



COMPARATIVE STUDY OF SELECTED PHYSICAL FITNESS COMPONENTS OF BASKETBALL PLAYERS OF KERALA AND MAHARASHTRA STATES

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Abstract

The main purpose of this study was to investigate to compare the selected physical fitness components of Kerala and Maharashtra states. For the purpose of this study 40 female Basketball players (20 from Kerala and 20 from Maharashtra) and the age was ranged between 15 to 17 years were purposively selected as the subject.

Muscular strength was measured through flexed arm hang test and score was recorded in seconds, muscular endurance was measured through bent knee sit ups test in one minute and score was recorded in number, speed was measured through 50 yard dash test and score was recorded in seconds and explosive power of leg was measured through vertical jump test and score was recorded in centimeters.

To determine the significant difference, independent 't' test was employed for each component separately; the level of significance was set at 0.5 for testing the hypothesis. The findings of statistical analysis revealed that Kerala Basketball players had greater muscular strength, muscular endurance, speed, agility and explosive power of leg than the Maharashtra states Basketball players.

Key words: Muscular Strength, Muscular Endurance, Speed, Agility, Explosive Power of leg, Basketball

Introduction

Health and physical fitness have a vital role in the life of men from time immemorial. The progress of the Nation lies in the hands of the people, who are healthy and physically fit. Every individual should develop physical fitness for a happy and effective living. In order to get physical fitness one has to involve in physical activities. Physical activity is essential for the development of wholesome personality of a child which would depend upon the opportunities provided for wholesome development of the mental, physical, social and spiritual aspects. Hence a well

organized and properly administered physical education programme for school children is very essential.

For top-level performance, it is very important to spot, select and nurtures a budding sportsman as if it recognized by that entire athlete must possess same inherent qualities, which can be developed by means o systematized and scientific training. For spotting and selecting a player one must consider physique and fitness as these qualities help a long way towards better performance.

Significance of the Study

1. The finding of the study would assist in designing suitable training programme for Basketball players.
2. To know about the physical fitness level of Basketball players of both the States.

Hypothesis

It was hypothesized that, there might be significant difference in selected physical fitness components of female Basketball players of Kerala and Maharashtra States.

Methodology

Total 40 district female Basketball players were selected in this study. Out of which 20 players were selected from Kerala state and 20 players were chosen from Maharashtra state, and their age was ranging form 15 to 17 years.

Criterion Measures

For the present study the following variables, tests and criterion measures were chosen-

- Muscular Strength: It was measured through flexed arm hand and score were recorded in seconds
- Muscular Endurance: Muscular endurance measured through number of bent knee sit ups in one minute and score was recorded in numbers.
- Speed: It was measured through 50 yard dash and score was recorded in seconds.
- Agility: It was measured through shuttle run test and score was recorded in seconds.
- Explosive power of leg: Explosive power of leg was measured through vertical jump test and score was recorded in centimeters.

Collection of Data

The data pertaining to the study were collected on the selected subjects by administering the above mentioned tests. Before collection of data, the research scholar had explained the purpose of the study to the subjects so as to they could put their best. The data were collected on the selected players from Kerala and Maharashtra states.

Analysis of Data

The data pertaining to study were examined statistically by applying independent 't' test in order to test the hypothesis set at .05 level of significance.

Table – 1

Description of Mean, SD and t-ratio for the Data on Muscular Strength of Female Basketball Players of Kerala and Maharashtra States

State	Mean	SD	M.D.	S.E. of MD	t-ratio
Kerala	24.95	4.86	17	1.14	14.91*
Maharashtra	7.95	1.64			

*Significant at 0.05 level

Tabulated $t_{0.05}(38) = 2.024$

It is evident from the findings of above table that the calculated t-value of 14.91 is greater than the tabulated t-value of 2.024 at 0.05 level for the 38 degree of freedom, which indicates that statistically there is significant difference between the means of Muscular Strength of Kerala and Maharashtra States' Basketball Players. From the mean value it is obvious that the Basketball Players of Kerala possessed significantly greater Muscular Strength compared to the Maharashtra players. The difference of means has been shown graphically in fig. 1.

