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## A comparative study of physical fitness components between Baseball and Softball players of Pune City

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### Abstract

Physical fitness denotes a person status of physique in relation to its physical achievements. The latest scientific evidence also edict the fact that for internal or physiological soundness physical fitness is necessary. Modern physical educators are divided the components of fitness into Health related and skill related physical fitness components. Physical fitness refers to the capacity of an athlete to meet the varied physical demands of their sport without reducing the athlete to a fatigued state. The components of physical fitness are Cardio vascular endurance, Muscular strength, Flexibility. For this study 15 male District level Baseball Players and 15 male District level Softball players of Pune city were selected as the subjects. All the subjects were specialized in Baseball and Softball players and undergoing training at the Pune city. District level male Baseball Players have better average performance than District level male Softball Players in flexibility. District level male Softball Players are not having better average performance than District level male Baseball Players in 10x6 mts shuttle run. Baseball Players are better than Softball Players in sit and reach. The average performances of male Baseball players are higher than softball players in endurance. The calculated value of t-ratio was higher than the calculated value required at 0.05 level of confidence. The results of the study when compared with physical fitness of both the groups showed that both are not equal.

**Keywords:** Physical Fitness, Baseball players, Softball Players

### Introduction

Fitness is the term which is widely used in the present day health conscious society. The people have realized the importance of fitness in day to day routines and also in achieving sports excellence. Fitness denotes a person status of physique in relation to its physical achievements. The latest scientific evidence also edict the fact that for internal or physiological soundness physical fitness is necessary. It is also a high concern for a coach to develop various skills and for this the sportsperson's skill related physical fitness should be upgraded and developed. Physical fitness refers to the capacity of an athlete to meet the varied physical demands of their sport without reducing the athlete to a fatigued state.

Physical fitness is component of total fitness an individual. Total fitness is a result of the genetic makeup and the interaction with the environment. Totally fit individual is psychological stable, mentally alert, emotionally balanced and socially adjustable to different circumstances prevailing in the society. For successful motor sequence to achieve, an accurate and efficient movement is needed whether it is a single effort as in a golf drive or a series of complex and rapidly changing movements as in baseball & softball game.

Uppal *et al.* (1987) [6] conducted a study to assess the motor fitness components as a predictor of soccer playing ability. Male soccer players (n=200) were selected for the study. They were administered five tests of motor fitness components, namely, speed (50 yard dash), agility (4x10M shuttle run), maximum leg strength (by dynamo-meter), explosive leg strength (standing broad jump) and cardio-respiratory endurance (Cooper's twelve minute run/walk test). The soccer playing ability was assessed with the help of a panel of three judges. Statistical treatment of the data shows all the independent variables (speed, agility, maximum leg strength, explosive leg strength and cardio-respiratory endurance), have been found to be significantly related to dependent variable (soccer playing ability). The regression equation

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developed was = 11.72 (standing broad jump) +. 52 (Cooper's 12 minute run/walk test horses in 100th unit) - 2.06 (4x10m shuttle run) +4.94.

### Methodology

The purpose of the study was to compare the physical fitness components among male Baseball and Softball players. to achieve this purpose, male Baseball and Softball players from

Pune city who participation in the District level game. Those were selected as subjects they participated in the district level tournament. 10x6m shuttle run, 30 meter sprint, sit & reach and 2.4 km run tests were administered to the subjects. For this study were selected total number of subjects (n=30).

### Result of the Study

**Table 1:** Comparison of Physical fitness components of Baseball and Softball Players of Pune city

Motor components	Subjects	No of Players	Mean	SD
30 Meters sprint	Baseball Players	15	5.1293	0.2085
	Softball Players	15	5.2533	0.2437
10X6 m Shuttle run	Baseball Players	15	16.7673	0.6904
	Softball Players	15	16.5347	0.3854
Sit & reach	Baseball Players	15	15.6667	4.8648
	Softball Players	15	12.0667	2.5204
2.4 km run	Baseball Players	15	11.1280	1.1530
	Hockey Players	15	12.2733	1.3207

The table no-1 indicates that the comparison of all variables viz. 30 meters sprint, 10x6 meters Shuttle run, sit and Reach and 2.4 km run in respect of male district level Baseball and Softball players of Pune city. The calculated value of Mean and Standard deviation on the First variable shows in (30 meters sprint) 5.1293, 0.2085 and 5.2533, 0.2437 respectively in respect of male district level Baseball and Softball players of Pune city. There is a little variation as the Mean value of male Baseball players are less than male Softball players and this can be interpreted that in this variable Softball players are better than Baseball players. The calculated value of Mean and Standard deviation on the Second variable shows in (10x6 meters Shuttle run) 16.7673, 0.6904 and 16.5347, 0.3854 respectively in respect of male Baseball and Softball players of Pune city. There is a little variation as the Mean value of male Baseball players are higher than that of Softball players and this can be attributed that in this variable male Softball players are not better than male Baseball players. The calculated value of Mean and Standard deviation on the third variables shows in (Sit and Reach) 15.6667, 4.8648 and 12.0667, 2.5204 respectively in respect of male Baseball and Softball players of Pune city. There is a little variation as the Mean value of male Baseball players are higher than that of male Softball players and this can be explained that in this variable District level Baseball players are better than District level Softball players. The calculated value of Mean and Standard deviation on the fourth variables shows in (2.4 km run) 11.1280, 1.1530 and 12.2733, 1.3207 respectively in respect of male District level Baseball and Softball players of Pune city. There is a little variation as the Mean value of male District level Baseball players are less than male District level Softball players and this can be explained that in this variable male District level Softball players are better than male Baseball players.

### Discussion

Based on the results of the above study the investigator has drawn the following conclusions: District level male Softball players have better average performance than District level male Baseball players in speed. This speaks that 30 meters sprint is speed event, which comes under sprinting distance. Hence District level male Softball players are already having good speed and can cover 30 meters sprint in less time compared to male Baseball players. The reason is that male Softball players of Pune city training schedule include mostly

activities like strength training, explosive strength training and speed training. District level male Softball players are not having better average performance than District level male Baseball players in 10x6 mts shuttle run. This speaks that District level Softball players are not having good speed and agility. To improve speed and agility Sports male District level Baseball players play the game which improves the agility like the kho-kho, handball, volleyball and short races etc. The average performances of District level male Baseball players are better than male Softball players in Sit and Reach component. This speaks like that they are having good flexibility. To improve the flexibility in the body their training schedule includes stretching i.e. individual and partner stretching, individual flexibility and partner flexibility. The average performances of District level male Softball players are higher than District level male Baseball players in endurance. To find out whether there is any significant difference among Softball players and Baseball players of Pune city t-ratio was tabulated. The calculated value of t-ratio was higher than the tabulated value required at 0.05 level of confidence. The results of the study when compared with physical fitness of both the groups showed that both are not equal in physical fitness.

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