

Compare the Flexibility of Intercollegiate Volley Ball and Handball Male Players

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Abstract—This paper will highlight the Flexibility of intercollegiate Volley ball and Handball male players, Sports have an undeniable role in the society. As society changes so does sport. Games in the early years were local and informal. The rules were simple and changing according to the number of participating and the local. As cities grew, clubs were formed and interclub competitions began. Eventually cities played against other cities as transportation developed and as coaches, steamboats and railways reduced the time to travel long distance. Finally, there were regional, national and international competitions and corresponding governing bodies. All these developments took time and occurred as cities reached a certain stage of development and inventions occurred to make these improvements possible (Uppal, 1992). Clearly, stretching routines performed before exercise can increase flexibility for up to 90 min, but there is scant scientific evidence to suggest that such routines can improve exercise performance, reduce delayed-onset muscular soreness, or prevent injuries. It remains to be confirmed whether or not stretching on a regular basis away from the exercise environment is effective in improving some types of exercise performance or reducing injury risk.

Man by nature, is highly competitive and in pursuit of performance he has always been striving to jump higher and farther, to run faster and to demonstrate greater strength and skill. Physical fitness plays emphasis on more and more activity

Index Terms— Hand ball, Volley ball, flexibility.

I. INTRODUCTION

Sport plays a very prominent role in the modern society. It is important to individuals, a group, a nation and indeed the world. Throughout the world, sport has a popular appeal among people of all ages and both sexes. At present, most of the coaches and physical education teachers work very hard to achieve supreme fitness for their players. The superlative physical condition of the foreign players in various games, have focused interest on fitness and have caused our coaches to know much about each for the activity in question.

In recent years, there has been record-breaking performance in diverse sports activities. Some of these were much beyond the expectations of sports and coaches and physiologists. Several regions have been attributed to these amazing performances of the modern athletes. Some of the most important of which are improved techniques and training methods, better selection of the suitable activities and better nutrition.

Even though it increases the range of motion of the joints, stretching just before exercise may cause

temporary strength deficits. Epidemiologic data indicate that the risk of injury to muscles, tendons, and ligaments is more closely linked to poor aerobic fitness of the athlete than to insufficient flexibility. Different sports require different fitness components. Volley ball players and Hand ball players must be able to perform prolonged intermittent exercise (endurance), exercise at high-intensity, sprint, and develop high levels of power (force). Good levels of agility are also necessary and distinguish between Volley ball players and Hand ball players.

Handball, a popular game throughout the world, was introduced in by a gymnastics teacher, Max Heiser, in 1917. Handball is a fast-flowing game. The aim is to is to throw the ball into the opponent's goal as many times as possible with in 30-minute period play. The players work together, passing, dribbling and shooting the ball up the court in an attempt to score a goal.

In 1895, William G.Morgan, an instructor at the Young Men's Christian Association (YMCA) in Holyoke, was introduced Volleyball. Volleyball is an Olympic team sport in which two teams of six players are separated by a net. Each team tries to score points by grounding a ball on the other team's court under organized rules.

There has long been an understanding between flexibility and the enhancement of athletic performance and the prevention of injuries. For example greater range of motion about the hip and knee can lead to improved stride turnover and length during sprinting which ultimately means greater speed. Furthermore, poor flexibility in the hamstring muscles has been related to low back pain as well as anterior knee complaints. Lately, the efficacy of flexibility and stretching has been questioned and many have abandoned it as a necessary component to athletic development. It is this author's opinion that flexibility does have a role in the prevention of injury and the improvement of performance. The issues, though, are identifying areas of weakness and hyperactivity, as well as, understanding when it is more appropriate to stretch or to strengthen. This article will describe the role of flexibility in movement function, dysfunction, and overall performance.

II. STATEMENT OF THE PROBLEM

The purpose of the study was to compare the Flexibility of intercollegiate volley ball and Handball male players.

III. HYPOTHESIS

There will be a significant difference in flexibility of Volley ball and Handball inter- collegiate male players.

IV. SIGNIFICANCE OF THE STUDY

- 1) This study will help to compare the Flexibility between volleyball and handball players.
- 2) The study will be a guide to coaches and physical education teachers for selecting talented players for volleyball and handball game.
- 3) It may help to chalk out proper training programmed for Volleyball and Handball players.
- 4) It may help in determining the player's level of flexibility.

