

# THE RELATIONSHIP BETWEEN EXCLUSIVE BREASTFEEDING AND COMPLEMENTARY FEEDING WITH THE INCIDENCE OF STUNTING BABIES UNDER TWO YEARS IN MANDAILING NATAL DISTRICTS NORTH SUMATRA

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**ABSTRACT**

Background: Stunting is a condition in which growth and development is disrupted by children caused by chronic malnutrition. This study aims to determine the relationship between exclusive breastfeeding and the age of complementary feeding (MP-ASI) with the incidence of stunting. This study uses a quantitative approach with secondary data analysis and tested by chi-square with the sample. The statistical results show a value of  $p = 0.05$ . This study can be concluded that there is a relationship between the age of complementary feeding (MP-ASI) and the incidence of stunting. In other words, it is said that the sooner prelactal food is given, the easier it is for stunting to occur in children aged 0-2 years. The statistical results show  $p = 1,000$ , this shows that there is no relationship between exclusive breastfeeding and the incidence of stunting.

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## INTRODUCTION

The problem of *stunting* is experienced by most children in poor and developing countries such as Indonesia. Stunting is a chronic nutritional problem that results in children having a height that is not in accordance with the increasing age of toddlers (Sariy, Simanjuntak, & Suryani, 2018).

National *stunting prevalence rate* in 2021 according to results Studi Status Gizi Indonesia (SSGI) is 24.4%. The percentage of stunted children under five in North Sumatra Province is 25.8% with children aged 0-23 months as much as 20.8% and children aged 0-59 months as much as 24.4%. This figure decreased compared to 2019, which was 30.1%. This figure is still far from Indonesia's target in reducing stunting, which is less than 20% (Purwanti, 2019).

*Stunting* is a condition in which the occurrence of impaired growth and development experienced by children caused by chronic nutritional deficiencies. According to World Health Organization (WHO) It is said *to be stunting* if the child has a height/length of body to age (TB/U or PB/U) more than two degradation standards below the median child growth standard (Z-score  $< -2$  SD).

According to Kementrian Kesehatan RI, 2018 *Stunting* that occurs in children can affect children's physical and mental development. In addition, *stunting* can affect children's cognitive function, decreased immune function, and metabolic disorders resulting in the risk of degenerative diseases. There are two efforts made to improve nutritional status, namely psychological nutrition intervention and sensitive nutrition intervention. Psychological nutrition interventions consist of nutrition-conscious families, exclusive breastfeeding, pregnant women's PMT, early breastfeeding initiation (IMD), complementary foods (MP-ASI), blood added tablet sprinkles, US PMT and nutritional surveillance. Meanwhile, nutrition-sensitive interventions consist of raskin assistance, healthy lubrication, clean water and sanitation, improving food security, etc. which require cross-sector synergies.

According to PP No. 33 Tahun 2012 Exclusive breastfeeding is breast milk given to babies since birth for 6 months without adding and / or replacing with other foods or drinks. Breast milk is an intake that can meet the needs of babies in supporting the process of growth and development of babies. One of the benefits of exclusive breastfeeding is to help the baby's growth process, especially in increasing the baby's height. This is because breast milk contains more calcium and is more easily absorbed by the body properly. Babies who do not get enough breast milk will have poor nutritional intake that can cause stunting (Domili, Suleman, Arbie, Anasiru, & Labatjo, 2021).

Based on research Sulistianingsih and Sari, 2018 History of exclusive breastfeeding is an influential factor in the occurrence of stunting in toddlers aged 2-5 years with OR=0.108 (CI 95%: 0.065-1.180). This explains that toddlers who get exclusive breastfeeding are 9.3 times less *stunted* than toddlers who do not get exclusive breastfeeding.

MP-ASI is a process of switching liquid-based intake from milk to semi-solid food. In infants aged 6 months, the need for energy and nutrition begins to increase so that it cannot be fulfilled if only with breast milk alone, complementary foods are needed (MP-ASI). Improper breastfeeding practices are still a common problem in developing countries (Wangiyana et al., 2020). Accuracy in giving MP-ASI is not only about time, but also in quantity and texture (Srimiati & Melinda, 2020).

