Mothers Knowledge Regarding Stunting and The Incident Of Stunting In Children Aged 6-24 Months At The Kampung Baru Community Health Centre In Medan City

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Abstract. This study aimed to assess mothers' knowledge about stunting and its correlation with the incidence of stunting in children aged 6-24 months at the Kampung Baru Community Health Centre in Medan City. A cross-sectional design was used with a sample of 60 mothers, and data were collected through structured questionnaires. The study found that 43.3% of mothers had good knowledge, 41.7% had moderate knowledge, and 15% had inadequate knowledge about stunting. The children's height status revealed that 86.7% were normal, while 11.7% had stunting. A significant correlation was observed between maternal knowledge and the incidence of stunting, with children of mothers with inadequate knowledge showing a higher prevalence of stunting. The findings suggest the need for educational interventions to improve maternal knowledge on stunting prevention to reduce its prevalence and improve child health outcomes.

Keywords: knowledge, stunting, children 6-24 month

1 Introduction

Stunting remains one of the major global nutritional problems of chronic nature. It is defined as a height-for-age below −2 standard deviations of the WHO growth standard, reflecting linear growth failure due to prolonged undernutrition, recurrent infections, and inadequate psychosocial stimulation [1]. Its consequences are not limited to impaired physical growth but also include delayed cognitive development, reduced learning capacity, lower immunity, and decreased economic productivity in adulthood [2]. For this reason, WHO and UNICEF have prioritized stunting reduction as a key global target within the *Sustainable Development Goals* (SDGs) and the *Global Nutrition Targets 2025*. Globally, the most recent UNICEF/WHO/World Bank Joint Malnutrition Estimates (2023) reported that more than 148 million children under five are stunted, with the highest prevalence observed in South Asia and Southeast Asia. Countries with high stunting prevalence face the risk of a “lost generation” due to its long-term impact on human capital development [3].

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In Indonesia, despite a gradual decline in prevalence, stunting remains a serious public health concern. Based on the 2024 Indonesian Nutritional Status Survey (SSGI), the national stunting prevalence decreased to 19.8%, surpassing the 2024 target of 20.1% and approaching the 2025 target of 18.8%. This figure marks a decline from 21.5% in 2023, demonstrating significant progress in the government's stunting reduction program [4]. Nevertheless, the prevalence still exceeds the WHO threshold of 20%, which categorizes stunting as a major public health problem [5].

The situation in North Sumatra Province reflects similar challenges. According to the 2024 SSGI, the prevalence of short and very short children (stunting indicator) in this province was 22%, higher than the national average of 19.8% [4]. Medan, the capital city of the province, continues to face the problem, with several community health centers (*Puskesmas*) still reporting stunting cases annually, including Puskesmas Kampung Baru, which remains one of the areas with a significant number of cases despite a declining trend between 2020 and 2022.

One important factor influencing stunting prevention is maternal knowledge. Understanding of nutrition, child feeding practices, and complementary feeding (MP-ASI) plays a key role in supporting optimal child growth. Studies have shown that low maternal knowledge is related to higher stunting prevalence among toddlers [6], while interventions focusing on maternal education have been effective in improving knowledge and feeding practices [7]. Additionally, a qualitative study in Magelang emphasized the role of both mothers and community health cadres in monitoring child growth, highlighting that knowledge gaps may contribute to the persistence of stunting [8].

Given these conditions, it is essential to provide an overview of maternal knowledge on stunting and its incidence among children aged 6–24 months at Puskesmas Kampung Baru, Medan City. This study is expected to offer a descriptive understanding of maternal knowledge in relation to child stunting at the local level, and to provide evidence that may support future public health interventions aligned with the national target of reducing stunting prevalence to 18.8% by 2025.

2 Method

This study applied a quantitative design with a cross-sectional approach. It was conducted between May and June 2025 in the working area of Puskesmas Kampung Baru, Medan Maimun District, which covers six sub-districts: Kampung Baru, Sei Mati, Suka Raja, Jati, Hamdan, and Aur. A total of 60 mothers were recruited as the study sample from a population of 130 mothers, with the sample size determined using the Lemeshow formula. Participants were selected through Proportionate Stratified Random Sampling to ensure proportional representation from each sub-district. Data was collected using a validated questionnaire consisting of 10 knowledge items. The items assessed maternal knowledge in five domains: (1) the definition of stunting, (2) causes of stunting, (3) effects of stunting, (4) stunting prevention, and (5) principles of balanced nutrition. Responses were scored to quantify knowledge levels, with higher scores indicating greater knowledge.

Descriptive statistical analysis was performed to present an overview of maternal knowledge and the incidence of stunting among children aged 6–24 months. Nutritional knowledge was assessed by providing correct (score 1) and incorrect (score 0) answers. Knowledge, attitudes, and

behaviors were categorized as low (>60%), moderate (60-80%), and high (>80%) [9].

Anthropometric data to assess nutritional status was obtained by directly measuring body weight using a digital scale with 0.1 kg accuracy and height using a microtoise with 0.1 cm accuracy. Nutritional status analysis was conducted by determining the z-score of height-for-age (HAZ) using WHO Anthro Plus.

