The Effect of Food Consumption Patterns and Food Intake with Stunting Events in The Work Area of Peureumeu

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Abstract: In the world, Eighty percent (80%) of stunting under-fives are spread across 14 countries and Indonesia is ranked 5th in the country with the largest number of stunting. This is because at that age toddlers are not getting breast milk and are starting to select (choose) the food to eat. Therefore, at this time the role of parents, especially mothers, is very important in providing food for toddlers. Stunting in Acehnese toddlers is ranked 3rd out of 34 provinces in Indonesia with a prevalence of 37.3%, meaning that 1 in 3 children in Aceh is stunted. Meanwhile, the stunting rate for children under two years old (baduta) was ranked 1st out of 34 with a prevalence of 37.9%. This study aims to analyze the effect of food consumption patterns and food intake with the incidence of stunting in the working area of Peureumeu Public Health Center, Kaway XVI District, West Aceh Regency. This type of research is observational with a case-control design. The sample in the case was 15 respondents who experienced stunting and the control sample was 15 respondents who were not stunted. Each case in the subject was matched to a control according to age. Data analysis was performed by chi-square analysis by looking at the Odds Ratio (OR). A total of 30 respondents, the results of bivariate analysis showed that there was a relationship between the variables and the incidence of stunting, food consumption pattern variables (p= 0.001 ; OR= 38.5 ; 95% CL= 3.749-395.407) and food intake (p= 0.035; OR= 12.25; 95% CL= 1,268-118,362). It is recommended to all health agencies and mothers who have toddlers to pay more attention to eating patterns and also the food intake obtained by toddlers and make the appearance of food more attractive to attract the attention of toddlers to eat.

Keywords: Food Consumption Pattern; Food Intake; Stunting

Introduction:

Anthropometry or measurement of the human body provides an important indicator of good nutritional status in children and adults. In children, body measurements reflect general health status, dietary evaluation, and growth and development over time. While in adults, body measurements are used to see health and nutritional status, risk of disease, and human body composition (CDC, 2016) Worldwide, in 2015, there were 156 million children with short stature, about 45% of whom lived in countries - developing countries and countries in conflict (WHO, 2017).

Eighty percent (80%) of stunting under-fives are spread across 14 countries in the world and Indonesia is ranked the 5th country with the largest number of stunting. This is because at the age of the toddler they are not getting breast milk and are starting to select (choose) the food to eat. Therefore, at this time the role of parents, especially mothers, is very important in offering food to toddlers. (Novita, 2018)

The Millennium Challenge Account Indonesia (2015) stated that the prevalence of stunting in Indonesia is higher than other countries in Southeast Asia, such as Myanmar (35%), Vietnam (23%), and Thailand (16%). In Indonesia, it is estimated that 7.8 million children under 5 years of age are stunted, this data is based on a report released by UNICEF. Most countries with the number of children under 5 years experiencing high stunting. The prevalence of stunted children under five in Indonesia based on the results of the 2013 Riskesdas reached 37.2% and was ranked 24th out of 32 provinces in Indonesia. The incidence of stunting at Riskesdas in 2010 was 35.6% and in 2007 was 36.8%. Short prevalence is 37.2% consisting of 18.0% very short and 19.2% short. (Farah, 2018)

In Indonesia, the national prevalence of short stature in 2013 was 37.2%, which means an increase compared to 2010 (35.6%) and 2007 (36.8%). The prevalence of 37.2% consisted of 18% of very short stature and 19.2% of short stature. In 2013, very short stature decreased from 18.8% in 2007 and 18.5% in 2010. The prevalence of short stature increased from 18% in 2007 to 19.2% in 2013 (Riskesdas, 2013).

