

Food Availability and Parenting Relationships toward the Incidence of Stunting of Toddlers 2-5 Years (Case Study: Fishing Families in Sabang City)

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ABSTRACT

Stunting reflects the delay in growth that affects failure to achieve normal and healthy height according to age. Stunting problems if not handled can continue to adulthood. Food availability is one of the factors that can affect stunting in infants. Food availability is good in terms of quantity and quality to be the main capital in the adequate intake of family nutrition. Parenting is a mother's care in the form of providing nutritious food, maintaining personal hygiene and health care for toddlers aims to support the growth of toddlers is part of parenting. This study aims to analyze the relationship between food availability and parenting with the incidence of stunting of toddlers 2-5 years in fishing families in Sabang City. This study was an observational study using a cross-sectional design. The samples in this study amounted to 128 toddlers. Family food availability data is obtained using food list recall. Foster pattern data consists of feeding practices, self-hygiene practices and health practices using questionnaires. Data analysis was done using Chi-square statistic test. The results showed a significant relationship between availability of family protein food with incidence of stunting ($p=0.000<0.05$), and foster pattern consisting of feeding practices with incidence of stunting ($p=0.000<0.05$). Self-hygiene practices with incidence of stunting ($p=0.000<0.05$) and health practice with incidence of stunting ($p=0.000<0.05$). Only availability of family energy food that has no significant relationship with incidence of stunting has a value ($p=0.104>0.05$).

Keywords: Food Availability, Parenting, Stunting

INTRODUCTION

Stunting reflects the delay in growth that affects failure to achieve normal and healthy height according to age. Stunting problems if not handled can continue to adulthood. Food availability is one of the factors that can affect stunting in infants.

Stunting is a nutritional problem in Indonesia that needs to be addressed in the immediate event. Stunting is a condition of failure to grow in children due to chronic malnutrition, especially 1,000 HPK so the child is too short for his age. This situation is presented with the value of the height Z-score according to age (TB/U) under two standard deviation (SD) or lower than the median height based on the growth standard according to WHO (WHO, 2018).

Childhood is a period that is very vulnerable to the environment so that it takes more attention especially adequacy of nutritional (Kurniasih et al., 2010). In time toddlers need adequate intake of nutrients in quantities and more qualities, because at this time the toddler experienced physical and brain growth and development. Nutrient Intake is not fulfilled then the physical growth and intelligence of toddlers will experience disruption, which will eventually cause them to be the lost generation, and the vast impact the country will lose quality human resources (Welassih & Wirjatmadi, 2012).

The UNICEF Data in 2013 showed that there were 161 million of stunting toddlers in the world, but in 2014 this figure increased to 162 million toddlers occurring in

children under the age of five. In the Asian continent there are 106 million toddlers who are stunting or about two-thirds of the total stunting toddler in the world. Globally, about one in four toddlers are stunted (Rudert, 2014).

Nationally stunting prevalence in infants has decreased over a period of five years, from 37.2 percent in 2013 to 30.8 percent in 2018. As for normal toddlers there is an increase of 48.6 percent in 2013 to 57.8 percent on tahun 2018. Although nationally there is a decrease in the prevalence of nutritional problems, but there are still 18 provinces above the prevalence of national, one of which Aceh occupies the third position of 34 provinces in Indonesia (Risikesdas, 2018).

The stunting case in ACEH is above the national average, despite the tendency to decline from 2007 to 2018. Risikesdas Data showed a decline in stunting prevalence of 44.6 percent in 2007 to 37.3 percent in 2018, only declining to 7.3 percent. The results of the survey of basic health research stunting in the toddlers of ACEH occupied the position of three of 34 provinces in Indonesia with a prevalence of 37.3 percent, meaning that one out of three children in Aceh were stunted.

Stunting problems in infants can result in physical growth, mental development, and health status in children. Stunting children are concerned with poor, low levels of education and low income as adults. Stunting children are more likely to grow into unhealthy and poor adult individuals. Stunting in children also relates to increased vulnerability of children to diseases, both infectious diseases and untransmitted diseases (PTM) as well as increased risk of overweight and obesity.

According to Anugraheni (2012), Stunting in children is caused by several interconnected factors including food intake. The quality and quantity of child food intake needs to get special attention by the elderly because the child needs a good nutrient intake to support the growth. This suggests that to support good nutritional intake need to improve the ability of mothers in providing good care for children in terms of feeding

practices, self-hygiene / environmental practices or the practice of medical/health search.

Food availability is good in terms of quantity and quality to be the main capital in the adequate intake of family nutrition.

Parenting is a mother's care in the form of providing nutritious food, maintaining personal hygiene and health care for toddlers aims to support the growth of toddlers is part of parenting.

