

Profile of the physical condition of the determinant of the serve and skills on the court tennis service

Muhammad ali¹, Selamat Supriono², Turiyem³, Syarifah⁴.

¹Program Studi Pendidikan Jasmani /Fakultas Keguruan dan Ilmu Pendidikan, Universitas Jambi, Jl. Jambi – Muara Bulian No. 15, Mendalo Darat, Kabupaten Muaro Jambi, Jambi, 36361, Indonesia

²Sekolah Dasar Negeri 22 Pontianak Barat Gg. Selamat 3 No. 46, Sungai Jawi Dalam, Kalimantan Barat, 78244, Indonesia

³Sekolah Dasar Negeri 03 Belungai Dalam, Dusun Belungai, Belungai Dalam, Kalimantan Barat, 78572, Indonesia

⁴Sekolah Dasar Negeri 64 Sungai Raya, Jl. Aparatur Negara Komp. Korpri, Kalimantan Barat, 78391, Indonesia

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Abstract

The purpose of this study was to find out the determinant physical condition and service skills of court tennis in tennis players of the city's achievement coaching club Jambi. The subjects of this study were 15 tennis players of the city's achievement coaching club Jambi. Test instruments Push-Up Test (arm muscle strength), Sit and Reach (flexibility), Tennis ball throwing test (Eye and Hand Coordination), and Service Test (Service Skills). The results showed that the results of arm muscle strength owned by players coaching the achievements of the city of Jambi's tennis court most of the 14 players gained a good category once with a percentage of 93%. The togok flexibility test that players coaching the achievements of the city of Jambi city tennis mostly 9 players gained a very good category with a percentage of 60%. The eye and hand coordination tests that Jambi city court tennis coaching players have most of the 12 players gained a good category with a percentage of 80%.0%. And the court tennis service that the Jambi city court tennis coaching players have mostly 10 players gained less category with a percentage of 67%.

Keywords: Physical condition, Serve skills, Tennis.

INTRODUCTION

Sports is something important in life, because sports play an important role for now and in the future and is one of the needs of life that must be met. In today's modern era humans cannot be separated from activities called sports, both as a necessity of life and as a lifestyle in order to keep the body fit and healthy even as an achiever.

To achieve maximum achievement in the game of tennis requires physical condition factors, namely strength, endurance, speed, explosiveness, flexibility, agility, coordination, balance, accuracy and

reaction The above physical conditions are basic needs that must be owned and mastered perfectly by athletes to perform all punching techniques in the sport of tennis. Physical condition is a basic ability that every athlete must have. In physical condition there are several components. According to (Putra et al., 2017) Some basic biomotoric components include: (1) strength, (2) endurance, (3) speed, (4) flexibility, and (5) coordination. This is the capital for the improvement of the ability to perform tennis tennis techniques.

Another supporting element of strength is a very important component to improve a person's overall physical condition. Strength in this case is the ability of the arm muscles to perform interesting movements and embrace the opponent so as not to escape from mastery. In line with that according to (Syakad Al Fakhi., 2019), Arm muscle strength is intended as arm muscle resistance used to support weights as measured by push-up tests with maximum effort. According to (Widiastuti, 2015), Skill is a movement that follows a particular pattern or shape that requires coordination and control of part or all of the body that can be done through the learning process, someone who is able to perform skill movements well is said to be skilled.

According to (Irawan, 2014), what is meant by flexibility is as one of the components of physical freshness, is the ability to move the body or parts as widely as possible without joint tension and muscle injury. According to (Kusworo, 2012), a person's flexibility is affected by: type of joints, length of muscle rest, length of ligament rest and joint capsule, body shape, muscle temperature, sex, age, skin endurance, and bone shape. In the sport of tennis the components that determine the accuracy of the serve include flexibility (Hidayat & Jariono, 2021). According to (Kurdi & Qomarrullah, 2020), coordination is the ability to perform various movements at the difficulty level quickly, precisely and efficiently. This means that athletes who have good coordination skills are not only able to perform their movement skills well but are also able to cope with exercise quickly. Coordination and tennis according to (Irfan Arifianto & Raibowo,

2020). Of the biomotor components of the physical condition, the coordination fisik condition component is one of the components of physical condition needed in tennis.

