

## Analysis of Anthropometric measurements of football players in relation to positional play

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### Abstract

The purpose of this investigation was to investigate the analysis of anthropometric measurements of football players in relation to positional play among defenders, midfielders and attackers. 60 football players who participated in the Mushtaq Memorial football championship held at Srinagar (J&K) during June 2015 were selected randomly as subjects for the study. The age of the subjects ranged between 20 to 30 years. Height, weight, thigh girth and leg length were measurements were measured for the test. On way ANNOVA was used as a statistical treatment. The level of significance was set at 0.05.the results revealed that there is no significant difference found in anthropometric measurements among the foot ball players.

**KEYWORDS:-** Anthropometric measurements, Football Players

**Introduction:-** change and challenges are the twin laws of nature as they affect every aspect of human life. Changes are taking place all rounds and because of these changes new challenges present themselves. Man is constantly trying to meet these challenges and excel his previous performance every time.

Technology covers all aspects of life and sports are no exception to it. Sports science has enabled modern youth to develop physical capacities beyond any time imagined. Sports have become high competitive and record are being broken with greater rapidity.

Athletes for superior performance in any sports are selected on the basis of his physical structure and body size, which has proved to be appropriate for high performance in the given sports. Garay, Levine and Lindsay Carter concluded in their study that performance in a particular event demands a particular type of body size and shape, other aspects being similar, they established high relationship between structure of an athlete and the specific task (event) in which they excelled.

**Methodology:** - 60 football players were selected as subjects for this study. The subjects were selected randomly who had participated in the Mushtaq memorial football championship during June 2015. The subjects were divided into three groups (each group consists of 20 players on the basis of their position of play.

Defenders 20, Midfielders 20 and Attackers 20.

The age of the subjects ranged between 20 to 30 years. Height, Weight, Thigh Girth and leg length were selected as variables for the study. To determine the significance of difference between the group means in different variables for the defenders, midfielders and attackers of football players, the one way analysis of variance (F ration) was used. The significant level was set at 0.05.

**Results:-**

Significance of Means difference of anthropometric measurements of defenders, midfielders and attacks of football players are shown below.

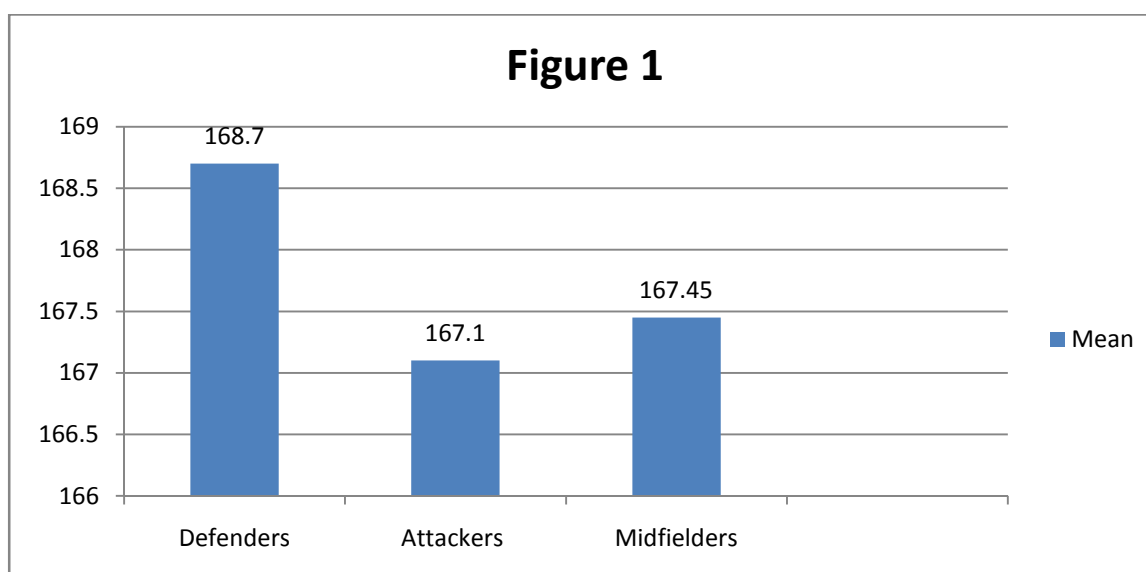
Variable	Source of variance	Degree of freedom	Sum of squares	Mean square	F. ratio
<b>Height</b>	Between group	2	149.56	75.32	3.12
	Within group	57	1932.32	32.85	
<b>Weight</b>	Between group	2	30.3	15.14	.236
	Within group	57	19.34	34.70	
<b>Leg length</b>	Between group	2	2.6	1.6	1.45
	Within group	57	616.60	13.59	
<b>Thigh girth</b>	Between group	2	48.33	23.18	2.15
	Within group	57	814.98	17.02	

Tabulated value of F to be significant at 0.05 level of the degree of freedom (2, 57) = 3.17

