

Analysis of Nutritional Status, Physical Fitness and Learning Outcomes of SMP Negeri 2 Kuala Batee Aceh Barat Daya Students, Indonesia

Hayatul Ulfa¹, Mansur¹, Yeni Marlina¹, Zulfikar¹, Sukardi Putri¹, Muhammad Jafar¹

¹ *Syiah Kuala University*

Jln. Teuku Nyak Arief, Darussalam, Banda Aceh, Aceh, 23111, Indonesia

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Corresponding Author:

Hayatul Ulfa

hayatululfampo@gmail.com

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Abstract. Junior high school is closely related to movement and food or nutrition. The nutrition obtained by a child through daily food consumption plays a major role in the child's life. SMP Negeri 2 Kuala Batee students are individuals who, during this growth period, experience great growth and development, so good nutrition and good fitness are needed to support the growth and development of more optimal children. This research includes descriptive research, which aims to determine the presence or absence of a relationship between variables and other variables, while the approach used to answer the problem is correlational. The samples in this study were Class I and Class II students of SMP Negeri 2 Kuala Batee, totalling 40 students. Sampling technique using random sampling by lottery. Data collection techniques using tests and measurements. The instrument used to determine the level of physical fitness is the Indonesian Physical Fitness Test for the age group 13-15 years, 2010. The nutritional status measurement instrument is the weight-for-height index for ages 6-17 – data analysis using the percentage formula. The results of measuring nutritional status show that students who are categorised as very thin are six students (15%), in the category of thin three students (7.5%), in the category of medium five students (12.5%), in the normal category 20 students (50%), in the position of fat two students (5%), Obesity 4 students (10%). The results of the physical fitness level test show that students with excellent physical fitness category one student (2.5%), good physical fitness category three students (7.5%), moderate physical fitness category 18 students (45%), physical fitness category less nine students (22.5%), physical fitness category very less (22.5%). So it can be concluded that class I and class II students of SMP Negeri 2 Kuala Batee have an average nutritional status of normal category, namely 50%, and moderate physical fitness level, namely 45%.

Keywords: Physical fitness; Nutritional status; Students.

INTRODUCTION

Physical education in schools is part of education in general in Indonesia. Physical education has a big role in humanising humans. Because it involves physical activity, of course, physical education has the greatest role in the formation of health and physical fitness. Physical education has a mutually supportive function and is in line with education's goals in general. Learning objectives are something that must be achieved. At the same time, the purpose of physical education itself is to develop students in the psychomotor, affective, and cognitive domains.

Physical education and health taught to students at school can develop various skills such as movement, critical thinking and social skills. In addition, learning PE and health is expected to stabilise emotional and moral actions and apply a healthy lifestyle by introducing a clean and healthy environment. Furthermore, the important thing is the purpose of physical education. The author [1] states, "Considering self-processing skills to develop and maintain physical fitness and a healthy lifestyle through adequate nutritional intake and various physical activities and chosen sports".

Nutrition is one of the important elements needed by the human body. By providing good and adequate nutrition, the growth and development of an individual will be optimal. Especially in school-age children because children are in optimal growth and development at this age. In the process of physical growth and mental development until adulthood, humans need healthy food in which nutrients are balanced.

Nutritional intake considerably influences children's growth and development, especially in learning, communicating, socialising, and adapting to the environment. Therefore, parents should pay attention to their children's nutritional intake. Children with poor nutritional status will not grow and develop properly. In addition to affecting the growth and development of children, poor nutrition also affects their level of intelligence.

The author [2] says, "Physical fitness is an ability to carry out normal daily activities with vigour and full preparedness, without experiencing significant fatigue and still having energy reserves to enjoy leisure time activities and emergency events that come suddenly". Physical activity and exercise will increase the body's ability to consume oxygen optimally.

Physical fitness plays a role in learning activities; without the support of good physical fitness, learning activities will be disrupted and affect learning outcomes. If students do not have good physical fitness, receiving lessons from the teacher will be difficult. If students' physical fitness is well maintained, the learning process will be smooth, and the absorption of knowledge in all subjects by students will be better. Thus, physical fitness plays a very important role in students' learning process and the results obtained.

Learning outcomes are the ability students obtain after learning activities with the material set within a certain period. Students can achieve this through teaching and learning activities, including cognitive, affective, and psychomotor abilities. Optimising learning outcomes is determined by many factors, including excellent physical condition marked by students' physical fitness level and nutritional status and a harmonious body condition between height and weight so that the ideal body weight is achieved, called body mass index.

Performing activities requires adequate nutritional intake because if the body is allowed to enter more calories than are expended, the remaining energy that should be used for adequate movement will be stored as fat, resulting in uncontrolled body weight and disturbed body composition. Examining the relationship between nutritional status and physical fitness level requires properly analysing the aspects contained therein. Nutritional status is the level of fulfilment of a person's nutritional status, which is obtained by daily food intake, both of plant and animal origin and is closely related to physical fitness.

