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Analysis of Stunting Incidence and its Influencing Factors in Banggle Village

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ABSTRACT

Stunting is an important problem. This is because it is very influential on the future development of the nation starting from the growth of its children. Stunting in children is a chronic nutritional problem due to inadequate nutritional intake in the long term combined with infectious diseases in children and environmental problems. Stunting needs special attention because it can increase the risk of death in children, as well as hinder the physical and mental development of children. The method used in this research is a quantitative method with case control study. The population in this study is all children under five aged 1-5. The research location is in Bangggle Village, Kanigoro District, Blitar Regency. The time of the study was July – August 2021. The sample of this study was 84 respondents using the Purposive Sampling technique with a total of 42 case respondents and 42 control respondents. The statistical test used was the chi square test. family income, mother's occupation, history of basic immunization and history of ARI and diarrhea. Meanwhile, the results of statistical tests for other variables can be concluded that there is a relationship between birth weight, mother's education, history of exclusive breastfeeding, energy and protein intake and the incidence of stunting (p=<0.05).

Keywords : Analysis of Stunting, Factor, Intake energy

INTRODUCTION

Based on data from World Health Statistics 2018, Indonesia ranks 3rd highest with a stunting prevalence of 36.4% in the Southeast Asia Region (World Health Organization, 2018). Stunting is defined as a growth disorder in children where the child's height is lower or shorter than the standard age caused by lack of nutritional intake for a long time (Ministry of Health, Government of the Republic of Indonesia, 2018). Stunting based on the Decree of the Minister of Health of the Republic of Indonesia Number 1995/MENKES/SK/XII/2010 concerning the standard of arthropometry for assessing the nutritional status of children is a condition where the measurement results of Body Length according to Age (PB/U) or Height according to Age (TB) /U) is between -3 SD to -2 SD. If the measurement results of PB/U or TB/U are below -3 SD, it is called very short (severe stunting) (Kemenkes RI, 2011).

With the emergence of various factors in increasing the number of stunting in Indonesia, it becomes interesting to study by looking at the number of stunting in Blitar Regency. Thus it becomes also interesting to be used as research as a requirement to fulfill the final project. With the title " Analysis of Stunting Incidence and its influencing factors in Banggle Village, Kanigoro District, Blitar Regency"

METHODS

The method used in this research is quantitative method with case control study. The population in this study is all children under five aged 1-5. The research location is in Banggle Village, Kanigoro District, Blitar Regency. Julie research time – August 2021. The sample of this study was 84 respondents using the purposive sampling technique with a total of 42 case respondents and 42 control respondents.

RESULTS

The sexes in the case group and the normal group were almost the same as many as 23. And for the age of toddlers, many respondents were aged 37-60 months in the case group and control group. In the case group of toddlers who had low birth weight as many as 11 toddlers and in the control group as many as 3 toddlers. The results of the study were the birth weight of toddlers in the sample was in the range of 2200 – 2480 grams.

The family characteristics observed in this study were mother's education, mother's occupation, and family income. The work of mothers in the case group and in the control group had mothers who did not work by 90.5%. In the mother's education, in the case group, there were more mothers with less than high school education and in the control group, the mother's education was more than the same as SMA. The family income in each group was low, namely less than a minimum wage of Rp. 2.004,000.

In the case group and in the control group each gave colostrum to toddlers. As for the mother who did not give her colostrum because at that time she thought the colostrum was dirty. Whereas in exclusive breastfeeding, 61.9% of children under five did not receive exclusive breastfeeding and in the control group, 71.4% of infants received exclusive breastfeeding.

Complete basic immunization followed by the case group and control group had almost the same results, as many as 92.2% of toddlers did complete basic immunization. Energy and protein intake in the case group had a low intake, while in the control group energy and protein intake tended to be sufficient.

The frequency of food consumption in the case group and the normal group of animal protein sources found eggs to be the food that was often consumed by the case group, namely 3 times for one week. In addition there are meatballs as a source of animal protein that is often consumed. In contrast to the normal group, which more often consume marine fish in the form of pindang. Both the case and control groups had a rare frequency of diarrhea. Likewise with the frequency of ARI shown in the table, each group has a history of rare illness.

DISCUSSION

Table 1 Variable Statistical Test

Variable	Stunting		Normal		*p value**	OR
	n	%	n	%		(95% CI)
Birth weight						
<2500 grams	11	26.2	3	7.1	0.04*	4.6
≥ 2500 grams	31	73.8	39	92.9		(1.18 – 17.9)
Mom's job						
Work	7	16.7	1	2.4	0.063	8.2
Doesn't work	35	83.3	41	97.6		(0.96 – 69.9)
Mom's education						
Low	25	59.5	13	15.5	0.016*	3.28
High	17	40.5	29	69.0		(1.33 – 8.05)
Income						
Under minimum wage	36	85.7	34	81.0	0.770	0.78
Up to minimum wage	6	14.3	8	19.0		(0.23- 2.24)
Exclusive breastfeeding						
No	26	61.9	12	28,6	0.004*	4.06
Yes	16	38.1	30	71,4		(1.6 – 10.1)
Basic immunization						
Not complete	5	11.9	1	2.4	0.24	5.5
Complete	37	88.1	41	97.6		(0.61 – 49.63)
Energy Intake						
Low	25	59.5	13	31.0	0.01*	3.28
Enought	17	40.5	29	69.0		(1.33 – 8.05)
Protein Intake						
Low	24	57.1	7	16.7	0.00*	6.66
Enought	18	42.9	35	83.3		(2.41 – 18.4)
Diarrhea Frequency						
Often	7	16.7	2	4.8	0.158	4.00
Seldom	35	83.3	40	95.2		(0.77 – 20.53)
ARI frequency						
Often	10	23.8	6	14.3	0.45	1.87
Seldom	32	76.2	36	85.7		(0.61 – 5.73)

Based on the results of the study, the case group had children under five who had a history of low birth weight by 26.6% in the control group of low birth weight by 7.1%.

