

## Stunting In Children In Rural Related To Socio-Economic Conditions Of Communities

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**Abstrak** — Kejadian stunting muncul sebagai akibat dari keadaan yang berlangsung lama seperti sering menderita penyakit secara berulang karena higiene maupun sanitasi yang kurang baik, perilaku pola asuh yang tidak tepat, dan kemiskinan. Meneliti kejadian stunting sangat penting karena stunting memiliki dampak jangka panjang yang signifikan pada kesehatan dan perkembangan anak. Stunting terjadi ketika anak mengalami kekurangan gizi kronis dalam jangka waktu yang panjang, terutama pada 1.000 hari pertama kehidupannya, yaitu dari masa kandungan hingga usia 2 tahun. Dampak stunting pada anak antara lain Penurunan kemampuan kognitif dan kecerdasan, Penurunan kesehatan tubuh secara umum, Penurunan produktivitas di masa depan: Stunting dapat memengaruhi kualitas hidup di masa depan dan menghambat kemampuan anak untuk berkontribusi pada masyarakat dan perekonomian. Oleh karena itu, meneliti kejadian stunting penting untuk memahami faktor-faktor yang menyebabkan stunting dan mencari solusi untuk mencegahnya agar Indonesia selamat dari generasi emas. Penelitian ini merupakan penelitian observasional menggunakan rancangan Cross Sectional, menggunakan 107 Balita. Analisa data Bivariat menggunakan Uji Kai Kuadrat. Hasil penelitian menunjukkan bahwa sebagian orang tua pada kelompok Balita Stunting berpendidikan dasar sebanyak 104 responden (92,86 %), sebagian besar memiliki pekerjaan petani sebanyak 75 responden (66,97 %) serta penghasilan sebagian besar berpendapatan dibawah upah minum regional (< UMR) sebanyak 67 responden (59,82%). Hasil Penelitian secara bivariat ditemukan dua variabel (Pendidikan, dan Pendapatan ) signifikan berhubungan dengan kejadian Stunting (p-value < 0,05).

**Kata kunci** – desa, ekonomi, stunting.

*Abstract* — Incidence of stunting arises as a result of long-lasting conditions such as frequent recurring illnesses due to poor hygiene and sanitation, behavior improper parenting, and poverty. Researching the incidence of stunting is very important because stunting has a significant long-term impact on children's health and development. Stunting occurs when a child experiences chronic malnutrition over a long period of time, especially in the first 1,000 days of life, from the womb to 2 years of age. The impact of stunting on children includes a decrease in cognitive abilities and intelligence, a decrease in general physical health, a decrease in future productivity: Stunting can affect the quality of life in the future and hinder a child's ability to contribute to society and the economy. Therefore, researching the incidence of stunting is important to understand the factors that cause stunting and find solutions to prevent it so that Indonesia can survive the golden generation. This research is an observational study using a cross sectional design, using 107 toddlers. Bivariate data analysis using Kai-Square Test. The results showed that some of the parents in the Toddler Stunting group had basic education as many as 104 respondents (92.86%), most of them had farmer jobs as many as 75 respondents (66.97%) and most of their income was below the regional drinking wage (<UMR) as many as 67 respondents (59.82%). The results of the bivariate study found that two variables (Education and Income) were significantly related to the incidence of stunting (p-value < 0.05).

**Keywords** – village, economy, stunting

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### 1. INTRODUCTION

Stunting is low growth and the cumulative effect of insufficient long-term intake of energy, macronutrients and micronutrients, or the result of infection chronic/recurring infections (Umeta et al.,

2003). Stunting events appear as the result of long-standing circumstances such as poverty, parenting behavior that is not right, and often suffer from chronic diseases repeated due to poor hygiene and sanitation not good. Stunting in children under five is

one indicator of chronic nutritional status that can be describe social disturbances the economy as a whole in the past and in the early 2 years of a child's life impact that is difficult to repair [1].

One of the indirect causes of the problem of stunting is socio-economic status family affected by level parents' education, because the higher the education, the greater the chances of earn enough income so could have the opportunity to live in good and healthy environment, meanwhile better job parents are always busy work so not interested to pay attention to the problems faced by their children, when in fact these children really need some love parents [2], [3].

Current malnutrition problem This among other things is due to inadequate consumption is seen as an ecological problem that is not only caused by insufficient availability certain foods and nutrients but also influenced by poverty, environmental sanitation poor and ignorant about nutrition [4].

Socio-economic level influences family ability to suffice nutritional needs of toddlers, in addition to the circumstances. Socio-economic also influences the election type of supplementary food and time feeding and living habits Healthy. This is very influential on toddler stunting [2], [3], [5].

