Journal of Bionursing
2023, VOL.5, NO. 2, 168-174

Analysis Of Family Behavior With The Incidence Of Stunting In Toddlers Aged 3-5 Years

[1] Mikawati ✉, [2] Evi Lusiana, [3] Suriyani

[1] S1 Nursing Study Program STIKES Panakkukang
[2] D3 Nursing Study Program STIKES Panakkukang
[3] Nursing Profession Study Program STIKES Panakkukang
Correspondence Author: mikawati.skp@gmail.com

ABSTRACT

***Backgroud** : Currently, stunting is one of the government's main concerns, because cases of stunting are increasing in Indonesia. The prevalence of stunting, which is in the high category, will affect growth and development failure in toddlers and will affect economic status if not taken seriously. One effort that can be done is to increase family empowerment, both through knowledge and attitudes and behavior.*

***Objective**: This study aims to determine family behavior with the incidence of stunting in toddlers aged 3-5 years, where the family behavior variables consist of Clean and Healthy Behavior (PHBS), family behavior in food processing, and family behavior in feeding.*

***Methods**: In this study using a descriptive research design with a cross sectional study approach. The respondents were mothers who had stunted toddlers aged 3-5 years in the working area of the Kaluku Bodoa Health Center, with a purposive sampling technique of 68 samples.*

***Results**: From the data analysis using SPSS with the chi square test, the results showed that there was a relationship between family PHBS behavior in food processing and feeding with the incidence of stunting in toddlers aged 3-5 years. As for each value p is $p_1 = 0.014$, $p_2 = 0.012$ and $p_3 = 0.000$.*

***Conclusion**: from the results of this study, it can be concluded that the family is one of the factors that can reduce the incidence of stunting, for this reason it is necessary to increase government programs, especially in health centers that involve families in efforts to prevent stunting.*

KEYWORDS
Family behavior, stunting, toddlers

INTRODUCTION

Stunting is a nutritional problem that is currently being experienced by people around the world due to the possibility of nutritional irregularities, namely during growth and development in the early stages of life. Two organizations, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), have identified three types of nutritional diseases in children, with stunting being the most common. With more than 2 million under-five deaths worldwide due to stunting, it is a critical global problem of malnutrition. According to data from the World Health Organization (WHO) in 2018, Indonesia is the fourth country with the highest prevalence of stunting in children in the Southeast Asia region, after Timor Leste (50.5%), India (38.5%). 4%), and Indonesia (36.4%). (Ministry of Health, 2018).

Based on Basic Health Research (Riskesdas) data, it is known that there have been changes in the prevalence of stunting in South Sulawesi Province. The 2018 Riskesdas results show that the prevalence of stunting in toddlers increased from 35.6% in 2010 to 36.8% in 2012 and to 40.9% in 2013. Based on the results of nutrition surveillance monitoring (PSG) conducted in 2019 in Sulawesi Province, the prevalence of stunting decreased to 30.09%. Although the current prevalence rate has not reached the expected level, efforts continue to ensure that the results are in line with expectations (South Sulawesi Health Office, 2019). According to the Basic Health Research (Riskesdas), the incidence of stunting in Makassar City was around 8.62% in 2019.

Factors that directly cause stunting are infectious diseases and healthy food intake in pregnant women and toddlers, while indirectly caused by the mother's education level, parenting patterns, environmental sanitation, and health services in the local area (Sinatrya & Muniroh, 2019). Stunted toddlers will have a low immune system and are at risk of germ infections and other diseases, therefore it is necessary for families to pay attention to behavior in feeding, implementing household PHBS and preparing food for toddlers as one of the efforts to prevent stunting in children.

To determine the quality of life of toddlers in the future, the role of mothers is needed, therefore it is very important for mothers to understand how to carry out PHBS properly and how maternal behavior in preparing and processing good food.

In food processing according to Prabatini (2010) that various ways of cooking or processing food can affect the nutritional content of the food to be cooked. Meanwhile, according to (Rahmawati, 2020) the process of preparing good food can provide benefits in increasing nutritional value, digestibility, taste or aroma, and durability (Yati, 2018). Things that need to be considered in processing food ingredients besides cleanliness are also preparation, for example in cutting food ingredients. This is because the chewing process and swallowing reflexes of toddlers are not perfect so that children choke easily. The use of stimulating spices is not recommended, because it harms the digestive tract of toddlers (Rahmawati, 2020).

