stunting prevention practices. The questionnaire consisted of three main sections, namely socio-demographic characteristics, maternal knowledge of LAM, and stunting prevention practices.

The LAM knowledge section was designed in the form of multiple-choice and closed-ended questions assessing mothers' understanding of the concept, criteria, benefits, and application of LAM in breastfeeding practices. Each correct answer was assigned a score of 1, while incorrect answers were scored as 0. The total score was calculated and converted into a percentage, which was then categorized into three levels: good knowledge ($\geq 76\%$), moderate knowledge (56–75%), and poor knowledge ($\leq 55\%$).

Prior to data collection, the instrument underwent content validity testing by experts in maternal and child health to ensure its relevance and appropriateness in measuring the intended variables. In addition, a reliability test was conducted, and the instrument demonstrated acceptable internal consistency, with a Cronbach's alpha coefficient greater than 0.70, indicating good reliability.

Furthermore, a pilot test was conducted on a group of respondents outside the study sample to assess clarity, comprehensibility, and consistency of the questionnaire items. Feedback obtained from the pilot test was used to refine and improve the instrument before its implementation in the main data collection phase.

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Data Analysis

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Data were analyzed using statistical software such as SPSS. Univariate analysis was conducted to describe the characteristics of respondents using frequency and percentage distributions. Bivariate analysis was performed using the chi-square test to examine the association between maternal knowledge of LAM (good, moderate, poor) and stunting prevention practices. A p-value of <0.05 was considered statistically significant.

RESULTS AND DISCUSSION

Characteristics of Respondents

A total of 60 mothers participated in the study, and all selected respondents completed the questionnaire in full. There were no missing data, and all responses were included in the final analysis. The distribution of respondents based on socio-demographic characteristics is presented in Table 1.

Table 1. Characteristics of Respondents (n = 60)

Variable	Category	Frequency (n)	Percentage (%)
Age	<20 years	6	10.0
	20–35 years	42	70.0
	>35 years	12	20.0
Education	Primary	18	30.0
	Secondary	30	50.0
	Higher	12	20.0
Occupation	Housewife	38	63.3
	Employed	22	36.7
Parity	1 child	20	33.3
	≥2 children	40	66.7
Income	Low	28	46.7
	Middle-High	32	53.3

The majority of respondents were aged 20-35 years (70.0%), had secondary education (50.0%), and were housewives (63.3%). Most respondents had two or more children (66.7%) and belonged to middle-high income households (53.3%).

Maternal Knowledge of the Lactational Amenorrhea Method (LAM)

The distribution of maternal knowledge regarding LAM is shown in Table 2.

Table 2. Distribution of Maternal Knowledge of LAM (n = 60)

Knowledge Level	Frequency (n)	Percentage (%)
Good	15	25.0
Moderate	25	41.7
Poor	20	33.3

Most respondents had moderate knowledge (41.7%), followed by poor knowledge (33.3%), while only 25.0% had good knowledge of LAM. Maternal knowledge was categorized based on total questionnaire scores into good, moderate, and poor levels. This classification was used consistently throughout the analysis to determine the association with stunting prevention practices.

Stunting Prevention Practices

The distribution of stunting prevention practices among respondents is presented in Table 3.

Table 3. Distribution of Stunting Prevention Practices (n = 60)

Practice Category	Frequency (n)	Percentage (%)
Adequate	34	56.7
Inadequate	26	43.3

More than half of the respondents (56.7%) demonstrated adequate stunting prevention practices, while 43.3% were categorized as inadequate. Stunting prevention practices were assessed based on indicators including exclusive breastfeeding, complementary feeding practices, immunization status, growth monitoring, and hygiene behaviors. Among these, exclusive breastfeeding and routine growth monitoring were the most commonly practiced behaviors, while timely and adequate complementary feeding practices were the least consistently implemented.

Association between Maternal Knowledge of LAM and Stunting Prevention Practices

The relationship between maternal knowledge of LAM and stunting prevention practices was analyzed using the chi-square test. The results are presented in Table 4.

