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## Comparison of fast bowlers and spinners on physical fitness variable strength

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### Abstract

The present study was an attempt to investigate the significant mean difference between Fast bowlers and Spinners on physical fitness variable strength which are participating at District level. The sample of the study comprised of 20 fast bowlers and 20 spinners 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 descriptive statistics was employed. The result indicates that there exists a significance difference between Fast bowlers and Spinners on physical fitness variable strength specifically arm strength. Fast bowlers were found to be better than Spinners on the physical fitness variable arm strength.

**Keywords:** Strength, Cricket, Players

### 1. Introduction

The term "Fitness" is perhaps among the most difficult to define in the area of measurement in physical education. Fitness is that state which characterizes the degree which a person is able to function efficiently, AAPHER (1965) [1]. It implies the ability of each person to live most effectively with his potentialities. The term fitness, physical fitness and motor fitness are often used inter changeably, but motor fitness is actually the broader concept, including both physical fitness and motor ability factors (Baumgartner and Jackson, 1991) [2]. Fitness has broader meaning which includes not only physical fitness but anatomical, psychological and physical fitness too. The physical fitness is the ability to last, to bear up; to withstand stress and to reserve energy to face situations under difficult circumstances where an unfit person would quit. The main components of physical fitness are strength, speed, endurance, flexibility and coordinative abilities.

#### 1.1 Strength

Strength is the ability of a muscle or muscle groups to generate maximum force. This force is revealed by the individual's ability to pull, push, lift or squeeze an object or to hold the body in a hanging position. Strength is a prerequisite of all activity since it takes a certain amount of strength to be agile, to have power and to run fast. Although, strength as a factor is inextricably related to other motor performance factors, it remains an entity in itself and is a significant part of any activity as a whole. Strength and endurance are specific to the muscle group, speed of the contraction, and joint being tested (Heyward: 1991) [7]. Certainly strength plays an important role in cricket specially bowlers. It is required to a great extent in bowlers involving efficient run up and to generate optimum speed.

### 2. Methodology

For this study the investigator adopted survey method to collect data related from cricket players (fast bowlers and spinners). The subjects of the study consist of 40 cricket players i.e. 20 fast bowlers and 20 spinners. 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.

#### 2.1 Tools Used: 6-lbs Medicine Ball Put Test

**1. Purpose:** To measure arm strength

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2. **Equipments:** one 6-lbs medicine ball, a measuring tape, lime scorecard, a well marked space inside the track approximately 50\*25 feet with two retraining lines.
3. **Procedure:** The test was explained and demonstrated before the testing commenced. The subject assumed a shot put position and put the medicine ball straight down the course. The subject was not allowed to step on or over the throwing line during the throw. Each player was allowed to take three trials in succession. Fouls were counted as trial but in the event that fouls were made in all three trials, the subject was required to put until he made a fair put.
4. **Instruction:** The subject was asked to put the medicine ball and not throw it. During the put, subject was not allowed to step on or over the putting line.
5. **Scoring:** The distance of the best put out of three trials was recorded as the final score.
6. **Validity:** Test validity is .736 based on a comparison of the test with a composite of 29 tests measuring eight different components of motor ability.
7. **Reliability:** The reliability of the test is 0.893 and the objectivity for two scores is 0.997.
8. **Testing personnel:** The help of one trained assistant was taken to supervise the testing station, to measure distance and to record the scores. A student assistant was requested to mark the spot of the put and return the ball to the throwing areas.

**2.2 Findings**

The main objective of the study is to compare Fast bowlers and Spinners on physical fitness variable strength. 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 Z-ratio.

**Table 1**

S. No.	Variable	Fast Bowlers		Spinners		Z-ratio
		Mean	S.D	Mean	S.D	
1.	6-lbs Medicine Ball	12.12	1.09	10.75	1.28	6.009**

\*\*Significant at .01 level of confidence

Table 1 shows the results of mean scores of 6-lbs Medicine Ball test of Fast bowlers and Spinners which are 12.12 meters and 10.75 meters respectively. The Z-ratio of the mean difference on 6-lbs Medicine Ball test is 6.009 in favor of fast bowlers. It is significant at .01 level of confidence. Hence, the difference between the mean scores of Fast bowlers and Spinners on 6-lbs Medicine Ball test is found to be significant. The mean score of fast bowlers is higher than that of spinners. It implied that the fast bowlers have better arm strength as compared to the spinners. It may be due to their continuous bowling at a good speed as compare to their counterpart spinners. They have to do fast rotation of their arms to generate maximum speed (130 to 160 km/h approximately) but spinners have to bowl at a lower speed (70 to 100km/h approximately) resulting less vigorous arm movement. Further, fast bowlers have to field on the boundary lines most of the times and to throw the ball from 70 to 80 meters every time, one really needs good amount of arm strength.

**3. Discussion of Findings**

The results suggested that the Fast Bowlers have better arm

strength than the Spinners. It Hence, there exist a significance difference between Fast bowlers and Spinners on physical fitness variable arm strength.

**4. Conclusion**

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

There exists a significance difference between Fast bowlers and Spinners on physical fitness variable arm strength. Fast Bowlers were found to be better than spinners on this physical fitness variable.

**4.1 Implications**

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

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