



## Physical Condition Profile of Volleyball Athletes of STKIP PGRI Pacitan

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### Abstract

**Study purpose.** The aim of the study was to determine the physical condition profile of STKIP PGRI Pacitan Bola voli athletes who competed in the East Java POMPROV championship in 2023. The athlete's physical condition used as a benchmark to determine whether the athlete was ready before competing.

**Materials and methods.** The study used a survey description method with test and measurement techniques. The research population used was all STKIP PGRI Pacitan indoor volleyball athletes who competed in the East Java POMPROV Championship in 2023. The measuring instruments: sit-up test, sit and reach test, vertical jump test, 20 m run test, and multi-stage fitness test. The data analysis technique used a Likert scale.

**Result.** The results of data analysis in this study as a whole show that 0% of athletes had a physical profile in the very good category, 85.72% (12 athletes) had a physical profile in the good category, 7.14% (1 athlete) had a physical profile in the moderate category, 7.14% (1 athlete) had a physical profile in the less category, and 0% had a physical profile in the very poor category.

**Conclusions.** The conclusion of the study is that the physical condition of STKIP PGRI Pacitan volleyball athletes who would take part in the POMPROV Championship in 2023 East Java as a whole was in a good category so that athletes were declared physically ready to take part in the championship.

**Kata Kunci:** Physical, Athletes, Volleyball

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### Introduction

Volleyball is one of the big ball sports that requires physical, technical, tactical, and mental conditions in its application (Anhar & Mulyadi, 2021). According to (Suganda & Suharjana, 2013) Volleyball is a sport played by two teams competing using hands and separated by a net, then each team tries to drop the ball into the opponent's field area by hitting the ball over the net, and each team has six core players and several reserve players. Volleyball is a sport that can be played by children or adults, women or men (Hakim & Umar, 2019). Through the game of volleyball, competence can be well developed through elements of mental and emotional competence (Suhairi & Dewi, 2021). In addition, personality can also develop well, especially the ability to control individuals, discipline, cooperation, and a sense of

responsibility for what is done (Burhaein, 2017).

Volleyball is competed in the East Java Provincial Student Sports Week (POMPROV) in 2023, volleyball is competed because it is certain that most universities in East Java have the club. The great interest in volleyball gives a different spirit to students. Students who take part in volleyball matches on average have more ability than others. Volleyball itself physical preparation is the main thing besides technique and tactics. Physicality greatly affects the performance of each athlete (Aziz, Okilanda, Permadi, et al., 2023). Maximum physical condition is certainly expected to have an impact when competing. Physical condition preparation is carried out before the tournament is held through a series of exercises that are certainly programmed (Chang, Pan, & Tsai, 2011). *Sekolah Tinggi Keguruan dan Ilmu Pendidikan Pendidikan Guru Republik Indonesia* or called STKIP PGRI Pacitan is one of the universities in East Java that sends its athletes to compete. Athletes are selected from a strict selection conducted by the coach, this is to ensure the ability and readiness of an athlete to compete in the championship to be followed. Volleyball athletes who represent STKIP PGRI Pacitan in the POMPROV Championship in 2023 East Java are the result of selection from volleyball Student Activity Unit students. The preparation of the coaching team is also very serious in preparing well-planned training programming. One focus that is prioritized is the physical development of volleyball athletes with proper physical exercise programming. Therefore, it is necessary to conduct research on the physical condition profile of STKIP PGRI Pacitan volleyball athletes who will take part in the POMPROV Championship in 2023 East Java.

In order to get maximum physical fitness, physical exercise must be done with frequency, intensity, time, and certain types of exercise (Sutresna Maliki, 2017). Coach competence can affect achievement, the coach is a professional whose job is to help the team improve the team's performance (Martínez-López, Suárez-Manzano, De La Torre-Cruz, & Ruiz-Ariza, 2019). The highest achievement of a coach is an important factor, the success rate of the coach is if he is able to deliver his team to improve their abilities and achievements as high as possible (Barker-Ruchti & Purdy, 2021). Physical training has an important role as the basis for technical training, tactical training, and mental training (Fu et al., 2022) elements contained in physical conditions: endurance, strength, speed, explosive power, flexibility, agility, coordination, and balance (Permadi & Fernando, 2021). Physical condition in volleyball is the basic foundation for athletes to show their performance in matches (Hamdan, 2020). Volleyball athletes who have a high physical condition will be able to overcome and be ready for the match, have good thinking power in high concentration in the match, so that every volleyball athlete who has a prime physique can bring out his maximum ability both in terms of technique, tactics or mentality (Whinata Kardiyanto & Setiawan, 2022). Physical condition is a necessity that is needed. Physical condition is a necessary requirement in improving the performance of an athlete, it can even be considered a basic need that cannot be delayed or negotiated.

