



COMPARATIVE STUDY OF FITNESS COMPONENTS BETWEEN BADMINTON AND LAWN TENNIS PLAYERS

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Sports are essential part of our life. Sports play an important role in developing a healthy body and mind. There are many types of sports, which help in our physical as well as mental development. Health and skill related fitness coming under physical fitness is an important thing regarding the components of fitness. Where health related fitness consists of muscular strength, muscular endurance, cardio vascular endurance, flexibility and freedom from obesity or body composition, these 5 components. The same skill fitness includes the 5 components of health-related fitness along with 5 additional components - muscular strength, agility, speed, balance and reaction time. Thus skill-related fitness is a combination of a total of 10 components. In the present paper Comparative study of fitness components between badminton and lawn tennis players has been studied.

Keywords: Lawn-tennis, Badminton, Flexibility, Speed, Endurance, Agility, Flexibility

Objectives:

- To study the playing skill of lawn-tennis
- To study the playing skill of Badminton
- To compare the speed of players between badminton and lawn tennis
- To compare the flexibility of players between badminton and lawn tennis
- To compare the agility & endurance of players between badminton and lawn tennis

Preface:

Playing any sport leads to physical development as well as mental development. Every part of our body gets exercise while playing sports. Eyes, brain and every part of the body have to be used while playing. So playing sports doesn't require you to give up personal time for exercise either. Sports also improve body balance. Playing some sport regularly keeps the mind happy. Physical organs develop properly. Happiness and enthusiasm increase in the mind and success is achieved in every field of life. There are also different types of sports, some sports are physical and some are mental. That is how we call sedentary games and outdoor games. Playing physical games requires physical effort, whereas mental games involve the brain. Football, hockey, volleyball, cricket, tennis, kabaddi etc. are physical games. Playing these games requires physical strength. On the other hand, there are mental games like chess, cards, quadrupeds, etc., which require the use of mental power to play, i.e. the brain needs to be stimulated. The level of physical fitness varies from person to person. It depends on the nature of work performed, size, structure, age, gender and adaptability of the individual. Similarly, there is a change in the requirement of fitness in different sports. In physical fitness, the game system, biological system and psycho-system perform efficiently.

History of tennis:

According to many historians, tennis is believed to have originated in ancient Egypt. The word "racquet" is said to have begun from the Arabic word "rakat", which implies "palm". However, the most broad conviction is that tennis was to begin with played by French ministers in the 11th and 12th centuries. From 1872, when the first lawn tennis club was founded, tennis began to develop as a professional sport. On the lawn of the Lamington resort, Hoe Pereira, a Portuguese businessman, and doctors Wellesley Tompkins and Frederick Haynes played a Spanish game called pelota with a ball. Later, the original lawn tennis rules were developed. Generally, tennis courts are 2,808 square feet in size and measure 78 by 36 feet. The game of tennis is played with either two players (singles match) or four players (doubles match).

About Game:

This diversion is played in both singles and pairs. In singles there is one player on each side of the net and in copies there are two players on either side of the net. A few vital data related to this diversion is as follows-

- ❖ The racket utilized in this is fitted with engineered strings, from which the ball is hit, which is in a steady position. The portion of the racket from which the ball is hit is more often than not oval.
- ❖ The balls used are usually made of rubber. On which a extraordinary kind of cloth is sewed. Concurring to the Worldwide Tennis Alliance, the distance across of the ball ought to be from 65.41 mm to 68.58 mm and its weight ought to be between 56 and 59.4 grams.
- ❖ The tennis court is 78 feet long and 27 feet wide. In this, centre mark, base line service line, centre service line, single side line etc. are drawn with white colour.

- ❖ The base line and service line denote the width of the court. The double side line represents its length. Apart from this, the centre service line divides any side of the net into two parts. the divided space is quadrangular, which is called the service court.