V. METHODOLOGY

The study was designed to compare the Flexibility between the Inter collegiate Volleyball and handball male players. In order to achieve this purpose, thirty volleyball and thirty handball male players were selected from Inter-Collegiate Tournaments. The subjects were in the ages of 18-25 years. Players were tested with the help of the following test items.

The tests to measure the selected Flexibility.

- | | | |
|----------------------------|---|--------------------------------|
| 1. Modified Sit and reach | - | Flexibility |
| 2. Static flexibility test | - | Shoulder and wrist flexibility |
| 3. .Bridge up test | - | Spine and its hyperextension |

Description of test

Modified Sit and reach

Test Procedure

The basic outline of the sit and reach test is described below. Some of the more popular variations are described in more detail above.

Equipment required: sit and reach box (or alternatively a ruler can be used, and a step or box)

Modified Sit and reach -[Flexibility]

Procedure: This test involves sitting on the floor with legs stretched out straight ahead. Shoes should be removed. The soles of the feet are placed flat against the box. Both knees should be locked and pressed flat to the floor - the tester may assist by holding them down. With the palms facing downwards, and the hands on top of each other or side by side, the subject reaches forward along the measuring line as far as possible. Ensure that the hands remain at the same level, not one reaching further forward than the other. After some practice reaches, the subject reaches out and holds that position for at one-two seconds while the distance is recorded. Make sure there are no jerky movements..

Static Flexibility Test - Shoulder & Wrist

Aim : The objective of this test is to monitor the development of the athlete's shoulder and wrist flexibility.

Equipment

- 18" Stick
- Metre Ruler
- Assistant

Procedure

- The athlete lays prone on the floor, forehead on the ground, and arms extended holding the 18" stick with both hands shoulder width apart
- The assistant measures and records the athlete's arm length from the acromial extremity to the stick
- The athlete raises the stick as high as possible whilst keeping their forehead on the ground
- The assistant measures and records the vertical distance from the ground to the bottom of the stick
- Repeat the test 3 times recording the vertical distance achieved
- The assistant subtracts the longest recorded vertical distance from the recorded arm length and the result is used to assess the athlete's performance

Static flexibility test - [Shoulder and wrist flexibility]

Bridge up test: This test measures the flexibility of spine and its hyperextension. It is applicable to both sexes, from age six years and above.

Equipment:

A mat, an anthropometry rod and a flex measure case with the yardstick and guide inserted. Alternatively a mat and a tape or anthropometer.

Procedure: The subjects asked to assume the supine position on the mat. Now the subject is instructed to place palms of his/her hands on the mat near head so that the thumbs are the near the ears ; toiles soles flat on the mat by folding the legs. the subject is required to push his/her head and shoulders from the floor so as to lift the body to attain the bridge arch position by moving the hands and feet towards each other. The tester puts the zero end of the yardstick of the flex measure on the mat and slides the flex measure case upward rapidly till the ruler guide touches the highest point of the arched opine of subject . The reading is recorded I the flexor measure case window in the inches accurate up to one- tenth of an inch or in the anthropometric eye in cm.

Bridge up test [Spine and its hyperextension]

score : The maximum score out of three trials given to the subject is subtracted from standing navel height of subject. For measuring standing navel height, the subject is asked to stand erect with heels together, toes apart, in alert position stretching the body upward preferably against a wall. The anthropometry rod is placed in front of the subject in between his/her feet and the crossbar of the anthropometry rod is brought the navel of the subject to the record his/her navel height. For example, suppose, the navel height of subject is 45.7" and the bridge test height (best of 3 trials) IS 25.3", the subject test score will be 45.7-25.3=20.4. The smaller the test score the better is the flexibility of subject.

VI. ANALYSIS AND INTERPRETATION OF THE DATA

The purpose of this study was to compare the flexibility of Inter Collegiate volleyball and handball male players. To achieve this purpose, the data collected for this study were put to statistical analysis 't' test. The results are presented as below.

Mean, standard deviation and 't' test value of the flexibility is presented in the following tables.

TABLE I. SHOWING THE MEAN VALUE, STANDARD DEVIATION AND 'T' SCORE OF THE SIT AND REACH TEST

Sl.No.	players	Sample size	Mean \pm SD	't' value
1	volleyball	30	6.5003 \pm 1.22	1.952*
2	Handball	30	5.8193 \pm 1.53	

Level of significance 0.05.

The above table shows the Mean value, Standard deviation and 't' value of volleyball and Handball male players. In sit and reach test the calculated 't' value 1.952 is greater than table 't' value 1.70. So there is a significant difference in fallibility. Hence volleyball players are better than the Handball players in this.

