



## ASSESSMENT OF WOMEN'S BASKETBALL MOTOR PERFORMANCE ON THE BASIS OF SELECTED SPEED COMPONENTS AT DIFFERENT LEVELS

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### Abstract

The present study examined the speed component of women basketball players playing at the District, State, and National levels. The players of different levels were selected on the basis of their participation at different levels of competitions (District, State, and National). The purposive sampling procedure was used for the sample selection. One hundred fifty women basketball players (N=150) were selected from Madhya Pradesh. Fifty players from each group participated in the study. The players were between 17-25 years age of ranged. Players' speed for a 50-meter dash run was recorded in seconds. The data was analyzed by using appropriate statistical techniques. Results of the study revealed that the level of players indicated differences in time for the 50-meter dash run. The results are discussed using proper rationale.

**Key Words:** Women basketball Players, Speed and Motor Components.

### Introduction

Basketball game involves a lot of starting and stopping despite not being known as an aerobic sport. It is a great workout that can aid in calorie burning (playing basketball for an hour can burn between 630 and 750 calories), endurance building, balance and coordination improvement, concentration and self-discipline development, muscle building, and more.

Children can be active and have fun with basketball in a very useful and effective way. A national introduction to basketball program called "Aussie Hoops" was created by Basketball Australia and the Australian Sports Commission for primary school students. It offers opportunities for primary school boys and girls of all ages, abilities, and skill levels to play basketball and develop sports skills in a secure setting. Basketball can be a great social sport and teaches us the value of working well with others. In India, basketball is played at high school, college, and university levels, with the younger generation actively participating right now like never before. Men and women participate in this sport irrespective of age and ability. There are many professional state teams for basketball in India. Even government institutions have their professional basketball teams consisting of men and women who work and play for them. The sport of basketball was first played in India in 1930. The first-ever Indian National Championship for men was conducted in New Delhi in 1934. The Basketball Federation of India (BFI) is the governing body of the sport in the country, formed in 1950.

The first men's professional basketball league in India is known as the United Basketball Alliance (UBA) Pro Basketball League. Currently, this basketball league is not in operation in the country.



Speed plays a crucial role in a basketball game. The specific speed in basketball is manifested as game speed, reaction speed, movement speed, displacement speed, and endurance speed. Each of these types of speeds has special features for their analysis, interpretation, and training methodology. The speed of the game is related to the pace (pacing) printed by the teams. The reaction speed depends on the decision-making of the sensory organs (visual, auditory, and kinesthetic). In the speed of movement, the frequency of motor actions takes an important role. The displacement speed consists of assessing the player's body in space-time. Finally, endurance speed aims to maintain the power levels at each type of speed. The integration of the different speeds will allow the basketball player to achieve high-performance levels. Strength and conditioning coaches must understand how each speed works to create effective training methodologies in their professional practice.

### Methodology

The present study aims to examine the difference in the level of women's basketball motor performance on the basis of selected Motor component speed between players of different levels (District, State, and National). A total of 150 women basketball players playing at District, State, and National levels were selected to participate in this study. Fifty players from each group were selected by using a purposive sampling method. The age range of the players was between 17 to 25 years. Simple one-way between-group design was used in this study. Players of different levels (District, State, and National) constituted the group. Equipment used in this study were Flat surface, lime powder, stopwatch, measuring tape, cones, and score sheet. The

players have been explained the purpose of the study. They were communicated with and encouraged to complete the run as faster as possible. After that players were given the chance to perform on a 50-meter dash run and their time in seconds were recorded. After the completion of the run, players were thanked for their cooperation and support. Descriptive information, (mean, trendy deviation, minimum and maximum) evaluation of variance ANOVA with LSD submit post hoc test, to comparisons (mean deference and crucial suggest deference) and impartial t-check have been applied. The information studying tools spss-21 software turned into used. Significance was set at 0.05.

### Findings

The time in seconds recorded was considered as the score for further analysis. Means and standard deviations of the scores indicating time spent for 50 meters were obtained by using descriptive statistics. Results are shown in Table-1. To examine the between-group difference among the players' scores one-way analysis of variance (ANOVA) was performed and shown in Table-2.