Serve is the initial blow made to start the game of court tennis, without anyone serving it is certain there will not be a game of tennis in a game or in the championship. According to (Mukhlis Yarso et al., 2019) Basic techniques that must be mastered for beginners in the game of court tennis include: service technique, groundstroke forehand, backhand groundstroke, volley and smash. According to (Alim, 2018) Stated the serve must be done as well as possible so that the opponent is difficult to return. The process of learning the serve technique needs to be carefully considered in its implementation. Next according to (Rosmi, 2017) These factors are needed with the aim that the service carried out becomes effective, efficient and more importantly avoid injury. Proper basic technical direction early on is necessary for the technique to be mastered properly. Similarly, the development of technical elements in general that are correct early on in accordance with the principle of exercise is the main capital in building achievement.

In basic engineering training to improve service skills, it is also necessary to provide supporting exercises such as physical condition training in the biomotor strength of arm muscles (Baiget et al., 2019; Williams, 2020). The sport of court tennis in the city of Jambi is one of the coaching that has excellent achievements. This is evident in every championship in every national event. In addition, at the Provincial Sports Week 2018, the sport of tennis court jambi city managed to win 5 gold, 2 silver, 1 bronze. In 2019, 4 court tennis players from jambi city participated in the National Training Center (TC) for the International Championship. The achievement of the achievement of the sport of tennis court jambi certainly can not be separated from various factors, one of which is the factor of physical condition. Physical is a major component of sporting achievement, in addition to physical there are techniques, tactics and mental will be able to be developed well if they have good physical

qualities (Husein, M, Akbar, 2020). Physical condition is a requirement that must be owned by an athlete or sportsman in improving and developing optimal sports achievement, so that his physical condition needs to be developed and improved in accordance with the characteristics, characteristics, and needs of each sport (Pujiyanto, 2015). Physical condition needs to be improved this is done to support the performance of athletes on the field and the importance of physical condition is a major need in sports (Sugito et al., 2020). Physical condition is a necessary need in improving an athlete's performance, and can even be considered a basic need that cannot be delayed or negotiated." Physical condition is one of the indispensable prerequisites in any effort to improve the achievement of an athlete (Reid, Maschar., Schneiker, 2008). From some of these opinions it can be concluded that the physical condition is a musty that is very important as supporting the achievement of an athlete's achievements, so the physical condition factor must be considered by the athlete. Furthermore, to further maximize the achievements of tennis players coaching achievements in the city club Jambi, it needs to be improved to pay attention to factors that affect the achievement of athletes, not just prioritize physical factors only. In this study, researchers focused on the determinant physical condition and service skills possessed by tennis players in the city of Jambi's achievement coaching field. Physical conditions that are tested include, arm muscle strength, togok flexibility, eye and hand coordination, and service skills. Later after this research it is expected that players and coaches can know the results of current physical conditions and can be used as training program material in order to get good performance.

METHOD

This type of research uses quantitative descriptive, this study describes certain phenomena. The population in this study was the entire achievement coaching players of Jambi city which amounted to 15 players, with a male gender. Sampling techniques using total sampling techniques, technique of determining a sample by taking all members of

the population as respondents or samples (Sugiyono, 2011). Data collection techniques in this study use tests and measurements (Fenanlampir, A. dan Faruq, M, M., 2015). This method is intended to collect data about physical condition using test techniques. The various physical condition tests that will be carried out include:

1. Strength of arm muscles by using Push-Ups.
2. Togok's flexibility by using Sit and Reach.
3. Eye and Hand Coordination by using the tennis ball throwing test.
4. Service skills using Service Tests.

Analysis to find the reliability of test-retes using Anava (Analysis of Variance method), then look for T-Score, arrange norms and set the norm category into 5 categories very good, good, enough, less, More less (Azwar, 2012).

