



*International Journal of
Physical Education and
Sports Sciences*

*Vol. V, No.I, April-2013,
ISSN 2231-3745*

COMPARISON OF CARDIO-VASCULAR FITNESS OF BADMINTON PLAYERS BELONGING TO HIGH AND LOW PERFORMANCE ABILITY

Comparison of Cardio-Vascular Fitness of Badminton Players Belonging To High And Low Performance Ability

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Abstract – The purpose of this study was to assess the cardio-vascular fitness of badminton players of low and high performance ability. Thirty male badminton players (fifteen districts level and fifteen state level) were randomly selected for this study. All the players were residing in lucknow city and their age ranged from 19-25 years. Data on cardio-vascular fitness of the subjects were collected with the help of Harvard Step Test. To compare the cardio-vascular fitness of badminton players “t-ratio” was employed and the level of significance was set at 0.05. On the basis of the results of the study high performance level badminton players had significantly high cardio-vascular fitness than those of low performance level badminton players.

INTRODUCTION:-

Badminton is a game which although played in a relatively small area, involves almost continuous movements in the court and thereby puts considerable demands on the cardio-vascular system of the players. To enable badminton players to maintain their speed, reflections and agility for long duration at high level of competition, cardio-vascular fitness plays an important role.

Success in competitive sports places high psychological demand on the participants. Physical fitness at one hand and psychological at other are equally important to maintain the equilibrium of the individual. The teams are prepared not only to play the game but to win the game and for winning the game it is not only the cardio-vascular fitness which brings victory but more important is the spirit of the players with which they play and perform their best in the competition.

METHOD

Thirty male badminton players (fifteen district level and fifteen state level) who had participated recently in their respective competitions were randomly selected for this study. All the players were residing at lucknow city and their age ranged from 19-25 years. Data on cardio-vascular fitness of the subjects were collected with the help of Harvard Step Test. The fitness index (score) was obtained using following formula:-

$$\text{Fitness Index} = \frac{\text{Duration of exercise period in seconds} \times 100}{2 \times \text{Sum of pulse counts after exercise}}$$

To compare the cardio-vascular fitness of high and low level badminton players “t-ratio” was applied and the level of significance was set at 0.05 levels.

FINDINGS

Findings related to cardio-vascular fitness of high and low level badminton players are presented below.

Table-1

SIGNIFICANCE OF DIFFERENCE OF MEAN OF HIGH AND LOW LEVEL

BADMINTON PLAYERS ON THE CARDIO-VASCULAR FITNESS

Group	Mean	S.D	Mean Difference	S.E. of Difference of Mean	“t” ratio
High Level Badminton Players	87.86	18.2			
			21.06	9.27	2.27*
Low level badminton players	66.80	29.6			

* Significant at 0.05 level

N = 30

“t” ratio needed to be significant at 0.05 level with 28 degrees of freedom is 2.05.

The analysis of data in table-1 shows that there is a significant difference between high and low level badminton players of lucknow district in their cardio-vascular fitness as obtained “t” ratio of 2.27 is greater than the required “t” value of 2.05.

DISCUSSIONS

It is evident from table-1 that high performance level badminton players are significantly superior to low performance level badminton players in the dimension of cardio-vascular fitness. This may be due to the fact that high performance level badminton players might have taken conditioning program more seriously due to the motivational effect, as a result of which the efficiency of their cardio-vascular fitness might have improved more than the low performance badminton player.

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