

Comparison of Anthropometry Measurements between Basketball and Football Players

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Abstract

Background: For the purpose of the present study was to compare anthropometry measurements between basketball and football players.

Methods: Sixty male students studying in G.B.Pant University of Agriculture and Technology, Pantnagar, Uttarakhand, for the year 2009-10, were selected as subjects for the present study. From the sixty subjects, each thirty subjects were players of Basketball and Football. The subject's age ranged from 18 to 25 years. The variables for study were standing height, sitting height, weight, arm length, calf girth, thigh girth, and chest girth. To compare the selected anthropometry measurements between Basketball and Football players 't' test was used. The level of significance was set at 0.05 level.

Results: The result showed significant differences in standing height, sitting height, arm length, calf girth, thigh girth, and chest girth and insignificant difference in weight
Key words: Standing Height, Sitting Height, Weight, Arm Length, Calf Girth, Thigh Girth, and Chest Girth.

INTRODUCTION

Anthropometry is the study of measurements of man whether living or dead. The word anthropometry was established by German Dr. Ales Holtreg in 17th century. Anthropometry measures all physical aspects of your body. Simple measurements include height and width. But a more thorough body of measurements is usually needed for Human Factors work. Measurements such as the length from your elbow to the tip of your finger or the circumference of your skull are some examples. In a complete anthropometric survey measurements are taken between every joint and across hinge joints (such as the knee and elbow). Range of motion is also recorded. Thickness or girth is measured as well.

There are numerous factors which are responsible for the performance of a sports person the physique including the size shape and form are known to play a significant role in this regard. At present, sportsperson for superior performance in any sports is selected on the basis of physical structure and body size. this has proved to be appropriate for high performance in the given sports.

Structural measurements include anthropometric measurements which consist of objective measurements of structures such as height and weight, depth and circumference of the various part of body.

MATERIALS AND METHODS

The present study i.e. “comparison of anthropometry measurements between basketball and football players” was conducted on the selected anthropometry measurements on sixty male students studying in G.B.Pant University of Agriculture and Technology, Pantnagar, Uttarakhand, for the year 2009-10, were selected as subjects for the present study. From the sixty subjects, each thirty subjects were players of basketball and Football. The subject’s age ranged from 18 to 25 years.

Variables

The variables for study were standing height, sitting height, weight, arm length, calf girth, thigh girth, and chest girth.

Statistical Analysis

To Compare the selected anthropometry measurements basketball and football players, ‘t’ test was used. The level of significance was set at 0.05 level.

RESULTS AND DISCUSSION

Fig. 1: Graphical Representation of Standing Height, Sitting Height, Weight, Arm length, Calf Girth, Thigh Girth, and Chest Girth of Basketball and Football Players.

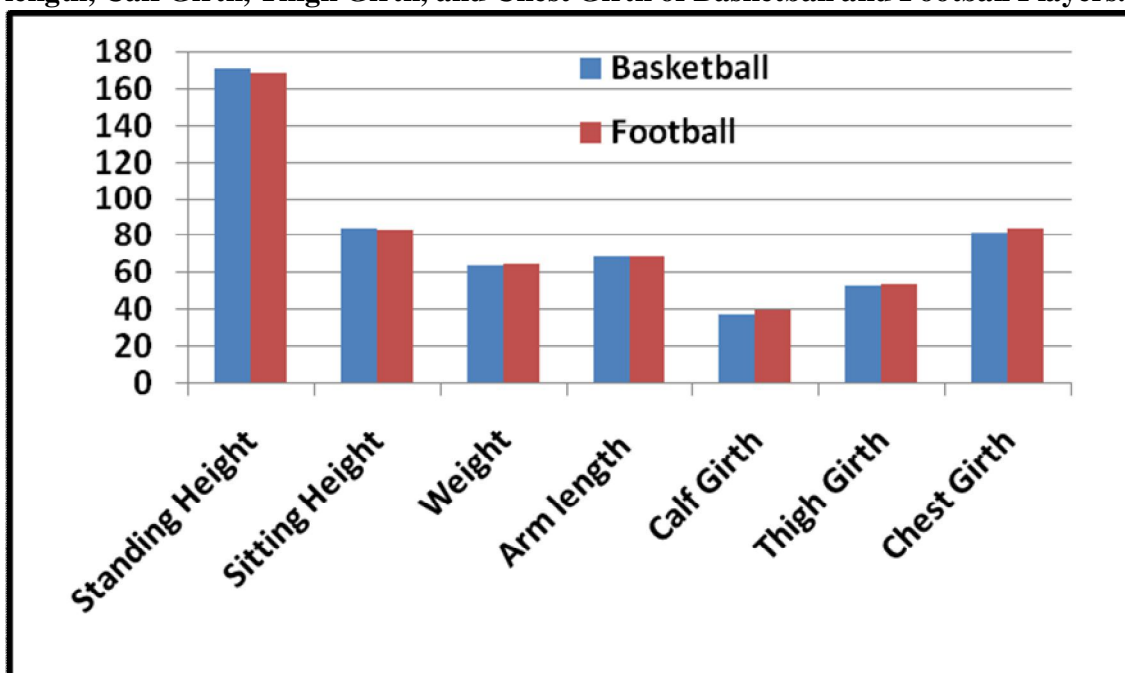


Table-1: Mean Comparison of Selected Anthropometry Measurements between Basketball and Football Players.

sl.no.	Variables	Basketball		Football		‘t’ ratio
		Mean	S.D.	Mean	S.D.	
1	Standing Height (Cm)	171.3333	6.0647	168.7000	2.5884	2.243

2	Sitting Height(Cm)	84.2333	2.9087	82.7667	1.7554	2.517
3	Weight (Cm)	64.0333	1.9205	64.5000	2.6749	.675
4	Arm length (Cm)	69.000	.2626	68.2333	104546	2.935
5	Calf Girth(Cm)	37.4667	2.5014	39.2000	2.2657	2.616
6	Thigh Girth(Cm)	52.2333	1.0726	53.6333	2.0722	2.445
7	Chest Girth(Cm)	81.4333	3.3803	83.9667	2.9300	2.884

***Significant at 0.05 level of confidence, $t_{.05}(58) = 2.00$**

The above table reveals that significant difference were found in Standing Height, Sitting Height, arm length, Calf Girth, Thigh Girth, and Chest Girth, as the calculated value of 't' = 2.243, 2.517, 2.935, 2.616, 2.445, and 2.884 were greater than the tabulated value $t_{.05}(58) = 2.000$.

It is evident from the table -1 that insignificant differences was found in Weight, since the calculated of 't' value .675 was less than tabulated 't' value 2.000 at 0.05 level.

CONCLUSIONS

On the basis of results and with in the limitation of study, the following conclusions were drawn:-

1. Basketball and football male Players of G.B.Pant University of Agriculture and Technology, Pantnagar, Uttarakhand, were similar in weight.
2. Basketball male Players of G.B.Pant University of Agriculture and Technology, Pantnagar, Uttarakhand have more Standing Height, Sitting Height and Arm length than the football male Players of G.B.Pant University of Agriculture and Technology, Pantnagar, Uttarakhand.
3. Football male Players of G.B.Pant University of Agriculture and Technology, Pantnagar, Uttarakhand have more Calf Girth, Thigh Girth and Chest Girth than the Basketball male Players of G.B.Pant University of Agriculture and Technology, Pantnagar, Uttarakhand.

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