

Validation of Stunting Data in Pematangsiantar City and Policy Recommendations for Handling

Marice Simarmata

Master of Health Law Program, Universitas Pembangunan Panca Budi

Corresponding Author: Marice Simarmata

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ABSTRACT

Stunting is a condition of failure to thrive in children under five due to chronic malnutrition so that children are shorter for their age. Stunting occurs due to malnutrition from infancy in the womb and early life after birth and looks or appears after the child is 2 years old. This verification is carried out by visiting directly toddlers who fall into the stunting category to the location of residence, namely to the homes of toddlers who weighed in February 2022, namely 136 toddlers. This activity is carried out weighing in each village by measuring the nutritional status of infants and toddlers first by weighing and measuring height, intervention and monitoring. Based on the results of research Characteristics of Toddlers and Families who experience. *Stunting* in Pematangsiantar City is as follows: 1) The percentage of stunting toddlers in Pematangsiantar City is lower (15%) than the average *stunting* in North Sumatra (25%) based on SSGI 2021. e-PPGBM data 136 people; 2) Characteristics of Toddlers in Pematangsiantar City who experience *Stunting* is more people aged 24-59 months, namely (69.12%) and female (50.74%) but almost entirely have a Normal birth weight (77.94 %); 3). Family characteristics in Pematangsiantar City seen from high school father's education (62.5%) and toddler mother's education (70.59%) More are basic educated and seen from the whole job Fathers and mothers of toddlers work seen from the economic status of the family more families with income below UMR are (69.12%)

Keywords: Validation of Stunting, Pematangsiantar City, Policy Recommendations, Handling

INTRODUCTION

Stunting is a condition of failure to thrive in children under five due to chronic malnutrition so that children are shorter for their age. Stunting occurs due to malnutrition from infancy in the womb and early life after birth and looks or appears after the child is 2 years old.

The results of the weighing carried out in February 2022 and the entry of the Pematangsiantar City EPPGBM application found 136 stunting toddlers. To implement stunting reduction interventions, it is necessary to verify and validate toddlers who are indicated to be stunted and assistance in re-measuring the height or length of toddlers indicated to be stunting carried out by TPG Pematangsiantar City which is monitored by the Pematangsiantar City Health Office, Pematangsiantar City Government.

This verification is carried out by visiting directly toddlers who fall into the stunting category to the location of residence, namely to the homes of toddlers who weighed in February 2022, namely 136 toddlers. On Thursday, June 9, 2022, stunting verification and validation activities were carried out at 16 Puskesmas whose work areas were found to be stunted. This verification is carried out by Puskesmas nutrition staff and the Puskesmas team using measuring instruments and measuring methods according to standards. From the results of verification and validation, 136 stunting cases were found, namely 94 old

cases and 42 new cases.

Of the 136 stunting cases in February 2022, there were several toddlers who moved their residence, the age of the child has passed toddlers and children are not categorized as stunting toddlers (children's weight is appropriate for age but still vulnerable to stunting) and some toddlers are classified as stunting risk toddlers. The weighing in February 2022 was 8954 people. Toddler data registered in the PPGBM e_ application there are 12 thousand toddlers and Pusdatin data 14,999 toddlers. The stunting data was reported by nutrition officers through the ePPGBM application which was taken based on the results of weighing in all Posyandu Pematangsiantar City. To ensure stunting data in Pematangsiantar City, it is necessary to validate stunting data every year.

MATERIALS & METHODS

Purpose

To find out the number of stunting infants and toddlers in the working area of the Pematangsiantar City Health Center.

Places

Stunting baby or toddler homes in 16 Puskesmas Kota Pematangsiantar.

Execution Time

This activity will be held in June 2022.

Executor:

1. TPG Puskesmas and Puskesmas team;
2. Posyandu Cadre;
3. Monitoring of Pematangsiantar City Health Office.

Activity Method

This activity is carried out weighing in each village by measuring the nutritional status of infants and toddlers first by weighing and measuring height, intervention and monitoring.