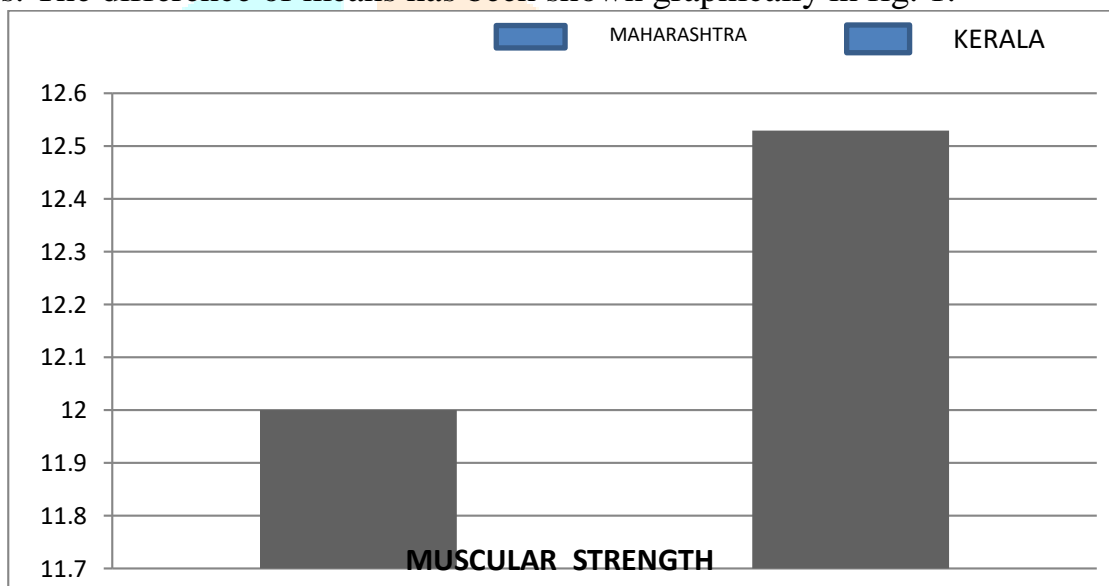


Fig-1: Graphical Representation of Muscular Strength of Kerala and Maharashtra States' Basketball Players.

Table – 2

Description of Mean, S.D. and t-ratio for the Data on Muscular Endurance of Kerala and Maharashtra States' Basketball Players

State	Mean	SD	M.D.	S.E. of MD	t-ratio
Kerala	42.05	6.44	15.7	2.00	7.85@
Maharashtra	26.35	6.209			

*Significant at 0.05 level

Tabulated $t_{0.05}(38) = 2.024$

The findings of above table revealed that the calculated t-value of 7.85 is greater than the tabulated t-value of 2.024 needed to be significant that at 0.05 level for the 38 degree of freedom, which indicates that statistically there is significant difference between the means of Muscular Endurance of Kerala and Maharashtra States' Basketball Players. From the mean value it is obvious that the Basketball Players of Kerala possessed significantly greater Muscular Endurance compared to the Maharashtra players. The difference of means has been shown graphically in fig. 2.

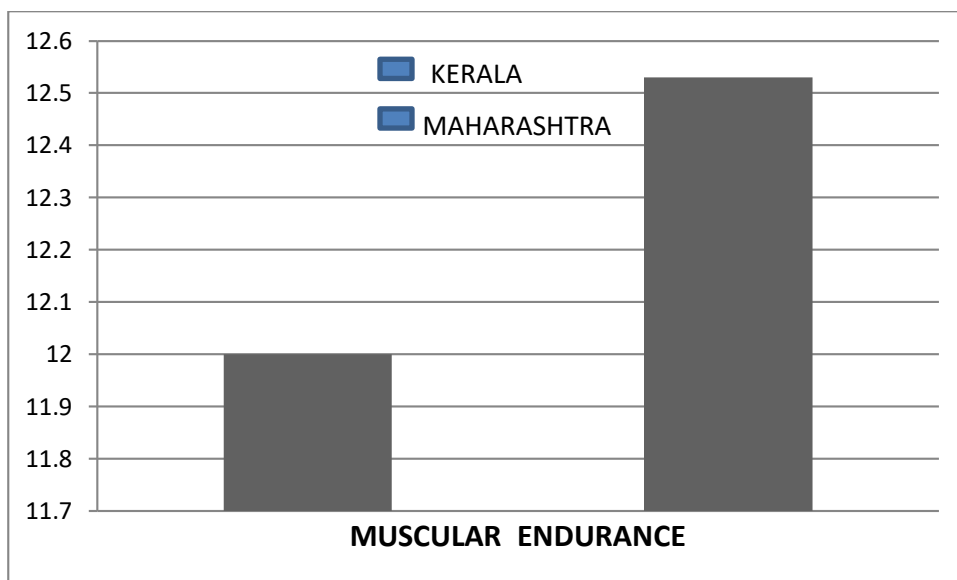


Fig-2: Graphical Representation of Muscular Endurance of Kerala and Maharashtra States' Basketball Players.

