The Correlation Between Exclusive Breastfeeding and Stunting Incident In Toddlers In The Bastem Utara Public Health Care

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Abstract

Stunting describes a lack of nutritional status that is chronic during times of growth and development from the beginning of life. This situation is presented with z-score height according to age (TB / U) less than -2 standard deviation (SD) based on growth standards. The purpose of this research was to analyze the Correlation of exclusive breastfeeding with the incidence of stunting in children under five in the Work Area of Bastem Utara primary health care. The research design used a cross sectional approach. The sample in this research amounted to 34 people with total sampling technique.

The results showed that out of 34 respondents, 13 respondents (38.2%) with exclusive breastmilk included 10 toddlers (29.4%) with short stature and 3 toddlers (8.8%) with very stature short. And as many as 21 respondents (61.8%) did not provide exclusive breastmilk, including 3 toddlers (2.9%) with short stature and 20 toddlers (58.8%) with very short stature. Statistical test results using the chi square test showed that the p-value = 0.000 was smaller than the value of α = 0.05. The conclusion is there was a relationship between exclusive breastfeeding and the incidence of stunting in children under five in the Work Area of Bastem Utara primary health care.

Based on the results of this research the authors propose suggestions, among others: expected to increase counseling in schools, Posyandu or cross-sectoral meetings in an effort to reduce the incidence of stunting. Birth attendant midwives are more motivating to support the success of exclusive breastfeeding, paying attention to the quality and quantity according to the needs of toddlers. Posyandu cadres to provide assistance to mothers from pregnancy to 6 months old toddlers for successful exclusive ASI.

Keywords: Exclusive ASI, Stunting, Toddler
A. Introduction

Stunting describes chronic nutritional status that is chronic during growth and development since early life. This situation is represented by the height z-score by age (TB / U) less than -2 standard deviations (SD) based on growth standards according to WHO (WHO, 2010 in Ni’mah, 2016). Globally, about 1 in 4 children under five is stunted (UNICEF, 2013). In Indonesia, based on the results of basic health research (Riskesdas) in 2013, there were 37.2% of children under five who were stunted. It is known from the total percentage, 19.2% of children are short and 18.0% are very short. The prevalence of stunting has increased compared to the results of Riskesdas in 2010 which amounted to 35.6%

The toddler period is a period that is very sensitive to the environment so more attention is needed especially the adequacy of nutrition (Kurniasih, 2010). Nutrition problems, especially stunting in infants, can inhibit a child’s development, with negative impacts that will occur in the next life such as intellectual decline, susceptibility to non-communicable diseases, reduced productivity to cause poverty and the risk of giving birth to babies with low birth weight (UNICEF, 2012; and WHO, 2010 in Ni’mah, 2016).

UNICEF in 2014 released the results that more than 162 million under 5 years of being stunted (short) in the world, with wasting (thin) as many as 51 million children, and 17 million in very thin conditions that require special handling. The situation will experience long-term effects that have an impact on him, his family, and the government, even at high risk of death. Stunting if it occurs during the golden period (golden period) of brain development (0-2 years), it results in poor brain development (Rudert C, 2014). This in the future can result in decreased intellectual ability and productivity, increased risk of degenerative diseases and the birth of infants with low birth weight or premature (Sari, et al., 2010).

Factors related to stunting according to research (Ulfani, et al, 2011) one of which is the level of parental education. The level of education can make it easier for someone or the community to absorb information and apply it in their daily behaviors (Astari: 2006). Riskesdas (2010) that the lower the education of parents (elementary school and never attended school) the higher the shortness prevalence compared to parents with junior high school education and above.

In addition to parental education factors, breastfeeding is one of the important factors for the growth and development and health of children. WHO and Unicef (2012) in the Global strategy on infant and young child feeding in 2012 recommend the 4 (four) best diets for 0 months to 2 years of age, namely Early Breastfeeding Initiation (IMD) in the first 30 to 60 minutes after birth, giving Exclusive breastfeeding until the baby is 6 months old, starts giving complementary food starting at 6 months and continues breastfeeding until 2 years old. The behavior of exclusive breastfeeding for up to 6 months is still not optimal.

The results of research conducted by Hasanah (2017) on the relationship of exclusive breastfeeding with the incidence of stunting in infants, shows that there is a statistically significant relationship between exclusive breastfeeding with the incidence of stunting in infants. Research conducted by Susilowati (2018) about the risk factors for stunting in infants 1-5 years old at the Bangsri I Health Center in Jepara District, shows that the LILA, ANC, Exclusive breastfeeding and MP ASI factors are risk factors for stunting in infants 1-5 years. Research conducted by Al-Rahmad (2013) on the study of stunting in children under five in terms of exclusive breastfeeding, MP-ASI, immunization status and family characteristics in the city of Banda Aceh, shows that stunting in children under five is closely related to low family income, giving ASI is not exclusive, lack of good MP-ASI and incomplete immunization. While non-exclusive breastfeeding is a dominant factor as a risk of stunting.

