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Analysis Of Factors Related To The Incidence Of Stunting In Children Aged 2-5 Years In Purwoasri Village, Purwoasri District, Kediri Regency

Renanda Tika Afrinah[1*], Reny Maretha Sari[2]
[1,2]Universitas STRADA Indonesia
***Corresponding author:** renandaafrinah@gmail.com

ABSTRACT

Stunting is chronic malnutrition caused by lack of nutritional intake for a long time due to feeding that is not in accordance with nutritional needs. Indonesia is the country with the 2nd place that has a prevalence of stunting children in Southeast Asia, which is 26.92% in 2020. The purpose of this research is to determine the behavioral factors of breastfeeding, knowledge about diet and access to information with the incidence of stunting. This type of research is quantitative research with an analytical observational research design with a Cross Sectional design. The population in this study was 90 children aged 2-5 years in Purwoasri Village. With a total sample of 74 children taken by simple random sampling technique. The data analysis used was univariate, bivariate using Chi Square test. The results of this study showed a relationship between the behavior of breastfeeding with a p-value of 0.003 < 0.05, there was a relationship between dietary knowledge with a p-value of 0.006 < 0.05, there was a relationship between access to information and the incidence of stunting p-value 0.001 < 0.05. The active role of influential people in the environment is needed to invite and provide motivation and assistance from local health workers in providing health education to increase mothers' knowledge, especially about stunting.

Keywords : access to information, complementary feeding, stunting

INTRODUCTION

This type of research is quantitative research with an analytical observational research design. The research study design used in this research is a cross sectional design. The population in this study was all children aged 2-5 years and their mothers in Purwoasri Village, Puwoasri District, Kediri Regency, a total of 90 children. The sample for this research was 74 children aged 2-5 years with respondents being mothers who had children aged 2-5 years in Purwoasri Village. The sampling technique uses simple random sampling.

The variables in this study are the incidence of stunting, behavior of giving MP-ASI, access to information and mother's knowledge regarding eating patterns.

The incidence of stunting is measured by measuring the height of toddlers. The measurement results were measured using Zscore and then categorized into = very short (<-3SD), short (-3N to <-2SD) and Normal (-2 SD to + 3SD). The behavior of giving MP-ASI was measured using a questionnaire from Kusumaningrum with a score range of 12-36 which was then categorized into appropriate behavior (28-36), inappropriate (20-27), inappropriate (12-19). Mother's knowledge was measured using a questionnaire from Pratiana with a score range of 0-10 which was then categorized into good (7-10) and poor (0-7). Access to information was measured using a questionnaire with a score range of 0-12 then categorized into good (7-10) and poor (0-6).

The instrument used in this research refers to previous researchers. Kusumaningrum with reliability test results of 0.75>0.6. Pratiana with reliability test results of 0.665>0.6. Data analysis in this study used the Chi-Square test to see whether there was a relationship between the independent variable and the dependent variable.

METHODS

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RESULTS

1. Characteristics of Respondents

The following are the characteristics of mothers of toddlers based on their last job and education.

Tabel 1. Characteristics of Respondents Based on Parental Occupation and Parental Education in Purwoasri Village

No.	Characteristics	Frequency	Precentage(%)
	Occupation		
1.	Groceries	11	14,9
2.	House Wife	51	68,9
3.	Enterpreneur	6	8,1
4.	Employee	4	5,4
5.	Nurse	2	2,7
	Total	74	100,0
	Last Educational		
1.	Elementary School	2	2,7
2.	Junior High School	3	4,1
3.	Senior High School	59	79,7
4.	Diploma III	3	4,1
5.	Bachelor degree	7	9,5
	Total	74	100,0

Based on Table 1, it can be seen that the respondents with the most occupations were housewives at 51 (68.9%), and the smallest occupations were nurses at 2 (2.7%). In the last education group, it can be seen that the respondents with the most recent education were Senior High School (SMA/SMK) as many as 59 (79.7%), and the lowest level of education was elementary school with 2 (2.7%).

The following are the characteristics of toddlers which include height, age and gender.