Table – 3
Description of Mean, S.D. and t-ratio for the Data on Speed of Kerala and Maharashtra States' Basketball Players

State	Mean	SD	M.D.	S.E. of MD	t-ratio
Kerala	7.83	0.608	2.13	0.29	7.34@
Maharashtra	9.96	1.16			

*Significant at 0.05 level

Tabulated $t_{0.05}(38) = 2.024$

From the findings of above table it is understood that the calculated t-value of 7.34 is greater than the tabulated t-value of 2.024 at 0.05 level for the 38 degrees of freedom, which indicates that statistically there is significant difference between the means of Speed of Kerala and Maharashtra States' Basketball Players. From the mean value it is obvious that the Basketball Players of Kerala possessed significantly greater Speed compared to the Maharashtra players. The difference of means has been shown graphically in fig. 3.

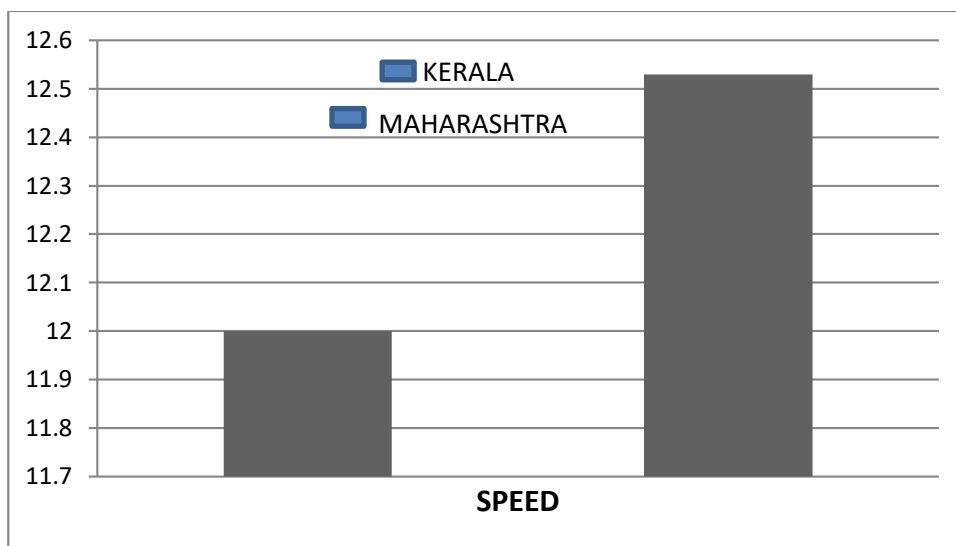


Fig-3 : Graphical Representation of Speed of Kerala and Maharashtra States' Basketball Players.

Table – 4
Description of Mean, S.D. and t-ratio for the Data on Agility of Kerala and Maharashtra States' basketball Players

State	Mean	SD	M.D.	S.E. of MD	t-ratio
Kerala	10.91	1.02	2.65	0.33	8.03@
Maharashtra	13.56	1.12			

*Significant at 0.05 level

Tabulated $t_{.05}(38) = 2.024$

From the findings of above table it is understood that the calculated t-value of 8.03 is greater than the tabulated t-value of 2.024 at 0.05 level for the 38 degrees of freedom, which indicates that statistically there is significant difference between the means of Agility of Kerala and Maharashtra States' Basketball Players. From the mean value it is obvious that the Basketball Players of Kerala possessed significantly greater Agility compared to the Maharashtra players. The difference of means has been shown graphically in fig. 4.

