# DESCRIPTION OF NUTRITIONAL STATUS CHILDREN OF PRIMARY SCHOOL AGE AT AL-CHUSNAINI ISLAMIC ELEMENTARY SCHOOL KLOPOSEPULUH SUB-DISTRICT SUKODONO DISTRICT

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**Abstract.** Nutrition is one of the foundations for public health, if there are disturbances of malnutrition, undernutrition, excess nutrition, and obesity growth will not take place optimally. Lack of nutrients results in reduced comprehension, physical growth is not optimal, stature tends to be short, not active, while excess nutrients will increase the risk of degenerative diseases in the future. This study aims to describe the nutritional status of elementary school-age children at Al-Chusnaini Islamic Elementary School, Kloposepuluh Subdistrict, Sukodono District. This research method is a descriptive study. The population and sample size are the same, namely 50 grade 1 students and 50 grade 2 students. The data for this study were taken by measuring height and weight and then calculated based on body mass index (BMI) and Z-Score. The results of the study showed that almost all students in grades 1 and 2 were in the good nutrition category, nutritional status was seen by gender, it was found that male students experienced more obesity problems, while female students experienced more malnutrition problems. This research is expected to be a reference in monitoring the nutritional status of elementary school students as well as a reminder for teachers to teach students how important it is to have good nutritional status, eat according to balanced nutrition guidelines, and actively participate in sports activities that have been facilitated by the school.

**Keywords :** Utritional Status, Elementary School Age Children.

## 1 INTRODUCTION

The national development of a nation is influenced by the quality of Human Resources (HR). One of the efforts to improve the quality of human resources is the creation of fair and equitable health development, which strives for people to be in optimal health, both physically, mentally and socially and to be able to become productive generations. The achievement of health development is assessed by the degree of public health. The degree of health is described by the situation of mortality, morbidity and nutritional status of the community. Nutritional imbalance can reduce the quality of human resources. Good nutrition will produce quality human resources, namely healthy, intelligent and physically strong and productive (Seprianty et al., 2015; Akubuilo et al., 2020; Akombi et al., 2017) .

Nutritional problems in Indonesia are still dominated by malnutrition, namely Protein Energy Deficiency (PED), iron anemia, Iodine Deficiency Disorders (IDD), and vitamin A deficiency (C.At & Rengel., 2023) . Apart from that, there are also other micro-nutrient problems such as zinc deficiency which until now have not been revealed

due to the limitations of nutritional science and technology. Malnutrition can also cause infectious diseases which are the cause of death (Seprianty et al., 2015) .

In addition, poor nutritional status can cause the above problems. The most important thing that must be considered is that it can cause stunting. Stunting is a condition in a person who has less length or height compared to his age. Stunting is a health problem that must be considered and treated early, because it will have a long impact on a person's life. Stunting is a cumulative process that occurs from pregnancy, childhood, and throughout the life cycle (Rahayu et al., 2018; Ejike, 2014) .

The prevalence of stunting or shortness in Indonesia tends to be static. The results of Riskesdas in 2007 showed that the prevalence of stunting under five in Indonesia was 36.8%. In 2010 it decreased to 35.6%. However, in 2013 the prevalence of stunting under five increased again to 37.2% and in 2016 the prevalence of stunting under five decreased to 27.5%. In 2017 and 2018, the prevalence of stunting increased again to 29.6% and 30.8% (Kemenkes, 2018) .

The high growth of stunted children can be influenced by many factors, one of which is the lack of nutrient intake. The incidence of stunting in elementary school-age children is a manifestation of stunting in toddlers, because there is no improvement during the catch-up growth period due to intake of macro and micro nutrients that are not in accordance with long-term needs, accompanied by a history of infectious disease (Santoso & Wahjuni, 2022; Adedeji et al., 2017) .

## 2 RESEARCH METHODS

This research uses a descriptive method. Descriptive research is research conducted on a set of objects that aims to see a picture of phenomena (including health) that occur in a certain population (Zellatifanny & Mudjiyanto, 2018). This research use a cross-sectional approach, namely a research design by carring out measurements or observations at the same time (Nurdini, 2006) . The population and samples in this study were students in grades 1 and 2 of Al-Chusnaini Islamic Elementary School, Kloposepuluh Village, Sukodono District, totaling 100 students. The data collection technique uses anthropometric measurements which include measuring body weight and height then calculated based on body mass index (BMI).