The availability of family food is measured to see the daily food condition of the family with a live interview using the Food list recall form, by asking and recording all foodstuffs along with the number in the household size which is then converted in gram, then the food is analyzed nutrient intake (energy and protein) using Nutrisurvey software. The measurements were done 2 times on different days, and then taken the average amount of energy and protein available in the household, which results in comparison with the AKG of the whole family.

The availability of household food is then categorized into food availability either if the amount of food available $\geq 100\%$ family AKG, food availability is said to be if the amount of food available 80-90% family AKG, food availability is said to be lacking if the amount of food available 70-80% AKG family and food availability is said deficit if the amount of food available $< 70\%$ AKG 1990 family

Based on the research of Widyaningsih et al. (2018) conducted in Bayat Sub-district on Food diversity, foster care patterns and incidence of stunting in toddlers 24-59 months as many as 100 toddlers, showed that as many as 51.2 percent stunting toddlers have a less feeding pattern which means there is a diet relationship with incidence of stunting in infants 24-59 months.

This research was reinforced with research conducted in East Nusa Tenggara that there is a relationship between the foster pattern with incidence of stunting in toddlers 24-59 months. Toddlers who have

foster pattern has a chance of having a 14.5 time stunting when compared with toddlers who have a history of good foster pattern (Nabuasa et al., 2013). The results of the research conducted in central ACEH regency with the value of OR 8.07 it shows that the toddler with the foster pattern has an opportunity of 8 times greater to be stunted, when compared with the toddler's good foster pattern (Aramico et al., 2013). This suggests that to support good growth and development in children, it is necessary to improve the ability of mothers in providing good care especially in the practice of feeding, personal hygiene practices and health practices (Yudianti, 2016).

This study aims to analyze the relationship between food availability and parenting with the incidence of stunting of toddlers 2-5 years in fishing families in Sabang City.

RESEARCH METHODS

The type of research that will be conducted is an observational research using quantitative research methods, this research aims to know the food availability relationship and foster pattern with the incidence of stunting toddlers 2-5 years in the family of fishermen in the city of Sabang. The draft on this research is to use cross sectional design where data collection is performed at a time or same period in measuring free variables and bound variables.

The population of this research is a toddler aged 2-5 years old in Sabang city. The samples of this study were toddlers 2-5

years old from a family of fishermen amounting to 128 toddlers residing in Sabang city, which was determined based on the formula Lameshow.

Family food availability data is obtained using food list recall. Foster pattern data consists of feeding practices, self-hygiene practices and health practices using questionnaires. Data analysis was done using Chi-square statistic test.

RESULT

Analysis of Bivariate Relationship between Availability of Family Food and Incidence of Stunting

Availability of family food is an independent variable that wants to be analyzed with the dependent variable of incidence of stunting. Food availability is assessed by measuring nutritional substances of energy and family proteins. Based on the results the study showed that as many as 60.6 percent of families who had energy food availability was deficits have stunted children. Based on the bivariate analysis test results using the chi square test shows that the availability of family energy food has no connection with incidence of stunting ($p=0.104 > 0.05$).

The results of the study also showed that families who have protein-food availability lack a stunting child of 90.5 percent. Test results bivariate analysis using chi square indicates that there is a significant relationship between the availability of family protein food with incidence of stunting ($p=0.000 < 0.05$).

Table 1. Analysis of Bivariate Result of Between Availability of Family Food and Incidence of Stunting

Availability of Family Food	Nutritional Status				Total		P
	Not Stunting		Stunting		N	%	
	N	%	N	%			
Energy							0.104
Good	15	51.7	14	48.3	29	100	
Medium	22	61.1	14	38.9	36	100	
Less	10	33.3	20	66.7	30	100	
Deficit	13	39.4	20	60.6	33	100	
Protein							<0.000
Good	46	82.1	10	17.9	56	100	
Medium	12	60	8	40	20	100	
Less	2	9.5	19	90.5	21	100	
Deficit	0	0	31	100	31	100	

Relationship between Foster Pattern and Incidence of Stunting

Based on the results shows that 64.9 percent of toddlers who get a foster pattern of feeding are less stunted. Test results bivariate analysis using the chi square test indicates there is a relationship between the practice of feeding with incidence of stunting ($p=0.000<0.05$).

The results of the study also showed that toddlers who get the pattern of self-hygiene are less stunting at 64.4 percent.

Based on the test results bivariate analysis using chi square test indicates there is a relationship between self-hygiene practices with incidence of stunting ($p=0.000<0.05$).

The results of the study also showed that toddlers who are getting the pattern of a less stunting health practices are 78.3 percent. Based on the test results bivariate analysis using chi square test shows that there is a relationship between health practice and incidence of stunting ($p=0.000<0.05$).

