

Relationship of Mother Characteristics with Stunting Events in Elementary School Children in the Work Area of Air Beliti Public Health Center

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Relationship of Mother Characteristics with Stunting Events in Elementary School Children in the Work Area of Air Beliti Public Health Center

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Abstract

Stunting is a failure of growth and development experienced by children due to inadequate nutritional intake for a long time, recurrent infectious diseases, and inadequate psychosocial stimulation. The purpose of this study was to see the relationship between maternal characteristics and the incidence of stunting in elementary school children in Air Beliti Community Health Center working area. Methods: This study used a cross sectional design. The research was conducted in elementary schools in the working area of Air Biliti Health Center, Musi Rawas Regency. The population is 200 elementary school children and a sample of 84 respondents who meet the inclusion criteria. Sampling technique using random sampling method. The measuring instrument used in this study is a questionnaire sheet with data analysis using Univariate, Bivariate, and Multivariate statistical tests. The study was conducted in March 2021. The results of the study showed that most of them were stunted 43 (51.2%), most of the children were 11 years old, the age of marriage for teenagers was 43 (51.2%), the father's education was low 46 (54.8%), the father's occupation was mostly agriculture. 55 (65.5%), low and high maternal education 42 (50.0%) respectively, mother's occupation mostly agriculture 63 (75.0%) and mostly low economic status 49 (58.3%). Based on the results of the bivariate analysis, there was a relationship between the age of marriage ($p=0.049$), and maternal education (0.029) with the incidence of stunting. The results of the multivariate analysis using the logistic regression method had an effect of 80,079 times on the incidence of stunting.

Keywords
mother characteristics;
stunting



I. Introduction

National development aims to realize the quality of human resources that are healthy, intelligent, productive and independent. The nutritional status of the population must be improved to build quality resources and it starts as early as possible (Monje, 2019). School children are children who enter the school period with a range of ages between 7-12 years. In children, which often occurs in children, one of which is stunting (Purnamasari, 2018). Based on data (WHO, 2019) 54% of stunting cases were found in Asian countries, 40% in African countries WHO, 2020). Based on data (Riskesdas, 2018) it was found that the proportion of very short and short nutritional status in toddlers was 30.8%. For the South Sumatra Province, the prevalence of stunting in children under five was 30.8%. The prevalence of stunting in toddlers in 2018 decreased when compared to the results of Riskesdas in 2013, which was 31.7%. The prevalence of stunting is still high when compared to the WHO standard, which is <20%.

Research conducted by (Longa et al., 2020) in West Golewa District, Ngada Regency in East Nusa Tenggara Province found 35.46% of children experiencing stunting. Research conducted by (Schoenbuchner et al., 2019) at SD Inpres Maulafa and SD Negeri Kelapa Lima, Kupang City found that 41.4% of stunting occurred in boys and 58.6% in girls. Stunting is a growth and development failure experienced by children due to inadequate nutritional intake for a long time, recurrent infectious diseases, and inadequate psychosocial stimulation (Endang et al., 2020). Research conducted (Yarmaliza et al., 2019) showed that 48% of mothers with elementary school education were stunted. Stunting is also caused by many factors, both direct and indirect. Direct factors are determined by nutrient intake, birth weight and disease. While indirect factors such as economic factors, culture, education and work, health service facilities. Socio-economic factors. In schools, nutritional needs are needed for growth and development, the level of consumption is determined by the quality and quantity of children's food and drink intake. However, school-age children are vulnerable to nutritional deficiencies and nutritional status that can interfere with their development and growth. Adinda et al (2019) stated that most students bring food to school, but the provisions do not meet the balanced nutrition of students, there are still many students who do not add vegetables and fruit in their lunch. Besides carrying supplies, they also buy a snack in cafeteria. Researchers looked snacks in schools does not meet the nutritional balance, due to the low in vitamins and minerals in these snacks, only high in carbohydrates and fats such as meatball skewers, pop noodles, fried noodles, light snacks, and milk cans.

Disruption of growth interaction with each other such as nutrient input, birth weight and infectious diseases in children. Children who experience stunting are caused by lack of food intake and recurrent diseases, especially infectious diseases that can increase metabolic needs and reduce appetite so that it results in abnormalities in short body shape even though gene factors in cells show the potential to grow normally (Sumsel Health Office, 2019). Research conducted by (Pertiwi et al., 2019) also states that mothers with low education are at risk of having stunting children by 64.7%. In addition, the gestational age of the mother at the time of delivery also determines the occurrence of stunting in children. Research conducted by (Manggala et al., 2018) found that maternal age at delivery <20 years was at risk of 22.3% of their children experiencing stunting. According to (Clark et al., 2020) pregnant women in their teens can have an impact on the linear growth of children due to nutritional competition between mothers and prospective babies. Low family income is also a risk factor for stunting in children. Research conducted (Rahmawati et al., 2018) shows that 46.6% of families with low incomes are at risk of having stunting children. The behavior of the mother's parenting pattern is a child's growth and development needs and can have an effect on meeting the child's nutritional intake needs. Based on research (Manggala et al., 2018).

