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Research Article

Relationship between Age and Improvement of Nutritional Status of Stunting Children

Ria Setia Sari[1*] | Febi Ratnasari [2] | Yuni Susilowati[3]

[1,2,3]Department of Nursing, Yasti College of Health
Jln. Arya Santika No. 40 A Ex. Margasari district. Karawaci Tangerang City - Banten - Indonesia

***contact**

riasetia233@gmail.com

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Abstract

Aim: to find out the relationship between stunting children's age and improvement in stunting children's nutritional status
Methods: This type of research is a descriptive correlational study with a cross sectional approach and uses the total sampling method with 45 respondents. Collecting data using a questionnaire that includes the age of the child, and improvement of nutritional status. Data analysis using chi-square
Results: children aged 1-15 months experienced an improvement in nutrition 37% while the same nutritional status was 78%, children aged 16-30 months experienced an improvement in nutritional status 13.3% while those who did not experienced nutritional improvement were 86.7%, aged 46¬- 60 months as much as 50% and did not experience an improvement in nutrition as much as 50%. After the Ch-Square test was carried out with a P-Value of 0.022 that there was no significant relationship between stunting children's age and improvement in stunting children's nutritional status.
Conclusions: the improvement of nutritional status in stunted children is not related to the child's age. Other studies on enhancing balanced nutrition could be conducted by other researchers.

Keywords
Age, stunting, nutritional status

INTRODUCTION

In 2018, 22.2% of children under five in the world (150.2 million) experienced stunting, while in 2019 1 out of 3 toddlers or around 149 million children under five in the world experienced stunting3. Stunting is a global nutritional problem, especially in developing countries1. Toddlers who were declared stunted were indicated by the Z-score (Height/age) for height for age less than -2 standart Deviasi where the short category was less than -2 standart Deviasi and the very short category was less than -3SD2. More than half of stunted children under five in the world come from Asia (55%) while more than a third live in Africa (39%) (1).

In 2017 Indonesia entered the third country with the highest prevalence of stunting in the Southeast Asia region or South East Asia Regional (SEAR) after Timor Leste and India. while in 2018 according to East Asia and Pacific (EAP) Indonesia was in second

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Jurnal Keperawatan Komprehensif
Vol. 8 No.1 January 2022

place with the average number of stunting, wasting and obese children is under 5 years on average. In 2013-2018 stunting children decreased with an initial number of 37.2% decreasing to 30.8% based on data from Riskesda1, during the covid-19 pandemic it turned out that the stunting rate had increased, in 2020 it increased by 15%, this is due to a decline in power buy people during this covid-19 pandemic (2).

The prevalence of stunting in toddlers in Banten province in 2019 was 24.11%, while in 2018 it was around 26.6% with the percentage of short toddlers 17.00% and very short toddlers 9.60%4. The prevalence distribution of nutritional status (Heigt/Age) in children aged 0-59 months (toddlers) in Lebak occupies the first position with the percentage of very short toddlers 17.61% and short toddlers 22.58% followed by Pandegelang 19.38% and short toddlers 20.09%, in the city of Serang very short toddlers 10.99% and short toddlers 13.69%, Cilegon city very short toddlers 7.23% and short toddlers 16.09%, Tangerang very short toddlers 7.93% and short toddlers 15.30%, South Tangerang City for very short toddlers 3.13% and short toddlers 16.72% and lastly Tangerang City 3.11% and short toddlers 15.96%5. Stunting will become a health problem if the prevalence reaches 20% (3).

A preliminary study was found At the time of the visit to the Kemiri and Rajeg primary health centers there were children aged 1-59 months with measurements categorized as short as many as 100 children. Interventions that have been carried out are counseling on balanced nutrition for children and parents and given additional food, but previous implementations have been carried out by providing balanced nutritional food and given for 30 days. Also checked for weight before intervention and after intervention with the results that there is an effect on the provision of balanced nutrition by improving nutritional status with children aged 1-59 months (4).

Age is included in the characteristics of children which also affects the incidence of stunting, according to the results of the study, the majority of respondents were at the age of toddlers (64.9%) (5). The results of this study are not in line with the results of research that discusses the risk factors for stunting in children aged 6-36 months in the Inland Region of Silat Hulu District, Kapuas Hulu, West Kalimantan, the results obtained are 46.7% of children suffering from stunting and the highest prevalence is in children aged between 25-36 months (57.9%) (6).

Based on that reason, the researcher is interested in conducting research on the relationship between the age of stunted children and the improvement of nutritional status in stunted children in the work area of the Tangerang District Health Office. The specific objective to be achieved in this study is to correlate the relationship between the age of stunted children and the improvement of nutritional status in stunted children.

METHODS

The research design used is descriptive correlation with a cross-sectional approach, which aims to determine the relationship between children's age and improvement in the nutritional status of stunting children (7). Sampling in this study used the Probability Sampling technique of Simple Random Sampling type with a total of 45

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Jurnal Keperawatan Komprehensif
Vol. 8 No.1 January 2022

respondents. The inclusion criteria in the study were short children aged 5 years, the exclusion criteria for short children aged 5 years with their parents refusing to be respondents. The research instrument used a questionnaire (children's age and improved nutritional status of children). The data analysis used was the Chi-Square test. This research has passed the ethical test by the ethics committee No. 102/LPPM-STIKES-YATSI/II/2021.

