



P-ISSN: 2394-1685  
E-ISSN: 2394-1693  
Impact Factor (ISRA): 5.38  
IJPESH 2018; 5(3): 07-08  
© 2018 IJPESH  
www.kheljournal.com  
Received: 03-03-2018  
Accepted: 04-04-2018

**Devanand P**  
Physical Education Teacher  
ZPHS Dommata, Medak,  
Telangana, India

## **A comparative study of aerobic endurance among hand ball players and volley ball players in Osmania University Telangana**

**Devanand P**

### **Abstract**

The aim of the present study was to study the difference in aerobic endurance among Hand Ball and Volley Ball Players. The 40 Male Subjects between the age group of eighteen to twenty one years i.e. Twenty Hand Ball Players and twenty Volley Ball Players of Osmania University who have taken part in the Osmania University Inter Collegiate sports and games during the year 2013-14 were taken for the study. The 12 Run Cooper Test were used to evaluate the aerobic endurance among Hand Ball and volley Ball Players. The Study shows that the Hand Ball Players are having very good aerobic endurance compare to the volley Players. It is recommended that hand ball and volley players must be given good endurance training to play the game in efficient manner.

**Keywords:** Aerobic endurance, hand ball, volley ball, 12m cooper test etc

### **Introduction**

Aerobic Endurance is the amount of oxygen intake during exercise. Aerobic Endurance is the time which you can exercise, without producing lactic acid in your muscles. During aerobic (with oxygen) work, the body is working at a level that the demands for oxygen and fuel can be met by the body's intake. The only waste products formed are carbon-dioxide and water which are removed by sweating and breathing.

### **Aerobic exercise**

The aerobic exercise is physical exercise of relatively low intensity and long duration, which depends primarily on the aerobic energy system. Aerobic means "with oxygen", and refers to the use of oxygen in the body's metabolic or energy-generating process. Many types of exercise are aerobic, and by definition are performed at moderate levels of intensity for extended periods of time. Aerobic exercise comprises innumerable forms. In general, it is performed at a moderate level of intensity over a relatively long period of time. For example, running a long distance at a moderate pace is an aerobic exercise, but sprinting is not. Playing singles tennis, with near continuous motion, is generally considered aerobic activity, while golf or two person team tennis, with brief bursts of activity punctuated by more frequent breaks, may not be predominantly aerobic. Some sports are thus inherently "aerobic", while other aerobic exercises, such as fartlek training or aerobic dance classes, are designed specifically to improve aerobic capacity and fitness.

### **Volley Ball**

Volley Ball is a team sport in which two teams of six active players each team score points against one another by one ball through a net. Volley Ball is one of the most popular and widely viewed sports in the World. Points are scored by shooting, smashing & passing the ball through the net. The team with more points at the end of the game wins. The ball can be advanced on the court by passing it between team mates. While competitive volley ball is primarily an indoor sport, played on a volley ball Court, less regulated variations have become exceedingly popular as an outdoor sport among both Urban and rural people. W.G. Morgan has introduced the volley ball Game.

**Correspondence**  
**Devanand P**  
Physical Education Teacher  
ZPHS Dommata, Medak,  
Telangana, India

**Hand ball**

Hand Ball is a team sport where two teams of seven players each (six players and a goal keeper) pass and bounce a ball trying to throw it in the goal of the opposing team. Hand ball game has origins from ancient Greece. The Team hand ball game as we know it today was formed by the end of the 19th century in Northern Europe. The Dane Holger Nielsen drew up the rules for the modern hand ball. Hand ball is played on a court 40 Meters long by 20 meters wide with a dividing line in the middle and a goal in the center of either end.

**Aim**

To find out the Aerobic endurance between Hand ball and Volley ball players.

**Sample**

The sample for present study consists of 20 Hand ball players and 20 Volley ball players of Osmania University who has taken part in the Osmania University Inter Collegiate sports and games during the year 2013-14.

**Tools**

12 Minute Cooper Test is used for collection of Data.

**Procedure of data collection**

The Cooper test is a test of physical fitness. It was designed by Kenneth H. Cooper in 1968 for US military used in the original form the point of the test is to run as far as possible within 12 minutes.

To undertake this test you will require:

1. 400 meter track
2. Stop Watch
3. Whistle

Technical Official This test requires the Hand Ball and Volley Ball player to run as far as possible in 12 minutes.

- The subjects given 10 minutes for warm up.
- The assistant gives the command “GO”, starts the stopwatch and athlete commences the test
- The Technical official keeps the athlete informed of the remaining time at the end of each lap
- The Technical official blows the whistle when the 12 minutes has elapsed and records the distance the athlete covered to the nearest 10 meters

**Results and Discussions**

The Table No.1 showing the Mean, S.D, Standard Error, t-ratio of Hand Ball Players and Volley Ball Players in Cooper Test.

**Table 1**

Results of 12 min Cooper Test	N	Mean	Std. Deviation	Std. Error Mean	t	Mean difference	Sig. (2-tailed)
Hand ball players	20	3450.00	219.71	49.13			
					1.69453	38.00	0.10
Volley ball players	20	3350.00	137.71	30.79			

The Hand Ball Players Mean Performance is 3,450 Meters and the Volley Ball Players Mean performance is 3350 Meters. There is mean difference of 100 Meters between Hand Ball and Volley Ball Players. The Performance of Hand Ball Players is very good comparing to Volley Ball Players. Hence it is concluded that Hand Ball Players are good in aerobic endurance than Volley Ball Players.

**Recommendations**

- It is recommended that good Aerobic Endurance must be given to Hand ball and Volley ball Players.
- It is recommended that similar studies can be conducted on female sports persons.

**References**

1. Duxbury A. Andrew (2006-02-28) Water fitness 2008-01-07
2. Agarwal JC. Educational Research; an Introduction New Delhi: Agar Book Dept, 1975.
3. Margrat Wharton H. An Investigation of the Youth Fitness Test as a predictive measure of skill development in field of Hand ball Completed Research in Health, Physical Education and Recreation IV, 1962, 49.
4. Robert Lee G. Motor fitness level of seven High School Boys and Girls in a rural wiscons in High School” Completed Research in Health, Physical Education and Recreation. 1962; 7:81.