The data obtained by each test item is rough data from the results of each test achieved. The rough result is converted into a t-score value with the following t-score formula:

$$T = 10 \left(\frac{M-X}{SD} \right) + 50 \text{ (data inversi)} \quad (1)$$

$$T = 10 \left(\frac{M-X}{SD} \right) + 50 \text{ (data reguler)} \quad (2)$$

Information:

T = t score

M = rough average value

X = rough data value

SD = standard deviation of rough data

Once the data is obtained is to analyze the data to draw conclusions from the research conducted. The data analysis used from this study uses quantitative descriptive analysis techniques with percentages. According to (Sugiyono, 2012) formula used is as follows:

$$P = \left(\frac{f}{N} \right) + 100 \% \quad (3)$$

Information:

P = percentage sought

F = frequency

N = number of respondents

RESULT

The study used tests and measurements 4 categories of tests used to support and describe the physical condition and service skills of tennis court. The data taken in the study were tests of arm muscle strength, togek flexibility, coordination, and court tennis service. The summary of the overall data description will be presented as follows:

Table 1. Data results test of arm muscle strength of tennis players coaching court achievements jambi city

Category	Score Range	Frequency	Percentage
Very good	29-37	14	93%
Good	20-28	1	7%
Enough	13-19	0	0%
Less	4-12	0	0%
More Less	>4	0	0%
Total		15	100 %

Based on the data on table table 1 above can be known from 15 tennis court players on the arm muscle strength test obtained the best score is either a category with 14 players or 93%. Overall results in the arm muscle strength test were as follows, the excellent category of 14 players with a 93% percentage, the good category of 1 player with a percentage of 7%.

Table 2. Data results flexibility test of tennis players coaching field achievements jambi city

Category	Score Range	Frequency	Percentage
Very good	>39	9	60%
Good	34-38	3	20%
Enough	29-33	3	20%
Less	24-28	0	0%
More Less	<23	0	0%
Total		15	100 %

Based on the data on table 2 above can be known from 15 tennis players presented on the test of flexibility togek obtained the best score is

very good at 9 players or 60%. Overall the results in the test of the tossiveness of court tennis players are as follows, the category of good once 9 players with a percentage of 60%, the category of good 3 players with a percentage of 20%, and the medium category of 3 players with a percentage of 20%.

Table 3. Data results of hand eye coordination tests of tennis players coaching court achievements of jambi city

Category	Score Range	Frequency	Percentage
Very good	20	3	20%
Good	15-19	12	80%
Enough	10-14	0	0%
Less	8-9	0	0%
More Less	<7	0	0%
Total		15	100%

Based on the data on table table 3 above it can be known from the 15 tennis court players presented on the eye coordination test and the best earned hand score is either with 12 players or 80%. Overall results in the eye and hand coordination tests of court tennis players are as follows, the category of good once 3 players with a percentage of 20%, the good category of 12 players with a percentage of 80%.

Table 4. Data Results test tennis service skills tennis players coaching court achievements jambi city

Category	Score Range	Frequency	Percentage
Very good	>50	0	0%
Good	46-50	0	0%
Enough	41-45	4	27%
Less	37-40	10	67%
More Less	<36	1	7%

Based on the data on table 4 above it can be known from the 15 tennis players presented on the test of the best tennis service of the court is less than 10 players or 67%. Overall the results in the court tennis service test are as follows, the medium category 4 players with a percentage of 27%, the category of less 10 players with a percentage of 67%, the category of less once 1 player with a percentage of 7%.

DISCUSSION

The purpose of this study was to find out the determinant physical condition and service skills of tennis court at the jambi city achievement coaching club. The physical condition items that became instruments in this study are 3 categories of tests used to support and 1 test describing the physical condition and service skills of tennis court, physical conditions including arm muscle strength, togok flexibility, coordination, and court tennis skills are court tennis services. The results showed that the results of arm muscle strength tests were an excellent category of 3 athletes with a percentage of 0.45%, both 7 athletes with a percentage of 1.05%, while 2 athletes with a percentage of 0.3%, less than 2 athletes with a percentage of 0.3%, and less once 1 athlete with a percentage of 0.15%. Togok's flexibility tests get results including 3 athletes with a percentage of 0.45%, both 7 athletes with a percentage of 1.05%, while 2 athletes with a percentage of 0.3%, less than 1 athlete with a percentage of 0.15%, and less once 2 athletes with a percentage of 0.2%. The results of eye and hand coordination tests are very good 5 athletes with a percentage of 0.75%, both 3 athletes with a percentage of 0.45%, while 3 athletes with a percentage of 0.45%, fewer 2 athletes with a percentage of 0.3%, and less once 2 athletes with a percentage of 0.3%. Tennis skills using service tests get excellent results 7 athletes with a percentage of 1.05%, both 3 athletes with a percentage of 0.45%, while 3 athletes with a percentage of 0.45%, fewer 2 athletes with a percentage of 0.3%, and less once 2 athletes with a percentage of 0.3%.