TABLE-1  
MEANS AND STANDARD DEVIATION OF THE SCORE OF  
MOTOR COMPONENTS SPEED 50M. RUN BETWEEN  
WOMEN BASKETBALL PLAYERS OF  
DIFFERENT LEVELS

Level of Players	Mean	Std. Deviation
District	8.58	0.97
State	6.5	0.86
National	6	0.73

The mean score shown in Table-1 indicates that National level players completed 50 meters run in less time (M=6 sec) as compared to the State level (M=6.5) and



District level (M=8.58) players' results are shown in Figure 1.

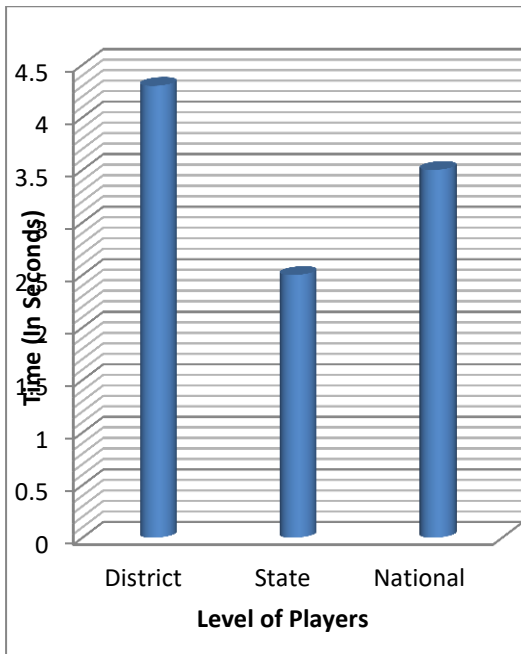


Fig.1: Graphically presentation of Descriptive statistics tables of level of players Mean time in seconds of women basketball players of different levels: District, State & National.

TABLE-2  
ONE-WAY ANALYSIS OF VARIANCE (ANOVA) FOR TIME SPENT (50 M. RUN - SCORES IN SECONDS) BY THE PLAYERS OF DIFFERENT LEVELS

Source of Variation	Sum of Squares	df	Mean Square	F
Between Groups	187.213	2	93.607	126.6*
Within Groups	108.68	147	0.739	
Total	295.893	149		

\*Significant at .01 level of significance

A close view of the ANOVA result indicates that the effect of levels of players was significant,  $F(2,147) = 126.6, p > .01$ . It reflects that players of different levels took significantly different times to complete the 50-meter run.

Post hoc comparison was also performed to examine the difference between District, State, and National level players, and the result is shown in Table-3.

TABLE 3  
POST HOC TEST OF MOTOR COMPONENTS SPEED 50M. RUN BETWEEN WOMEN BASKETBALL PLAYERS OF DIFFERENT LEVELS

District	State	National	Mean Difference	Critical Difference
8.58	6.50	-----	2.08*	0.34*
8.58	-----	6	2.58*	
-----	6.50	6	0.50*	

A close look at the result supports that State level players performed significantly better (M=6.50) as compared to District level players (M=8.58). Similarly, National level players took less time (M=6.0) as compared to District level players (M=8.58). The National level players also performed better (M=6.0) as compared to State level players. The obtained value of critical difference was obtained .34, which is significant. In the result, lower value of the score represents better performance.

### Discussion and Conclusion

The findings of the study indicate that women basketball players participating at different levels took different times in Seconds to complete the 50-meter dash run. The result supports that better performance was displayed by National level players as compared to the State level and District level players. Similarly, The State level players also showed better performance than District level players. Possibly the pattern of results supports that the practice and experience of the players contributed to better performance. In the present study, it was noted that gradually players move upward from District to State and National levels. Players in their journey get opportunities to acquire training



and coaching systematically. It seems reasonably assumed that when players began their journey of training they develop interest, competence, and intrinsic motivation regarding their performance in Basketball games. Probably the Pattern of results shows the same trend. It has been observed that players reach the National level after extensive hard work and training, because of that in this study their performance was observed significantly higher as compared to State and District level players. The present findings suggest that regular practice, training, and encouragement should be continued for players to sharpen their sports performance. The Present findings are useful for coaches and trainers to plan their strategies for preparing players of different levels. The significance Mean score of women's basketball motor performance on the basis of selected Motor component speed at different levels (District, State, and National).

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