

# A Study on Motor Fitness Components of Football and Hockey Players of Bangalore City University

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## I. INTRODUCTION

Motor fitness is generally judged by the performance and this performance is based on composite of many factors. The following factors have generally been conceded as being most mentioned components of motor fitness. Higher level of physical fitness and motor fitness is fundamental to success in all types of games and sports. To become a top-level performer in any games or sports, it is essential that he should have a sound and fit body. It is considered as a matter of fact that when all other contributing factors are considered the level of physical or motor fitness shall lead to improvement in the performance level of the sportsman participating in a variety of games and sports. The activities such as running, jumping, leaping are considered as fundamental human movements but at the same time are considered basic to all types of games and sports. There is no such game which does not involve activities like running, walking, jumping, and leaping. Thus, it automatically becomes clear that the degree to a particular game or sport depends on the type of variety of movement involved in them. In sports Training, excessive concentration would be given on the fitness because high level of fitness would be more helpful in emergency conditions. Physical fitness is a positive and dynamic quality which extends from birth to death. Since an individual is important while for sprinter development of strength and speed is given greater importance the same is also true in the case of training of games.

Every individual must know the importance of physical fitness in other words one must have a fundamental knowledge of anatomy and physiology. This fundamental knowledge enables person to understand physical fitness. Physical fitness is the capacity of a person to function steadily and smoothly when a situation arises. The benefits and physical

fitness are numerous. The person who is physical fit has stamina and improves sense of well being, the well-developed muscles. Safeguard bones integral organs and joints and keep moving parts limber and improved cardio respiratory function. Physical fitness varies with the individual and with the demands and requirements of a specific task.

## II. SIGNIFICANCE OF THE STUDY

- The result of this study will help physical education teacher, coaches, and trainers to use the fitness activities to develop their football and hockey personality of the player
- The result of the study will help to assess the ability of the fitness of the football and hockey players.
- The result of the study will help coaches and physical education teachers to plan examining system and coaching schedule for the football and hockey players.
- This study will throw light on the level of motor fitness between the hockey and football players.

## STATEMENT OF THE PROBLEM

The purpose of the study is to assess the motor fitness level of Hockey and football players, of Bangalore city university.

## DELIMITATIONS OF THE STUDY:

1. The study was delimited to the Hockey and football players of Bangalore city university
2. The study was delimited to 12 Hockey and 12 football male players.
3. The study was delimited to the players who were in the range of 21-25 years of age.

## LIMITATIONS OF THE STUDY:

1. During the test motivational techniques were not used at is also considered as one of the limitations of the study.
2. performance given by the subjects was considered as one of the limitations of the study.

#### HYPOTHESIS OF THE STUDY:

The study may effect of may not effect. These may be different between Hockey and football players on selected Motor fitness test.

#### DEFINITION OF THE TERMS:

1. Speed: It is the performance pre-requisite to do motor actions under given conditions (movement task external factors individual pre-requisites) in minimum of time. Speed is the rate of movement of action especially distance travelled per unit of time. Speed may be defined as the capacity of the individual to person successive movements of the same pattern at a fast rate.
2. Endurance: is the result of physiological capacity of the individual to strain movement over a period. The capacity to keep going or put up with Prichard ship etc for a long time. The ability to withstand physical hardship or strain. Endurance is the ability to do sports movements with the desired availability and speed under conditions of fatigue.
3. Agility: Is The ability to change the position of the body in a pace rapidly and accurately without loss of balance. Agility is important the sports where the obstacles or opponents must be avoided. It is recognised as a basic component of motor performance, but exact nature has not been determined. Agility as often presented by the term's memory ability, mobility etc, it is the ability to change the directions of the body and its parts rapidly. Agility is the capacity of the individual to measure by the rate of change his position in pace.

#### II.REVIEW OF RELATED LITERATURE

Peterson: Conducted study to predict the basketball performance by using psychomotor, cognitive and anthropometrics measures, 43 female members of the top 4 teams. mission small college basketball tournament served as subjects. The contribution of G.L.A. anaerobic leg power, 15 yards dash, 30-yard

dash, total body, R.T.T.R.J. height and weight to basketball performance was determined by a specially designated formula by M.K. Kay as thigh (8-288) was the over significant (P05) predictor, the 15-yard dash total body T.T. and power were next. The R for the four top variable was 0.56 (P0.01).

Holland: Conducted a study on the predictive value of selected variables determining the ability to play basketball in small high schnook, measures included speed, agility, reaction, lime, shooting ability, pouching ability height, weight, age and previous experience. The criterion was the relating of the basketball playing ability of each gang member by his coach. The most important variables were experience, ball handling, pulling ability and shooting ability. The weighted index with R-0.76 was basketball score on speed dribble (+0.26) score on walk volleys (+0.15) score on shooting test (-10.1) score.

Edward. G. Hatchet: Studied a group of 90 ninth grade boys and found that these were a moderate positive relationship between physical fitness and academic achievements.

