

## The Relationship Between Nutritional Status and the Level of Physical Fitness of Sinjai 1 Public High School Students

M. Adam Mappaompo<sup>1\*</sup>, Akbar Sudirman<sup>2</sup>  
Universitas Negeri Makassar<sup>1,2</sup>

**Corresponding Author:** M. Adam Mappaompo [m.adam.mappaompo@unm.ac.id](mailto:m.adam.mappaompo@unm.ac.id)

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### ABSTRACT

This research aims to find out whether there is a relationship between nutritional status and the level of physical fitness of students at SMA Negeri 1 Sinjai. The population of this study were all students of SMA Negeri 1 Sinjai. The research sample consisted of 20 students from SMA Negeri 1 Sinjai. The technique for collecting data on nutritional status is by measuring height and weight, and physical fitness using the Indonesian physical fitness test which consists of 60 m running, sit ups, full ups, vertical jumps and 1200 m running. The research results show that a sig value = 0.001 > 0.05 is obtained, so H<sub>0</sub> is rejected and H<sub>1</sub> is accepted, meaning that there is a significant joint correlation between nutritional status level and the determination value (R Square) = 0.252 or a joint correlation of 25.2 % While 74.8% was caused by other factors, it can be concluded that there is a relationship between nutritional status and the level of physical fitness of students at SMA Negeri 1 Sinjai.

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## **INTRODUCTION**

Physical education is a learning process that uses physical activity as a learning medium with the aim of improving physical fitness, developing motor skills, healthy, active living behavior, sportsmanship and emotional intelligence. Physical education has an important role in providing students with opportunities to gain movement learning experiences. Apart from movement experience, physical education also plays a role in students' fitness status.

Student health is one of the main factors in ensuring the formation of a quality and productive young generation. The two main aspects that influence student health are nutritional status and physical fitness. Both have a significant impact on the welfare of students at SMA Negeri 1 Sinjai, and have the potential to influence their academic performance and daily life.

Nutritional status is an important indicator of individual health. Students who have poor nutritional status can be at risk of experiencing various health problems such as lack of energy, decreased endurance, and risk of infectious diseases. Good nutritional status is very important to ensure students have optimal health to learn and participate in physical activities according to Bakri (2001:24) who stated that nutritional status is an expression of a state of balance or the manifestation of nutrition in the form of certain variables, while views regarding the balance situation or the realization of nutrition with certain variables is nutritional status. Paath in (Henjilito, 2019).

Meanwhile, physical fitness is an important component of physical health. Good physical fitness can increase students' stamina, endurance and physical performance. This can affect their ability to participate in sports activities, physical activities at school, and daily life. Physical education is teaching that includes deliberate physical activity to develop movement abilities, health, physical fitness, critical thinking, emotional stability, moral action and reasoning (Ika, 2015 in (Nugraha & Wibowo, 2021). Meanwhile, the definition of physical fitness according to Djoko Pekik I (2000:2), namely, a person's ability to be able to carry out daily work efficiently without causing excessive fatigue so that he can still enjoy his free time.

Developing a person's physical fitness through sports activities aims to improve a person's physical condition and endurance so that they are able to participate in learning activities well. Physical activity is movement activity carried out in order to improve the quality of human performance. Apart from nutritional status and physical activity, vital lung capacity is very important in supporting a person's activities.

The relationship between nutritional status and physical fitness is very close. Poor nutritional status, especially obesity, can hinder students' physical fitness. Students who are overweight may have difficulty undertaking physical activities that require endurance and fitness. On the other hand, poor physical fitness can also be an indicator of broader nutritional problems, including being overweight or malnourished.

## **THEORETICAL REVIEW**

An organism uses food that is normally consumed through the processes of digestion, absorption, transportation, storage, metabolism, and excretion of waste substances that are not needed by the body to maintain life, promote organ growth, and function normally and to produce food. energy. according to Supariasa, et al. (2002: 18) defines nutritional status as a manifestation of a balanced state in the form of certain variables. Irianto, meanwhile, according to Mary E. Barasi (2009:26), nutrients are classified into two based on the amount needed, chemical properties and function in the body, namely macronutrients and micronutrients. Macronutrients are needed in large quantities including carbohydrates, fats and proteins. Micronutrients are substances that the body needs in small quantities, including minerals and protein. Furthermore, according to Atikah Proverawati and Erna Kusumawati (2010: 5) states that nutrients are classified into six main groups, namely carbohydrates, fats, proteins, vitamins, minerals and water

