

Physical Fitness Study Screening of Physical Education Students for Enhancing Physical Capabilities at Universitas Tunas Pembangunan Surakarta

Satrio Sakti Rumpoko¹, Vera Septi Sistiasih², Sunjoyo¹, Muchhamad Sholeh^{1*}, Titin Kuntum Mandalawati³, Anwar Rasyid¹

1, Universitas Tunas Pembangunan Surakarta

2, Universitas Muhammadiyah Surakarta

3, Universitas PGRI Madiun

*e-mail: sholeh.utp@gmail.com

ABSTRACT

Physical fitness is one of the important physical components and must be owned by students of Tunas Pembangunan University to support lecture activities related to physical activity. The purpose of this study was to determine the physical fitness of students of Tunas Pembangunan University Surakarta. This research uses quantitative descriptive research methods, is research that has the intention of getting an overview of a situation that exists in the present and ongoing and centered on actual problems. Data collection using MFT (Multistage Fitness Test) running test. The population of this study uses all students of the UTP Physical Education Study Program class of 2023 totaling 112 students consisting of 98 boys and 14 girls. The results showed that out of 112 physical education students, there were 5 people or 4% of the physical fitness level of the less than once category, 14 people or 12.5%. Physical fitness level of the category is less, 19 people or 17% of the physical fitness level is in the medium category, 58 people or 51% of the physical fitness level is in the good category, and there are 16 people or 14% of physical education students who have a physical fitness level in the very good category. Based on the results of this study, it was concluded that the level of basic physical fitness (cardiorespiratory endurance) of physical education students was good. There are 74 people or 66% of students out of a total of 112 students all in the good and very good categories.

Keywords: *fitness, physical, physical education, utp*

1. INTRODUCTION

The Physical Education program at UTP is one of the academic programs within the Faculty of Teacher Training and Education at UTP. The enthusiasm of prospective students has been evident since the beginning, as the successful recruitment of students in the first intake totaled 112, meeting the criteria for passing the selection process for new students in 2023 at UTP. The selection process for new students in the Physical Education program involves three stages: administration, physical tests, and interviews. The evaluation of the physical tests revealed suboptimal results due to the need to accommodate the required student quota. Consequently, the task force team for the Physical Education program opted for simpler physical tests, falling short of measuring the actual basic physical fitness.

In general, courses in the physical education program are practical in nature. Physical fitness is crucial for students in physical education to effectively participate in various academic and campus activities and achieve positive outcomes. While many students in the Physical Education program come from athletic backgrounds, not all possess a fit and healthy physique. In

the field of sports, students in the Physical Education program are already familiar with sports and their benefits.

Physical activities in sports involve repetitive movements with varying intensities and durations. Each movement requires good physical fitness. Physical activity is vital to support sports achievements, and a student's level of physical fitness plays a significant role in supporting the learning process in physical education, especially in practical courses. To achieve good physical fitness or even be classified as excellent, students are required to engage in regular and programmed physical exercises. Physical training is closely related to maintaining the necessary physical condition for those who aim to preserve and enhance physical fitness. Good physical fitness can be enhanced by considering factors such as body endurance, strength, speed, and flexibility. Therefore, engaging in physical activities is essential for improving and developing physical fitness. Physical fitness, often referred to as physiological fitness, is an important aspect for everyone.

Furthermore, students in the Physical Education program are expected to participate in Sports Week, involving various sports such as volleyball, badminton, basketball, martial arts, and more. The Physical Education program always encourages its students or athletes to compete or act as judges in competitions. The term "physical fitness" is commonly used in society in daily life, with several terms related to physical well-being found in various studies. Physical fitness is an individual's ability to meet the demands of daily life effectively, without significant fatigue, and still have energy for leisure activities and unforeseen emergencies ([Hadi, 2007: 48](#)). Physical fitness is a crucial aspect for everyone.

Moreover, students' cardiovascular endurance levels in the Physical Education program have not been assessed and measured as part of an evaluation. Therefore, this research aims to determine the basic physical fitness level of students in the Physical Education program from the 2023 intake.

