

Conference Paper

The Number of Stunting Cases Based on Chronic Energy Deficiency (CED) in the North Buton Regency

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Household food shortage has detrimental effects on the children. The objective of this study was to describe the number of stunting cases based on chronic energy deficiency (KEK) in the North Buton Regency. This is a survey research utilizing the health report data of the North Buton Regency Health Office for the 2018-2020 period, which include the data for exclusive breastfeeding, infant health services as well as complete neonatal visits (KN3). The type of research data is numerical. The research data is presented in the form of a graph with narration. In the North Buton Regency, the data shows that in the 2018-2020 period the highest number of stunting cases occurred at the Kulisusu Health Center with 205 cases, the lowest in 2019 at the Kambawo Health Center with as few as 2 cases. Related to the cases of caloric energy deficiency, at the Kulisusu Health Center in 2018 there was 6.3%, while the stunting rate in 2019 was the lowest at the Kambawo Health Center with the proportion of KEK at 26.09%.

Keywords: Stunting, toddlers, chronic energy deficiency

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1. introduction

Stunting is a nutritional problem in the children with PB/U or TB/U below minus two standard deviations (<-2SD) [1]. According to WHO (World Health Organization) data, in 2018 the prevalence of children less than five affected by stunting was around 21.9% [2]. Stunting is an inappropriate linear growth or stunted growth and is considered a major public health problem among children worldwide.

There is around 151 million (22%) children under the age of five in 2017 were affected by stunting [3]. Children die before the age of five each year worldwide 5.6 million, with 80% of these deaths occurring in sub-Saharan Africa and Asia. Nearly half of these deaths occur in malnourished children. Accurate epidemiological evidence suggests this is due to the increased susceptibility to life-threatening infections among malnourished children [4],[5]. The incidence of stunting is associated with low birth weight which

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reflects a failure to receive adequate nutrition over the long term, especially micronutrients associated with infectious diseases and the formation of human resources in the future [6, 7].

Indonesia is the third country with the highest prevalence of stunting in Southeast Asia. The prevalence of stunting in Indonesia in 2016 was 27.5%, in 2017 it increased by 29.6% and in 2018 it increased again to 30.8% [7]. In Southeast Sulawesi Province, the prevalence of stunting in 2018 based on the nutritional status of PB/U or TB/U was 2.67% with the category of very short toddlers and the category of short toddlers of 5.25%. This figure has increased in 2019 based on the nutritional status of the TB/U index, namely the very short toddler category by 3.25% and the short toddler category by 13.67% [8].

Children who grow up with stunting of cognitive and psychomotor have development problems [3]. If the proportion of children who are malnourished and stunted is large in a country, it will also have an impact on the proportion of the quality of human resources. The stunting problem in children today will have an impact on the quality of the nation in the future [9]. Stunting conditions not only have a direct impact on the intellectual quality of the nation, but also become an indirect factor in degenerative diseases (diseases that appear with age [10].

Stunting in childhood is closely related to poverty. Without a change in the environment, stunting can lead to a permanent decline in growth. Pregnant women with CED are characterized by the circumference of the upper arm on the hand that is not used in daily activities with the length of the circumference [11, 12].

2. METHODOLOGY

The type of this research is a survey research by utilizing the health report data of the North Buton Regency Health Office for the 2018-2020 period involving exclusive breastfeeding coverage data and coverage of infant health services as well as complete neonatal visits (KN3). The type of research data is numerical. The research data is presented in the form of a graph with narration.

3. RESULT OF THE STUDY

The research result is presented using a bar chart with an explanation that can be presented as follows:

Figure 1 shows that in the year 2018, the proportion of Calorie Energy Deficiency in pregnant women was highest at the North Wakorumba Health Center as much as 76% and the lowest at the Boneguru Health Center as much as 4.4%.