Statistical results ($p<0.05$) showed that there was a relationship between low birth weight and stunting. Babies who have low birth weight will experience the risk of stunting as much as 4 times.

In the control group there were 97.6% of mothers who did not work and in the case group, 83.3% of mothers did not work. so that in this case it can be concluded that mothers who do not work in the case group and the control group do not experience any difference. Toddlers with mothers do not work are more likely to be stunted because mothers who do not work will pay more attention to the quality and quantity of food consumed by their children and also have more time to take care of and care for their children.

Based on the results of the study, the control group had mothers with low education less than high school as many as 13 respondents, while in the control group the mothers had low education as many as 25 respondents. This shows that stunting toddlers have mothers with low education. So that the mother's education is very influential on the occurrence of stunting because the mother's level of knowledge is lacking. Based on the test, the mother's education variable was related to the incidence of stunting ($p<0.05$). Mothers who have low education will have 3 times the risk of stunting under five.

Based on the results of the study, the income of parents in the control group and the income of parents in the case group have almost the same percentage, which is more than 80%. So in this case it can be concluded that the income of parents below the minimum wage (< 2.004,000) has no effect on the incidence of stunting under five.

Based on the results of the study, the control group of children under five who did not receive exclusive breastfeeding for 6 months was 28.6%, while the case group was 61.9%. This shows that the case group has very minimal knowledge about exclusive breastfeeding, so they give other foods such as formula milk, honey and bananas. Babies who get other foods before the age of 6 months are considered babies who are not enough with only breast milk. Babies cry continuously because of lack of milk so that parents or other family members give additional food prematurely. The results of the variable test showed that there was a relationship between exclusive breastfeeding and the incidence of stunting ($p<0.05$). Mothers who do not give exclusive breastfeeding will be at risk of having stunting children 4 times.

Based on the results of the study in the control group as many as 1 child under five did not carry out complete basic immunization. The toddler missed the DPT 2 and Polio 3 immunizations. Meanwhile, in the case group, it was found that there were 5 toddlers who did not complete the basic immunization. The immunizations that the child did not participate in were DPT/HB2, polio 3 and measles. The parents of the toddler felt sorry for not seeing or knowing complete information about immunizations, so they were left behind with immunizations that should have been implemented. So in this case the control or case has the same thing in incomplete immunization.

Based on the results of the study, energy intake in the dick group was 69% with adequate intake of > 1350 kcal per day, while in the case group as many as 59.6% experienced low energy intake < 1350 kcal. So it can be concluded that the toddler case group has a low energy intake so that it affects their daily energy needs. Protein intake in the dick group as much as 83.3% of toddlers experienced adequate intake of > 20 mg per day. Meanwhile, in the case group, 57.1% of toddlers had low protein intake <20 mg per day. In this case, the toddler case group did not meet the daily protein intake.

Energy and protein intake had a significant relationship with the incidence of stunting ($p<0.05$). If the intake of energy and protein is low in toddlers, the toddler has more than 3 times the risk of experiencing stunting. Nutrient intake in toddlers is very important in supporting growth according to the growth chart so that growth faltering does not occur

which can cause stunting. (Stunting Bulletin, 2018). Adequate nutrition is necessary to ensure optimal growth and development of infants and children. Daily nutritional needs used to carry out and maintain normal body functions can be done by choosing and consuming good foods.

Based on the results of the research on the history of ARI disease in the control group, 6 respondents experienced frequent, in the last three months experiencing 2 – 3 times fever, cough and flu. The longest experiencing pain is 1 to 3 days. This is different from the case group, there are 10 respondents who have frequent ARI frequencies, more than 2 times in 3 months. Those who have fever, cough and runny nose for 1-3 days. Of course this is very influential on health and food consumption. If this happens for a long time then this infection will greatly affect the nutritional status of toddlers. The occurrence of this illness is very dependent on many things, ranging from the wrong food and also the lifestyle of maintaining personal hygiene. Because all that will not be separated with the occurrence of various diseases.

CONCLUSON

Based on the results of the research that has been carried out and described in the discussion, the researchers can draw conclusions that there is a relationship between birth weight, mother's education, history of exclusive breastfeeding and energy and protein intake on stunting. Toddlers who have low birth weight have 4 times the risk of experiencing stunting. Toddlers who have mothers with low education have 3 times the risk of experiencing stunting. Exclusive breastfeeding that is not given has a 4 times risk of experiencing stunting. Low energy intake and low protein intake have a risk factor of 3 times experiencing stunting.

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