



THE RELATIONSHIP BETWEEN EXCLUSIVE BREASTFEEDING HISTORY AND STUNTING INCIDENCE IN TODDLERS AGE 24-60 MONTHS

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ABSTRACT	Keywords
Currently the incidence of short toddlers or called stunting is one of the nutritional problems experienced by toddlers in the world. One of the causes of the stunting problem is the delay in Early Breastfeeding Initiation (IMD) and non-exclusive breastfeeding. The World Health Organization (WHO) recommends breastfeeding for at least 6 months. Breast milk is a nutritional intake that fits the needs that help the growth and development of children. Children who do not get enough breast milk mean they have poor nutritional intake and can cause malnutrition, one of which can cause the risk of stunting. The method of this study is observational analytic with a retrospective approach. The number of samples in this study were 72 toddlers. The instrument used to obtain secondary data in this study was the MCH handbook, and the instrument used to obtain primary data in this study was research observation sheets. The data were analyzed using the Fisher Exact test. The results showed that out of 72 toddlers, 36 toddlers experienced stunting, 37 of them were not given exclusive breastfeeding and 35 of them were given exclusive breastfeeding. Bivariate analysis showed that there was a relationship between a history of exclusive breastfeeding and the incidence of stunting (P Value 0,000). There is a relationship between a history of exclusive breastfeeding and the incidence of stunting in toddlers aged 24-60 months in the working area of the Telen Health Center.	Exclusive Breastfeeding, Stunting, Toddlers

INTRODUCTION

Nutritional factors play a crucial role in determining the level of human health and well-being. Good nutrition is defined as a balance and harmony between the physical and mental development of individuals (F. I. Pratama et al., 2019). One of the nutritional issues faced by toddlers worldwide today is the occurrence of short stature or stunting (Putri & Ayudia, 2020). Stunting, according to the World Health Organization (WHO) definition, occurs when a toddler's height-for-age is less than -2 Standard Deviations (SD) on the growth curve established by WHO (WHO, 2020). This condition is

irreversible and is caused by inadequate nutrient intake and recurrent infections during the first 1000 Days of Life (HPK). Stunting prevention can begin during adolescence and within the first 1,000 Days of Life, focusing on improving the nutrition of pregnant and breastfeeding mothers, as well as children aged 0-23 months (PERSAGI, 2018).

Research by the United Nations International Children's Fund (UNICEF) indicates that the number of toddlers suffering from stunting under the age of five worldwide reached 22% or approximately 149.2 million in 2020, a decrease from 203.6

million in 2000. However, in some regions such as West and Central Africa, the number of stunted toddlers has increased from 22.8 million in 2000 to 29.3 million in 2020 (UNICEF, 2021). As a developing country, Indonesia ranks second with the highest stunting prevalence in Southeast Asia after Timor Leste, with a prevalence rate of 48.8%. Stunting prevalence in Indonesia in 2020 reached 31.8%, which is well above the WHO threshold of 20% (Asian Development Bank, 2021).

At the provincial level, East Kalimantan is one of the regions with high stunting rates in Indonesia, reaching 22.80% in 2021 (Ministry of Health RI, 2021). The Indonesia Nutritional Status Survey (SSGI) shows that Kutai Timur District, East Kalimantan, has the highest stunting rate, reaching 27.5% (Ministry of Health RI, 2021). Telen Sub-district, located within Kutai Timur, also has a significant stunting rate of around 20.11% out of a target of 179 children aged 24-60 months (PKM Telen Nutrition Report, 2022). The impact of stunting on a country is substantial, with estimated losses of up to Rp. 300 trillion per year. Stunting also affects the quality of Human Resources (HR), disrupting brain development, physical growth, and body metabolism in the short term, as well as reducing cognitive abilities and learning achievements, and long-term immune function. This can lead to various chronic diseases in old age and decreased economic productivity (Ministry of Health RI, 2018).

Several factors that can contribute to stunting in toddlers include family income (Socioeconomic Status), parental education, Low Birth Weight (LBW), infant length, premature birth, inadequate exclusive breastfeeding for the first 6 months, as well as macronutrient and micronutrient deficiencies (Mulyanti & Budi Astuti, 2020). Despite the strong correlation between exclusive breastfeeding and reduced stunting risk (Handayani et al., 2019), the community's perception of the importance of exclusive breastfeeding for the first 6 months of life has not fully changed. The World Health Organization (WHO) recommends exclusive breastfeeding for at least 6 months. In

Indonesia, the coverage of exclusive breastfeeding has not yet reached the WHO target, with only 56.9% nationally and 53.6% in East Kalimantan Province (Ministry of Health RI, 2021). The coverage of exclusive breastfeeding in Kutai Timur District was 56.8% in 2020 and decreased to 51.9% in 2021. Meanwhile, the coverage of exclusive breastfeeding in Telen Sub-district was only 41.4% in 2021. Some issues leading to low coverage of exclusive breastfeeding include the availability of formula milk, mothers working outside the home, limited breastfeeding counselors, and a lack of maternal knowledge about the importance of exclusive breastfeeding (Kutai Timur District Health Profile, 2021).

