



The Relationship of Mother's Knowledge with Stunting Incidents in Children Aged 0 - 59 Months

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ABSTRACT

Stunting is a growth and development disorder due to lack of nutritional intake, recurrent infections characterized by body length or height below standard. Toddlers with stunting will have a lower level of intelligence, be susceptible to disease and delayed mental development. The aim of this research is to determine the relationship between maternal knowledge and the incidence of stunting in children aged 0-59 months in the Meureubo Health Center Working Area, West Aceh Regency. The method used is observational with a cross sectional research design. The population in this study were mothers who had toddlers aged 0-59 months in the Meureubo Health Center Working Area, West Aceh district, totaling 2296 people. Determining the number of samples used the Slovin formula with the Stratified Random Sampling technique, totaling 95 people. Data was collected using a questionnaire to measure maternal knowledge and anthropometry to measure body height. Determining whether or not there is stunting is assessed using the child's Z-Score standard. In this study, univariate analysis was carried out which was presented in the form of a frequency distribution table. Next, bivariate analysis was carried out between the two variables using the Chi Square statistical test. Results The chi square test shows that maternal knowledge (0.000) is related to stunting in toddlers. It is hoped that the Meureubo Community Health Center will further improve health promotion in the form of education regarding the causes and prevention of stunting.

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1. Introduction

Stunting is a disruption in the growth and development of children due to lack of nutritional intake, recurrent infections in the first 1000 days of life (World Health Organization, 2018). Stunting is characterized by the length or height of the baby/child being below standard (Kemenkes RI, 2024). According to the Ministry of Health (Kemenkes), stunting is a child under five with a z-score value of less than -2SD/standard deviation (stunted) and less than -3SD (severely stunted). Malnutrition occurs when the baby is in the womb and in the early days after the baby is born, but stunting only appears after the baby is 2 years old (Indonesia, 2017).

Globally in 2022, 148.1 million or 22.3% under the age of 5 will experience stunting. Almost all affected children live in Asia (52% of the global share) and Africa (43% of the global share) (UNICEF et al.,

2023). Based on UNICEF and WHO data, Indonesia's stunting prevalence rate ranks 27th highest out of 154 countries that have stunting data, making Indonesia ranked 5th among countries in Asia (Prasetyo et al., 2024).

The Ministry of Health announced that the prevalence of stunting in 2022 will be 21.6 percent. This figure is lower than in 2021, namely 24.4 percent (Badan Pusat Statistik, 2023). This value is still quite high and exceeds the threshold set by WHO, namely 20%. This indicates that stunting in Indonesia is still considered chronic. So, Indonesia in Presidential Regulation Number 72 of 2021 is committed to accelerating the reduction of stunting in order to achieve the target of sustainable development goals by 2030. In this Presidential Decree, the reduction in stunting prevalence that must be achieved by 2024 is 14%. However, since the issuance of the Presidential Decree in 2021, the stunting rate in Indonesia has only decreased by an average of 1.45% each year, which is certainly very far from the expected target (Prasetyo et al., 2024).

Stunting cases in toddlers aged 0-59 months in Aceh are ranked 8th out of 38 provinces in Indonesia with a prevalence of 29.3%. The prevalence of stunting in Aceh is higher than in the provinces of Papua, Maluku and other eastern provinces (Kemenkes RI, 2023). The results of the 2022 Indonesian Nutrition Status Survey (SSGI), the prevalence of stunting in West Aceh Regency was 27.4% (Berita et al., 2023).

Toddlers with stunting will have a lower level of intelligence, be susceptible to disease (Ramayuli, 2018), and have delayed mental development. In the future, this could result in decreased productivity compared to normal toddlers (World Health Organization, 2019). Apart from that, stunting has an impact on toddlers in the short and long term. The short-term impact is that toddlers are at risk of contracting deadly infectious diseases and the long-term impact is that they increase the risk of chronic diseases such as cardiovascular (Oot et al., 2016).

Chronic malnutrition prevention programs have been in place for several years, but do not seem to specifically address chronic malnutrition which causes stunting. Realizing the impact of stunting on a child's future, it is necessary to look for causes and ways to overcome stunting (Candra MKes(Epid), 2020). Stunting is caused by several factors, one of which is maternal factors (mother's knowledge regarding nutritional status, exclusive breastfeeding and complementary foods). The mother's lack of understanding regarding nutrition, exclusive breastfeeding and MP-ASI greatly affects the nutritional status of children. Nutrient intake before, during pregnancy and after giving birth (Indonesia, 2017).