SMP Negeri 2 Kuala Batee students are individuals who, during this growth period, experience great growth and development, so good nutrition and good fitness are needed to support the growth and development of more optimal children. Frequent movement activities will affect the physical condition of children. However, environmental factors also greatly influence the success in the formation of Indonesian humans with high cognitive, affective and psychomotor abilities. Quality human resources development will succeed if optimal growth and development have started early.

One factor that needs to be considered in improving the physical fitness of junior high school students, which is closely related to movement, is food or nutrition. The nutrition obtained by a child through daily food consumption plays a major role in the child's life. If nutritional needs are met completely, the processes in the body can run normally, such as energy needs are met to carry out various activities such as playing and exercising, and students are more enthusiastic in carrying out learning activities both in the classroom and in the field.

Nutritional needs for each individual are different in each age periodisation and the intensity of physical activity from their daily routine. Based on preliminary observations made by the author, most parents of students at SMP Negeri 2 Kuala Batee come from the middle social class, namely large farmers. As small civil servants, so economically, students who attend school at SMP Negeri 2 Kuala Batee have sufficient nutritional status because it is considered sufficient to buy nutritious food. However, this does not guarantee that the food consumed contains balanced nutrition. Moreover, the types of food sold in the canteen

and around the school do not even meet the criteria for foods with balanced nutritional content.

Grade VII junior high school students are the initial level of students entering the gates of junior high school. So, it takes time to adjust the old school (elementary school) habits to the new school (junior high school). Schools, especially physical education teachers at SMP Negeri 2 Kuala Batee, do not yet have data on their students' physical fitness levels and nutritional status. The level of physical fitness and nutritional status needs to be known for the continuity of a smooth teaching and learning process and further handling if there are problems regarding the level of physical fitness and nutritional status of students.

Given the importance of knowing physical fitness to carry out daily activities, such as doing learning tasks well, and nutritional status for student growth and development, the author wants to know students' nutritional status and physical fitness level.

METHOD

This research includes quantitative research, which is research on problems based on testing a theory consisting of variables measured by numbers and analysed by statistical procedures to determine whether the predictive generalisation of the theory is correct. According to [3], quantitative data is a research method based on positivistic (concrete data) research data in the form of numbers that will be measured using statistics as a calculation test tool related to the problem under study to produce a conclusion.

While the descriptive research approach is a method of researching the status of a human group, an object, a condition, a thought, or a current event, descriptive methods are used to create a systematic, factual and accurate picture or description of existing phenomena. Quantitative descriptive research describes variables as supported by data in the form of numbers generated from actual circumstances.

The target population used in this study were all SMP Negeri 2 Kuala Batee, Southwest Aceh Regency students enrolled in the 2023/2024 semester II school year, totalling 186 students consisting of 105 boys and 81 girls.

RESULTS AND DISCUSSION

Based on Table 1 above, the classification of the nutritional status of students of SMP Negeri 2 Kuala Batee is in the Normal category because the majority of students with a frequency of 17 people are in the percentage of 53.12% with normal categories in the level of nutritional status.

Table 1 – Percentage of Nutritional Status

No	Classification	Frequency	%
1	Very Skinny	6	18,75
2	Thin	3	9,37
3	Usual	17	53,12
4	Fat	2	6,25
5	Obesity	4	12,5
Sum		32	100

The physical fitness category (Table 2) of SMP Negeri 2 Kuala Batee students is in the moderate category with a frequency of 14 people and a percentage of 43.75%.

Table 2 – Frequency of Physical Fitness

No	Classification	Frequency	%
1	Very good	0	0
2	Good	2	6,25
3	Keep	14	43,75
4	Less	9	28,12
5	Very Less	7	21,87
Sum		32	100

Based on Table 3, the average student learning outcomes are still in grade B, namely 53.12% with 17 frequencies, and those who get "A" have zero frequencies.

Table 3 – Student Learning Outcomes of SMP N 2 Kuala Batee

Intervals	Frequency	Value	%
60–69	4	D	12,5
70–79	11	C	34,37
80–89	17	B	53,12
90–100	0	A	0
Sum	32	-	100

Description of Nutritional Status. The results of research on the nutritional status obtained stu-

dents who have a nutritional status with a very thin classification as many as six people and a percentage of 18.75%; someone is said to be very thin if the body mass index (BMI) is < 16.0. The thin classification is three people with a percentage of 9.37%, said to be thin if the body mass index (BMI) is 16.00-16.99. Normal classification, with a frequency of 17 people and a percentage of 53.12%, is normal if the BMI is 18.50-24.99. The fat classification with a frequency of 2 people, a percentage of 6.25%, is said to be fat if the BMI is 25.00-29.99. The classification of obesity, with a frequency of 4 people and a percentage of 12.5%, is said to be obese if the BMI is 30.00-39.99. So, it can be seen that the classification level of nutritional status of SMP Negeri 2 Kuala Batee students is in the Normal category with a frequency of 17 people and a percentage of 53.12%.

