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## Comparison of batsmen and bowlers on cardiovascular endurance

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### Abstract

The present study was an attempt to investigate the significant mean difference between Batsmen and Bowlers on cardiovascular endurance which is participating at District level. The sample of the study comprised of 20 batsmen and 20 bowlers of Jind district of Haryana state. All the players are male participants and their age ranges from 16 to 19 years. In order to test the significance of mean difference between the variables t-test was employed. The result indicates that there exists a significance difference between Batsmen and Bowlers on cardiovascular endurance. Bowlers were found to be better than Batsmen on cardiovascular endurance.

**Keywords:** cardiovascular endurance, cricket, players

### Introduction

Fitness is that state which characterizes the degree which a person is able to function efficiently (Aapher, 1965) <sup>[1]</sup>. It implies the ability of each person to live most effectively with his potentialities. The generality and specificity of motor fitness has been debated and researched for year, with the bulk research evidence in favor of its specialty (Henry, 1960; Henry & Rogers, 1960) <sup>[9, 10]</sup>. Motor fitness was general in nature; as a result, the term general motor ability came into vogue. They assumed if an individual excelled in a certain sports that corresponding ability would automatically carry over to other activities. One's motor fitness has a definite effect on the performance of any movement activity that requires quick reactions, speed of movement, agility or coordination of movement, explosive power and balance.

### Cardio vascular endurance

Cardiovascular endurance is the ability of the heart, lungs and blood vessels to deliver oxygen to your body tissues. The more efficiently your body delivers oxygen to its tissues, the lower your breathing rate is. While this may help you get a little more bottom time from each tank of air, the real benefits are being more relaxed, experiencing less fatigue and being better able to respond to challenging currents and any emergencies that may arise. Essentially, a stronger, more efficient oxygen delivery system allows you to do exercise with greater ease in any situation. The definition of cardiovascular endurance simply put is the body's ability to continue exertion while getting energy from the aerobic system used to supply the body with energy. This is the system that kicks in third after the phosphogen and the glycogen lactic acid system, and so the one that supplies energy to the human circulatory system and the muscles over extended periods. Cardiovascular endurance is most useful for long distance sports; for marathon training, long distance running, jogging and swimming, however it will also be useful for everyone else and a lack of it will lead to individuals becoming quickly tired and out of breath. Obviously a strong heart is crucial for cardiovascular fitness as it's what will pump the blood round the muscles to the mitochondria and the muscles. This will be transported through the veins and arteries that make up the 'human circulatory system'. A healthy circulatory system can be maintained through consumption of fiber, which travels through the veins and arteries to unclog arterial plaque, and by eating a diet low in carbohydrates and saturated fats. Between these elements then is found an in-depth definition of cardiovascular endurance. Through understanding the exact process that goes into cardiovascular fitness you

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can train each aspect separately to improve every aspect of your performance.

### Methodology

For this study the investigator adopted survey method to collect data related to cricket players (batsmen and bowlers). The subjects of the study consist of 40 cricket players' i. e. 20 batsmen and 20 bowlers. The age group of cricket players ranges between 16 to 19 years. All these cricket players are male participants and belong to district Jind (Haryana) only.

**Tools Used:** 600 Yds Run/Walk test

**Purpose:** To measure Cardiovascular Endurance

**Equipments:** Tracked or marked area and stop watch

**Administration and description of test:** The subject is asked to take a "Standing Start" and at the signal "Ready Go" the subjects start for the 600 meter distance. Running and walking is permitted but the performer has to cover the distance in the shortest period of time.

**Scoring:** One trial is given and the recorded time is the final score.

**Reliability:** The reliability of the test is 0.961.

### Findings

The main objective of the study is to compare batsmen and bowlers on cardiovascular endurance. The data collected from cricket players was arranged, tabulated and statistically analyzed. The obtained data was processed for descriptive statistics i. e. Mean, S.D and t-ratio.

Table 1

| Sr. No. | Variable     | Batsmen |       | Bowlers |       | t-ratio |
|---------|--------------|---------|-------|---------|-------|---------|
|         |              | Mean    | S. D  | Mean    | S. D  |         |
| 1.      | 600 Yard Run | 95.20   | 3.053 | 85.27   | 3.542 | 9.502** |

\*\*Significant at .01 level of confidence

Table 1 shows the results of mean scores of 600 yard run test of Batsmen and Bowlers which are 95.20 and 85.27 respectively. The t-ratio of the mean difference on 600 yard run test is 9.502 in favor of Bowlers. It is highly significant at .01 level of confidence. Hence, the difference between the mean scores of Batsmen and Bowlers on 600 yard run test is significant. The mean score of Bowlers is lower than that of Batsmen. It implied that the Bowlers have better cardiovascular endurance as compared to Batsmen.

### Discussion of findings

The results suggested that the Bowlers have better cardiovascular endurance than the Batsmen. It may be due to the long practice sessions of the bowlers as compare to their counterpart Batsmen. They have to run each and every time they bowl either in the practice session or in the match. Bowlers have to field on the boundary lines and to cover long distances as compared to their counterpart Batsmen. They have to work on their endurance so that they can bowl for longer durations in test matches while batsmen have to work on their speed as they have to run 22 yards every time to complete a run. It is clear that there exist a significance difference between Batsmen and Bowlers on cardiovascular endurance.

### Conclusion

**Based on the results of the present study the following conclusion is drawn**

There exists a significance difference between Batsmen and Bowlers on cardiovascular endurance. Bowlers were found to be better than Batsmen on this variable.

### Implications

The findings of the study have a number of implications for coaches, physical education teachers, trainers and cricket players.

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