Knowledge, attitudes and practices regarding stunting with the incidence of stunting in Early childhood at Deli Serdang Regency

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Abstract. The stunting indicator is seen using the Z-score of body length according to age. Knowledge, attitudes and practices are factors that can influence stunting prevention. To assess the knowledge, attitudes, and practices regarding stunting prevention with the incidence of stunting in early childhood aged 3-5 years at Cahaya Pengharapan Abadi Education, Deli Serdang Regency. The research design used was a cross-sectional design with a total sampling of 45 children. Knowledge, attitudes, and practices were obtained through questionnaires. Height and weight data were analyzed using WHO Anthro Plus. Data analysis used the Spearman test. The number of stunted children is 26.7%, while the number of non-stunting children is 73.3%. High knowledge in mothers of children, namely 53.3%. Attitudes in the high category were 55.6%, while practices in the high category were only 6.7%. The results of the bivariate test (Spearman Correlation) show that there is a relationship between knowledge and practices ($p<0.05$).

Keywords: knowledge, attitudes, practices, stunting

1 Introduction

Early childhood is a period of rapid growth and development, which requires adequate and balanced nutrition. This period is also vulnerable to environmental exposure, necessitating extra attention, especially regarding nutritional adequacy. Insufficient nutrition can lead to nutritional problems, including both underweight and overweight conditions, as well as stunting [1]. Stunting is a condition where a child's nutritional status, reflected by height or length, is not appropriate for their age. According to the 2023 Indonesian Health Survey (SKI), the national prevalence of stunting in children under five decreased by 2% compared to 2022, with a national stunting prevalence rate of 158% in 2023. In North Sumatra Province, the stunting prevalence decreased from 211% in 2022 to 132% in 2023 [2]. Stunting can be addressed by improving knowledge, which can subsequently improve feeding practices in young children. If mothers have adequate knowledge, they are more likely to choose and provide food that meets the nutritional needs of their children, thereby positively impacting the child's nutritional status [3].

A mother plays a crucial role within the family, particularly in the growth and development of the child. Additionally, the mother is responsible for determining the food intake provided to

ICIESC 2024, September 17, Medan, Indonesia

DOI 10.4108/eai.17-9-2024.2353043

the child. A mother's role in fulfilling the nutritional needs of a young child is vital, as she is the person closest to the child and the first to interact with the child. This is related to how a mother must possess good knowledge, attitudes, and practices regarding the child's nutritional status [4][5].

If someone has a negative attitude, their behavioral actions are also likely to be poor, which can lead to nutritional problems in children. A mother's attitude towards feeding practices includes adjusting feeding methods to the child's psychomotor abilities, providing responsive feeding, including encouragement from the mother or caregiver for the child to eat, attention to the child's appetite, timely feeding, and creating a positive feeding relationship, such as ensuring mealtime is free from distractions and consistent mealtime supervision and protection. Other factors include the child's adaptation to family foods [6].

Research conducted on mothers with young children in Bekasi shows that a lack of knowledge about stunting leads to mothers not fully understanding stunting, thereby not providing appropriate care for their children. Knowledge can change a person's thinking and perspective, ultimately reinforcing their beliefs about something. These beliefs can then influence their behavior. With good knowledge, mothers can improve their child's nutritional status and support optimal growth. Conversely, a lack of knowledge can leave mothers feeling confused about making the right decisions and actions [7]. Research in Padang shows a significant relationship between a mother's attitude and the incidence of stunting in children entering school. A mother's attitude is closely related to the nutritional status of young children [8].

Therefore, this study aims to analyze the knowledge, attitudes, and practices, as well as the incidence of stunting in the Cahaya Pengharapan Abadi Early Childhood Education School in Medan. The research site was selected purposively, considering that the school specifically caters to children from low socioeconomic backgrounds.

