

## THE EFFECT OF PHYSICAL FITNESS ON THE GRADE POINT AVERAGE OF STUDENTS OF PHYSICAL EDUCATION AT STKIP TAMAN SISWA BIMA

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### Abstract

This aim of this article was to determine the contribution of physical fitness to Grade Point Average (GPA). This information is important for colleges for evaluation every semester. The subjects of this research were fifty students of physical education at STKIP Taman Siswa Bima. The data was collected through an Indonesian physical fitness test and other documentation. The data analysis technique used in this research was regression analysis. The data used for regression analysis include physical fitness data and grade point average. The results showed that there was a significant effect of physical fitness on grade point average of the students of physical education with  $p = 0.000 < 0.05$ .

**Keywords:** Physical fitness, grade point average, and physical education

### Introduction

National education has the purpose of educating the nation and improving the people of Indonesia to realize a progressive, fair and prosperous society based on Pancasila, which enables its citizens to be given the opportunity to increase their dignity and self-development as full Indonesians. In improving the quality of the Indonesian people as a whole, the role of education is vital, helping produce people who have competitiveness in facing global challenges.

Universities, as the highest formal institutions, play a vital role in preparing a reliable and superior human resources and ready to face various challenges in the future. Higher education includes diploma education programs, undergraduate, master, specialist and doctor. In the world of college, students receive education in the form of unique knowledge.

STKIP Taman Siswa Bima is a university which has a study program physical education to accommodate the interests and talents of students who want to develop in sports. Study program physical education to accommodate talented students or achievements in sports. Of course all that needs to be supported all aspects. Active roles of universities such as lecturers, foundation leaders, local governments, and even the surrounding community also need to provide support. All walks of life should know the importance of superior seeds in the field of sports as the future pioneer of the nation's successors.

Exercise is an integral part of human life. Referring to the classical principle of *mens sana in corpore sano* (a healthy soul exists in a healthy body), it is time for exercise to be a part of education today. Lectures on campus that have been tended so far tend to be broad and give equal treatment to all students so that less attention is paid to differences among students in the skills, interests, and talents (Vries, Hooff, Geurts, & Kompier, 2016).

By following a lecture on campus, it is expected that physical education can help students maintain and improve their level of good fitness, and carry out fitness in everyday life. Good fitness will affect the spirit of learning and thus the Grade Point Average (GPA). Health is the main capital of a person to be able to perform everyday activities. Fitness is a habit done by someone which is related to health, including physical education (Reza, Hosseini, & Hejazi, 2016).

Keep in mind also that those with good fitness will be able to perform their job or lecture maximally without experiencing fatigue (Fábio Ceschini, Aylton Figueira Junior, Erinaldo Luiz de Andrade, Timóteo Leandro Araújo, Roberta Luksevicius Rica, Maria Luiza de Jesus Miranda, Victor Keihan Rodrigues Matsudo, 2018). Thus, optimum physical fitness can lead to a success gap especially in terms of learning activities, and GPA will be affected. Physical condition is weak cause the lack of endurance so that a barrier to be able to follow and complete the learning.

With fitness, it may be possible for students to avoid disease, and have a healthy physical and mental condition (Klyus O. A, 2014). With a healthy physical and mental condition, students of physical education can follow the lecture process optimally, so that students can get a good index of cumulative achievement.

Physical fitness is closely related to health and skills. Health-related physical fitness includes: 1) cardiovascular fitness (muscle fitness, 2) muscle strength (fitness strength), 3) body weight fitness, 4) flexibility (Govind B. Taware, Milind V. Bhuktar, 2013). Thus, a good physical fitness can improve one's skill with better results or performance index. Physical fitness is closely related to  $VO_2$  max. Because  $VO_2$ max is the fastest tempo in which one can use oxygen during exercise (Bonney, Ferguson, & Smits-engelsman, 2018), someone who has a good  $VO_2$  max so then in the use of oxygen will be maximal so that cardiorespiratory resistance becomes better and influential against one's physical good. Someone who has good physical fitness, will not easily tired or tired after doing daily activities, even if there is fatigue with a little rest can restore the body as normal condition.

Students physical fitness physical education is very important because they are experiencing a period of good growth from physical and psychology. In order for the

growth period to run optimally, then physical fitness must be maintained and enhanced so that it will support the motor and physical ability. Good utilization of leisure time can also help achieve good physical fitness. Incorrect filling of spare time will lead to things that are not beneficial to students. Of the total number of student physical education, almost all students, especially students semester V physical education not know how much influence the physical fitness of the GPA that students have.