Table 2. Sample Characteristics Based on Child Age, Child Height, and Child Gender in Purwoasri Village**.**

No.	Characteristic	Frequency	Precentage(%)
	Body Length		
1.	80,0 – 90,0 cm	36	48,9
2.	90,1 – 100,0 cm	34	45,6
3.	100,1 – 110,0 cm	3	4,1
4.	110,1 – 120,0	1	1,4
	Total	74	100,0
	Age		
1.	20 – 30 Bulan	30	40,5
2.	31 – 40 Bulan	21	28,4
3.	41 – 50 Bulan	15	20,3
4.	51 – 50 Bulan	8	10,8
	Total	74	100,0
	Gender		
1.	Male	48	64,9
2.	Female	26	35,1
	Total	74	100,0

Based on Table 2, it can be seen that the sample with the highest height, namely 80.0-90.0 cm, was 36 (48.6%), and the smallest height was 110.1-120.0 cm, namely 1 (1.4%).). Meanwhile, in the children's age group, it can be seen that the sample with the largest age, namely 20-30 months, is 30 (40.5%), and the smallest age is 50-60 months, namely 8 (10.8%). And in the gender group it can be seen that, sample with the largest gender was male, 48 (64.9%), and the smallest gender was female, 26 (35.1%).

2. Variable of Research

The following are research variables which include the incidence of stunting, behavior of giving complementary food (MP-ASI), mother's knowledge about balanced nutrition and access to information.

Table 3. Research Variables Based on Knowledge of Dietary Patterns, Mother's Behavior in Providing MPASI and Access to Information in Purwwoasri Village

No.	Characteristic	Frequency	Precentage(%)
	Incidence of stunting		
1.	Stunted	3	4,1
2.	Severe stunted	13	17,6
3.	Normal	58	78,4
	Total	74	100,0
	Behavior of giving Complementary food (MP-ASI)		
1.	Not appropriate	3	4,1
2.	Less appropriate	57	77,0
3.	Appropriate	14	18,9
	Total	74	100,0
	Dietary Knowledge		
1.	Good	35	47,3
2.	Less	39	52.7
	Total	74	100,0
	Information Accessibilty		
1.	Good	34	45,9
2.	Less	40	54,1
	Total	74	100,0

Based on Table 1.3, it can be seen that the highest percentage of nutritional status was normal, as many as 58 people (78.4%). Meanwhile, the smallest nutritional status group was very short, namely 3 people (4.1%). In the behavior group giving MP-ASI, it can be seen that,

of the 74 respondents in Purwoasri Village, the majority had inappropriate behavior in giving MP-ASI, 57 people (77.0%), while 14 people (18.9%) had inappropriate behavior. , and a small percentage behaved inappropriately as many as 3 people (4.1%). In the knowledge group about eating patterns It can be seen that, respondents with more or less knowledge about eating patterns were 39 people (52.7%). Compared with respondents who had knowledge about good children's eating patterns, namely 35 people (47.3%). And in the access to information group, it is known that, of the 74 respondents in Purwoasri Village, the majority have poor knowledge of access to information as many as 40 people (54.1%), and a small percentage of respondents have good knowledge of access to information as many as 34 people (45 .9%).

3. Univariate Analysis

Table 4. MP-ASI Giving Behavior with Stunting Events

MP-ASI Giving Behavior	Incidence of Stunting							
	Severely stunted		Stunted		Normal		Total	
	F	%	F	%	F	%	F	%
Appropriate	0	0,0	1	1,4	13	17,6	14	18,9
Less appropriate	3	4,1	9	12,2	45	60,8	57	77,0
Not appropriate	0	0,0	3	4,1	0	0,0	3	4,1
Total	3	4,1	13	17,6	58	78,4	74	100,0
	$p<\alpha$ 0,0003 <0,05							

Based on Table 4, it can be seen that, of the 74 respondents with inappropriate MP-ASI feeding behavior, 3 children (4.1%), with 3 children (4.1%) having short nutritional status, very short nutritional status. and normal none (0%). Then the number of respondents whose behavior in giving MP-ASI was inappropriate was 57 (77.0%), with 3 children (4.1%) having very short nutritional status, 9 children (12.2%) having very short nutritional status and almost half of them having normal nutritional status. as many as 45 children (60.8%). Meanwhile, there were 14 (18.9%) respondents with appropriate MP-ASI feeding behavior, almost all of them had normal nutritional status, 13 children (17.6%) and 1 child (1.4%) with short nutritional status.