Based on a preliminary study conducted by researchers at the North Bastem Health Center on August 3 2018, 34 data were obtained from the number of stunting events in 2016-2018 with 2016 underives in 2016 totaling 508 infants, in 2017 totaling 500 infants and in 2018 totaling 589 toddler. The number of exclusive breastfeeding targets in 2016 is 80% while the achievement is only 39% and in 2017, the number of exclusive breastfeeding targets is 61% while the achievement is only 20%. This indicates that the exclusive ASI program was less successful (Profil Puskesmas Bastem Utara, 2018).
B. Literature Review

Breastfeeding is one of the important factors for the growth and development and health of children. WHO and Unicef (2012) in the Global strategy on infant and young child feeding in 2012 recommend the 4 (four) best diets for 0 months to 2 years of age, namely Early Breastfeeding Initiation (IMD) in the first 30 to 60 minutes after birth, giving Exclusive breastfeeding until the baby is 6 months old, starts giving complementary food starting at 6 months and continues breastfeeding until 2 years old. The behavior of exclusive breastfeeding for up to 6 months is still not optimal.

The study of Susilowati, E. (2018), the results showed the age of pregnant women at risk of 35.7%, Hb levels of anemia for mothers 48.6%, CUP of maternal KEK 31.4% frequency of ANC 100% good, LBW 21.4%, Not Asi exclusively 44.3% and breastfeeding MP is not suitable for age 44.3% Statistical analysis shows that there is a significant influence between MUAC (Wald: 6,230, p: 0,013), ANC (r: 0,336, p: 0,004) exclusive breastfeeding (Wald: 6,744) , p: 0.009) and giving ASI (Wald: 6,744, p: 0,009) to the incidence of stunting, in conclusion the MUAC, ANC, exclusive breastfeeding and MP ASI are risk factors for stunting in infants 1-5 years.

Early and exclusive breastfeeding for at least 4-6 months will help prevent a variety of childhood illnesses, including gastric and respiratory disorders, especially asthma in children. This is due to the presence of important antibodies present in breast milk colostrum (in smaller amounts), will protect newborns and prevent allergies. For this reason, all newborns must get colostrum. Rahmi, (2008) in Aprilia, (2010).

Growth and development in infancy requires a balanced and relatively large supply of nutrients. However, a baby's ability to eat is limited by the condition of the digestive tract which is still in the maturing stage. The only food that suits the condition of the baby's digestive tract and meets the needs for the first few months is breast milk. Hidayati, (2010): Mediana (2016).

Inappropriate breastfeeding can cause babies to suffer from malnutrition and poor nutrition. Whereas malnutrition in infants will have an impact on psychomotor, cognitive and social disorders as well as clinically impaired growth. Another impact is the degree of health and nutrition of Indonesian children is still cause for concern. Children who are not breastfed are at higher risk for nutrient deficiencies needed for the growth process. Subsequent growth disorders will result in stunting in children. Hidayati, (2010): Mediana (2016).

In Indonesia, around 37% (nearly 9 million) of children under five experience stunting. Indonesia is the country with the fifth highest stunting prevalence. Toddler / baduta (babies under the age of two years) who experience stunting will have a level of intelligence that is not optimal, making children more vulnerable to disease and in the future can be at risk of decreasing levels of productivity. In the end, stunting will be able to hinder economic growth, increase poverty, and widen inequality (Riskesdas 2013).

C. Method

1. Research Design

This type of research is analytic observational research, using a cross sectional design. Cross Sectional Approach is an approach used in research that aims to determine the relationship between independent variables with the dependent variable on the object of research at the same time (Sastroasmoro, 2014).

2. Population and sample

The population used in this study were all mothers with stunting children in the North Bastem Health Center Work Area of 34 people. The sample used in this study were all mothers with stunting children in the Bastem Utara primary health care of 34 people.

3. Data Collection

Data collection tools in this study used questionnaires about characteristics of respondents' data which included: mother's name, mother's age, economic status, mother's education and stunting events. And interview the respondent with a question (do you give exclusive breastfeeding?) With an answer Yes or No.
4. Data Analysis

Univariate analysis is used to describe each variable, both the independent variable (exclusive breastfeeding) and the dependent variable (stunting occurrence in infants) in the form of numbers and categories. Bivariate analysis is used to analyze sample data, and the results will be generalized in the population. Analysis through the variables studied by looking at the relationship between one independent and dependent variable. The analysis used Chi Square statistical test with significance level $\alpha = 0.05$.