Based on statistics and data on the prevalence of stunting reported that in Kaluku Bodoa Health Center, it is the second highest prevalence of stunting in the city. Makassar, the results of observations show that stunting in children under five years of age has not been able to reach the predetermined level due to the low level of maternal involvement in learning, attitudes and actions in PHBS, food processing, and feeding. According to preliminary data obtained from the Kaluku Bodoa Health Center, the prevalence of stunting was around 197 or 4.9% in 2021, so this study aims to analyze the relationship between family behavior in food processing, implementation of PHBS and feeding with the occurrence of stunting in children under five years of age 3-5 years

METHODS

Population and Sample

This study uses descriptive quantitative research with a cross sectional study approach, which is research that connects the two variables. In this study, the independent variable is family behavior, which consists of food processing behavior, PHBS and feeding behavior, while the dependent variable is stunting status.

Data from each variable were collected from a number of samples that met the research criteria. The inclusion criteria for this study were: toddlers who are psychologically and physically healthy, aged 3-5 years who are stunted, while the exclusion criteria of the study are toddlers who are affected by infectious diseases, illiterate mothers of toddlers. From these criteria, a sample size of 68 toddlers was obtained, where sample data was collected using non-probability sampling method with purposive sampling technique.

Instrument

Data from independent variables were obtained using a research instrument in the form of a research questionnaire that had previously been tested for reliability and validity. While the dependent variable is obtained by weighing BW and measuring TB using a microtoise scale measuring instrument whose results will be adjusted to the standard deviation of WHO using the z-score tab. After the data from each variable is collected, then further statistical tests are carried out to assess the presence or absence of a relationship between the two variables using the chi-square statistical test.

Data Analysis

Descriptive statistics were used to illustrate the frequencies of the study variables. A bivariate analysis was carried out using a Chi-Square test and P-values less than 0.05 were considered significant. The statistical analyses were conducted using SPSS, version 25.

RESULT AND DISCUSSIONS

In the results of this study, it is presented about how the relationship between family behavior which consists of 3 components, namely food processing behavior, PHBS and food feeding behavior

Table 1. Relationship between family behavior in food processing and stunting status in toddlers aged 3-5 years in the working area of the Kaluku Bodoa Health Center

		Stunting status				*p*
		Short		Very Short		
		n	%	n	%	
Family Behavior In Food Processing	Good	13	59	13	28,3	0,014
	Not Good	9	41	33	71,7	
Total		22	100	46	100	

From table 1 the results of the analysis using the chi square test, it was obtained a value of p = 0.014, which means that there is a relationship between family behavior in food processing and stunting in toddlers aged 3-5 years.

Tabel 2 Relationship between Clean and Healthy Behavior (PHBS) and stunting status in toddlers aged 3-5 years in the working area of the Kaluku Bodoa Health Center

		Status Stunting				*p*
		Short		Very short		
		n	%	n	%	
PHBS	good	12	54,5	11	23,9	0,012
	Not Good	10	45,5	35	76,1	
Total		22	100	46	100	

From table 2, the value of p <0.05 was obtained, namely p = 0.012 which was seen through the chi square analysis test. This means that there is a relationship between PHBS and the stunting status of toddlers aged 3-5 years.

Tabel 3 : Relationship between family behavior in providing food with stunting status in toddlers aged 3-5 years in the working area of the Kaluku Bodoa Health Center

		Status Stunting				*p*
		short		Very short		
		n	%	n	%	
family behavior in providing food	Good	17	77,3	2	4,3	0,000
	Not good	5	22,7	44	95,7	
Total		22	100	46	100	

Table 3 shows the results of the analysis using the chi square test with a value of p = 0.000, which means there is a relationship between family behavior in feeding and stunting in toddlers aged 3-5 years.

Discussion

Family behavior in food processing with stunting status in toddlers aged 3-5 years

If you look at the data from table 1, there are 42 respondents who do poor food processing, where most of the stunting status of toddlers is in the very short category, namely 33 toddlers. So from these data it can be concluded that poor maternal behavior is more likely to result in stunting status of toddlers in the very short category. According to Supriati (2020), food processing is a component in parenting in paying attention to the nutritional content of each food to be processed.

