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Relationship of Exclusive Breastfeeding with Stunting Incidences in Toddlers in Nias District

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ABSTRACT

The purpose of this study was to determine and analyze the relationship of exclusive breastfeeding with stunting incidences in toddlers in Nias District. This research is analytic observational using a cross sectional study design. The population in this study were all children under five in Nias District which consisted of 10 sub-districts, namely Idanogawo, Bawolato, Ulugawo, HiliwetoGido, Sogae'adu, Ma'u, Somolo-molo, Hiliduho, Botombawo, and Botomuzoi. Data on the target of the community nutrition improvement program from the Nias District Health Office shows that the number of children under five in Nias District is 14,114 children under five who were then designated as the population in this study. The number of samples that have been determined is 266 children under five. The data collection method used in this research is primary and secondary data. Data analysis was carried out with bivariate data analysis. The results showed that there was a relationship between exclusive breastfeeding and stunting incidences in children under five in Nias District.

Keywords: Breastfeeding, Exclusive, Stunting

INTRODUCTION

Stunting is a condition of growth failure that occurs in infants under the age of five. This happens because of chronic malnutrition, especially in the first 1000 days of life, so that children are too short compared to children their age who have normal nutritional status. The incidence of stunting in children results in impaired physical growth, intellectual development, metabolic disorders, and decreased productivity in adulthood. The state of malnutrition in this condition starts from the time the baby is still in the mother's womb until the beginning of the baby's birth, but stunting in infants can be seen after two years of age. In addition to poor nutrition in pregnant women and children under five, the incidence of stunting is caused by many factors. Stunting conditions, including chronic nutritional problems, can be caused by several things such as socioeconomic conditions, the nutritional state of the mother during pregnancy, the incidence of illness, and lack of nutritional intake in infants (Kementerian Kesehatan, 2018).

Prevalence data in 2017 showed that 22.2 percent or around 150.8 million children under five in the world were stunted. However, when compared to the stunting rate in 2000, this figure has decreased from 32.6 percent. The situation of stunting under five in the world as much as more than half came from Asia (55%) in 2017 while more than a third (39%) lived in Africa. A total of 83.6 million stunting toddlers in Asia with the second rank occupied by Southeast Asia, which is 14.9 percent (Kementerian Kesehatan, 2018). The prevalence of stunting based on data released by the World Health Organization (2013) states that Indonesia is included in the third country with the highest prevalence in the Southeast Asia region after Timor Leste (50.5%) and India (38.4%) which is

36.4 percent (Kementerian Kesehatan, 2018).

According to the United Nations Children's Fund, the main problems that affect stunting are parenting patterns, coverage and quality of health services, the environment, and food security at the family level. The issue of food security consists of the availability of food to the household level, the quality of the food consumed, as well as the availability of stable food and its relation to people's access to food. The problem of food security is related to the incidence of malnutrition and in the long term will be the cause of the increasing prevalence of stunting. This is due to the process of failure to thrive that began in pregnancy due to lack of nutritional intake before and during pregnancy.

Factors that affect nutritional status include internal factors and external factors. Internal factors, namely the basic factors of meeting a person's level of nutritional needs which include nutritional intake and infectious diseases (Almatsier, 2015). In addition to internal factors, external factors also affect nutritional status. External factors that can affect nutritional status are parenting patterns such as the attitudes and behavior of mothers or other caregivers in terms of their proximity to children, providing food, caring for, giving love, providing time, and so on (Soekirman, 2006).

Research conducted by Tatu et al. (2021) on several risk factors related to the incidence of stunting in children under five in Kabuna Village, Kakuluk Mesak District, Belu Regency, showed that there was a significant relationship between socioeconomic status, parenting patterns, low birth weight, and environmental sanitation with the incidence of stunting in children. children under five in Kabuna Village, Kakuluk Mesak District, Belu Regency based on the chi square test conducted with p value<0.05.

The incidence of stunting in children under five in Indonesia is still a serious problem, although the stunting rate from the 2018 Basic Health Research data shows a decline from 30.8 percent to 27.67 percent according to the Indonesian Toddler Nutrition Status Study-National Socio-Economic Survey in 2019 This illustrates that one in four children under five, namely more than eight million children in Indonesia, is stunted. From the latest data, it is known that the national stunting prevalence rate in Indonesia is still above 20 percent, meaning that it has not reached the World Health Organization target which should be below 20 percent.