Research conducted by (Yensasnidar et al., 2019) on students of SDN 11 Kampung Jua, Lubuk Begalung District. As many as 25.3% of children who experience less protein intake. Not only protein, zinc deficiency can also affect the incidence of stunting in children. Based on research conducted by (Zakout et al., 2010) in Gaza City there are 70.2% zinc deficiency in boys and 67.7% in girls. In addition to protein and zinc intake, iron deficiency can also affect children experiencing stunting. Shinta et al (2020) stated that stunting illustrates the condition of failure to thrive in children due to malnutrition or chronic malnutrition during the period of growth and development that appears after children are 2 years old.

Based on data from the results of the 2018 Nutrition Status Monitoring (PSG) in 17 regencies/cities in South Sumatra Province. The number of stunting percentages in the last

five years in children under five has decreased but there was a slight increase in 2017 and 2018. In 2014 the stunting rate was 26.3%, and decreased to 24.5% in 2015, then fell back to 19.30% in 2016 and there was a slight increase of 22.8% in 2017 and remained at 22.8% in 2018. In 2018 the highest percentage of stunting in children under five in Banyuasin Regency was 32.8% and 34.6% in Musi Rawas Regency, while stunting in children under five was lowest in Palembang City at 14.5%. Musi Rawas Regency is included in the 10 highest stunting areas (Dinkes Sumatera Selatan, 2019).

Based on data from the Musi Rawas Regency Office, in the 2019 online recording and nutrition reporting data (e-PPBGM) regarding the nutritional status of toddlers at 19 Puskesmas in Musi Rawas Regency, it was found that the number of children classified as very short was 321 children under five and those classified as short were 819 children. toddler. Of the 19 health centers, the working area of the Megang Sakti health center has the highest number of stunting, namely 431 children under five, the Air Beliti health center has a not so large number of stunting compared to the Megang Sakti health center, which was 115 children under five, while the lowest stunting rate was found in the working area of the L. Sidoharjo health center with a stunting number of 16 children under five (Musi Rawas District Health Office, 2020). The high incidence of stunting in Musi Rawas Regency, especially Tuah Negeri Subdistrict, will affect the next young generation in developing Musi Rawas Regency. Therefore, it is necessary to conduct further research to analyze the relationship between maternal characteristics and nutrient intake with the incidence of stunting in elementary school children in Musi Rawas Regency.

II. Research Methods

This research is quantitative with an analytical survey method with cross sectional research design. The research location is an elementary school in the working area of the Air Beliti Health Center in Musi Rawas Regency. The population in this study was elementary school children in the working area of the Air Beliti Health Center. The sample in this study were elementary school children in the Tuah Negeri District in the Air Beliti Health Center Work Area as long as they met the inclusion criteria and passed the exclusion criteria. Sampling technique with porous sampling technique in selecting schools and random sampling in taking samples of elementary school children adjusted to inclusion and exclusion criteria, with a total sample of 84 people. How to collect data using questionnaires and Observation sheets for TB and BB measurements using the Anthropometric method of data collection. Data analysis with Univariate, Bivariate and Multivariate.

III. Results and Discussion

Based on the results of the study, it can be described as follows:

Table 1. Frequency Distribution of Child and Parent Characteristics Data

Variable	n	%
1. Occurrence Stunting		
a. Stunting	41	48,8
b. Not Stunting	43	51,2
2. Usia Anak		
a. 7 year	1	1,2
b. 9 year	9	10,7

c. 10 year	26	31,0
d. 11 year	35	41,7
e. 12 year	10	11,9
f. 13 year	2	2,4
g. 14 year	1	1,2
3. Married Agea		
a. Teenager	43	51,2
b. Normal Age	41	48,8
4. Father's Educationa		
a. Low	46	54,8
b. High	38	45,2
5. Father's occupation		
a. Non-Farm	29	34,5
b. Agriculture	55	65,5
6. Mother's Education		
a. Low	42	50,0
b. High	42	50,0
7. Mother's Job		
a. Non-Farm	21	25,0
b. Agriculture	63	75,0
8. Economic Status		
a. Low	49	58,3
b. High	35	41,7

Based on Table 1, it was found that most of them did not experience stunting 43 (51.2%), most of the children were 11 years old, the age of marriage was 43 (51.2%), father's education was low 46 (54.8%), the father's occupation was mostly agriculture 55 (65.5%), low and high maternal education 42 (50.0%) respectively, mother's occupation mostly agriculture 63 (75.0%) and mostly low economic status 49 (58.3%). The definition of stunting according to the World Health Organization (WHO) is as a failure in the growth and development of children caused by inadequate nutritional intake for a very long time, as well as recurrent infectious diseases, and inadequate psychosocial stimuli. Children who are stunted, especially at an early age, may also experience growth retardation in other organs, including the brain (Endang, 2020).

