CORRELATION BETWEEN THE NUTRITIONAL STATUS OF PREGNANT WOMEN WITH STUNTING BABIES 6-24 MONTHS OLD IN THE WORKING AREA OF PASREPAN HEALTH CENTER

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ABSTRACT

Introduction: Stunting is a condition of impaired growth that children experience because of prolonged poor nutrition. Factors that cause stunting are the nutrition status of pre-pregnancy mothers, nutrition status during pregnancy, early initiation of breastfeeding, exclusive breastfeeding, environment sanitation, and infection in children. Stunting has an impact on suboptimal intelligence in children and also can result in a poor immune system.
Purpose: To know the correlation between pregnant mothers' nutrition status with stunting babies 6-24 months old in the working area of Puskesmas Pasrepan.
Method: This study was an observational analytical study with a case-control retrospective design, participated by 80 babies which 40 were stunted and the other 40 were normal height and was taken from Pasrepan Health Center secondary data using consecutive technique sampling. Data was taken from Puskesmas Pasrepan consisted of mid-upper arm circumference (MUAC) of pregnant women, the height of children 6-24 months, age of children, number of ANC visits, and sex of children. Variables were analyzed using Chi-Square to know the correlation between the nutritional status of pregnant women with stunting.
Results: 5 out of 6 stunted 6-24 months old babies (83,3%) were from malnourished pregnant women or maternal chronic energy deficiency (CED),and 35 out of 40 stunted 6-24 months old babies (47,3%) were from maternal with normal nutrition. The correlation between the nutritional status of pregnant womenwith stunting results was (p=0,09).
Conclusion: There is no significant correlation between the nutritional status of pregnant women with stunting babies 6-24 months old.

Keywords: Stunting, Mid Upper Arm Circumference (MUAC), baby

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INTRODUCTION

The incidence of stunting is one of the nutritional problems experienced by children under five years of age globally. In 2017, around 150 million children under five in the world were stunted, with a percentage of 22.2% of the world's children under five. In 2000, the stunting rate decreased by around 32.6%. 2017 shows that half of the world's children and toddlers who suffer from stunting are in Asia. The largest proportion is in southern Asia. The data collection on the prevalence of stunting of children under five, which was collected by the World Health Organization (WHO), shows that Indonesia is in the third position with the highest prevalence in Southeast Asia. (1) Malnutrition is one of the main health problems in Indonesia, especially stunting. During the last three years, it has been shown that children who have nutritional status disorders that result in short stature are more than those who suffer from nutritional status disorders that result in thin or obese stature. Stunting continues to increase from 2016 by 27.5% to 29.6% in 2017, according to Nutritional Status Monitoring (PSG) data. (1) The results of Basic Health Research (Riskesdas) in 2018 show that the proportion of nutritional status of children under five is very short with high interpretation based on age <-3 standard deviation (TB / U <-3SD) and nutritional status of children under five with high interpretation based on age> -3 standard deviation to <-2 standard deviation (TB / U> -3SD s / d <-2SD) according to district /city, East Java province in 2013-2018 experienced an insignificant decline, namely in 2013 amounted to 35, 8% while in 2018 it became 32.81%. Based on the Pasuruan Health Office data in August 2019, the percentage of children under five with stunting was 22.5% of the 82,963 children who underwent examinations in the Pasrepan District area. The highest number of stunting was 1177 children. Thus, causing growth failure in children under five years old. Under-five malnutrition is affected since the toddler is still in the womb and after pregnancy. However, this stunting condition appears at the age of 2 years. According to the Ministry of Health (Kemenkes), children under five who experience stunting are their height less than -2 standard deviation (SD) from the WHO height curve. Toddlers who are stunted have short stature and have the possibility of having a suboptimal level of intelligence and a deficient body defense system, which can reduce productivity and can affect their future. If the number of people who are stunted in a country is large, it can impact the economy, such as poverty and social inequality in society. The government has also taken steps to overcome this by issuing 12 policies that are expected to reduce the prevalence of stunting. In addition to issuing policies, the Ministry of Health also issued a program, namely Specific Nutrition Program Interventions related to specific nutrition interventions and sensitive nutrition interventions.

Based on data from the Ministry of Health in 2019, pregnant women suffering from CED is 14%, while the prevalence of pregnant women suffering from CED in East Java is still above the national level, namely 18%. (5) The nutritional status of mothers during pregnancy plays a large enough role in preventing stunting. The usual measurement to determine the nutritional status of pregnant women is the circumference of the upper arm (LILA). The upper arm circumference is often used in health centers because the tool is cheap, easy to do, and very easy to carry. (6)

Based on the description above, it is known that the incidence of stunting is still common in Indonesia and has a significant impact, so the researchers were interested in examining the relationship between the nutritional status of pregnant women and the incidence of stunting of children aged 2-24 months in the working area of Pasrepan Health Center.

METHOD

This type of research is an observational analytic study, which observes the research subject to find the relationship between variables. The research design used was a retrospective case-control method regarding the relationship between the nutritional status of pregnant women and the incidence of stunting for children aged 6-24 months in the Pasrepan Health Center. The population of this study was children 6-24 months of age in the Pasrepan Public Health Center. The samples of this study were toddlers aged 6-24 months in the Pasrepan Public Health Center who met the inclusion and exclusion criteria. The sampling technique in this study was conducted using the Consecutive sampling technique.