The Aceh government itself has established a series of regulations on integrated prevention and handling of stunting in the Aceh Governor's Regulation Number 14 of 2019. Efforts to prevent stunting are carried out with a comprehensive First Thousand Days of Life (1000 HPK) approach, both specific interventions and sensitive interventions according to the characteristics and local wisdom of the local community and do not conflict with Islamic law (Aceh, 2019).

The first 1000 days of life (HPK) period starts from the beginning of pregnancy until the child is 2 years old, is the most critical period that determines the health, success and well-being of the child in the future. Malnutrition during this period can cause irreversible damage (irreplaceable) (Berawi, 2021).

Based on the results of an initial survey conducted by researchers at the Meureubo Community Health Center, there were 2296 children under five. There are 44 children with stunting in the Meureubo Community Health Center working area. Results of interviews with 10 mothers who have toddlers, 7 mothers have low knowledge about stunting, balanced nutrition both during postpartum pregnancy and for toddlers 0-59 months without paying attention to the food they consume. In fact, in the first 1000 days of life, it is very important to pay attention to the nutrition consumed to prevent stunting.

2. Methods

The method used in this research is observational with a cross sectional research design. The population in this study were mothers who had toddlers aged 0-59 months in the Meurebo Health Center Working Area, West Aceh district, totaling 2296 people. Determining the number of samples used the Slovin formula with the Stratified Random Sampling technique, totaling 95 people. The research was conducted in 2023 in the Meurebo Community Health Center Working Area, West Aceh district with a

working area of 33 villages. Data were collected using a closed questionnaire that had been tested for validity and reliability to measure maternal knowledge and anthropometry to measure height and weight. Determining whether or not stunting is assessed by the Z-Score standard. Toddlers are said to be stunted if the z-score value is less than from $-2SD$ /standard deviation (stunted) and less than $-3SD$ (severely stunted)

Data was collected using a questionnaire to measure maternal knowledge and anthropometry for measure height. Determining whether or not there is stunting is assessed using the child's Z-Score standard. In this study, univariate analysis was carried out which was presented in the form of a frequency distribution table. Next, bivariate analysis was carried out between the two variables using the Chi Square statistical test.

3. Results and Discussion

Results

This section must contain: The research results are written in a logical sequence, according to the research flow in the research methods section. Research results are presented in narrative / textual form, tables, or images in the form of graphs or diagrams. Avoid displaying raw data. all tables, figures, graphs, are described and explained. Discussion An explanation of the results and in-depth analysis has been written. Comparison of results with other studies has been written. Limitations of the study or threats to validity have been written.

Table 1.
Frequency Distribution of Mother's Age, Mother's Education Level, Toddler's Gender , Mother's Knowledge and Stunting in Toddlers

Variable	n	Percentage
Mother's Age		
Late Teenagers (17-25 Years)	17	17.9
Early Adulthood (26-35 Years)	42	44.2
Late Adulthood (36-45 Years)	36	37.9
Mother's Education Level		
basic education	31	32.6
Secondary Education	47	49.5
higher education	17	17.9
Toddler Gender		
Man	44	46.3
Woman	51	53.7
Mother's knowledge		
Good	29	30.5
Enough	41	43.2
Not enough	25	26.3
Stunting		
Normal	58	61.1
Stunting	37	38.9

The results of the univariate test in table 1 show that of the 95 respondents, the majority were early adults (44.2 %), most of the education level was secondary education (49.5%), the gender of the toddlers was mostly female (53.7%), mothers fairly knowledgeable (43.2%) and more toddlers are normal (61.1%).

Table 2.
Relationship between Mother's Knowledge and the Incident of Stunting in Toddlers

Variable	Stunting events				Total		P
	Normal		Stunting		n	%	
	n	%	n	%			
Mother's Knowledge							0.000

Good	29	30.5	0	0	29	30.5
Enough	28	29.5	13	13.7	41	43.2
Not enough	1	1	24	25.3	25	26.3
Total	58	61,1	37	39	95	100

Based on the bivariate test, it shows that of the 29 respondents who had good knowledge, none had stunting toddlers, meaning that there were 29 respondents (100%) who had normal status. Of the 41 respondents who had sufficient knowledge, there were 13 respondents (31.7%) who had stunted toddlers and 28 respondents (68.3%) were in the normal category. Of the 25 respondents who had insufficient knowledge, there were 24 respondents (96%) who had stunted toddlers and 1 respondent (4%) who had normal status. The results of the Chi-square test show that the p value is <0.000 , this means that there is a significant relationship between maternal knowledge and the incidence of stunting in children aged 0 - 59 months in the working area of the Meureubo Community Health Center, West Aceh Regency.