The World Health Organization (2013) in monitoring health for Sustainable Development Goals found that the incidence of stunting was high in men compared to women. The results of Basic Health Research in 2013 stated that in Indonesia, around 37 percent, namely nearly nine million children under five, were stunted, so that Indonesia is the country with the fifth largest prevalence of stunting in the world. The level of intelligence in toddlers who experience stunting is not optimal because toddlers become more susceptible to disease and in the future are at risk of lowering productivity levels.

The research of Windasari et al. (2020) regarding the relationship factors with the incidence of stunting at the Tamalate Makassar Community Health Center stated that there was a relationship between early breastfeeding initiation with p=0.014 and exclusive breastfeeding with p=0.001 with stunting incidence, while low birth weight babies with p=0.172 were found does not have a relationship with the incidence of stunting in the area.

Research conducted by Komalasari et al. (2020) on the factors that cause stunting in children under five, found that there was a relationship between exclusive breastfeeding status, maternal nutritional status, and maternal education with stunting. Another study conducted by Sutriyawan et al. (2020) states that there is a socio-economic relationship with the incidence of stunting, with the magnitude of

the incidence of stunting being twice as large for children with socioeconomic status who are included in the poor group.

The purpose of this study was to determine and analyze the relationship of exclusive breastfeeding with stunting incidences in toddlers in Nias District.

RESEARCH METHODS

This research is analytic observational using a cross sectional study design where the dependent variable and the independent variable were studied at the same time. The research of cross-sectional study design aims to study the dynamics of the correlation between risk factors and effects, by approach, observation, or data collection (Sugiyono, 2018).

The population is an area that can represent objects/subjects with certain qualities and characteristics determined by researchers to be studied and then drawn conclusions (Sugiyono, 2018). The population in this study were all children under five in Nias District which consisted of 10 sub-districts, namely Idanogawo, Bawolato, Ulugawo, HiliwetoGido, Sogae'adu, Ma'u, Somolo-molo, Hiliduho, Botombawo, and Botomuzoi. Data on the target of the community nutrition improvement program from the Nias District Health Office shows that the number of children under five in Nias District is 14,114 children under five who were then designated as the population in this study. Sampling technique is a technique to get a sample that can represent the characteristics of a population which includes the size of the sample and how the process or sampling technique is (Sugiyono, 2018). The number of samples that have been determined is 266 children under five.

The data collection method used in this research is primary and secondary data. Primary data were obtained from direct interviews using questionnaires (Sugiyono, 2018). Primary data were obtained from direct interviews with mothers using questionnaires and toddler measurements using a height measuring instrument or microtoice. Secondary data is the process of analyzing which is carried out on existing data without the need to conduct interviews, surveys, observations, and certain other data collection techniques (Sugiyono, 2018). Secondary data were obtained from the Nias District Health Office and the Community Health Center in each sub-district.

Data analysis was carried out with bivariate data analysis. Bivariate analysis is a follow-up analysis to determine the relationship between two variables, namely the independent variable and the dependent variable (Sugiyono, 2018).

RESULT

Research Overview

Location and Area Boundaries

Nias District is one of the regencies in North Sumatra Province which is located on an island called Nias Island. Nias District is located in the Province of North Sumatra in the west of Sumatra Island, which is ±85 nautical miles from Sibolga and is surrounded by the Indian Ocean. Geographically, Nias District is located at 0˚12'-1˚32' North Latitude and 97˚-98˚ East Longitude close to the equator and 0-800 m above sea level.

Nias District has been divided through the establishment of two new autonomous regions and was inaugurated by the Minister of Home Affairs of the Republic of Indonesia on 29 October 2008, namely Gunungsitoli City with Gunungsitoli as its capital, North Nias District with Lotu as its capital and West Nias District with Lahomi as its capital. The total area of Nias District is 1,004.06 km^2 consisting of 10 sub-districts, 170 villages and 544 hamlets. The sub-districts in Nias District are Idanogawo, Bawolato, Ulugawo, Gido, Sogaeadu, Ma'u, Somolomolo, Hiliduho, Hiliserangkai, and Botomuzoi. The following are the boundaries of the Nias District area:

1. To the north, it is bordered by North Nias District and Gunungsitoli City.
2. To the south, it is bordered by South Nias District.

3. In the east, it is bordered by Gunungsitoli City and the Indonesian Ocean, North Sumatra.
4. In the west, it is bordered by North Nias District and West Nias District.

