



**ORIGINAL RESEARCH PAPER**

**Sports Science**

**COMPARATIVE STUDY OF MOTOR FITNESS BETWEEN ZONAL AND NATIONAL LEVEL CRICKET PLAYERS**

**KEY WORDS:** motor fitness, strength, Zonal, flexibility, Agility

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**ABSTRACT**

Physical fitness is essential quality for learning motor skills besides the influence of growth. Motor fitness is an important component for an athlete in order to obtain optimal performance in sports. Motor fitness refers to how players can perform at his sports which involves a combination of agility, reaction time, coordination, power and balance. The prevalent objectives of the study were to compare motor fitness components between school zonal and national level cricket players. 60 sixty cricket players (30 subjects from each level) were selected as the participants for this study whose age were ranging between 14-17 yrs. The data were analysed by using one way ANOVA to find out the difference, if any. The result of the study showed that there was insignificant difference in speed whereas significant difference found in strength, flexibility and strength between the zonal and national level cricket players.

**Introduction**

*“Physical fitness is not only one of the most important keys to a healthy body; it is the basis of dynamic and creative intellectual activity.” John F. Kennedy*

Sport is a great source for a healthy mind and body which is essential for success in life. Sports play a vital role in every individual's life. Combination of exercise, enthusiasm and sensations is the advantage of sports. It is popular among people of all ages because it helps them to keep fit. Physical fitness is essential quality for learning motor skills besides the influence of growth and maturation. Children can learn a specific motor activity only when he has attained the actual physical growth required to accomplish that movement. In addition to having achieved the necessary physical growth, the child must be ready to learn a motor skill in different ways i.e. he must have reached certain level of motor, emotional and social development.

Motor fitness is the term which defines that an athlete able to execute effectively during any physical activity or sports activity. Motor is important as it allows greater freedom of body movement and helpful for the maintenance of working capacity of the body for a longer time. It helps in preventing injuries and improving co-ordination of movements and shortening the pace for acquiring and perfecting movement. Motor fitness is the final criteria through which all other elements of physical fitness are perceived and measured. In the present study also researcher find out the level of motor fitness component between zonal and national cricket players

**METHODOLOGY :** To achieve the purpose of the study 60 cricket players from zonal and national level were selected from school level. Ages of the selected participants were ranged between 14-17 years.. Data were collected for speed, flexibility, agility and strength.50m. Sprint, 10mt. shuttle run, sit and reach test and push up for one minute were used to assess the selected variables. The collected data were analysed using one way ANOVA.

**Selection of variable:** The following variables will be selected for the purpose of the study:

- Speed
- Agility
- Flexibility
- Strength (Upper Extremity) – Shoulder Strength

**Tools for the study:** The following tool were selected to measure the variables

Serial No.	Variables	Test Items
1	Speed	50 Meter Sprint
2	Agility	10 Meter Shuttle Run
3	Flexibility	Sit and Reach Test
4	Strength (Upper Extremity)	Push Ups ( 1 minute)

**RESULTS AND DISCUSSIONS**

**Results :** To find out the level of motor fitness between zonal and national level cricket the means of both the group were analysed as follows.

**Table. 1: Comparison of means of zonal level and national level cricket players in speed**

	Sum Of Squares	Df	Mean Square	F
Between Groups	0.055	1	0.055	0.11
Within Groups	28.686	58	0.495	
Total	28.741	59		

Table 1, depicts that the F ratio of the means is .110 and is less than the tabulated F value of 2.37(1,58) at point .05 level of significance. Finally table 1 depicts that there is no significance difference between zonal and national level cricket players in relation to speed ability.

**Table-2: Comparison of means of zonal level and national level cricket players for strength**

	Sum Of Squares	Df	Mean Square	F
Between Groups	147.267	1	147.267	6.254
Within Groups	1365.733	58	23.547	
Total	1513	59		

Table-2, depicts that the F ratio of the means is 6.254 and is much more than the tabulated F value of 2.37 (1,58) at point .05 level of significance. Finally table 3 depicts that there is a high significance difference between zonal and national level cricket players in relation to speed ability.

**Table-3: Comparison of means of zonal level and national level cricket players of flexibility**

	Sum Of Squares	Df	Mean Square	F
Between Groups	3.408	1	3.408	2.568
Within Groups	76.988	58	1.327	
Total	80.396	59		

Table 3, depicts that the F ratio of the means is 2.568 and is more than the tabulated F value of 2.37 (1,58) at point .05 level of significance. Finally table 4 depicts that there is a significance difference between zonal and national level cricket players in relation to flexibility ability.

**Table-4: Comparison of means of zonal level and national level cricket players of agility**

	Sum Of Squares	Df	Mean Square	F
Between Groups	2.731	1	2.731	3.557
Within Groups	44.52	58	0.768	
Total	47.251	59		

Table –4, depicts that the F ratio of the means is 3.557 and is more

than the tabulated F value of 2.37 (1,58) at point. Finally table 4 depicts that there is a significance difference between zonal and national level cricket players in relation to agility ability.

**DISCUSSION ON FINDINGS :** The result of the study reveals that the motor components related to flexibility, strength (upper extremity-shoulder strength) and agility were found to be comparatively higher in the school national level cricket players. There was no significant deviation found the speed of zonal and national level players. This might be due to the fact that speed is highly trainable component and depends on many factors like rest and so on. The training in zonal and national cricket players doesn't have so much of difference. This might be the reason that speed in an average were found to be equal for the groups.

In case of flexibility slight improvement was noted in the national level cricket players. This might be due to the fact that they are using a better range of motion to play sport at the higher level. Though flexibility also increases slowly and consistently, training is required. Thus, deviation was noted in small amount but still it was significant.

In case of strength and agility it is well known that more we use our muscles in various tasks and skill more will be the strength development and more we use the body movement in various situation along with competitive aspect more will be the agility developed in the muscles. In the national level cricket players they use to play more games in competitive spirit and to sustain their performance in each game it is very important to register their position in the team. Thus good amount of training and sweating on field is required. This actually has improved their shoulder strength and agility.

#### **CONCLUSIONS:**

Based on the findings obtained from the present study, the following conclusions are drawn:

1. The findings of the study revealed that there were statistically insignificant difference in speed between the zonal level and national level cricket players.
2. The findings of the study revealed that there was statistically significant difference in flexibility and agility between the zonal level and national level cricket players
3. The findings of the study revealed that there were statistically a high significant difference in strength between the zonal level and national level cricket players.

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