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Comparison of shoulder and leg explosive strength between intercollegiate volleyball and handball male players

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Abstract

The main purpose of the study was comparison of shoulder and leg strength between intercollegiate volleyball and handball male players. The present researcher was taken the male subjects for the study. The sources of data would be made from the Volleyball and Handball male Players; those are participated in the intercollegiate tournament of Tumkur university intercollegiate tournament. The researcher was selected 30 players from each games Volley ball (n=30) and Handball (n=30). The 60 Subjects would be selected by simple random sampling method. Following equipments would be used for collection of data: 1) Shoulder strength was measured by push-up test. 2) Leg explosive strength was measure by standing broad jump test. The data for the study is to be collected and statistical analysis and interpretation of data will be done by using statistical technique 't' test because in the present study only two variables are taken into consideration i.e. shoulder and leg strength between volleyball and handball players. The level of significance is 0.05 for testing the hypothesis. Result there was a no significant difference in shoulder strength between the volleyball and Handball male players. There was a significant difference in leg strength between the volleyball and Handball male players.

Keywords: shoulder, leg strength, volleyball, handball

1. Introduction

Sports hold the prominent place in the modern scientific age. Today sports have become integral part of our human and social life. The game and sports have been indispensable to mankind and have been part of his culture. It is quite certain that physical activities have been a basic necessity of life, more than fun and diversion, for his survival depended on fitness. Gradually along with process of evolution, such activities have become more of play and part of culture of our people. They used sports and 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 civilizations as a culture heritage, which was passed on from one generation to another generation. Games and sports are as old as the human society and these has achieved a universal status in the modern society. It now enjoys a popularity which outstrips any other form of social activity. It has become an integral part of the educational process as physical education and sports have been included in the regular curriculum of education. The students are taught various games and sports in systematic and scientific manner. Besides teaching the students are evaluated in their performance. Many people participate in games and sports for getting enjoyment besides deriving physical, mental, social, emotional and physiological benefits. In the modern time, sports have assumed competitive character and as such call for better and still better performance, every sportsperson strives to shatter the previous records, which are broken more rapidly. Now-a-days, the every form of sport requires a certain amount of fitness, skill level, physique, body composition etc. The competitive sports have gained tremendous importance in almost all countries of the world. Every country is trying to win more medals in international sports competition. Huge amount of money, time and efforts are being spent by the nations of the world to achieve these objectives. Sports coaches, teachers, scientists, organizers and administrators all over the world are in search of better way and means for spotting talent, for training Sports men and women, for improving organization and planning for sports training and competition. Physical fitness is probably the most popular and

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frequently used term in physical education. The most important objective of physical education is to develop physical fitness. According to Nixon and Cozens (1964), it was the desire to establish a scientific approach to the development of physical fitness which formed the basis of the first meeting of physical educators in 1885 when the profession of physical education originated. The United States President's Council on physical fitness and sports defined the terms "physical fitness as the ability to carry out daily task with vigor and alertness, without undue fatigue, with ample energy to enjoy leisure time pursuits and to meet unforeseen emergencies" (Clarke, 1972) [2].

General fitness implies the ability of a person to live most effectively with his and her potentials, which depend upon the physical, mental, emotional, social and spiritual components of fitness which are highly interrelated. The primary components of physical fitness identified by the president's council on physical fitness and sports were muscular strength, muscular endurance and cardio respiratory endurance. However, later on the president council also included some other motor performance components namely agility, speed, flexibility and balance in physical fitness. But keeping in view the general opinion of the majority of the researchers, the author has not included the components such as speed, agility, power and balance (which are more important for success in specified sports) as essential components of basic physical fitness. However, the author defines physical fitness by group of five components, namely muscular strength, muscular endurance, cardio respiratory endurance, flexibility and body composition (Kansal, 1996) [6].

The main purpose of the study was comparison of shoulder and leg strength between intercollegiate volleyball and handball male players

2. Methodology

2.1 Source of data

In the present researcher was taken the male subjects for the study. The sources of data would be made from the Volleyball and Handball male Players; those are participated in the intercollegiate tournament of Tumkur University.

2.2 Selection of Subject

The researcher was selected 30 male players each from games of inter college Volleyball and Handball games.

2.3 Sampling Method

The 60 Subjects would be selected by simple random sampling method.

2.4 Equipments used for collection of data

Following equipments would be used for collection of data:

1. Shoulder strength: Shoulder strength was measured by push-ups test.
2. Leg explosive strength: leg explosive strength was measure by standing broad jump test.

2.5 Statistical analysis

The data for the study is to be collected and statistical analysis and interpretation of data will be done by using statistical technique 't' test because in the present study only two variables are taken into consideration i.e. shoulder and leg strength between volleyball and handball male players. The level of significance is 0.05 for testing the hypothesis.

3. Results

Table 1. Comparison of shoulder strength between inter-collegiate volleyball and handball male players.

Variable	Group	Mean	Sd	Se	Md	Ot	Df	Tt
Shoulder strength	Volleyball	14.65	3.100	0.939	0.500	0.532	38	2.02
	handball	14.15	2.834					

Significant at 0.05 level.

The above table reveals that there is difference between means of volleyball and handball male players because mean of volleyball male players is 14.65 which is slightly greater than the mean of handball male players which is 14.15 and therefore mean difference is 0.500 to check the significant difference between volleyball and handball male players data

is again analyzed by applying 't' test. Before applying 't' test, standard deviation is calculated between volleyball and handball male players which is 3.100 and 2.834 respectively and then the calculated value of 't' is found as 0.532, is less than tabulated 't' which is 2.02 at 0.05 level of significance.

Table 2. Comparison of shoulder strength between inter-collegiate volleyball and handball male players.

Variable	Group	Mean	Sd	Se	Md	Ot	Df	Tt
Leg Strength	Volleyball	233.55	21.847	7.752	16.700	2.154	38	2.02
	handball	216.85	26.918					

Significant at 0.05 level.

The above table shows that there is difference between means of volleyball and handball male players because mean of volleyball male players is 233.55 which is greater than the mean of handball male players which is 216.85 and therefore mean difference is 16.700 to check the significant difference between volleyball and handball male players data is again analyzed by applying 't' test. Before applying 't' test, standard deviation is calculated between volleyball and handball male players which is 21.847 and 26.918 respectively and then the calculated value of 't' is found as 2.154, is greater than tabulated 't' which is 2.02 at 0.05 level of significance. This

shows that volleyball male players are having more leg strength than handball male players.

4. Conclusion

On the basis of finding and within the limitation of the presents study following.

It was seen in table-1. there was a no significant difference in shoulder strength between the volleyball and Handball male players.

It was seen in table-2. there was a significant difference in leg strength between the volleyball and Handball male players.

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