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Comparative study of selected physical fitness variables between fast bowlers and batsman among cricket players

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Abstract

The main purpose of the study was to compare the selected Physical fitness components between fast bowlers and batsman in cricket. A total of 40 state level male subjects age ranged between 16-18 years were selected for this study from Cricket Coaching Centre, Jind (Haryana) approved by BCCI. The purposive sampling method was used to obtain the objective of the study. All the subjects, after having been informed about the objective and protocol of the study, gave their consent and volunteered to participate in this study. They were further divided into two groups of 20 each (N1=20; fast bowlers and N2 =20; batsman). The t- test was employed to find out the significant differences between male fast bowlers and batsman. To test the hypotheses, the level of significance was set at 0.05. The results revealed significant differences between Fast bowlers and batsman on the variables speed and strength. Insignificant differences found on the variables of endurance and flexibility.

Keywords: Fast bowlers, batsman, speed, strength, endurance, flexibility

Introduction

Physical fitness variables are the most important contributing factors for better performance in all sports and games so is in cricket. The game of cricket requires considerable amount of physical fitness and mastery of skills. A cricket player ought to possess specific speed, strength, power, agility flexibility & endurance in abundance so as to learn & master the techniques of the game. Cricket is a game in which robustness is traditionally not thought of as significant. Not with standing, the attainment in the 2000s of the world-beating Australian group is credited to their professionalism, and to some degree to the way they take care of their fitness. The other test-playing nations have rightfully put more accentuation on fitness recently and are getting the rewards. With the appearance of one day Cricket and all the more recently Twenty 20, the game has experienced noteworthy changes and the physical fitness demands made on a cricketer's body have additionally increased considerably.

Cricket is a highly profile world sport. Cricket has had a history of being regarded as a leisurely gentleman's game. But modern cricket has developed from a crude game which was played as early as the 12th century. Cricket is essentially a game of skill but fitness gives the edge. There are two things that matter in cricket i.e. ability and fitness. If a cricketer haven't got the first, then the second does not matter all that much. But if he has got two side of equal ability then obviously the fitter one is going to have the edge. Reliant upon the adaptation of the game being played and also reliant on the part of the player in the group, the worth of fitness will fluctuate: the robustness prerequisites of a speedy bowler will be more significant and furthermore not fairly the same as that of an opener batsmen, and one-day cricket will be more demanding than a five day match. There have been some studies on fitness modules for cricket, asking what you suppose is the completely most critical fitness segment for cricket, and rating of each of the fitness factors.

Poor physical condition can predispose one to premature tiredness and cause a loss in concentration, resulting in a lesser performance. There is also no doubt that fit players are less likely to be injured than those who are unfit. So the physical fitness is one of the deciding factors for the successful participation of cricketers at higher level.

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Method and Procedure

Selection of subjects

Subjects for the study were selected purposively from the Cricket Coaching Centre, Jind (Haryana) approved by BCCI. For the purpose of the study 20 fast bowlers and 20 batsman age ranged between 16-18 were selected randomly. The fast bowlers and batsman both the groups were measured on the selected physical fitness variables namely, speed, strength, endurance and flexibility. The fast bowlers and batsman speed was assessed by 60 yards dash test in seconds, strength was assessed by standing broad jump test in centimeters endurance was assessed by 12 mint run and walk test in meters and flexibility was assessed by sit and reach test in centimeters.

Statistical analysis

Descriptive statistics such as mean and standard deviation of the variables i.e. speed, strength, endurance, flexibility were calculated. Independent t-test was employed to compare between male fast bowlers and batsman. The level of significance was set at 0.05 level. The statistical analysis was conducted by using SPSS 16 software.

Results

Descriptive statistics regarding physical fitness parameters

Parameter	Minimum	Maximum	Mean	Std. Deviation
Speed	5.60	8.90	7.12	0.76
Strength	1.87	2.99	2.44	0.26
Endurance	1500	2800	2236.88	303.85
Flexibility	10.00	21.00	14.43	2.18

Table 1: Mean, Standard Deviation, Standard Error of the Mean, t-value and p

	N	Mean	SD	Mean difference	t-value	df	p-value
Fast Bowler	40	7.34	0.69	0.455	2.786	78	0.007 ^S
Batsman	40	6.89	0.76				

S – Significant ($p > 0.05$)

Speed

Table no. 1 The descriptive statistics shows the mean and SD value of fast bowlers on the variable of speed as 7.34 and .69 respectively. However, batsman had mean and SD values as 6.89 and .76 respectively. The ‘t’ - value 2.786 as shown in the table above was found statistically significant ($p > .05$).

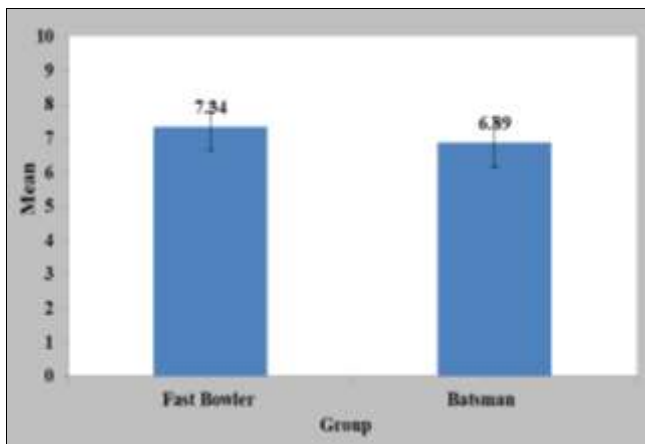


Fig 1: Graphical representation of mean scores of fast bowlers and batsman on the variables i.e. Speed

Table 2: Mean, Standard Deviation, Standard Error of the Mean, t-value and p-

	N	Mean	SD	Mean difference	t-value	df	p-value
Fast Bowler	40	2.38	0.29	-0.131	2.228	78	0.029 ^S
Batsman	40	2.51	0.22				

S – Significant ($p > 0.05$)

Strength

Table no. 2 The descriptive statistics shows the mean and SD value of fast bowlers on the variable of strength as 2.38 and .29 respectively. However, batsman had mean and SD values as 2.51 and .22 respectively. The ‘t’ - value 2.228 as shown in the table above was found statistically significant ($p > .05$).