Analysis

Based on bivariate tests, it shows that the majority of respondents have sufficient knowledge (43.2%), there are 13 respondents (31.7%) who have stunted toddlers and 28 respondents (68.3%) are in the normal category. The results of the Chi-square test show that the p value is <0.000 , this means that there is a significant relationship between maternal knowledge and the incidence of stunting in children aged 0 - 59 months in the working area of the Meureubo Community Health Center, West Aceh Regency.

The results of this research are in line with research conducted by Kurniati (2022), which said that there was a relationship between maternal knowledge and the incidence of stunting in toddlers at the Sungan Durian Community Health Center, Sintang Regency with a significance value of $p=0.000$ (Kurniati, 2022). Research conducted by Murti, Budiani and Darmapatni (2020), also said that there was this. This shows that there is a significant relationship between mothers' knowledge about toddler nutrition and the incidence of child stunting. The results of the analysis also show that the Odds Ratio (OR) value is 4.846 and 95% CI (1.882-12.482), meaning that mothers of toddlers who have less knowledge about toddler nutrition have a 4.8 times greater chance of their children experiencing stunting than mothers of toddlers who have less knowledge. good about toddler nutrition (Murti et al., 2020).

This research is also supported by research by Dewi and Ariani (2021) which states that there is a significant relationship between maternal knowledge and the incidence of stunting in toddlers with a p value of $0.007 < 0.05$ (Dewi & Ariani, 2021). Woodruff Bradley A, et al (2017) in his research on the maternal knowledge factor regarding nutritional status, it was stated that the p value was $0.001 < 0.005$, so there was an influence between maternal nutritional knowledge on child growth (Woodruff et al., 2017).

Nutritional problems in children are caused by various factors, one of which is consumption of food that is not appropriate to the child's needs. Nutritional knowledge is a mother's knowledge about nutrition which greatly influences a child's growth. Mother's knowledge about toddler nutrition is very important for the process of growth and development of her child. Mothers have a big role in the progress of their toddlers' growth and development through proper stimulation and care for their children, and arranging a balanced nutritional intake pattern for their toddlers. Parents' knowledge about nutrition helps improve the nutritional status of children to achieve growth maturity (Murti et al., 2020).

Knowledge will influence the information that mothers get so that mothers can change attitudes in preventing stunting. The better the mother's knowledge, the better the mother is at preventing stunting in children. Efforts to prevent stunting start from pregnancy, especially in the first 1000 days of life (Amri et al., 2022)

According to Hasnawati, Latief and AL (2021) Mother's knowledge can help improve the nutritional status of children to achieve growth maturity. Insufficient knowledge, lack of understanding

about good eating habits, and understanding that less about stunting determines the mother's attitude and behavior in providing food for her child, including the right type and amount (Hasnawati et al., 2021) so that children can grow and develop optimally, they need to get more nutrition than just calories (Global Health Council, 2023)

According to researchers, mothers' knowledge about nutrition during pregnancy and toddlers contributes to stunting in toddlers. The higher a mother's knowledge about stunting, the better her food choices, whereas mothers with low knowledge often eat without meeting their nutritional needs. Food refusal problems can also occur in toddlers, and factors such as food variety and food appearance can influence this behavior.

4. Conclusion

Mother's knowledge is related to the incidence of stunting in toddlers because mothers play a very important role in determining the nutritional quality of food for the family, especially food for toddlers. This will of course influence the lack of intake of toddlers which can hinder their growth and development during the golden age so it is hoped that health workers can increase nutritional knowledge. mothers through counseling in an effort to reduce the incidence of child stunting.

Acknowledgements

The results of the chi square test showed that maternal knowledge (0.000) was related to stunting in toddlers because mothers play a very important role in determining the nutritional quality of food for the family, especially toddler food . This will certainly affect the lack of nutritional intake in toddlers which can inhibit their growth and development during the golden age so that mothers are expected to monitor toddler growth routinely at the integrated health post and health workers can provide counseling and nutrition counseling during pregnancy, breastfeeding and Complementary Foods (MP ASI) and Provision of Additional Foods (PMT) for safe, quality recovery based on local food ingredients for toddlers who experience nutritional problems to meet the nutritional needs of toddlers. Cooperation and support from stakeholders (cross-sector) are needed in empowering the community to improve parenting patterns and efforts to increase maternal knowledge about balanced nutritional patterns in an effort to reduce the incidence of stunting.

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