Table 2. Analysis of Bivariat Result of Foster Pattern and Incidence of Stunting

Foster Pattern	Not Stunting		Nutritional Status				P
	Stunting						
	N	%	N	%	N	%	
Feeding Practices							
Less	34	35.1	63	64.9	97	100	<0.000
Good	26	83.9	5	16.1	31	100	
Self-Hygiene Practices							
Less	36	35.6	65	64.4	101	100	<0.000
Good	24	88.9	3	11.1	27	100	
Health Practices							
Less	15	21.7	54	78.3	69	100	<0.000
Good	45	76.3	14	23.7	59	100	

Analysis of Multivariate

Based on Table 2, the bivariate selection results are variables p value <0.25 will proceed to the multivariate stage. Variables that enter the multivariate stage are feeding practices, self-hygiene practices, health practices, availability of family energy food, and availability of family protein food. These variables are then inserted together into the model.

Table 3. Bivariate Selection Results with Stunting

No.	Variable	P Value
1	Availability of Family Energy Food	0.104
2	Availability of Family Protein Food	<0.000
3	Feeding Practices	<0.000
4	Self-Hygiene Practices	<0.000
5	Health Practices	<0.000

In the early stages all variables that go into the multivariate model are tested together.

Table 4. Multivariate Analysis of Stunting Phase 1

Variable	B	P Value	Exp(B)	95% Cl. for EXP (B)	
				Lower	Upper
Availability of Family Energy Food	0.265	0.340	1.303	0.757	2.243
Availability of Family Protein Food	1.864	0.000	6.450	3.017	13.789
Feeding Practices	-1.481	0.044	0.227	0.054	0.960
Self-Hygiene Practices	-1.689	0.066	0.185	0.031	1.115
Health Practices	-1.690	0.012	0.184	0.050	0.685
Constant	-2.490	0.004	0.083		

According to Table 4 shows the results that availability of family energy food ($p=0.340>0.05$) and self-hygiene practices ($p=0.066>0.05$) are unrelated to

incidence of stunting and have a p value value below 0.005 so that both variables are removed from the model and cannot proceed to the next stage of the selection.

Table 5. Multivariate Analysis of Stunting Phase Final

Variable	B	P Value	Exp(B)	95% Cl. for EXP (B)	
				Lower	Upper
Availability of Family Protein Food	1.860	0.000	6.422	3.078	13.398
Feeding Practices	-1.548	0.028	0.213	0.054	0.844
Health Practices	-1.999	0.001	0.136	0.041	0.450
Constant	-2.062	0.002	0.127		

The final result of multivariate analysis can be noted that availability of family protein food ($p=0.000$), feeding practice ($p=0.028$) and health practices ($p=0.001$) have a connection to incidence of stunting. However, these three are availability of family protein food that most affect incidence of stunting with the value of Exp (B) 6.422.

CONCLUSION AND SUGGESTION

CONCLUSION

The results showed a significant relationship between availability of family protein food with incidence of stunting ($p=0.000<0.05$), and foster pattern consisting of feeding practices with incidence of stunting ($p=0.000<0.05$). Self-hygiene practices with incidence of stunting ($p=0.000<0.05$) and health practice with incidence of stunting ($p=0.000<0.05$). Only availability of family energy food that has no significant relationship with incidence of stunting has a value ($p=0.104>0.05$).

SUGGESTION

Stunting problems can be solved when there is cooperation between all parties whether family, health care and local government to improve the availability of family food and foster patterns to be together in addressing health problems in particular stunting.

1. For Mothers

As parents, especially mothers who manage food are expected to pay more attention to the diversity of food and increase nutrient intake of protein energy and other nutrients in order to reduce the risk of stunting in children in order to support growth and development of children and is expected to improve the nutritional intake of quality toddlers with a variety of nutrients to be fulfilled its needs, especially in the period of growth spurt so The stunting problem does not continue to mature and does not lead to stunting across generations.

It is hoped that mothers can provide daily breakfast for children, provide nutritious food such as rice, side dishes, vegetables, milk daily, measuring the height and weight of children regularly every month to monitor the nutritional status of children, so that children grow and develop into a useful human resources for the future.

2. For Healthcare Professionals

Improving the role of health workers and cadres in delivering better information and easy to understand by mothers who have toddlers about the pattern of foster-feeding, personal hygiene and health practices toddlers and are expected for health workers can also make training for housewives about the preparation of food menus tailored to the food that is easily found at affordable prices.

3. For Government

Government is expected to create and support programs related to food availability and community self-reliance, for example with affordable food price control and small-medium business development. Improvement of parenting should be supported by the Government by conducting educational activities and interventions related to the fulfillment of children's nutrition so that stunting problems do not continue until adult teenagers so that stunting problems in life cycle can be decided.

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