2 Method

The research design used was a cross-sectional study conducted from May to June 2024. The research was conducted at the Cahaya Pengharapan Abadi Early Childhood Education School in Medan. The location was selected purposively, considering that the school serves children from low socioeconomic backgrounds. The study population consisted of children attending Cahaya Pengharapan Abadi School. The total number of subjects in the study was 45 children, selected through total sampling.

Primary data collected included the characteristics of knowledge, attitudes, and practices. Knowledge, attitudes, and practices related to stunting were obtained by providing a structured questionnaire filled out directly by the mothers. The questionnaire was validated before the study was conducted. In this questionnaire, knowledge items (10 questions) measured knowledge related to the definition of stunting, causes of stunting, effects of stunting, stunting prevention, and balanced nutrition. The attitude and practice sections were scored on a Likert scale, consisting of 14 questions for attitudes and 10 questions for practices. The attitude items measured attitudes related to child body measurements, mother's attendance at Posyandu, appropriate complementary feeding practices, and clean and healthy living habits. The practice items measured behaviors related to child health control, health checks during pregnancy,

appropriate complementary feeding practices, and healthy living habits.

Nutritional knowledge was assessed by providing correct (score 1) and incorrect (score 0) answers. Attitudes toward balanced nutrition were divided into three categories: agree, uncertain, and disagree. Balanced nutrition behaviors were categorized into never (score 0), sometimes (score 1), and always (score 2). 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 shows the distribution of child characteristics data, with an equal gender proportion. The balanced gender distribution between boys and girls ensures no gender bias in the stunting analysis, while the 3-year age group had a prevalence of 75.6% compared to the 4-year age group, which had 24.4%. This is important because 3 years of age is a critical growth period where growth disturbances, such as stunting, are more evident.

The prevalence of stunting in early childhood (very short and short stature) was 26.6%. This figure is relatively high and indicates a serious nutritional problem in the early childhood. Height-for-age is the primary indicator of stunting. Stunting reflects a chronic condition associated with long-term nutritional deficiencies, and stunted children tend to have impaired growth potential and long-term health risks.

Table 1. Distribution of Subjects Based on Child Characteristics

Category	N	%
Gender		
Boys	26	57.8
Girls	19	42.2
Age		
3 years	34	75.6
4 years	11	24.4
Nutritional status (HAZ)		
Very short	2	4.4
Short	10	22.2
Normal	29	64.4
Tall	4	8.9

Mother's characteristics also play an essential role in tackling stunting. These results show age categories among mothers with a relatively even proportion, 48.9% and 51.1%. The balanced age distribution between younger and older mothers reflects variations in pregnancy experiences and parenting patterns that can influence stunting prevention practices. A mother's age becomes a risk factor when a woman marries at a young age. Early marriage increases the risk of having a stunted child by 4.79 times compared to children born to mothers who married at the ideal age (p=0.001). Research in Polewali Mandar Regency showed similar results, indicating a

significant relationship between early marriage and stunting incidence (p=0,023) [10]. Additionally, mothers who give birth at a young age are also vulnerable to high-risk pregnancies and deliveries [11].

The dominant occupation among mothers was housewife (48.9%), while the remainder worked in other sectors. Most mothers are housewives, who may have more time to care for their children, but this could also mean economic limitations that could affect the child's nutritional intake. Economic limitations can influence access to nutritious food and adequate healthcare services [12].

Table 2 also shows the results, namely maternal income in the high category, namely 13.3%. The low-income level of most mothers indicates economic limitations that can have a negative impact on their access to adequate nutrition and health services, important factors in preventing stunting. Research shows that family income is significantly related to the incidence of stunting, this is related to the purchasing power of nutritious food and food ingredients that can be consumed by the family [13]. Low family incomes are at greater risk of experiencing food insecurity and limited health services [14]As a result, children are at risk of not having their nutritional needs met both in quantity and quality. Conversely, high family income can help children grow and develop optimally because they are able to provide children's needs in terms of quantity and quality [15]

