



RELATIONSHIP BETWEEN ECONOMIC STATUS AND STUNTING INCIDENTS IN TODDLERS AGED 12 - 59 MONTHS IN EAST NUSA TENGGARA, INDONESIA

Maria R.K. Langotukan¹ , Budi Prasetyo² , Irwanto² 

¹ Midwifery Study Programme, Faculty of Medicine, Airlangga University, Surabaya

² Midwifery Study Programme, Faculty of Medicine, Airlangga University, Surabaya

³ Rumah Sakit, Airlangga University, Surabaya

Correspondence address:

City and country

Email : marnilangotukan20@gmail.com

Abstract

Background: Toddlers who experience stunting generally experience cognitive and motor developmental delays. The incidence of stunting in Balauring village in February 2021 was 39.1%, in August it was 25%. This study aims to determine the stunting rate, analyze the relationship between economic status and parenting patterns on the incidence of stunting in toddlers aged 12-59 months. **Method:** This type of research is observational analytic using cross-sectional. The sample in this study were parents who had toddlers aged 12 – 59 months who were registered on the register at the Balauring village posyandu, biological parents who cared for the toddlers, lived at home with the toddlers, and were willing to be respondents. The sample size was 60 respondents. Sampling technique. Non Random Sampling atau tidak acak dengan *consecutive sampling*. The related variable is stunting, while the independent variables are economic status and parenting patterns. Bivariate data analysis used the chi square test.

Results: This research showed that there were 18 stunted toddlers with a low economy (54.5%) and 15 stunted toddlers with a low economy (45.5%) in Balauring village. A total of 26 toddlers were stunted (56.5%) toddlers were not stunted with inappropriate parenting patterns in providing food in Balauring village. There was no relationship between economic status and the incidence of stunting in toddlers aged 12 – 59 months in Balauring village with a value of $p < 0.511$ ($p < 0.05$). There is no relationship between the parenting style of giving food and the incidence of stunting in toddlers aged 12 – 59 months in Balauring village with $p = 0.606$ ($p < 0.05$). **Conclusion:** This research shows that there is no relationship between economic status, parenting patterns and the incidence of stunting in toddlers aged 12 - 59 months in Balauring village.



Keywords: Toddlers, Economic Status, Parenting Patterns of Feeding, Stunting

INTRODUCTION

Toddlers who experience stunting will generally experience obstacles in their cognitive and motor development which will affect their productivity as adults because an important period in the process of human growth and development is in infancy. Where for toddler growth, nutritional intake is very much needed. Stunting in toddlers is the result of many factors related to poverty and lack of attention to the quality, quantity and practice of providing food that is adjusted to the age of the toddler. Children with Stunting Indonesia according to the Joint Child Nutrition Elites in 2018 is the highest in Asia (55%). For Indonesia, the stunting rate in 2018 was 30.8% and stunting data for NTT Province according to SSGI in 2021 was 37.8%. The number of stunting for Lembata Regency according to Health Office data in 2021 for the August period was 25.0% and the incidence of stunting at the Balauring Health Center for the February 2021 period was 37.4%, the August 2021 period was 28% and in Balauring village the incidence of stunting for the February period was 39.1%, the August period was 25%. This study aims to determine the relationship between economic status and the incidence of stunting in toddlers aged 12-59 months in Balauring village.

Indirectly, stunting is influenced by economic factors, such as family income and food availability. Food availability is a family's ability to meet adequate food needs in terms of quantity, quality, and safety (Doriza, 2015). A family's economic status will affect the family's ability to fulfill nutritional needs and the ability to access health services (Aziz, 2013). Children in families with low economic levels are at greater risk of stunting because their low ability to fulfill nutritional needs increases the risk of malnutrition (Aziz, 2013). This is evidenced by data from the 2018 Joint Child Malnutrition Estimates, which shows that upper-middle-income countries were able to reduce stunting rates by up to 64%, while lower-middle-income countries only reduced stunting rates by around 24% (Ministry of Health of the Republic of Indonesia, 2018). Family income and economic crises are among the main causes that influence delayed child growth and development and various nutritional problems. Such economic conditions make it difficult for stunted children to obtain sufficient nutritional

intake, so they cannot catch up properly (Mary, 2018). The aim of this study is to analyze Relationship between Economic Status and Stunting Incidents in Toddlers Aged 12 - 59 Months in Balauring Village, Lembata Regency, NTT.

METHOD

This type of research is observational analytic using cross-sectional design. The sample in this study were parents who had children age 12 – 59 months. Inclusion criteria are Children who were registered at the Posyandu in Balauring village, biological parents who cared for the toddlers, lived at home with the toddlers, and were willing to be respondents. The sample size was 60 respondents. Sampling technique is consecutive sampling. Instrument of this study is questioner to measure Economic status and for height of the children use Infantometer and Mikrotis. Data analyze used Chi-Square.

RESULT AND DISCUSSION

A. Mother 's Characteristics of the sample

Table 1 Characteristics of mothers based on age, education, occupation, height and weight during third trimester of pregnancy.