RESULT and DISCUSSION

Characteristics of Toddlers in Stunting Cases

Child nutritional status is the state of health of children determined by the degree of

physical needs of energy and other nutrients obtained from food and food whose physical impact is measured anthropometrically and categorized based on WHO book standards with BB / U, TB / U and BB / TB indices. Children's nutritional problems are broadly the impact of an imbalance between nutrient intake and output, namely intake that exceeds the output or vice versa, in addition to errors in choosing food ingredients to eat (Arisman, 2009).

Short and very short are nutritional statuses based on the index of length according to age (PB / U) or height according to age (TB / U) which is another term for stunted and severely stunted. Stunting is defined as a height index according to age (TB/U) less than minus two standard deviations (-2SD) or below the existing standard average and severe stunting is defined as less than -3SD (ACC/SCN, 2000).

Stunting in children is the long-term result of chronic consumption of low-quality diets combined with morbidity, infectious diseases and environmental problems. Stunting is the result of chronic malnutrition and often occurs between generations coupled with frequent diseases. This is a characteristic of endemic poverty.

Stunting is associated with lower cognitive development and productivity. Stunting is a major public health problem in almost all provinces in Indonesia and a warning has been given by the President of the Republic of Indonesia, who is challenged to reduce stunting in Indonesia. Stunting in children is the main indicator in assessing the quality of human capital in the future. Growth disorders suffered by children early in life, in this case stunting can cause permanent damage. The success of sustainable economic improvement can be assessed by reducing the incidence of stunting in children under 5 years old (USAID, 2010).

Anthropometric parameters are the basis of nutritional status assessment. The anthropometric index is a combination of existing parameters. Anthropometric

indexes consist of body weight according to age (BB / U). Height according to age (TB/U) and weight according to height (BB/TB). To find out whether stunting is stunted or not, the index used is the height index according to age (TB / U). Height is an anthropometric parameter that describes the state of bone growth. Height according to age is a measure and linear growth achieved, can be used as an index of past nutritional status. Low height according to age is defined as shortness and reflects either normal variation or pathological processes that affect failure to achieve linear growth potential. The result of the latter process is called stunting or getting insufficiency from height according to age.

1. Age of Toddler

Toddler age is a time when the growth process and Development occurs very rapidly. At this time toddlers need adequate nutritional intake in greater quantity and quality because toddlers generally have high enough physical activity and are still in the process of learning. One of the nutritional problems that often occurs is stunting. (Welasih BD, Wirjatmadi RB, 2012) The toddler period is the most vulnerable age, because at this time toddlers often Exposed to infectious diseases that make children at high risk of becoming malnourished. At preschool age, namely the age of 2-6 years, children experience stable growth, development occurs with increased physical activity and increased skills and thought processes. Growth in toddlerhood is slower than in infancy but growth is stable.

This slowing growth rate is reflected in a decrease in appetite, even though in this time children need adequate calories and nutrients to meet their nutritional needs. Age 3-5 years Recommended Feeding is the same as the recommended feeding for ages 2 to 3 years. Feeding to children must meet nutritional adequacy standards, namely complete and balanced

nutrition. The requirement of a balanced menu is that it can meet the body's energy adequacy, protein, fat, vitamins, minerals and water that can help in the process of 20 growth and development of children (Bown, 2008).

2. Gender.

A cohort study in Ethiopia showed that boys were twice as likely to be stunted as girls at 6 and 12 months. Boys are more at risk of stunting and underweight than girls. Several studies in sub-Saharan Africa suggest that preschoolers are more at risk of stunting than girls, in which case it is not known why. In two studies conducted in three different countries namely Libya (Taguri et al 2008) and Bangladesh and Indonesia (Semba et al 2008) show that the prevalence of stunting is greater in boys than girls. The results of another study showed that child sex was a strong predictor of stunting in children aged 0-23 months and 0-59 months. Girls have a lower risk compared to boys in this regard. During infancy and childhood, girls are less likely to become stunted than boys, and girls survive in large numbers than boys in most developing countries. (Ramli, 2009)

3. BBL

Low birth weight babies (BBLR) are babies born weighing less than 2500 grams, regardless of gestational age (IDAI, 2009). Babies born with low birth weight are classified as babies with high risk, because the morbidity and mortality rates are high. Therefore prevention of low birth weight is very important, with good prenatal examination and paying attention to the nutritional needs of the mother. It is said that babies born with low birth weight are not good because in low birth weight babies there has been growth retardation since in the womb, especially if they do not get good nutrition after birth.

