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# Description of Nutritional Status In Elementary School Students: A Case Study Of Sd Gmim 65 Winuri, East Likupang District, North Minahasa Regency

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## Abstract

Nutrition plays an important role in the human life cycle from fetus to the elderly. Malnutrition in infants and toddlers can cause growth and development disorders that continue into adulthood if not treated early. Good quality of children can be achieved by ensuring that the process of child development is also good. Growth is quantitative, such as height, weight, and head circumference, and development is the gradual change and improvement of abilities, such as movement, sensory, language, and social abilities. This research was conducted at SD GMIM 65 Winuri. The sample of this study were all elementary school children at SD GMIM 65 Winuri. The results showed that the most common age characteristics of the respondents were 7 years old by 20%, the sex characteristics were mostly male by 52%. Nutritional status based on body mass index (BMI) according to age, respondents have less nutritional status by 18%, normal nutritional status by 50%, overweight status by 14%, nutritional status of obesity I by 8%, and nutritional status of obesity II by 10%.

**Key words:** Nutritional Status, Elementary School Student, Sd Gmim 65 Winuri, Body Mass Index, Age.

## INTRODUCTION

Good quality of children can be achieved by ensuring that the process of child development is also good. Growth is a quantitative change, such as height, weight, and head circumference, and development is a gradual change and increase in abilities, such as motor, sensory, language, and social abilities (Hockenberry & Wilson, 2012). Nutrition plays an important role in the human life cycle from the womb to the elderly. The 2009 health law states that the main priority of efforts to improve nutrition in Indonesia is infants and toddlers. Malnutrition in infants and toddlers can cause growth and development disorders that continue into adulthood if not treated early. (Ministry of Health, 2010).

According to the World Health Organizing (WHO) in 2012, as many as 104 million people experienced malnutrition. Meanwhile, the prevalence of malnutrition in South Asia is the largest in the world, at 46%. In sub-Saharan Africa, 28% are undernourished, while in Latin America 7% are

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undernourished, and Central Europe is the lowest in the world's malnutrition ranking. (Maisarah, 2018). Problems that exist around community life which is one of the main points is the problem of nutrition. Malnutrition is one of the national health problems that has not been resolved until now. Malnutrition has an impact not only on health problems, but can also be a problem in reducing the quality of Human Resources (HR) which will have an impact on the future of society in the future. The risk of death for children with poor nutrition is 17 times more risky than children with normal nutritional status. Therefore, every child who is malnourished must receive treatment according to standards to improve his nutritional status. (Kamila et al., 2018).

Elementary school age children aged 6 to 12 years, at this age are a group of people who are prone to experiencing health problems, namely malnutrition. The low nutritional status of school children will have a negative impact on improving the quality of Human Resources (HR). In children aged 11 years, there are 37%, and those who have a very thin nutritional status are 32% and those who have breakfast are only 67.4%. (Rohmah et al., 2016). At this age children have many activities both at school and outside of school, so children need more energy. The growth of children is slow but sure, according to the amount of food consumed by children. Children should be given breakfast before going to school, so that children can concentrate on lessons well and excel.

Indonesia is experiencing a double problem, namely the problem of undernutrition and the problem of overnutrition. The problem of undernutrition is generally caused by poverty, lack of food supplies, poor environmental quality, lack of public knowledge about nutrition, balanced menus and health. More nutrition problems are caused by economic progress at certain levels of society accompanied by a lack of knowledge about nutrition, balanced menus and health (Almatsier, 2010). Based on Riskesdas (2010), nationally the prevalence of nutritional status in children aged 6-12 years consists of 4.6% very thin, 7.7% thin, 78.6% normal and 19.2% fat.

