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## A COMPARATIVE STUDY ON PHYSICAL VARIABLES OF CLUB AND NON-CLUB CRICKETERS IN KOLKATA INDIA

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**Abstract:** The purpose of the study was to compare the physical fitness components among the club and non-club cricketers. 30 (15 club & 15 non-club) cricketers were selected as subjects. The age of the subjects was 17 to 28 years. Age, Height and Weight were taken as personal data. Selected physical fitness components were measured as criterion by standard tests. The subject was taken randomly. Data were collected in the afternoon (3-4:30 p.m.) consecutively four days. Mean, Standard Deviation and independent t-test was used. Significant level was set at 0.05 levels. Club cricketers were significantly better than non-club cricketers on Agility, Sit-ups & standing broad jump and there were insignificant difference between club and non-club cricketers on selected other physical fitness components.

**Key words:** Physical Fitness, Cricketers, Club, Non-Club.

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### **Introduction**

Cricket is one of the most popular sports in India. It is a game played by both male and female across many age groups and levels of participation from recreational to professional sports. In India, the game also is played at all levels from amateur to professional competitions. India has been adequately represented at both levels, from intercollegiate to world championship, in both junior and senior men and women categories [1-8].

Cricket is a multi-faceted sport with multiple formats based around both the standard of play, the desired level of formality and the time available. An important division in terms of professional cricket is between matches limited by time in which the teams have two innings apiece, and those limited by number of overs, in which they have a single innings each. The former, known as first-class cricket, has a duration of three to five days (there have been examples of "timeless" matches too); the latter, known as limited over cricket because each team bowls a limit of typically 50 or 20 over, has a planned duration of one day only [9-14].

Typically, two-innings matches have at least six hours of playing time each day. Limited



over matches often last six hours or more . There are usually formal intervals on each day for lunch and tea with brief informal breaks for drinks. There is also a short interval between innings.

To prevent, injury, and to enable a full season to hopefully be completed, its essential that a correct warm up and stretching routine be implemented prior to the start of each match, along with dynamic movements to enable bowlers and bats man to stay in optimum performance during long matches.

Along with building a good base of strength and fitness, the skills of the game should be worked on, ideally as a team in order to produce a higher level of combined skills, as cricket is a sport that is played in two forms, batting and fielding.

Cricket has become has one of the most popular game in the world and of all the major game in India it is the only one that has been jealously preserved by all those who player supported. Physical 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 and endurance in abundance so as to learn and master the techniques of the game.

Modern demands in one day competitions, especially for training of fast bowlers, batsman, fielders and wicket-keepers adequate emphasis is given for the development physical characteristics. Therefore the modern trend in the field of cricket is to assess the related components successfully as a part of total body and size of each cricketer and interpret how far each of these components are helpful in the performance of a cricketer under match condition.

**CRICKET :-** Cricket is a bat-and-ball game played between two teams of 11 players on a field at the centre of which is a rectangular 22-yard long pitch. Each team takes it in turn to bat, attempting to score runs, while the other team fields. Each turn is known as an innings.

**Club cricketers:** In Kolkata there are many cricket clubs under the C.A.B. In every season organized match between each division (1<sup>st</sup> & 2<sup>nd</sup>) of club. So the every club maintains a good training season, good diet for the cricketers. Basically maintain good fitness for over season under the scientific observation.

**Non-club cricketers:** Those cricketers who played cricket but do not played under the organization like club cricket.

**Objectives:** The objective of the study was to compute the comparison between Club and Non-Club cricketers in relation to selected physical fitness components.



## METHODOLOGY

### SELECTION OF SUBJECTS:-

Thirty Male Cricketers (fifteen club and fifteen non-club cricketers) were selected as subjects for this study .The age of the subjects ranged from 17 to 28 years. The detailed description of the subjects related to the study in given **Selection Variables**

Selected Physical Fitness Variables:-

1. Speed (50 mts. Dash)
2. Leg Strength (standing broad jump)
3. Abdominal Strength Endurance (sit-ups)
4. Agility(4\*10 mts shuttle run)
5. Endurance (1000 mts run)

The necessary data on the selected physical fitness variables are collect Visva-Bharati cricket ground and Bira school ground.

### STATISTICAL ANALYSIS OF DATA

The study has been undertaken to present profile of cricket players, namely club and non-club cricketers on physical variables. Further a comparison among club and non-club cricketers have been made in order to assess differences, if any on physical variables by using the t-test. The analysis was done by using statistical package for windows and Microsoft excels 2007.

Criterion Measures with Units. Table -1

S.No	Variables	Tools/test	Unit
1	Speed, endurance, agility	Stop watch	Sec/min
2	Leg strength,	tape	Cm
3	Abdominal strength endurance	Stop watch	counts

## FINDINGS

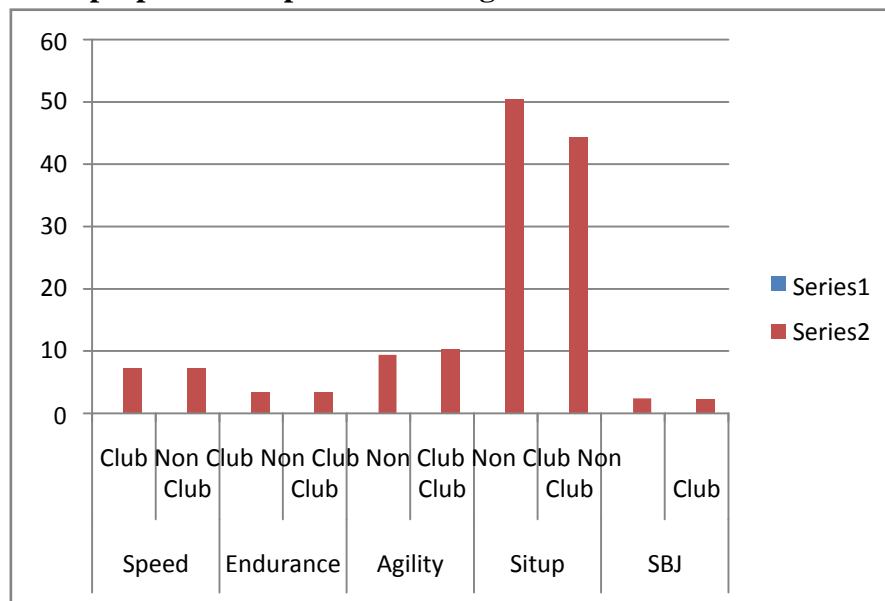
Descriptive statistics for physical variables .Table- 2