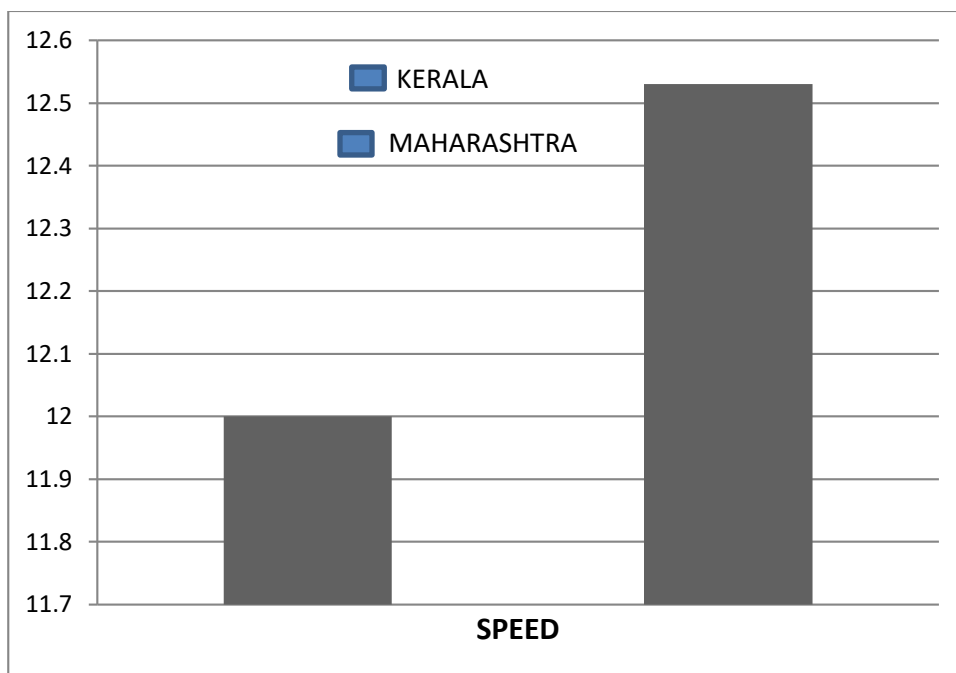


Fig-4 : Graphical Representation of Agility of Kerala and Maharashtra States' Volleyball Players.

Table – 5

Description of Mean, S.D. and t-ratio for the Data on Explosive Power of Kerala and Maharashtra States' basketball Players

State	Mean	SD	M.D.	S.E. of MD	t-ratio
Kerala	0.33	0.04	0.08	0.02	4*
Maharashtra	0.25	0.08			

*Significant at 0.05 level

Tabulated $t_{0.05}(38) = 2.024$

It is evident from the findings of above table that the calculated t-value of 4 is greater than the tabulated t-value of 2.024 which is required to be significant at 0.05 level for the 38 degrees of freedom, i.e. statistically there is significant difference between the means of Explosive Power of Kerala and Maharashtra States' Basketball Players. From the mean value it is obvious that the Basketball Players of Kerala possessed significantly greater Explosive Power compared to the Maharashtra players. The difference of means has been shown graphically in fig. 5.

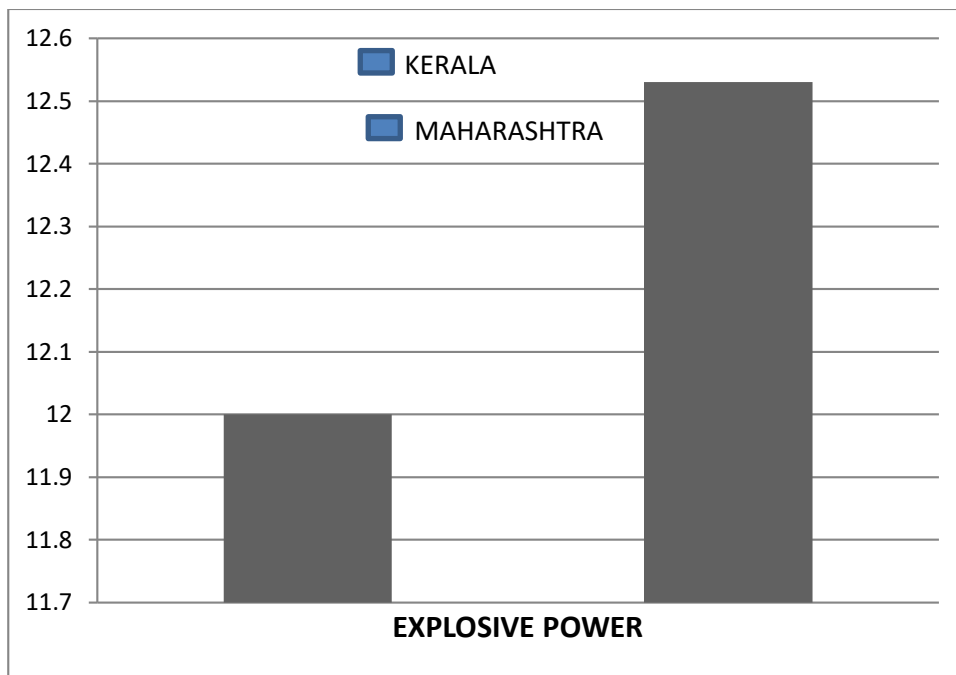


Fig-5 : Graphical Representation of Explosive Power of Kerala and Maharashtra States' Basketball Players.

Discussion on findings

The findings of table 1,2,3,4 and 5 revealed that there was significant difference among the Basketball Players of Kerala and Maharashtra State's. The Basketball players of Kerala Possessed greater physical fitness than the Basketball players of Maharashtra. This superiority might have been due to physical fitness workout, food habits, climatic conditions, attitude of the players and coaches, and might be the influence of various environmental factors. Hence such results might have occurred this study.

Conclusions

Within the limitations of the present study and on the basis of findings, it was concluded that the Basketball Players of Kerala possess superior physical fitness possesses compared to the Maharashtra state Basketball players.

References

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