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The Relationship of Exclusive Breastfeeding to Stunting in Toddlers in Jambangan District, Surabaya, Indonesia

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A B S T R A C T

Stunting is a condition of failure to thrive in children, which is characterized by a height that does not match their age due to chronic malnutrition, especially in the first 1000 days of life, that is, from the mother's womb until the age of the toddler is 2 years. East Java is one of the regions with a prevalence of quite high stunting. This study aimed to determine the relationship between exclusive breastfeeding and stunting in toddlers in the Jambangan District, Surabaya. This study was a cross-sectional descriptive observational study and used secondary data from the Kebonsari Health Center in Surabaya, where as many as 3906 toddlers were included in this study. Data analysis was carried out using SPSS univariate and bivariate. The results of the study showed that of the 3906 toddlers who became the research sample, 0.26% of them were stunted. In conclusion, there is no relationship between exclusive breastfeeding and stunting (p>0.05).

1. Introduction

Stunting is a condition of failure to grow optimally in children, which is characterized by stunted physical growth and development. Medically, stunting occurs when a child's height under the age of five falls below the normal growth curve set by the World Health Organization (WHO). Children who are stunted have a shorter height than their average age. Stunting usually occurs during a critical growth period, namely in the first 1,000 days of life, from pregnancy to two years of age. The main factor that causes stunting is a lack of nutrition, especially a lack of essential nutrients such as protein, energy, vitamins, and minerals. In addition, factors such as repeated infections, poor sanitation, limited access to clean water, low nutritional education, and social and economic factors can also contribute to stunting.[1-5]

Stunting has serious long-term impacts on children's health and development. Children who are stunted have a higher risk of experiencing health problems, including weak immunity, susceptibility to infectious diseases, decreased cognitive function and mental development, impaired physical and motor development, and decreased productivity later in life. Stunting prevention involves comprehensive efforts involving various sectors, including health, nutrition, clean water and sanitation, education, and social and economic factors. The steps needed to prevent stunting include increasing access to balanced and quality nutrition during the first 1,000 days of life,

promoting the practice of exclusive breastfeeding during the first six months of life, increasing access to nutritious food, improving sanitation and environmental hygiene, and education. And nutrition awareness in the community.[6-9]

Exclusive breastfeeding plays an important role in preventing stunting in children. Exclusive breastfeeding provides optimal nutrition for babies during the first six months of life. Breast milk contains all the essential nutrients a baby needs, including protein, fat, carbohydrates, vitamins, and minerals. Adequate and balanced nutrition in breast milk helps support optimal growth and development in children, preventing malnutrition which can lead to stunting. Breast milk is specific for babies and is naturally adapted to their needs. Breast milk is more easily digested by the baby's digestive system compared to formula milk or other foods. Breast milk contains enzymes and immune factors that help babies absorb nutrients properly. Breast milk contains immune factors such as antibodies, enzymes, and immune cells that help protect babies from infection and disease. Recurrent infections in infants can cause growth and development disorders, so exclusive breastfeeding helps protect babies from various chronic infections that can cause stunting. Breast milk contains natural growth factors, including growth hormones, which support a baby's physical growth and brain development. These factors help ensure that the baby gets the necessary stimulus for optimal growth.[10-14] This study aimed to determine the relationship between exclusive breastfeeding and the incidence of stunting in the Jambangan District, Surabaya, Indonesia.

2. Methods

This study was an observational study with a cross-sectional approach and used secondary data from the Kebonsari Health Center, Jambangan District, Surabaya. A total of 3906 toddlers were included in this study. The inclusion criteria for this study were toddlers aged 10-47 months who were recorded in the register book of the Kebonsari Health Center, Jambangan District, Surabaya, Indonesia and had complete data in the register book. This study made observations on the sociodemographic data of the study subjects, immunization data, and data on exclusive breastfeeding of the study subjects. Data analysis was carried out using SPSS software version 25 in univariate and bivariate. Univariate analysis was performed to present the data frequency distribution of each test variable, and bivariate analysis was performed to present the relationship between the test variables, with $p<0.05$.

3. Results and Discussion

Table 1 presents the characteristics of the research data. The incidence of stunting at the Kebonsari Health Center, Jambangan District, Surabaya, Indonesia, shows a fairly small number, namely only 10 per 3906 toddlers or 0.26%. The stunting incidence rate, which is quite low, below 1 percent, remains a problem that must continue to be pursued so that it can be followed up so that incidents can reach the target of zero incidents.

Stunting was found in 7 subjects (36.8%) who received exclusive breastfeeding. Although it was higher than subjects who did not receive exclusive breastfeeding (3 subjects, 42.9%), the bivariate analysis did not show a relationship between exclusive breastfeeding and stunting because a p-value was obtained of 0.780 (> 0.05). This study shows that exclusive breastfeeding is not related to the incidence of stunting in toddlers in Jambangan District, Surabaya. Several studies show that the effect of exclusive breastfeeding on stunting is not from the aspect of nutritional intake but from infection prevention efforts. Another related theory is a model from experts which shows that exclusive breastfeeding alone will not be able to reduce the incidence of stunting, but it must be supported by improvements in socio-economic conditions, education levels, infectious disease problems, and women's empowerment.[15-19]

Table 1. Characteristics of research data.

Variable	Frequency	Percentage (%)
Incidence of stunting		
Stunting	10	0,26
Not stunting	3896	99,74

Table 2. Relationship between exclusive breastfeeding and stunting.

Variable	Incidence of stunting				p-value	OR	95% CI
	Stunting		Not stunting				
	f	%	f	%			
Exclusive breastfeeding	7	36.8%	12	63.2%	0.780	0.778	0.133 - 4.536
Not exclusive breastfeeding	3	42.9%	4	57.1%			
Total	**10**	**38.5%**	**16**	**61.5%**			

4. Conclusion

There is no relationship between exclusive breastfeeding and stunting in Jambangan District, Surabaya.

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