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The Analysis of Exclusive Breastfeeding Towards the Stunting Cases

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Abstract

Stunting is a condition in which a child experiences developmental delays so that their height does not match their age, due to health problems during pregnancy, illness during infancy, and long-term lack of nutrition. One of the reasons for stunting is eating unbalanced, including exclusive breastfeeding as a baby. The impact of stunting besides growth, also causes minor illnesses, impaired brain development and intelligence, in the long term it can cause decreased mental capacity, decreased immune system so that it becomes weak easily, obesity, diabetes, stroke, heart and blood vessel disease, and old age disability. The aim of this research was to analyze the history of exclusive breastfeeding for the incidence of stunting. The research design was a quantitative correlation retrospective cohort approach. A population of 100 people with a sample of 50 people was taken by using the simple random sampling technique. The research used Microtoice to measure the child's height was confirmed in table Z-Score and interview sheets for exclusive breastfeeding data. Analysis using Fisher Exact showed that there was a correlation between a history of exclusive breastfeeding and the incidence of stunting. Based on this research, further information was needed on how to prevent stunting regarding the importance of clean and healthy life, especially for family members who smoke, because smoking had a negative impact on stunted toddler growth hormones.

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INTRODUCTION

Stunting is a condition in which a child experiences developmental delays due to prolonged malnutrition, resulting in a height that is disproportionate to their age. Stunting is a significant threat to Indonesia's human resources because it not only hinders development but also makes children vulnerable to disease and causes disturbances in brain development and intelligence (Ministry of Health RI, 2018). The global stunting rate reached 22.2% in 2017, or around 150.8 million children under the age of five. This figure has decreased when compared to the stunting rate of 32.6% in 2000. 55% of the world's short toddlers are in Asia (RI Ministry of Health, 2018). The 2019 Indonesian Nutrition Status Survey (SSGI) revealed that 27.7% of Indonesian children were stunted. In 2021, the stunting percentage decreases to 24.4%. The percentage of stunting children in East Java Province had the acute and chronic categories was 26.2 percent in 2019 and 23.5 percent in 2021. The World Health Organization (WHO) stated that stunting can be categorized as a chronic public health problem if its prevalence exceeds 20%. As a result, the problem of stunting in Indonesia was still a chronic problem (RI Ministry of Health, 2021). Stunting in rural areas is higher than in the center of Kediri. The stunting rate in Kediri City is 15.7%, while in Kediri Regency is 18% (Ministry of Health RI, 2021). One of the areas in Kediri Regency that has got the most cases of stunting is Keniten Village. Out of 493 toddlers, 14 of them are stunted. Exclusive breastfeeding counseling, guidance on food for pregnant women, provision of TT for pregnant women, IMD, provision of infant and child feeding (IYCF), environmental sanitation improvement programs, and provision of micronutrients are some of the efforts made in East Java to reduce stunting rates and improve nutrition in 1.000 first day of life (HPK) (East Java Health Office, 2021). Latifah et al., 2020, according to their research, unbalanced food intake was one of the factors causing stunting in toddlers. Unequal feeding considering that breastfeeding was limited, exclusive breastfeeding had a fat, starch, mineral, and phosphorus content that suits the child's needs so that retention by the child's body will be encouraged, especially in the ability of bone development. Because exclusive breastfeeding contains high levels of antibodies and calcium, it can reduce the risk of stunting.

The effects of stunting in the short term can slow down mental health, knowledge, inhibited actual development, and metabolic problems in the body, and the effects of stunting in the long term can cause a decrease in mental capacity and learning achievement, reduced endurance so that you are very weak, and at high risk of causing diabetes, obesity, heart and blood vessel disease, cancer, stroke, and disability in old age (RI Ministry of Villages, 2017). The phenomenon of stunting can cause huge losses in child development, so the researchers decided to take the investigation of stunting in Keniten Village as the core area because there are stunting cases in Keniten Village and to figure out from a history of exclusive breastfeeding.

METHOD

A quantitative correlation research design with a retrospective cohort approach was used in this type of research. The variable that was measured retrospectively was the history of exclusive breastfeeding, and the variable that had an effect in the past was the variable of stunting. This research was conducted from 8 to 10 February 2023. The research location was in Keniten Village, Mojo, Kediri. The population in this research were toddlers aged 24-37 months with a sample of 50 small children. The instruments Microtoice to calculate the height were then confirmed with TableZ-Score, and interview sheets were used to view the history of exclusive breastfeeding. Sampling technique using random (probability), sampling with technique simple random sampling (simple random sampling), followed by a statistical test using Fisher exact.

RESULT

General data and special data are the two types of data presented. The description of the research area, the age of the children under five, gender, PHBS, and the age of the mother were included in the general data. Specific data presents the incidence of stunting and a history of exclusive breastfeeding. The sub-districts in Kediri Regency include 26 sub-districts namely, Mojo, Semen, Ngadiluwih, Kras, Ringinrejo, Kandat, Wates, Ngancar, Plosoklaten, Gurah, Puncu, Kepung, Kandangan, Pare, Badas, Kunjang, Plemahan, Purwoasri, Papar, Plafon, Kayenkidul, Gampengrejo, Ngasem, Mostly, Grogol and Tarokan. Keniten Village is in the Mojo District, Kediri Regency. With an area of 6.81 km2 with a population of 6773 people from 2021. The Mojo Health Center is the closest health facility to Kenitan Village. The working staff are midwives, doctors, nurses, and other health workers. There are 30 cadres in Keniten Village to help midwives implement the Posyandu program.

