

Conference Paper

## The Effect of Balanced Nutrition Feeding Time on Improving the Nutritional Status of Stunting Children

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### ABSTRACT

Stunting is a nutritional problem that has a negative impact on achieving optimal growth and development in children. One of the causes of stunting is the inaccuracy of giving balanced nutritional food. The purpose of this study was to analyze the timing of giving balanced nutritional foods to the nutritional status of stunting children, using a quasi-experimental method, one group pre, and post-test design. The sample of this research was taken by accidental sampling technique as many as 45 respondents. The analysis test used Wilcoxon with the result of Sig 0.000 ( $< 0.05$ ), where there was an effect of the time of giving balanced nutrition to the nutritional status of stunting children in the work area of the Tangerang District Health Office.

*Keywords: Balanced nutrition, stunting, time to give*

### Introduction

Growth and development that is not optimal due to the negative impact of the problem of nutritional disorders is the definition of stunting where one of the causes is the problem of chronic malnutrition. Balanced nutrition is a daily menu that contains nutrients in the amount and type according to the body's needs, with a variety of foods, assisted by physical activity, clean living behavior, and regular weight monitoring to maintain a normal weight and prevent nutritional problems.

The description of the nutritional status of children under five in Tangerang Regency, toddlers who experience malnutrition are 1,161 (0.38%) and 9,644 (3.14%) are malnourished, while good nutrition is 294,027 (95.68%). Stunting prevalence 36.8% (2007); 34.6% (2010); 37.2% (2013); 30.8% (2018); 27.67% (2019) (Risksda). Based on E-PPGBM 2018 data (Nadira, 2019), the five sub-districts with the highest prevalence of stunting in Tangerang District are Sukamulya District (45.3%), Jayanti District (42.2%), Solear District (41.1%), District Gunung Kaler (40.1%) and Kematan Pakuhaji (37.8%). Other research results mention protein intake with stunting in toddlers aged 0-59 months in the Sukamulya Health Center Work Area, Cikuya, Pakuhaji, Tangerang Regency in 2019 has a very significant relationship with p-value 0.037  $< 0.05$  and OR 0.276 (Nadira, 2019). There is also a significant relationship between energy intake and the incidence of stunting in toddlers aged 0-59 months with a p-value of 0.047  $< 0.05$  and OR 3.300.

A preliminary study found that in several working areas of the Puskesmas in Tangerang Regency, there was a decrease in the stunting rate every year. 2017 has decreased from the previous year. This situation shows that cross-sectoral performance commitments to reduce the incidence of nutritional problems in children under five in the Tangerang district are carried out as much as possible by providing maximum health services for the community. One of the efforts made by the Tangerang District Health Office is by promoting health on stunting and providing

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balanced nutrition for toddlers. In addition to health promotion, the health office also performs real interventions in the form of providing balanced nutrition for toddlers. The results of the observation that many parents provide balanced nutritional food to children under five, but the timing of feeding is inconsistent. Parents often give snacks to children at mealtimes, so that when children are given balanced nutrition they refuse because they are full.

The specific objective to be achieved in this study is to analyze the effectiveness of the timely provision of balanced nutrition to stunting children so that the results of this study are expected to provide an improvement in the nutritional status of stunted children in society in general and in the work area of the Tangerang Regency Office, especially regarding balanced nutrition. . This research is also expected to be a concern for parents and health workers, especially nurses, to improve the knowledge and skills of the community in the ability to fulfill the nutritional intake of stunting children, thereby improving nutritional status and optimizing the growth and development of stunted children.

### Material and Methods

The research used in this study used a quasi-experimental design with one group pre and post-test design which aims to compare the nutritional status of stunted children before and after giving a balanced nutritional diet on time. Measurement of nutritional status using anthropometric measurements.

In the beginning, researchers conducted observations and measurements of body weight, giving balanced nutritional food and after that provided education on the timeliness of providing balanced nutrition to children, researchers observed the timeliness of giving balanced nutrition for 1 month and after that, bodyweight was re-measured with anthropometry. The number of samples used in this study was 45 stunting children in the area of the Rajeg Health Center and the Kemeru Public Health Center, Tangerang Regency. Bivariate analysis is an analysis that aims to determine the effect of two variables, namely the effect of punctuality in the provision of balanced nutrition on the restoration of nutritional status in stunted children. The variables in this study were analyzed using the Wilcoxon test.

