# FACTORS AFFECTING THE EVENT STUNTING IN TOLLS AT SEI BAMBAN HEALTH CENTER BATANG SATAN DISTRICT LANGKAT DISTRICT YEAR 2020

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## ABSTRACT

*The term "stunting" has become widespread in research, programs and international child health and nutrition policy circles. Stunting (short body) describes the condition of malnutrition that has been long since 1000 days of birth of a baby and it takes time for the child to develop and return to normal according to the growth and development of the child's age. This study aims to determine the factors that influence the incidence of stunting in toddlers at the Sei Bamban Health Center, Batang Serangan District, Langkat Regency in 2020. This research is an analytical survey with a cross sectional study design. The sampling technique was Simple Random Sampling with a total population of 20 children at the Puskesmas Sei Bamban. The method of collecting data for maternal nutrition variables during pregnancy, exclusive breastfeeding, complete basic immunization and environmental sanitation was using a questionnaire. Data analysis using Chi Square. The results showed that from 20 samples, 75.5% of children under five were stunted, 80.0% of mothers had a history of poor nutrition during pregnancy, 70.0% of children under five had a history of not exclusive breastfeeding, 45.0% of children under five received complete basic immunization. , and 85.0% have poor environmental sanitation. Meanwhile, complete basic immunization did not have a significant relationship with the incidence of stunting. Research suggests that the active role of the government, especially health workers, is to tackle the incidence of stunting in toddlers. In addition, it is hoped that the community will adopt a balanced nutrition diet to improve welfare*

***Keywords*** *: Stunting, pregnancy, breastfeeding, immunization, sanitation*

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## INTRODUCTION

The term "stunting" has become widespread in research, program, and international child health and nutrition policy circles. Stunting is usually used to monitor the effectiveness of public health and nutrition programs. Stunting (short body) describes a state of malnutrition that has been around for a long time since 1000 days of the baby's birth and it takes time for the child to develop and return to normal in accordance with the growth and development of the child's age. To

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strengthen the diagnosis of stunted children, it can be seen from Anthropometry examinations. Stunting can be experienced by children before birth due to poor nutrition during pregnancy, poor diet, and the intensity of the frequency of suffering from frequent illnesses.[1]

Stunting is a health problem that is often found in developing countries, including Indonesia. According to the United Nations Children' fund (UNICEF), in 2016 there were 22.9% of children under five years old (toddlers) experiencing stunting. Short body (stunting) according to the Decree of the Minister of Health of the Republic of Indonesia Number 1995/MENKES/SK/XII/2010 concerning anthropometric standards for status studies Child nutrition is a condition where the measurement of body length according to age (PB/U) or height for age (TB/U) is between -3 Standard Deviation (SD) to -2 SD is severely stunted (very short).[2]

Stunting problems are related to nutrition and health problems for pregnant and lactating mothers, newborns and children under two years of age. This period is more commonly known as the Gold Period or the first 1000 days of a person's life. This period is a process of growth and development of the child's body systems and organs. This period must be paid more attention because it can have an impact on children's growth and development and is very difficult to repair.[2]

The prevalence of stunting globally in 2017 was 22.2% or around 150.8 million children under five in the world experienced stunting. However, the incidence of stunting has decreased when compared to the incidence of stunting in 2015 (23.2%), 2010 (26.1%), 2005 (29.3%) and in 2000 (32.6%) . In 2017 more than half of children under five experiencing stunting came from Asia (55%), while more than a third (39%) lived in Africa. Of the 83.6 million stunting children under five in Asia, the highest incidence came from South Asia (58.7%) and the lowest incidence was in Central Asia (0.9%). Based on data from the World Health Organization (WHO), Indonesia is included in the third country with the highest prevalence in Southeast Asia/Sourth-East Asia Regional (SEAR). The average prevalence of stunting in Indonesia in 2005-2017 was 36.4%.[3]

According to Maternal and Child Nutrition Reducing child stunting is the first of the 6 goals in the Global Nutrition