1) Toddler

Table 1: Frequency Distribution of Toddler

Age (month)	Frequency	Percentage
24	10	20%
25	1	2%
26	3	6%
27	2	4%
28	3	6%
29	3	6%
32	1	2%
33	1	2%
34	1	2%
35	2	4%
36	13	26%
37	10	20%
Total	50	100%

Table 1 showed that 26% toddlers were 36 months old.

2) Gender

Table 2: Frequency Distribution of Gender

Gender	Frequency	Percentage
Male	22	44%
Female	28	56%
Total	50	100%

Table 2 showed that half of the respondents was female (56%).

3) PHBS

Table 3: Frequency Distribution of Healthy and Clean Behavior

PHBS	Frequency	Percentage
Smoker	23	46%
Non-Smoker	27	54%
Total	50	100%

Table 3 showed that 46% respondents were active smokers.

4) The Age of Mother

Table 4: Frequency Distribution of Mother Age

Age	Frequency	Percentage
19	1	2%
21	1	2%
22	4	8%
24	1	2%
25	2	4%
26	2	4%
27	2	4%
28	1	2%
30	3	6%
31	6	12%
32	2	4%

Age	Frequency	Percentage
33	1	2%
34	6	12%
35	4	8%
36	2	4%
37	5	10%
39	2	4%
40	2	4%
41	2	4%
42	1	2%
Total	50	100%

According table 4, frequency distribution of maternal age, it can be seen that maternal age is classified as few the age of 31 years with a presentage 12%.

b. Specific Data

1) Stunting Cases

Table 5: Frequency Distribution of Stunting Cases

Case	Frequency	Percentage
Stunting	7	14%
Non-Stunting	43	86%
Total	50	100%

Table 5 presented the data about the number of Stunting cases (14%).

2) The History of Exclusive Breastfeeding

Table 6: Frequency Distribution of Exclusive Breastfeeding

Breastfeeding	Frequency	Percentage
Exclusive Breastfeeding	42	84%
Non-Exclusive Breastfeeding	8	16%
Total	50	100%

Table 6 reported that almost all respondents had the history of exclusive breastfeeding (84%).

DISCUSSION

Fifty people participated in the research entitled "Analysis of the History of Exclusive Breastfeeding for Stunting in Toddlers Age 24-37 Months in Keniten Village, Mojo District, Kediri Regency, East Java".

a. Stunting Cases

The results of the research showed that in Keniten Village there were several stunting cases. Out of the 50 (fifty) toddlers, 7 (seven) were stunted. Out of the 7 (seven) toddlers who experienced stunting (the frequency distribution of stunting events was shown in Table 5, 4 (four) of them were due to inadequate nutritional fulfillment because toddlers chose certain foods they liked, such as light snacks, eating rice, only 3-4 spoons, did not want vegetables at all, and because the family's ability to meet primary needs was lacking so that resources were not fulfilled which are family limitations which can result in unfulfilled food adequacy. The Ministry of Health stated in 2022 that stunting in infants was influenced by the size of the salary, a large salary makes it easier to get access to education and welfare, so that children's food intake can be better. Mother's age during pregnancy was another factor that contributes to stunting, and Clean and Healthy Behavior (PHBS). According to Table 4 (frequency distribution of maternal age) there were mothers under 20 years of age. Maternal age at the time of diagnosis of pregnancy had a significant impact on the course of pregnancy. Complications during pregnancy are more likely if the mother is younger or older during her pregnancy. Pregnant women under the age of 20 are at risk of having red blood cell deficiency or anemia, impaired growth and development of the fetus, miscarriage or abortion, prematurity or low birth weight, birth defects, preeclampsia or pregnancy poisoning, and