The problem that occurs at this time is the results of observations on the physical condition of STKIP PGRI Pacitan volleyball athletes who have never conducted a physical condition test. Based on the results of observations through interviews with coaches, the physical condition of athletes is still not monitored. Endurance is one of the factors that influence motivation so it makes it easier for the coach to provide training programs. One of the physical conditions that is basically the main capital of athletes (Aziz, Okilanda, Rozi, Suganda, & Suryadi, 2023). Therefore, efforts that can be made are to conduct tests and measurements of physical conditions in volleyball athletes. This study aims to determine the physical condition of STKIP PGRI Pacitan volleyball athletes.

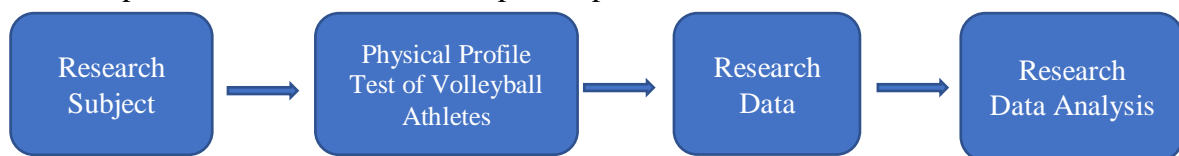
## Materials and methods

### Study Participants

The sampling technique used was total sampling (Arikunto, 2006), in which all STKIP PGRI Pacitan volleyball athletes who would participate in the POMPROV Championship in 2023 East Java consisted of 14 athletes.

### Study Organization

This research was descriptive research (Nanda Hanief, Yulingga; Wasis, 2017), one of the characteristics of this research was that there was no hypothesis, and the data collected was percentaged. The method used was the survey method with test and measurement techniques (Sugiyono, 2017). The data in this study were obtained from tests and measurements taken by the measurer on the subject. The research subjects were STKIP PGRI Pacitan volleyball athletes. In this study, the population was all STKIP PGRI Pacitan volleyball athletes who would take part in the POMPROV Championship in 2023 East Java.



**Figure 1. Chart Flow of Physical Research Design of Volleyball Athletes**

**Source: Internal peneliti**

The research method used was a survey method with test and measurement techniques (Nurhasan, 2008). The tests were used to determine the physical profile of athletes, as for the type of tests used were Sit-Up to measure endurance and abdominal muscle strength, Sit and Reach Test to measure flexibility, Multi Stage to measure endurance, 20 meter run to measure speed, and Vertical Jump to measure leg muscle power.

### Statistical analysis.

The data analysis technique used in this study was descriptive techniques with percentages as in the table below.

**Table 1. Categorization of Physical Condition of Volleyball Athletes**

No	Interval	Category
1	$\geq 61.44$	Very good
2	55.72 s/d 61.39	Good
3	44.33 s/d 55.67	Moderate
4	38.61 s/d 44.28	Poor
5	$\leq 38.56$	Very poor

Source: (Sugiyono, 2016)

## Results

Description of the research data regarding the physical profile of STKIP PGRI Pacitan volleyball athletes who will take part in the POMPROV Championship in 2023 East Java obtained data as below:

Table 2: Research Data on the physical profile of volleyball athletes Volleyball STKIP PGRI

No	Interval	Frequency	Percentage	Category
1	$\geq 61.44$	0	0.00%	Very good
2	55.72 s/d 61.39	12	85.72%	Good
3	44.33 s/d 55.67	1	7.14%	Moderate
4	38.61 s/d 44.28	1	7.14%	Poor
5	$\leq 38.56$	0	0.00%	Very poor
		14	100.00%	

Furthermore, to be easier to understand, an overview is presented in the form of a graph of the physical profile of STKIP PGRI Pacitan volleyball athletes who will take part in the POMPROV Championship in 2023 East Java.

