

## **Comparison of Selected Physical Fitness Components between Sports Person and Non Sports Person**

**Harendra Singh Papola\* Bhaskar Kumar Tewari \*\* Poonam Tyagi\*\*\***

\* G.B.P.U.A.&T., Pantnagar -2613145 (U.S.Nagar, Uttarakhand).

\*\* G.B.P.U.A.&T., Pantnagar -2613145 (U.S.Nagar, Uttarakhand).

\*\*\* G.B.P.U.A.&T., Pantnagar -2613145 (U.S.Nagar, Uttarakhand).

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### **Abstract**

The purpose of the present study was to compare the selected physical fitness components between sports person and non sports person. Sixty (60) male students studying in G.B.Pant University of Agriculture and Technology, Pantnagar, U.S.Nagar, Uttarakhand, were selected as subjects for the present study.

Out of sixty (60) subjects, thirty subjects were university team players for the year 2014-2015 i.e. 10 from Football, 10 from Hockey, and 10 from Cricket, were considered as sportsperson. Remaining thirty subjects, who were neither the players nor having any background of sports, were considered as non sportsperson. The subject's age ranged from 18 to 25 years.

The variables for study were- Agility, Explosive Strength, and Cardiovascular Endurance.

To Compare the selected physical fitness components between the sports person and non sports person 't' test was used. The level of significance was set at 0.05 level. The result showed significant differences in Agility, Explosive Strength, and Cardiovascular Endurance.

Key words- Agility, Explosive Strength, Cardiovascular Endurance.

### **INTRODUCTION**

Fitness may be defined as one's level of adaptation to the stressors of one's lifestyle. (Frank W.Dick 2006).

Agility is the ability to change directions quickly and control body movements (Hardyal Singh, 1991).

Explosive strength is the capacity of the individual to release maximum force in the shortest period of time. (Donald K. Mathews, 1981).

The ability to perform muscular work at sub maximal level by moderate contractions for a long time is known as Cardiovascular Endurance. (Devinder K.Kansal,1996).

Physical Fitness is the ability to meet each day demands without becoming exhausted. It is the ability to have a reservoir of endurance life' emergencies in short, "physical fitness is that condition of your body that giver buoyancy to living."(John Walsh1966),

Physical fitness is a matter of fundamental importance to individual well-being and to the progress and security of a nation. It is the basis for all other forms of excellence. With increased mechanization there has been a corresponding decrease in the number of tasks that require an expenditure of energy, sufficient vigorous exercises are not done to develop and maintain equate levels of physical fitness. Many individuals must rely on attain an acceptable level of physical fitness.( Robert,1973)

A physically fit man will live a long and rich life. His entire success in life depends on his physical fitness. A physically fit man not only lives for himself but also for others. The society and the nation particularly in a developing country like ours, the need for physically fit person is very great. "Since the days of early Greeks, physical fitness has important objective of physical education. Infected the desire to establish a scientific approach to the development of physical fitness was the primary reason for meeting of physical education in 1985, that resulted in the birth of as profession." (Nixon,1956)

### MATERIAL AND METHODS

The purpose of the present study was to compare the selected physical fitness components between sports person and non sports person. Sixty (60) male students studying in G.B.Pant University of Agriculture and Technology, Pantnagar, U.S.Nagar, Uttarakhand, were selected as subjects for the present study.

Out of sixty (60) subjects, thirty subjects were university team players for the year 2014-2015 i.e. 10 from Football, 10 from Hockey, and 10 from Cricket, were considered as sportsperson. Remaining thirty subjects, who were neither the players nor having any background of sports, were considered as non sportsperson. The subject's age ranged from 18 to 25 years.

#### Variable

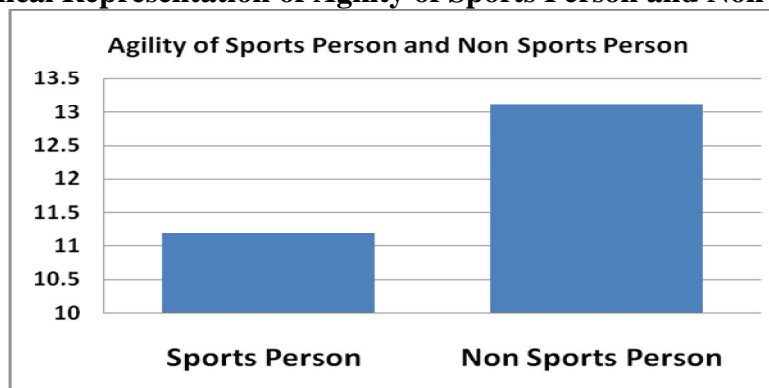
1. Agility: - Agility was be measured by using 4 x 10 m shuttle run. The score was recorded to the nearest tenth of a second.
2. Explosive strength:- Explosive strength was measured by the horizontal distance covered in meters and centimeters between the take off line and the nearer break made in landing using standing broad jump.
3. Cardiovascular Endurance: - Cardiovascular Endurance was measured by cooper's 12 minute run/walk test. The score was recorded in meters.

