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A Comparative Study of Physical Variables (Muscular Strength) Football Players and Athletes of School Levels

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Abstract

The purpose of study is to compare the physical fitness (muscular strength) among the football players and athletes of school level. For the purpose of study we choose sample of sixty subjects and divided them in two groups of thirty each. The range of subjects between 16 to 18 yrs. The variables selected Strength one of the component of Physical Fitness. The necessary data of physical fitness (muscular strength) is measured by number of sit ups performed by subjects, in three attempts performed in one minute each. The collected data paired t-Test was to use find out the significant difference. 0.05 level of confidence was used to test the significance.

Keywords*:* Physical fitness variables (Muscular strength), football players, athletest.

Introduction

Games and sports have been part of human life almost since the time immemorial. Be it a necessity of survival i.e. hunting for food and shelter, safety form wild animals or other enemies or as a pursuit of pleasure, the games and sports have been indispensable to mankind and have been part of his culture. People used sports and physical activities the culture heritage of their tribes, a games, sports and physical activities, persisted despite the rise and fall of ancient civilization as a cultural heritage. Today games and Sports have emerged as Universal cultural phenomenon[1].

Physical education and sports, being an integral part of education have also experienced the impact of scientific advancements. Now the sportsman has been able to give outstanding performance because of involvement of new training methods and means, and of execution of sport exercises such as sports techniques and tactics, improvement of sportswear and equipments as well as other components and conditions of the system of training[2].

The game provides an ample opportunity for the development of strength, speed, endurance, agility, neuromuscular skill and coordination of the by various actions involved in it. Such actions as running, jumping, bending, stretching and movements, which call for balance and carryout values, and thus it meets all the requirements of an excellent form of physical activity.

Strength as one of the factors of various training methods plays an ever-increasing role in the modern system or training .Strength is created by a contraction of the muscle fibers. The contraction results day to the proteins present in the muscle, mainly atomism. Strength can be developed through systematic weight training. This is the most important condition for achieving good performance in all kinds of competitions. The development of specific strength for each specific sport can be achieved through specific training methods. A great progress has been made in this field during recent years. In the past athlete began his training in the fine weather and continued until the end of the autumn. He then retired during the winter. Today, things have changed, training never stops and it is exhausting to suit one's sport. This is the reason why records are broken in every competition. This is due to the fact that methods of increasing the specific quality of strength for each sport will continue to improve. The conclusion is that the strength factor more and more dominates the modern system of training[3].

A high level performance in any games and sports not only requires certain physical qualities like speed, endurance, explosive power, agility etc. but also a good physical structure. Under modern condition especially related to training of sports/games with focus on superior performance, adequate importance is given to the physique and body build of each athlete.

The games provide an ample opportunity for the development of strength, speed endurance, agility, and neuromuscular coordination of the various actions involved in it. Such actions are running, bending, stretching and other movements. It meets all the requirements of an excellent form of physical activity[4].

Proficiency in football and athletics requires that an athlete has top level fitness. He should be capable of repeated sprints of short distances possess enabling him to rapidly change direction without losing momentum, have explosive power to run faster and have endurance to perform for sustained period of activity[5].

Football requires strength, speed and agility. General athleticism in every form of play. It is a prerequisite for skills and technical performance. In the training choose exercise which certain one and more athletic element[6].

It is also established beyond doubt that no serious study and comparison on the physical fitness variable (like strength) among athletes and football players was even taken.

Hence the scholar in the form of study is making modest effort in this direction to compare physical fitness variables belonging to football players and athletes.

Methodology

For the present study we select muscular strength as physical fitness variable.

Muscular strength: Number of sit-ups performed by subject in one minute.

Data Analysis: The obtained data was systematically arranged tabled and subjected to statistical treatment co-relation and t-test for finding the difference between the football Players and Athletes.