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Targets for 2025 and the main indicator in the second Sustainable Development Goal of Zero Hunger, the prevalence of child stunting in Indonesia has remained high over the past decade, and nationally about 37%. Based on Nutrition Status Monitoring (PSG) data, the prevalence of stunted toddlers in Indonesia has increased in 2016 from 27.5% to 29.6% in 2017 while in 2018 the percentage of 37.2% under five in Indonesia has a height that is not high. according to their age (short), currently around 8 million children in Indonesia are experiencing growth that is not in accordance with their age.[1]

Based on Riskesdas data, the prevalence of stunting in Langkat Regency from 2013 to 2018 decreased by 32.18%. In 2013 the prevalence of stunting cases was 55.48% and in 2018 it was 23.3%. However, the achievements in 2018, have not yet met the target of the WHO stipulation of 20% (Ministry of Health of the Republic of Indonesia, 2018). The local government of Langkat Regency issued a policy through Regent Regulation Number 10 of 2018 concerning Reducing Stunting through Specific Nutrition Interventions aimed at 1000 HPK children carried out by the health sector and Sensitive Nutrition Interventions which will be carried out across the health sector targeting all communities.[1]

Based on an initial survey conducted at the Sei Bamban Health Center, Batang Serangan District, Langkat Regency in June 2020, 2 out of 8 villages in the working area of the Sei Bamban Health Center there are 4 toddlers who are stunted. There are 1 toddler who is said to be stunted based on BB/U, 2 toddlers based on TB/U and 1 toddler based on BB/TB.

## MATERIAL AND METHOD

This type of research uses an analytical survey research with a cross sectional design. The cross-sectional research design (cross-sectional) includes all types of research in which the measurement of the variables is carried out only once or at that time (Dr. Hasmi, 2016). The research population is the entire research object or object under study. The population in this study were all children under five who visited the Sei Bamban Health Center during July-August 2020. The sample is the object under study and is considered to represent the entire population.[4] The research sample was taken using a probability

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sampling technique, which is a sampling technique that provides equal opportunities for each insur (member) of the population to be selected as a sample. The type of probability sampling used in sampling in this research is simple random sampling. Simple random sampling is sampling in a random way without regard to the strata that exist in the members of the population. The sample in this study were 20 people. This research was conducted at the Sei Bemban Health Center, Batang Serangan District, Langkat Regency. Time This research will be conducted in July – August 2020, The test used in this research is chi square. The results of the chi square test are only to be able to conclude whether or not there is a difference in proportion between groups or in other words, it can only conclude whether there is a relationship between two categorical variables.

## RESULT

Bivariate analysis was carried out to see the relationship between the independent variables, namely the Factors Affecting the Incidence of Stunting in Toddlers at the Sei Bamban Health Center, Batang Serangan District, Langkat Regency in 2020.

**Table 1. The Correlation of maternal nutrition during pregnancy with stunting in toddlers at the Sei Bemban Health Center, Batang Serangan District, Langkat Regency in 2020.**

| Nutrition for Pregnant Women | *Stunting Incident* | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | ***Stunting*** | | **Not *Stunting*** | | **Total** | | ***X²*** | ***p-Value*** |
| | **f** | **%** | **f** | **%** | **f** | **%** | | |
| Kurang Baik | 15 | 93,8% | 1 | 6,2% | 16 | 100% | 15.000 | 0,000 |
| Baik | 0 | 0% | 4 | 100,0% | 4 | 100% | | |

*Source: Processed Primary Data, 2020*

Based on table 1 above, it can be seen that the proportion of toddlers who experience stunting is more in mothers who have a history of poor maternal nutrition during pregnancy as many as 15 toddlers (93.8%) compared to toddlers who experience stunting with mothers who have a history of maternal nutrition during pregnancy. which is not good, namely 1 toddler (6.2%). The results of the Chi-Square test analysis of the relationship between maternal nutrition

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during pregnancy and the incidence of stunting showed that the significant value was 0.000 less than = 0.005. So, it can be concluded that statistically there is a relationship between maternal nutrition during pregnancy and the incidence of stunting at the Sei Bamban Health Center in 2020.