Group Statistics					
	Grp	N	Mean	Std. Deviation	Std. Error Mean
Speed	Club	15	7.1707	.34790	.08983
	Non Club	15	7.2953	.31582	.08154
Endurance	Club	15	3.3247	.16750	.04325
	Non Club	15	3.3180	.25069	.06473
Agility	Club	15	9.4173	.33805	.08728
	Non Club	15	10.2827	.33797	.08726
Sit-ups	Club	15	50.4000	5.23450	1.35154



	Non Club	15	44.3333	4.57738	1.18187
SBJ	Club	15	2.4027	.23057	.05953
	Non Club	15	2.2293	.10552	.02725
WGT	Club	15	65.0667	3.89994	1.00696
	Non Club	15	60.2000	3.46822	.89549
HT	Club	15	170.1333	4.68838	1.21054
	Non Club	15	172.8667	6.68545	1.72618
BMI	Club	15	22.5287	1.85310	.47847
	Non Club	15	20.1980	1.54514	.39895

Using descriptive statistics in physical variables of CLUB and NON-CLUB cricketers have been prepared and presented in fig.-1



**Fig.1 Physical Variables Of club and non-club cricketers**

Descriptive statistics of club and non-club cricketers separately on physical variables was computed and have been presented -

- The mean & SD value of 50mts dash of club & non-club cricketers were 7.17 & 7.29 and .34 & .31 respectively. Whereas the t-value was 1.028 and mean difference .12, this is not significant at .05 levels.



- The mean value of 1000mts run/walk 3.32 & 3.31 and SD .16 & .25 of club & non-club cricketers respectively and mean difference .006 .whereas t-value .86, this is non-significant at .05 level.
- The mean value of 4\*10 Agility 9.41 & 10.28 and SD .338 & .337 of club & non-club cricketers respectively and mean difference .86. whereas t value 7.01,this is significant at .05 level
- Mean value of Abdominal & Oblique strength 50.40 & 44.33 and SD 5.23 & 4.57 of club & non-club cricketers respectively and mean difference 6.06 .whereas t-value 3.37, this is significant at .05 level.
- The mean value of Leg strength 2.40 & 2.22 and SD .23 & .10 of club & non-club cricketers respectively and mean difference .17 .whereas t-value 2.64, this is significant at .05 levels.

For comparison of different physical variables among club & non-club cricketers t-test was applied and presented and placed-Table-3

		df	Mean Difference	Std. Error Difference	T value	Sig. (2-tailed)
Speed	Club	28	0.12467	.12132	1.028	.313
	Non Club					
Endurance	Club	28	0.00667	.07785	.086	.932
	Non Club					
Agility	Club	28	0.86533	.12342	<b>7.011*</b>	.000
	Non Club					
Situp	Club	28	6.06667	1.79541	<b>3.379*</b>	.002
	Non Club					
SBJ	Club	28	0.17333	.06547	<b>2.647*</b>	.013
	Non Club					
WGT	Club	28	4.86667	1.34754	3.612	.001
	Non Club					
HT	Club	28	2.73333	2.10834	1.296	.205
	Non Club					
BMI	Club	28	2.33067	.62297	3.741	.001
	Non Club					

- **Significant at .05 levels.**



## DISCUSSION:

The statistical data pertaining to physical variables reveals that the non-club cricketers have higher mean values as compared to club cricketers in speed measured by 50mts run but this is non-significant and also the club cricketers have higher mean value as compared to non-club cricketers in endurance measured by 1000mts run/walk but this is also non-significant at 0.05 level.

The mean value of performance in 4\*10m shuttle runs by the club and non-club cricketers. This test measures agility, which is the ability of an individual to change direction without reducing. The result indicated that the performance in this test, club cricketers are improve better than non-club cricketers. This is significance 0.05 level.

The performances of the abdominal strength endurance the mean value of the club cricketers are more improve than non-club cricketers. So this is significance 0.05 level.

The figure represents the mean values of as measured by standing broad jump test for the leg strength in club cricketers have higher than non-club cricketers. So this is also significance at 0.05 level.

The above findings in respect of the selected physical variables appear to be very logical. The result might be due to the fact that this motor component comparatively improves the club cricketers for their regular training. The results of these studies are in good accord to the present one.

## CONCLUSIONS

Among the five components the club cricketers are improve better than non-club cricketers. For the strength and endurance dominating events sit-ups and 1000mts run/walk than the speed and power dominating events 50mts run, shuttle run, standing broad jump . Policies to support regular physical activity participation various training should be strategically developed and promoted high lighting the promotion of health benefits in exercise. The present study following-

1. Club cricketers are found to be significantly better in agility, abdominal strength endurance and leg strength as compared to the non-cricketers.
2. In case of endurance club cricketers are good than the non-club cricketers and in the speed the non club cricketers are better improve than club cricketers but this is non-significance.

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