3 Result and Discussion

Table 1 presents the distribution of subjects based on child characteristics. The proportion of girls was slightly higher than boys, with 32 children (53.3%) being girls and 28 children (46.7%) boys. Regarding age distribution, the majority of children were 12 months old (23.3%), followed by those aged 9 months (20.0%). Children aged 6 months accounted for 15.0%, while those aged 7 months made up 13.3%. The proportions of children aged 10 months and 11 months were each 10.0%, and the smallest group was children aged 8 months, representing only 8.3% of the total sample. Overall, the data indicate that the sample was relatively balanced in terms of gender, with a slightly higher proportion of girls, and most children were concentrated in the age range of 9–12 months. This age range is critical because it coincides with the transition period from exclusive breastfeeding to complementary feeding (MP-ASI). Inadequate introduction of complementary foods during this stage is often associated with increased risk of growth faltering [10].

Table 1. Distribution of Subjects Based on Child Characteristics

Category	n	%
Gender		
Boys	28	46.7
Girls	32	53.3
Age (months)		
6	9	15.0
7	8	13.3
8	5	8.3
9	12	20.0
10	6	10.0
11	6	10.0
12	14	23.3

The predominance of mothers in the productive age group (25–39 years) reflects a demographic likely involved deeply in child-rearing and domestic responsibilities. However, younger mothers (19–24 years) may face more challenges—such as limited experience and lower access to health information—that could influence feeding practices and child health outcomes [11]. The high proportion of housewives (70%) suggests that most mothers were directly responsible for daily childcare and infant feeding. Although household caregivers are central to promoting young child nutrition, their effectiveness depends heavily on adequate health education and support systems [12]. While most families fell into the moderate-income bracket, socioeconomic status remains a pivotal factor in child nutrition. Higher-income families often

have better access to diverse, nutritious foods, whereas low-income households may struggle with food security, increasing the risk of undernutrition and stunting [13]. Notably, even in moderate-income contexts, maternal knowledge and feeding practices remain critical determinants for preventing stunting.

Table 2. Distribution of Subjects Based on Mother's Characteristics

Category	n	%
Age (years)		
19 – 24	8	13.3
25 – 29	17	28.3
30 – 34	15	25.0
35 – 39	15	25.0
40 – 44	5	8.3
Occupation		
Housewife	42	70.0
Private employee	8	13.3
Entrepreneur	6	10.0
Housekeeper	4	6.7
Income		
Low (< Rp. 1.500.000)	4	6.7
Severe (Rp. 1.500.000 – Rp. 3.500.000)	40	66.6
High (> Rp. 3.500.000)	16	26.7

The prevalence of stunting in this study was 11.7%, lower than the most recent national estimate for Indonesia, which reported a prevalence of 19.8% in 2024. This suggests that the burden of stunting in the Kampung Baru area may be below the national average, although continued prevention efforts remain necessary. The majority of children (86.7%) were classified as normal, indicating adequate growth in most of the sample. However, the presence of stunted and severely stunted children (11.7%) highlights the persistence of chronic malnutrition in this community. According to UNICEF/WHO/World Bank data (2023), stunting continues to affect more than 148 million children worldwide, with Southeast Asia among the regions with the highest burden [3].

Table 3. Distribution of Stunting Incidence among Children Aged 6–24 Months

Height-for-Age Status	n	%
Very short (< -3 SD)	2	3.3
Short (-3 SD to < -2 SD)	5	8.3
Normal (≥ -2 SD to ≤ +2 SD)	52	86.7
Tall (> +2 SD)	1	1.7
Total	60	100.0

Previous studies in Indonesia have demonstrated that maternal knowledge, feeding practices, and household socioeconomic conditions are critical determinants of stunting [14]. In this study, the stunting prevalence aligns with earlier evidence that although improvements in nutrition

programs have reduced national prevalence, local variations remain [7]. The relatively lower prevalence observed here may be influenced by maternal awareness of stunting, availability of health services, and government-driven nutrition programs such as *Posyandu* and *Program Percepatan Penurunan Stunting*.

The findings indicate that the majority of mothers had either good or moderate knowledge (85%), reflecting a relatively positive awareness of stunting and its prevention. This result is consistent with studies in Indonesia showing that higher maternal knowledge is associated with better child feeding practices and reduced risk of stunting [14]. However, the presence of 15% of mothers with inadequate knowledge highlights the need for continuous nutrition education programs, particularly at the community level through *Posyandu* and health cadres.

Table 4. Distribution of Mothers' Knowledge about Stunting

Knowledge Level	**n**	**%**
Good	26	43.3
Moderate	25	41.7
Inadequate	9	15.0
Total	60	100.0

Adequate maternal knowledge is a crucial determinant in stunting prevention. Mothers who understand the definition, causes, consequences, and preventive measures of stunting are more likely to practice appropriate complementary feeding, maintain balanced nutrition, and utilize health services optimally [15]. Conversely, inadequate knowledge has been linked to poor feeding practices and delayed growth monitoring [16].

4 Conclusion

Although the prevalence of stunting in this area is lower than the national average, there are still children classified as short and very short who require special attention. The fact that most mothers possess good to moderate knowledge is an important asset in stunting prevention; however, continuous efforts to strengthen nutrition education are essential, particularly for mothers with limited knowledge, in order to achieve national stunting reduction targets. Strengthening targeted nutrition education systems, improving community engagement, and addressing local challenges in healthcare access will play a crucial role in creating an environment that supports optimal child growth and development. Additionally, stronger policy support in improving access to education and healthcare facilities, along with enhanced collaboration between local government, healthcare providers, and families, is vital to accelerate the achievement of national stunting prevention targets. Addressing stunting requires a multifaceted approach that integrates health, education, and social support to ensure long-term, sustainable progress.

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