When a person is physically healthy, they are able to carry out daily tasks successfully and efficiently for long periods of time without feeling too tired, but still have the energy to carry out other activities. The body will feel healthy if you have strong physical fitness. Children who think relatively positively in overcoming difficulties and feel physically strong and active tend not to explicitly support the implementation of the educational process at school. According to Riadi (2009), the three elements include food and nutrition factors, sports training or physical exercise or regular factors. called physical activity and rest factors, can influence a person's level of physical fitness. (Munipiddin, Muhammad Husni Tamim, 2018) while in the opinion of Rusli Lutan, J. Hartoto and Tomoliyus (2001:7) physical fitness (which is related to health) is the ability a person to carry out physical tasks that require strength, endurance and flexibility. According to Budi Sutrisno and Muhammad Bazin Gaddafi (2009:52), physical fitness is the ability and ability to carry out work or activities, increasing work capacity without experiencing excessive fatigue.

## **METHODOLOGY**

The method used in this research is descriptive research method. The definition of descriptive according to (Sugiyono, 2018) is: "The descriptive method is research carried out to describe independent variables, either only on one variable or more (standalone variables) without making comparisons and looking for that variable with other variables.

According to Suharsimi Arikunto (2002) research instruments are tools used by researchers in collecting data to make their work easier and better. The research instrument used to collect data in this research is the measurement method. Nutritional status is a condition that describes the body condition of students at SMA Negeri 1 Sinjai which is measured by comparing body weight and height, while physical fitness is a person's ability to carry out daily tasks without causing significant fatigue which is measured by running 60 meters as fast as possible. fast, hanging body lifts (pull ups) for 60 seconds, lying down

sitting (sit ups) for 60 seconds, jumping upright as high as possible, and running 1200 meters (TKJI, 2010).

## RESULTS

1. Descriptive analysis
  - a. Nutritional status(X)

Table 1. Frequency and nutritional status of students at SMAN 1 Sinjai

No.	IMT	Category	f	Persentase (%)
1.	<17.0	Severe BB deficiency	0	0 %
2.	17.0-18. 5	Mild BB deficiency	7	35 %
3.	>18. 5-25.0	Normal	12	60 %
4.	>25.0-27.0	The advantages of light level BB	1	5 %
5.	>27	Heavy BB excess	0	0 %
Total			20	100%

- b. Physical Fitness Level Variable (Y)

Tabel 2. Description of Physical Fitness Research Results

No.	Value	Frequency	Percent	Classification
1	22 - 25	0	0	Very well
2	18 - 21	2	10 %	Good
3	14 - 17	16	80 %	Currently
4	10 - 13	2	10 %	Not enough
5	5 - 9	0	0	Very little
amount		20	100	

2. Hypothesis Test Results

- a. Relationship between Nutritional Status and Level of Physical Fitness

Tabel 3. Correlation Coefficient of Nutritional Status (X) with Physical Fitness (Y)

Correlation	r count	r square	sig	information
X1.Y	0. 502	0.252	0.000	Signifikan

## DISCUSSION

Based on the table above, it can be seen that the results of the regression calculations, obtained a value of  $\text{sig} = 0.001 > 0.05$ , then  $H_0$  is rejected and  $H_1$  is accepted, meaning that there is a significant joint correlation between nutritional status level and the determination value (R Square) = 0.252 or The joint correlation is 25.2% while 74.8% is caused by other factors. Thus, if someone has a good nutritional status, this will also be followed by a good level of physical fitness. Nutritional status refers to the condition of a person's body which is influenced by food and nutritional intake. Students with good nutritional status have adequate nutritional intake for the growth and development of their bodies.

Meanwhile, physical fitness includes a person's physical abilities, including strength, endurance, flexibility and cardiovascular. Good physical fitness can help students live a healthy and active lifestyle. Students with good nutritional status and optimal physical fitness tend to have higher energy levels, better concentration, and improvements in academic outcomes and They are also more likely to develop healthy living habits that can persist throughout their lives, reducing the risk of chronic disease , and improve their quality of life.

## **CONCLUSIONS AND RECOMMENDATIONS**

This research concludes that there is a significant relationship between students' nutritional status and their level of physical fitness. Sinjai 1 Public High School students with better nutritional status tend to have a higher level of physical fitness.

The results of this research can be used as basic guidelines. Schools must prioritize more intensive nutrition education. In the curriculum, there need to be lessons that teach students about balanced nutritional intake, the importance of healthy food, and its impact on physical fitness.

## **FURTHER STUDY**

To understand the relationship between nutritional status and physical fitness in more depth, further research can be carried out. This could include a broader study and involve a larger sample. By considering these recommendations and learning from the research results, SMA Negeri 1 Sinjai can play an important role in improving the well-being of their students, promoting healthy lifestyles, and helping students reach their best potential. both in terms of physical health and academic achievement.

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