From the results of this study, most respondents, in this case mothers, still tend to be poor in food processing (42 out of 68 respondents). Among them are still many mothers who wash fruits and vegetables by squeezing, cook vegetables for more than 5 minutes, process fish by frying and provide flavoring to almost all food ingredients.

Prakhasita (2018) states that family behavior in food processing is influenced by the age of the mother, where in this study the age of the mother is still relatively young, which is less than 35 years old. In addition to age, the level of education can also affect food processing. Education is needed in obtaining information or knowledge about the growth process of toddlers, the level of education also determines whether or not it is easy for a mother to absorb and understand information in food processing that is obtained and then applied (Nurarif & Kusuma 2016). In this study, most mothers had a primary school education level (50%), so that poor food processing was dominated by mothers who had a primary school education level.

PHBS with stunting status in toddlers aged 3-5 years

The family principle in the application of PHBS in this study, assessed through 10 indicators of household PHBS, mothers who apply PHBS so as to enable family members to achieve optimal health and achieve the growth and development of toddlers (Wirahatama, 2018). Stunting is one example of how the mother's behavior in the application of PHBS is poor, which is an indirect factor in leading to nutritional problems and stunting toddlers (Wanimbo, et al, 2020).

In addition, respondents have a low educational background, which affects the level of knowledge and actions regarding the implementation of household PHBS which is also not good.

Family behavior in feeding with the occurrence of stunting in toddlers aged 3-5 years

In the age of toddlers, health problems are often found due to improper feeding (Goleman, et al, 2019) Feeding should pay attention to several things, such as the content of nutrients in the ingredients used, giving according to the age of the toddler, and giving according to the proportion and frequency of food.

In this study, family behavior in feeding has a relationship with the occurrence of stunting in toddlers aged 3-5 years. Most families are still in the

poor category in feeding, which is 49 samples. Poor feeding could be due to the factor of low education level, where most respondents still have elementary school level education, so that it will affect the family's ability to receive and apply information. In addition, the family income factor is also an important factor in feeding.

LIMITATIONS

In the current situation of the Covid-19 pandemic and the existence of government regulations, namely PPKM (Enforcement of Restrictions on Community Activities), the process of collecting data through google form which makes researchers not interact directly with respondents to provide explanation and understanding in answering questions so as to cause different assumptions and understanding of each respondent in filling out answers through the google form used, besides that the questionnaire in the form of google form and sheets is distributed through intermediary cadres, which causes data collection long enough to fit the desired sample size

CONSLUSIONS AND RECOMENDATION

From the results of this study, it can be concluded that the family is one of the factors that can reduce the incidence of stunting, seen from the analysis test that family behavior has a significant relationship with the incidence of stunting in toddlers. So the researchers suggest that there is a need to increase government programs, especially in health centers that involve families in terms of stunting prevention efforts.

REFERENCES

Arisna, D. (2013). Regional General Hospital Cut Nyak Dhien Thesis By: Derni Arisna Nim: 08C10104043 Public Health Science Study Program Teuku Umar University Meulaboh - West Aceh.

South Sulawesi Health Office. (2019). Regional Apparatus Organization Performance Report. 25-26.

Ernawati, A. (2006). Relationship between Socioeconomic Factors, Environmental Sanitation Hygiene, Consumption Level and Infection with Nutritional Status of Children 2-5 Years of Age in Semarang Regency [Thesis]. Diponegoro University Postgraduate Program, Semarang.

Goleman, D; Boyatzis, R; Mckee, A. Health Behavior. Journal of Chemical Information and Modeling. 2019. 53 (9), 1689-169

Indonesian Pediatric Association. (2015). Recommendations for Evidence-Based Infant and Toddler Feeding Practices in Indonesia to Prevent Malnutrition. Jakarta: IDAI

Indonesian Ministry of Health. (2018). Stunting Bulletin. Indonesian Ministry of Health, 301(5), 1163 1178.

Lynawati. (2020). The Relationship between PHBS (Clean Healthy Living Behavior) and Stunting in Kedung Malang Village, Banyumas Regency. Journal of HUMMANSI

(Humanities, Management, Accounting), 3(March), 41-46.