**Table 2. Relationship of Exclusive Breastfeeding with Stunting Incidents in Toddlers at the Sei Bemban Health Center, Batang Serangan District, Langkat Regency in 2020.**

| Exclusive Breastfeeding | *Stunting* Incident | | | | | | $X^2$ | *p-Value* |
|---|---|---|---|---|---|---|---|---|
| | *Stunting* | | *Not Stunting* | | Total | | | |
| | f | % | f | % | f | % | | |
| Not Exclusive Breastfeeding | 14 | 100,0 | 0 | 0 | 14 | 100 | 15.556 | 0,000 |
| ASI Eksklusif | 1 | 16,7 | 5 | 83,3 | 6 | 100 | | |

*Source: Processed Primary Data, 2020*

Based on table 4.13 above, it can be seen that the proportion of toddlers who experience stunting is more in toddlers who have a history of non-exclusive breastfeeding, namely as many as 14 toddlers (100.0%) compared to toddlers who are not stunted with a history of exclusive breastfeeding, namely 5 toddlers (83, 3%). The results of the Chi-Square test analysis of the relationship between history of exclusive breastfeeding and the incidence of stunting showed that the significance value was 0.000 less than = 0.05. So, it can be concluded that statistically there is a relationship between a history of exclusive breastfeeding and the incidence of stunting at the Sei Bamban Health Center in 2020.

**Table 3. Relationship of Complete Basic Immunization with Stunting Incidence in Toddlers at the Sei Bemban Health Center, Batang Serangan District, Langkat Regency in 2020.**

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| Complete Basic Immunization | *Stunting Incident* | | | | | | $X^2$ | *p-Value* |
|---|---|---|---|---|---|---|---|---|
| | *Stunting* | | *Not Stunting* | | Total | | | |
| | f | % | f | % | f | % | | |
| Not complete | 7 | 77,8 | 2 | 22,2 | 9 | 100 | 0,067 | 0,795 |
| Complete | 8 | 72,7 | 3 | 27,3 | 11 | 100 | | |

*Source: Processed Primary Data, 2020*

**Table 4. Relationship of Environmental Sanitation with Stunting Incidents in Toddlers at the Sei Bemban Health Center, Batang Serangan District, Langkat Regency in 2020.**

| Environment sanition | *Stunting Incident* | | | | | | $X^2$ | *p-Value* |
|---|---|---|---|---|---|---|---|---|
| | *Stunting* | | *Not Stunting* | | Total | | | |
| | f | % | f | % | f | % | | |
| Not good | 15 | 88,2% | 2 | 11,8% | 17 | 100% | 10.588 | 0,001 |
| Good | 0 | 0% | 3 | 100,0% | 2 | 100% | | |

*Source: Processed Primary Data, 2020*

Based on table 4.15 above, it can be seen that the proportion of toddlers who experience stunting is more in toddlers who have poor environmental sanitation, namely 15 toddlers (88.2%) compared to toddlers who are not stunted who have good environmental sanitation, namely 3 toddlers. (100.0%). The results of the Chi-Square test analysis of the relationship between environmental sanitation and the incidence of stunting showed that the significance value was 0.001 less than = 0.05. So, it can be concluded that statistically there is a relationship between environmental sanitation and the incidence of stunting at the Sei Bamban Health Center in 2020.

## DISCUSSION

Based on bivariate analysis, the variables that have been proven to be factors that influence the occurrence of stunting are maternal nutrition during pregnancy, exclusive breastfeeding, and environmental sanitation.

The nutritional status and health of mothers and children as determinants of the quality of human resources, it is

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increasingly clear with evidence that the nutritional status and health of mothers during pre-pregnancy, during pregnancy and during breastfeeding is a very critical period. In the womb, the fetus will grow and develop through increased body weight and length, brain development and other organs.[5]

The results of this study are in accordance with several studies that have been carried out previously, namely research conducted by yanistin with the title Risk Factors for Stunting Events in Newborns at Wonosari Hospital, Gunung Kidul Regency in 2016 with the type of observational research with a case-control research design which shows that there are There is a significant relationship between maternal nutrition during pregnancy and the incidence of stunting.

