Academic Sports Scholars

A STUDY OF SELECTED ANTHROPOMETRIC VARIABLES AND THEIR RELATIONSHIP WITH PERFORMANCE AMONG WOMEN BASKETBALL PLAYERS

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ABSTRACT :

Millions of people take part in sports activities for either recreational purpose or for health, strength and fitness purpose and for displaying superiority over others in competitive sports. The need of for scientific approach to the problem of modern athletic training has been recognized for many years. It is imperative that a certain general body of knowledge is acquired before attempting to study the techniques and methods of improvement in training. It is essential therefore, to gather date on morphological and physiological responses of the participants to a general work task during participation in different sports.

KEYWORDS : Anthropometric Variables , Women Basketball Players , health, strength and fitness .

INTRODUCTION:

As evident from the historical resume, anthropometry as measurement of body structure happens to be one of the oldest types of body assessment as an earlier form of testing in physical education. The study of human physical measurements is, therefore prominently known as anthropometry, and has wide application to the essentials parameters constituting the selective diagnostics of any game or sports.

There is a wealth of scientific and empirical evidence to support the claim that there is body size differences among athletes in different sports and game, and among even within the same sports. The increased investigation and study in women sports.

Today, it has been realized that the champions in different sports differ in their anthropometric and physiological characteristic particular requirement of their respective events. Studies have shown that the top level performance is not ensured, if the anthropometric-body dimensions of mechanical aspect of the game concerned. Therefore it has been observed that apart from other factors the performance of a sportsman in any sport and game is influenced by various specific characteristic of physique, body composition, psychological traits and physiological functions which help him to attain better performance.

OBJECTIVES AND HYPOTHESIS:
The objectives of the study were:
• Assessment of selected anthropometric variables of women Basketball players.
• To determine the correlation between selected anthropometric variables and performance score.
The hypothesis of the study was:
• It was hypothesized that greater anthropometric measurements in height, sitting height, leg length and arm length will have higher correlation with Basketball playing ability.

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PROCEDURE AND METHODOLOGY

For this purpose of the study 35 female players who have either participated in Inter College or zonal championships were randomly selected to act as subjects for the study. The age of the subjects were ranging from 17-25 years. Weight, standing Height, Sitting Height, leg length, lower leg length, upper leg length, Arm length, upper arm length and lower arm length were taken into consideration for the anthropometric measurements. Weighing Scale, Anthropometric Rod, Steel tape and Skin Fold Caliper were the tools were used for the measurements whereas the performance of the selected female Basketball players was gathered by the help of the three experts out of 10 marks. The collection data was analyzed by computing descriptive statistics followed by Pearson's Product Moment Correlation.

RESULTS AND DISCUSSION

The results and findings of the present study were analyzed and interpreted in the different tables as follows:

Descriptive Statistics values of selected Anthropometric Variables

S.No.	Variables	Mean	SD
1	Weight	50.48	5.28
2.	Height	154.91	3.85
3.	Sitting Height	79.03	6.32
4.	Leg length	86.82	7.38
5.	Upper leg length	47.80	3.82
6.	Lower Leg Length	43.80	1.99
7.	Arm Length	59.73	4.68
8.	Upper Arm Length	29.15	3.20
9.	Lower Arm Length	31.00	4.21

Table no. 1 indicates the descriptive statistics values of selected Anthropometric Variables, which shows that the mean and SD values of Weight, Standing Height, Sitting Height, Leg length, Lower leg Length, Upper leg length, Arm length, Upper Arm Length and Lower Arm Length were found to be 50.48 ±5.28, 154.91±3.85, 79.03±6.32, 86.82±7.38, 47.80±3.82, 43.80±1.99, 59.73±4.68, 29.15±3.20 and 31.0±4.21 respectively.

Table-2
Pearson's Product Moment Correlation between Anthropometric Variables and the Performance score of women Basketball players.

S.No	Variables Correlated	Correlation Coefficient
1.	Weight and Performance Score	0.324*
2.	Height and Performance score	0.828**
3.	Sitting Height and Performance Score	0.468*
4.	Leg length and a Performance Score	0.481**
5.	Upper leg length and Performance Score	0.178
6.	Lower Leg Length and Performance Score	0.655*
7.	Arm Length and Performance Score	0.533**
8.	Upper Arm Length and Performance Score	0.352*
9.	Lower Arm length and Performance Score	0.658**

*Significant at 0.05 level   **Significant at 0.01 level

Table no.2 indicate the values of Pearson's Product Moment Correlation, which indicates that the performance score of women Basketball players significantly correlates to weight, height, sitting height, leg length, lower leg length, arm length, upper arm length and lower arm length as the values were found to be 0.324, 0.828, 0.468, 0.481, 0.655, 0.533, 0.352 and 0.658 respectively, which were significant at 0.05 level.

CONCLUSIONS

Within the limitations of the present study the following conclusions were drawn from the study:

1. Performance of the women Basketball players was significantly related to leg length, upper arm length and arm length. These variables may used as the predictors of performance of Basketball.

2. The performance of the women Basketball players was not significantly related to upper leg length so it may be treated as poor predictor of performance.

3. For better prediction of performance of women Cricket players, all the variables weight, standing height, sitting height, leg length, lower leg length, upper leg length, arm length, upper arm length and lower arm length employed in the present study may be considered in combination instead of studying the influence of each of the independent variable.

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