

Analysis Of Determinant Factors In Stunting Incidence In Toddlers

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Abstract

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Stunting is a chronic condition that describes stunted growth due to long-term malnutrition. The prevalence of stunting under five in Indonesia is the second largest in the Southeast Asia region after Laos, reaching 43.8%. This study aimed to determine the determinant factors causing the increase in the incidence of stunting. This type of research is analytic with a cross-sectional research design. This research was conducted from April to June 2022 with a total sample of 49 people. Data analysis in this study used the Gamma Correlation statistical test. The study results concluded that there is a relationship between the pattern of breastfeeding, feeding pattern, and primary immunization with the incidence of stunting in children. Advice to health workers to provide more information and motivate parents to provide complete primary immunization, exclusive breastfeeding, and giving food patterns.

1. INTRODUCTION

Stunting is a chronic condition that describes stunted growth due to long-term malnutrition. According to the WHO Child Growth Standard, Stunting is based on an index of body length for age or height for age with a z-score of less than -2 SD.

Based on data on the prevalence of stunting under five collected by WHO, in 2020, as many as 22% or around 149.2 million children under five will experience stunting (World Health Organization, 2021). The prevalence of stunting under five in Indonesia is the second largest in the Southeast Asia region after Laos, reaching 43.8%. The 2018 Riskesdas data shows that the prevalence of stunting under five in Indonesia is 30.8%. Based on WHO limits, Indonesia is in the category of severe stunting problems. Based on the 2019 Toddler Nutrition Status Study in Indonesia (SSGBI), conditions in Indonesia are still relatively high, where the prevalence of stunting is 27.67%. The prevalence of stunting in Indonesia is still higher than in Southeast Asia at 24.7% (Ministry of Health RI, 2020).

The value incidence of stunting shows a decrease but is still above 20%, and stunted children are still a national problem. This is because stunting hurts human resources in the future. Stunting can occur when the fetus is still in the womb, and only appears when the child is two years old (Ministry of Health of the Republic of Indonesia, 2016).

Stunting is influenced by several factors, including prenatal factors such as maternal nutrition during pregnancy and postnatal factors such as exclusive breastfeeding, child nutrition during the growth period, infectious diseases, social economy, health services and mother's knowledge, environmental sanitation, and various other factors. Collaborate at a certain level and level so that in the end, it causes linear growth failure, one of the causes

of stunting problems is also caused by delays in Early Breastfeeding Initiation (IMD) and non-exclusive breastfeeding (Nuzulul et al., 2022).

The most frequent assessment of toddlers' nutritional status is the anthropometric assessment. In general, anthropometry deals with measuring body dimensions and body composition at various ages and levels of nutrition. Stunting toddlers are found where the height is shorter than the age.

Stunting hurts children and can occur in the short or long term. The short-term effects of stunting are retarded brain development, retarded physical development of children, metabolic disorders in the body, the child becoming susceptible to disease, and increased health costs. Meanwhile, the long-term impact of stunting is that children who are stunted are more likely to grow into unhealthy adults.

Southeast Sulawesi has been recorded from 2013 to 2021, the highest prevalence occurred in 2017, namely 36.4%, and the lowest prevalence in 2021, namely 16.4%, and the stunting rate in South Konawe Regency was 21.6%. South Konawe Regency suffered stunting in children under five years old in 2019. It was recorded that 5.15% of toddlers were concise, and 10.30% were short. Then in 2020, it was recorded that sufferers of stunting, or what is commonly called chronic nutrition, experienced an increase of 17.5%. Whereas in 2021, it was recorded that toddlers suffering from stunting experienced a further increase of 21.6% with nutritional problems, the Ranomeeto Health Center in Konawe Selatan Regency is one of the Health center that has a lot of stunted children (Dinkes Kab. Konse, 2021).

