



A STUDY OF SELECTED PHYSICAL FITNESS COMPONENTS AMONG BASKETBALL AND VOLLEYBALL INTER UNIVERSITY PLAYERS

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ABSTRACT

The Greek philosopher and thinker, **Aristotle** stated, "Body is the temple of the soul, and to reach harmony of body, mind and spirit, the body must be physically fit". **Williams (1962)** stated, "Physical fitness is essential not only in terms of general health but also for the special physical requirement for competitive sports and certain highly specialized and demanding occupation". Fitness is that state which characterizes the degree to which the person is able to function. Fitness is an individual matter. It implies the ability of each person to live most effectively with his potential. Ability to function depends upon physical, mental, emotional and social components of fitness, all of which are related to each other and mutually interdependent. Physical fitness involves the performance of the heart and lungs, and the muscles of the body. The purpose to the study is to compare the selected physical fitness components of basketball and volleyball Inter University players. 15 players from basketball and Volleyball game including from Dr. R.M.L. Awadh University, Faizabad, U.P., India and University of Lucknow, Lucknow, U.P., India were selected as subjects for this study making total of 30 players. The players who had represented their university in the Inter University tournament during 2011-2013 session were selected as subjects, their age ranged from 18 to 25 years. The four selected physical fitness test i.e. shuttle run (agility), 12 minute run/walk (endurance), forward bending position (flexibility) and vertical jump (explosive strength) were administered. The study revealed that the mean value of agility, the basketball and volleyball players are almost the same. It shows that basketball and volleyball players have at least same agility. In the case of others variables, the mean values of endurance, flexibility and explosive strength of basketball players are better than the volleyball players. It may be due to nature of the game because in basketball the players have to run, jump and twist maximum as compared to volleyball players.

INTRODUCTION

The Greek philosopher and thinker, Aristotle stated, "Body is the temple of the soul, and to reach harmony of body, mind and spirit, the body must be physically fit". **Williams (1962)** stated, "Physical fitness is essential not only in terms of general health but also for the special physical requirement for competitive sports and certain highly specialized and demanding occupation". Fitness is that state which

characterizes the degree to which the person is able to function. Fitness is an individual matter. It implies the ability of each person to live most effectively with his potential. Ability to function depends upon physical, mental, emotional and social components of fitness, all of which are related to each other and mutually interdependent. Physical fitness involves the performance of the heart and lungs, and the muscles of the body. Fitness and

training are the most misused and over-used words in English language. Sir Roger Bannister defined "Physical fitness" as a state of mental and physical harmony which enables someone to carry on his occupation to the best of his ability with the greatest happiness. **Bemergee A. Richard (1982)** mentioned that fitness for sports and work has an absolute and a relative meaning in absolute terms, the man that can run the fastest, Jump the highest output during a working day, must be the fit for the particular activity. According to **Clarke, H. Harrison (1976)**, in a society where material values predominate, participation solely for pleasure, recreation and allied benefits in any activity such as sports, that demands much time, energy and self discipline is not likely to be very popular or widely practiced doctrine, especially when the nations of the world are openly using sports as an approach to national fitness and international prestige .

MATERIALS AND METHODS

Statement of the problem

The purpose to the study is to compare the selected physical fitness components of basketball and volleyball Inter University players.

Delimitations

1. This study was delimited to male players of basketball and volleyball game only,
2. Their age ranged from 18 to 25 year.
3. The study was delimited to the Inter University players from Dr. R.M.L.Awadh University, Faizabad, U.P. , India and University of Lucknow, Lucknow, U.P. ,India
4. For the purpose of this study, the following components were selected.
 - (a) Agility
 - (b) Endurance
 - (c) Explosive strength
 - (d) Flexibility

Hypothesis

It is hypothesized that there will be significant difference between physical fitness components in basketball and volleyball Inter University players.

Selection of Subjects

15 players each from basketball and volleyball game from Dr. R.M.L.Awadh University, Faizabad, U.P., India and University of Lucknow, Lucknow, U.P. , India were selected as subjects for this study making total of 30 players. The players , who had represented their university in the Inter University



tournament during 2011-2012 session , were selected as subjects, their age ranged from 18 to 25 year.