D. Result and Discussion

1. Exclusive Breastfeeding

**Table 1. Frequency Distribution Based on Exclusive Breastfeeding in the working area of the Bastem Utara primary health care**

<table>
<thead>
<tr>
<th>Exclusive Breastfeeding</th>
<th>(n)</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exclusive Breastmilk</td>
<td>11</td>
<td>38,2</td>
</tr>
<tr>
<td>Not Exclusive Breastmilk</td>
<td>23</td>
<td>57,6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>34</td>
<td>100,0</td>
</tr>
</tbody>
</table>

Source: Primary Data, 2018

Based on table 1 above shows that from 34 respondents, the number of respondents who gave exclusive breastmilk were 11 people (38.2%), and the number of respondents who did not give exclusive breastmilk were 23 people (57.6%).

2. Stunting incident

**Table 2. Frequency Distribution Based on Stunting Incident in the working area of the Bastem Utara primary health care**

<table>
<thead>
<tr>
<th>Stunting Incident</th>
<th>(n)</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short stature</td>
<td>13</td>
<td>38,2</td>
</tr>
<tr>
<td>Very short stature</td>
<td>21</td>
<td>61,8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>34</td>
<td>100,0</td>
</tr>
</tbody>
</table>

Source: Primary Data, 2018

Based on table 2 above shows that from 34 respondents, the number of respondents who have children under five with short stature is 13 people (38.2%), and the number of children under five with very short stature is 21 people (61.8%).


**Table 3. The relationship between exclusive breastfeeding and the incidence of stunting in infants in the Bastem Utara primary health care**

<table>
<thead>
<tr>
<th>Exclusive Breastfeeding</th>
<th>Stunting incident</th>
<th>Total</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Short stature</td>
<td>Very short stature</td>
<td></td>
</tr>
<tr>
<td>Exclusive</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Exclusive</td>
<td>10</td>
<td>29,4</td>
<td>3</td>
</tr>
</tbody>
</table>


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Based on table 3 above shows that of 34 respondents, as many as 13 respondents (38.2%) with exclusive breastmilk, including 10 toddlers (29.4%) with short stature and 3 toddlers (8.8%) with stature very short body. And as many as 21 respondents (61.8%) who did not provide exclusive breastmilk, including 3 toddlers (2.9%) with short stature and 20 toddlers (58.8%) with very short stature. Statistical test results using the chi square test showed a p-value = 0.000 smaller than the value of $\alpha = 0.05$, which means there is a relationship between exclusive breast milk and the incidence of stunting in infants in the Bastem Utara primary health care.

### Table 3. breastmilk

<table>
<thead>
<tr>
<th></th>
<th>Exclusive Breastmilk</th>
<th>Not Exclusive Breastmilk</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>2.9</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>58.8</td>
<td>21</td>
<td>61.8</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>32.4</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>67.6</td>
<td>34</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Primary Data, 2018

D. Discussion

1. Exclusive Breastfeeding

In this study there were 61.8% of mothers who did not give exclusive breast milk. The results of interviews with respondents' toddlers mothers showed that the reason mothers of toddlers who did not give exclusive breast milk to their children was because breast milk did not come out when the child was born so the baby was given formula milk as a substitute. After the milk is smooth, the milk is given to her child with formula milk added. In addition, supplementary milk is given early so that the baby does not cry or fuss.

In the field most newborn babies are not immediately given breast milk but are given bottle milk on the grounds that breast milk has not come out. If the milk comes out, the mother gives milk, but first the milk that comes out first is discarded and is not given directly to the baby on the grounds that the first expenditure is still dirty. If the expenditure of breast milk is a little, the mother immediately replaces the milk with bottle milk. The provision of bottle milk that enters the baby's body may not necessarily be digested by the baby well, moreover if the method of making bottle milk does not match the dose and does not maintain the cleanliness of the bottle of milk it will cause diarrheal disease in infants so that growth will be disrupted.

Breastmilk has many benefits, for example increasing children's immunity against diseases, ear infections, reducing the frequency of diarrhea, chronic constipation and so on (Henningham and McGregor, 2009). Lack of breastfeeding and complementary food that is too early can increase the risk of stunting, especially early in life (Adair and Guikley, 1997). The magnitude of the effect of exclusive breastfeeding on the nutritional status of children makes WHO recommend implementing interventions to increase breastfeeding during the first 6 months as one step to achieve the WHO Global Nutrition Targets 2025 regarding reducing the number of stunting in children under five years (WHO, 2014).