The initial assessment was carried out at the Ranomeeto Health Centre in South Konawe Regency in 2020. The incidence of stunting was 43 (1.8%) very short toddlers and 112 short toddlers (4.8%) of the total target in 2020 of 2,293 toddlers, while in 2021, the incidence of stunting increased, there are 54 (2.2%) very short toddlers and 168 (7.0%), short toddlers, out of a total target of 2,395. In 2022 there will be 49 toddlers aged 2-5 years with stunting events (Ranomeeto Health Center, 2022).

The data above shows that there are problems behind the increase in stunting. Therefore, the researchers were interested in analyzing the determinant factors causing the increase in the incidence of stunting in the working area of the Ranoameeto Health Center.

2. METHODS

This type of research is analytic with a cross-sectional research design, namely data taken simultaneously to describe the relationship between exclusive breastfeeding, feeding, and immunization status with the incidence of stunting in children aged 2-5 years at the Ranameto Health Center.

This research was conducted from April to June 2022. The population totaled 49 people with the sampling technique using Total Sampling so that the sample became 49 people. Data analysis used the Gamma Correlation statistical test.

3. RESULT AND DISCUSSION

Results

Table 1
Stunting Incidence Frequency Distribution, Exclusive breastfeeding, feeding, and immunization status at the Ranameto Health Center in 2022

No	Variable	Frequency (f)	Percentage (%)
1	Stunting events		
	a. Very short	23	46,9
	b. Short	26	53,1
2	Exclusive Breastfeeding		
	a. Not	18	36,7
	b. Yes	31	63,3
3	Immunization Status		
	a. Incomplete	17	34,7
	b. Complete	32	65,3
4	Feeding		
	a. Not exactly	22	44,9
	b. Appropriate	27	55,1

Based on table 1, it can be seen that stunted children are more significant in the very short category; namely, 26 people (53.1%), the majority of children are exclusively breastfed as many as 31 people (63.3%), the majority of toddlers with incomplete immunization status are 17 people (34.7%), and most of the feeding patterns were correct as many as 27 people (55.1%).

Table 2
The Relationship between Breastfeeding Patterns and Stunting Incidence.

Pattern of Breastfeeding	Stunting events				Y
	Short		Very short		
	n	%	n	%	
Exclusive	14	28,6	4	8,2	0.000
Not Exclusive	9	18,4	22	44.9	
Total	23	46.9	26	53.1	

Based on the table, it is known that the pattern of exclusive breastfeeding is that there are 14 respondents (28.6%) with short stature and four respondents (8.2%) with very short stature. There were nine respondents (18.4%) with short stature and 22 respondents (44.9%) with very short stature.

The statistical test results using Gamma Correlation obtained a significance value of $0.000 < 0.05$, so it was concluded that there was a relationship between the pattern of breastfeeding and the incidence of stunting. The correlation coefficient between the pattern of breastfeeding and the incidence of stunting is 0.79, which means there is a strong relationship between the pattern of breastfeeding and the incidence of stunting.

Table 3
The Relationship between Feeding Patterns and Stunting Incidence.

Feeding Patterns	Stunting events				Y
	Short		Very short		
	n	%	n	%	
Appropriate	18	36,7	9	18,4	0.001
Not exactly	5	10,2	17	34,7	
Total	23	46,9	26	53,1	

Based on the table, it was known that there were 18 respondents (36.7%) who were short in stature and nine respondents (18.4) who were very short in stature. While the feeding pattern was inappropriate, five respondents (10.2%) were short,

and 17 (34.7%) were concise.

The statistical test results using Gamma Correlation obtained a significance value of $0.001 < 0.05$, concluding that there was a relationship between feeding patterns and the incidence of stunting. The correlation coefficient between the pattern of feeding and the incidence of stunting is 0.74, which means there is a strong relationship between the pattern of feeding and the incidence of stunting.

Table 4
The Relationship between Basic Immunization Patterns and Stunting Incidents.

Provision of Basic Immunization n	Stunting events				Y
	Short		Very short		
	n	%	n	%	
Complete	17	34,7	0	0	0.000
Incomplete	6	12,3	26	53,1	
Total	23	46,9	26	53,1	

Based on the table, it is known that 17 respondents (34.7%) who gave complete primary immunization had short stature. In contrast, incomplete immunization provided six (12.3%) who were short and 26 respondents (53.1%) very short.

