



COMPARATIVE STUDY ON ARM AND LEG EXPLOSIVE POWER BETWEEN VOLLEYBALL AND FOOTBALL PLAYERS

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ABSTRACT

The point of the study was to locate exposed the Arm and leg explosive power between volleyball and football players at college level. To achieve the idea of this study, the researcher randomly selected 40 men volleyball and football players each consist of 20 players from Anna University affiliated Colleges, Coimbatore district. The selected subjects age ranged between 18 to 25 years. A static group comparison design method was followed for this research. Before conducting the tests, the investigator informed the subjects the reason of the study to get most co-operations from the subjects. The tests were explained and expression and stable direction was employed during the periods of researcher. The Arm explosive power was measured by six pound medicine ball put and leg explosive power was measured by using vertical jump. In this study the collected data was analyzed by descriptive and independent 't' test. In all the cases, 0.05 level of significance was fixed to test the significance was considered as appropriate.

Keywords: Arm explosive power, leg explosive power and volleyball and football.

1. INTRODUCTION

The word 'Sport' is deduced from two words 'Dis and porter' meaning carrying down from work, two points out similar recreational conditioning which are relaxing in nature and it's for the sake of seeking only. Principally sports are individual conditioning born out of nature urges for movement. Sports are part are parcel of mortal as well as beast life. In the ultramodern times, it has now come an integral part of education process and social conditioning, millions of sports suckers share in sports for fun adventure, health, physical fitness and fiscal benefits linked with a high degree of fashion ability.

1.1 Volleyball

The game Volleyball was constructed by William G. Morgan in the time 1895 at YMCA, Holyoke (Massachusetts), USA. Originally Morgan introduced this game by the name "Mintonette". The game was substantially developed as a competitive recreational game for old people, as it was less violent and less violent. He developed it from his own sports training styles and his practical experience at Y.M.C.A, gymnasium.

1.2 Football

The game football, further generally known as simply football or soccer, is a platoon sport played with a globular ball between two brigades of 11 players. It's played by roughly 250 million players in over 200 countries and dependences, making it the world's most popular sport. The game is played on a blockish field called a pitch with a thing at each end. The object of the game is to score further pretensions than the opposition by moving the ball beyond the thing line into the opposing thing, generally within a time frame of 90 or further twinkles.

1.3 Arm Explosive Power

According to Arm Explosive Power was the capability to release maximum muscular force in the shortest possible time, a sin executing a Six Pound Medicine Ball Put.

1.4 Leg Explosive Power

It's a combination of strength and speed capacities. It can be defined as the capability to overcome resistance with high speed. Depending on the nature of combination of speed the explosive strength can be farther sub divided into launch strength, Strength speed (power) and speed strength, start strength is the capability to develop minimal muscle force during the starting phase of the movement sprint, start, weight lifting etc. Strength speed is the capability to overcome heavy resistance with high speede.g platoon games, compact sports (lower weight orders). The explosive strength is of different nature in cyclic and acyclic movements. Explosive strength always finds expression in motor movement. It's a form of dynamic strength explosive strength performance.



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2. OBJECTIVE OF STUDY

To find out the Arm and leg explosive power between volleyball and football players at college level.

3. HYPOTHESIS

- It was hypothesized that there would be a significant difference in Arm explosive Power between volleyball and football Players.
- It was hypothesized that there would be a significant difference in leg explosive Power between volleyball and football Players.

4. SAMPLES

40 men Volleyball and Football players each consist of 20 players from Anna University affiliated Colleges, Coimbatore district. The selected subject's age ranged between 18 to 25 years.

5. DEPENDENT VARIABLES

- 1) Arm Explosive Power
- 2) Leg Explosive Power

6. INDEPENDENT VARIABLES

- 1) Volleyball Players.
- 2) Football Players.

7. EXPERIMENTAL DESIGN

A static group comparison design method was followed for this research. Before conducting the tests, the investigator informed the subjects the reason of the study to get most co-operations from the subjects. The tests were explained and expression and stable direction was employed during the periods of researcher. The Arm explosive power was measured by six pound medicine ball put and leg explosive power was measured by using vertical jump.

Table 1: Criterion measures

S. No	Variables	Equipment/Test	Unit of Measurement
1.	Arm Explosive Power	Six Pound Medicine ball Put	Meters
2.	Leg Explosive Power	Vertical jump	Centimetres

7.1 Scoring

The distance between the stand mark line and jump mark line by centimetres. The maximum distance (among all the trial) between the reaching heights provide the score of the test. However, to get the power in foot-pound units, the above distance is multiplied by the subject's body weight. But majority of testers routinely use directly the distance jumped irrespective of body weight as the score of test.

8. RESULTS

Table 2: Shows independent t -value on arm explosive power variable between volleyball and football players (scores in meters)

Variables	Subjects	N	Mean	SD	't'-value
Arm Explosive Power	Volleyball players	20	5.80	0.51	3.84*
	Football players	20	6.33	0.69	

*Significant at 0.05 level df (1.38) = 2.03.



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From table 2, it is understood that the obtained 't' value on Arm explosive Power is 3.84, which is greater than the required table value of 2.03 at 0.05 level of significance. It shows that there was a significant difference in Arm explosive Power between the Volleyball and Football Players. By observing the mean value, Football players have high arm explosive power when compared with volley ball players.

Table 3: Shows independent t- value on leg explosive power variables between volleyball and football players (Scores in centimetres)

Variables	Subjects	N	Mean	SD	't'-value
Leg Explosive Power	Volleyball players	20	51.85	5.51	5.84*
	Football players	20	62.33	6.89	

*Significant at 0.05 level $df(1.38) = 2.03$.

From table 3, it is understood that the obtained 't' value on Leg explosive Power 5.84 was greater than the required table value of 2.03 at 0.05 level of significance. It shows that there was a significant difference in Leg explosive Power between the Volleyball and Football Players. By observing the mean value, the Football players have more Leg explosive power than the volleyball players.

9. DISCUSSIONS ON FINDINGS

The result of the study indicates that there was significant difference on Arm and leg explosive Power between volleyball and Football Players.

10. DISCUSSIONS ON HYPOTHESES

It was hypothesized that there would be a significant difference in Arm explosive Power between volleyball and Football Players. From the result of this study that there was significant difference in Arm explosive Power between volleyball and Football Players. Hence the research hypothesis was accepted.

It was hypothesized that there would be a significant difference in leg explosive Power between volleyball and Football Players. From the result of this study that there was a significant difference in leg explosive Power between volleyball and Football Players. Hence the research hypothesis was accepted.

11. CONCLUSIONS

The results show that there was a significant difference in Arm explosive Power between the Volleyball and Football Players. The Football Players had more Arm explosive Power than Volleyball Players.

The results show that there was a significant difference in Leg explosive Power between the Volleyball and Football Players. The Football Players had more Leg explosive Power than Volleyball Players.

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