Musher - Eizenmen & Holub, (2007). Beverage Intake of Girls at Age 5 Years Predicts Adiposity and Weight Status in Childhood and Adolescence. American Journal of Clinical Nutrition, 90, 935-942.

Natsir, M. F. (2019). Clean and Healthy Living Behavior (PHBS) in the Household Setting of the Parang Baddo Village Community. National Journal of Health Sciences (JNIK), 1(3), 54-59.

Notoatmodjo S. (2012.) Health Promotion and Health Behavior. Jakarta: PT Rineka Cipta.

Noviyanti, L. A. (2019). Factors Affecting Feeding Patterns of Toddlers in the Kencong Health Center Working Area. University of Jember. http://repository.unej.ac.id/handle/123456789/89968

Nurarif & Kusuma. Food Processing Methods and Techniques. TIBBES Journal of Boga and Fashion Industry Technology. 2016. 53(9), 1689-1699.

Prabatini, D. 2010. Breastfeeding Companion Food. Yogyakarta: Nuha Medika.

Prakhasita, R. C. (2018). The Relationship between Feeding Patterns and the Incidence of Stunting in Toddlers 12-59 months of Age in the Tambak Wedi Surabaya Health Center Working Area.

Puskesmas Kaluku Bodoa, (2020). Health Profile of Kaluku Bodoa Health Center 2018. Bodoa: Kaluku Bodoa Health Center.

Putri, Y. S. (2019). Poltekkes Kemenkes Yogyakarta. TEST OF ANTIFUNGIARY POWER OF CENGKEH FLOWER OIL (Syzygium Aromaticum L.) AGAINST THE GROWTH OF THE FUNGE Aspergillus Flavus IN VITRO, 4(2), 2-3. http://eprints.poltekkesjogja.ac.id/239/

Rahmawati, D., & Agustin, L. (2020). No Title. 9(1), 80- 85.

Raksanagara, A., & Raksanagara, A. (2016). Clean and Healthy Living Behavior as an Important Determinant of Health in Household Settings in Bandung City. Journal of Health Systems, 1(1), 30-34. https://doi.org/10.24198/jsk.v1i1.1034

Rina, S. (2018). UNIVERSITY OF NORTH SUMATERA Polyclinic of NORTH SUMATERA UNIVERSITY. Journal of Urban & Regional Development, 1(3), 82-91.

Sinatrya Alfadhila Khairil & Muniroh Lailatul, 2019. The Relationship of Water, Sanitation, and Hygiene (WASH) Factors with Stunting in the Working Area of Kotakulon Health Center, Bondowoso District, Amerta Nutrition Journal. 3(3): 164-170.

Sulasmi, I., Dewi. S, A. C., & Karmila, M. (2019). Analysis of Clean and Healthy Living Behavior (Phbs) on Early Childhood Motor Skills at Pos Paud Al Masyithoh Plamongansari. Paudia: Journal of Research in the Field of Early Childhood Education, 7(2), 85-95. https://doi.org/10.26877/paudia.v7i2.3271

Sundari Dian, Almasyhuri, Astuti Lamid. (2015). The

Effect of the Entry Process on the Nutritional Composition of Protein Source Food Ingredients. Journal of Media Limbangkes. Vol. 25. No. 4. 235-242.

Supriati, E. K. Factors Causing the Incidence of Stunting in Toddlers. Indonesian Health Magazine, 2020. 51-56

Yati, D. Y. (2018). The Relationship of Feeding Patterns with Stunting in Toddlers 36- 59 Months of Age in Mulo and Wunung Villages in the Region of the Relationship of Feeding Patterns with Stunting in Toddlers 36- 59 Months of Age in. Aisyiyah University Yogyajarta, 1-14.

Wanimbo, Erfince & Minarti, W. The Relationship between Maternal Characteristics and the Incidence of Stunting in Toddlers (7-24 Months). Journal of Health Management of Dr. Soetomo Hospital Foundation. April 2020. Vol.6, No. 1.

Wirahaditama, himawan. (2018). article on health determinants of clean and healthy living behavior (PHBS) of rural communities in improving public health. 6(2). https://doi.org/10.31219/osf.io/92kfb