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

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Abstrak

Gizi merupakan salah satu pondasi bagi kesehatan masyarakat, jika terjadi gangguan gizi buruk, gizi kurang, gizi lebih, dan obesitas pertumbuhan tidak akan berlangsung optimal. Kekurangan zat gizi berakibat daya tangkapnya berkurang, pertumbuhan fisik tidak optimal, postur tubuh cenderung pendek, tidak aktif bergerak, sedangkan kelebihan zat gizi akan meningkatkan resiki penyakit degenerative di masa yang akan datang. Penelitian ini bertujuan untuk mengetahui gambaran status gizi pada anak usia sekolah dasar di SD Islam Al-Chusnaini Kelurahan Kloposepuluh Kecamatan Sukodono. Metode penelitian ini adalah studi deskriptif. Jumlah populasi dan sampel nya sama yakni 50 siswa kelas 1 dan 50 siswa kelas 2. Data penelitian ini diambil dengan melakukan pengukuran tinggi badan dan berat badan kemudian dihitung berdasar indeks massa tubuh (IMT) dan Z-Score. Hasil penelitian hampir seluruh siswa kelas 1 dan 2 dengan kategori gizi baik, status gizi dilihat berdasarkan jenis kelamin didapatkan siswa laki-laki lebih banyak mengalami masalah obesitas sedangkan siswa perempuan lebih banyak mengalami masalah gizi kurang. Penelitian ini diharapkan dapat menjadi acuan dalam pemantauan status gizi siswa sekolah dasar serta menjadi pengingat bagi guru untuk mengajarkan siswa betapa pentingnya memiliki status gizi baik, mengonsumsi makan sesuai pedoman gizi seimbang, serta aktif mengikuti kegiatan olahraga yang telah di fasilitasi oleh pihak sekolah.

***Kata kunci**: Status Gizi, Anak Usia Sekolah Dasar*

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**: Nutritional 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).

Nutritional problems in Indonesia are still dominated by malnutrition, namely Protein Energy Deficiency (KEP), iron anemia, Iodine Deficiency Disorders (IDD), and vitamin A deficiency. (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).

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 RI, 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).

Fulfillment of nutrients in school children must be given appropriately both in terms of quality and quantity. This is because school children belong to a group that is prone to nutritional problems. The low nutritional status of school children will affect the quality of Human Resources (HR) in the future even though school children are the next generation and agents of change for the nation and state in the future. Therefore, the developmental stage of elementary school age is one of the crucial developmental stages that needs attention, including aspects of nutrition for the cognitive development of school-age children (Novianti & Utami, 2018).

Nutritional status is the state of the body as a result of food consumption and use of nutrients. Nutritional status can also be interpreted as a physical sign caused by a balance between nutritional intake and expenditure through certain variables, namely nutritional status indicators. Another definition states that nutritional status is a person's physical condition which is determined by one or a combination of certain nutritional measures (Indonesia et al., 2011).

Poor or deficient nutritional status can be related to stunting. Stunting is a chronic malnutrition problem caused by insufficient nutritional intake for a long time due to the provision of food that does not match nutritional needs. Stunting can occur when the fetus is still in the womb and only appears when the child is two years old. Stunting that has occurred if it is not balanced with catch-up growth will result in decreased growth, the problem of stunting is a public health problem associated with an increased risk of morbidity, death and obstacles to both motor and mental growth.

Stunting is formed by growth faltering and inadequate catch-up growth which reflects the inability to achieve optimal growth. This reveals that the group of toddlers born with normal weight can experience stunting if their further needs are not met properly (Rahmadhita, 2020).

Growth Stunting that occurs at an early age can continue and there is a risk of growing short in adolescence. Children who grow short at an early age (0-2 years) and remain short at 4-6 years of age have a 27 times the risk of remaining short before entering puberty; conversely, children who grow normally at an early age can experience growth faltering at the age of 4-6 years and have a risk of 14 times growing short at pre-pubertal age. 10 Therefore, interventions to prevent growth stunting are still needed even after exceeding 1000 HPK (Aryastami, 2017).

Several components of nutritional status assessment are food intake, biochemical examination, clinical examination and health history, and anthropometric examination. Food intake is information about the amount and type of food eaten or consumed by a person or group of people at a certain time. From food intake, the nutrients needed by the body are obtained to maintain growth and good health (Fakri & Jananda, 2021). Assessment of nutritional status by bio-chemistry is the examination of laboratory tested specimens on various body tissues. Body tissues that are commonly used include blood, urine, feces and also some body tissues such as the liver and muscles. This method is used as a warning that there may be even more severe malnutrition (Han & goleman, daniel; boyatzis, Richard; Mckee, 2019). Anthropometric examination comes from the words anthropos and metros. An-thropos means body while met-ros means size (Jayanti, 2019). Anthropometry can be used as an indicator to assess nutritional status, especially a person's lack of energy and protein. Anthropometry as an indicator of nutritional status can be carried out using several parameters. Parameters commonly used in anthropometric measurements are age, weight, and height.