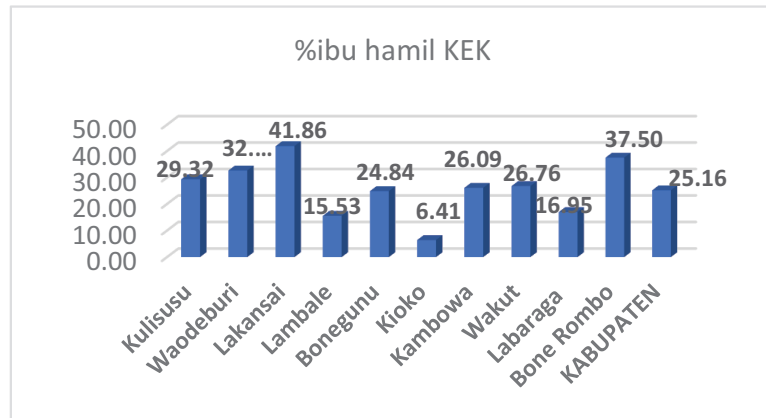


Figure 1: Cases of Low Calorie Energy in Pregnant Women in 2018.

Figure 2 showed that in 2019, the cases of Calorie Energy Deficiency in pregnant women was highest at Lakansai Health Center at 41.86% and the lowest at Kioko Health Center at 6.41%.

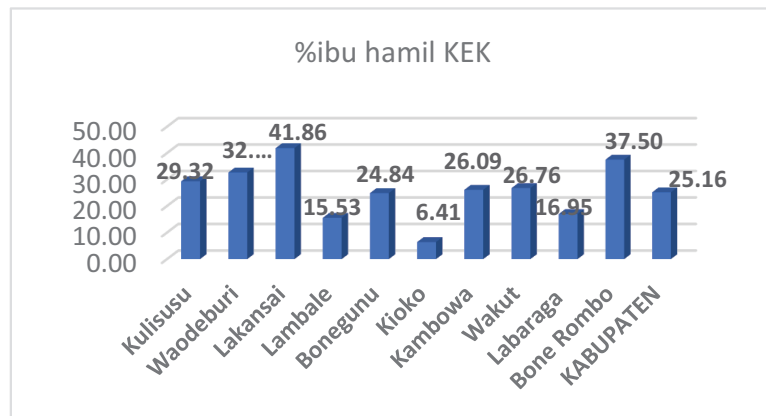


Figure 2: Deficiency of Calorie Energy in Pregnant Women in 2019.

Figure 3 showed that in 2020, the Calorie Energy Deficiency cases in pregnant women is highest at Lambale Health Center at 36% and the lowest at Kioko Health Center at 5%.

Figure 4 showed that in 2018 the highest number of stunting cases in North Buton Regency was at the Kulisusu Health Center as many as 205 cases and the lowest was at the Labaraga Health Center as many as 36 cases. Then in the year 2019, the highest was at the Kulisusu Health Center with 96 cases and the lowest was at the Kambawo Health Center as many as 2 case. In 2020 the highest was at the Kulisusu Health Center as many as 106 cases and the lowest at the Kambawo Health Center as many as 5 cases

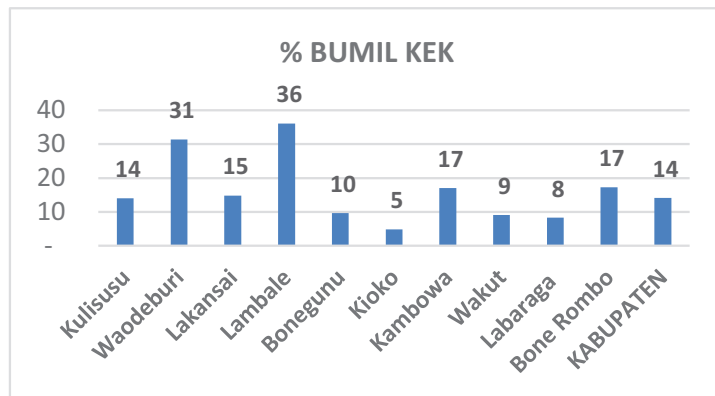


Figure 3: Deficiency of Calorie Energy cases in Pregnant Women in 2020.

