

Research Article

Provision of Additional Food as an Effort to Handling Stunting in Children in Siwalankerto District Surabaya

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Article history:

Submission December 2020

Revised December 2020

Accepted December 2020

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ABSTRACT

Stunting (dwarf) is a condition where toddlers have a length or height that is less than age. This condition is measured by size or size which is more than minus two median, standar deviation of the child growth standar of yhe WHO. Stunting toddlers include chronic nutrition problems caused by and lack of nutritional intake in infants. The type of research use is pre – experimental with one group design pretest post test design where the design is no control group. The population of this study were children under 59 month. Technique sampling use probability with purposive sampling method. Weight measurement were carried out before and after the supplementary food intervention of food other than the supplementary food. he results showed that changes in weight status of children under five according to age indicated that there was a change in weight status of children, namely 2 children became malnourished and 13 others were still in the category of acute malnutrition. The results showed that there were differences in the Weight for Age (WAZ) index status before and after complementary foods.

Keywords: Stunting, supplementary food, weight, toddlers, child

Introduction

Stunting (dwarfism) is a condition in which toddlers have less length or height compared to their age. This condition is measured by a distance or size that is more than minus two standard deviations from the WHO's median growth standard for children [1][2]. Stunting prevalence data collected by the World Health Organization (WHO), Indonesia, is included in the third country with the highest prevalence in Southeast Asia / South-East Asia Regional (SEAR). The average majority of stunting under five in Indonesia in 2005-2017 is 36.4% [3][2].

The incidence of stunting (short) children is a major nutritional problem facing Indonesia. Based on Nutritional Status Monitoring (PSG)

data for the last three years, stunting has the highest prevalence than other dietary issues such as malnutrition, thinness, and obesity. The majority of short children under five has increased from 2016, namely 27.5% to 29.6% in 2017 [4][5].

The prevalence of stunting under five in Indonesia tends to be static. The results of the Basic Health Research (Riskesdas) in 2007 showed the majority of stunting under five in Indonesia was 36.8%. In 2010, there was a slight decrease to 35.6%. However, the prevalence of stunting increased again in 2013, namely to 37.2%. The majority of Riskesdas short children in [4][6].

How to cite:

Hubaedah, A. & Andarwulan, S. (2020). Provision of Additional Food as an Effort to Handling Stunting in Children in Siwalankerto District Surabaya. *Basic and Applied Nursing Research Journal*, 1(2), 25 – 28. doi: 10.11594/banrj.01.02.01

Indonesia is currently faced with a "double burden of malnutrition" or multiple nutrition problems. On the one hand, it still has to work hard to overcome malnutrition, one of which is stunting, while on the other hand, the issue of excess nutrition is starting to creep up, which leads to an increase in cases of the non-nutritional disease—*infectious disease* in the adult group. Investing through the fulfillment of nutrition is necessary to formulate a country's development planning. Getting adequate nutrition is a human right that should be obtained by every individual. Adequate nutrition can support optimal growth and development from the fetus to the next stage of life. In the long run, the fulfillment of nutritional needs can improve the next generation's quality, which will indirectly increase significant economic benefits by enhancing the quality of human resources [7]. One of the solutions in handling stunting in toddlers is by providing Supplementary Food (PMT). The prevalence of toddlers 6-59 months in Indonesia who receive Supplementary Food (PMT) in 2018 is 41% [8][9].

To overcome malnutrition that occurs in the age group of under five nutrition it is less necessary to provide additional food (PMT). Feeding addition is an intervention program for toddlers who suffer from malnutrition where the goal is to improve the nutritional status of children and to make ends meet nutritional needs of children so that nutritional status and good nutritional conditions can be achieved with the child's age. Additional types of food are foods made specifically which must be modified so that nutritional intake can be met according to the needs, modified so that nutritional intake can be met in accordance with protein needs and micronutrient, safe, clean, not too spicy and salty and easy for children to consume [10].

