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THE RELATIONSHIP BETWEEN LOW BIRTH WEIGHT AND THE INCIDENCE OF STUNTING IN TODDLERS 2 YEARS OLD AT THE KATARINA SIMANJUNTAK CLINIC MEDAN

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ABSTRACT

Stunting is the failure growth in toddlers is due to malnutrition over a long period of time, exposure to repeated infections and lack of stimulation. The period 0-24 months is a golden period that determines the quality of life and is very sensitive because the consequences for the baby during this period will be permanent and cannot be corrected. The aim of this research is to analyze the history of low birth weight and the incidence of stunting in babies. The research design used in this research is a descriptive analytic with retrospective design. The population in this study were 2 years old baby in the working area of the Katarina Simanjuntak Clinic and the sampling technique in this research is a purposive technique, a sampling technique that is based on certain criteria previously determined by the researcher with totaling 98 people. The instrument used in this research was microtoise and KIA Books. The results of data analysis showed that 12 babies with birth weight at risk experienced stunting (24.5%) and 1 person (2%) did not experience stunting with the p value is 0.001, meaning that there is a significant relationship and there was a 15,568 chance of stunting in babies born with low weight compared to babies born with normal weight. This research can used to provide references to health workers in efforts to prevent stunting by optimizing the provision of nutrition and stimulation, especially for babies with low birth weight.

Keywords: low birth weight; stunting; toddlers

INTRODUCTION

Stunting is the failure growth in toddlers is due to malnutrition over a long period of time, exposure to repeated infections and lack of stimulation (Ministry of Health 2022). Stunting is a growth failure (growth faltering) due to the accumulation of nutritional deficiencies that last for a long time starting from pregnancy until the age of 24 months. The period 0-24 months is a golden period that determines the quality of life and is very sensitive because the consequences for the baby during this period will be permanent and cannot be corrected, so at this age adequate nutrition is required (Mucha, 2012).

The results of the Basic Health Research (RISKESDAS, 2018), found that 30.8% of children endured stunting, which means 3 out of 10 children in Indonesia endured stunting (Riskesdas, 2018). SSGI 2022 reveal that the percentage of stunting in Indonesia is 21.6% and percentage in North Sumatra it is 21.1%. Stunting in early life particularly in the first 1000 days from conception until the age of two impaired growth has adverse functional consequences on the child. Some of those consequences include poor cognition and educational performance, low adult wages, lost productivity and increased risk of nutrition related chronic diseases in adult life. One of the direct causes of children experiencing stunting nutritional problems is a history of low birth weight (Wahyuningrum et al., 2023). One of the long-term effects is the disruption of children's height growth or stunting (Wijayanti, 2022).

Malnutrition at the beginning of a child's life will continue in every human cycle starting from pregnant women who experience chronic energy deficiency and will be at risk of giving birth to low birth weight (LBW) babies. LBW is what will continue to cause toddlers to be at higher risk of experiencing stunting and continuing into school age ((Septikasari, 2018). According to WHO (2020), the impacts that arise if a child experiences stunting are divided into short-term and long-term impacts. The short-term impacts that will be experienced can increase the incidence of morbidity and death as well as hamper the process of cognitive, motor and verbal development in children. Meanwhile, in the long term, children will have less than optimal body posture (shorter than children their age), an increased risk of obesity, and decreased productivity and work capacity. Diagnosis of stunting in children can be done by anthropometric measurements, namely height or body length adjusted for age and this can measure the baby's linear growth achievement which describes the child's nutritional condition in the past The use of the body length index according to age can identify children who are stunted or very short (severely stunted), so that the nutritional status indicator height for age (TB/U) or body length for age (PB/U) can describe the problem chronic nutrition in children according to (Kementerian Kesehatan Indonesia, 2020). Under normal circumstances, height will increase with age. Height growth, unlike body weight, is relatively less sensitive to malnutrition problems in a short period of time. The effect of nutritional deficiencies on height will appear over a relatively long period of time so this index can be used to describe nutritional status in the past.

METHOD

The research design used in this research is a descriptive analytic with retrospective design, research carried out with the aim of creating an objective picture or description of a situation by looking backwards. The population in this study were 2 years old baby in the working area of the Katarina Simanjuntak Clinic and the sampling technique in this research is a purposive technique, a sampling technique that is based on certain criteria previously determined by the researcher (Sugiyono, 2016) with totaling 98 people. The instrument used in this research was microtoise and KIA Books.

RESULTS AND DISCUSSION

Table 1.
The relationship between low birth weight and the incidence of stunting in toddlers 2 years old (n=98)

Birth weight	Stunting		Normal		P	CI	OR
	f	%	f	%			
Low birth weight	12	24,5	1	2	0,001	1,936-125,181	15,568
Normal weight	37	75,5	48	98			

Table 1 The results of data analysis showed that 12 babies with birth weight at risk experienced stunting (24.5%) and 1 person (2%) did not experience stunting. The p value contained in the chi square test results is 0.001, meaning that there is a significant relationship between the history of a baby's birth weight and the incidence of stunting in babies aged 2 years. There is a 15,568 chance of stunting in babies born with low weight compared to babies born with normal weight. Birth weight is also related to long term growth and development of toddlers. LBW (dysmature) endured growth problems when they are in the womb and will continue until the baby is born and are at risk of endured growth faltering and development than babies born normally, and can also endured growth failure at their age (Dhaded et al., 2020). This is in accordance with research

conducted by (Akombi et al., 2017) which states that toddlers born with low birth weight are significantly more likely to suffer from stunting. The effect of babies born with a weight of less than 2500 grams is failure their growth and development and may experience a decline in intellectual function and are more susceptible to infection and hypothermia (Wong, 2009). As is known, the period from 0-24 months of a child's age is a golden period that will determine the quality of life. This period is a sensitive period because the consequences during this period are permanent, difficult to detect because nutritional problems in children are not easily recognized by society and even families because children do not appear sick and cannot be corrected.

CONCLUSION

There is a relationship between a history of low birth weight and the incidence of stunting in babies. The aim of this research is to analyze the history of low birth weight and the incidence of stunting in babies to provide references to health workers in efforts to prevent stunting by optimizing the provision of nutrition and stimulation, especially for babies with low birth weight.

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