The results of nutritional status research on students obtained the majority with a frequency of 25 people with moderate and normal nutritional status. Each student has different nutritional needs, which must be considered and met, especially when approaching adolescence. Because it can affect the body's metabolism, the role of parents and teachers to continue to maintain and improve the nutritional status of students is very important because the nutrients obtained and consumed by the body will affect its capacity to carry out daily activities such as school, study, sports and so on [4].

Description of Physical Fitness. The results of the study of physical fitness of students obtained students who have physical fitness in the Excellent category with a frequency of 0 people and a percentage of 0%, said to have excellent physical fitness if the range of TKJI test norms for men and women is 22-55. A good category with a frequency of 2 people and a percentage of 6.25% is said to be good if the range of TKJI test norms for men and women is 18-21. The moderate category, with a frequency of 14 people and a percentage of 43.75%, is considered moderate if the range of TKJI test norm values for men and women is 14-17. The Lack category, with a frequency of 9 people and a percentage of 28.12%, is said to be lacking if the range of TKJI test norm values for men and women is 10-13. The category is very poor, with a frequency of 7 people and a percentage of 21.87%. It is said to be very poor if the range of TKJI test norms for men and women is 5-9. So, it can be seen that the physical fitness level of SMP Negeri 2 Kuala students is in

the moderate category with a frequency of 14 people and a percentage of 43.75%.

The description of the data above shows that the level of physical fitness of students is in the moderate or sufficient category with a frequency of 14 people, but the categories of less and very less also have almost the same frequency, namely for the category of very less as many as seven people, and the category of less as many as nine people. These results show that many students still have fitness below the moderate category. Physical fitness is one of the causes of increased ability and daily student learning.

Students lacking physical fitness can impact their ability to carry out their activities, such as playing sports. In good physical condition, students are ready for daily tasks and consistently try to improve learning outcomes, especially in PE learning. Learners obtain learning outcomes that differ from one another. Many factors, including physical fitness and daily nutrition, influence the acquisition of PE learning outcomes. According to [5], students succeed in the PE learning process if there is a change in behaviour in students. Behavioural changes occur due to the training process and students' experiences.

Description of Nutritional Status and Physical Fitness in Improving Learning Outcomes. The number of adolescents who are malnourished is caused by food intake with balanced nutrition that is still not optimally fulfilled. The lack of nutrition will hurt adolescent children's physical, mental, intellectual and social health conditions [6]. According to [7], indications of nutritional needs carry out the child's education process because food nutrients such as carbohydrates, fats and proteins as energy-giving substances, especially carbohydrates, are needed by the brain to think about nutritional needs to support the results of the learning process of students at school.

In addition to nutritional status, other factors affect students' process and learning outcomes, namely physical fitness. Physical fitness is seen from the physical ability of students to carry out daily activities or activities without causing significant fatigue. The higher the students' physical fitness, the more likely they are to complete a job and enjoy life. The author [8] suggests that physical fitness is the physical aspect of comprehensive fitness (total fitness), which gives a person the ability to be productive and adapt to physical differentiation (physical stress) that is feasible.

Nutritional status can also affect the high and low levels of physical fitness. Normal nutritional status will be able to produce a fresh body condition and will appear more confident in public, especially in everyday life. As the research results [6] say, the better a person's nutritional status, the better his productivity. If the nutritional status of workers is poor, it will directly affect their work productivity and can result in decreased work endurance. A well-fit child can work or do activities for a long time without feeling tired prematurely. This is because those who have good physical fitness have large energy reserves. They will quickly recover the energy used up during activities.

CONCLUSIONS

Based on the results of the analysis and discussion, it can be concluded that:

1. The nutritional status of SMP Negeri 2 Kuala Batee students is in the normal classification, with a frequency of 17 people and a percentage of 53.12%.

2. The level of physical fitness of SMP Negeri 2 Kuala Batee students is in the moderate category, with a frequency of 14 people and a percentage of 43.75%.

3. The level of nutritional status and physical fitness can affect the improvement of student learning outcomes. That is, the lower the nutrition and physical fitness of students, the lower the learning outcomes obtained by students. This can be seen from the average score of students at SMP N 2 Kuala Batee.

According to the results of this study:

1. Parents are expected to pay attention to the nutritional patterns of students at home so that their nutritional intake is sufficient.

2. The role of teachers is very important in improving the physical fitness of students who have less physical fitness and need to pay attention to their physical activities to be improved.

3. Schools can significantly improve students' nutritional status and physical fitness, supporting a more effective teaching and learning process.

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