Stunting is an unattainable age-appropriate height caused by chronic or chronic malnutrition. This study is not in line with the research by Picauly (2013) which found that there were 155 (31.75%). This research is in line with Lestari's research (2018) that stunting is influenced by 36 (56.2%) low maternal education and 45 (70.3%) low family income. This research is not in line with Larasati's research (2018), there are 13 mothers who became pregnant at an early age or in their teens or 41.4%.

In this study, of the 41 (48.8%) children who experienced stunting, most of them were 11 years old as many as 43 (51.2%), and 49 (58.3%) with low economic status. This is in accordance with research conducted by (Pertiwi et al., 2019) which states that mothers with low education can influence children to experience stunting and not only low education that can affect stunting in children. Because in the study (Rahmawati et al., 2018) it was found that low family income can also affect the incidence of stunting in children. Therefore, maternal characteristics are factors that can affect the increasing incidence of stunting in elementary school (SD) children.

Table 2. Relationship of Mother's Education with Stunting Incidence in ¹Elementary School Children Working area of Air Biliti Health Center

Variable	Stunting Incident				Total	P
	Stunting		Not Stunting			
	n	%	N	%		
Age Marry						
Teenager	26	21.0	17	22.0	43	0.049
Normal	15	20.0	26	21.0	41	
Mother's Education						
Low	26	20.5	17	21.5	42	0.029
Normal	15	20.5	27	21.5	42	

Based on the results of this study, the relationship between mother's education and the incidence of stunting in elementary school children was obtained with a p value of 0.049. Apart from maternal age, maternal height and maternal education and socioeconomic status also affect stunting in children. As research conducted by (Yenasnidar et al., 2019) on students of SDN 11 Kampung Jua, Lubuk Begalung District. Low maternal education is one of the causes of stunting in school-age children. Based on the results of (Mushtaq et al., 2011) parents' education is lower with a p value = 0.001. This is due to socio-demographic theory affecting the incidence of stunting in children where low education and low education lead to low mastery of survival skills, so that in reaching work opportunities are hampered which results in low family income due to uncertain work (Latif, 2017). According to Sulastri's research (2012), the results of low maternal education were 39%.

This study is in line with research (Khairunnisa, 2020) which shows that most of the respondents were married at the age of 17-19 years as many as 73.3% or the late adolescent group. There are those who marry at the age of 14-16 years as many as 26.7% or middle teens and there are no respondents who get married at the age of less than 14 years or early teens, mothers who are pregnant in their teens are still in their infancy so that there can be a struggle for nutritional intake between the fetus and the mother herself. The struggle for nutritional intake will get worse if the mother's nutritional intake is not strong so that the fetus will experience delays in body development.

This study is in line with research (Larasati, 2018) that there is a significant relationship between pregnancy during adolescence and the incidence of stunting in children. Pregnancy in adolescence, when the mother is also still growing will increase the risk that the baby born will experience stunting (Larasati, 2018).

This study obtained the results of the analysis that there was a significant relationship between married age (p=0.049) and mother's education (p=0.029). This is supported by the fact that most of the parents of the research subjects graduated from elementary school so that it could affect the knowledge and economic status of the family so that the risk of stunting in the research subjects increased. This study is not in line with research (Aprilyadi *et al.*, 2020) that maternal education has no effect on the growth and development of preschool children with a high maternal education of 55 (50.9%).

Higher education levels in mothers are closely related to reducing the risk of stunting (Mittal et al., 2007). So that maternal factors or maternal characteristics are still very influential on the incidence of stunting in children, including maternal education and age at marriage can increase the risk of stunting in children born to them.

Table 4. Results of Multivariate Logistic Regression Analysis between Seven Significant Variables

Variable	Coefisien	P	OR	95% CI
Father's Education	-.121	.779	.886	0.381-2.060
Father's occupation	-.325	.263	.722	0.409-1.277
Mother's Education	.036	.929	1.037	0.470-2.266
Mother's Job	-.087	.764	.916	0.519-1.620
Economic Status	.182	.736	1.200	0.416-3.459
Child Age	-.948	.032	.388	0.163-0.922
Married Age	4.383	.000	80.079	13.657-469.536
Constant	5.779			

The results of the logistic regression analysis showed that the characteristics of married mothers had an 80,079 times greater chance of their child experiencing stunting compared to families with normal age married mothers. This is in accordance with the results of Kharirunisa's research (2020) that there is an opportunity to increase the risk of stunting in teenage pregnancy

IV. Conclusion

There is a significant relationship between married age and mother's education with the incidence of stunting in elementary school (SD) children in the working area of the Air Beliti Health Center, Musi Rawas Regency. There are research results, most of the subjects are 11 years old 35 (41.7%), father's education is 46 (54.8%), the work of parents is mostly farmers 63 (75.0%), and low economic status 49 (58.3 %). The results of this study are expected to be used as a basis for consideration in policy making by the Health Office, especially the Musi Rawas District Health Office in the health sector for elementary school children. Programs in terms of preventing stunting and nutritional deficiencies need to be added to reduce the prevalence of stunting in Musi Rawas Regency. Further research is also needed to look at other factors that can increase the incidence of stunting besides maternal characteristics related to stunting in Musi Rawas Regency.

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