Borthy A. Meeks: Conducted AAHPER fitness for 264 girls at Holman Junior high school. These 264 girls were divided into groups. The 27 girls who scored highest in the test were designated as the "fit group". These groups were compared in academic achievements by grade point average, personality fit students, had better personalities, made better grades and were more socially accepted by their peers than the physically outsit students, high and the other scored low in motor proficiency. They reported that the superior motor performance group demonstrated better scholastic adjustment. As evidenced by the larger number with high intelligence and excellent or good rating in reading, writing and comprehensive

#### III.METHODOLOGY

The selection of the subjects, criterion measure, model of the study, selection of motor fitness components, and development of training programme, administration of training programme and analysis of data have been described in this chapter.

Subjects: 24 boys studying in graduation of Bangalore city University, who were selected in Hockey and football University team as subjected of the study.

Most of the subjects who have been selected for the present study belongs to same socio-economic group and were found physically fit for the type of programme for which they are to be subjected. All the subjects were divided into two groups ie. Hockey and football. All the subjects of the present study are under the age range of 22-25 years. All the subject are taking active part in routine Hockey and football coaching programme as per the schedule of the university.

#### THE SELECTION OF THE VARIABLES:

The selection of variables was done keeping in view of those most contributing factors in sports performance, the feasibility of collection of data, and the legitimate time available with the research the following measures have been selected.

Speed: of the students were measured with the help of stop watch by which the individual covered the total distance i.e. 50mts

Endurance: of the subjects were measured by the examiner by taking time plus rate of the individual per minute.

Agility: of the students were measured with the help of stop watch the total time taken to cover the distance ie. 12.50x12.50 mts with 4 reputation.

Experimental Design: Group 'A' Hockey and group 'B' Football players were employed in the study. Both the groups ie, A and B. Practiced selected motor fitness components, thrice a week for a period of seven weeks. The subjects were tested for speed, endurance, strength, and agility before and after the experimental period.

Hockey Test: The dependent variables were selected taking into consideration the most contributing factor to the performance of hockey skills. The dependent variables for this study are as below.

1. 50 mts dash with ball
2. zigzag run with ball
3. scooping the ball for distance

1) 50 Meters Dash with Ball:

#### STATISTICAL TECHNIQUE:

The purpose of the study was to access the motor fitness variables such as predictions of football and hockey playing ability of the players. Multiple correlations were computed to analyse the data.

#### IV ANALYSIS OF DATA

The statical analysis of data related to performance on motor fitness variables speed, agility, Endurance) and playing ability data (zigzag ran with ball, 50 mtrs dash with the ball and scooping or kicking the ball collected on football and Hockey players of the Bangalore city university.

TABLE-1

An analysis of co efficient of inter-correlation between playing ability of hockey and motor fitness variables

TESTS	ZIGZAG	DASH	SCOOPIING
SPEED	0.140	0.046	0.339
AGILITY	0.531	0.061	0.435
ENDURANCE	0.128	0.706	0.280

Significance at 0.05 level of confidence.

The table no. I reveals that multiple correlation of co-efficient between the endurance and 50 Mt dash with ball (0.706) agility and zigzag run with the ball (0.531) Agility and scooping the ball (0.435) level of confidence with value at 0.412. However, there was no significant correlation found between speed and 50. int dash with ball (0.046) agility and 50 mt dash with ball

(0.061) power and 50 mtr dash with ball (0.210) speed and zig zag run with ball (0.140) power and zigzag run with ball (0.216) endurance and zigzag run with ball (0.128) speed and scooping the ball (0.339) power and scooping the ball (0.127) endurance and scooping the ball (0.280) at 0.05 level of confidence with value of 0.412.