History of Badminton:

The history of the game of badminton is not very old. This game was played during the British rule. British officers used to play a badminton-like game called shuttlecock. Instead of coke, balls of wool were used in this game. This was around 1870. Earlier this game was played by maximum 4 - 4 people but later it started being played in singles and doubles. Around 1934, the foundation of the "Badminton World Federation" was laid and many rules of the game were made. The founding members of this union were Ireland, France, New Zealand and Scotland. In the year 1936, British India also became a member of the Badminton Sports Federation. The game of badminton is very popular in Asia and Europe. India, China, Indonesia, Malaysia and South Korea are the leaders in badminton. India has also won many Olympic medals in badminton. Saina Nehwal, PV Sindhu, Srikanth, Pullela Gopichand are prominent Indian players who have made a mark at the world level. Badminton also has a mixed doubles game, in which both men and women play together. A field is essential for playing any game. Playing badminton also requires a ground known as a "badminton court". There is a lattice in the middle of this courtyard, which divides the courtyard into two equal parts. The court is 13.4 m long and 5.18 m wide, which reduces to 6.1 m during doubles play. The game includes a move called a rally which is a mainstay of badminton. In this, the players of both the sides hit the racket and push the coke towards each other.

Rules of Badminton:

- In this game first toss is done. The winner of the toss decides whether to serve first or not and which side to play.
- If the player pushes the cock towards the opponent's player with the help of his racket, then it is called service. When a player fails to hit the shuttlecock, the opponent gets a point. The one who serves is called the server and the one who receives is called the receiver.
- The player can serve from the right or left corner. In the game, both the players stand diagonally from each other.
- When a player loses a rally, the opponent gets a chance to serve. The reason for losing a rally is a fault.
- The game is played three times in a match. The player who wins the game twice is declared the winner. The player changes his side every time the game is played.
- Badminton game is of total 21 points. The player who gets more points is the winner. If the game reaches 29 points, the winner is decided by golden points.

Methodology:

The purpose of this study was to compare physical fitness variables (speed, endurance, agility and flexibility) between badminton and lawn-tennis players. Total 30 (15+15) male players from each group of Badminton and Lawn Tennis of Amravati sport club were selected for this study by purposive random sampling method. Descriptive statistics (mean and standard deviation) and independent 't' tests were employed using Statistical Package for the Social Sciences (SPSS) to compare variables.

- Speed measured by 30m dash.
- Endurance was measured by sit-ups with knees bent.
- Agility measured by shuttle run (4x10m).
- Flexibility measured by bridge up test and shoulder and wrist elevation test.

Hypothesis:

- Prior to the research, it was hypothesized that there might be differences in speed, endurance, agility and flexibility between badminton and lawn tennis male players of Amravati sport clubs.

Limitation:

- Sports performance of the players was not considered for the study.
- Diet, food habits of the players are not under control

Delimitation:

- This study was delimited to male Players.
- The Players for research was randomly selected from regular match practice group.
- This study was delimited to two groups, each Group having 15 male players (Total 30) of badminton and lawn tennis.

Components	lawn tennis		badminton		T test
	Mean	SD	Mean	SD	
30 M dash	5.11	0.42	5.5	0.46	0.72
Sit ups	35.8	6.36	41.8	5.9	0.01
Shuttle run	10.44	0.99	11.41	1.05	0.01
Bridge up test	17.53	3.58	18.0	3.74	0.72
Shoulder and wrist elevation test	12.86	3.24	14.2	3.16	0.26

Significant at 0.05 levels

Results and Discussion:

The comparison of study variables among lawn tennis and badminton players of Amravati club is presented in the above table. This table shows that the 30 m mean value and standard deviation of lawn-tennis and badminton male players were 5.11 ± 0.42 and 5.5 ± 0.46 , respectively. The sit-up means and standard deviation of lawn-tennis and badminton male players were 35.8 ± 6.36 and 41.8 ± 5.9 , respectively. The shuttle run values and standard deviations of lawn-tennis and badminton male players were 10.44 ± 0.99 and 11.41 ± 1.05 , respectively. The bridge up test value and standard deviation of lawn-tennis and badminton male players were 17.53 ± 3.58 and 18 ± 3.74 , respectively. The shoulder and wrist elevation test values and standard deviations of lawn-tennis and badminton male players were 12.86 ± 3.24 and 14.2 ± 3.16 , respectively. The t test calculated values of 30 m dash (0.72), sit ups (0.01), shuttle run (0.01), bridge up test (0.72) and shoulder and wrist elevation test (0.26) were less than the tabulated values at 5% level. Thus, there was no significant difference between lawn-tennis and badminton male players of Amravati club on all the variables.

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