

Periodic Research

A Comparative Study of Physical Variables of Football Players & Athletes at College Level

Abstract

The purpose of study is to compare the Physical fitness among Football Players and Athletes. For this purpose sample of sixty male subjects were taken and divided in to two categories, 30 each in each category i.e. 30 Football Players and 30 Athletes. There is range between 18 to 23 yrs.

The variables selected for study Physical Fitness variables i.e. strength, speed, endurance and flexibility and over all fitness. The necessary data on selected Physical Fitness variables was collected by administering various tests by using standardized instruments and was recorded in cm. seconds, minutes. Physical Fitness variables: speed is measured by stop watch and recorded to the nearest of 1/10th seconds, Muscular strength is measured by number of sit ups performed on one minute, Endurance is measured by stop watch and recorded in minutes, Flexibility is measured by measuring strap tape and recorded in cm. All the variables were added up to find out the overall fitness of the Football Players and Athletes.

The paired t-Test was used to find out the significant difference, if any among Football players and Athletes on selected certain variables separately in all the cases 0.05 level of confidence was used to test the significance, strong co-relation found between Football Players and Athletes.

Keywords: Physical Fitness Variables, Football Players, Athletes

Introduction

Games and sports have been part of human life almost since the time immemorial. Be it is necessity for his survival i.e. Hunting for food and Shelter, Safety from 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. Though the origin of sports is lost in antiquity, it is quiet certain that physical activity has been a basic necessity of life, more than fun and diversion, for his survival depended on it. Gradually along with the process of evolution, such activities become more of play & become part of culture of tribes. People used sports & games as a means of transmitting the cultural heritage of their tribes, games, sports and physical activities, persisted despite the rise and fall of ancient civilization as a cultural heritage, to another. Today games and sports have emerged as universal culture phenomenon¹.

The games provide an ample opportunity for the development of strength, speed, endurance, agility, neuro-muscular coordination of the various actions involved in it. Such actions are running, jumping, bending, stretching and other movements; it meets all the requirements of an excellent form of physical activity².

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 sustained period of activity³.

Malhotra and Subramaniam have claimed that a high level of general fitness with motor abilities like strength aerobic endurance, speed of movement, jumping abilities, agility, flexibility etc. ate essential qualities required to be developed by the basket ball to play this internal game.⁴ Football requires stamina, strength, speed & agility. General athleticism in every form plays a particularly important role. It is a Prerequisite for skills and technical performance. In the training choose exercise which certain and more athletic element⁵.

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It is also established beyond doubt that no serious study and comparison on the physical fitness variables among Athletes and Football Players was ever taken-up in order to spot out the gaps and subsequently bridge them speed, strength, flexibility and endurance (Physical Fitness Variables) is very popular in our country, hence the scholar in the form of study is making modest effort in this direction to compare Physical Fitness variables of sportsmen belonging to Football Players and Athletics games.

Methodology

Different kind of activities and bodily movements required different kind of physical variables to perform different movements that involve agility, balance and speed. Hence, for the present study we had selected the following variables:

Speed

It was measured by stop watch recorded to the nearest of $1/10^{\text{th}}$ of seconds.

Muscular Strength

It was measured by the number of sit-ups performed in one minute.

Endurance

It was measured by stop watch, recorded in one minute.

Flexibility

It was measured by sit and reach test, recorded in centimeters.

- The data was collected for each variable administering their respective tests 7, 8. The tests were administered at sports ground of Multan Modi College, Modinagar, Ghaziabad

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.

Result and Discussion

On the basis of findings the following conclusions are drawn:

- In relation to muscular strength no significant difference was found between Football Players and Athletes.
 - Speed showed insignificant difference between Football Players and Athletes.
 - In relation to endurance no significant difference was found between Football Players and Athletes.
 - In relation to flexibility no significant difference was found between Football Players and Athletes.
 - In relation to overall fitness no significant difference was found between Football Players and Athletes.
 - Positive co-relation was found among Football Players and Athletes with respect to Physical fitness variables i.e. strength, speed, endurance, flexibility and overall fitness at the college level.
- These studies were useful to understand the Physical fitness variables and overall fitness at the college level.

References

- Ajmer Singh, Jagtar Singh, Jagdish Bains: Modern Text Book of Physical Education Health and Sports, Kalyani Publishers, Ludhian
- Dhanraj; Basket Ball for men and women.
- Encyclopedia of Sports Sciences and Medicines, S.V. "Foot Ball by Lunsford".

- M.B. Malhotra and S. Subramaniam, "Effect of precompetitive and off session training on general physical fitness and skill in Basket Ball Players" Snipes Journal, P-24(April-82).
- Recard Roberson and Herberthoison beginning Football, California Woodworth publishing company.
- Umesh kumar Sharma (1983) "Variation and Selected Physical Variables and anthropometric measurement between Bowler and Batsman".
- Donald Methwes "Measurement in Physical Education". Philadelphia; W.B. Saunders Company 193.
- M.B. Malhotra and S. Subramaniam "Effect of pre competitive and off - season training on general physical fitness and skill in basket ball players" SNIPES Journal (April - 82) : 24.