According to research Louis, Mirania and Yuniarti, 2022 As many as 26.7% of children are *stunted* due to improper age in breastfeeding. Meanwhile, as many as 46.7% of children are not *stunted* because children are of the right age in giving MP-ASI.

Based on the study *of breastfeeding and the high rate of stunting in North Sumatra, the purpose of this research is* to know the magnitude of the stunting problem in North Sumatra, know the exclusive breastfeeding in North Sumatera, know the picture of breastfeeding MP in North Sumatra, assess the effect of exclusive breastfeeding with the incidence of stunting, and assess the effect of breastfeeding with the incidence of stunting in North Sumatra. This research is expected to be a basis that exclusive breastfeeding and MP breastfeeding can prevent stunting in Mandailing Natal Regency, North Sumatra.

## RESEARCH METHODS

This study used a quantitative approach of secondary data analysis. The secondary data used was sourced from the 2021 Indonesian Nutritional Status Study. The Nutritional Status Study is an activity aimed at obtaining the magnitude of nutritional status problems for toddlers (stunted, wasted and underweight) at the National, Province, Regency / City levels and obtaining determinants of stunted, wasted and underweight in Indonesia which was carried out in 34 Provinces and 514 Regencies / Cities collecting data on probabilytic households with 8803. The samples taken were children aged 0-2 years in Mandailing Natal Regency, North Sumatra, which was 147 children. The variables used in this study were Stunting Percentage, Exclusive Breastfeeding and First Age of Breastfeeding in Mandailing Natal Regency, North Sumatra. Exclusively breastfed babies are infants aged 0-6 months who are breastfed alone without other food or liquids except drugs, vitamins and minerals. Age of breastfeeding of children 0-2 years, the incidence of stunting based on Height Index according to Age Weight according to Height (BB / TB) is at Z-score - 3SD to - 2SD. Data processing and analysis is carried out in two parts using the Stata program. First, descriptive statistical analysis was carried out to describe all variables used in the study. Second, a khi-square analysis was carried out to determine the relationship between breastfeeding and MP ASI on the incidence of stunting in North Sumatra.

## RESULTS AND DISCUSSION

Based on the results of the study, it was found that most of the mothers' education levels were in the low category, namely 86 people (58.5%), the age of mothers was mostly at the age of 20-35 years, which was 104 (70.7%), most mothers did not work as many as 71 people (48.3%). The study found 82 (55.8%) more boys than women, 73 (49.7%) aged 12-24 months and 46 (31.3%) children aged 6-12

<b>Education Level Mother</b>	<b>n</b>	<b>%</b>
Low	86	58,5
intermediate	42	28,6
Tall	19	12,9
Total	147	100,0
<b>Maternal Age Group</b>		
< 20 Year	5	3,4
20-35 Year	104	70,7
>35 Year	38	25,9
Total	147	100,0
<b>Mother's Work</b>		
Does not work	71	48,3
Private Officers	4	2,7
Self-employed	18	12,2
Laborer	54	36,7
Total	147	100,0

Child's Gender		
Man	82	55,8
Woman	65	44,2
Total	147	100,0
Child Age		
0 - 6 Months	28	19,0
6 - 12 Months	46	31,3
12 - 24 Months	73	49,7
Total	147	100,0

including the low category of 86 people (58.5%) The age of mothers is mostly at the age of 20-35 years which is 104 (70.7%), most mothers are not working as many as 71 people (48.3%). The study found 82 (55.8%) more boys than women, 73 (49.7%) aged 12-24 months and 46 (31.3%) children aged 6-12

The mother's education level has an effect on health behavior change. Maternal education is one of the factors that affect the nutritional status of children and the duration will interfere with family growth. The productive period where a person is easy to accept the learning process and the development of intellectual power is in the age range of 20-35 years, where at that age has enough experience and a growing way of thinking and knowledge about exclusive breastfeeding and how to provide complementary feeding that is good for his baby. Research shows that boys aged 0-2 years are more than girls. In the first year of life men are more prone to nutritional problems than girls, because men's body size is larger so it requires greater energy intake. If food intake is not met and the condition occurs within a reasonable period of time.