Table-1
Physical Fitness Variables Raw Scores -Muscular Strength

S. No	ATHLETES				FOOTBALL PLAYES			
	1	2	3	MEAN	1	2	3	MEAN
1	22	24	23	23	14	16	18	16
2	24	23	25	24	23	24	22	23
3	18	20	22	20	20	21	22	21
4	20	22	21	21	16	18	20	18
5	24	20	22	22	21	23	22	22
6	22	24	20	22	18	18	21	19
7	17	19	18	18	19	20	23	21
8	15	16	17	16	22	21	23	22
9	21	22	23	22	24	22	23	23
10	20	21	22	21	25	23	24	24
11	19	20	18	19	21	22	23	22
12	16	20	18	22	17	20	17	18
13	21	23	25	23	16	18	20	18
14	17	20	20	19	22	23	24	23
15	20	24	22	22	22	25	22	23
16	23	21	25	23	24	25	26	25
17	23	27	25	25	24	22	24	24
18	17	19	24	20	24	23	25	24
19	19	19	22	20	25	24	26	25
20	17	18	22	19	17	16	18	17
21	21	27	24	24	19	20	21	20
22	15	19	17	17	24	25	26	25
23	18	17	19	18	18	20	19	19
24	18	22	23	21	19	20	21	20
25	21	21	24	22	21	22	23	22
26	22	22	22	22	20	24	22	22
27	23	25	27	25	21	23	22	22
28	22	24	24	24	22	24	23	23
29	22	26	27	25	22	24	23	23
30	22	26	24	24	18	22	20	20

Mean and S.D Muscular Strength among Football Players and Athletes		
Particulars	Football Players	Athletes
Mean	21.43	21.47
Std. Dev	2.43	2.47
T-Test on Muscular strength among football players and athletes		
T-Test	0.48	