Data stunting is based on the following characteristics:

No	Category	Sum	%
1	Nutritional Status		
	Short	123	90,44
	Very Short	13	9,56
2	Age		
	0-11 months	11	8,09
	12-23 months	31	22,79
	24-59 months	94	69,12
3	Gender		
	Man	67	49,26
	Woman	69	50,74
4	BB Birth History		
	< 2500 grams	20	14,71
	> 2500 grams	106	77,94
	BBL doesn't know	10	7,35

Family Characteristics

1. Parent Education

In the research of Astari, Nasoetion and Dwiriani (2005), the level of father's education in stunted children is lower than normal children, this shows that parental education will affect child care because with high education parents will understand the importance of parents' role in child growth. In addition, with good education, it is estimated to have good nutritional knowledge as well. Mothers with good nutritional knowledge will know how to process food, manage food menus, and maintain good food quality and hygiene. Low maternal education is the main cause of stunting in children. Educated mothers are more likely to make decisions that will improve the nutrition and health of their children. In addition, educated mothers tend to send all their children to school so as to break the chain of ignorance and would be better off using strategies for the survival of their children such as adequate breastfeeding, immunization and family planning. Therefore, educating women will be a useful step in reducing the prevalence of malnutrition, especially stunting (Yimer G, 2000).

2. Parents' work

Employment is an important factor in determining the quality and quantity of food, because employment is related to income. Thus, there is a relationship between income and nutrition, if income increases, it is not impossible that health and family problems related to

nutrition will improve. The results of Diana's research, (2006) suggest that there is a significant relationship between eating parenting and mother's work. Mothers who work outside the home can cause children to be uncared for because toddlers are very dependent on their caregivers or other family members. In addition, mothers who work outside the home tend to have more limited time to carry out household tasks than mothers who do not work, therefore parenting patterns will affect and ultimately the growth and development of children will also be disrupted. (Ramli, 2009).

3. Family Economic Status

Income is the factor that most determines the quality and quantity of food, between income and nutrition is very closely related to the fulfillment of food needs of family life, the higher the purchasing power of the family the more food consumed and the better the quality of food consumed. Here it is clear that low income will hinder the improvement of nutrition and can lead to malnutrition. Income level can determine diet. People with low economic levels will usually spend most of their income on food, while people with high economic levels will spend less on food. Income is a determining factor in food quality, driven by the beneficial effects of increased incomes on improved nutritional health and other family problems related to nutritional conditions, which is evident in the low income level of the poor and weak

purchasing power the family has not allowed him to cope with certain eating habits and ways that hinder effective nutritional improvement especially for their children (Yimer G, 2000).

Families belonging to the limited income category use a large portion of the income earned to meet the needs of groceries for the family. In developing countries with more household populations, low-income households have most household expenditures allocated to food. The economic condition of the family can be viewed from a person's income that will have an impact in a good direction or in

a bad direction, economic conditions will affect the provision of adequate nutrition, where lack of income will inhibit activities both materialistic and non-materialistic.

Poverty is the condition of a family that is unable to maintain itself and its family with a standard of living, and also unable to utilize its energy, mentally and physically to meet its needs. Poor families with children under five cannot meet their growth and development needs, where children experience deviations from normal growth and development (Almatsier, 2005) Data on the distribution of stunting based on family education factors.

Table 2.2. Distribution of Characteristics of Stunting Toddlers based on family factors

No	Category	Sum	%
1	Father's Education		
	SD	11	8,09
	JUNIOR	27	19,85
	SMA	85	62,50
	PT	9	6,62
	No school	2	1,47
2	Mother's Education		
	SD	7	5,15
	JUNIOR	17	12,50
	SMA	96	70,59
	PT	14	10,29
	No school	2	1,47

Table 2.3. Distribution of Characteristics of Stunting Toddlers based on family income

