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The Breastfeeding with Nutritional Status Based on Toddler's Height in Bondowoso

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ABSTRACT

Abstract: The incidence of stunting in toddler in Indonesia has been above the WHO target. In Bondowoso, the prevalence of stunting in February 2019 reached 17.54% of 45,002 toddlers. Stunting is closely related to inadequate nutrition, one of which is exclusive breastfeeding. The purpose of research was to determine the relationship of breastfeeding with nutritional status based on toddler's height in Walidono Village, Prajekan District, Bondowoso Regency.

Methode: The type of research was a correlational study with a case control approach. Total population of 46 toddlers aged 24-36 months and obtained a sample of 41 toddlers with proportional random sampling technique. The instrument used questionnaires giving ASI, microtoise and z score application. Data analysis used Chi Square test and obtained the Contingency Coefficient value with the help of the SPSS 26.

Results: The results shows 51.22% of toddlers with no history of exclusive breastfeeding and 48.78% were given exclusive breastfeeding, toddler stunting 43.90% and not stunting 56.10%. The analysis results obtain p-value of 0.039 <α (0.05), it can be concluded that H0 is rejected Ha is accepted, with a Contingency Coefficient value of 0.306 meaning that there is a relationship between breastfeeding and nutritional status based on toddler's height in Walidono Village, Prajekan District, Bondowoso Regency.

Conclusion: Midwives are expected will increase the provision of information on exclusive breastfeeding to pregnant and breastfeeding mother in order to prevent stunting in toddler.

Keywords: *Breastfeeding; Nutritional status; Toddler.*

Introduction

Toddler period is an important period in the process of human growth and development which is a determinant of success in the next process. This period is also a period that takes place quickly and will never be repeated, because it is often called the golden age (Setyawati, 2018). One of the basic needs for growth and development is adequate nutritional intake, which begins in the first 1000 days of life, namely the period in the womb and the period after the baby is born until the age of two years. If toddlers are malnourished, they will be at risk of having poor nutritional status which indicates a growth problem, one of which is stunting. Stunting is a condition of failure to thrive in infants and toddlers as a result of chronic malnutrition, especially in the first 1000 days of life so that children are too short for their age, stunting only appears after children are two years old (PERSAGI, 2018). The length or height of stunting toddlers according to age (TB/U) is less than -2 standard deviations (SD) based on World Health Organization (WHO) standards (Directorate of Public Health and Nutrition and Secretariat for the Acceleration of Nutrition Improvement - Bappenas, 2018).

According to WHO, Indonesia ranks fifth with the highest prevalence of stunting in the world in 2018. Of the 23.7 million total children under five in Indonesia (Ministry of Health RI, 2019) the results of Riskesdas 2013 showed that the proportion of stunting due to chronic malnutrition was 37.2%, but in 2018 the number fell to 30.8% (Health, 2018), but the figure is still far from the WHO target of 20%. In Indonesia, there are 18 provinces with a high prevalence of stunting incidence with a prevalence of 30%, while East Java province ranks 11th highest, which is 32.81% stunting under five out of 2.8 million children under five (Health, 2018). There are 12 districts/cities in East Java that have the highest prevalence and become the focus of stunting reduction and one of them is Bondowoso District (Directorate of Public Health and Nutrition and Secretariat for the Acceleration of Nutrition Improvement - Bappenas, 2018). It was recorded that in February 2019 the incidence of stunting in Bondowoso Regency was ranked third in East Java, reaching around 17.54% of 45,002 children under five (Bondowoso Health Office, 2019). Of the 23 sub-districts in Bondowoso Regency, there are 7 sub-districts that are designated as the focus locations for stunting reduction and the 7th place is Prajekan District. In Prajekan Sub-district in August 2019 there were 27.14% stunting under-fives out of 1,271 toddlers. The Ministry of Health has determined two villages in Prajekan District as the

focus of stunting reduction based on the highest prevalence of stunting under five in Prajekan District, namely Walidono Village and Bandilan Village. In Bandilan Village in August 2019 there were 16.5% stunting toddlers out of 335 toddlers, while in Walidono Village in 2017 there were 16.58% stunting toddlers, in 2018 as many as 18.09%, and in August 2019 as many as 20 ,1% of 199 children under five (Public Health Office Bondowoso Regency, 2019).