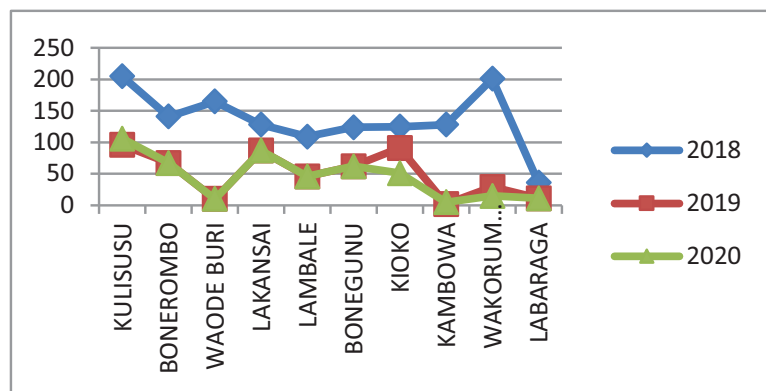


Figure 4: Toddlers Number of Stunting cases for the 2018-2020 Period.

4. DISCUSSION

In the North Buton Regency, it shows that in the 2018-2020 periods the highest number of stunting cases occurred at the Kulisusu Health Center with 205 cases, the lowest in 2019 at the Kambawo Health Center as many as 2 cases. Related with the cases of caloric energy deficiency at the Kulisusu Health Center in 2018 there was 6.3% while the lowest stunting rate in 2019 was at the Kambawo Health Center with the proportion of CED of 26.09%. The number of CED cases was higher in other health centers with low stunting rates. This illustrates that descriptively the cases of stunting in children under the age of 60 months can be associated with the mother’s SEZ status during pregnancy.

Although in this study no inferential data analysis was carried out to determine the relationship between SEZ and stunting, the relation between the two has been widely reported through previous studies, among others [13–15]. Thus, pregnant women who are known to have chronic energy deficiency from the start can be immediately handled

by health workers, so that the prevention can be carried out as early as possible. Preventions given to pregnant women can improve their nutritional status including increasing the baby's weight and baby's length.

The nutritional status of the mother before and during pregnancy can affect the growth of the fetus being conceived. If the nutritional status of the mother is normal before and during pregnancy, it is likely to give a healthy birth, full-term baby with a normal weight. In other words, the quality of the baby born is very dependent on the nutritional state of the mother before and during pregnancy. Poor fetal growth of pregnant women with SEZ will produce babies with low birth weight. The risk of growth restriction will be exacerbated if the incidence of malnutrition in the fetus is followed by inadequate food intake in the first two years of life. The period in the womb and the first two years of life is very decisive for the incidence of stunting in adulthood.

There are also those who report that SEZ is not a risk factor for stunting in toddlers aged 6-23 months, namely Kristiana Tri Warsini's research [16] which states that a history of SEZ during pregnancy is not a risk factor for stunting ($p = 0.23$, $OR = 0.7$, $95\% CI = 0.37-1.31$). Furthermore, Tri Warsini stated that this protective history of SEZ can be caused during pregnancy, when mothers who suffer from SEZ receive intervention in the form of PMT. By providing additional food to pregnant women with SEZ, it will improve the nutritional status of the mother and the baby she is carrying.

Therefore, it is very necessary to provide special interventions for mothers with SEZ conditions by providing additional food during pregnancy which has been proven to protect mothers with stunting toddlers.

5. CONCLUSION

In the North Buton Regency, it shows that in the 2018-2020 periods the highest number of stunting cases occurred at the Kulisusu Health Center with 205 cases. The lowest in 2019 at the Kambawo Health Center as many as 2 cases. Related with the cases of caloric energy deficiency at the Kulisusu Health Center in 2018 there was 6.3% while the stunting rate in 2019 was the lowest at the Kambawo Health Center with the proportion of CED at 26.09%

6. AUTHOR' CONTIBUTION

The authors have contributed to the preparation of this article.

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