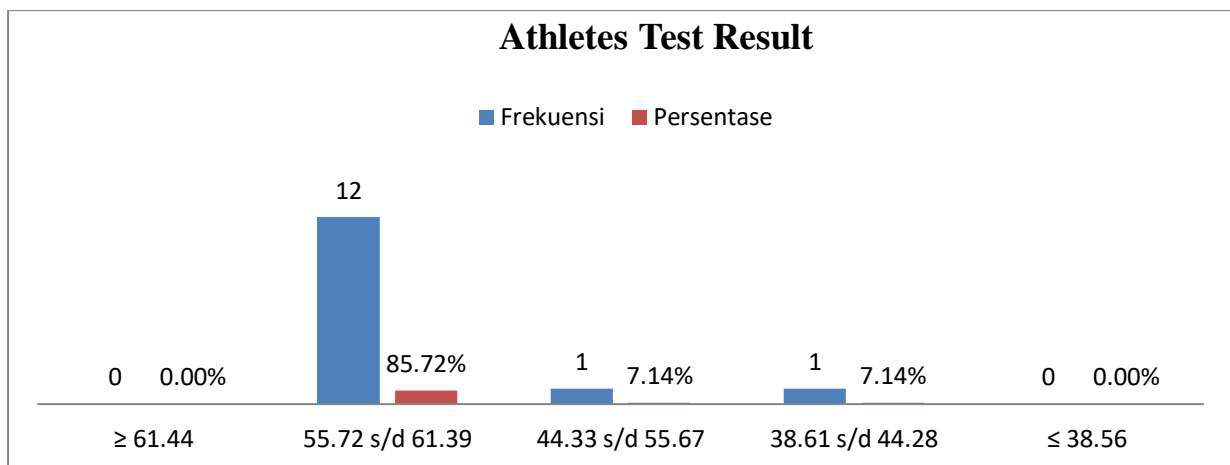


Figure 2: Research Graph of the physical profile of STKIP PGRI volleyball athletes

Data on the physical profile of STKIP PGRI Pacitan volleyball athletes who will take part in the POMPROV Championship in 2023 East Java as a whole shows that 0% had a physical profile in the very good category, 85.72% (12 athletes) had a physical profile in the good category, 7.14% (1 athlete) had a physical profile in the moderate category, 7.14% (1 athlete) had a physical profile in the less category, and 0% had a physical profile in the very poor category. The data above shows that the physical data of STKIP PGRI Pacitan volleyball athletes who will take part in the POMPROV Championship in 2023 East Java is overall in the good category.

### Discussion

The physical condition of an athlete is indeed very prioritized to continue in optimal condition, especially during training and when going to compete. As a result of research that has been conducted by concluding that knowing the athlete's physical condition before competing can be used as a benchmark to determine whether an athlete, both individual and team, is ready when going to a championship or match. Furthermore, the results of the study (Ridwan, 2020) thus, the players are expected to be more motivated to do physical exercise as needed. (Whinata Kardiyanto & Setiawan, 2022) concluded that to have an optimal upper serve, athletes must pay attention to the physical condition factors of shoulder muscle strength and arm muscle explosiveness, because these two aspects contribute significantly to upper serve performance. With maximum physical condition, it is expected that the athlete's performance can improve even better. With the physical condition of volleyball athletes known as found in

this study, it will certainly be a benchmark for coaches to be able to maintain and improve the performance of STKIP PGRI Pacitan volleyball athletes. Various training efforts through training programs continue to be made more complex to provide maximum training effects. The physical training of STKIP PGRI Pacitan volleyball athletes who will take part in the POMPROV Championship in 2023 East Java is in a good category, this is because the coach divides the training with systematic and planned training programming.

### Conclusions

Based on the analysis results, research testing, and discussions, it is concluded: the physical condition of STKIP PGRI Pacitan volleyball athletes who will take part in the POMPROV Championship in 2023 East Java is in the good category. The results of this study will be beneficial for coaches to control the condition of athletes in their performance in order to achieve maximum performance. The limitations of this study are only focused on STKIP PGRI Pacitan volleyball athletes who will take part in the POMPROV Championship in 2023 East Java. Further research is needed to develop research with more diverse research subjects not only in one sport.

### Acknowledgment

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### Conflict of interest

All authors declare that there is no conflict of interest whatsoever in this research.

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