In an effort to tackle stunting, the Government of Indonesia conducts Specific Nutrition Interventions and Sensitive Nutrition Interventions. Specific Nutrition Interventions are interventions aimed at children in the First 1,000 Days of Life (HPK) which are divided into several main interventions starting from the mother's pregnancy to giving birth to a toddler (Indonesia, 2017). The results of the evaluation of one of the government's specific nutritional interventions and the RPJMN program, namely exclusive breastfeeding, in Walidono Village, Prajekan District, Bondowoso Regency in 2016 the coverage of exclusive breastfeeding was 61.90%, in 2017 it was 56.52% and in 2018 it was 53.85% . From this data, it turns out that the coverage of exclusive breastfeeding in Walidono Village is experiencing a downward trend and is far below the MSS target of 80%.

Based on the results of a preliminary study conducted in August 2019 for 6 children aged 24-36 months, consisting of 3 toddlers (50%) who were stunted and 3 toddlers (50%) not experiencing stunting, the following results were obtained from 3 toddlers who did not experiencing stunting, it is known that 2 toddlers (67%) have a history of being given exclusive breastfeeding, while from 3 toddlers who experience stunting it is known that 3 toddlers (100%) have a history of not being given exclusive breastfeeding. Based on the description and facts above, it is very necessary to do research on the relationship between breastfeeding and nutritional status based on height in toddlers in Walidono Village, Prajekan District, Bondowoso Regency.

Methode

This research is a correlational study that examines the relationship between exclusive breastfeeding and nutritional status based on height in children aged 24-36 months, using a case-control approach, which is to identify nutritional status based on height in toddlers aged 24-36 months, then trace the history. breastfeeding. Data were collected using an instrument in the

form of a height measuring device (microtoise) to measure the height of toddlers aged 24-36 months. Furthermore, the measurement results are entered into the z-score application to determine nutritional status based on height. Data collection on exclusive breastfeeding was done using a questionnaire to trace the history of breastfeeding when toddlers were 0-6 months old.

Determination of the sample using the Slovin formula, obtained 41 children under five with a proportional random sampling technique, which is a proportional sampling technique carried out by taking subjects from each region determined in balance with the number of subjects in each region. The location of the research was in Walidono Village, the working area of Prajekan Public Health Center, Bondowos Regency. The primary data collection procedure has followed the ethical standards according to the protocol from the Health Research Ethics Commission (KEPK) Poltekkes Kemenkes Malang with No. 773/KEPK-POLKESMA/2020.

Analysis Method

The data that has been collected is then processed through data entry, editing, coding and tabulation processes. The analysis used in this research is univariate and bivariate analysis. Univariate analysis was conducted to provide an overview of the research variables in the form of a frequency distribution. Bivariate analysis using Chi Square statistical test (x2). used to determine the relationship between variables.

Results

Characteristics of Respondents

The demographic characteristics of the respondents in this study with a sample of 41 children under five are as follows:

Table 1. Characteristics of respondents in Walidono Village, Prajekan District, Bondowoso Regency in 2020

Characteristic of Respondents	Frequency	Persentase (%)
Child gender		
Male	22	53,66
Female	19	46,34
Mother's age toddler		
< 20 year	1	2,44
20-35 year	29	70,73
>35 year	11	26,83
Mother's education		
Elementary School	14	34,15

Junior high school	12	29,27
Senior high school	8	19,51
College	7	17,07
Mother's Job		
Housewife	35	85,36
Self-employed	3	7,32
Teacher	3	7,32

The sex of the children under five was mostly male, namely 53.66%. Boys are more active than girls, so they need adequate nutrition for their growth and development.The mother's age of 20-35 years was mostly in the age range of 20-35 years (70.73%). The mother's age range is an adult age who has physical and psychological readiness in raising children. Almost half (34.15%) of mothers have elementary school education and almost half (29.27%) have junior high school education. A person's education will affect attitudes and behavior in parenting. The higher the education of the mother, the easier it will be to understand child care. Almost all (85.36%) mothers do not work and become housewives. Mothers who do not work outside the home allow them to have more free time with their toddlers than mothers who work.