Breastfeeding	n	%
Exclusive	11	7,5
Non-Exclusive	136	92,5
Total	147	100,0

### Exclusive breastfeeding

Table 2 Distribution of Exclusive Breastfeeding

The results showed that most of the children, 136 (92.5%) did not Exclusive breastfeeding is given and only 11 people (7.5%) are exclusively breastfed. According to Riskesdas (2021), the coverage of exclusive breastfeeding is 52.5%, this is in line with Sulistianingsih and Sari's (2018) research, which is 33.2%.

Age given MP-ASI

Tabel 3. Distribusi Usia Anak diberi MP ASI

Age	n	%
< 1 Moon	79	53,7

2-5 Moon	88	59,9
6 Moon	13	8,8
<b>Total</b>	<b>147</b>	<b>100,0</b>

The results showed that most children received prelactal, namely the age of children under 1 month, which was 79 children (53.7%), and the age of 2-5 months was 88 children (59.7%).

The results of this study show that most children get MP-ASI too early, which will have an impact on diarrhea and respiratory infections, According to Government Regulation No. 33 of 2012, proper complementary feeding (MP-ASI) from the age of 6 months and continuing breast milk until the age of 2 years, this will affect the degree of health.

#### Incidence of Stunting in Children aged 0-24 Months

Table 4. Distribution of stunting events

<b>Status Stunting</b>	<b>n</b>	<b>%</b>
Stunting	59	40,1
No Stunting	88	59,9
<b>Total</b>	<b>147</b>	<b>100,0</b>

From table 4 above, it was found that 59 (40.1%) stunted children, while 88 (59.9%) were not stunted.

According to BKKBN (2022), the proportion of stunting in North Sumatra, especially Mandailing Natal Regency, is 47.7%.

The Relationship

between

Exclusive

Breastfeeding

Incidence of Stunting

Table 5. The Relationship between Exclusive Breastfeeding and the Incidence of Stunting

The results showed that most children aged 0-2 years as many as 81 children (81.4%) who were not exclusively breastfed, but not stunted. While children 0-2 years who were not exclusively breastfed experienced stunting as many as 55 children (54.6%). Statistical results show  $p = 1,000$ , this shows that there is no relationship between exclusive breastfeeding and the incidence of stunting.

This is contrary to the results of (Fitri & Ernita, 2019) research<sup>12</sup> with the case-control method stating that there is a relationship between exclusive breastfeeding and the incidence of stunting. Babies aged 0-6 months the best food is exclusive breastfeeding because breast milk has advantages in terms of nutrition and immunity.

The low coverage of exclusive breastfeeding will have an impact on the incidence of stunting.

### Age Relationship between Breastfeeding and Stunting Incidence

Age of MP ASI	Stunting Events				Total	p	
	Stunting		No Stunting				
	n	%	n	%			
< 1 Month	26	31.7	53	47.3	79	79.0	0,05
2-5 Month	29	22.1	26	31.9	55	55.0	
6 Month	4	5.2	9	7.8	13	13.0	

Table.6 The relationship between the age of breastfeeding and the incidence of stunting.

The results showed that children under 1 month of age had received MP-ASI stunted as many as 26 children, while children who were introduced to MP-ASI on time or 6 months had fewer stunting events. Based on age, most of the MP-ASI ages are not stunted as many as 53 children.

According to (Angkat, 2018) The results of research in Turkey show that giving MP-ASI too early can be at risk of stunting.

The statistical result shows the value of  $p = 0.05$ . This study can be concluded that there is a relationship between the age of MP-ASI and the incidence of stunting. In other words, it is said that the sooner prelactal food is given, the easier it is for stunting problems to occur in children aged 0-2 years.

### CONCLUSION

The conclusion of this study is that there is no relationship between exclusive breastfeeding and the incidence of stunting, and there is a relationship between the age of breastfeeding and the incidence of stunting.

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