Table 5. Knowledge of Dietary Patterns and Stunting Events

Dietary Knowledge	Incidence of *Stunting*							
	Severely stunted		Stunted		Normal		Total	
	F	%	F	%	F	%	F	%
Good	0	0,0	2	2,7	33	44,6	35	47,3
Less	3	3,1	11	14,9	25	33,8	39	52,7
Total	3	4,1	13	17,6	58	78,4	74	100,0
	$p<\alpha$ 0,0006 <0,05							

Based on table 5. It is known that, of the 74 respondents, 39 children (52.7%) had poor knowledge, with very short nutritional status of 3 children (3.1%), 11 children (14.9%), and normal as many as 25 children (33.8%). Then there were 35 respondents with good knowledge of eating patterns (47.3%), with 0 very short nutritional status, 2 children (2.7%) with normal nutritional status, 33 children (44.6%) normal.

Table 6. Access to Information on Stunting Events

Information Accessibility	Incidence of *Stunting*							
	Severely Stunted		Stunted		Normal		Total	
	F	%	F	%	F	%	F	%
Good	0	0,0	1	1,4	33	44,6	34	45,9
Less	3	4,1	12	16,2	25	33,8	40	54,1
Total	3	4,1	13	17,6	58	78,4	74	100,0
	$p<\alpha$ 0,0001 <0,05							

Based on table 6. Above, it is known that, of the 74 respondents, 40 (54.1%) of the 74 respondents had poor knowledge about access to information, with very short nutritional status for 3 children (4.1%), 12 children (16.2%) were short. , and normal 25 children (33.8%). Meanwhile, respondents with good knowledge about access to information were 34 (45.9%), with short nutritional status 1 child (1.4%), normal 33 children (44.6%) and none of them had very short nutritional status (0 .0%)

DISCUSSION

A. The Relationship between MP-ASI Giving Behavior and Stunting Events

The Chi-Square statistical test value is said to have a correlation if the p value <α. The results obtained showed a result of 0.006, which means there is a relationship between maternal behavior in providing MP-ASI and the incidence of stunting in Purwoasri Village. Based on the research results, it was found that 9 people (12.2%) had inappropriate maternal behavior with the nutritional status of stunted children and 13 people (17.6) had appropriate actions with normal nutritional status. This is in line with Yulianti's research which states that mothers' practices in giving MPASI to their babies greatly influences nutritional status, proves that the better the mother's practice in giving MP-ASI to her baby, the better the baby's nutritional status will be (Jutningsih, 2016).

The results of this research showed that there was 1 mother (1.4%) whose actions were good but the child's nutritional status was short (Stunting). This can be caused by several factors because maternal behavior is not the only factor that influences a child's nutritional status, including physiological factors. Physiological factors in nutritional needs or the ability to metabolize nutrients are the main factors that influence the body's use of food (Wulan, Rahfiludin, & Fatimah, 201).

The results of this research showed that 13 children (17.6%) had appropriate behavior and nutritional status without stunting. This is because mothers who have normal or non-stunting children have the correct behavior of giving MP-ASI, both in terms of age of giving, duration of giving, form, portion, frequency and method of giving (Nurtaati, 2019). Improper provision of MP-ASI has a significant influence on the incidence of stunting (Hasanah, 2020). This is in line with research results (Sarwanti, 2022) which show that the majority of stunted toddlers at the North Tambusai Community Health Center have a history of giving MPASI that is not appropriate in terms of speed, time, frequency, type and portion of giving MP-ASI.
Behavior in providing MP-ASI will directly influence the occurrence of stunting because the nutritional adequacy given to children is greatly influenced by the food intake provided. Improper behavior in providing MP-ASI will result in children's nutritional needs not being met, which will disrupt their growth. In the end, children will experience stunting.

