



COMPARISON OF RESTING PULSE RATE AND BREATH HOLDING TIME BETWEEN COLLEGE BADMINTON AND BALL BADMINTON PLAYERS

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Abstract:

The purpose of the study was to compare the resting pulse rate and breath holding time between college men badminton and ball badminton players. To achieve this purpose of the study, sixty men students studying from Arts and Science Colleges in and around Bangalore, Karnataka, India were selected as subjects at random. The selected subjects were divided into two equal groups of thirty badminton players and thirty ball badminton players. Among the physical fitness components, the following variables namely resting pulse rate and breath holding time were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables namely resting pulse rate and breath holding time by using radial pulse and holding the breath for time respectively. The independent 't' ratio was used to analyze the significant difference, if any between groups. The .05 level of confidence was fixed as the level of significance to test the 't' ratio obtained, which was considered as an appropriate. The results of the showed that there was a significant difference between badminton players and ball badminton players on resting pulse rate and breath holding time.

Key Words: Resting Pulse Rate, Breath Holding Time, College Men Badminton, Ball Badminton Players.

Introduction:

In the world of sports, especially in high-intensity activities like badminton and ball badminton, understanding and monitoring physiological parameters such as resting pulse rate and breath holding time are critical. These metrics provide valuable insights into an athlete's cardiovascular fitness, endurance, and overall health. Resting pulse rate, also known as resting heart rate, is the number of heartbeats per minute while the body is at complete rest. It serves as a fundamental indicator of cardiovascular fitness and the efficiency of the heart's functioning. Lower resting pulse rates typically suggest a well-conditioned heart that pumps blood more efficiently, indicating good aerobic fitness. Breath holding time refers to the duration a person can comfortably hold their breath after a normal exhalation. It is an essential parameter indicating respiratory efficiency and lung capacity. Athletes, particularly those in sports demanding quick bursts of energy and precise breathing control, benefit significantly from good respiratory function. Both resting pulse rate and breath holding time reflect an athlete's physical conditioning and are pivotal in determining training regimens. Regular monitoring and improvement in these parameters can elevate the performance levels of badminton and ball badminton players, enabling them to excel in the demanding and competitive nature of these sports.

Methodology:

The purpose of the study was to compare the resting pulse rate and breath holding time between college men badminton and ball badminton players. To achieve this purpose of the study, sixty men students studying from Arts and Science Colleges in and around Bangalore, Karnataka, India were selected as subjects at random. The selected subjects were divided into two equal groups of thirty badminton players and thirty ball badminton players. Among the physical fitness components, the following variables namely resting pulse rate and breath holding time were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables namely resting pulse rate and breath holding time by using radial pulse and holding the breath for time respectively. The independent 't' ratio was used to analyze the significant difference, if any between groups. The .05 level of confidence was fixed as the level of significance to test the 't' ratio obtained, which was considered as an appropriate.

Analysis of the Data:

Resting Pulse Rate:

The mean, standard deviation and 't' ratio values on resting pulse rate of badminton players and ball badminton players have been analyzed and presented in table 1.

Table 1: The Mean, Standard Deviation and 't' Ratio Values Between Badminton and Ball Badminton Players on Resting Pulse Rate

Groups	Mean	Standard Deviation	't' Ratio Value
Badminton Players	72.18	0.11	4.23*
Ball badminton Players	72.33	0.16	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence with df 58 was 2.002).

The table 1 shows that the mean values on resting pulse rate for badminton players and ball badminton players were 72.18 and 72.33 respectively. The obtained 't' ratio value on resting pulse rate 4.23 which was greater than the table value required for significance with df 58 was 2.002. The results of the study showed that there was a significant difference between college men badminton players and ball badminton players on resting pulse rate.

Breath Holding Time:

The mean, standard deviation and 't' ratio values on breath holding time of badminton players and ball badminton players have been analyzed and presented in table 2.

Table 2: The Mean, Standard Deviation and 't' Ratio Values Between Badminton and Ball Badminton Players on Breath Holding Time

Groups	Mean	Standard Deviation	't' Ratio Value
Badminton Players	45.62	1.17	8.59*
Ball badminton Players	43.11	1.09	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence with df 58 was 2.002).

The table 2 shows that the mean values on breath holding time for badminton players and ball badminton players were 45.62 and 43.11 respectively. The obtained 't' ratio value on breath holding time 8.59 which was greater than the table value required for significance with df 58 was 2.002. The results of the study showed that there was a significant difference between college men badminton players and ball badminton players on breath holding time.

Conclusions:

- There was a significant difference between badminton players and ball badminton players on resting pulse rate.
- There was a significant difference between badminton players and ball badminton players on breath holding time.

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