



## Description of Characteristics of Respondents of the Nutritional Recovery Program for Stunting Children

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### ABSTRACT

The data analysis technique uses frequency distribution to determine the characteristics of respondents in the nutritional restoration program for stunted children. This research was carried out at the Grogol Health Center, Sukoharjo Regency. The population in this study is all mothers with toddlers aged 6-24 months at the Grogol Health Center, Sukoharjo Regency, there were 44 mothers. From the research results, it was found that 29 respondents were male (65.9%) and 15 female respondents (34.1%), 2 children (4.4%) who were underweight at birth, namely <2,500 grams, the average baby born has a normal body height, namely 48-52 cm, namely 37 children (84.1%) and there are 7 children (15.9%) with a body length less than normal. From the research results, it was found that 16 respondents were good weight (36,4%), 17 (38,6%) respondents underweight and 11 (25%) respondents very underweight, frequency distribution of Height for Age in the short category was 34 people (77.3%) and very short was 10 people (22.7%). The results of the study showed that the frequency distribution of weight for height in the good nutrition category was 27 responden (61,4%) , malnutrition was 16 (36,4%) respondents and risk of overnutrition was 1 responden (2,2%).

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### 1. Introduction

Stunting is the condition of a child who has a height that is shorter than their age standard, namely below the 2nd percentile of the growth standards determined by WHO. Stunting occurs when a child does not receive adequate nutritional intake for a long period of time, especially in the first 1,000 days of life (from pregnancy to the first 2 years of life). In the long term, stunting can hinder children's brain growth and cognitive development.

The factors that can cause stunting in children in Indonesia include: lack of nutrition, especially protein and iron, unhealthy environmental conditions such as poor sanitation, inadequate drinking water and unhealthy housing, lack of access and availability of healthy food. and nutrition, infections and diseases in children as well as low socio-economic conditions. Even though some families have abundant food, cases of malnutrition may still occur because it is not balanced with catch-up growth. Even though a stunting management program has been implemented, the high rate of stunting in Grogol District is still a major problem that must be resolved. The need to analyze the factors that influence the success of nutritional restoration programs for stunted children to map priorities for the

implementation of the programs being implemented is the basis for the study in this research. Therefore, there is a need for a nutritional restoration program for stunted children, by providing complementary foods for breast milk (balanced nutrition) with high protein according to local wisdom that is rich in protein and increasing the skills of mothers to do massage for stunted children to stimulate the child's appetite.

The nutritional status of children under five can be measured and assessed using several specific parameters and indicators. Several general parameters used to assess the nutritional status of children under five include body weight, height, upper arm circumference, and body mass index (BMI) adjusted for age. Below are several categories of nutritional status of children under five based on various indicators: Good nutrition: BB/U is within the normal range, indicating a body weight appropriate for the child's age. Malnutrition: BB/U is below normal standards, indicating a body weight less than expected for the child's age. Overnutrition: BB/U is above normal standards, indicating a body weight that is more than expected for the child's age. Good nutrition: TB/U is within the normal range, indicating a height appropriate to the child's age. Undernutrition (Stunting): TB/U is below normal standards, indicating a lower height than expected for the child's age. Stunting is a sign of chronic malnutrition. Good Nutrition: LILA is within the normal range, showing upper arm circumference appropriate for the child's age. Malnutrition (Acute Malnutrition): LILA is below normal standards, indicating acute malnutrition. Good nutrition: BMI is within the normal range, indicating a body mass index that is appropriate for the child's age. Malnutrition: BMI is below normal standards, indicating a lack of weight for the child's height. Overnutrition: BMI is above normal standards, indicating excess weight for the child's height.

Assessment of the nutritional status of children under five is often carried out by health workers and involves regular monitoring of the child's growth. Each child may have different nutritional needs, and an assessment of nutritional status must consider factors such as genetics, health conditions, and the child's diet. Preventive and intervention measures are needed to ensure that children receive adequate nutrition for optimal growth and development.

The contribution of this research is to determine the characteristics of stunting child respondents based on age, weight and height, so that risk factors for stunting children can be identified.

## **2. Methods**

The research design is the technical and operational steps that will be carried out in this research using descriptive research methods with a cross sectional approach, namely collecting data at a certain time. This research was carried out at the Grogol Health Center, Sukoharjo Regency. The research will be carried out in September 2023. The population in this study is all mothers with toddlers aged 6-24 months at the Grogol Health Center, Sukoharjo Regency. With a sample of all mothers with toddlers aged 6-24 months at the Grogol Health Center, Sukoharjo Regency, there were 44 mothers using a total sampling technique. Data collection in this research uses a survey method, namely a data collection method that uses a questionnaire and is given to respondents to obtain data in the form of responses or responses from the sample. The questionnaire used in this research is in the form of options (closed end items) which will be distributed to mothers of toddlers to be filled in according to the answers to the questions in the questionnaire, Observation, namely by measuring the weight and height of the toddler, Interview, namely collecting data to find out things from respondents that more in-depth by conducting interviews with mothers of toddlers, Documentation, namely by taking data on the number of toddlers aged 6-24 months at the Grogol Health Center, Sukoharjo Regency. The data analysis used in this research is statistical analysis of frequency distribution.