## 3 RESULTS AND DISCUSSION

### 3.1 Result

**Table 1.** Frequency Gender Distribution of Student in 1 and 2 Grades of Al-Chusnaini Islamic Elementary School

| Gender | n | % |
|---|---|---|
| **First Grade** | | |
| - Male | 20 | 40 |
| - Female | 30 | 60 |
| **Second Grade** | | |
| - Male | 24 | 48 |
| - Female | 26 | 52 |

**Table 2.** Frequency Distribution of Nutritional Status Students in 1 and 2 Grades of Al-Chusnaini Islamic Elementary School.

| Nutritional Status | n | % |
|---|---|---|
| **Fisrt Grade** | | |
| - Malnutrition | 0 | 0 |
| - Underweight | 1 | 2 |
| - Normal Weight | 35 | 70 |
| - Overweight | 5 | 10 |
| - Obesity | 9 | 18 |
| **Second Grade** | | |
| - Malnutrition | 0 | 0 |
| - Underweight | 3 | 6 |
| - Normal Weight | 34 | 68 |
| - Overweight | 4 | 8 |
| - Obesity | 9 | 18 |

**Table 3.** Frequency Distribution of Nutritional Status Based on Gender students in grades 1 and 2 of Al-Chusnaini Islamic Elementary School.

| Grade | Nutrition Status | Male | | Female | |
|---|---|---|---|---|---|
| | | n | % | n | % |
| 1 | Malnutrition | 0 | 0 | 0 | 0 |
| | Underweight | 0 | 0 | 1 | 3,3 |
| | Normal Weight | 14 | 70 | 21 | 70 |
| | Overweight | 1 | 5 | 4 | 13,3 |
| | Obesity | 5 | 25 | 4 | 13,3 |
| 2 | Malnutrition | 0 | 0 | 0 | 0 |
| | Underweight | 1 | 4,1 | 2 | 7,6 |
| | Normal Weight | 13 | 54,1 | 21 | 80,7 |
| | Overweight | 3 | 12,5 | 1 | 3,8 |
| | Obesity | 7 | 29,1 | 2 | 7,6 |

## 3.2 Discussion

### Nutritional Status Elementary School-Aged Children

Assessment of nutritional status based on BMI/U using WHO standards and the 2020 Permenkes which was carried out on 100 students at Al-Chusnaini Islamic Elementary School aged between 6-9 years found that the number of students with good nutrition categories was quite high, namely 70% for grade 1 students and 68% for grade 2 students. However, this value is still below the figure from the results of the 2017 Nutrition Status Monitoring study, which was 92.1%. This is because the research was only carried out in one agency, so it has not been able to represent all districts, even districts and provinces. In addition to good nutrition, there were also problems of malnutrition and undernutrition, but in this study there were no students who experienced malnutrition and only a few students who experienced problems with malnutrition, namely a total of 4 students.

In the opinion of researchers, the causes of malnutrition in school-age children can be caused by children not being used to having breakfast before going to school, especially

at Al-Chusnaini Islamic Elementary School this school is on a full day basis so children must pay attention to their food intake. 4 students who experience malnutrition can still be overcome as quickly as possible so that the nutritional value does not increase. One of the media for good nutrition education in schools is by establishing a healthy canteen. If children don't have breakfast and parents don't have time to make provisions, students can buy food or snacks in the school cafeteria to fulfill their nutritional intake.

In addition, because there was no problem of malnutrition, automatically there was no problem of stunting in grades 1 and 2 of Al-Chusnaini Islamic Elementary School. This has a positive impact on government programs because educational institutions can help reduce the prevalence of stunting by optimizing the role of teachers in educating students about nutritional status. Nutrition education taught by schools is expected to form good eating practices, of course it must be instilled from an early age and one of them is from the elementary school level (Abebe et al., 2017; Opoola et al., 2016).

