

Analysis Level Physical Condition of Female Volleyball Athletes in Blitar City

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Abstract

This study aimed to analyze the physical condition of female volleyball athletes in Blitar City. A total of 50 athletes from various clubs and teams were assessed using a battery of physical fitness tests, including BMI, Strength, Endurance, Explosive power and Flexibility. The subjects of this research were 12 female athletes and received the same training program. Physical condition test for volleyball athletes based on BMI add up to 271.5 with an normal of 22.6 and ordinary category. Strength gets 551 comes about and an normal of 45.9 with the less category. Endurance is 380.6 with an normal of 31.7 and sufficient category. Explosive power totaled 589 with an normal of 49.1 within the adequate category. Flexibility totaled 493.4 with an normal of 41.1 and the category sufficient. BMI comes about get comes about with a rate of 58.3% within the typical category. Strength percentage is 41.6% within the less category. Continuance rate is 83.3% within the sufficient category. Explosive power comes about with a rate of 75% within the sufficient category. Flexibility with a rate of 66.6% within the sufficient category. Generally, the competitors appeared a moo level of physical wellness, with solid execution within the BMI, strength, flexibility, explosive power and endurance tests. In any case, there were varieties in execution levels among the competitors, demonstrating the require for individualized preparing programs.

Keywords: *Analysis, Physical Condition, Female volleyball Athletes,*

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INTRODUCTION

Analysis the physical condition of volleyball athletes is essential to identify strengths and areas for improvement in training. Conditions influenced of physical fatigue the players can be conditioned as the best option for situational matches (Dambroz et al., 2022). This includes several aspects, such as strength, speed, flexibility, endurance, and coordination to be a strong and comprehensive background for the coaching team to design an appropriate training program. Based on the provisions of instruments that are suitable for Indonesia's geographical conditions, test items and parameters of measuring instruments that are appropriate in improving performance are determined (Pamungkas et al., 2022). This factor aims to achieve the highest physical condition, because in every sport physical condition is the most basic aspect (Rofik et al., 2021).

Physical fitness and the specific skills associated with corresponding team sport can improve play (Hammami & Bouhlel, 2017). To maximize the athlete's potential and ensure from overall best physical condition to perform in competition. The ability of an athlete to work effectively against hypo-kinetic conditions, and deal with emergency situations (Buttar et al., 2019). Physical measurement is the first step in evaluating athletes. One of the physical must-

haves is cardiovascular endurance (Hamidah et al., 2023). Physical in general such as aerobic endurance is a general condition related to the ability of the heart and lungs to perform physical activity over a long period of time (Arridho et al., 2021).

This test instrument includes height, weight and body proportion measurements to assess the athlete's body mass distribution. Suboptimal body composition can reduce the athlete's physique when there is a decline in condition during the match (Latifah et al., 2019). Explosive strength tests such as vertical jump or squat jump to assess leg strength and explosive power. In terms of speed and agility in athletes and then the effect on strength tests (Bayrakdar et al., 2020). Sit and reach test to look at lower body flexibility. Flexibility focuses on mobility, flexibility, speed, joint movement, muscle elasticity, coordination for progress and trajectory, and tendon and ligament areas (Gemael & Kurniawan, 2020). Shuttle run test or other speed and agility tests. Athletes need agility as an indicator of performing basic techniques in the game (Bismar & Fadillah, 2020). VO2 max test to measure cardiorespiratory capacity or endurance to achieve maximum results in the event (Yusuf et al., 2023). Coordination and stability of the lower limbs and core in all forms of ball control in different situations, including hitting, passing, and serving (Izzo et al., 2015).

The purpose of all these tests helps in understanding the athlete's strengths and weaknesses. An athlete's muscle contraction is mainly determined by physical condition factors that can be improved through the training process (Lestari, 2019). The data from these tests are used as material for coach to design a focused and appropriate training program to improve aspects that need to be improved and maintain existing strengths. An extensive continuous training program will improve physical fitness in athletes (Alonso-Fernández et al., 2017). Moreover, it also helps in preventing injuries and optimizing athlete performance. With research constantly evolving, the understanding of the ideal physical condition for volleyball athletes is also constantly changing and updating.

METHOD

The research analyzes the physical condition of female volleyball athletes in Blitar City, using methods to obtain relevant and accurate data. The population in this study were 12 Blitar City volleyball players. Field observation (observation) involves direct observation of athletes when they practice or compete. This can provide information about technique, strength, speed, and other physical aspects that can be observed visually (Pamungkas et al., 2019)

Physical condition tests use standards that have been recognized in the scientific literature to measure physical aspects consisting of BMI, strength, endurance, explosive power

and flexibility tests (Sepdanius et al., 2019). Analysis uses statistical software to analyze data collected from various physical tests or measurements. This can help in identifying trends, strengths and weaknesses of athletes in more detail.

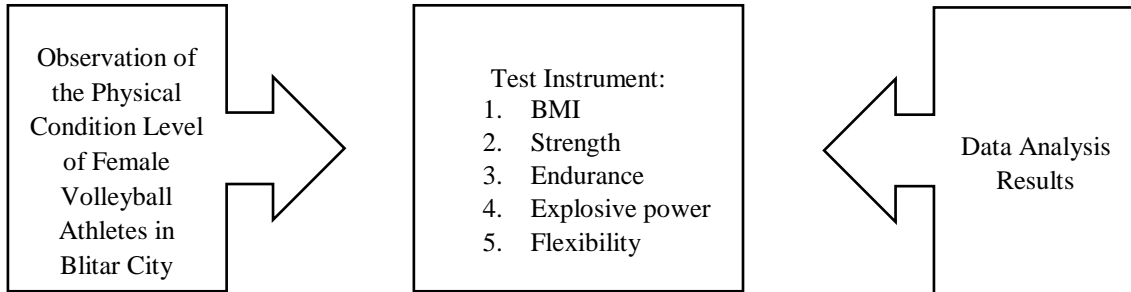


Figure 1. Flowchart Physical Condition Level of Female Volleyball Athletes in Blitar City