The prevalence of nutritional problems, namely stunting, underweight and wasting in Aceh has always been above the national average, although there is a downward trend from 2007 to 2018. The results of basic health research (Riskesdas) show that the prevalence of stunting has decreased from 44.6% (2007) to 37.3% (2018) only decreased by 7.3%. The results of the basic health survey (riskesdas 2018) that stunting in Acehnese toddlers is ranked 3rd out of 34 provinces in Indonesia with a prevalence of 37.3%, meaning that 1 in 3 children in Aceh is stunted. Meanwhile, the stunting rate for children under two years old (baduta) was ranked 1st out of 34 with a prevalence of 37.9%. (Riskesdas 2018). Meanwhile, when compared with the nutritional problems of children under five in Aceh between 2016 and 2017, it can be seen that there was an increase in the prevalence of stunting by 23.9% in 2016 and 35.7% in 2017 with a stunting prevalence in West Aceh of 33.2%. . (PSG, 2017). Nationally, the average energy consumption adequacy for children under five is 83.2%, while for Aceh it is 72.4% or Aceh's position is in the lowest position of all of Indonesia. (PSG, 2017)

In the study, Basri Asamico et al, explained that children with a poor diet had a 3 times higher risk of becoming stunted. In Brazil, a study proved that children who eat less or consume protein intakes below the average daily nutritional adequacy are 1.5 times more likely to experience stunting. While research in Latin America explains that the relationship between malnutrition and those who are not malnourished has changed the speed of diet and physical activity in school children. (Asamaco, 2015) Based on data from the West Aceh District Health Office in 2018, Peureumeu Health Center was the health center with the highest stunting cases, namely 24 cases (20.2%), while in other health centers such as Johan Pahlawan there were 3 cases (2.5%), Suak Ribee as many as 18 cases (15.1%), cot seumereng as many as 1 case (0.8%), kuta padang layung as many as 5 cases (4.2%), kuala bhee as many as 20 cases (16.8%), pasi mali as many as 13 cases (10.9%), tangkeh in 2 cases (1.7%), pante cermen in 3 cases (2.5%), meurebo in 14 cases 4 (11.8%), 5 cases of bone loss (4.2%), and Kajeung Public Health Center 11 cases (9.2%).

(Dinkes, 2018) While the data at the Peureumeu Public Health Center In 2019, there were 1,298 toddlers and 30 toddlers experiencing stunting (2.3%). (Public health center Peureumeu, 2019)

Methods

This research is an observational study with a case control research design. In case studies, observations or measurements of the dependent variable are not carried out at the same time. The study began by measuring the dependent variable, namely the effect, while the independent variables were searched retrospectively. The inclusion and exclusion criteria for the sample in this study were as follows: 1) children under five years of age (toddlers) living in the working area of Peureumeu Public Health Center, Kaway XVI District, West Aceh Regency, 2) TB/U index value <-2 SD in case group, the TB/U value was -2 SD in the control group and 3) Mother was willing to be a respondent.

Result

Table. 1. Analysis Bivariate

Variables	Cases		Control		Total		P-Value	OR
	F	%	F	%	F	%		
Food Intake								
Lest Then	14	63.6%	8	36.4%	22	100%	0.035	12.25
Good	1	12.5%	7	87.5%	8	100%		
Food Compsumtion Pattern								
Lest Then	14	77.8%	4	22.2%	18	100%		
Good	1	8.3%	11	91.7%	12	100%	0,0001	38,50

Discussion

Effect of Food Consumption Patterns with Stunting Incidence in Toddlers in the Work Area of Peureumeu Health Center.

In accordance with the chi-square statistical test, the P value = 0.00 and this is smaller than = 0.05 (P-value = 0.00 < 0.05), where Ha is accepted and H0 is rejected so it can be concluded that there is a relationship between food consumption patterns and the incidence of stunting in toddlers in the region. Peureumeu Health Center work. Based on the observations of researchers in the field. Almost all children with stunting status have problems in food consumption patterns. Both in terms of the eating schedule, the frequency of food consumed and even the type of food consumed. In fact, children with stunting status often skip their meals. In addition, the food consumed by these children under five is less varied. Unlike the case with normal children. Toddler normal people tend to pay attention to the food eaten by th eir mother and the food they eat varies.