The inclusion criteria in this study were toddlers aged 6-24 months who had mothers aged 21-35 years in the working area of Pasrepan Health Center. Mothers had a KIA book containing LILA measurement data, complete ANC (at least four meetings), and children's height measurements. The exclusion criteria in this study were children under five with a history of birth with LBW (<2500 grams) and premature (<37 weeks)), mothers with a history of hypertension (≥140 / 90 mmHg), history of preeclampsia (pregnant women with hypertension, proteinuria, headaches), history of anemia (Hb <11 g / dL), and multiple / more pregnancies, history of maternal and chronic childhood disease.

RESULTS

Based on the research conducted by the researcher, the following describes the respondent's characteristic data in the form of respondent's age, gender, ANC visit, and nutritional status of pregnant women.

Table 1. Characteristics of Respondents

Variable	Frequency (Percentage)		Total
	Stunting		
Toddler age (month)	Yes	No	
6-12	15	12	27
	(56,6%)	(44,4%)	(100,0%)
13-18	9	18	27
	(33,3%)	(66,7%)	(100,0%)
19-24	16	10	26
	(61,5%)	(38,5%)	(100,0%)
Total	40	40	80
	(100,0%)	(100,0%)	(100,0%)
Gender			
Male	26	19	45
	(57,8%)	(42,2%)	(56,3%)
Women	14	21	35
	(40%)	(60,0%)	(43,7%)
Total	40	40	80
	(100,0%)	(100,0%)	(100,0%)
ANC visit (time)			
4-6	29	25	54
	(53,7%)	(46,3%)	(67,5%)
7-9	11	15	26
	(42,3%)	(57,7%)	(32,5%)
Total	40	40	80
	(100,0%)	(100,0%)	(100,0%)

Based on the data in the table above, it was found that the respondents in this study aged 19-24 months with children under five who experienced stunting were 16 respondents or 61.5%. Distribution based on the sex of respondents found that the sex of children under five who participated in this study were women as many as 35 respondents or 43.7% and male as many as 45 respondents or 56.3%. The frequency of the number of ANC visits by the respondent's mothers who participated in the study found that the highest number of ANC visits that occurred stunting was the ANC visits 4-6 times as many as 29 respondents or 53.7%.

Table 2. The Relationship Between Nutritional Status of Pregnant Women and Incidence of Stunting in Children 6-24 months

Variable	Stunting		Total	P Value
	Yes	Not		
CED	5 (83,3%)	1 (16,7%)	6 (7,5%)	0,090
No CED	35 (47,3%)	39 (52,7%)	74 (92,5%)	
Total	40 (100%)	40 (100%)	80 (100,0%)	

The analysis test results using the Chi-Square test obtained a significance value or p = 0.09. This indicates that there is no significant relationship between the nutritional status of pregnant women and the incidence of stunting for children aged 6-24 months. The relationship between the two variables is significant if the p-value is <0.05. So, from the results of the analysis test carried out, the conclusion is that the research hypothesis is rejected.

DISCUSSION

The stunting of infants aged 6-24 months can be affected by the nutritional status of pregnant women. Several factors, including the respondent's age, gender, and the number of ANC visits by the mother, have a role in influencing the incidence of stunting for children aged 6-24 months.

This study found that the highest number of respondents with stunting was 16 people (61.5%) aged 19-24 months. The results of this study follow the 2013 Riskesdas data, which shows that the greater the baby's age, the difference in height between normal and stunted babies is quite striking. (1) This can be since the nutritional intake of infants aged 6- 24 months is increasing and can no longer be fulfilled from breast milk only. At this age, the child is in a period of rapid growth and development, becomes exposed to infection, and becomes physically active; therefore, the baby's need for nutrition increases with attention to these factors. (7)

Based on the distribution of sex groups, the largest number of respondents experiencing stunting were male, with as many as 26 respondents (57.8%). Research by Rohan et al. 2016 shows that women's physical activity is lower than men's due to socio-ecological factors from individuals, families, and schools. With low physical activity, more nutritional needs are needed for growth. (8).

The results also showed that the number of respondents who experienced the most incidence of stunting was mothers who made ANC visits 4-6 times. Based on research by Harimat et al. In 2018, in all Puskesmas in Indonesia, it was found that midwives who performed ANC correctly and well for the 9T, 7T, 5T components were 18.8%, 23.2%, and 31.7% of the 224 midwife samples, p. This shows that even though the quantity of ANC visits is according to a predetermined standard, the quality carried out is still below the standard. (9) The research results found that the relationship between the nutritional status of pregnant women and the incidence of stunting in children 6-24 months using the Chi-Square test was p = 0.09 (p≤0.05). This shows that there is no significant relationship between the nutritional status of pregnant women and the incidence of stunting in children aged 6-24 months. From these results, it can be concluded that H0 is rejected. Research conducted by Kristiana et al. in 2016 shows that the history of CED and anemia in pregnant women is not related to the incidence of stunting in children aged 6-23 months in Sedayu District, Bantul, Yogyakarta (10). Research conducted by Ridha et al. in 2017 shows no relationship between the history of maternal nutritional status during pregnancy with the growth of children under five in Soreang District, Bandung Regency.

CONCLUSION

Based on the results of the research that has been conducted, it is concluded that there is no significant relationship between the nutritional status of pregnant women and the incidence of stunting of children aged 6-24 months.

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