Graphical representation of table -01

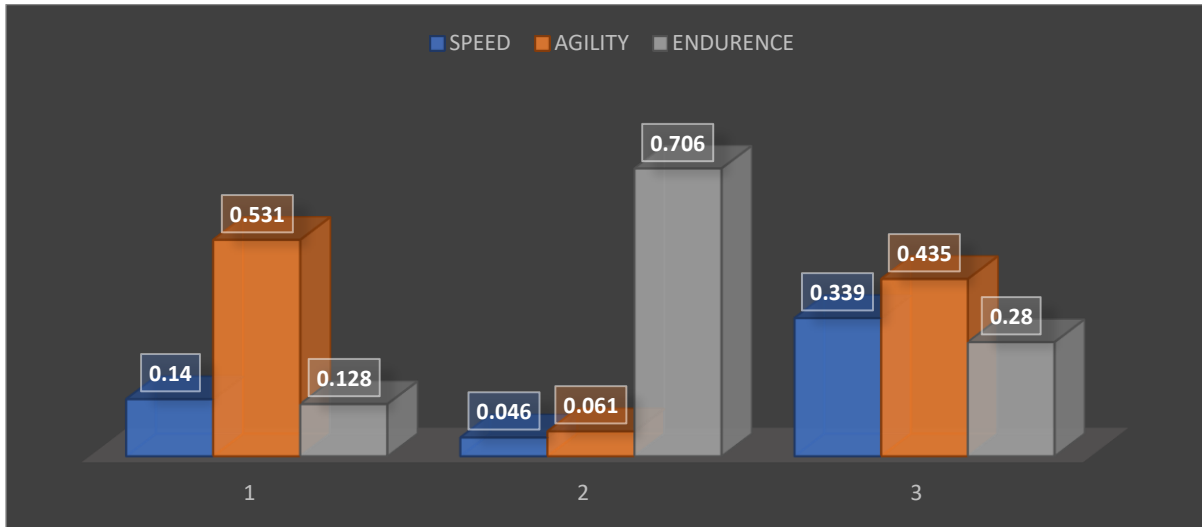


TABLE-2

An analysis of co efficient of inter-correlation between playing ability of hockey and motor fitness variables.

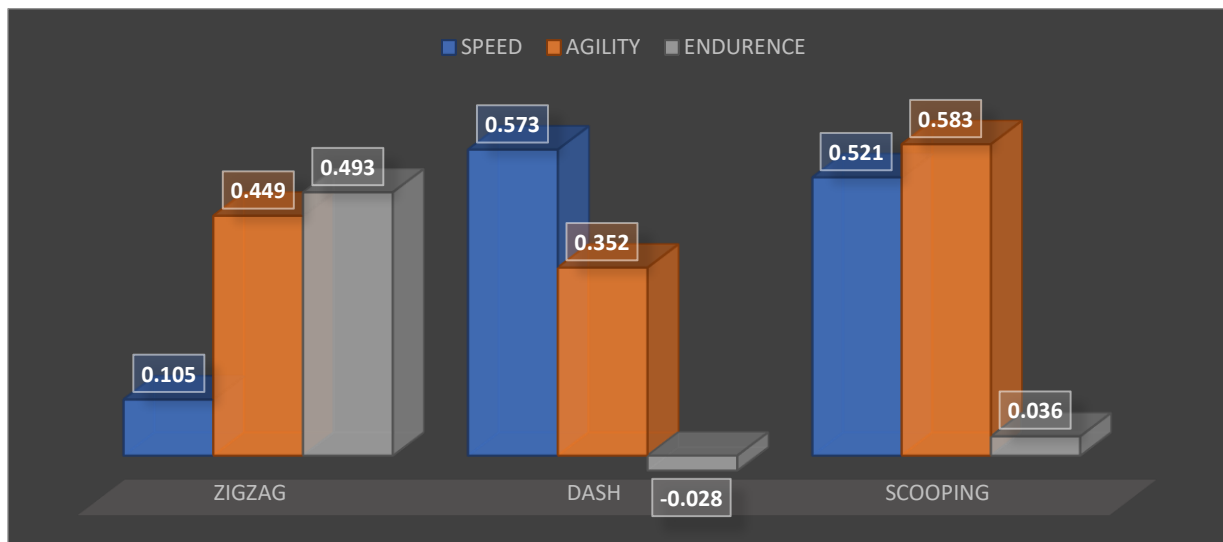
TESTS	ZIGZAG	DASH	KICKING
SPEED	0.105	0.573	0.521
AGILITY	0.449	0.352	0.583
ENDURENCE	0.493	-0.028	0.036

Significance at 0.05 level of confidence.

The table no.2 reveals that multiple correlation of coefficient between agility and zigzag run with ball (0.449) agility and kicking the ball (0.583) 50 mts. dash (0.573). speed and striking the ball (0.521) endurance and zig zag run (0.493). However, there was

no significant correlation between agility and 50 mts dash with ball 0.352, power and 50 mts dash will ball (0.105), power and zigzag run with ball (-0.144) power and striking the ball, (0.098), endurance and striking the ball (0.036) at 0.05 level of confidence.

Graphical representation of table -02



## V.CONCLUSIONS

Based on the results, the following conclusions are drawn:

1. In multiple correlation of co-efficient between football playing ability test that is kicking the ball test score and motor fitness variables score shown significant correlation.
2. In multiples correlation of coefficient between hockey players playing ability test that is scooping the ball test score and motor fitness variables shown significant correlation.
3. Between the hockey players there was no significant. Correlation was found between the 50 mtrs dash with the ball and motor fitness variables score, zigzag run with ball and motor fitness variables scores.
4. Between the football players there is significant profit relationship between the ability and zig zag and strikes as the values are significant. The ball striking and the values are significant.
5. Between the football players endurance is found to be strongly correlated in the zigzag skill.
6. For hockey players there was no significant correlation with zigzag run with ball 50 mtrs, dash with ball and scooping the ball.
7. For the football players power test to be negatively, though not significant, correlated to the development of skills necessary for a successful football player.

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