History of breastfeeding at the age of 0-6 months

Table 2. Frequency distribution of breastfeeding history to toddlers in Walidono Village, Prajekan District, Bondowoso Regency in 2020

Breastfeeding	Frequency	%
No Exclusive Breastfeeding	21	51,22
Exclusive Breastfeeding	20	48,78
Number	41	100,00

Based on table 5, most (51.22%) of children under five had a history of not getting exclusive breastfeeding, and almost half (48.78%) had a history of getting exclusive breastfeeding.

Nutritional Status Based on Toddler Height

Table 3. Frequency distribution of nutritional status based on toddler height in Walidono Village, Prajekan District, Bondowoso Regency in 2020

Nutritional Status (height)	Frequency	%
No stunting	18	43,90
Stunting	23	56,10
Number	41	100,00

Based on table 6, it turns out that most (56.10%) toddlers aged 24-36 months are not stunted, and almost half (43.90%) are stunted.

The Relationship between Breastfeeding and Nutritional Status Based on the Height of Toddlers aged 24-26 months

Table 4. Cross table of relationship between breastfeeding and nutritional status based on height of Toddlers Age 24-36 Months in Walidono Village, Prajekan District, Bondowoso Regency in 2020

Breastfeeding	Nutritional Status by Height		Number	χ^2 count (Chi squares)
	Stunting	No stunting		
No Exclusive Breastfeeding	13 (61,9)	8 (38,1)	21	
Exclusive Breastfeeding	5 (25%)	15 (75%)	20	
Number	18	23	41	0.039

Based on the cross table, it turns out that among toddlers aged 24-36 months who have a history of not getting exclusive breastfeeding, most (61.9%) are stunted. Meanwhile, in toddlers who have a history of getting exclusive breastfeeding, most (75%) are not stunted. Furthermore, the results of the analysis using chi square obtained a calculated x2 value of 4.266 with a significance value of 0.039. Due to the significance value, p-value 0.039 < (0.05), then H0 is rejected. Ha is accepted, meaning that there is a relationship between breastfeeding and nutritional status based on the height of toddlers aged 24-36 months. With a correlation coefficient (KK) of 0.306, it is in the category of having a low level of closeness. The results of this study indicate that there is a significant relationship between breastfeeding and nutritional

status based on the height of toddlers aged 24-36 in Walidono Village, Prajekan District, Bondowoso Regency.

Discussion

Stunting is caused by chronic nutritional deficiencies, especially the first 1000 days of life, resulting in children being shorter than their age (PERSAGI, 2018). Nutritional intake is divided into two, namely pre-natal and post-natal nutritional intake. Post-natal nutritional intake is nutritional intake given after the baby is born, one of which is breast milk. As much as 50% of protein in infants is used for growth and calcium is used for the growth of bones and teeth. All substances needed by infants aged 0-6 months of life are the best food for babies. The protein content in breast milk is quite high, namely 0.8-1gr/100 ml and the composition is different from the protein found in formula milk. Breast milk contains more whey-casein, which is 65:35, this composition causes breast milk protein to be more easily absorbed. (Yuliarti, 2010). Breast milk also contains twice as much lactose as formula milk. Lactose affects the absorption of calcium which acts as a bone-forming material. Lactose by fermentation will be converted into lactic acid. This lactic acid provides an acidic atmosphere in the intestines which will provide several advantages, including inhibiting the growth of harmful bacteria so that it is good for the baby's digestive system, stimulating the growth of microorganisms that produce organic acids and synthesize vitamins, facilitate precipitation of Ca caseinate, and facilitate absorption of minerals. including calcium. Calcium levels in breast milk are sufficient to allow optimal growth of the baby's bones and teeth (Soetjiningsih, 2012).