Materials and Methods

This study used a pre-experimental study design. Ethical permits were submitted to the research unit of the responden who has child. Measurement of body weight at the beginning of the examination [11][12]. Furthermore, the Puskesmas provides additional food packages for 3 months with the frequency and number of drinks that have been determined by the

nutrition officer. In the post test stage, it measures the toddler's weight The population and sample in this study took data from 15 toddlers using non-probability sampling with a purposive sampling method [13]. Toddlers who are included in the age category 0 - 59 months.

Toddlers who have less criteria in fulfilling nutrition. Analysis of the difference test used the SPSS statistical test with paired two-sample t test.

Results and Discussion

Nutrition Status Based on Weight / Age Indicators

Table 1. Distribution of Nutritional Status Based on Body Weight / Age Index of Respondents Before Receiving Supplementary Food.

Nutritional Status Index Weight / Age	Before giving supplementary food	
	N	%
Bad	14	93,3
Less	1	6,7
Good	0	0
Total	15	100

Table 1 shows that there are 14 toddlers with malnutrition status (93.3%) and 1 underfive (6.7%) under nutritional status. 3.18 SD and the lowest is -5.86 SD

Table 2. Distribution of Nutritional Status Based on Body Weight / Age Index for Respondents After Giving Supplementary Food

Nutritional Status Index Weight / Age	After giving supplementary food	
	N	%
Bad	12	80
Less	3	20
Good	0	0
Total	15	100

After giving additional food, there was a change in the weight of children under five,

namely 2 under five and the rest were still in the bad category with the highest score - 3.14 SD and the lowest 4.90 SD.

Table 3. Differences in Z-Score based on Weight / Age Index Before and After

Nutritional Status	Before Sup. Food.giv.	After Sup. Food.giv.	Change	P value
Skor Z	-4,49	-3,87	0,63	0,046=
W/A	0,82	0,87	0,04	

Table 3 shows that the change in the Z score of children under five before and after giving additional food for body weight / age is 0.63 with a standard deviation of 0.04.

The results of the paired two-sample t test showed that there was a significant difference in the change in the Z score before and after the supplementary feeding with $p = 0.046$ ($p < 0.05$). Changes in body weight measurement can affect the calculation of SPSS, because the sensitivity of small changes to body weight is relatively high.

Measurement of body weight showed that 2 children under five had changes in their nutritional status. This change is directly proportional to the level of consumption of children under five. Toddlers who consume supplementary food according to the standard. Toddlers who have not consumed supplementary food at all will be different from toddlers who have consumed additional food [14].

Retnowati, who conducted research at the Kelambu Community Health Center, stated that providing additional food by giving formula 100 for 90 days can help increase the weight of BGM toddlers who have worms. Provide additional food or fluids that contain nutrients. The body really needs foods that contain balanced nutrition for toddlers who are severely malnourished. Vitamins with low osmolarity levels make it easier for toddlers to absorb nutrients and facilitate the consumption of additional foods [15].

This research is in line with the research conducted by Saputra et al, by conducting research on 32 respondents through the univariate analysis test with the presentation of

frequency distribution and the bivariate test using Spearman rank correlation. The results of this study indicate that there is a significant relationship between nutritional status and provision of additional food for children under five [16].

Conclusion

Based on the results of the literature study conducted, it can be concluded that Supplementary Food Giving (PMT) can be used as a means of handling stunting in children under five in Indonesia. However, it needs improvement, especially in several aspects, including:

First, there is a target error and leakage, so that it does not have more impact on the target, and does not fully function as an additional so that the total nutritional intake does not increase optimally.

Second, there needs to be education, especially for parents regarding the benefits of Supplementary Food. Third, it is necessary to have optimal coordination starting from the city/district health office to village sub-district midwives in distributing Supplementary Food to the target.

Acknowledgment

The authors thank Universitas PGRI Adi Buana Surabaya and Puskesmas Pilang.

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