



ISSN: 2456-0057

IJPNPE 2018; 3(1): 589-591

© 2018 IJPNPE

www.journalofsports.com

Received: 14-11-2017

Accepted: 15-12-2017

**Dr. Mukhwinder Singh**

Director Physical Education &  
Sports, SSM College Dinanagar,  
Punjab, India

## A comparative study of selected physical fitness parameters of inter-college and inter-varsity baseball players

**Dr. Mukhwinder Singh**

### Abstract

The purpose of the study was to compare the college level and university level softball players with regard to selected physical fitness parameters. For this purpose, the investigator has selected forty (N=40) Inter-college and Intervarsity male baseball players of 18 to 25 years of age to act as subjects. The subjects were purposive assigned in to two group: - A: Intercollege (N<sub>1</sub>=20) and Group – B: intervarsity (N<sub>2</sub>=20). The purposive sampling technique was used to select the subject. All the subjects, after having been informed about the objective and the protocol of the study, gave their consent and volunteered to participate in this study. To determine the significant difference between intervarsity and intercollege baseball players, unpaired t-test was employed for data analysis. To test the hypothesis, the level of significance was set at 0.05.

**Keywords:** Physical fitness parameters, inter-college, inter-varsity baseball players

### Introduction

Physical fitness plays a vital role in the sports besides physical fitness techniques training also plays an important role in the total training of sports personalities. Most sports scientist explained that the games and sports depends in exhibiting excellent skills depending upon in the individual that occur to show their abilities in master in the skills and talent, but most of the optimum level of development in the physical fitness of sports students depend basically on the reflection of their psychological factors that influence that various sports personalities to put up a good show and show their skill and power and ability to perform in the better manner by proving themselves through the latest technology that have come under way to solve all the Psychological problems in the sports Physical fitness is general state of good physical health. Physical fitness is the ability to endure, beat with stand stress and carry on in circumstances where an unfit person could not continue. Modern competitive performance Demands intensive training every day throughout the year, to maintain Fitness for performance of peak level. The techniques and skills in sports and games have advanced that the competitive sports participants required to possess a high degree of physical fitness. Skill related physical fitness refers to an individual's athletic ability in sports such as tennis and encompasses skill-related attributes like dynamic balance, power, speed and agility; the health-related aspect is a measure of cardiovascular endurance, muscle strength, endurance, and flexibility, and body composition (Hopkins & Walker, 1988).

Physical fitness is general state of good physical health. Physical fitness is the ability to endure, beat with stand stress and carry on in circumstances where an unfit person could not continue. Physical fitness is often divided into the following categories in order for people to be able examine its components or parts. Particularly, Physical fitness is judged as Cardio vascular endurance is the ability of the body to deliver oxygen and nutrients to tissues and to remove wastes over sustained periods of time. Muscular strength & endurance deals with the ability of the muscle to exert force for a brief time period, while endurance is the ability of a muscle, or group of muscles, to sustain repeated contractions or to continue to apply force against an inert object. Flexibility denotes the ability to move joints and use muscles through their full range of motion.

**Correspondence**

**Dr. Mukhwinder Singh**

Director Physical Education &  
Sports, SSM College Dinanagar,  
Punjab, India

### Selection of variables tools all test

S. No.	Components	Test
1.	Speed	50-Yard Dash
2.	Strength	Pull-Ups
3.	Endurance	600-YARD RUN/WALK
4.	Agility	4x10 mtr. (Shuttle Run)

### Research findings

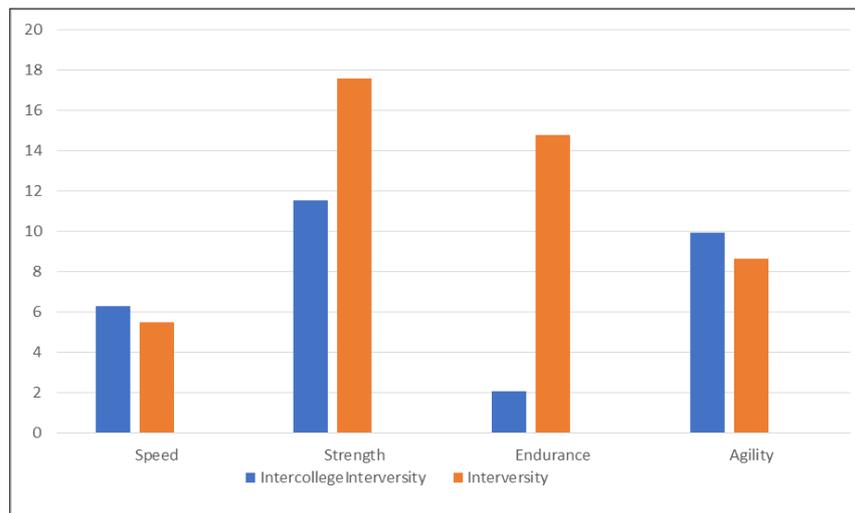
**Table 1:** Mean Values ( $\pm$ SD), Standard Error of Mean and Test Statistic 't' between inter-college and inter-varsity players of baseball with regard to the variable Speed, Strength, Endurance and Agility.