Procedure for Administrating Test

The physical fitness tests were performed after the worm-up session. The following tests were administered:

- a. Agility
- b. Endurance
- c. Explosive strength
- d. Flexibility

Agility: Shuttle Run was conducted to measure the agility. Measuring tape, stop watch, two wooden blocks (2”×2”×4”) are used. The performer started behind the starting line on the single go and runs to the blocks, picked up one return to the starting line and placed the block behind the line. He then repeated the process with the second block. The time taken to shuttle run race was recorded to the nearest 1/10 of a meter.

Endurance: To measure the endurance Athletics’ track, measuring tape, stop watch, clapper are used. 12 minute run/walk was to test the endurance of subjects. Subjects were allowed to warm up before actual performance. On the signal “On your mark and go” the subjects run/walk as possible for 12 minutes.

Distance to the nearest meter was taken and recorded.

Explosive Strength: Vertical Jump is used to measure the explosive strength. Marked wall, measuring tape, chalk powder are used. Subject stands laterally and swings his arm backward and goes downward and then jumps vertically and touching the wall by the tip of the middle finger. Scoring was done in centimeter of distance from the normal height to the nearest contact point on the wall.

Flexibility: To measure the flexibility of the performer forward bending position is used. Wooden Box (40’×20’×15’), measuring tape are used. The performer stands on the box and then starts forward bending without knee bending and touches the front side of the box. The distance was recorded in Centimeter.

Statistical Procedure

This was a comparative study of two groups of team game players. For finding out difference in criterion measures, the mean difference of these groups was tested for significance by ‘t’ test and level of significance was set at 0.05 level.

RESULTS AND DISCUSSION

In table-1, the mean and sd and in table-2, ‘t’ test (Significance of Difference) of

physical fitness variables of basketball and volleyball players is given.

Table – I
MEAN AND S.D. OF PHYSICAL FITNESS VARIABLES OF BASKETBALL AND VOLLEYBALL PLAYERS

S. No.	Variables	Basketball Player		Volleyball	
		Mean	SD	Mean	SD
1.	Agility	10.2	1.08	10.3	0.631
2.	Endurance	2446	323	2220	242
3.	Flexibility	19.3	3.27	15.0	5.69
4.	Explosive Strength	47	10.10	37	4.05

TABLE – II
SIGNIFICANCE OF DIFFERENCES OF MEAN IN PHYSICAL FITNESS VARIABLES OF BASKETBALL AND VOLLEYBALL PLAYERS

S. No.	Variables	Mean Differences	Sdev	't'- ratio\
1.	Agility	0.10	0.883	0.271
2.	Endurance	226	286	2.17*
3.	Flexibility	4.3	4.64	2.56*
4.	Explosive Strength	10	3.1	3.02*

* Significant at 0.05 level of confidence (2.04)

The table-II showed that there were significant difference between the variables except agility, thus the hypothesis is accepted. In the case of agility, the 't' value 0.271 was not significant at 0.05 level of confidence. In the case of endurance, 't' value 2.17 was significant at 0.05 level of confidence. Similarly, in the case of flexibility and explosive strength, the 't' value 2.56 and 3.02 was significant at 0.05 level of confidence. It is revealed from table- I that mean values of agility of the basketball and volleyball players are almost the same. It shows that basketball and volleyball players have at least same agility. In the case of others variables, the mean values of endurance, flexibility and explosive strength of basketball players are better than the volleyball players. It may be due

to nature of the game because in basketball the players have to run, jump and twist maximum as compared to volleyball players. Thus, the study concludes that the basketball players were better in all variable comparison except agility.

REFERENCES

1. Clarke, H. Harrison, (1976). "Application of Measurement to Health and Physical Education Englewood cliff N.J. Printice Hall I.N.C.
2. Bemergee A. Richard. (1982). "Applied Exercise Physiological", Philadelphia: La and Fibiger Publication, p. 210.
3. Williams, J.C.P. (1962). Sports Medicine, London: Award Arnold Ltd., p.2.