## **3. Results and Discussion**

Data processing was carried out in October using data on stunted children for September 2023.

The results of data processing are as follows:

### 3.1. Frequency distribution Gender

Table 1  
Frequency distribution gender

Gender	FREQUENCY	Percent
Male	29	65,9
Female	15,	34,1

From the research results, it was found that 29 respondents were male (65.9%) and 15 female respondents (34.1%). The influence of gender on stunting has been widely studied by experts in the field of child health and nutrition. This research was conducted to understand whether there are significant differences between the gender of children (boys and girls) in the risk of stunting. Several studies show that gender does not have a significant influence on the risk of stunting. This means that men and women have almost the same risk of stunting if they have similar risk factors, such as poor nutrition or limited access to food. Although there is inequality in the risk of stunting, some research shows that the symptoms and impact of stunting can differ between men and women. For example, girls may experience more serious nutritional problems than boys in the same situation. The research results also show that the influence of gender can interact with other factors, such as family socio-economic status, access to health services, and diet. This may make a difference in the impact of gender on stunting. Some research focuses more on a gender approach and how social and cultural factors related to gender can influence stunting. For example, social norms that encourage differences in food provision or access to health services. Research results may differ depending on geographic context, demographics, and methodology used. Therefore, careful evaluation and more research are needed to better understand the role of gender in stunting. In addition, appropriate child nutrition and health interventions must consider gender differences and other factors that influence stunting.

### 3.2. Frequency distribution of Birth Weight

Table 2  
Frequency distribution birth weight

Birth Weight	FREQUENCY	Percent
<2500	2	4,4
2500-4000	44	95,6

From the research results, it was found that there were 2 children (4.4%) who were underweight at birth, namely <2,500 grams. The baby's weight at birth is closely related to the risk of stunting in the future. Birth weight is often considered an important indicator of a baby's health and can provide an initial picture of a child's growth and development. Babies with low birth weight (less than 2,500 grams) have a higher risk of experiencing stunting compared to babies with normal birth weight. Low birth weight is often related to factors such as poor maternal nutrition during pregnancy, prematurity, or maternal health problems. Low birth weight may reflect the nutritional condition of the mother during pregnancy, which affects the growth and development of the baby during the prenatal period. These factors can affect the development of important organs, including the brain, which can impact the child's future growth and development. Babies with low birth weight tend to be more susceptible to health problems, such as infections and nutritional disorders. These factors can cause stunting if not handled properly during growth and development. Several studies show that low birth weight can have a long-term impact on a child's growth and development, including the risk of stunting. This may occur due to adverse influences on the development of vital organs during early life. Low birth weight babies require special attention and intervention to ensure optimal growth and development. Providing good nutrition, adequate health care, and regularly monitoring children's growth can help reduce the risk of stunting in these children.

### 3.3. Frequency distribution of birth height

Table 3  
Frequency distribution birth height

Birth Height	FREQUENCY	Percent
<48	7	15,9
48-52	37	84,1

Based on the research results, the average baby born has a normal body height, namely 48-52 cm, namely 37 children (84.1%) and there are 7 children (15.9%) with a body length less than normal. The baby's height or length at birth also has implications for growth and the risk of stunting later in life. A baby's body or body length at birth is often considered an indicator of health and early growth. Babies who have a shorter than average body length may be at greater risk for stunting, especially if these factors persist throughout the child's growth period. The baby's body length at birth can reflect genetic potential and growth capacity. Babies with better growth potential may have a lower risk of stunting if they receive adequate nutrition and good health conditions during the child's growth period. Monitoring a child's growth, including height or body length, is important for early identification of the risk of stunting. If a child's linear growth does not match the expected growth standards, early intervention can be carried out to prevent stunting. The baby's height at birth can also be influenced by genetic factors and the mother's health condition during pregnancy. Babies born to mothers with good nutrition and optimal health may have better body length, which can contribute to optimal growth. Good nutrition and care after birth is essential to ensure optimal growth. Adequate nutrition and good health care can help prevent stunting and support healthy growth

It is important to note that the baby's height or length at birth is only one factor that influences the risk of stunting. Other factors such as diet, nutritional status, general health, and environmental factors also play a significant role. Therefore, efforts to prevent stunting must involve a holistic approach that includes these aspects. Regular monitoring of children's growth and necessary interventions can help reduce the risk of stunting and ensure children grow well.