Previous research indicates inconsistencies in the relationship between exclusive breastfeeding and stunting occurrence. A study by Paramashanti et al. (2016) found that risk factors for stunting in Indonesia include maternal education, income, average duration of illness (such as diarrhea and ARI), birth weight, and energy intake level. In their study, exclusive breastfeeding was not found to influence stunting occurrence. Similar findings were reported in a study in Busungbiu Sub-district, Buleleng-Bali, where no relationship was found between exclusive breastfeeding and stunting occurrence (Marheni, 2020). In addressing the stunting issue, Telen Community Health Center (Puskesmas) has undertaken several intervention efforts, including monitoring toddler growth through weighing and height measurement, providing supplementary feeding at integrated health posts (posyandu), educating about exclusive breastfeeding, and conducting maternal education classes.

Based on the presented background, the researchers are interested in conducting a more in-depth study on the relationship between exclusive breastfeeding history and stunting occurrence in children aged 24-60 months in the Telen Community Health Center's working area.

METHOD

This study is an analytical observational research with a retrospective

approach to determine the relationship between exclusive breastfeeding and stunting occurrence among toddlers in the working area of Telen Community Health Center. The research design employs a case-control design, involving two types of variables: the dependent variable is the occurrence of stunting in toddlers, while the independent variable is the history of exclusive breastfeeding. The population in this study consists of toddlers aged 24-60 months in the Telen Community Health Center's working area, totaling 179 toddlers, where 36 toddlers have experienced stunting and 143 toddlers have not. In this study, the sample ratio of cases to controls is 1:1 (36:36). The case samples comprise 36 toddlers aged 24-60 months who have experienced stunting, selected through purposive sampling. Meanwhile, the control samples comprise 36 toddlers aged 24-60 months who have not experienced stunting, selected using systematic random sampling from the total of 143 non-stunted toddlers. The control samples are chosen with a sampling interval of 4 from the sequence number of non-stunted toddlers. Primary data is collected through research observation sheets that will be provided to mothers of toddlers who meet the inclusion criteria. This study employs a non-parametric test, namely the Fisher Exact test, which is used to test hypotheses between two variables with nominal data scale.

RESULTS

Table 1. Frequency Distribution of Respondents' Characteristics in the Working Area of Telen Community Health Center in 2023.

Variable	Category	Frequency	Percent (%)
Age	24-35 months	41	57
	36-47 months	17	23,6
	48-60 months	14	19,4
	Heights	8	11,1
Height	36-47 months	28	38,9
	48-60 months	36	50
	Heights	40	
	Stunting	32	

Gender	48-60 months	Ver	Sho	Sho	Nor	Mal	Fe	mal	e	Exclusive Breastfeeding History	Sample Status		P Value
											Stunting	Non-Stunting	
										Exclusive Breastfeeding	3	32	0,000
										Exclusive Breastfeeding	33	4	0
										Total		24	
										55,6			
										44,4			
Total										72			100

Source: Primary Data

Table 1 shows that the age group with the highest percentage of toddlers is in the 24-35 months category, with a total of 41 toddlers (57%). The height of toddlers falls into the "very short" category for 8 toddlers (11.1%) and the "short" category for 28 toddlers (38.9%). In terms of gender, the highest percentage of toddlers is male, with a total of 40 toddlers (55.6%).

Table 2. Frequency Distribution of Exclusive Breastfeeding in the Working Area of the Community Health Center.

Variable	Category	Frequency	Percent (%)
Breastfeeding History	Exclusive Breastfeeding	35	48,6
	Non-Exclusive Breastfeeding	37	51,4
	Exclusive Breastfeeding		
	Non-Exclusive Breastfeeding		
Total		72	100

Source: Primary Data

Table 2 shows that there were 35 toddlers (48.6%) who were given exclusive breastfeeding, while 37 toddlers (51.4%) were not given exclusive breastfeeding.

Table 3. Frequency Distribution of Stunting Incidence in Children Aged 24-60 Months in the Working Area of Telen Community Health Center in 2023.