B. Relationship between knowledge about eating patterns and the incidence of stunting

From the results of research that has been conducted (3.1%) of mothers have knowledge of inappropriate feeding patterns who have toddlers with very short nutritional status (Stunting) and (14.9%) mothers who have children with short nutritional status (Stunting). The results of

this research are in accordance with the results of research (Kurniati, 2017) showing that there is a significant relationship between eating patterns and the nutritional status of toddlers. This means that diet is one of the factors that influences the nutritional status of toddlers. If the diet is good, the food intake needed by toddlers can be met. Establishing a good diet is very important and must be paid attention to, because toddlers need proper nutrition for their growth. If this is not fulfilled, toddlers can suffer from malnutrition.

The research results showed that (33.8%) mothers had inaccurate knowledge who had toddlers who were not stunted. According to this, this happens because children do not choose food, parents do not limit their children's snacks and also genetic factors. This is caused by the daily condition of toddlers who are considered to be lacking in food intake. Apart from that, parents also tend to give more snacks so that children don't have an appetite. This happens due to several factors, namely mothers who work, children who have difficulty eating and children who like to eat ciki. Diet is one of the factors that influences the nutritional status of toddlers. If the diet is good, the food intake needed by toddlers can be met.

The type of food consumed also greatly determines a child's nutritional status. This is because children are a nutritionally vulnerable group so the type of food given must be in accordance with the child's needs and digestive capacity. Types of food that are more varied and have sufficient nutritional value are very important to avoid stunting in children. Good feeding patterns must be implemented from an early age by providing a variety of foods and providing information to children about good eating times. In this way, children will get used to healthy eating patterns.

Researchers also found several facts from respondents regarding the feeding patterns of stunted toddlers who felt there was a need for nutritional consultation and assistance. Some children are used to consuming only rice and vegetable soup, then if there are children who like to eat porridge for reasons of difficulty eating until they are more than 2 years old, and the food processing is less varied than mothers of toddlers who prefer to buy more practical food.

C. The Relationship between Access to Information and Stunting Incidents

The results of research data analysis show that the majority of respondents received and utilized information in the poor category. From the results of statistical tests it was found that (4.1%) mothers of toddlers in the category of lack of access to information had very short children (Stunting) and (16.2%) had short toddlers (Stunting) compared to mothers who had children who were not Stunting 44 .6% in the good category in access to information. The lack of information obtained by the mother can cause the mother to lack knowledge about stunting. This is in line with research (Suryagustina, Erni, & Mariyam, 2018) which states that a lack of information greatly influences the mother's level of knowledge.

The results of this research are in line with (Winasis, 2018) that exposure to and good use of technology in the form of information, infrastructure and health services tends to result in better health status. Mothers who use technology well and sufficiently to obtain information and health services tend to have non-stunting children. This happens because all the information and health services received by the mother create a good understanding of the mother so that positive behavior is created, namely awareness of the importance of the growth and development period of toddlers. The use of technology that is lacking in this research is the lack of use of print/electronic media in accessing health information about Stunting. And there is rarely a refrigerator at home as a place to store food, so mothers sometimes go to work without providing food at home. Thus, there is a need for socialization regarding the use of appropriate technology to prevent and overcome stunting.

Access to information from health workers and cadres is also very important in efforts to increase prospective brides' knowledge about stunting. Health workers such as doctors, midwives and nurses have a big contribution in providing information and knowledge to the community. Meanwhile, health cadres are considered closer to the community, making it

easier to approach the community to convey health information.

CONCLUSION

The behavior of providing MP-ASI in Purwoasri Village is that most mothers of toddlers provide complementary breast milk food with inappropriate behavior, with a total of 57 (77.0%) respondents. The majority of mothers' knowledge about eating patterns for children in Purwoasri Village is in the poor category, with a total of 39 (52.7) respondents. Access to information in Purwoasri Village was mostly categorized as poor, with 40 (54.1%) respondents. There is a relationship between the behavior of giving MP-ASI, knowledge about eating patterns and access to information with the incidence of stunting in Purwoari Village, Purwoasri District, Kediri Regency.

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