Characteristics	n	%
Age		
< 20 years	2	3,3
20 – 35 years	46	70,0
>35 years	12	26,7
Education		
SD	16	26,7
SMP	13	21,7
SMA	17	28,3
Universities	14	23,3
Work		
Housewife	41	68,3
Self-employed	3	5,0
Honorary staff	7	11,7
Civil servant	9	15,0
Height		
≤ 145 cm	43	71,1
>145 cm	17	28,3
body weight in 3rd Trimester		
Normal	58	96,7
Abnormal	2	3,3
Income of the family		

Low	33	55
High	27	45
Total	60	100

From table 1, The majority of mothers aged 20-35 years have toddlers aged 12-59 months and almost all mothers' height is considered abnormal. The last education of the mothers is mostly high school and almost all mothers work as housewives.

B. Toddlers Characteristic

Characteristics	n	%
Gender		
Male	30	50
Famale	30	50
Age		
12 – 24 months	20	33,3
25 – 36 months	15	25,0
37 – 48 months	11	18,3
49 – 59 months	14	23,3
Height per Age		
Very Short	10	16,7
Short	28	46,7
Normal Total	22	36,7
History of Malnutrition		
Yes	27	45,0
No	33	55,0
Stunting incidence		
Stunting	25	41,7
Not stunting	35	58,3
Total	60	100%

C. Analyze between economic status and the incidence of stunting in toddlers aged 12-59 months

Economic Status	Stunting incidence in toddlers						<i>p value</i>
	<i>Stunting</i>		Not <i>stunting</i>		Total		
	n	%	n	%	n	%	
Low	15	45,5	18	54,5	33	100	0,511
Tall	10	7,0	17	63,0	27	100	
Total	25	41,7	35	58,3	60	100	

A large percentage of respondents with low economic status did not have stunted toddlers (54.5%). The results of statistical tests using the Chi-square test obtained a p-value of 0.511. When compared with the α value of 0.005, the p-value

is > 0.05 , indicating there is no relationship between economic status and the incidence of stunting in toddlers aged 12–59 months in Balauring village. This study aligns with research conducted by Ulva Noviana and Heni Ekawati (2018), which found no correlation between economic status and stunting.

Respondents with inappropriate parenting patterns, as many as 56.5%, had toddlers who did not experience stunting. The results of statistical tests using the chi-square test obtained a p-value of 0.606. When compared with the α value of 0.005, the p-value > 0.05 indicates there is no relationship between parenting patterns and stunting. Despite low economic status and incorrect parenting patterns in feeding, with a high level of maternal education, mothers are able to manage food well and consider nutritional value so that stunting does not occur in children.

Despite low economic in providing food, with a high level of maternal education, mothers are able to manage food well and consider nutritional value so that stunting does not occur in children. The low economic status in Balauring village is due to the family's lack of additional income. Although the family's economic status is low, the number of children in the family is small. Therefore, even though the economic status is nominally low, they are able to meet the nutritional needs of children. Several studies contradict the results of the study conducted in Balauring village. Research conducted by (Dina and Rinda, 2020) stated that increasing income will increase the opportunity to purchase food with better quality and quantity, conversely, a decrease in income will lead to a decrease in purchasing power for food, both in quality and quantity. Another contradictory study is research conducted by (Akbar and Ramli, 2022), which states that family income factors influence the incidence of stunting in children aged 6-59 months.

There is no relationship between economic status and stunting in Balauring village, as low-income families are able to prepare nutritious food with simple, inexpensive ingredients to meet their children's nutritional needs. There are still respondents with high economic status in Balauring village whose toddlers experience stunting. This is because high incomes generally consume higher-priced foods, but this does not guarantee good nutrition. High incomes do not always increase the consumption of nutrients needed by the body, but they will increase the opportunity to choose food ingredients and increase the consumption of

preferred foods even though these foods do not contain nutrients. One indirect cause of stunting is the family's socioeconomic status, which is influenced by the level of parental education. Higher education increases the opportunity to earn sufficient income to live in a good and healthy environment. While better jobs mean parents are always busy working so they are not interested in paying attention to the problems faced by their children, even though these children really need parental love (Adriani, 2012).

Income level was not associated with stunting in Balauring village, as most of the respondents' fathers worked as fishermen. Therefore, protein foods are relatively inexpensive in this area. This is because even in low-income families, animal-based foods can still be purchased or obtained through fishing. This allows both high- and low-income families to access these foods, making income a non-risk factor for stunting.

CONCLUSION

Stunting incidents in Balauring village amounted to 25 children under five is still high (41.7%) **and** Economic status is not related to the incidence of stunting among toddlers in Balauring village in East Nusa Tenggara.

DECLARATION

Conflict of Interest

There is no conflict of interest in this research

Authors' Contribution

The author contributed to the preparation of the article starting from research design, data collection, data processing, and analysis.

Ethical Approval

The Health Research Ethics Committee of Universitas Airlangga has reviewed and approved this study, deeming it ethically feasible with letter number No. 135/EC/KEPK/FKUA/2023.

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Data Availability

Based on data from the Health Service for the February and August periods of 2021.

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