RESULTS

Data on the frequency of children's age

Table.1 Children's Age

Variable Child's Age (Months)	F	%
1-15	8	17,8
16-30	14	31,1
31-45	12	26,7
46-60	11	24,4
Total	45	100

Based on table 1, from 45 respondents, the highest age was 16-30 months (31.1%).

Data on the frequency of improvement in the nutritional status of stunting children

Table 2. Improvement of Nutritional Status

Variable Nutritional status	F	%
Repair	10	22,2
Decrease	0	0
Fixed	35	77,8
Total	45	100

p-ISSN : 2354 8428 | e-ISSN: 2598 8727
Jurnal Keperawatan Komprehensif
Vol. 8 No.1 January 2022

Based on data on the improvement of nutritional status in children, the highest score on permanent nutritional status was 35 respondents (77.8%).

Relationship between child age and improvement in nutritional status in stunting children

Table 3. The Relationship between Children's Age and Improved Nutritional Status in Stunted Children

Child's Age	Recovery of Nutritional status				Total		*P value*
	Repair		Fixed				
	n	%	n	%	n	%	
1-15	3	6.66	5	11,11	8	17,77	0,022
16-45	2	4,44	13	28,89	15	33,33	
46-60	5	11,11	17	37,78	22	48,90	
Total	**10**	**22,21**	**35**	**77,79**	**45**	**100**	

Based on table 3, the P-Value of 0.022 shows that there is no significant relationship between stunting children's age and improvement in stunting children's nutritional status.

DISCUSSION

Toddlers who have a height or body length that is not in accordance with their age, which is seen from the size of the height minus two standard deviations of the median standard deviation of children's growth according to WHO. The causes of stunting include lack of nutritional intake, due to socioeconomic conditions, maternal nutrition during pregnancy, and infant pain. The result of stunting is the difficulty of achieving physical and cognitive development which will come.

Based on table 3: children aged 1-15 months experienced an improvement in nutritional status of 6.66% while the same nutritional status was 11.11%, children aged 16-30 months experienced an improvement in nutritional status of 4.44%, while those who did not experience nutritional improvement were as much as 28.89%, aged 46¬-60 months who experienced an improvement in nutrition and remained the same, as many as 11.11%. After the Ch-Square test was carried out with a P-Value of 0.022 that there was no significant relationship between stunting children's age and improvement in stunting children's nutritional status.

Based on the results of the researcher's observations, children aged 46-60 months always consume balanced nutritional foods given by their mothers and their mothers said that if their children at this age eat whatever is given they always eat and spend and do not choose food. While the age of the child is not one of the factors that affect the improvement of nutritional status in stunted children. The results of parental observations also said that before being monitored by researchers regarding food in

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Jurnal Keperawatan Komprehensif
Vol. 8 No.1 January 2022

children, giving food according to what the child wanted was not in accordance with balanced nutrition. The results of the researchers are not in line with the research where age is included in the characteristics of children that affect the incidence of stunting, with the majority of respondents being toddlers (64.9%){5}.

The results of this study are not in line with other studies which say that the improvement of nutritional status in stunted children is by providing balanced nutrition, daily food composition containing nutrients in the type and amount according to the body's needs, taking into account the principles of food diversity, physical activity, clean living behavior, and monitoring body weight regularly in order to maintain a normal weight to prevent nutritional problems (8).

The results of this study are not in line with the results of research which says that the increase in height is influenced by maternal factors. Maternal factors associated with moderate and severe stunting in Ethiopian children: analysis of several environmental factors based on the 2016 demographic health survey Mother's education, number of antenatal care visits, and place of delivery appear to be the most important predictors of child stunting in Ethiopia. Therefore, educating and empowering women, increasing access to family planning and ANC services, and addressing maternal malnutrition are important factors that should be included in policies aimed at reducing child stunting in Ethiopia, and every centimeter increase in maternal height reduces the likelihood of stunting by as much as 0.5% ($p = 0.01$) {9}. Another study in Cameroon showed that malnutrition in children found that poor nutrition was related to maternal age, child age, mother's education level, mothers who had family planning information, and drinking water sources. The stunting condition in this country begins after weaning. The incidence of malnutrition is 6%, stunting is 31%, and underweight is 14%(10). Another study also said that the factor that affects the improvement of stunting nutritional status is protein intake, this intake can increase the increase in height for stunting children in the working area of the Umbrella Rejo Health Center. The study was carried out for 3 months, showing the results that protein intake can increase body weight and also height in stunting children (11).

The incidence of stunting in the Tangerang District Office area, especially in Kemiri Health Center and Rajeg Health Center, is caused by a lack of awareness of parents in providing balanced nutrition to children, economic factors because parents with incomes below the minimum wage but choose to spend money for other purposes compared to nutrition. child. Improving the nutritional status of stunting children is influenced by the provision of balanced nutrition (9).

CONCLUSION

Age in stunted children has no relationship with the improvement of the nutritional status of stunted children, based on theories and related journals that affect the improvement of nutritional status is the provision of balanced nutrition so that further researchers can conduct other research on improving balanced nutrition.

p-ISSN : 2354 8428 | e-ISSN: 2598 8727

Jurnal Keperawatan Komprehensif
Vol. 8 No.1 January 2022

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