Babies who are not exclusively breastfed will be more easily malnourished and susceptible to infectious diseases such as diarrhea and respiratory infections. Infectious diseases, such as diarrhea that attacks the digestive system interfere with the absorption of nutrients and energy for growth, diverted to the body's resistance to infection. When children are sick, their appetite generally decreases, resulting in lower nutritional intake. Thus, malnutrition in infancy can lead to growth failure, namely stunting (Meihartati, 2019).

The results showed that the majority of children aged 24-36 months who had a history of being given exclusive breastfeeding (75%) were not stunted. This proves that breastfeeding at the age of 0-6 months (exclusive breastfeeding) has better growth and development than those who

are not given exclusive breastfeeding (Fikawati, 2015). Almost half (48.78%) of toddlers have a history of getting exclusive breastfeeding. This is because most (70.73%) mothers are of productive age, namely 20-35 years. Mothers of that age are in their productive period and mothers are said to be able to provide exclusive breastfeeding because in general mothers have good lactation abilities caused by the hormones prolactin and oxytocin which are still widely produced by the reproductive organs (Simbolon P., 2017). Almost all mothers (85.36%) do not work or become housewives. This allows mothers to have more time to give their breast milk, in contrast to working mothers who have little time to breastfeed and finally give formula milk to their babies (Yosephin, 2019).

Most of the children under five who are not stunted (53.66%) are male. Boys need more nutrition because they have more physical activity than girls (Purwaningrum & Wardani, 2013). Thus, if nutritional intake is met, boys are more protected from the problem of growth disorders due to nutritional deficiencies than girls. From the results of the study, it was found that toddlers aged 24-36 months who had a history of not being given exclusive breastfeeding (61.9%) experienced stunting or shorter height than their age. Breast milk is the best and complete nutritional intake for babies up to the age of 6 months, if the baby lacks nutritional intake it can have an impact on his growth later. Most of the toddlers (51.22%) had a history of not being given exclusive breastfeeding. The low behavior of exclusive breastfeeding is due to the low level of mother's education (34.15%) with elementary school education and 29.27% with junior high school education. Mother's education level affects decision making, where the higher the education, the higher the opportunity to give exclusive breastfeeding (Simbolon P., 2017). The lower the level of education and knowledge of mothers about the importance of exclusive breastfeeding, the lower the behavior of mothers to give exclusive breastfeeding to their babies. In addition, education affects the mother's grasp of the information conveyed because mothers with low education are more difficult to understand the information provided. Efforts are needed to provide information with an easy-to-understand method so that it can affect the mother's knowledge, especially about the importance of exclusive breastfeeding to meet the growing needs of her child.

The results of this study are in line with the results of research conducted by Sri Mugianti, et al (2018), that the factors that cause stunting in children aged 25-60 months are

children who are not given exclusive breastfeeding and the behavior of mothers in providing exclusive breastfeeding is influenced by education, mothers with low education can causes mothers not to give exclusive breastfeeding to their children because of the mother's ignorance about the importance of exclusive breastfeeding. Based on the results of this study, it has been proven that there is a relationship between exclusive breastfeeding and nutritional status based on height in children under five. So that exclusive breastfeeding is one of the preventive efforts against growth failure in toddlers or what is called stunting.

Conclusion

Most toddlers aged 24-36 months in Walidono Village have a history of not getting exclusive breastfeeding. Most toddlers aged 24-36 months are not stunted. There is a relationship between breastfeeding and nutritional status based on height in toddlers aged 24-36 months in Walidono Village, which means that toddlers aged 24-36 months who have a history of not getting exclusive breastfeeding experience stunting while toddlers who have a history of getting exclusive breastfeeding do not experience stunting. For health workers, in this case, midwives in the work area of Walidono Village, Prajekan Sub-district, are expected to further increase the provision of information by providing education about exclusive breastfeeding using methods that are easy to understand and understand by the community, especially pregnant women and breastfeeding mothers as a preventive effort against stunting. For further research, it is necessary to examine other factors as a cause of stunting in toddlers with a larger sample size.

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