Variable	Sports Group	Mean	SD	SEM	t-value
Speed	Inter-college players (N <sub>1</sub> =20)	6.30	0.40	0.78	5.70*
	Inter-varsity players (N <sub>2</sub> =20)	5.52	0.46		
Strength	Inter-college players (N <sub>1</sub> =20)	11.55	1.43	6.05	12.09*
	Inter-varsity players (N <sub>2</sub> =20)	17.61	1.69		
Endurance	Inter-college players (N <sub>1</sub> =20)	2.08	0.186	0.60	13.69*
	Inter-varsity players (N <sub>2</sub> =20)	1.478	0.064		
Agility	Inter-college players (N <sub>1</sub> =20)	9.97	0.95	5.51	0.24
	Inter-varsity players (N <sub>2</sub> =20)	8.67	0.46		

\*Significant at 0.05 level

Table shows that the means of selected variable speed in inter-college baseball players and inter-varsity baseball players was 5.52 and 6.31 respectively whereas the standard deviation (SD) was 0.464 and 0.41 respectively. The tabulated value of "t" (1.69) is less than calculated t- value (5.70), the data does suggest that the difference between inter-college and inter-varsity baseball players in regard to the variable speed are significant. Strength in inter-college baseball players and inter-varsity baseball players was 11.55 and 17.50 respectively whereas the standard deviation (SD) was 1.43 and 1.67 respectively. The tabulated value of "t" (1.69) is greater than calculated t- value (12.09) the data does suggest that the difference between inter-college and inter-varsity baseball players in regard to the variable strength are

insignificant. Endurance in inter-college baseball players and inter-varsity baseball players was 1.48 and 2.08 respectively whereas the standard deviation (SD) was 0.064 and 0.186 respectively. The tabulated value of "t" (1.69) is less than calculated t- value (13.69) the data does suggest that the difference between inter-college and inter-varsity baseball players in regard to the variable Endurance are significant and Agility in inter-college baseball players and inter-varsity baseball players was 8.67 and 9.97 respectively whereas the standard deviation (SD) was 0.46 and 0.95 respectively. The tabulated value of "t" (1.69) is less than calculated t- value (5.51) the data does suggest that the difference between inter-college and inter-varsity baseball players in regard to the variable Agility are significant.



**Fig 1:** Graphical representation of mean values, standard deviation (SD), standard error of mean, 't' value between inter-college and inter-varsity players of baseball with regard to the variable Speed, Strength, Endurance and Agility.

### Discussion of findings

The objective of this study was to determine the significant difference of selected physical fitness parameters between inter-college and inter-varsity baseball players. For this purpose, 40 subjects were selected, they are further divided into two groups N<sub>1</sub>=20(inter-college) and N<sub>2</sub>=20 (inter-varsity) the purposive sampling technique was used to attain the objective of the study. All the subjects after having been

informed about the objective and protocol of the study. They gave their consent and volunteered to participate in this study. The present study show that the between group difference were found for speed ( $\pm$ =0.78), strength ( $\pm$ =6.05), endurance ( $\pm$ =0.60) and agility ( $\pm$ =0.24) since the computed value of T for all the dimension were greater than the tabulated. T +.05 (38) =1.69.

## References

1. Ambegaonkar JP, Redmond CJ, Winter C, Cortes N, Ambegaonkar SJ Thompson B *et al.* Ankle stabilizers affect agility but not vertical jump or dynamic balance, 2011.
2. Performance. Foot Ankle Spec. 4(6):354-60.
3. Barr M, Sheppard J, Gabbett T, Newton R. Long-term training induced changes in sprinting speed and sprint momentum in elite rugby union players. J Strength Cond Res. 2014. [Epub ahead of print]
4. Ben-Zaken S, Meckel Y, Nemet D, Eliakim A. Genetic score of power-speed and endurance track and field athletes. Scand J Med Sci Sports. 2013. doi: 10.1111/sms.12141. [Epub ahead of print]
5. Bhat R, Moiz JA. Comparison of dynamic balance in collegiate field hockey and football players using star excursion balance test. Asian J Sports Med. 2013; 4(3):221-9.
6. Boccolini G, Brazziti A, Bonfanti L, Alberti G. Using balance training to improve the performance of youth basketball players. Sport Sci Health, 2013; 9(2):37-42.
7. Brandenburg JP, Gaetz M. Fluid balance of elite female basketball players before and during game play. Int J Sport Nutr Exerc Metab. 2012; 22(5):347-52.
8. Butler RJ, Queen RM, Beckman B, Kiesel KB, Plisky PJ. Comparison of dynamic balance in adolescent male soccer players from Rwanda and the United States. Int J Sports Phys Ther. 2013; 8(6):749-55.
9. Cunningham DJ, West DJ, Owen NJ, Shearer DA, Finn CV, Bracken RM *et al.* Strength and power predictors of sprinting performance in professional rugby players. J Sports Med Phys Fitness. 2013; 53(2):105-11.
10. Darbutas T, Juodžbalienė V, Skurvydas A, Kriščiūnas A. Dependence of reaction time and movement speed on task complexity and age. Medicina (Kaunas), 2013; 49(1):18-22.
11. Donath L, Faude O, Roth R, Zahner L. Effects of stair-climbing on balance, gait, strength, resting heart rate, and submaximal endurance in healthy seniors. Scand J Med Sci Sports. 2013. doi: 10.1111/sms.12113. [Epub ahead of print]