Paired T-Test on Muscular Strength Among Football Players and Athletes

Discipline/ Sport	Mean	F	Σdf^2	S.D.	t-Ratio
Football	20.7	21	287	2.87	1.902
Athletes	19.4	18	278	2.45	

Paired T-Test On Speed Among Football Players And Athletes

Discipline /Sport	Mean	F	Σdf^2	S.D.	t-Ratio
Football	6.55	7.48	735.5	4.94	0.157

Paired T-Test On Endurance Among Football Players And Athletes

Discipline/ Sport	Mean	F	Σdf^2	S.D.	t-Ratio
Football	2.20	1.99	2.59	0.009	0.162
Athletes	2.19	2.62	8.79	0.0017	

Paired T-Test on Overall Fitness Among Football Players And Athletes

Discipline/ Sport	Mean	F	Σdf^2	S.D.	t-Ratio
Football	50.7	51.47	1125.7	6.42	1.93
Athletes	47.54	45.59	1018.9	5.82	

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Appendix – I

Physical Fitness Variables of Athletes & Football Players										
S.No..	Football Players					Athletic Players				
	Strength	Speed	Endurance	flexibility	Combined Raw Score	Strength	Speed	Endurance	Flexibility	Combined Raw Score
1	15	6.89	2.63	15	39.52	21	6.99	2.5	21	51.39
2	23	7.02	2.75	23	55.77	23	7.38	2.05	23	55.43
3	20	7.48	1.8	20	49.28	18	5.92	2.65	18	44.57
4	16	6.24	2.08	16	40.04	14	5.21	2.18	14	35.86
5	21	7.22	2.04	21	51.26	23	7.21	2.22	23	55.43
6	18	5.78	2.55	18	44.33	22	5.35	2.4	22	51.75
7	19	7.31	2.01	19	45.32	20	6.24	1.95	20	48.19
8	22	5.92	2.07	22	51.99	17	7.02	2.12	17	43.14
9	24	5.68	2.13	24	55.81	15	6.89	2.02	15	38.91
10	25	6.99	2.1	25	59.09	21	6.09	2.15	21	50.24
11	21	6.61	2.49	21	51.1	20	6.99	2.41	20	49.4
12	17	7.4	2.1	17	43.05	16	7.4	2.32	16	41.72
13	16	5.35	2.02	16	39.37	19	6.68	2.1	19	45.78
14	22	6.97	1.93	22	52.9	21	7.48	2.7	21	5.18
15	21	7.48	1.93	21	51.47	18	6.97	2.62	18	45.59
16	25	6.5	1.99	25	59.15	21	6.8	1.95	21	50.75
17	26	6.95	2.65	26	61.4	23	5.89	1.95	23	53.84
18	24	6.54	2.45	24	56.84	23	7.25	2	23	55.25
19	25	6.45	2.3	25	58.68	20	8.21	2.1	20	50.31
20	17	6.15	2.23	17	42.25	17	6.3	2.2	17	42.5
21	19	6.55	2.1	19	46.87	19	5.6	2.2	19	45.8
22	24	6.45	2.32	24	56.6	16	6.65	2.05	16	40.7
23	18	6.5	2.15	18	44.7	23	7.1	2.02	23	55.12
24	19	6.3	2.2	19	4.4	15	6.89	2	15	38.89
25	21	6.15	2.1	20	48.15	17	5.65	2.04	17	41.69
26	21	7	2	21	51.17	18	7	2.1	18	45.1
27	22	7.15	2.17	22	53.37	18	6.14	2.11	18	44.25
28	22	6.55	2.22	22	52.79	19	6.25	2.3	19	46.55
29	23	6.35	2.05	23	54.4	22	5.3	2.15	22	51.45
30	16	6.75	2.12	16	40.87	23	6.15	2.13	23	54.28
AVG.	20.1654	6.42652	2.12622	20.13326	47.49963	18.86288	6.378567	2.125815	18.86288	44.79158
S.D.	3.12866	0.542135	0.23296	3.131046	10.54866	2.749295	0.735566	0.210279	2.749295	9.478966

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Diagram showing the S.D. value of Football Players and Athletes.

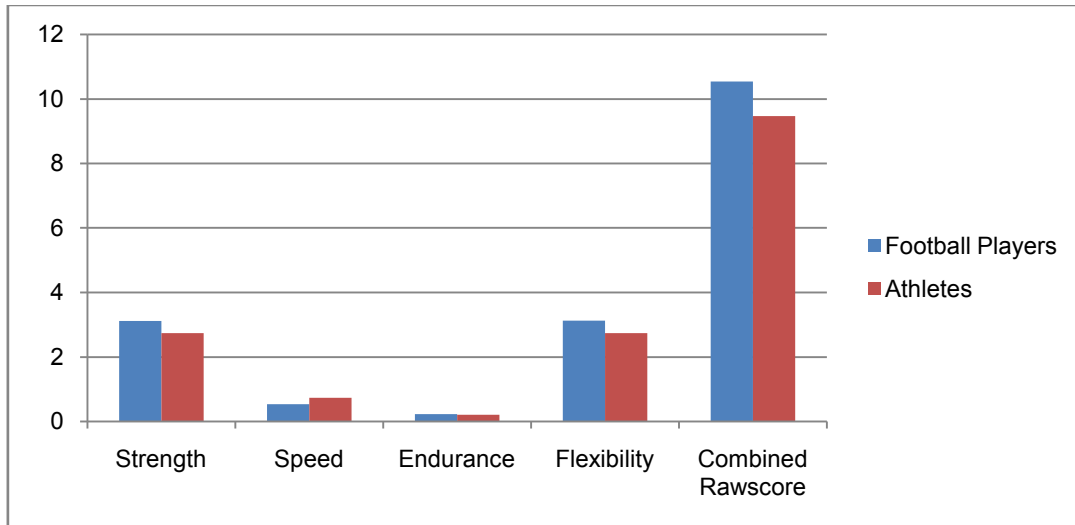


Diagram showing the Avg. value of Football Players and Athletes.