According to Dewi's previous research, there is a relationship between food consumption patterns and the incidence of stunting in toddlers 36-59 months. According to Suharjo (2009), what has happened in the community so far is that mothers do not pay attention to the pattern of feeding their toddlers, where the amount, type, and frequency of eating are not paid attention to and do not know the food needs that should be sufficient for their toddlers. Haharjo's research is in accordance with the results obtained, that it can be concluded that there is a relationship between the type of food, the amount of food and the food schedule for toddlers with the incidence of stunting. The results of the study on feeding patterns in a study showed that the provision of animal side dishes, vegetable side dishes, vegetables and fruit to children under five who had edited was still not considered for giving. As for children who do not experience stunting, attention has been paid to regular and varied feeding (Maqfiroh, 2020).

The results of the research conducted at the Jatinegara Public Health Center showed that most of them had good status, namely 41 children under five or around (70.7%). This is possible due to mothers who have knowledge about consumption patterns so that they implement this knowledge in daily life so that the nutritional needs of children are met. In the nutritional status of toddlers, it is less likely.

Effect of Food Intake with Stunting Incidence in Toddlers in the Work Area of Peureumeu Health Center

Based on the results of statistical analysis using chi-square between food intake and the incidence of stunting, the P value was 0.03 (<0.05). it means that there is a relationship between food intake and the incidence of stunting in the working area of the Peureumeu Health Center, this is in accordance with the UNICEF theory which states that inadequate food consumption is one of the factors that can lead to stunting. Observations of researchers in the field showed that respondents who had stunted toddlers gave less food to their toddlers and paid less attention to nutrition or food intake given to their toddlers compared to respondents who had normal toddlers. Respondents who have stunted toddlers, on average, often skip the food they should eat.

The average total protein intake collected through the food recall method and the semi-quantitative food frequency method was significantly lower in stunting children, even though both groups had a sufficient percentage of the RDA. According to Sari et al's research, almost all of the food intake that is obtained shows that children who experience stunting get food intake which is lower than children who are not stunted (Sari et al, 2016). The results show that the proportion of toddlers who have an inadequate energy adequacy level is more in the stunting group (54.5%) and toddlers who have an inadequate energy adequacy level have a 9.5 times greater risk of stunting compared to toddlers who have an adequate energy level. (Damayanti, 2016.)

Several studies have shown that food intake is associated with stunting. Research conducted by fitri in supariasa (2012) based on 2010 RISKESDAS data in Sumatra stated that the intake of nutrients in the form of energy and protein showed a significant relationship to the incidence of stunting. This is the same as that shown in Supriasa's research in Oktarina (2013) that there is a relationship between the level of energy consumption and the incidence of stunting in toddlers. (Nur Fitra, 2017). During the growth process, toddlers need complete nutrients to help the

growth process which is influenced by the food consumed by children. Provision of food to toddlers must be appropriate both in type and amount to the nutritional content of the food. Nutrients needed by children are determined by age, gender, activity, weight, and height. To determine the average consumption of a group of respondents, it can use the 2x24 hour recall method or weighing for one day is sufficient. As was done in Oktarina's 2013 research (Nur Fitra 2017). Nutrient intake from food and the process of absorption in the body can affect nutritional status. Imbalance of energy and carbohydrate intake and other macronutrients with continuous needs can result in negative changes in body weight which is one indicator of nutritional status assessment. (Amerta, 2019)

Conclusion:

After conducting research on 30 respondents to children under five according to the criteria in the work area of the Peureumeu Health Center, Kaway XVI District, West Aceh Regency, in 2020 it can be concluded that: There is a significant relationship between food consumption patterns and the incidence of stunting in toddlers in the working area of Peureumeu Health Center with tilapia P value = 0.001 and OR = 38.5. There is a significant relationship between food intake and the incidence of stunting in children under five in the working area of the Peureumeu Public Health Center with P value = 0.035 and OR = 12.25

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