Student study program physical education is a student who is physically and mentally start to look because of what is done in activity lectures with dominated lecture practice. Therefore they should always have a healthy condition both physically and mentally healthy mentally. Healthy conditions both physically and mentally will not happen if physical fitness is lacking. A person who has a good physical fitness will be able to do the job optimally without experiencing significant fatigue and still be able to do the other activity. So that with good physical fitness can lead a person to success level, especially in terms of lecture activities. With good physical fitness can be enabled a person will be protected from various diseases, so it can be said that a person has a healthy physical condition so as to be able to follow the lectures optimally.

Based on the above problems, it arises the desire of researchers to examine the effect of physical fitness on the grade point average students of physical education at STKIP Taman Siswa Bima. This article was to determine the contribution of physical fitness related to the Grade Point Average (GPA). This information is important for colleges to evaluate the study every semester and the physical fitness they had.

## **Methodology**

This research is a regression study. The method used is survey. The research was conducted at STKIP Taman Siswa Bima. The subjects of this research were students of physical education at STKIP Taman Siswa Bima which amounted to 50 people.

### *Research variable*

Variables in this research have two variables, namely the independent variable and the dependent variable. The independent variable is physical fitness and the dependent variable is the GPA of the students physical education.

### *Data Collection Techniques and Instruments*

#### Data collection technique

Data collection techniques using test and measurement techniques, and documentation. Physical fitness data obtained from Indonesian physical fitness test. The test is done in stages each post that has been provided. Each will perform the test, should warm up and be briefed about the tests to be implemented. Data GPA data obtained by way of documentation that is request data GPA of student in study program physical education.

#### Research Instruments

The instrument used in this research is using Indonesian physical fitness test, including Harvard step, standing stork, sit up, wall squat, zigzag, and run 1000 m (Center for Physical Quality Development: 2010). This test is chosen because it is easy to implement, does not require laboratory equipment, can be used for individuals or large groups and does not take a long time.

Data analysis technique

Data analysis in this research to test the hypothesis using regression test with the help of SPSS. To make the frequency distribution of physical fitness is done by means of quantitative descriptive refers from the Indonesian physical fitness test.

**Table 1:** Value of Indonesian physical fitness test

Value	Wall Squat	Zigzag	Standing Stork	Sit Up	Harvard Step test	Run 1000 m
5	>102 secs	<11,2 secs	>50 secs	>38	>66	s.d – 3’ 04”
4	102–76 secs	11,2 – 13,3 secs	50-41 secs	28 – 37	53 – 65	3’ 05” – 3’53”
3	75-58 secs	13,4 – 15,5 secs	40-31 secs	19 – 27	42 – 52	3’ 54” – 4’46”
2	57-30 secs	15,6 – 17,8 secs	30-20 secs	8 – 18	31 – 41	4’ 47” – 6’ 04”
1	<30 secs	>17,8 secs	<20 secs	0 – 7	0- 30	6’ 05” – dst

After the data is collected, the next step is to analyze the data so that the data can be drawn a conclusion. In this research, statistical analysis used is regression analysis using SPSS assistance to determine the effect of physical fitness on GPA student physical education.

The following table classifies the level of physical fitness based on Indonesian physical fitness test:

**Table 2:** Classification of Physical Fitness Level Based on Indonesian physical fitness test

No	Total of value	Classification
1	25-30	More High
2	19-24	High
3	13-18	Medium
4	7-12	Low
5	1-6	Very low

After the data is grouped into each category, then look for the percentage of each data. To calculate the percentage of respondents used the formula as follows:

$$P=f/N \times 100\%$$

Information:

f: the frequency being searched for percentage

N: Number of Cases (number of frequencies)

P: percentage

(Sugiyono, 2013)