Table 1. BMI classification according to WHO, Western Pacific Region in 2000

| Classification | Body Mass Index |
|---|---|
| Underweight | < 18,5 |
| Normal weight | 18,5 – 22,9 |
| Overweight with a risk | 23 – 24,9 |
| Obesity I | 25 – 29,9 |
| Obesity II | ≥ 30 |

## MATERIALS AND METHODS

This research is descriptive with a cross-sectional design. This research was conducted at SD GMIM 65 Winuri in September 2021. The population of this study were all elementary school children GMIM 65 Winuri. The sample size was determined using the proportion estimation formula (Rahmawati and

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Marfuah. 2016). A total of 50 school children were sampled by purposive sampling with criteria for elementary school children in grades I, II, III, IV, V, VI who can communicate well and have no congenital notes. The collection of data on the nutritional status of school children was carried out by measuring weight using a scale and height using a body meter for elementary school children from grade I to grade VI.

## RESULTS AND DISCUSSION

Based on the results of research conducted at SD GMIM 65 Winuri, East Likupang District, North Minahasa Regency, the distribution of respondents can be presented in the following table:

Table. 2 Distribution of Respondents by Age

| Age | Frequency | Percentage |
|---|---|---|
| 6 | 5 | 10 % |
| 7 | 10 | 20 % |
| 8 | 6 | 12 % |
| 9 | 9 | 18 % |
| 10 | 9 | 18 % |
| 11 | 9 | 18 % |
| 12 | 2 | 4 % |

Table. 3 Distribution of Respondents by Gender

| Gender | Frequency | Percentage |
|---|---|---|
| Male | 26 | 52 % |
| Female | 24 | 48 % |
| Quantity | 50 | 100 % |

Based on Table 2, the characteristics of the respondents indicate that the age of the most respondents is 7 years old by 20%. And Based on Table 3 the most gender is male by 52%. Good nutritional status is influenced by the amount of nutrient intake consumed. Children who experience conditions of poor nutritional status can increase the risk of health and infection as well as growth disorders. The following is an overview of the nutritional status of SD GMIM 65 Winuri children, based on body mass index (BMI) which can be seen in the following table:

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Table 4. Nutritional Status Based on Body Mass Index (BMI)

| Nutritional status | Frequency | Percentage |
|---|---|---|
| Less | 9 | 18 % |
| Normal | 25 | 50 % |
| Excess | 7 | 14 % |
| Obesity I | 4 | 8 % |
| Obesity II | 5 | 10 % |
| Quantity | 50 | 100 % |

Based on Table 2 above, it shows that the nutritional status, according to age, most respondents have normal nutritional status by 50%, nutritional status of respondents who are overweight by 14%, nutritional status of respondents who are obese I by 8%, and nutritional status of respondents who are obese I. nutrition of respondents who are obese II by 10%. Obesity in childhood can increase the incidence of type 2 diabetes mellitus (DM). In addition, obesity in children aged 6-12 years can also reduce the level of intelligence because children's activities and creativity decrease and tend to be lazy due to being overweight (Freedman, 2004).

Some of the factors that cause obesity in children include excessive food intake from instant processed foods, soft drinks, and snack foods such as fast food. In addition, obesity can occur in children who are not accustomed to consuming breast milk (ASI), but use formula milk with an intake that exceeds the portion needed by the baby/child. As a result, children will experience excess weight at the age of 4-5 years. This is exacerbated by the habit of consuming unhealthy snacks with high calorie content without being accompanied by high calorie content without adequate consumption of vegetables and fruit as a source of fiber. Children aged 7-12 years are a group that is vulnerable to overnutrition. Therefore, children in this age range need attention from the point of view of changing their daily diet because the food that is usually consumed since childhood will form the pattern of subsequent eating habits. Another factor that causes obesity is the lack of physical activity, both daily activities and structured physical exercise. Physical activity carried out from childhood to old age will affect lifelong health. Obesity in childhood will increase the risk of obesity in adulthood. The causes of obesity are considered to be multicausal and very multidimensional because they do not only occur in high socio-economic groups, but also often occur in middle to lower socio-economic groups. Obesity is influenced by environmental factors compared to genetic factors.

## CONCLUSION

The age characteristic of the most respondents is 7 years by 20%, the most gender characteristic is male by 52%. Nutritional status based on body mass index (BMI) according to age, the most respondents have less nutritional status 18%, normal nutritional status 50%, nutritional status over 14%, nutritional status obesity I 8%, and nutritional status obesity II by 10%.

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