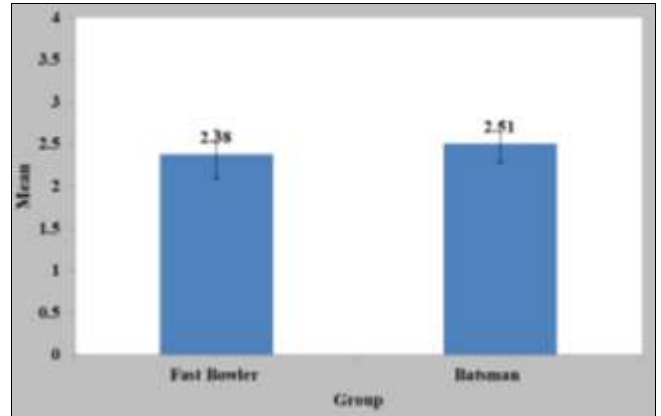


Fig 2: Graphical representation of mean scores of fast bowlers and batsman on the variables i.e. Strength

Table 3: Mean, Standard Deviation, Standard Error of the Mean, t-value and p-

	N	Mean	SD	Mean difference	t-value	df	p-value
Fast Bowler	40	2265.00	304.28	56.250	0.826	78	0.411 ^{NS}
Batsman	40	2208.75	304.64				

NS - Non significant ($p > 0.05$)

Endurance

Table no. 3 The descriptive statistics shows the mean and SD value of fast bowlers on the variable of endurance as 2265.00 and 304.28 respectively. However, batsman had mean and SD values as 2208.75 and 304.64 respectively. The ‘t’ - value 0.826 as shown in the table above was found statistically insignificant ($p > .05$).

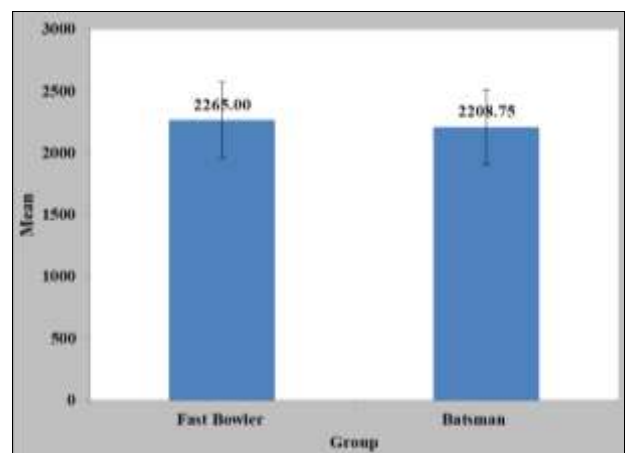


Fig 3: Graphical representation of mean scores of fast bowlers and batsman on the variables i.e. Endurance

Table 4: Mean, Standard Deviation, Standard Error of the Mean, t-value and p

	N	Mean	SD	Mean difference	t-value	df	p-value
Fast Bowler	40	14.25	2.05	-0.355	0.726	78	0.470 ^{NS}
Batsman	40	14.61	2.30				

NS - Non significant ($p > 0.05$)

Flexibility

Table no. 4 the descriptive statistics shows the mean and SD value of fast bowlers on the variable of flexibility as 14.25 and 2.05 respectively. However, batsman had mean and SD values as 14.61 and 2.30 respectively. The 't' - value 0.726 as shown in the table above was found statistically insignificant ($p > .05$).

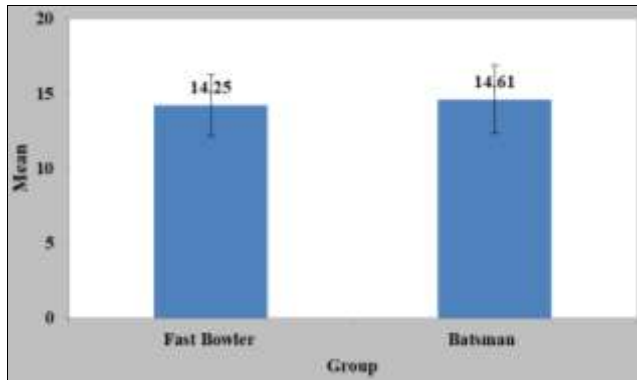


Fig 4: Graphical representation of mean scores of fast bowlers and batsman on the variables i.e. Flexibility

Discussion & Conclusion

It is concluded from the above findings that the significant difference were found in the selected physical fitness variable i.e. speed between fast bowlers and batsman the batsman are better than fast bowlers in speed. There was significant difference between fast bowlers and batsman on strength the batsman are better than fast bowlers in strength. The result might be due to the skills (Fast Bowling and Batsman) because both skills developed selected physical variable correspondingly and the level of players is same. And insignificant difference were found in the selected physical fitness variable endurance and flexibility,

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