2. METHODOLOGY

This research is descriptive, utilizing a survey method with testing and measurement techniques for data collection. The instrument used to measure Vo₂max levels is the Multi-Stage Fitness Test (MFT). The data analysis technique employed in this research is quantitative descriptive analysis presented in percentage form.

The data obtained in this research, using the MFT running test instrument to gather Vo₂max data, is then inputted into the MFT calculation table. To determine the cardiovascular endurance level, Vo₂max data for Physical Education students are obtained through the Multi-Stage Fitness Test (MFT). The calculation of Vo₂max data is then conducted using guidelines from the Performance Evaluation Test by Brianmac "Sport Coach," which is one of the Multi-Stage Fitness Test Calculators. The data from the running test is inputted into the calculator with specific criteria: the Level indicates the result of the running level obtained, and the Shuttle represents the return obtained at each level. After entering the data into the calculator, the total Vo₂max value for the test participant will be displayed. For the Vo₂max score analysis, reference

is made to the normative Vo2max data table. The obtained data is analyzed using percentage analysis. Once the basic physical fitness level (Vo2max) for each test participant is known, the percentage for each category can be determined using the percentage formula according to [Anas Sudijono \(2008:43\)](#).

$$P = \frac{F}{N} \times 100 \%$$

(Source : Anas Sudijono , 2008: 43)

View :

P : The percentage sought

F : Frequency

N : Number of Individuals

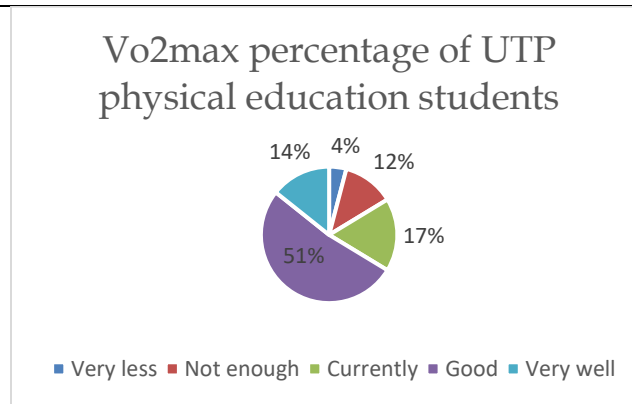
3. RESULT AND DISCUSSION

This research outcome constitutes a field study conducted on the level of physical fitness (cardiorespiratory endurance) through the measurement of VO2max capacity among students majoring in Physical Education in 2023. The research data was obtained through cardiorespiratory endurance (VO2max) tests using the Multi-Stage Fitness Test. The research data description can be outlined as follows:

Table 1. Frequency and percentage of student Vo2max

Kategori	Frequency	Persentase
Very Less	5	4%
Not Enough	14	12%
Currently	17	17%
Good	58	51%
Very Well	16	14%

The data above reveals that out of 112 physical education students, 5 individuals or 4% fall into the category of very poor physical fitness, 14 individuals or 12% fall into the category of poor physical fitness, 19 individuals or 17% fall into the category of moderate physical fitness, 58 individuals or 51% fall into the category of good physical fitness, and there are 16 individuals or 14% of physical education students who possess excellent physical fitness. Based on the findings of this research, it can be concluded that the basic physical fitness level (cardiorespiratory endurance) of physical education students is already good. There are 74 individuals or 66% of students out of the total 112 who fall into the good and excellent categories.



Picture 1. Persentase Vo2max

Results and Discussion in this research conclude that the level of physical fitness, specifically cardiorespiratory endurance, among physical education students varies significantly. There are four categories that can be summarized: very poor, poor, moderate, and good. In general, the level of physical fitness regarding cardiorespiratory endurance among the physical education students of the 2023 cohort amounts to 112 students, comprising 98 males and 14 females. The research results indicate that out of the 112 physical education students, 5 individuals or 4% fall into the very poor fitness category, 14 individuals or 12% fall into the poor fitness category, 19 individuals or 17% fall into the moderate fitness category, 58 individuals or 51% fall into the good fitness category, and there are 16 individuals or 14% of physical education students with excellent physical fitness.