Table 4. Association between Maternal Knowledge of LAM and Stunting Prevention Practices (n = 60)

Knowledge Level	Adequate n (%)	Inadequate n (%)	Total	p-value
Good	13 (86.7)	2 (13.3)	15	
Moderate	15 (60.0)	10 (40.0)	25	
Poor	6 (30.0)	14 (70.0)	20	
Total	34	26	60	0.003

The results showed a statistically significant association between maternal knowledge of LAM and stunting prevention practices ($p = 0.003$). Mothers with good knowledge demonstrated the highest proportion of adequate practices (86.7%), followed by those with moderate knowledge (60.0%) and poor knowledge (30.0%). This pattern indicates a strong positive gradient relationship between knowledge level and preventive behavior.

Socio-Demographic Characteristics and Their Implications

The majority of respondents in this study were aged 20-35 years, had secondary educational backgrounds, and were predominantly housewives. These characteristics indicate that most respondents were within the productive reproductive age, which is generally considered biologically and psychologically favorable for pregnancy, breastfeeding, and childcare practices. Women within this age group are more likely to have better physical readiness and emotional maturity in caring for children, including the ability to make health-related decisions regarding feeding practices, healthcare

utilization, and family planning.

Despite these favorable socio-demographic characteristics, the findings suggest that demographic factors alone are insufficient to ensure optimal stunting prevention practices. Maternal knowledge remains an important determinant influencing preventive behaviors, particularly related to exclusive breastfeeding, birth spacing, complementary feeding, and routine growth monitoring. This finding is consistent with previous studies emphasizing that maternal education and health literacy strongly influence childcare practices and nutritional outcomes among children under five (Arianty et al., 2024)(Togatorop et al., 2024).

In this study, although most mothers had secondary education, only a limited proportion demonstrated good knowledge regarding the Lactational Amenorrhea Method (LAM). This condition suggests that formal education alone may not adequately equip mothers with specific reproductive health knowledge, especially concerning postpartum contraception and breastfeeding-based family planning methods. Previous studies have also highlighted that maternal reproductive health literacy is often influenced more by access to counseling and health promotion than by formal educational attainment alone.

Most respondents were also multiparous mothers, indicating prior experience in pregnancy and childcare. Multiparity may increase maternal confidence and familiarity with childcare practices; however, experience does not necessarily guarantee accurate or updated health knowledge. In some cases, mothers may continue practicing traditional beliefs or habitual feeding behaviors that are not fully aligned with current recommendations for child nutrition and breastfeeding.

These findings emphasize the importance of strengthening maternal health education through antenatal care, postnatal care, and community-based counseling programs. Improving maternal knowledge regarding breastfeeding, birth spacing, and stunting prevention is essential to support evidence-based childcare practices and reduce the burden of stunting in the community.

Maternal Knowledge of LAM

The findings of this study revealed that most mothers had moderate and poor levels of knowledge regarding the Lactational Amenorrhea Method (LAM), while only a small proportion demonstrated good knowledge. This result indicates that maternal understanding of LAM remains relatively limited, particularly regarding its mechanism, eligibility criteria, and benefits for maternal and child health.

LAM is a natural postpartum contraceptive method that relies on the physiological suppression of ovulation during exclusive breastfeeding. The effectiveness of LAM depends on three essential conditions: the infant must be younger than six months, the mother has not resumed menstruation, and breastfeeding must be practiced exclusively without supplementary feeding. When these criteria are fulfilled, LAM can provide highly effective pregnancy prevention while simultaneously supporting infant nutrition through exclusive breastfeeding.

Beyond its contraceptive function, LAM has important implications for stunting

prevention. Exclusive breastfeeding during the first six months of life provides adequate nutrients, strengthens immunity, and supports optimal growth and development. In addition, appropriate birth spacing allows mothers sufficient recovery time between pregnancies and improves the allocation of nutritional and caregiving resources for children. Previous studies have consistently shown that exclusive breastfeeding and adequate birth intervals are strongly associated with reduced risks of malnutrition and stunting (Sridhar & Salcedo, 2017).

The relatively low level of maternal knowledge observed in this study may reflect limited access to reproductive health counseling and insufficient dissemination of information regarding postpartum family planning. Counseling on LAM is often less emphasized compared with other contraceptive methods, despite its important role in promoting breastfeeding and child health. Similar findings have been reported in previous studies, which identified maternal knowledge as a key determinant of breastfeeding practices and child nutritional outcomes (Hutajulu & Ditaelis, 2025)(Ma et al., 2022).