Socio-economic status is also very influenced by the level of family income, when access to food at the household level disrupted, mainly due to poverty, then one of them is malnutrition stunting will definitely appear. Based on this issue, the researchers are interested in doing research on the relationship between status socio-economic with the incidence of stunting.

## 2. RESEARCH METHODS

This type of research is observational in the field of community nutrition with the Cross design sectional. The research population is all toddlers whose height is below -2 standard Deviation from the median value according to Z calculations score based on index TB/U or PB/U.

This research was conducted in the village of Bulakan, Tlogorejo, Sukoharjo. Research population totaling 107 Toddlers, all members of the population researched. Data were analyzed univariate for describes the calculation of statistical values which includes the frequency distribution of the variables family income, education, father's occupation and Stunting Incidents in Toddlers. Analysis bivariate was done to see the relationship between the independent variables, namely socio-economic (father's occupation, father's education and family income) with the dependent variable namely Stunted Incidents in Toddlers with using the Chi Square test at  $\alpha$  0.05.

## 3. RESULT

The research was conducted in. The number of subjects that measured was 107 Toddlers. Relationship data Father's education with more stunting The full details can be seen in table 1 below.

**Table 1.** Relationship between Father's Education Level with Stunting Events

| Father's Education | Stunting events |      |              |      | Total |     | OR (95% CI)     | p-Value |
|--------------------|-----------------|------|--------------|------|-------|-----|-----------------|---------|
|                    | Stunting        |      | Not Stunting |      |       |     |                 |         |
|                    | n               | %    | n            | %    | n     | %   |                 |         |
| Base               | 104             | 30,6 | 236          | 69,4 | 340   | 100 | 2,424 (1,1-5,3) | 0,036   |
| Carry on           | 8               | 15,4 | 44           | 84,6 | 52    | 100 |                 |         |
| Total              | 112             | 28,6 | 280          | 71,4 | 392   | 100 |                 |         |

Based on table 1. It can be seen that some the father's education level in the group stunting has a basic education level namely as many as 104 respondents (30.6%). Proportion That's a lot more by comparison with father's education at an advanced level, namely only 8 respondents (15.4%). Furthermore by using the Chi Square test with  $\alpha$  = 0.05 obtained a p-value of 0.036. This matter shows that there is a relationship between Father's education with stunting [6]–[8].

**Table 2.** Relationship between Father's Employment Level with Stunting Events

| Father's occupation | Stunting events |      |              |      | Total |     | OR (95% CI) | p-Value |
|---------------------|-----------------|------|--------------|------|-------|-----|-------------|---------|
|                     | Stunting        |      | Not Stunting |      |       |     |             |         |
|                     | n               | %    | n            | %    | n     | %   |             |         |
| Farmer              | 75              | 28,4 | 189          | 71,6 | 264   | 100 | -           | 0,702   |
| Self-employed       | 24              | 30,8 | 54           | 69,2 | 78    | 100 |             |         |
| Fisherman           | 4               | 21,1 | 15           | 78,9 | 19    | 100 |             |         |
| Private             | 7               | 36,8 | 12           | 63,2 | 19    | 100 |             |         |
| civil servant       | 2               | 16,7 | 10           | 83,3 | 12    | 100 |             |         |
| Total               | 112             | 28,6 | 280          | 71,4 | 392   | 100 |             |         |

Based on table 2. It can be seen that the type Father's most jobs are Farmers, both in the stunting group as much as 75 respondents (28.4%), as well as in groups Not stunting as many as 189 respondents (71.6%). Furthermore, with the Chi Square Test at  $\alpha$  = 0.05 obtained a p-value of 0.702. This matter shows that there is no relationship between father's work with stunting incidents [9].

**Table 3.** Relationship between Father's Income Level with Stunting Events

| Family Income | Stunting events |      |              |      | Total |     | OR (95% CI)     | p-Value |
|---------------|-----------------|------|--------------|------|-------|-----|-----------------|---------|
|               | Stunting        |      | Not Stunting |      | n     | %   |                 |         |
|               | n               | %    | n            | %    |       |     |                 |         |
| > UMR         | 67              | 35,8 | 120          | 64,2 | 187   | 100 | 2,424 (1,1-5,3) | 0,036   |
| ≥UMR          | 45              | 22   | 160          | 78   | 205   | 100 |                 |         |
| Total         | 112             | 28,6 | 280          | 71,4 | 392   | 100 |                 |         |

Based on table 3. It can be seen that at the stunting group as many as 67 respondents (35.8%) have income below the minimum wage, still in the same group the proportion is bigger than that have an income above the minimum wage as many as 45 respondents (22%). Furthermore by using the Kai Square Test on  $\alpha$  0.05 obtained a p-value of 0.036. This matter shows that there is a relationship Significant difference between Father and Occupation level Stunting events.