### 3.4. Frequency distribution assessment of nutritional status based on Weight for Age

Table 4  
Frequency distribution assessment of nutritional status based on weight for age

Weight for age	FREQUENCY	Percent
good weight	16	36,4
underweight	17	38,6
very underweight	11	25

From the research results, it was found that 16 respondents were good weight (36,4%), 17 (38,6%) respondents underweight and 11 (25%) respondents very underweight. A child's low weight compared to his age can be an indicator of suboptimal growth and may increase the risk of stunting. This reflects nutritional problems or health conditions that can affect the child's body growth. Children with a low body weight compared to their age may face nutritional deficiencies that can affect the growth and development of bones, brain and other body organs. Suboptimal body weight compared to age may be an additional risk factor for stunting, especially if this condition persists over time. Stunting can be caused by a combination of genetic factors, poor nutrition, infectious diseases, and an environment that does not support a child's growth. Identification of children with low body weight compared to age allows for appropriate nutritional intervention. Programs providing nutritional supplements, nutritional education and health services can help increase growth and prevent stunting. Low weight compared to a child's age may also reflect general health problems, such as chronic illness or other chronic health problems, that can affect growth and development. Routine monitoring of the

child's weight compared to the child's age is an important way to detect the risk of stunting early. This monitoring allows for early treatment and intervention to improve the child's health condition

### 3.5. Frequency distribution Height for Age

Table 5  
Frequency distribution Height for Age

Height for Age	FREQUENCY	Percent
short height	34	77,3
very short height	10	22,7

The results of the study showed that the frequency distribution of Height for Age in the short category was 34 people (77.3%) and very short was 10 people (22.7%). Measuring height compared to age (Height/Age) is one of the common methods used to assess the risk of stunting in children. Stunting itself is defined as a child's height being lower than the expected growth standards for his age. Height/Age is an important indicator for assessing children's linear growth. If a child's height is lower than the expected growth standards for his age, this can be a sign of stunting. Height compared to age provides an idea of a child's nutritional status. Children who are stunted may face malnutrition or nutritional problems during their critical growth period. Stunting can have long-term impacts on a child's health, including chronic health problems, lower cognitive performance, and risk of chronic disease in adulthood. Therefore, measuring TB/U can provide clues about the long-term risks that a child may face. Routine monitoring of Height/Age is important for detecting the risk of stunting early. If a child is found to be low in height compared to his age, nutritional and health interventions can be started early to prevent the condition from worsening. Height/Age measurements can help identify factors that cause stunting, such as nutritional problems, infections and an environment that does not support growth. This information can serve as a basis for designing appropriate interventions. Height/Age measurements also provide data that can be used to identify stunting problems at the population level. This helps formulate public health programs and policies to address the stunting problem more effectively.

### 3.6. Frequency distribution weight/height

Table 6  
Frequency distribution weight/height

weight/height	FREQUENCY	Percent
Good nutrition	27	61,4
Malnutrition	16	36,4
risk of overnutrition	1	2,2

The results of the study showed that the frequency distribution of weight for height in the good nutrition category was 27 responden (61,4%) , malnutrition was 16 (36,4%) respondents and risk of overnutrition was 1 responden (2,2%). Measuring body weight compared to height or body mass index (BMI) is another method used to evaluate nutritional status and risk of stunting in children.

Body Weight/Height provides an idea of the proportion of a child's weight to their height. If a child has a low weight compared to his height, this can indicate nutritional problems and potentially increase the risk of stunting. Weight/Height measurements can provide an indication of a child's nutritional status and whether they are getting enough nutrition to support healthy growth and development. Apart from assessing the risk of stunting, Body Weight/Height can also help detect overweight or obesity in children. A balance between body weight and height is important to prevent problems with excessive or insufficient nutrition. Weight/Height Assessment not only provides information about stunting, but can also reflect a child's nutrition and general health. General nutritional and health problems that can affect a child's growth can be reflected in the weight/height ratio. If a child is found to have a weight/height below standard, appropriate nutritional intervention may be

recommended. This may include increasing nutritional intake, nutritional supplements, or changes in diet.

While Weight/Height provides valuable information, it is important to include other measurements, such as height versus age (Height/Age) and head circumference, as well as considering environmental and social factors that may influence a child's growth. Children who experience an imbalance between weight and height may have a greater risk of developing chronic health problems later in life, such as type 2 diabetes or heart disease. Therefore, early intervention to improve nutrition and a healthy lifestyle is important to prevent this risk.

#### 4. Conclusion

From the research results, it was found that 29 respondents were male (65.9%) and 15 female respondents (34.1%). The influence of gender on stunting has been widely studied by experts in the field of child health and nutrition. This research was conducted to understand whether there are significant differences between the gender of children (boys and girls) in the risk of stunting. Several studies show that gender does not have a significant influence on the risk of stunting. From the research results, it was found that there were 2 children (4.4%) who were underweight at birth, namely <2,500 grams. The baby's weight at birth is closely related to the risk of stunting in the future. Birth weight is often considered an important indicator of a baby's health and can provide an initial picture of a child's growth and development.

Based on the research results, the average baby born has a normal body height, namely 48-52 cm, namely 37 children (84.1%) and there are 7 children (15.9%) with a body length less than normal. The baby's height or length at birth also has implications for growth and the risk of stunting later in life. A baby's body or body length at birth is often considered an indicator of health and early growth. Babies who have a shorter than average body length may be at greater risk for stunting, especially if these factors persist throughout the child's growth period.

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The limitation of this research is that the research subjects are limited to ages 6-24 months, and only examines the characteristics of the respondents, so further research is needed regarding the provision of stunting management interventions, namely providing additional food as well as oromotor massage and tuina massage for stunted children.

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