In addition, socio-cultural beliefs and family influences may also affect maternal understanding and implementation of LAM. In some communities, early introduction of complementary foods is still commonly practiced, which may reduce the effectiveness of exclusive breastfeeding and consequently limit the effectiveness of LAM. Therefore, strengthening culturally appropriate health education and counseling programs is essential to improve maternal awareness and promote evidence-based reproductive health practices.

Overall, these findings indicate that improving maternal knowledge regarding LAM should become part of integrated maternal and child health strategies. Strengthening education on breastfeeding, postpartum contraception, and birth spacing may contribute significantly to improving childcare practices and reducing the prevalence of stunting.

Stunting Prevention Practices

The findings of this study revealed that more than half of the respondents demonstrated adequate stunting prevention practices, although a considerable proportion still showed inadequate practices. These findings indicate that while many mothers have implemented recommended preventive behaviors, important gaps in childcare and nutrition practices remain within the community. Stunting prevention requires comprehensive interventions during the first 1,000 days of life, a critical period that strongly influences child growth and development outcomes (Beluska-Turkan et al., 2019).

Stunting prevention practices include exclusive breastfeeding, appropriate complementary feeding, routine growth monitoring, immunization, hygiene practices, and timely utilization of healthcare services. Proper implementation of these interventions is essential to support optimal nutritional status and prevent chronic malnutrition among children. The World Health Organization also emphasizes that integrated interventions during early childhood are necessary to reduce stunting prevalence and improve child health outcomes (Ayuningtyas et al., 2022).

The relatively adequate practices observed in this study may reflect the contribution of maternal and child health programs implemented at the community level, particularly breastfeeding promotion and nutrition education through primary healthcare services. However, the persistence of inadequate practices among many respondents indicates that barriers such as limited maternal knowledge, socio-economic constraints, and restricted access to healthcare services continue to influence maternal behavior. In many cases, mothers may understand the importance of child nutrition but still experience difficulties in consistently implementing recommended practices due to economic limitations or lack of family support (Widyawardani et al., 2024).

Previous studies have consistently shown that maternal caregiving behavior significantly affects child nutritional outcomes and stunting prevention. Mothers who practice exclusive breastfeeding, provide appropriate complementary feeding, and routinely monitor child growth are more likely to support healthy child development and reduce the risk of undernutrition (Akmal et al., 2025) (Intiyati et al., 2024) (Khaliq et al., 2022). These findings reinforce the importance of improving maternal capacity and awareness as part of integrated stunting prevention strategies.

In the context of this study, the Lactational Amenorrhea Method (LAM) also contributes indirectly to stunting prevention through its role in supporting exclusive breastfeeding and optimal birth spacing. Exclusive breastfeeding ensures adequate nutrient intake during early infancy, while appropriate birth spacing allows sufficient maternal recovery and improves the allocation of nutritional and caregiving resources for children. Previous studies have reported that short birth intervals are associated with increased risks of maternal nutritional depletion and poor child growth outcomes (Wells et al., 2022).

Nevertheless, optimal stunting prevention practices are not solely influenced by maternal knowledge. Educational background, cultural beliefs, socio-economic conditions, family support, and healthcare accessibility may also affect maternal ability to implement recommended health behaviors. Therefore, strengthening maternal education and community-based health promotion programs remains essential to improve preventive practices and reduce the burden of stunting.

Association between Maternal Knowledge of LAM and Stunting Prevention Practices

The principal finding of this study demonstrates a statistically significant association between maternal knowledge of the Metode Amenore Laktasi (LAM) and stunting prevention practices ($p = 0.003$). Specifically, mothers with good knowledge exhibited a markedly higher proportion of adequate practices (86.7%) compared to those with moderate (60.0%) and poor knowledge (30.0%). This gradient pattern indicates a consistent relationship in which higher knowledge levels are associated with better health-related behaviors.

This finding directly contributes to answering the research question by confirming that maternal knowledge is a key determinant in shaping preventive behaviors against

Stunting. Knowledge functions as a fundamental cognitive component influencing attitudes and ultimately behavior. In this context, mothers who understand LAM are more likely to practice exclusive breastfeeding and maintain optimal birth spacing, both of which are essential strategies in preventing stunting (Prasetyo et al., 2025).

