

# A Comparative Study of Flexibility and Jumping Ability among Davanagere University Men Hand Ball and Foot Ball Players

**Dr. Chandrashekar C**

Physical Education Director,

Government First Grade College, Harihara, Davanagere, India

**Abstract:** *There is a great number of athletes that play HANDBALL and FOOT BALL today, which leads to the assumption that these two sports are among the most popular in the world. HANDBALL and FOOT BALL are dynamic sports that demand an intensive load of training to satisfy the high demands placed. The training program of these two sports theoretically is different, based on the fact that during FOOT BALL appear some somatomorphic characteristics that affect performance are in each sport, such us for example height, or hand-eye coordination in HANDBALL (Berg & Latin, 1995).*

**Keywords:** HANDBALL and FOOT BALL

## I. INTRODUCTION

There is a great number of athletes that play HANDBALL and FOOT BALL today, which leads to the assumption that these two sports are among the most popular in the world. HANDBALL and FOOT BALL are dynamic sports that demand an intensive load of training to satisfy the high demands placed. The training program of these two sports theoretically is different, based on the fact that during FOOT BALL appear some somatomorphic characteristics that affect performance are in each sport, such us for example height, or hand-eye coordination in HANDBALL (Berg & Latin, 1995).

It must also be emphasized that besides the differences, these two sports present some important similarities in their kinetic characteristics, such as starting, jumping, feinting or sprinting for small distances (Zakas, Mandroykas, Vamvakoudis, Christoulas, Agelopou-lou, 1995). Furthermore, athletic abilities such as coordination, agility, flexibility and power are very important in both sports (Berg & Latin, 1995). Those kinetic characteristics, demand highly developed muscle power of the lower limbs, as well as flexibility for better movement and injury prevention.

It must be stressed that jumping ability controls only the power-speed ability, because for achieving peak strength in high velocities such as jumping, landing or defensive movement, better coordination is needed as well as the use of high contraction kinetic units (Theorstensson & Karlsson, 1976, Coyle et al, 1981). type II Another important factor that describes an athlete's physical condition is also flexibility. Besides the fact that flexibility is very important for athletic performance, it is also highly correlated to athletes jumping ability and as a result with lower limbs strength (Lee, Etnyre, Poindexter, Sokol, &Toon, 1989) and therefore the reason that flexibility is a factor concluded in most research studies that describe physical condition. Surprisingly very few studies were concerned with the physical condition level of athletes that participate in FOOT BALL and HANDBALL, even though these sports are enormously popular throughout the world. Keeping in view the above issues present study focuses on flexibility and jumping ability among the players of Davanagere University plays HAND BALL and FOOT BALL.

## ORIGIN OF THE STUDY:

FOOT BALL is one of the most popular sports in Europe and the Americas. It has a vivid and interesting history in the world of sports. Early evidence of FOOT BALL being played as a sport finds occurrence in China during the 2nd and 3rd centuries BC. In China, it was during the Han dynasty that people dribbled leather balls by kicking it into a small net. Recorded facts also support the fact that Romans and Greeks used to play ball for fun and frolic. Some facts point to Kyoto in Japan where kicking of ball was a popular sport.

**DELIMITATIONS:**

1. The Study Is Delimited To the Hand Ball Players and University FOOT BALL players of Davanagere
2. The Study Is Delimited To Male Players, That Is 161 FOOT BALL players and 71 Hand Ball Players of Davanagere University
3. Further The Study Was Delimited To The Players Who Were In The Range Of 18-21years Of Age.
4. Further The Study Is Delimited On Physical Fitness Components Like Flexibility And Jumping Ability Only.
5. The Sit And Reach, A) Squat Jump, B) Counter Movement Jump And C) Counter Movement Jump With Arm Swing These. Fitness Test Is Selected To Assess The Physical Fitness Of The Subjects.