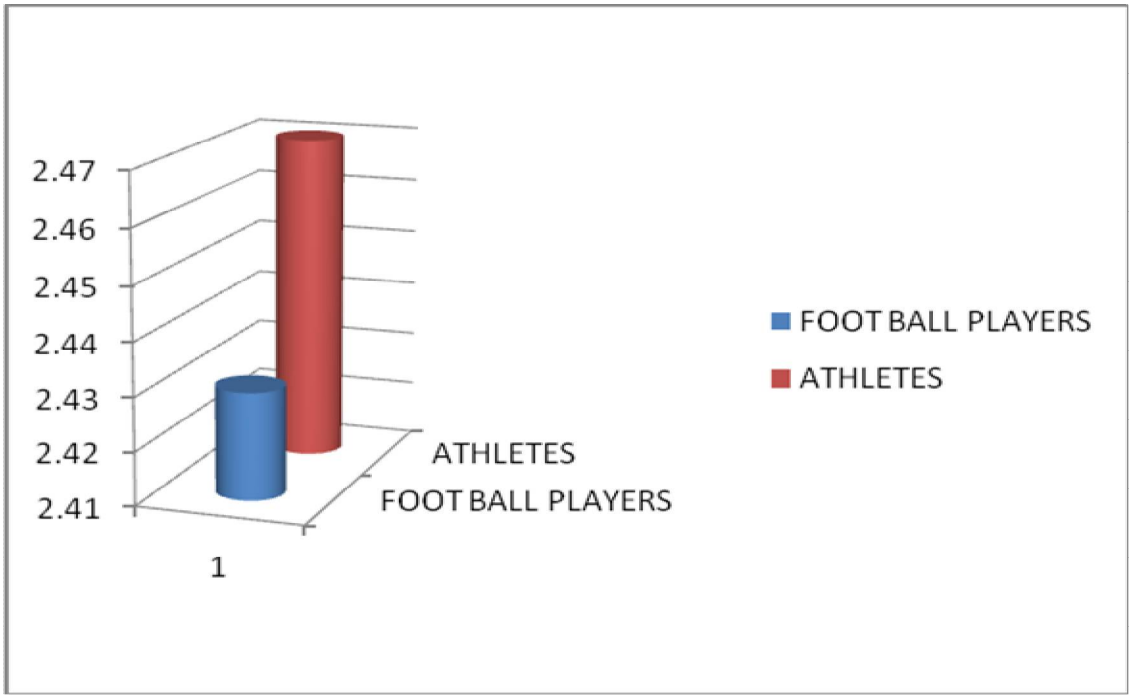

Figure-1
Bar Diagram Showing STD. Dev. among football players and athletes

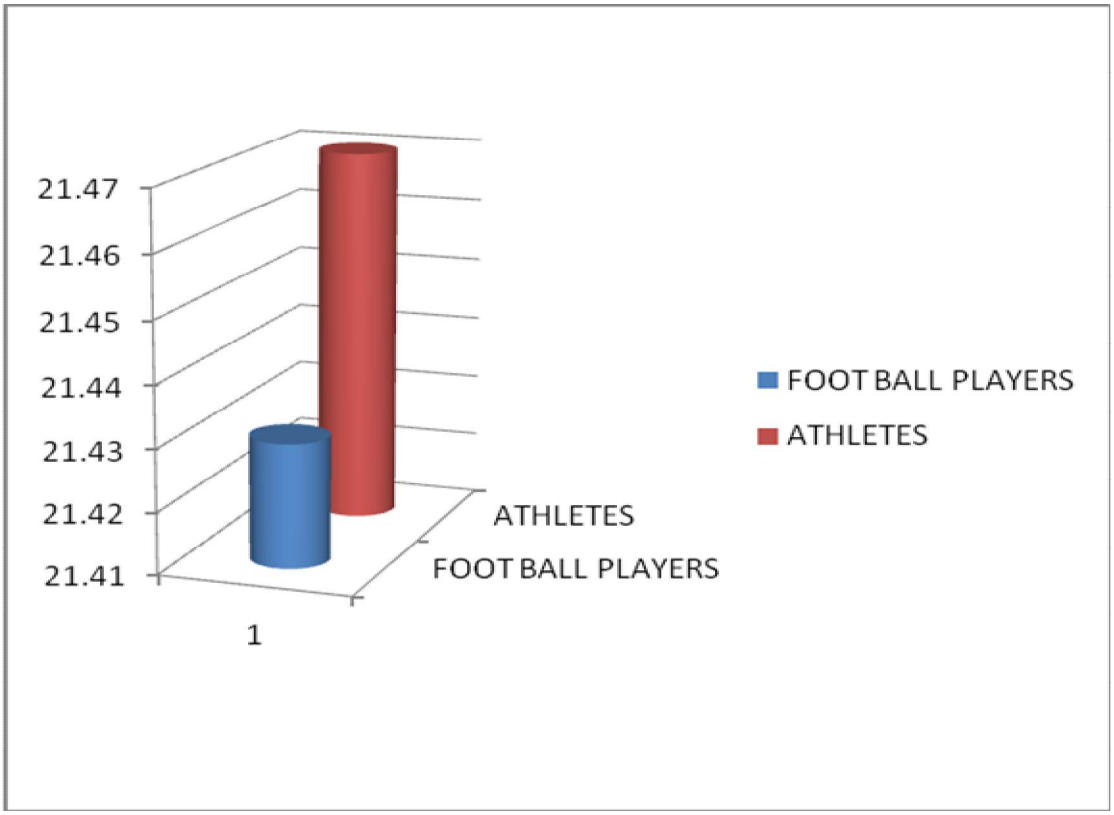

Figure-2
Bar Diagram Showing Mean among Football Players and Athletes

Results and Discussion

The study of data using t-test shows that variation exist among Athletes and foot ball players in the selected Physical variable Muscular Strength.

There exist no significant difference between athletes and foot ball players. This may be attributed to nature of the athletes performance where muscular strength plays a vital role for optimum performance as equal to the foot ball players. though the difference in relation to the muscular difference was found between athletes and foot ball players.

These studies was useful to understand the physical fitness variable like speed, strength, flexibility and overall fitness at College level.

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