The effects of malnutrition during pregnancy on the fetus in the womb include: miscarriage, impaired fetal growth until the baby is born with low birth weight (LBW), delayed fetal brain development, so that the child may be less intelligent later, the baby is born prematurely, and death. baby.

Arisman (2010) and Yanistin (2016) state that SEZ or poor nutrition during pregnancy is a long-standing nutritional deficiency in the mother. This is almost the same as anemia, where anemia manifests in impaired delivery of nutrients to the fetus while KEK lacks nutrients to be delivered to the fetus. This is the cause of stunted fetal growth.

Exclusive breastfeeding is breastfeeding without additional fluids such as formula milk, oranges, honey, tea water, water, and without the addition of solid foods such as bananas, papaya, milk porridge, biscuits, rice porridge and the team. Exclusive breastfeeding in question is breast milk that has been given since the baby was born until the age of 6 months and is not allowed to have additions and / or replacements with other foods or drinks.[5]

The benefits of breast milk as the best and most ideal source of nutrition with a balanced composition according to the needs of the baby during growth, breast milk contains fatty acids needed for brain growth so that babies who get exclusive breastfeeding have the potential to excel in achievement/increase intelligence, breast milk as a single food to meet growth needs until the age of six months.[5]

The results of this study are in accordance with research by Anisa (2012) and Lutfiana (2018) which states that a history of exclusive breastfeeding is

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associated with the incidence of stunting, which has a 3.7 times higher risk in infants who are not exclusively breastfed (breastfeeding <6 months) compared to toddlers who are exclusively breastfed (≥6 months) because toddlers who don't get colostrum have a higher risk of stunting.[6]

Based on the results of this study, it can be concluded that there is a relationship between a history of exclusive breastfeeding and the incidence of stunting at the Sei Bamban Health Center, Batang Serangan District and the cause of stunting with the proportion of non-exclusive breastfeeding history of 18 toddlers (90.0%). According to researchers, stunting experienced by toddlers is caused by a history of non-exclusive breastfeeding, which causes weak immunity in children and is susceptible to disease.

Immunization is an effort to actively induce/increase a person's immunity against a disease, so that if one day they are exposed to the disease, they will not get sick or only experience mild illness.[1]

The results of this study are in accordance with research by Paramitha Anisa (2016) which states that there is no relationship between immunization status and the incidence of stunting. In all types of malnutrition, it is known that the proportion of children who are not immunized is greater than that of those who are immunized.

Other factors that support the incidence of stunting in children under five who receive complete basic immunization are family income and maternal height (Journal of Agromedicine and Medical Sciences, 2020). Low family income gives a tendency of 2,344 times to have children under five who experience stunting. Low economic status causes low purchasing power so that children are vulnerable to nutritional problems due to inadequate nutritional needs (Candra, 2013). The height of the mother who has a height <147 cm has a tendency of 3,345 times to have a child who is stunted. Stunting caused by genetic factors causes non-optimal growth so that when adults tend to experience complications during pregnancy, are difficult during childbirth, and will cause death. Stunting mothers have the potential to have stunted children due to the intergenerational cycle of malnutrition.[6-11]

Based on the results of this study, it can be concluded that there is no relationship between complete basic immunization and the incidence of stunting at the Sei Bamban Health Center,

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Batang Serangan District, Langkat Regency in 2020.[2] According to the researcher, stunting experienced by toddlers is caused by maternal nutrition during pregnancy, exclusive breastfeeding, and poor environmental sanitation. not good enough to cause stunting in toddlers.

## CONCLUSION

In this study, there was a significant relationship between maternal nutrition during pregnancy, exclusive breastfeeding, and environmental sanitation with the incidence of stunting in children under five at the Sei Bamban Health Center, Batang Serangan District, Langkat Regency.

The results of this study are expected to provide information for the puskesmas, in order to know the factors that influence the incidence of stunting in children under five at the Sei Bamban Health Center. Provide education to WUS about nutrition so that they can prepare nutrition during pregnancy properly so that SEZ does not occur during pregnancy as well as training for toddlers posyandu cadres about the impact of stunting so that cadres are more skilled and can disseminate information about stunting.

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