Elementary school children, namely children aged 6-12 years, have a stronger physique, have individual characteristics and are active and do not depend on their parents. This school-age child is a period when there are various changes in the growth and development of children which will affect the formation of the child's characteristics and personality. This school-age period becomes the core experience of children who are considered to be initially responsible for their own behavior in relationships with peers, parents and others. In addition, school age is a time when children acquire basic knowledge in determining success in adjusting to adult life and acquiring certain skills (Bruce, 2015)

Several factors influence the development of elementary school-age children, namely hereditary factors and environmental factors. Hereditary factors can be interpreted as inheritance or transfer of individual biological characteristics from both parents to children or individual biological characteristics that are brought from birth that are not inherited from both parents. We can also say that the traits or characteristics of a child are hereditary (Lestari, 1907). While environmental factors are broadly divided into prenatal and postnatal factors. The postnatal environment in general can be classified into the biological environment (race/ethnicity, gender, age, nutrition, health care, susceptibility to disease, chronic disease, metabolic function, hormones), physical environment (weather , season, geographic condition of an area, sanitation, house conditions, radiation), psychosocial environment (stimulation, learning motivation, rewards or punishments, peer groups, stress, school), and family environment.

2. RESEARCH METHOD

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). Penelitian ini menggunakan pendekatan *Cross Sectional* yaitu rancangan penelitian dengan melakukan pengukuran atau pengamatan pada saat bersamaan (Allis Nurdini, 2006).

According to (Notoatmodjo, 2012) population is the entire object of research or the object under study. The population is also a collection of elements that have certain characteristics in common and have the same opportunity to be selected as the sample. The sample according to (Notoatmodjo, 2012) is the object under study and is considered to represent the entire population. Samples were also taken from all the objects studied and considered to represent the entire population. The population and am-pels in this study were students in grades 1 and 2 of Al-Chusnaini Islamic Elementary School, Klopoten Village, Sukodono District, totaling 100 students.

Sampling technique is a technique that discusses how to organize various techniques in drawing or taking samples (Saleh, 2017). The sample technique used in this study is total sampling. Total sampling is a sampling technique in which the number of samples is the same as the population (Inayah et al., 2018). The reason for taking total sampling is because the total population is less than 100, the entire population is used as a research sample.

An operational definition is given to a variable by giving meaning, specifying activities, or providing an operationalization needed to measure certain variables (Joko Setiyono, 2019). The variable of this study is the description of the nutritional status of Al-Chusnaini Islamic Elementary School students. The operational definition of nutritional status is the condition of elementary school-aged children based on BMI/U indicators (Saverus, 2019).

The data collection technique uses anthropometric measurements which include measuring body weight and height then calculated based on body mass index (BMI) which will be carried out for 1 day on March 20 2023.

In this study the authors used an instrument in the form of an informed consent sheet for approval of willingness to be a respondent in the study, using a digital weighing scale and a microtoise for anthropometric measurements.

3. RESULTS AND DISCUSSION

Result

Table 1. Gender distribution of students in grades 1 and 2 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 Distribution of Nutritional Status of Grade 1 and 2 students 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 Distribution of Nutritional Status Based on Gender of Grade 1 and 2 Students of Al-Chusnaini Islamic Elementary School

Grade	Nutrition Status	Male		Female	
		n	%	n	%
1	M	0	0	0	0
	UW	0	0	1	3,3
	NW	14	70	21	70
	OW	1	5	4	13,3
	OBS	5	25	4	13,3
2	M	0	0	0	0
	UW	1	4,1	2	7,6
	NW	13	54,1	21	80,7
	OW	3	12,5	1	3,8
	OBS	7	29,1	2	7,6

Information :

a. M : Malnutrition
b. UW : Underweight
c. NW : Normal Weight
d. OW : Overweight
e. OBS : Obesity

Discussion

1. Nutritional Status of 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.

Malnourishment in school-age children will result in children becoming weak, tired quickly, susceptible to disease, and less responsive in following learning in class. 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. Weak physical conditions will have an impact on children's learning styles, especially school-age children.

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. 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).

2. 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).

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.

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).

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).

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 AND SUGGESTION

Conclusion

Based on the results of the discussion that has been presented, the researcher will conclude several things based on the specific objectives to be achieved, namely as follows:

1. Almost all grade 1 and grade 2 students are in the good nutrition category.
2. Overnutrition and obesity are more common than malnutrition and undernutrition.
3. Based on gender, male students experienced more obesity problems, while female students experienced more malnutrition problems.

Suggestion

Based on the conclusions above, several suggestions can be put forward, including:

1. For Research Sites

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.

2. For Nursing Educational

It is hoped that the results of this study can be used as a study and source of literature for nursing science so that students have a good understanding of the nutritional status of school-age children.

3. For Reasearchers

As a study material for researchers to increase knowledge about the nutritional status of school-age children, it is also hoped that researchers can disseminate this research so that many people are concerned about nutritional status.

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