2. Stunting incident

The results showed that of the 34 respondents, the number of respondents who had toddlers with short stature were 13 people (38.2%), and the number of toddlers with very short stature were 21 people (61.8%). Stunting that has occurred if not balanced with catch-up growth (chasing growth) results in decreased growth. Stunting is formed by growth faltering and inadequate growth up which reflects the inability to achieve optimal growth. This revealed that the group of children under five born normal weight could be stunted if the subsequent fulfillment of needs was not met properly (Kemenkes: 2013).

The results of Riskesdas (2013) show that the incidence of stunting among children is much influenced by low income and parental education. Families with high incomes will be easier to get access to education and health so that the nutritional status of children
can be better Bishwakarma, (2011): N'i'mah (2015). In this study there were still respondents with the most recent elementary school education (23.5%), who had a junior high school education (26.5%).

N'i'mah (2015), in his research revealed that the socioeconomic status of the family such as family income, parental education, mother's knowledge about nutrition, and the number of family members can indirectly relate to stunting. Low economic status is considered to have a significant impact on the likelihood of children becoming thin and short (UNICEF, 2013).

Al-Rahmad (2013), said that the characteristics of mothers such as their level of education, work status, mother's age, etc. are very important to consider, for example the level of education also determines whether a person can easily absorb and understand the nutritional knowledge obtained. Although indirectly the mother's formal education will affect the nutritional status of her children. Because before that mother’s education will determine the level of nutritional knowledge. The higher the mother's education the higher the mother's ability to absorb practical knowledge and non-formal education, especially through television, newspapers, radio, and others.

3. Analysis of the relationship of exclusive breastfeeding with the incidence of stunting in toddler in the Bastem Utara primary health care.

The results showed that of 34 respondents, 13 respondents (38.2%) with exclusive breast milk, including 10 toddlers (29.4%) with short stature and 3 toddlers (8.8%) with very short stature. And as many as 21 respondents (61.8%) who did not provide exclusive breast milk, including 3 toddlers (2.9%) with short stature and 20 toddlers (58.8%) with very short stature.

Statistical test results using the chi square test showed a p-value = 0.000 smaller than the value of α = 0.05 which means there is a relationship between exclusive breastfeeding and the incidence of stunting in infants in the Bastem Utara primary health care. The proportion of children under five experiencing stunting short body stature of 38.2% due to exclusive breastfeeding, while the proportion of children under five who experience stunting of very short stature of 61.8% due to non-exclusive breast milk.

This research is in line with a study by Hasanah (2016), regarding the relationship of exclusive breastfeeding with the incidence of Stunting in infants. The significance value between exclusive breastfeeding and the incidence of stunting in infants using the chi square test showed a value of p = 0.034 with an OR value = 0.234. This research is also in line with a study from Al-Rahmad (2013), regarding the stunting study in children under five in terms of exclusive breastfeeding, MP-ASI, immunization status and family characteristics in the city of Banda Aceh. The results of multivariate analysis showed that non-exclusive breastfeeding was very dominant, causing children under five to experience stunting in the Banda Aceh City area with OR = 4.9.

In Indonesia, around 37% (nearly 9 million) of children under five experience stunting. Indonesia is the country with the fifth highest stunting prevalence. Toddler / baduta (babies under the age of two years) who experience stunting will have a level of intelligence that is not optimal, making children more vulnerable to disease and in the future can be at risk of decreasing levels of productivity. In the end, stunting will be able to hinder economic growth, increase poverty, and widen inequality. (Basic Health Research / Riskesdas 2013).

Inappropriate breastfeeding can cause babies to suffer from malnutrition and poor nutrition. Whereas malnutrition in infants will have an impact on psychomotor, cognitive and social disorders as well as clinically impaired growth. Another impact is the degree of health and nutrition of Indonesian children is still cause for concern. Children who are not breastfed are at higher risk for nutrient deficiencies needed for the growth process. Subsequent growth disorders will result in stunting in children. Hidayati, (2010): Mediana (2016).
In this study the researchers assumed that the low exclusive breastfeeding was one of the triggers for shortening (stunting) in children under five in the working area of the north bastem health center, as a result of past events and would have an impact on the future of sianak, otherwise good breastfeeding by mothers would help maintain the child's nutritional balance so that normal child growth is achieved. Breast milk is needed during infancy so that the nutritional needs are fulfilled. Therefore, mothers must and are obliged to give exclusive breastfeeding to infants until the age of 6 months and continue to give milk until the baby is 2 years old to meet the nutritional needs of the baby.

E. Conclusion
The result of this study showed there is a relationship between exclusive breastfeeding and the incidence of stunting in toddler in the Bastem Utara primary health care. It means that toddler who get exclusive breastmilk will not experience stunting.

F. References


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