Tennis court is one of the flagships in jambi province by using several club approaches to foster and develop its achievements so that in the process of achievement achievement can be obtained easily and structured in running an exercise program, 15 athletes of tennis this court is divided from several court tennis clubs such as those in the city of Jambi itself there are 2 and 1 club outside the city of Jambi, Some of the variables described in the process of strengthening the basic technique of service are greatly influenced by the strength of the arm muscles, the

flexibility of the *togok*, coordination and accuracy of the service itself is very attached and close that one's ability to perform basic service techniques with these variables must be done regularly, patterned, affordable and make that the exercise must be repeated systematically in order to meet the target intended, Importantly the strenghness of the arm muscles is the eye of the serve and muster directly at the time the movement is done, and supported by the flexibility of the *togok* and eye and hand coordination and combined on the target point of service so that it makes it difficult for the opponent to return the ball, therefore it needs to be analyzed and developed so that the serve that makes it difficult for the opponent to get points.

The results obtained by tennis players coaching court achievements in the city of Jambi are influenced by many factors. Factors that affect physical condition and skills in tennis players are: 1) exercise factors, 2) exercise program factors, 3) recovery factors, 4) healthy lifestyle factors, 5) environmental factors and, 6) Foods factors ([Treinamento et al., 2020](#)). According to ([Riewald, Scott., Nishihara, Mike., Mccoy, 2005](#)) It states that the coaching of physical conditions in sports that if an athlete wants to achieve must have physical conditions such as: strength (strength), endurance (endurance), muscle explosive power (speed), speed (speed), coordination (coordination), flexibility, agility (agility), balance, accuracy (accuracy), reaction (reaction). If the tennis player has a very good physical condition and skills or not good then it should always be improved during training. As revealed ([Garg Isha., Khurana Sonal., Kadyan Gaurav., 2018](#)) He stated that the physical condition and skills possessed by every sportsman must always be improved, in every exercise there are components that can improve these aspects.

In performing a service blow the physical factor also affects the level of ability to perform a service punch. Muscle strength in each segment as well as eye coordination with the arm when hitting the ball on the service movement is also very important because the harmonization of service movement greatly affects the accuracy, speed and direction of the

ball being hit. The physical factors of strength, coordination and flexibility are very important abilities that tennis players must have. (Sahan & Erman, 2009). Therefore, to facilitate the mastery of good service techniques, good physical ability is needed as well. In addition to physical factors, the mastery factor of service technique skills can affect the success rate of the service. There are three types of service techniques, namely flat service, twist service and slice service. All three types of services have their own characteristics, advantages and weaknesses. Mastery of these three types of serves has an effect on the success rate of the serve because each type of serve has an advantage so by mastering all three types of serves will provide an advantage in the game to get point by point to become a winner. The service skills must be supported by determining physical factors in order to result in good performance, physical can not be separated from the performance of tennis players on the court (Tsetseli, Marina Malliou, Vasiliki Zetou, Eleni Michalopoulou, Aria Kambas, 2010).

CONCLUSION

From the results obtained, the physical condition and service ability of the tennis court players coaching the achievements of the city of Jambi that the results of the arm muscle strength tests owned by the players coaching the achievements of the jambi city tennis court most of the 14 players obtained a good category once with a percentage of 93%. The togok flexibility test that players coaching the achievements of the city of Jambi city tennis mostly 9 players gained a very good category with a percentage of 60%. The eye and hand coordination tests that jambi city court tennis coaching players have most of the 12 players gained a good category with a percentage of 80%.0%. And the court tennis service that the jambi city court tennis coaching players have mostly 10 players gained less category with a percentage of 67%. By looking at these results, it should be known for players and coaching teams that the most important factor in sports is the physical condition factor and service skills, for that,

all teams must pay attention to the physical condition of their players so that the expected training program can run well.

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