Based on this research, it is concluded that the basic level of physical fitness (cardiorespiratory endurance) among physical education students is good. There are 74 individuals or 66% of the total 112 students who are classified as good or excellent in terms of physical fitness. The level of physical fitness among the physical education students of the UTP 2023 cohort serves as an initial overview of the physical fitness possessed by the students. With these results, it is hoped that they will provide valuable input for the Physical Education Program in developing future work programs, particularly in the enhancement of physical fitness programs. Additionally, the findings from this research serve as a benchmark and evaluation for the selection phase of new students, identifying strategies to attract new students with superior physical fitness capabilities.

4. CONCLUSION

Based on the research findings, it is revealed that out of 112 physical education students, 5 individuals or 4% fall into the category of very poor physical fitness, 14 individuals or 12% fall into the category of poor physical fitness, 19 individuals or 17% fall into the category of moderate physical fitness, 58 individuals or 51% fall into the category of good physical fitness, and there are 16 individuals or 14% of physical education students who have an excellent level of physical fitness. Based on these research results, it can be concluded that the basic physical fitness level (cardiorespiratory endurance) of physical education students is already good. Seventy-four individuals or 66% of the total 112 students are in the good and excellent categories.

A suggestion that can be given is that students should truly understand their individual physical fitness conditions. There must be a willingness to improve physical fitness, whether through individual efforts or engaging in activities related to their chosen sports specialization.

Additionally, students should be aware that good physical fitness is a crucial factor for smooth progress in the physical education program and to achieve optimal results during the course of their studies.

REFERENCES

- Arikunto, S. 2010. *Prosedura Penelitian Suatu Pendekatan Praktik*. Jakarta: Rineka Cipta.
- Beashel, P. and Taylor, J. (1996) *Advanced Studies in Physical Education and Sport*. UK: Thomas Nelson and Sons Ltd.
- Bizley, K. et al. (2010) *BTEC First Sport Level 2*, London, Harper Collins Publishers Limited, p. 303 Figure 3
- Estu M. *Kebugaran Fisik*. Diunduh pada <http://www.scribd.com/doc/79740669/kebugaranfisik>. Diakses pada tanggal 7 Mei 2018.
- Goosey-Tolfrey, V. L. and Tolfrey, K. (2008) The multi-stage fitness test as a predictor of endurance fitness in wheelchair athletes. *Journal of sports sciences*, 26 (5), p. 511-517
- Kilding, A.E. et al. (2006) Measuring and predicting maximal aerobic power in international-level intermittent sport athletes. *The Journal of Sports Medicine and Physical Fitness*, 46 (3), p. 366-72
- Mackenzie, B. (1999). *Multi-Stage Fitness Test*. Available from: <https://www.brianmac.co.uk/beep.htm> [Accessed 18/5/2018]
- OKG FKM UI. (2017) *Komponen Kebugaran Fisik*. Diunduh pada <http://akg.fkm.ui.ac.id/komponen-kebugaran-fisik/>. Diakses pada tanggal 7 Mei 2018.
- Permata, Ayu. 2015. "Pelatihan Interval Intensitas Tinggi Lebih Meningkatkan Kebugaran Fisik Dari pada Senam Aerobik High Impact Pada Mahasiswa Program Studi D-III Fisioterapi Universitas Abdurrab". Tesis. Pascasarjana Universitas Udayana Denpasar.
- Sharkley, 2011. *Kebugaran dan Kesehatan*. Rajawali Sport, Devisi Buku Olahraga & Kesehatan. PT. Raja Grafindo Persada.
- Tips Bugar: Mengenal 5 Komponen Kebugaran Fisik. Diunduh dari: <http://www.amazine.co/3374/tips-bugar> mengenal-5-komponen-kebugaran fisik/. Diakses pada tanggal 7 Mei 2018.