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The Relationship of Mother's Knowledge to the Incidence of Stunting in Children at the Bromo Public Health Center, Medan Denai, Indonesia

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A B S T R A C T

Stunting is a condition where there is a growth disorder in a child caused by a lack of intake of both macronutrients and micronutrients. A mother is an individual who is very close to a child regarding the growth and development of the child. This study aimed to determine the relationship between mother's knowledge and the incidence of stunting in children at the Bromo Public Health Center, Medan Denai, Indonesia. Cross-sectional analytic observational study. A total of 62 respondents who were mothers of children aged 36-60 months were included in this study. Data analysis was carried out with the help of SPSS software in a univariate and bivariate to determine the relationship between mother's knowledge and the incidence of stunting. The majority of children with stunting nutritional status have mothers with poor knowledge regarding nutritional intake. In conclusion, there is a statistical relationship between the mother's knowledge and the incidence of stunting in children, with $p < 0.05$.

1. Introduction

Stunting is a condition where there is a growth disorder in a child. Stunting is caused by multifactorial factors, ranging from biological and medical to sociocultural aspects. Biologically, stunting is caused by a lack of intake of both macronutrients and/or micronutrients. Carbohydrate and protein intake are important nutrients for the body. Carbohydrates are a source of glucose that plays a very important role in the production of energy in cells to support the physiological functions of cells. Protein is also a very important nutrient for the body. Protein is a source of various amino acids used by cells to grow and develop. Deficiency of these two main nutrients, of course, greatly affects the growth and life of cells in the body. Stunting is still a global health problem in the world. Various studies show that the incidence of stunting in the world is still quite high, including in Indonesia. The incidence of stunting in Indonesia is around 27.7%, which is still quite high, considering that stunting can have a serious impact on future generations if optimal management efforts are not made.[1-4]

A mother is an individual who is very close to a child. The mother is very important in the growth and development of a child. Mothers play a very important role in determining the nutritional intake of their children. Every day a mother must prepare food for her child, although sometimes there is help from a household assistant in the process. However, the role of the mother is very dominant in determining the food ingredients available at home. Various studies have shown that a mother's knowledge of nutrition and the nutritional needs of children play a very important role

in the adequacy of nutrition in children. A mother's lack of knowledge about nutrition and nutritional intake determines the availability of food consumed by a child. Lack of carbohydrate and protein intake certainly has the potential to trigger cell growth disorders and lead to growth disorders in a child. Not only is the lack of carbohydrate and protein intake a problem, but the nutritional imbalance between carbohydrates and protein and various other micronutrients also greatly affects the growth disturbance of a child's body.[5-8] This study aimed to determine the relationship between mother's knowledge and the incidence of stunting in children at the Bromo Public Health Center, Medan Denai, Indonesia.

2. Methods

This study was an analytic observational study with a cross-sectional approach and used primary data from interviews with research respondents. A total of 62 research subjects participated in this study. The research subjects met the inclusion criteria in the form of mothers who had children aged 36-59 months who visited the Bromo Public Health Center, Medan Denai, Indonesia, and the subjects agreed to participate in this study. This study was approved by the medical and health research ethics committee of the Faculty of Medicine, Dentistry and Health Sciences, Universitas Prima Indonesia, Medan, Indonesia (Number: 040/KEPK/UNPRI/XII/2022).

This study observed data in the form of mothers' knowledge about stunting and proper nutrition for children based on the WHO questionnaire. The stunting assessment was carried out by measuring the height/weight according to the WHO curve. Data analysis was performed using SPSS software version 25. Univariate analysis was performed to present the frequency distribution of each variable. Bivariate analysis was carried out to determine the relationship between the test variables, with a p-value <0.05.

3. Results and Discussion

Table 1 shows the baseline characteristics of the research subjects. The majority of research subjects were male children and had stunting nutritional status. The majority of research subjects were mothers with senior high school education, working as housewives, and aged around 36-40 years.

Table 1. Baseline characteristics.

Variable	Frequency	Percentage (%)
Child gender		
Female	30	48,4
Male	32	51,6
Mother's education		
Primary school	3	4,8
Junior high school	11	17,7
Senior high school	35	56,5
Diploma	6	9,7
Bachelor degree	7	11,3
Mother's occupation		
Housewife	40	64,5
Self-employed	11	17,7
Scavenger	5	8,1
Teacher	3	4,8
Other	3	4,8
Mother's age		
20-25 years	5	8,1
26-30 years	8	12,9
31-35 years	18	29,0
36-40 years	24	38,7
>40 years	7	11,3
Mother's knowledge		
Good	31	50,0
Poor	31	50,0
Child nutritional status		
Stunting	37	59,7
Not Stunting	25	40,3

Table 2 shows the relationship between the mother's knowledge and stunting. The results of this study indicate that the majority of children with stunting nutritional status have mothers with poor knowledge regarding nutritional intake. There is a statistical relationship between the mother's knowledge and the incidence of stunting in children, with p <0.05.

Table 2. Relationship between mother's knowledge and the incidence of stunting.

Mother's knowledge	**Incidence of stunting**				**P-value***
	Stunting		Not stunting		
	N	%	N	%	
Good	8	12.9	23	37.1	0.000
Poor	29	46.8	2	3.2	
Total	**37**	**59.7**	**25**	**40.3**	

*Pearson chi-square, p<0,05.

The results of this study are consistent with other studies, which state that there is a relationship between mothers' knowledge regarding nutritional intake and children's nutritional status. Mothers with good nutritional knowledge will provide and try to provide foodstuffs that suit the child's needs. Stunting is not always only related to economic problems. Several studies, including this study, state that a mother's knowledge regarding nutritional intake is related to stunting. A mother should always look for valid information regarding proper nutritional intake for her child. The balance between carbohydrates and protein needs to be a concern for every mother. It's not enough for a child to just be fed rice. There needs to be protein intake such as eggs, chicken, fish, or meat as protein intake for a child. Lack of protein causes various other health problems, considering that protein is an important element in cell growth and life.[9-13]

4. Conclusion

There is a relationship between mothers' knowledge and the incidence of stunting at the Bromo Public Health Center, Medan Denai, Indonesia.

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