



## Correlation of selected anthropometric variables to basketball performance

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### Abstract

The purpose of the study was to know the correlation of selected anthropometric variables and Basketball performance of inter-collegiate Basketball men players. Methodology- To achieve the objectives of the study Forty five male Basketball players, who had participated the Visvesvaraya Technological University inter-collegiate Basketball tournament, were selected as subjects. From the data pertaining to the six anthropometric variables such as standing height were measured by using wall mounted scale and the score was measured in centimeters, total body weight measured by weighing machine and the score was measured in kilograms., arm length and leg length were measured by with the help of gullick tape and the score was measured in centimeters, and playing ability assessed through subjective rating, by three experts, during the tournaments and the average was taken as criterion score. For analysis and interpretation of data, the investigator used Person's product moment correlation (zero order) was used. Results- there were significant relationship found between selected anthropometrics variables with Basketball performance of inter- collegiate Basketball men players.

**Keywords:** basketball, anthropometric, performance

### 1. Introduction

Sport is an important ingredient of physical education and is a worldwide phenomenon today. The unprecedented popularity and better organization of sports activities and competitions would have been impossible without the recognition of the important of sports competitions in the world. The world has realized the importance of sports for the modern civilizations. (Uppal, 1992) <sup>[5]</sup>.

Basketball is a sport played between two teams normally consisting of five or more players. Each team has five players on the basketball court at any given time. The objective is to score more points than the other team, with points being scored by shooting a ball through a basketball hoop (or basket), which is located ten feet above the ground. The two teams shoot at opposite goals. In order to move while in possession of the ball, a player must be dribbling, or bouncing the ball. The number of points awarded a player for successfully shooting the ball through his team's goal varies according to the circumstance. The most common scenario is the two-point play, wherein a player scores two points for making a basket anywhere inside the "3-point line" while the ball is in play. A semicircular line (the three- point line) marks the area beyond which, if a player makes a basket, three points are awarded for the shot. One point is given to a player upon successfully making a free throw, or a foul shot.

Anthropometry is the measurement of man, living or dead, and consists primarily in the measurement of the dimensions of the body. Anthropometry has also been defined as the science of measurement applied to the human body and includes measurements of height, weight, and selected body and limb girths. The use of anthropometry is a standardized method to compare bodybuilders and other athletes in the

areas of muscle, body proportionality, and fat tissue. A first area of assessment is body composition. Bodybuilding, unlike performance sports, is characterized by aesthetics and by body dimensions.

A good physique of the Basketball players plays a vital role in the Basketball game. Height has the potential placement and preferable pre- requisites in the performance excellence in many sports and games. It is an asset in Basketball game. Players must have optimum weight to do both offensive and defensive movements. Leg length has definite decisive advantage in Basketball. Longer strides are possible with longer leg length and it will helpful to run fast from one end to another end. Like leg length, arm length also helpful to players in catching, passing, shooting and to do defensive and offensive actions besides the opponent's hindrance. Potential placement and preferable pre- requisites in the performance excellence in many sports and games. It is an asset in Basketball game. Players must have optimum weight to do both offensive and defensive movements. Leg length has definite decisive advantage in Basketball. Longer strides are possible with longer leg length and it will helpful.

So, this present study was undertaken to measure the Basketball performance with selected anthropometric variables such as Body Height, total body weight, Arm Length and Leg Length.

The main purpose of the study was to know the correlation of selected anthropometric variables and Basketball performance of inter- collegiate Basketball men players.

### 2. Methodology

#### 2.1 Selection of subjects

Forty-five men inter-collegiate Basketball players, from four

Colleges, were selected as subjects; all the subjects belonged the age group of 18 to 25 years. During the Visvesvaraya Technological University inter-collegiate Basketball tournament.

## 2.2 Test Administration

The subjects were tested for the selected anthropometric variables such as of standing Body Height was measured by stadiometer and the score was measured in cm., Total body weight measured by weighing scale, Arm Length were measured by Gullick tape and scores was recorded in cm, and Leg length was measured by Gullick tape and scores was recorded in cm. The dependent variable was playing ability; which was assessed through subjective rating, by three experts. The average of three experts was the individual criterion score.

## 2.3 Statistical Analysis

To determine whether relationship among the research variables exists or not Person's products moment's Co-efficient of correlation was applied. The data was computed on the SPSS Statistical package for the Social sciences.

## 3. Results of the study

The anthropometric variables in relation with Basketball performance are given in table.1.

**Table 1**

S. No	Variables	Co-efficient of correlation
1	Inter- Collegiate Basketball Men Players Basketball Performance And Standing Height(Cm)	0.610*
2	Inter- Collegiate Basketball Men Players Basketball Performance And Total Body Weight(Kg)	0.525*
3	Inter- Collegiate Basketball Men Players Basketball Performance And Arm Length(Cm)	0.685*
4	Inter- Collegiate Basketball Men Players Basketball Performance And Leg Length(Cm)	0.534*

Significant at 0.05 level.

The Above Table-1 Shows That the Correlations of selected Anthropometric Variables Such As Standing Height( $r=0.610^*$ ), Total Body Weight( $r= 0.525^*$ ), Arm Length( $r=0.685^*$ ), Leg Length( $r=0.534^*$ ) and Basketball Performance.

## 4. Conclusion

On the basis of findings of the study, the following conclusions wear drawn.

There was a significant relationship found between the selected Anthropometric Variables Such As Standing Height, Total Body Weight, Arm Length, and Leg Length Basketball Performance of inter-collegiate basketball men players.

## 5. References

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