**LIMITATIONS:**

1. The study is limited to Davanagere University and to assess the Physical Fitness among Hand Ball Players and FOOT BALL players

**II. REVIEW OF REASERCH AND DEVOLOPMENT IN SUBJECT:**

For conducting any research review of literature is very important step to see the research topic in an analytical mind. This review of literature gives us a lot of idea about past works and it helps to get insight in to the deeper study of a research. For the convenience of our study

some of the literature has been discussed in this part. It must also be emphasized that besides the differences, these two sports present some important similarities in their kinetic characteristics, such as starting, jumping, feinting or sprinting for small distances (Zakas, Mandroykas, Vamvakoudis, Christoulas, Agelopou-lou, 1995). Furthermore, athletic abilities such as coordination, agility, flexibility and power are very important in both sports (Berg & Latin, 1995). Those kinetic characteristics, demand highly developed muscle power of the lower limbs, as well as flexibility for better movement and injury prevention. According to Housh and others (1984) The lower limbs' muscle power is known as one the most important factors that determine anathlete's physical condition and as a result successful performance. Whereas study conducted Bisschop, Darot, & Ferry, (1998) highlights that in past research, vertical jumping ability was considered to be a vital parameter for athletes' physical condition. Since it describes the level of lower limb muscle strength, especially in those sports that require performing a movement at maximum speed, as is HANDBALL and FOOT BALL. Apart from these major studies some other important studies have been conducted by Asley& Weiss, 1994, Bosco, 1979, Kraemer & Newton, 1994, Mayhew, Bemben, Rohrs & Bemben, (1994) and others.

**SIGNIFICANCE OF THE STUDY**

1. The result of this study will help to Physical Education Teacher, Coaches and Trainers to use the fitness activities to develop their HAND BALL and FOOT BALL personality of the players.
2. The study may provide criteria for selecting players to build up a team.
3. The result of the study will help to assess the Fitness of
4. This study will help the Coaches and Physical Education Teachers to plan and examining system and Coaching Schedule for Hand Ball and FOOT BALL players.

**OBJECTIVES OF THE STUDY**

The main objective of this study was to compare FOOT BALL and HANDBALL players' physical condition among the HANDBALL and FOOT BALL PLAYERS in Davanagere University. The clear statements of the objectives are;  
To compare physical fitness among the HANDBALL and FOOT BALL PLAYERS in Davanagere University;

- 1) To measure jumping ability and flexibility among HANDBALL and FOOT BALL PLAYERS n Davanagere University.
- 2) To know the strength and weakness in the performance level of the players and
- 3) To suggest possible solution to achieve best in their respective games

### **SCOPE AND METHODOLOGY**

The sample of this study consisted of 232 FOOT BALL and HANDBALL athletes, those who are studying in government first grade colleges which are affiliated to Davanagere University, Shimoga. Further they are fall under the age group of 18 to 21. From these athletes, 161 were FOOT BALLPLAYERS (18 years old: 40 athletes, 19 years old: 37 athletes, 20 years old: 37 athletes and finally 21 years old: 47 athletes), and 71 are HANDBALL athletes (18 years old: 16 athletes, 19 years old: 24 athletes, 20 years old: 15 athletes and 21 years old; 16athletes)

**Selection:** The sample was stratified to achieve better homogeneity of physical characteristics, and technical ability level. It is noticeable that these athletes were also under an intensive load of training during their daily practice.

#### **Measurement:**

For the present study we adopt the measurement methods which are most popular and designed by Liemohn, et al. (1994) and Bosco. According to their methods the tests performed in the study we are going to measure two of the most important parameters that define physical condition i.e: a) flexibility and b)lower limb muscle strength.

Further another method of sit and reach test which measures the range of motion is used to test the athletes' flexibility. For lower limb muscle strength (power-speed), three different jumping ability tests to be use by the electronic device of the force platform. These tests were: 1.squat jump, 2. counter movement jump, and c. counter movement jump with arm swing. Only one trial was accepted in which athletes gave the best of their effort.

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