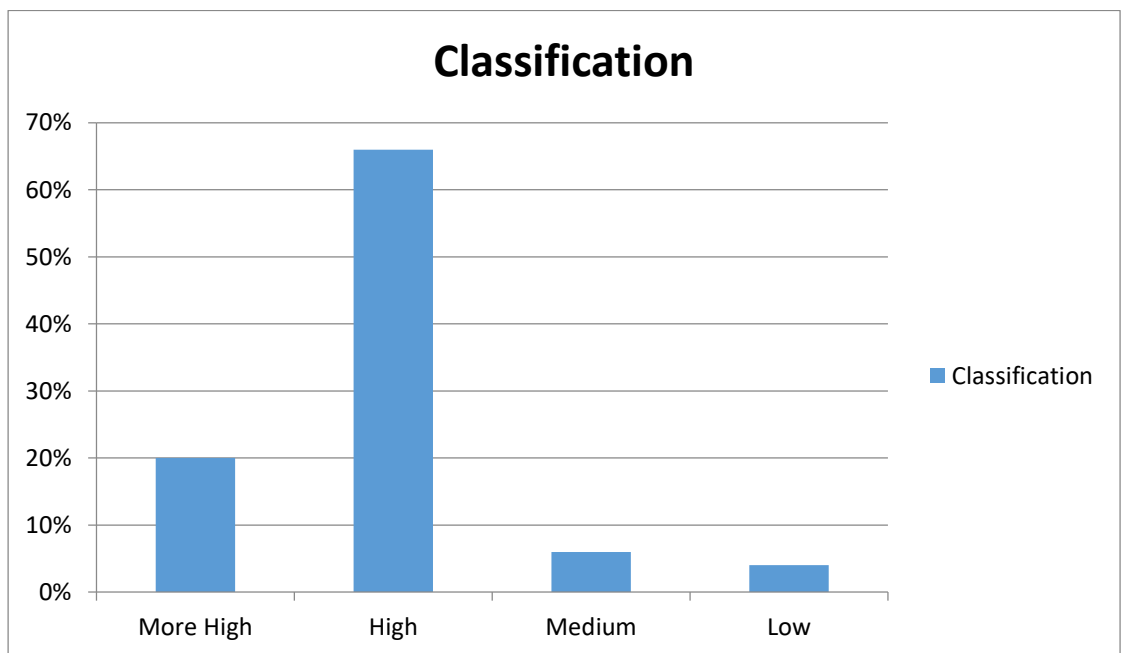
Testing the hypothesis in this study was done by regression test using SPSS. A regression test is used to see whether there is significant influence from two measurement result of a variable or from two variables studied.

Data can be said to have a significant effect if  $p < 0.05$  and  $t_{count} > t_{table}$ , 5%.

## Results

The tests performed in this study once, physical fitness tests include Harvard step, standing strork, sit ups, wall squats, zigzags and 1000 m runs, performed in open and flat fields. The following will summarize the results of the research briefly about the effect of physical fitness on the GPA students of physical education at STKIP Taman Siswa Bima.

The following will present physical fitness test data in the form of graph:



**Figure 1:** Results of the research the effect of physical fitness on the GPA

Hypothesis testing is done about the presence or absence of influence of physical fitness to GPA. Hypothesis testing is done by using regression test with the help of SPSS program.

**Table 3:** Regression Value

No	R	R Square	Adjusted R Square
1	0,760	0,578	0,589

Table 3 describes the value of the relationship (R) that is equal to 0.760 and described the percentage of the influence of independent variables on the dependent variable. And

obtained the coefficient of determination (R<sup>2</sup>) of 0.578, which implies that the influence of independent variables (physical fitness) to the dependent variable (GPA) is 57.8%.

**Table 4:** Value of the Effect of Physical Fitness to GPA

No	df	F	Sig
1	49	65,708	0,000

Table 4 explains whether there is a significant effect of physical fitness to GPA. Table 4 shows F count = 65,708 with significance level 0.000 < 0.05; hence, physical fitness has a significant effect on GPA.

## **Discussion**

Of the four classification categories of more high, high, medium, and low, the students are able to perform physical fitness tests with some tests used in the study of Harvard step, standing stroke, sit ups, wall squats, zigzag, and running 1000 m. This has been demonstrated by the value of the per-category presentation used. This makes it easier for researchers to distribute the test groups used in physical fitness tests, to seek influence from the student's GPA. To facilitate the search for academic and physical fitness influence in this research, the sample size was 50 people.

The test used in this research is a standard Indonesian physical fitness test. Physical fitness influences GPA with a more high presentation of 20% (10 people). Students who have physical fitness have an increase GPA with a high presentation of 66% (33 people). Students who have physical fitness to increase GPA of students with a medium presentation of 6% (3 people). Students who have physical fitness to increase GPA with presentation low at 4% (4 people).

The results of the tests of the students above represent a previously disclosed problem, which is looking for the effects of substance and physical fitness problems on the GPA of students of physical education at STKIP Taman Siswa Bima. Thus, the overall calculation of physical fitness research and GPA of students of physical education at STKIP Taman Siswa Bima who has physical fitness with a sample of 50 people. Thus, this physical fitness test is one important indicator to know the students' skills in terms of academic and physical fitness of the student.

## **Conclusion**

There is a significant effect of physical fitness on the GPA of students of physical education at STKIP Taman Siswa Bima.

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