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The Influence of Parents' Height and History of Infectious Diseases on Stunting Incidence Children in Wundulako District Kolaka Regency

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ABSTRACT

Introduction: Preliminary surveys that have been conducted in Kolaka Regency show that stunting is caused by various factors, including factors of inadequate nutritional intake for toddlers, inadequate nutritional intake during pregnancy, factors of giving the wrong diet to children, social factors, economics, knowledge and other factors. as well as existing data show that the prevalence of stunting in Kolaka Regency is relatively high. This is the reason for conducting research on the Effect of Parents Height and History of Infection on Stunting Incidents in Children in Wundulako District, Kolaka Regency.

Method: Quantitative research uses a cross sectional study design. The population in this study were all children under five aged 0-59 months who were stunted in the working area of the Wundulako Health Center with a total of 218 children under five, the sample was drawn using non-probability sampling with a sample size of 67 under five.

Result: Value Statistical Test (X^{2hit})= 8.242 > X^{2tab}= 3.841, meaning that there is an influence of parents' height and(X^{2hit})= 36,548 > X^{2tab}=3.841, meaning that there is an effect of a history of infection on the incidence of stunting in Wundulako District, Kolaka Regency.

Conclusion: Active efforts are needed to increase information about stunting, and how to prevent it as early as possible, especially for pregnant women who are at risk of giving birth to children with stunting.

Introduction

Malnutrition is a problemin Indonesia. One of the health problems affecting toddlers is stunting or short stature due to chronic malnutrition.[1]South Asia contributed the largest proportion (58.7%) and Central Asia the smallest proportion (0.9%). In 2000 the stunting rate was 32.6%, this is based on data collected by the World Health Organization (WHO).[2]

Data from the Ministry of Health (2019) Southeast Asia (SEAR). In 2018, there were 149 million (21.9%) underage stunted children and more than 94% (140.5 million children) and in 2019 there were 150 8 million (22.2%) children under the age of five. The prevalence of stunting in Indonesia in 2021 will increase to 24.4%.[3]

The number of stunting sufferers in children aged 0-59 months in Southeast Sulawesi in 2019 was 2,920 children under five, in 2020 it has decreased to 1,472 cases, in 2021 Southeast Sulawesi is included in the top 10 provinces with the highest prevalence of stunting, namely 37.6%, and for Kolaka Regency has a stunting prevalence of 12.2%, which is the third highest district for the prevalence of stunting sufferers (Southeast Sulawesi Provincial Health Office, 2021). Prevalence stunting Kolaka District is in Tosiba District with 25.2%, Wundulako District with 218 or 22.2% of toddlers experiencing stunting, Latambaga District 17.6%, Tanggetada District 17.0%, Polinggona District 17.0%, Pomalaa District 17, 0% and Iwoimendaa District 11.9%, of the existing twelve sub-districts, there are seven sub-districts with high stunting rates and are the Locus of Stunting sub-districts for Kolaka district.[4]

In Kolaka Regency the stunting rate in 2020 was 14.8% and Wundulako sub-district was the second sub-district with the highest number of stunting in Kolaka Regency, namely 22.2%, this can have a very large impact on human development.

Based on a preliminary survey that has been conducted in Kolaka Regency, stunting is caused by various factors, including factors of inadequate nutritional intake for toddlers, inadequate nutritional intake during pregnancy, factors for feeding the wrong child, social, economic, knowledge and other factors as well as existing data show that the prevalence of stunting in Kolaka Regency is classified ashigh, especially in the six sub-districts with the highest prevalence (Tosiba, Wundulako, Latambaga, Pomalaa, Polinggona, Iwoimendaa) so that researchers are interested in looking at the factor "The Effect of Parental Height and History of Infection on Stunting Incidents in Children in Wundulako District, Kolaka Regency".

Method

This type of quantitative research with a Cross Sectional Study approach.[5]with this design it is intended to study the dynamics of the relationship between factors that are considered risk or exposure, namely: (mother's height, birth weight, Early Breastfeeding Initiation, Colostrum Giving, Exclusive Breastfeeding, Frequency of Giving Complementary Food for Mother's Milk, hand washing and diarrheal disease), with the incidence of stunting,with the control group (toddlers who are not stunted).