Variable	Category	Frequency	Percent (%)
Stunting Category	Stunting	36	50
	Non-stunting	36	50
Total		72	100

Source: Primary Data

Based on table 3, the number of stunting cases among toddlers in the Telen Community Health Center's working area is 36 toddlers (50%).

Table 4. The Relationship Between Exclusive Breastfeeding and Stunting Incidence in Children aged 24-60 Months in the Working Area of Telen Community Health Center in 2023.

Souce: Primary Data

The results from table 4 indicate that out of 35 toddlers (48.6%) who were given exclusive breastfeeding, only 3 toddlers experienced stunting, while the remaining 32 toddlers did not experience stunting. In contrast, among the 37 toddlers (51.4%) who were not exclusively breastfed, 33 toddlers suffered from stunting and only 4 toddlers did not experience stunting. The analysis using the Fisher Exact test in the SPSS program showed that the P-value was 0.000, with $p < 0.05$. Therefore, the research hypothesis (H1) is accepted, which means there is a significant relationship between the history of exclusive breastfeeding and stunting incidence in children aged 24-60 months in the working area of Telen Community Health Center.

DISCUSSION

Stunting is a significant nutritional issue in Indonesia, particularly among children aged 24-60 months. Stunting has long-term impacts on children's health and development, including disruptions in physical and cognitive growth. This study explores the relationship between exclusive breastfeeding history and stunting incidence in children aged 24-60 months in the working area of Telen Community Health

Center. In this study, the respondents were toddlers aged 24-60 months. Based on the percentage data, it's evident that toddlers aged 24-35 months have a higher stunting incidence rate (57%) compared to toddlers aged 48-60 months (19.4%). Mzumara et al. (2018) supports this finding by stating that age is linked to stunting, where toddlers are at a higher risk of stunting compared to children above five years old. Furthermore, the study also found that male children experience stunting more (55.6%) compared to female children (44.4%). This is consistent with the research conducted by Larasati & Wahyuningsih (2018), stating that gender determines the nutritional requirements of an individual, where males need more energy and protein than females.

Exclusive breastfeeding is a critical factor in preventing stunting in toddlers. However, the research results show that out of 72 respondents, only 35 respondents (48.6%) provided exclusive breastfeeding, while 37 respondents (51.4%) did not. This indicates that the achievement of exclusive breastfeeding in the research area has not yet reached the expected national target (80%) according to the Indonesian Ministry of Health in 2015. Exclusive breastfeeding brings various benefits for both mothers and infants. Breast milk is a natural and ideal source of nutrition for infants due to its composition that suits their needs. Additionally, breast milk can support infant growth, especially in terms of height, as the calcium in breast milk is more efficiently absorbed compared to formula milk. Factors influencing exclusive breastfeeding include maternal knowledge of exclusive breastfeeding and obstacles like maternal employment. Previous studies by Setyawati (2012) and Arifin (2012) also indicate that maternal knowledge of exclusive breastfeeding is related to actual practice. Stunting occurrence in children aged 24-60 months is the main focus of this study. The research results indicate that 36 children experienced stunting. A child's nutritional status is a result of their consumed food, and prolonged nutritional deficiency can lead to stunting. Apart from exclusive breastfeeding history, other factors influencing stunting include maternal nutritional status during

pregnancy, birth weight, and birth length. Maternal nutritional status during pregnancy affects the nutrition received by the fetus, and infants born with low birth weight are at a higher risk of stunting.

The analysis results demonstrate a significant relationship between exclusive breastfeeding history and stunting incidence in children aged 24-60 months in the working area of Telen Community Health Center. Toddlers who receive exclusive breastfeeding have a lower risk of stunting compared to those who don't. Exclusive breastfeeding provides appropriate nutrition for infants and supports their growth, especially in terms of height. Thus, with exclusive breastfeeding, toddlers have the potential to grow normally and avoid the risk of stunting. However, stunting occurrence isn't solely influenced by exclusive breastfeeding; other factors like environmental hygiene and sanitation also play a role. Infections caused by an unclean environment can hinder nutrient absorption and lead to stunting.

CONCLUSIONS

Based on the results of this study, it can be concluded that the majority of respondents' ages fall between 24-35 months, with their height mostly ranging from 77-93 cm, and the majority of them being males. Toddlers aged 24-60 months who received exclusive breastfeeding mostly have a normal height, while those who did not receive exclusive breastfeeding mostly experienced stunting. In the case group (36 stunted toddlers), the majority did not receive exclusive breastfeeding, whereas in the control group (36 non-stunted toddlers), the majority received exclusive breastfeeding. These findings indicate a relationship between the history of exclusive breastfeeding and the occurrence of stunting in children aged 24-60 months in the working area of Telen Community Health Center.

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