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

Category	N	%
Age		
26-35 years	22	48.9
36-45 years	23	51.1
Occupation		
Housewife	22	48.9
Private employee	6	13.3
Entrepreneur	20	22.2
Farmer	4	8.9
Laborer/Driver/Motorcycle taxi	3	6.7
Income		
No income yet	22	48.9
Rp < 500,000	4	8.9
Rp 500,000 to Rp 1,000,000	3	6.7
>Rp 1,000,000 to Rp 2,000,000	10	22.2
>Rp 2,000,000 to Rp 4,000,000	6	13.3

Table 3 shows that high knowledge among mothers is 53.3%, high attitude is 55.6%, and high practice is only 6.7%. This indicates that high knowledge and attitude do not necessarily result in good practices. The high level of knowledge among mothers (53.3%) regarding stunting prevention shows that information about stunting has reached many mothers. Good knowledge is an important first step in stunting prevention. The high level of positive attitudes (55.6%) indicates that mothers generally understand the importance of stunting prevention and are motivated to implement it. Although mothers' knowledge and attitudes about stunting prevention are relatively high, only 6.7% of mothers apply stunting prevention practices well. This shows a gap between knowledge and attitudes and the actual implementation of practices in the field.

Table 3. Categories of Knowledge, Attitudes, and Practices Related to Stunting

Category	N	%
Knowledge		
Low	5	11.1
Moderate	16	35.6
High	24	53.3
Minimum ± Maximum Score	30 ± 100	
Average ± SD	82.66 ± 15.72	
Attitude		
Low	2	4.4
Moderate	18	40.0
High	25	55.6
Minimum ± Maximum Score	35.71 ± 100	
Average ± SD	79.44 ± 11.57	
Practice		
Low	22	48.9
Moderate	20	44.4
High	3	6.7
Minimum ± Maximum Score	30 ± 93.33	
Average ± SD	62.66 ± 13.32	

Table 4 shows that there is a relationship between knowledge and attitudes related to stunting (r=0.321, p=0.032) among mothers of early childhood at Cahaya Pengharapan School. However, there is no relationship between knowledge and practice, or between attitudes and practice.

Table 4. Relationship between Knowledge, Attitudes, and Practices (KAP) Related to Stunting.

KAP	r	p
Knowledge-Attitude	0.321	0.032*
Knowledge-Practice	-0.101	0.508
Attitude-Practice	0.179	0.239

Good knowledge about stunting tends to be followed by a positive attitude. This is consistent with the theory that in-depth knowledge about health and nutrition can improve attitudes towards preventive practices. The absence of a significant relationship between knowledge and practice suggests that knowledge does not always translate into real action. This could be due to various factors such as resource limitations, access issues, or practical barriers that prevent mothers from applying the knowledge they have. This may indicate that other factors influence the implementation of practices [16].

A literature study suggests that several factors beyond knowledge and attitudes can contribute to stunting, including parenting patterns, basic immunizations, family sanitation conditions, child infection history, and family smoking habits [17]. Other studies also states that knowledge alone may not be sufficient if not supported by other factors such as socioeconomic status and access to healthcare services [18].

A combination of knowledge, positive attitudes, and appropriate practices is crucial. Even when mothers have good knowledge, if their practices are not aligned with this knowledge due to external factors like poverty or lack of resources, the benefits may not be fully realized. Therefore, interventions aimed at improving child nutrition should not only focus on educating mothers but also on creating an environment that allows them to effectively apply this knowledge.

4 Conclusion

Improving mothers' knowledge, attitudes, and practices through targeted interventions can significantly enhance children's nutritional status. However, these efforts need to be supported by broader socioeconomic improvements and access to healthcare services to be truly effective. The studies cited emphasize the importance of a holistic approach to addressing child malnutrition, considering both individual and contextual factors that influence maternal behavior.

Acknowledgments to all parties involved in this research, namely the Research Team, Enumerators and Pengharapan Abadi Kindergarten in Deli Serdang. We also thank the Institute for Research and Community Service (LPPM) of Medan State University for funding support through BOPTN in 2024.

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