#### Statistical Analysis

To Compare the selected physical fitness components between the sports person and non sports person 't' test was used. The level of significance was set at 0.05 level.

### RESULTS AND DISCUSSION

**Fig. 1: Graphical Representation of Agility of Sports Person and Non Sports Person.**



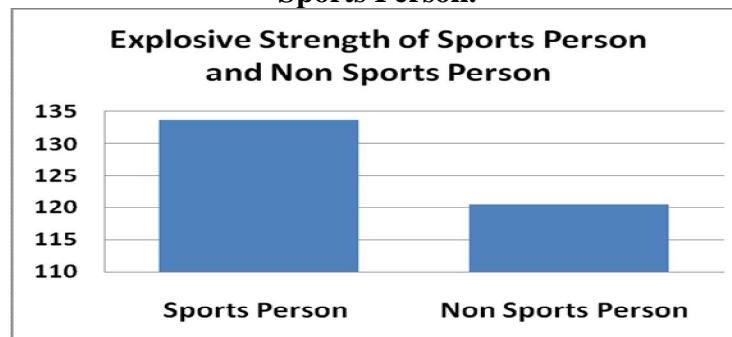
**Table-1: Mean Comparison of Agility between Sports Person and Non Sports Person**

	Sports Person	Non Sports Person	"t" ratio
Mean	11.1833	13.1133	10.875
SD	.64116	.68619	

Significant  $t_{0.05}(58) = 2.000$

The table-1 reveals that significant difference was found in Agility between the sports person and non sports person, as the calculated value of 't'=10.875 was greater than the tabulated  $t_{.05}(58) = 2.000$

**Fig. 2: Graphical Representation of Explosive Strength of Sports Person and Non Sports Person.**



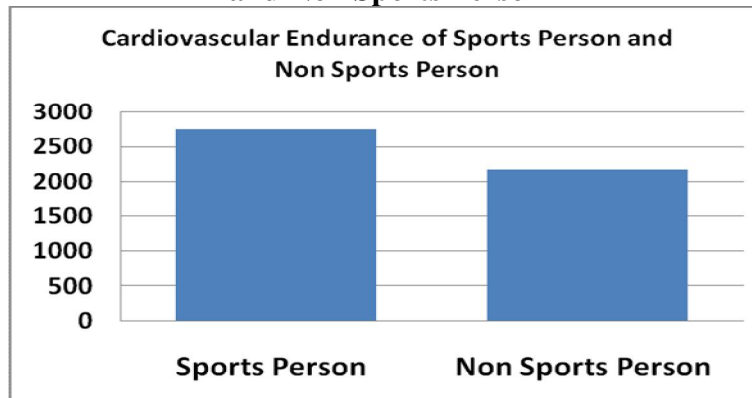
**Table-2: Mean Comparison of Explosive Strength between the Sports Person and Non Sports Person**

	Sports Person	Non Sports Person	"t" ratio
Mean	133.7500	120.5197	33.673
SD	1.79976	1.02067	

Significant  $t_{0.05}(58) = 2.000$

The table-2 reveals that significant difference was found in Explosive Strength between the sports person and non sports person, as the calculated value of 't'=33.673 was greater than the tabulated  $t_{.05}(58) = 2.000$ .

**Fig. 3: Graphical Representation of Cardiovascular Endurance of Sports Person and Non Sports Person**



**Table-3: Mean Comparison of Cardiovascular Endurance between the Sports Person and Non Sports Person.**

	<b>Sports Person</b>	<b>Non Sports Person</b>	<b>“t” ratio</b>
<b>Mean</b>	<b>2751.6667</b>	<b>2180.0000</b>	<b>17.889</b>
<b>SD</b>	<b>81.65586</b>	<b>149.48186</b>	

Significant  $t_{0.05}(58) = 2.000$

The table-3 reveals that significant difference was found in Cardiovascular Endurance between the sports person and non sports person, as the calculated value of ‘t’=17.889 was greater than the tabulated  $t_{0.05}(58) = 2.000$ .

### **Conclusion**

The findings of the study revealed that there were statistically significant differences in Agility, Explosive Strength, and Cardiovascular Endurance i.e. university male team players of Football, Hockey and Cricket for the year 2014-2015 of G.B.Pant University of Agriculture and Technology, Pantnagar, U.S.Nagar, Uttarakhand were having more Agility, Explosive Strength, and Cardiovascular Endurance than non sports person of G.B.Pant University of Agriculture and Technology, Pantnagar, U.S.Nagar, Uttarakhand.

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