



## Comparative Analysis On The Selected Motor Fitness Variables Between Batsman and Bowlers in Cricket

**Milon Kumar Das**

Students, MPed, Department of Physical Education, Visva-Bharati, Santiniketan, WB,

**Dr. Sentu Mitra**

Assistant Professor, Department of Physical Education, Visva-Bharati, Santiniketan, WB,

**ABSTRACT**

The objective of the study was to compare the selected motor fitness variables between batsman and bowlers in cricket. For this study, 20 university level male cricket players from Visva-Bharati, Santiniketan, WB were randomly selected as the subject. Among them 10 were batsman and 10 were bowlers. Motor fitness components such as Speed, Flexibility, Reaction ability, Coordination and Cardio-respiratory Endurance were selected as the variables for the study. To analysis the data descriptive statistics and t-test were used. The result showed that there was no significant difference between batsman and bowlers in the selected variables.

**KEYWORDS**

Batsman, Bowlers, Speed, Flexibility, Coordination, Reaction ability, Cardio-respiratory Endurance.

**INTRODUCTION-** Cricket is one of the oldest organized sports, there are very few studies on the physical demands of the game (Woolmer & Noakes, 2008; Christie & King, 2008; Christie et. al., 2008). Batting and bowling are intermittent in nature with the demands placed on the players being dictated by the type of match being played. Due to this stop-start nature of cricket, accurate assessments are often difficult and as such, research is sparse (Bartlett,2003) and as a consequence, there are few scientifically sound training programmes for cricketers. Historically cricket players never trained as hard as other sportsmen in team based sports such as rugby and soccer and in fact, many were overweight which dispelled any reason to be trained for their sport (Woolmer &Noakes, 2008). It wasn't until the Australians (cricket) and New Zealanders (rugby) demonstrated that, by focusing on physical training, performance benefits would be derived, that this started to change. This was a direct consequence of more scientifically based physical training programmes prior to their Cricket and Rugby World Cup wins in 1991 and 1987 respectively. As a generalization, it has been found that batsmen tend to be smaller and lighter than bowlers though they have similar morphological profiles. In this study an attempt was made to compare the selected variables between batsman and bowlers in cricket. The findings of the study would be helpful in understanding the fitness level of intervarsity level cricketers in Visva-Bharati.

The result would be helpful in selecting good team by differ-

entiating the batsman and bowlers in cricket.

**METHODOLOGY**

**Selection of Subjects:** For this study twenty university male cricket players (10 batsman and 10 bowlers) from Visva-Bharati, Santiniketan were randomly selected as the subject. The age of the subjects ranged between 17-26 years.

**Variables and Criterion Measures:**

Variables	Test Items	Criterion Measures
Flexibility	Moderate sit and reach test	Centimeter
Reaction Ability	Nelson hand reaction test	Number
Hand-eye Co-ordination	Alternate hand wall toss test	Number
Speed	20 meter Dash	1/100 <sup>th</sup> of Seconds
Cardio-respiratory Endurance	Queen's College Step Test	ml/kg/min

**Procedure:** In this study descriptive statistics and t-test were used to calculate the data

**RESULT**

The findings pertaining to descriptive statistics of the selected motor fitness variables for batsman and bowlers in cricket have been presented in Table 1.

**Table 1: Descriptive Statistics of Selected Motor Fitness Variables between batsman and bowlers**

	Speed (sec)		Flexibility (cm)		Reaction ability (times)		Coordination (times)		C-R End (ml/kg/min)	
	Batsman	Bowlers	Batsman	Bowlers	Batsman	Bowlers	Batsman	Bowlers	Batsman	Bowlers
Mean	3.011	3.137	17.7	18.7	14.3	14.8	29.3	29.6	52.866	51.186
Max score	2.52	2.52	14	13	20	19	32	32	62.61	59.25
Min Score	3.32	3.7	24	23	9	11	24	27	42.45	40.77

The t-value between the batsman and bowlers on the selected motor fitness variables has been presented in Table 2.

**Table 2: t-Test of the selected Motor Fitness Variables**

Variable		Mean	Mean Difference	t-value
Speed	Batsman	3.011	0.126	0.938
	Bowler	3.137		
Flexibility	Batsman	17.7	1.0	0.630
	Bowler	18.7		
Reaction ability	Batsman	14.3	0.5	0.364
	Bowler	14.8		

Coordination	Batsman	29.3	0.3	0.309
	Bowler	29.6		
C-R End	Batsman	52.866	0.68	0.603
	Bowler	51.186		
T critical of two tail =2.100				

**DISCUSSION**

Table- 1 expressed the descriptive statistics of the selected variables of the batsman and bowler. In the case of speed and c-r endurance the batsman were better comparing the bowler where as in the case of flexibility, reaction ability and coordination the bowlers were better than their counterparts. Table-2 mentioned the t-value of the selected variables between the batsman and bowlers in cricket. The t-value between batsman and bowlers for speed was 0.938 and for C-R endurance was 0.603. The t-value for flexibility was 0.630, for reaction ability 0.364 and for coordination it was 0.309. In all the cases the t-value were insignificant. The reason of this insignificant result might be due to almost similar type of activity and training. Now a days T20 format of cricket is very popular worldwide and almost similar potential players are now trying to play efficiently in batting as well as bowling and therefore almost similar type of training they were doing which might be the cause of this type of result. The result of the study was supported by the study of Noakes & Durandt (2000) who found that batsmen tend to be smaller and lighter than bowlers but that they have similar morphological profiles with both batsmen and bowlers averaging approximately 12-14%body fat. Batsmen also have higher predicted maximal oxygen uptake values and faster running (simulated three runs protocol) with quicker turn times than bowlers but have similar strength and 35 m sprint performances.

**CONCLUSION**

On the basis of the result it can be concluded that the bowlers are better in flexibility, reaction ability and coordination where as batsman batter better in speed and C-R endurance but there was no significant difference between the batsman and the bowlers in the selected motor fitness variables.

**REFERENCE**

1. Noakes TD, and Durandt JJ (2000). Physiological requirement of Cricket. Journal of Sports Sciences.8(12), 919-929.
2. Woolmer, B. & Noakes, TD. (2008). Art and Science of Cricket, Struik Publishers, ISBN 978-1-77007-658-7, Cape Town, South Africa
3. Christie, CJ. & King, GA. (2008). Heart rate and perceived strain during batting in a warm and cool environment. International Journal of Fitness, Vol.4, No., pp 33-38, ISSN 0973-2152
4. Christie, CJ.; Todd, AI. & King, GA. (2008). The energy cost of batting during a simulated batting work bout. Science and Medicine in Sports and Exercise, Vol.11, pp 581-584, ISSN 1440-2440
5. Bartlett, RM. (2003). The science and medicine of cricket: an overview and update. Journal of Sports Sciences, Vol.21, pp. 733-752, ISSN 1466-447X
6. Kansal K. Devinder, "Predict Performance Potentials" Textbook of Applied Measurement, Evaluation and Sports Selection, Sports and Spiritual Science Publication, New Delhi, India
7. Johnstone James, and Paul. (2010). Physiologic profile of professional cricketers. The Journal of Strength Conditioning; 24(11), pp. 2900-2907.