No	Category	Sum	%
1	Father's Work		
	PNS/TNI	3	2,21
	Sales, weaving, driver, mechanic	29	21,32
	Employees, Parking Attendants, Laborers	46	33,82
	Farmer	14	10,29
	Private / honorary teacher	3	2,21
	Buskers	1	0,74
	Self employed	33	24,26
	does not work	5	3,68
	Don't know	2	1,47
2	Mother's Work		
	PNS/TNI	1	0,74
	Selling, weaving	21	15,44
	IRT	87	63,97
	Farmer	5	3,68
	Private / honorary teacher	3	2,21
	Labor / Labor	8	5,88
	Self employed	8	5,88
	Don't know-die/OGDJ	3	2,21
	3	Family Income	
< IDR 2,500,000		94	69,12
	> IDR 2,500,000	42	30,88

Table 2.6. Distribution of Characteristics of Stunting Toddlers based on Smoking Behavior

No	Category	Sum	%
1	Smoke		
	Yes	107	78,68
	Not	27	19,85
	Don't know	2	1,47
2	Smoking in the house		

	Yes	87	person
	Not	20	person
3	Cost of Buying Cigarettes per Day		
	< 10,000	50	person
	> 10,000	57	person

Determinant Factors

1. Health Services

Table 2.4. Distribution of Characteristics of Stunting Toddlers by Health Services

No	Category	Sum	
1	Immunization	91	66,91
	Complete	44	32,35
	Incomplete	1	0,74
	Don't know		
2	Vitamin A	124	91,18
	Exist	9	6,62
	None	2	1,47
	Nothing yet	1	0,74
	Don't know		
3	Deworming	92	67,65
	Exist	41	30,15
	None	2	1,47
	Nothing yet	1	0,74
	Don't know		

2. Infectious Diseases suffered

Table 2.5. Distribution of Characteristics of Stunting Toddlers based on diseases suffered by children

No	Category	Sum	
1	Infectious Diseases		
	Pneumonia	2	person
	Cough, fever, runny nose	63	person
	Diarrhea	6	person
	Gata-itch	1	person
2	Laryngomalacia	1	person
	Stiff	1	person
	Heart Disease	1	person

3. Availability of Latrines and Clean Water

Table 2.7. Distribution of Characteristics of Stunting Toddlers based on the Availability of Clean Water Facilities and Latrines

No	Category	Sum	
1	Clean Water	131	96,32
	Yes	4	2,94
	Not	1	0,74
	Don't know		
2	Toilet	123	person
	Yes	13	person
	Not		
3	Healthy Latrines	115	person
	Yes	8	person
	Not		

Table 2.6. Distribution of Characteristics of Stunting Toddlers based on BPNT

No	Category	Sum	
1	Food Aid	66	48,53
	Yes	70	51,47
	Not		
2	Sustainable Food Program	13	9,56
	Yes	123	90,44
	Not		

CONCLUSION

Based on the results of research Characteristics of Toddlers and Families

who experience. *Stunting* in Pematangsiantar City is as follows:

1. The percentage of stunting toddlers in Pematangsiantar City is lower (15%)

than the average *stunting* in North Sumatra (25%) based on SSGI 2021. e-PPGBM data 136 people;

2. Characteristics of Toddlers in Pematangsiantar City who experience *Stunting* is more people aged 24-59 months, namely (69.12%) and female (50.74%) but almost entirely have a Normal birth weight (77.94%)
3. Family characteristics in Pematangsiantar City seen from high school father's education (62.5%) and toddler mother's education (70.59%) More are basic educated and seen from the whole job Fathers and mothers of toddlers work seen from the economic status of the family more families with income below UMR are (69.12%)

It is expected that the health office together with the Pematangsiantar City Government and other relevant agencies can provide solutions or make policies in order to improve the nutritional status of toddlers Especially reducing *stunting* rates. With more successful efforts 1000 HPK program as an effort to prevent *stunting*. Expected to The community, especially pregnant women and families who have babies and children Under 5 years old are advised to comply with and implement the program related in particular to the 1000 HPK program that has been implemented by Government by regularly visiting health services Especially puskesmas and posyandu to get early detection about the health of self and children as well as nutrition counseling and counseling about the health of themselves and their children and adding creativity to feeding consumption to cubs. The results of this research can be developed again by implementing Further research by examining more in-depth problems related to variables related to the incidence of *stunting* in toddlers.

Declaration by Authors

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