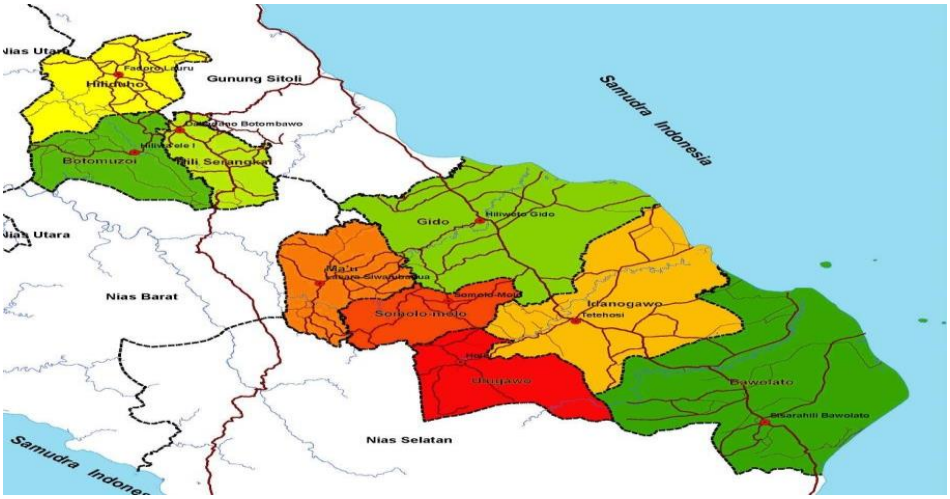

Figure 1: Map of Nias District

Demographics

Based on data from the Central Statistics Agency for Nias District in 2019, the population of Nias District is 143,319 people, with a composition of 69,753 men and 73,566 women. There are as many as 28,484 families and the average person/household is 5.01 people with a population density of 152,761 per km².

Based on gender, the female population is more than the male population, each with a female population of 73,566 and a male population of 69,753. The composition of the population of Nias District by age shows that the young population (0-14 years) is 56,596 people, the productive age (15-64 years) is 81,778 people and the old age (65+ years) is 98.78 people.

Topographical Condition

The topography of Nias District is hilly, narrow and steep and in the form of mountains. Lowlands to undulating reach 24 percent, from undulating land to hilly 28.8 percent from hilly to mountainous 51.2 percent of the total land area. A total of 170 villages in Nias District consist of 30 villages (18%) located in coastal areas and 140 villages (82%) in non-coastal/mountain areas. Such natural conditions resulted in the existence of 67 small, medium, or large watersheds found in almost all sub-districts.

Climate and Weather Conditions

The location of Nias District, which is close to the equator, results in quite high rainfall every year, causing the natural conditions of Nias District to be very humid and wet. In addition, the climate condition of Nias District is also greatly influenced by its position which is surrounded by the Indian Ocean. The average annual rainfall is 246 mm per month with the number of rainy days reaching 262 days a year or an average of 21.8 days per month. The greatest rainfall occurs in February, which is 402.2 mm with the number of rainy days reaching 23 days, the dry and rainy seasons alternate in a year.

The average wind speed in one year is 5.3 knots/hour. The air temperature in Nias District can reach 26.7°C with a maximum average of 31°C and a minimum of 23.2°C for major storms.

Bivariate Analysis

Bivariate analysis is a follow-up analysis to determine the relationship between two variables, namely the independent variable and the dependent variable (Sugiyono, 2018).

The results showed that there was a relationship between exclusive breastfeeding and stunting incidences in children under five in Nias District.

Table 1: Bivariate Analysis Test Results

Variable	Exclusive Breastfeeding						
	Stunting		Normal		Total		p-value
	n	%	n	%	n	%	
Exclusive Breastfeeding							
Yes	18	35.3	33	64.7	51	100	0.008
No	120	55.8	95	44.2	215	100	

CONCLUSION AND SUGGESTION

The results showed that there was a relationship between exclusive breastfeeding and stunting incidences in children under five in Nias District.

The Health Office is expected to collaborate with various fields related to holding programs for the prevention and handling of stunting in Nias District such as promoting and the importance of exclusive breastfeeding programs, socializing about good parenting for children, and increasing monitoring of growth and development of toddlers to deal with nutritional problems in children, especially stunting. The Community Health Center is expected to monitor and maximize the implementation of the ongoing stunting program. It is hoped that through village midwives, public health extension workers and nutrition officers can be committed to providing guidance and increasing counseling about stunting events and factors that can prevent stunting such as the importance of exclusive breastfeeding for children's growth and development to increase maternal awareness and obtain support from families in provide exclusive mother's milk for children. Parents or families are expected to pay more attention to the food intake of children under five who need essential nutrients for their growth and development, parents who have access can also use technology to find information about nutritional intake for children, provide good care for children, and regularly come to the Integrated Service Post. to monitor the growth and development of children so as to improve the nutritional status of children under five.

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