From a theoretical perspective, this result aligns with the Health Belief Model, which suggests that health behavior is influenced by knowledge, perceived benefits, and perceived barriers. Mothers with better knowledge of LAM are more likely to perceive the benefits of exclusive breastfeeding and appropriate birth spacing, thereby increasing their likelihood of adopting proper stunting prevention practices (Soliman et al., 2024; Sridhar & Salcedo, 2017).

This finding is also consistent with previous studies. Maternal knowledge significantly influences infant feeding practices and child nutritional outcomes (Fajriah et al., 2021). Similarly, Mothers with higher knowledge levels regarding breastfeeding and child nutrition were more likely to implement effective stunting prevention strategies (Utami & Ummah, 2025). However, this study also reveals that knowledge alone is not sufficient. A proportion of mothers with moderate (40.0%) and even good knowledge (13.3%) still demonstrated inadequate practices. This suggests the presence of other influencing factors, such as socio-economic conditions, cultural beliefs, family support, and access to healthcare services. This finding is supported by Ma et al. (2022), who emphasized that external barriers may hinder the translation of knowledge into practice.

The World Health Organization also highlights that stunting prevention requires a comprehensive approach that includes both individual knowledge and supportive environmental factors (Fetriyuna et al., 2021). In this regard, LAM provides dual benefits: promoting exclusive breastfeeding and supporting optimal birth spacing, both of which contribute to improved child health outcomes. Despite the significant association, this study has limitations. The cross-sectional design does not allow for causal inference, and the relatively small sample size ($n = 60$) may limit generalizability. Additionally, self-reported data may introduce bias.

The findings of this study are consistent with several previous studies that have identified maternal knowledge as a key factor in preventing stunting. For example, a study by Herawati & Dwimawanti (2025) found that mothers with better knowledge of infant feeding practices were significantly more likely to prevent stunting in their children. Similarly, research by Hasnita et al. (2022) reported a positive association between breastfeeding knowledge and child nutritional status.

However, some studies have reported contrasting findings, where knowledge alone did not significantly influence behavior due to external barriers such as socioeconomic constraints or limited healthcare access (Wells et al., 2022). This discrepancy suggests that while knowledge is important, it must be supported by enabling environments and accessible health services.

In conclusion, this study provides strong evidence that maternal knowledge of LAM is significantly associated with stunting prevention practices. However, improving knowledge alone is insufficient; it must be supported by enabling environments and

effective health systems.

This study has several limitations that should be considered. First, the cross-sectional design limits the ability to establish causal relationships between maternal knowledge and stunting prevention practices. Second, the relatively small sample size (n = 60) may affect the generalizability of the findings. Third, data were collected using self-reported questionnaires, which may be subject to recall bias or social desirability bias. Additionally, this study did not comprehensively assess other potential confounding variables such as cultural practices, paternal involvement, or health service accessibility, which may also influence stunting prevention behaviors.

Despite these limitations, this study provides important insights into the role of maternal knowledge of LAM in stunting prevention. The findings suggest that improving maternal knowledge through health education programs could significantly enhance stunting prevention practices. Future research should consider longitudinal designs to establish causal relationships and include a larger, more diverse sample to improve generalizability. Moreover, integrating qualitative approaches may provide deeper insights into the socio-cultural factors influencing maternal behavior.

In terms of practical implications, integrating LAM education into maternal and child health programs, particularly during antenatal and postnatal care, could be an effective strategy to promote exclusive breastfeeding and optimal birth spacing. Strengthening collaboration between healthcare providers and community health workers is also essential to ensure the dissemination of accurate and accessible health information.

CONCLUSION

This study demonstrates that maternal knowledge of the Metode Amenore Laktasi (LAM) is significantly associated with stunting prevention practices among mothers in Sikumana, Indonesia. Mothers with higher levels of knowledge were more likely to engage in adequate practices, including exclusive breastfeeding, appropriate birth spacing, and optimal child care behaviors, which are essential in preventing Stunting. These findings highlight that maternal knowledge serves as an important determinant of health behavior; however, it is not the sole factor, as socio-economic conditions, cultural influences, and access to healthcare services also play critical roles. Therefore, efforts to reduce stunting should not only focus on improving maternal knowledge through education and counseling but also on strengthening supportive environments and integrated health systems. Overall, integrating LAM education into maternal and child health programs represents a promising strategy to enhance stunting prevention efforts and improve child health outcomes.

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