#### 4. DISCUSSION

The Relationship between Education and Stunting Incidents In this study, 104 toddlers were observed. There are 2 terms used in this study, namely subject and respondent. What is meant by subjects are toddlers, while respondents are parents of toddlers who are in the research area, namely in Bulakan Village, Tlogorejo, Sukoharjo. In this study it was found that in the stunting group, fathers' education was dominated by basic education. The results of statistical tests show that there is a significant relationship between father's education and the incidence of stunting. This situation is in line with the theory that parents who have higher education will be more oriented towards preventive action, know more about health problems, and have better health status. According to the theory, it is explained that the level of education also determines whether or not it is easy for someone to absorb and understand nutrition and health knowledge. This is closely related to knowledge about nutritional sources and types of food that are good for family consumption. This condition causes parents to be less than optimal in meeting the nutritional needs of children, causing children to experience stunting. Parents' educational level is also related to awareness to utilize health facilities. According to previous research, it was explained that educated women tend to be better at utilizing health service facilities, more able to interact effectively by providing health services and more easily comply with the advice given to them. the most were farmers, both in the stunting group with 75 respondents (28.4%), and in the non-stunting group with 189 respondents (71.6%) [10]–[12]. The results of statistical tests showed that there was no significant relationship between father's work and the incidence of stunting. Based on the theory, it can be explained

that working parents will have the economic capacity to meet the nutritional needs of their children. Most parents who work as farmers tend to have a limited and generally erratic income, which causes the ability to meet the nutritional needs of children to be lacking, if this condition continues it will lead to stunting in toddlers. The above is supported by Basic Health Research data which states that the cause of stunting sufferers is due to, among other things, insufficient food in the household which causes a lack of nutritional food intake, especially in children under five. This condition requires the role of health workers, especially nutrition workers at the Puskesmas by conducting counseling on how to prepare healthy menus from existing local food ingredients to help families overcome family nutrition problems, as well as supervise toddlers who are at risk of experiencing stunting, especially in underprivileged families.

Income Relationship with Stunting Incidents This study showed that the stunting group had more income below the minimum wage, namely 67 respondents (35.8%), while only a few had income above the minimum wage, namely 45 people (22%). This is in accordance with Sulistyoningsih's opinion that increased income will increase the opportunity to buy food with better quality and quantity, whereas a decrease in income will cause a decrease in the purchasing power of food, both in quality and quantity. High income, which is not matched by sufficient knowledge of nutrition, will cause a person to become very consumptive in his daily diet, so that the selection of a food ingredient is based more on taste considerations than on nutritional aspects. A state that is not stunted occurs when the body gets enough nutrients used efficiently, thereby enabling physical growth, brain growth, working ability and general health at the highest possible level. Malnutrition occurs when the body experiences a deficiency of one or more of the more essential substances. Malnutrition is influenced by nutritional fulfillment, infectious diseases in children, poor hygiene, demographic/residential location can have an impact on individual nutritional status. So that it can cause stunting, while nutrition is a very important requirement in helping the process of growth and development in infants and children, considering the benefits of nutrition in the body can help the process of growth and development of children, and prevent the occurrence of various diseases due to malnutrition in the body. Fulfillment of nutritional needs in children is expected that children can grow rapidly according to their growing age and can improve quality of life and prevent morbidity and mortality. The role of parenting style on nutritional status is very important.

#### 5. CONCLUSION

The results of statistical tests show that there is a significant relationship between father's education and the incidence of stunting. This situation is in line with

the theory that parents who have higher education will be more oriented towards preventive action, know more about health problems, and have better health status. The results of statistical tests showed that there was no significant relationship between father's work and the incidence of stunting. Based on the theory, it can be explained that working parents will have the economic capacity to meet the nutritional needs of their children. This study showed that the stunting group had more income below the minimum wage, namely 67 respondents (35.8%), while only a few had income above the minimum wage, namely 45 people (22%). A state that is not stunted occurs when the body gets enough nutrients to be used efficiently, thus enabling physical growth, brain growth, work ability and general health at the highest possible level. Malnutrition occurs when the body experiences a deficiency of one or more of the more essential substances. Malnutrition is influenced by nutritional fulfillment, infectious diseases in children, poor hygiene, demographic/residential location can have an impact on individual nutritional status. So that it can cause stunting, while nutrition is a very important requirement in helping the process of growth and development in infants and children, considering the benefits of nutrition in the body can help the process of growth and development of children, and prevent the occurrence of various diseases due to malnutrition in the body..

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