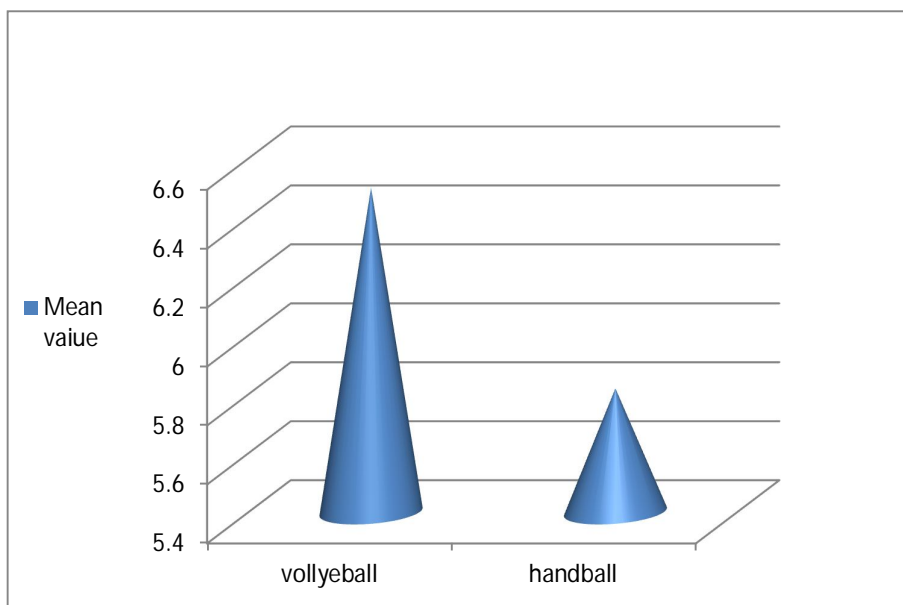


Fig-1: Graphical representation of mean value of the sit and reach

TABLE II. SHOWING THE MEAN VALUE, STANDARD DEVIATION AND 'T' SCORE OF THE BRIDGE UP TEST

Sl. No.	players	Sample size	Mean \pm SD	't' value
1	volleyball	30	57.9333 \pm 5.55805	0.112
2	Handball	30	58.1333 \pm 8.16947	

Level of significance 0.05.(1.699)

The above table shows the Mean value, Standard deviation and 't' value of volleyball and Handball male players. In Bridge up test the calculated value 't' 0.112 is lesser than table 't' value. So there is no significant difference between volley ball and hand ball male players. When mean values of bridge up test were compared hand ball players have shown more value than the volley ball players.

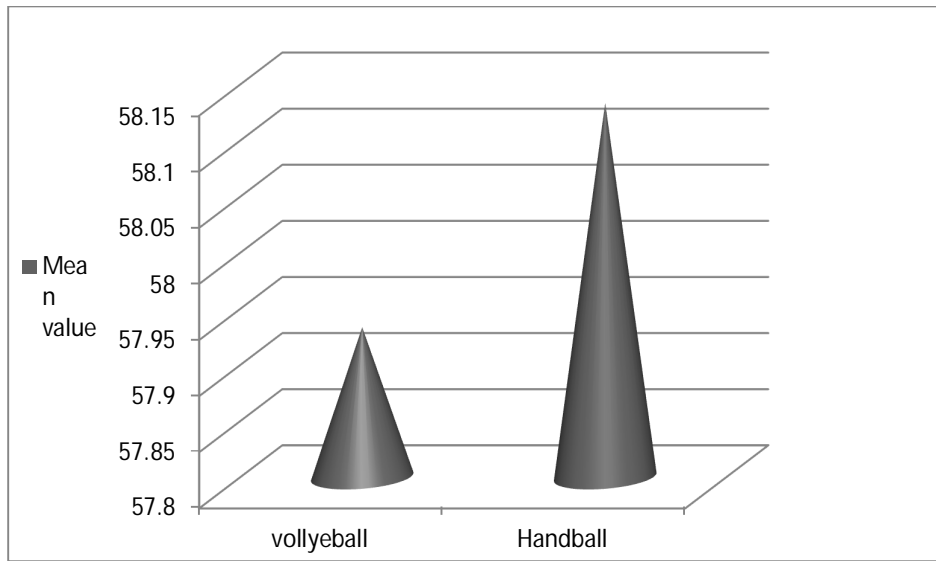


Fig-2: Graphical representation of mean value of the Bridge up test

TABLE III. SHOWING THE MEAN VALUE, STANDARD DEVIATION AND 'S' SCORE OF THE SHOULDER AND WRIST ELEVATION TEST

Sl. No.	players	Sample size	Mean \pm SD	't' value
1	volleyball	30	55.03 \pm 5.4279	0.218
2	Handball	30	55.30 \pm 5.730	

Level of significance 0.05.