The population in this study were all children under five aged 0-59 months who were stunted in the working area of the Wundulako Health Center with a total of 218 children under five, the sample was drawn using non-probability sampling with a sample size of 67 under five.

Result

Table 1 showed thatout of 40 respondents based on their parents' height who were not at risk, there were 21 people (52.5%) with normal height and 19 people (47.5%) who were stunted. Of the 27 respondents based on the height of their parents who were at risk, there were 4 people (14.8%) with normal height and 23 people (85.2%) who were stunted. Statistical test results show that the value X^2_{count}= 8,242 > X^2_{count}=3.841, meaning that there is an influence of parents' height on the incidence of stunting in Wundulako District, Kolaka Regency. Furthermore, the results of the closeness test showed that the value of φ was 0.382 or showed a weak relationship.

Table 2 showed that of the 31 respondents based on a history of infection who were not at risk, there were 24 people (77.4%) with normal height or age-appropriate and 7 people (22.6%) who were stunted. Of the 37 respondents based on a history of infection at risk category, there was 1 person (2.8%) with normal height or age-appropriate and 35 people (97.2%) who were stunted. Statistical test results show that the value X^2_{count}= 36,548 > X^2_{table}=3.841, meaning that there is an effect of a history of infection on the incidence of stunting in Wundulako District, Kolaka Regency. Furthermore, the results of the closeness test

showed that the value of φ was 0.770 or showed a strong relationship.

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Tabel 1.
Analysis of the Influence of Parental Height on Stunting Incidents in Wundulako District, Kolaka Regency

No	Parents' Height	Stunting				Amount		Statistic Test
		Normal		Stunting				
		n	%	n	%	n	%	
1.	No Risk	21	52,5	19	47,5	40	100,0	X^2 hit = 8,242
2.	Risk	4	14,8	23	85,2	27	100,0	X^2 tab = 3,841
Total		25	37,3	42	62,7	67	100,0	φ = 0, 382

Table 2.
Analysis of the Influence of Infection History on Stunting Incidents in Wundulako District, Kolaka Regency

No	Infection History	Stunting				Amount		Statistic Test
		Normal		Stunting				
		n	%	n	%	n	%	
1.	No Risk	24	77,4	7	22,6	31	100,0	X^2 hit = 36,548
2.	Risk	1	2,8	35	97,2	36	100,0	X^2 tab = 3,841
Total		25	37,3	42	62,7	67	100,0	φ = 0, 770

Discussion

Parents' Height of Stunting

Stunted growth causes organs not to grow and develop optimally.[6]Genetic factors are the basic capital to achieve the results of the growth process.[7] The results of bivariate analysis show thatmark X^2_{count}= 8,242 > X^2_{table}=3.841, meaning that there is an influence of parents' height on the incidence of stunting in Wundulako District, Kolaka Regency. Furthermore, the results of the closeness test showed that the value of φ was 0.382 or showed a weak relationship.The results of this study are in line with research conducted by[8]that parents' height is related to the incidence of stunting in children, especially in mothers who have a height <150, where short mothers have a risk of giving birth to stunted children 1.98 times greater than normal height.

History of Stunting Infectious Diseases

Infection is the entry of disease-causing bacteria and microorganisms into the human body and their reproduction, causing various symptoms of disease.[9]Infection often occurs with malnutrition, which can lead to malnutrition, creating a cycle in which malnourished people are more susceptible to infection.[10]Results of bivariate analysisshows that the value X^2_{count}= 36,548 > X^2_{table}=3.841, meaning that there is an effect of a history of infection on the incidence of stunting in Wundulako District, Kolaka Regency. Furthermore, the results of the closeness test showed that the value of φ was 0.770 or showed a strong relationship.

Conclusion

There is an influence of parents' height and history of infectious diseases on the incidence of stunting in Wundulako District, Kolaka Regency. So active efforts are needed to increase information about stunting, and how to prevent it as early as possible, especially for pregnant women who are at risk of giving birth to children with stunting.

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