antepartum bleeding, she will get early prenatal care (early prenatal care) less. Low birth weight babies (LBW) related to teenage pregnancy and infant mortality will be caused by mothers who receive inadequate care. The majority of teenage girls who are pregnant and have a BMI lower than normal (underweight) are at risk of giving birth to LBW babies. Concern about body shape during adolescence and lack of nutrition education are thought to be the root causes of low BMI in teenage pregnancy. One of the factors contributing to stunting in infants was the low maternal weight gain during pregnancy, which increased the number of premature babies (Vivatkusol, Y, 2017 in Nurhidayati's study1 et al., 2020). According to Wanimbo in 2020 concerning "Correlation between Maternal Characteristics and Baduta Stunting Incidents (7-24 Months)", namely maternal age was related to stunting incidents because the mother's age affects the parenting style of the mother, one of which was the provision of food, (Widyaningsih et al., 2018). Provision of adequate nutrition begins when the fetus is in the womb, because adequate nutrition during pregnancy affects the development and growth of the fetus, if the mother lacks energy for a long time during pregnancy it will result in LBW. Inadequate nutrition lasts a long time if it is continued after the baby is born it will result in malnutrition, if nutritional improvements in toddlers with malnutrition fail the incidence of illness will also increase, one of which is stunting. From the results of this research, researchers obtained family data that influenced the cases of stunting, namely PHBS (Clean and Healthy Lifestyle). In the sampling process, several houses found indications of a lack of PHBS, namely almost half of the respondent's families smoked (Table 4 Distribution of Family PHBS Frequency). As a result of unhealthy habits such as smoking and unhygienic feeding, higher morbidity rates could be caused by a lack of awareness regarding a clean and healthy lifestyle. Children who lived with exposure to cigarette smoke which contains carbon monoxide and benzene and other dangerous active ingredients cause a decrease in the number of red blood cells and damage bone marrow cells so they are susceptible to disease. A decrease in the number of red blood cells resulted in a decrease in the amount of growth hormone and oxygen distributed throughout the body, especially in the glandular tissue. Red platelets transported oxygen and supplements throughout the body (Sari, 2020 in Zubaidi's 2021). Children who are exposed to cigarette smoke have a direct impact on their growth because cigarette smoke can affect blood vessels and spread to tissues and affect the absorption of nutrients so they experience disturbances in children, namely slowing growth and development in children.

b. History of exclusive breastfeeding

The results of the research Table 6 (frequency distribution of exclusive breastfeeding) from 50 (fifty) respondents who gave exclusive breastfeeding there were 42 (forty-two) people or 84% and those who did not give exclusive breastfeeding were 8 (eight) people with a percentage of 16%. In the research, it was found that the majority of mothers under five gave exclusive breastfeeding (table 4.6 distribution of the frequency of exclusive breastfeeding). This was in accordance with Rahmawati's research in 2013 in Handayani et al., 2019 which said that under the age of 20 years were seen as still not really ready mentally and intellectually in supervising pregnancy, childbirth, and breastfeed a child with exclusive breastfeeding, at the age of 35 years or older is considered dangerous on the grounds that the actual organs of conception and the mother's strength are infinitely reduced without stopping, moreover, it can increase difficulties during pregnancy, childbirth, and the puerperium and present inherent risks to the child. The success of exclusive breastfeeding is influenced by age-related breastfeeding techniques because breast milk is the main food for babies less than 6 months old, so it plays a major role in fulfilling baby nutrition. When breast milk is not sufficient, there will be an imbalance of nutrients in the baby which can affect the nutritional status of the baby.

c. Correlation between the history of exclusive breastfeeding and stunting

Based on the results of a research of 50 (fifty) respondents, with a total of 42 (forty-two) respondents giving exclusive breastfeeding 1 (one) of them was stunted and 41 (forty-one) were normal, 8 (eight) respondents did not give exclusive breastfeeding 6 (six) of them were stunted and 2 (two) of them were normal. Results of analysis of the history of exclusive breastfeeding in stunting events in Keniten village, analysis Probabilitas Fisher Exact indicated that P was less than the error rate, so H0 was rejected. Moreover, the computer program

shows similar results, to precise values 0.000, meaning that there was a correlation between the history of exclusive breastfeeding and the incidence of stunting in Keniten Village. This was in accordance with Fitri and Ernita's research in 2019 concerning the Correlation of Exclusive Breastfeeding and Early MP-ASI with Stunting Incidence in Toddlers. The p value 0.000 indicated that there was a significant correlation between exclusive breastfeeding and stunting. The same findings were also addressed for Latifah's research in 2020 and until 2020 regarding the correlation between exclusive breastfeeding and stunting in toddlers aged 1 to 5 years. With p value 0.000, the hypothesis that H0 was rejected indicated that there was a significant correlation between exclusive breastfeeding and stunting. According to the theory that breastfeeding in the past and nutrition during the growth period until toddlers had an effect on the incidence of stunting.

CONCLUSION

Based on research conducted in Kenitan Village, Mojo Kediri, the target of toddlers aged 24-37 months with a total of 50 respondents, on 8-10 February 2023, the conclusion was as followed: very few toddlers experience stunting, almost all mothers of toddlers gave exclusive breastfeeding to their toddlers and there was a correlation between the history of exclusive breastfeeding and the incidence of stunting.

SUGGESTION

Mothers and their families can learn about the importance of a clean and healthy life through counseling, counseling, or leaflets distributed by health workers in the health service center nearby, especially regarding family members who smoke because it has a huge impact on toddlers which results in stunted growth hormones in toddlers.

For future researchers, it is expected that they can conduct research using other methods and types of research, especially subjective examinations, namely qualitative research to find out more about the correlation between exclusive breastfeeding and the incidence of stunting.

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CONFLICT OF INTEREST

The autors declares that there are no conflicts of interest in this research.

AUTHOR CONTRIBUTION

In this research, the author as a correspondent who is responsible for the research process from conception to publication by writing articles that have been adapted to journal guidelines.

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