Data processing techniques are used to measure the level of physical condition female volleyball athletes in Blitar City. After obtaining data from field data collection, we calculate the mean (average) value using the formula (Hadi, 2015). Calculating the percentage used the formula:

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

The data from the test results of the physical condition level of Blitar City female volleyball athletes as written above obtained the results of research data on the level of physical condition according to the assessment instrument used. The following is a table of data on the results of tests on the level of physical condition of female volleyball athletes in Blitar City:

RESULTS

Table 1. Test Results of Physical Condition Levels of Female Volleyball Athletes in Blitar City

	Physical Condition Test	Total	Average	Category
1	BMI	271,5	22,6	Normal
2	Strength	551	45,9	Less
3	Endurance	380,6	31,7	Enough
4	Explosive power	589	49,1	Enough
5	Flexibility	493,4	41,1	Enough

Table 1 results of the physical condition test for volleyball athletes based on BMI total 271.5 with an average of 22.6 and normal category. Strength gets 551 results and an average

of 45.9 with the less category. Endurance is 380.6 with an average of 31.7 and enough category. Explosive power totaled 589 with an average of 49.1 in the sufficient category. Flexibility totaled 493.4 with an average of 41.1 and the category enough.

Table 2. Percentage of Test Results of Physical Condition Levels of Female Volleyball Athletes in Blitar City

	Physical Condition Test	Percentage	Category
1	BMI	58,3 %	Normal
2	Strength	41,6 %	Less
3	Endurance	83,3 %	Enough
4	Explosive power	75 %	Enough
5	Flexibility	66,6 %	Enough

BMI results get results with a percentage of 58.3% in the normal category. Strength percentage is 41.6% in the less category. Endurance percentage is 83.3% in the enough category. Explosive power results with a percentage of 75% in the enough category. Flexibility with a percentage of 66.6% in the enough category.

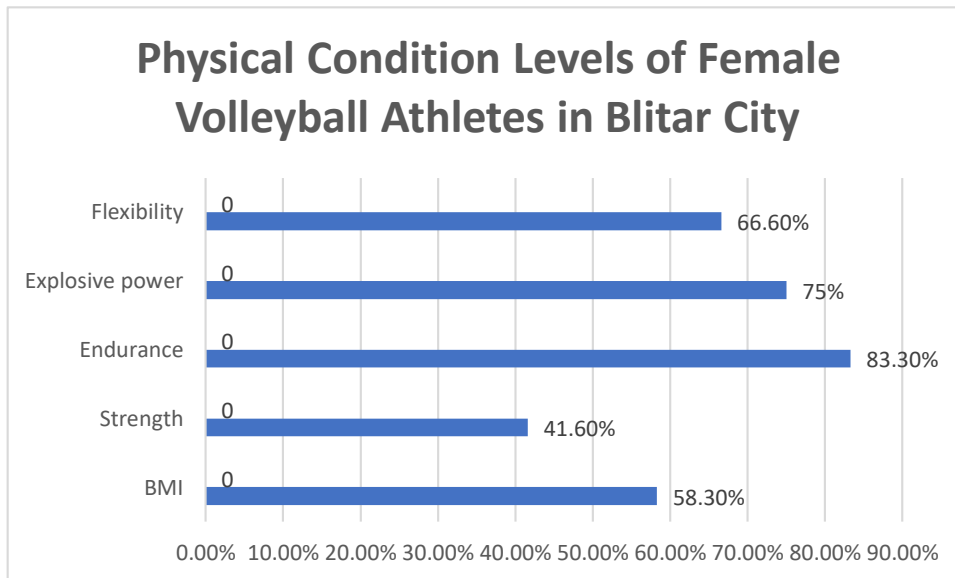


Figure 1. Percentage Diagram of Physical Condition Test Results

DISCUSSION

Analyze the general standard results for female volleyball athletes and also compare between athletes on team. Paying attention to increasing the training load is one the determinants of training changes that will be achieved in accordance with standard training

objectives (Mulyadi & Putra, 2020). From here, it can make recommendations to improve the physical condition of athletes, such as through more focused training programs or adjustments to diet and rest. General and dominant basic motion training patterns while fostering courage, willingness and fun in training (Wulandari & Jariono, 2022).

Training programs can be tailored to optimize the physical condition of each athlete and prepare them to perform optimally in matches. Appropriate training can help improve the aerobic and anaerobic capacity of players, which in turn can improve the physical condition of athletes (Pamungkas et al., 2023). Treatment of training with fixed rest and control will increase the physical condition of athletes (Arjuna, 2020). Training with a game model improves physical condition at a significant stage of athlete psychology (Olthof et al., 2018).

Physical conditions can be improved in various ways, by determining whether there is a difference given a variety of exercises performed before and after the training program (Orhan et al., 2021). A systematic training process, which is carried out repeatedly and which increases the amount of training load every day (Anwar, 2013). one factor is height and weight, as well as body position, but it does not rule out the possibility that there are also several exercises (Kusuma et al., 2023).

CONCLUSION

The analysis of physical condition of female volleyball athletes in Blitar City revealed some important findings. Overall, the athletes showed a low level of physical fitness, with strong performance in the BMI, strength, flexibility, explosive power and endurance tests. However, there were variations in performance levels among the athletes, indicating the need for individualized training programs. In addition, the study identified areas for improvement, such as strength training, which could further enhance the athletes' performance. These findings underscore the importance of a customized training program to optimize the physical condition of Blitar City female volleyball athletes.

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