Malnourishment in school-age children will result in children becoming weak, tired quickly, susceptible to disease, and less responsive in following learning in class (Khan et al., 2022). Children who are malnourished are easily sleepy and lack enthusiasm which can interfere with the learning process at school and reduce learning achievement, the child's thinking power is also reduced because his brain growth is not optimal (Mandy & Nyirenda, 2018). Weak physical conditions will have an impact on children's learning styles, especially school-age children (Cambridge., 2015).

Children with normal nutrition tend to be more active and more energetic. The availability of calories in the body is sufficient for them to do activities and learn. Children with normal nutritional status and adequate food intake support them for expression and for brain development, maintenance and function of their organs (Piper, 2019). Poor nutritional status or poor nutritional status can have an impact on neuronal connections, maybe not as much as it should, so that it can affect cognitive development and cause behavioral problems. Lack of intake of nutrients can inhibit the growth of myelin, reduce intelligence so that it can cause learning disorders (Erita et al., 2019) .

**Nutritional Status by Gender**

The main problem in this study is still the high percentage of overweight and obesity in grade 1 and 2 students. Based on the table above, male students are more likely to experience excess nutrition (grade 2 male students 12.5%), and obesity (grade 1 male students 25% and grade 2 male students 29.16%). So it can be concluded that gender greatly influences the nutritional status of children.

Gender is one factor that differentiates individual nutritional and caloric needs. This is because the body composition of male and female students is different. Boys have more muscle mass, while girls have more fat. The metabolism of a body with greater muscle mass requires higher calories, compared to a body with smaller muscle mass (Sakdiyah, 2013; Kausar & Nazr, 2018).

The difference in caloric needs is very influential on the difference in activity between male and female students. Larger muscle mass automatically requires more energy to function optimally, so that male students are superior in carrying out physical activities. In addition, most male students usually have a higher body posture than

female students. This high posture also affects the need for calories. In general, male students have a larger lung capacity, which allows them to work harder during sports or other physical activities (Khan et al., 2016).

According to the researchers, the factors that influence the occurrence of over nutrition and obesity in Al-Chusnaini Islamic Elementary School students are that Al-Chusnaini Islamic Elementary School is located in a fairly good housing area. The tuition fee per month is IDR 350,000, so that the average student studying at this school is in the middle and upper economic category. Parents' income greatly supports the growth and development of children, because parents can provide all the needs of children, both primary and secondary needs. Good socio-economic status will help the need for nutritious food intake, so that indirectly the nutritional status of children will be fulfilled. If the fulfillment of nutritional status is not in a balanced portion it will result in over nutrition and even obesity (Metasari & Kasmiati., 2020; Khan et al., 2019) .

As previously explained, namely the socio-economic status of the parents so that the fulfillment of nutrition in inappropriate amounts. In this study, the percentage of male students was greater than that of female students. Obesity in school children if not treated immediately can cause accumulation of fat in the blood vessels, resulting in blockage of blood flow in the blood vessels of the heart and brain. Other health impacts related to obesity in school children are increased severity of asthma and other respiratory diseases, low fitness levels, social discrimination such as bullying, and exclusion which can lead to low self-esteem. Apart from that, it can also cause complications of other health diseases such as hypercholesterolemia, hypertension, and type 2 diabetes mellitus, which are partly due to genetic factors (Aprilia, 2015; Marwat et al., 2019).

The nutritional status program that has been carried out by the school is providing education on nutrition education for elementary school children, management of healthy school canteens, giving blood supplement tablets for grade 5 and 6 girls because these students are already menstruating, and monitoring growth and development every year. Once every 6 months by taking anthropometric measurements.

## 4 CONCLUSION

The conclusion for this research are : (1) almost 1 and 2 grades students are in normal nutrition category, (b) overnutrition and obesity are more common that matnutrition and undernutrition, (c) based on gender, mate students experienced more obesity problems, while female students experienced more malnutrition problems. It is hoped that this research can become a reference in monitoring the nutritional status of elementary school students. It can also serve as a reminder for teachers to teach students how important it is to have good nutritional status, consume food according to balanced nutrition guidelines, and actively participate in sports activities that have been facilitated by the school.

# 5 REFERENCE


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