### Results and Discussion

Table 1. Distribution of the frequency of nutritional status improvement based on body weight before intervention

Variable	Amount	Percentage (%)
Very Less BB	5	11.1
BB less	39	86.7
Normal BB	1	2.2
Risk of excess BB	0	0
Total	45	100

Table 2. Distribution of the frequency of nutritional status improvement based on body weight after the intervention

Variable	Amount	Percentage (%)
Very Less BB	0	0
BB less	16	35.6
Normal BB	29	64.4
Risk of excess BB	0	0
Total	45	100

Table 3. The effect of timely balanced nutrition on improving the nutritional status of stunting children

Timely balanced nutrition	Restoration of nutritional status		P-value	
	Positive	Negative	Ties	
		%	n	%
BB- Pre Test	0	32	45	13
BB-Post Test				

### ***Nutritional status of children seen from weight before and after intervention***

The weight of stunting children before and after the intervention improved the results, this is illustrated in tables 1 and 2. This study is in line with what Ayuningtyas (2018) conducted regarding the intake of macro and micronutrients on the incidence of stunting in toddlers in the work area of the Sumber Urip Health Center, Rejang Regency. where protein intake with the incidence of stunting in toddlers aged 24-59 months with a p-value of 0.008 ( $p < 0.05$ ). The results of the study regarding the relationship between protein intake and weight and height gain in stunting children in the working area of the Umbrella Rejo Health Center obtained the results that there were 14 stunting children (47%) aged 6-12 months and 16 people (53 people). %) aged 13-24 months. The results of the paired t-test analysis followed for 3 months showed that protein intake could increase or increase body weight and height in stunting children. Protein consumed in the form of vegetable protein as many as 20 people (67%) and animal protein as many as 10 people (33%). This is in line with what was conveyed by Diniyyah & Nindya, 2017 regarding the incidence of malnutrition in toddlers aged 24-59 months in Suci Village, Gresik with energy, protein, and fat intake. The results of this study indicate that the age of toddlers who are very susceptible to nutritional problems such as stunting occurs at the age of 24-36 months. Moreover, toddlers with low birth weight are at risk of experiencing slow growth and development. The fulfillment of another nutritional status such as adequate energy intake affects the nutritional status of children under five with  $p = 0.007$ . Likewise, protein intake has a significant relationship with the nutritional status of children under five ( $p = 0.039$ ).

The results of Wahyudi's research (2018) state that there are 19 respondents (51.5%) with very short growth, 9 respondents (24.3%) have dubious development, and 10 respondents (27.0%) have appropriate development. The increase in height is also influenced by maternal factors. Based on research by Amaha and Woldeamanuel (2020) 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 seem to be the most important predictor of child stunting in Ethiopia. Therefore, empowering and educating women, coupled with 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. 014) and every centimeter increase in maternal height reduces the likelihood of stunting by 0.5% ( $p = 0.01$ ).

### ***The provision of balanced nutritional food, the effect on the restoration of the nutritional status of stunting children***

The results of the restoration of nutritional status after being given a balanced nutritional diet promptly for one month can be seen from the changes in the respondent's weight. The results of the study found that there was an effect on the timeliness of giving balanced nutrition to the improvement of balanced nutritional status. This is following research conducted by Perdani et al. (2017) which says that there is a relationship between feeding and nutritional status, where researchers suggest for mothers to always apply good feeding practices in terms of food selection and nutrition. The research of Mya et al. (2018) states that the practice of IDD (feeding baby

children) in children aged 6-23 months can avoid stunting, PMBA by giving eggs which are high-protein foods to increase growth. body cell building and breastfeeding. Breastfeeding can increase the body's resistance to minimize cases of diarrhea and hospitalization. Incidence of stunting mostly occurs in rural residents, the poor, and mothers of short stature.

Based on the results of Yuliarsih et al. research (2020) which shows that there are still toddlers with poor nutritional status, it is hoped that the Astanajapura Health Center will provide services to the community with children under five who prioritize primary services in the form of promotive and preventive health education to improve the health status of the community, especially in improving the nutritional status of toddlers. by reducing and suppressing the incidence of malnutrition or malnutrition.

## Conclusion

Stunting is a nutritional problem that hurts achieving optimal growth and development in children. One of the causes of stunting is the problem of chronic malnutrition so that which greatly affects the growth and development process of toddlers. This study has the results of the Wilcoxon statistical test on the weight variable with a probability value (0.000) which is much lower than the significant standard of 0.05 or ( $p < 0.00$ ), then the data  $H_0$  is rejected and  $H_1$  is accepted which means there is an effect of the accuracy of giving balanced nutritional food on the improvement of nutritional status in stunting children in the work area of the Tangerang District Health Office.

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