The above table shows the Mean value, Standard deviation and 't' value of volleyball and Handball male players. In shoulder and wrist elevation test the calculated value.0.218 is lesser than table't' value so there is no significant difference between volley ball and hand ball male players. When mean value of shoulder and wrist elevation test were compared hand ball players have shown more mean value than volley ball players.

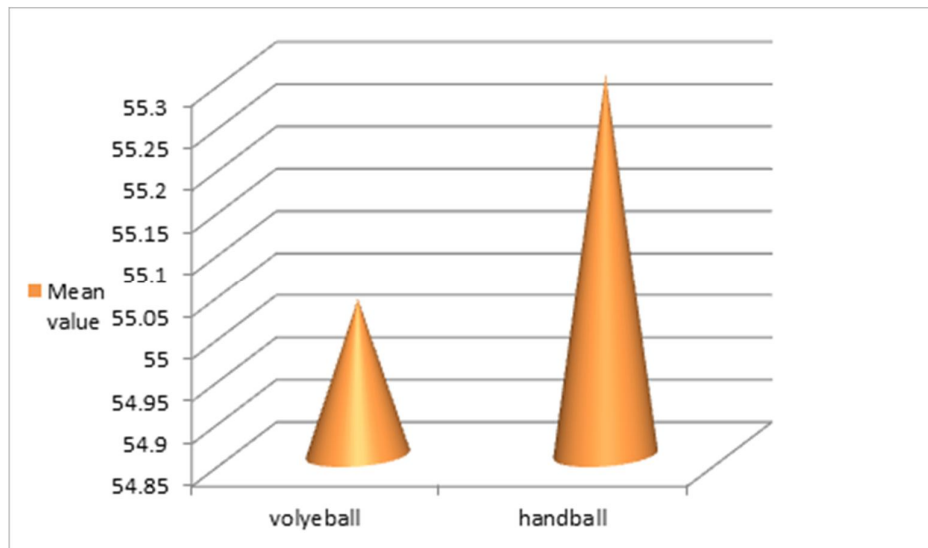


Fig-3: Graphical representation of mean value of the shoulder and wrist elevation test

TABLE IV. SHOWING THE MEAN VALUE STANDARD DEVIATION AND 't' SCORE OF VOLLEYBALL AND HANDBALL PLAYERS

Sl.No.	Name Of The Test	Mean \pm SD		't' value
		volleyball players	Handball players	
1	sit and reach test	6.50 \pm 1.221	5.82 \pm 1.53	1.952*
2	Bridge up test	57.93 \pm 5.558	58.13 \pm 8.17	.112*
3	shoulder and wrist elevation test	55.03 \pm 5.4.29	55.30 \pm 5.73	.218*

VII. DISCUSSION ON RESULT

To achieve the purpose of the study the collected data was analyzed by using statistical technique 't' test and the results showed Volleyball players are better in sit and rich flexibility test . There is no significant difference in the rest of the test.

VIII. SUMMARY

The purpose of this study was to investigate and compare the flexibility between volleyball and handball intercollegiate male players. To achieve the purpose, the study was conducted on thirty volleyball and thirty handball male players. The data collected was statistically analyzed by using Statistical package for social science. The result showed that volleyball players are better in sit and reach flexibility test than the volleyball male players. But there is no significant difference in the rest of tests.

IX. CONCLUSIONS

On the basis of limitation of the study already cited the following conclusions were drawn. There was a significant difference in sit and reach flexibility test between volleyball and handball male players. The volleyball players a rescored better in bridge up and shoulder and wrist elevation test mean value. This showed that more flexibility required for the volleyball game than the handball game. Because the use of flexibility is more in volleyball game when compared to handball game.

RECOMMENDATIONS

Based on the results and the conclusions drawn from this study, the following recommendations are made for further research.

- The result of this study can be used by the physical education teachers and coaches as an aid in screening and selecting for various sports.
- The study may be conducted on more subjects.
- The study may conduct on variables which were not considered in this study.
- The same study may be conducted for different game players.
- The same study may be conducted on female players.
- The similar study may be conducted at higher levels.
- To improve the flexibility factor proper training program may be chalk out.

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