The statistical test results using Gamma Correlation obtained a significance value of $0.000 < 0.05$, concluding that there was a relationship between immunization and stunting. The correlation coefficient between the breastfeeding pattern and the incidence of stunting is 1, which means there is a strong relationship between primary immunization and stunting.

Discussion

The Relationship between Breastfeeding Patterns and Stunting Incidence.

Based on the study's results, it was known that the pattern of exclusive breastfeeding was that there were 14 respondents (28.6%) with short stature and four respondents (8.2%) with very short stature. There were nine respondents (18.4%) with short stature and 22 respondents (44.9%) with very short stature. The results of this study indicate the importance of exclusive breastfeeding for children. According to the results of this study, it is known that exclusive breastfeeding has an impact on children's height. The results of this study indicate that children with non-exclusive breastfeeding patterns have a very short height.

Breast milk is a nutritional intake following the needs that will help the growth and development of children. Babies who do not get enough breast milk mean they have poor nutritional intake and can cause malnutrition, one of which can cause stunting. According to Prasetyono (2009), one of the benefits of exclusive breastfeeding is to support baby growth, especially height, because breast milk calcium is more efficiently absorbed than breast milk substitutes or formula milk. So babies who are given exclusive breastfeeding tend to have a higher height and follow the growth curve than babies who are given formula milk.

Breast milk contains more calcium and can be absorbed by the body properly to maximize growth, especially height, and avoid the risk of stunting. Breast milk also has lower calcium, phosphorus, sodium, and potassium levels than formula milk, while copper, cobalt, and selenium are present in higher levels. The content of breast milk follows the needs of the child so that it can maximize the child's growth, including height.

The Relationship between Feeding Patterns and Stunting Incidence

Diet in children plays an essential role in the process of growth in children because food contains lots of nutrients. Nutrition is a very important part of growth. Nutrition in it has a very close relationship with health and intelligence. If the diet is appropriately achieved in toddlers, the toddler's growth will be smooth, and thin body, short and even malnutrition can occur in toddlers. According to Cintya 2015, stunting is closely related to feeding patterns, especially in the first two years of life. Feeding patterns can affect the quality of children's food consumption so they can affect the nutritional status of toddlers.

The results of this study indicate the importance of proper food intake for children's growth. Research shows that children with improper eating patterns have very short bodies. This result is in line with the theory, which states that factors. However, the cause of stunting is not only seen in food intake, but children are generally prone to recurrent infectious diseases, which cause the body to need more energy to fight disease. If this need is not met with adequate intake, the child will experience malnutrition, eventually leading to stunting.

The Relationship between Basic Immunization and Stunting Incidents

Immunization gives the body active immunity against an antigen so that if in the future it is exposed to the same antigen, the body has recognized that antigen and reduced the risk of disease occurring. Immunization is a reaction process between antibodies and antigens that aims to reduce morbidity, disability, and even death from diseases that can be prevented by immunization (Sukma et al., 2019).

Immunization will have an immune effect on the human body, especially in early childhood, an age vulnerable to disease. Therefore immunization is essential for children's immunity (Swathma et al., 2017).

The results of this study indicate the importance of immunization for children. Because incomplete immunization has the potential for stunting. The results of the research align with research conducted by Aridiyah et al. (2017), which said that complete immunization does not guarantee that the child will avoid disease but immunizing is hoped that it will reduce the risk of these toddlers getting a disease. Several things can affect the benefits and effectiveness of immunization, such as the quality of the vaccine that is given does not meet standards or is not good enough so that children with complete or incomplete immunizations have the same opportunity to experience stunting (Aridiyah et al., 2017).

4. CONCLUSION

Based on the aims and results of the study, it was concluded that there was a relationship between patterns of breastfeeding, patterns of feeding, and primary immunization with the incidence of stunting in children.

Health workers should provide more information and motivation for parents to provide complete primary immunization, exclusive breastfeeding, and a balanced diet.

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