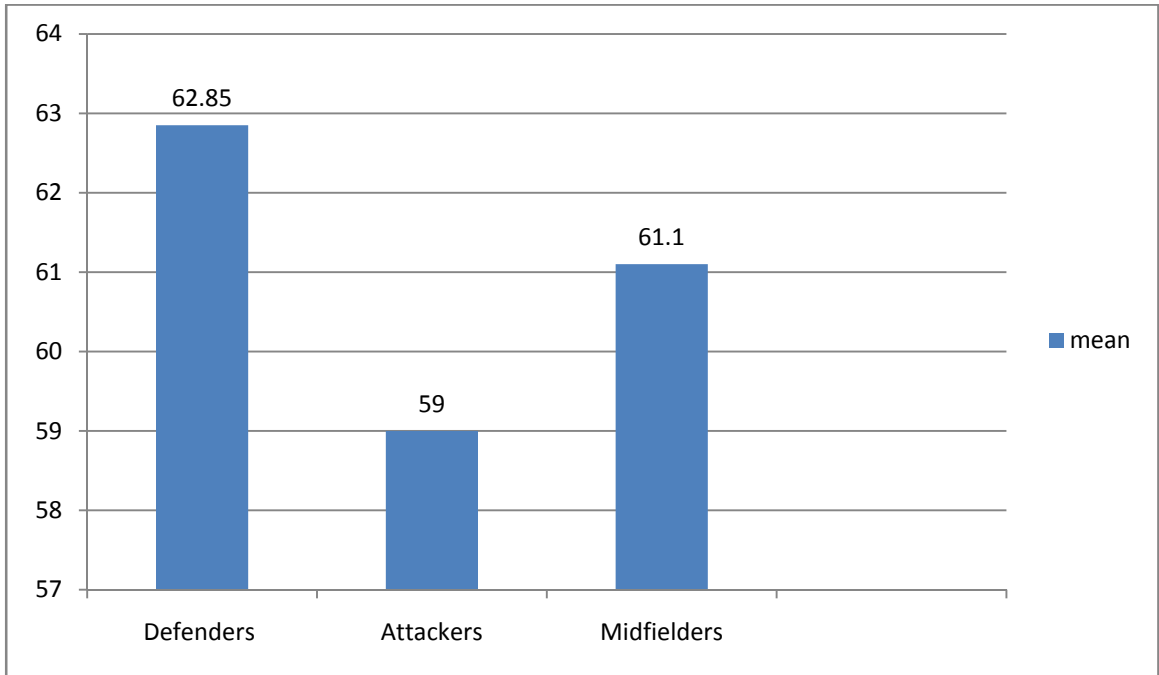
According to the analysis of data obtained from the three groups it is clear that there was no significant difference between the defenders , attackers and midfielders of football players in anthropometric measurements the calculated F ratio of height (3.12), weight (.236) ,leg length (1.45) and thigh girth(2.15) were not found statistically significant at 0.05 level of confidence as tabulated F value was 3.17 at 0.05 level.

The illustrations has been presented in figure 1 to 4

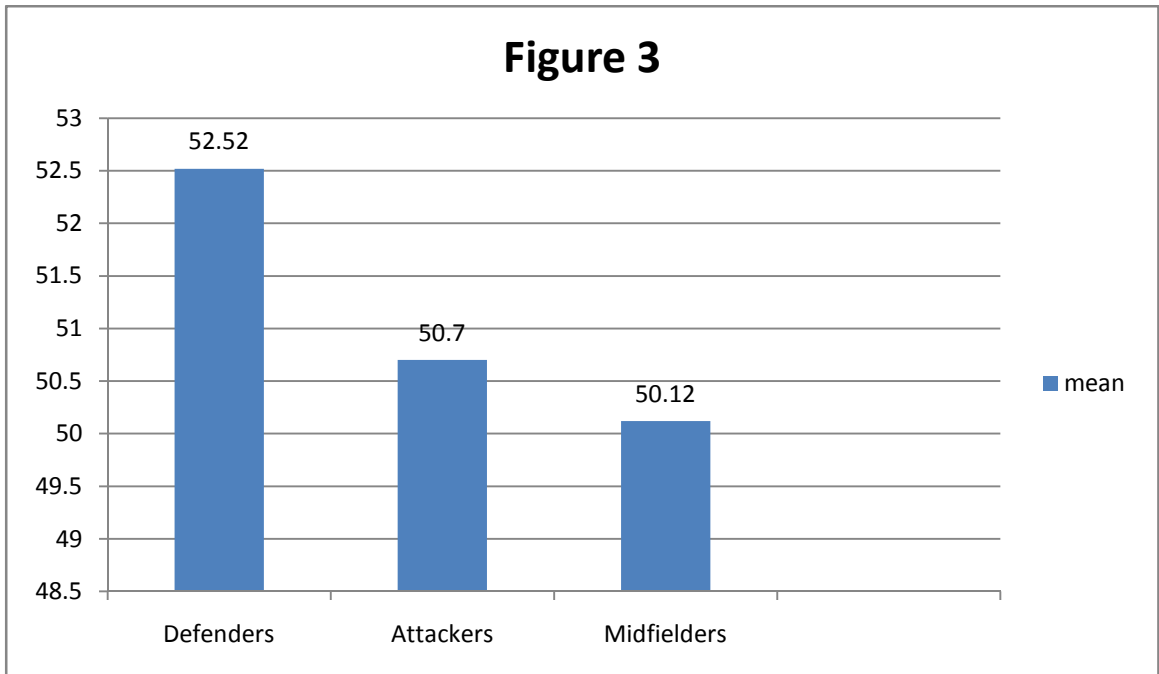
**Figure 1 showing the Mean difference of Anthropometric measurements (standing Height) among Defenders, Attackers and Midfielders foot ball players.**



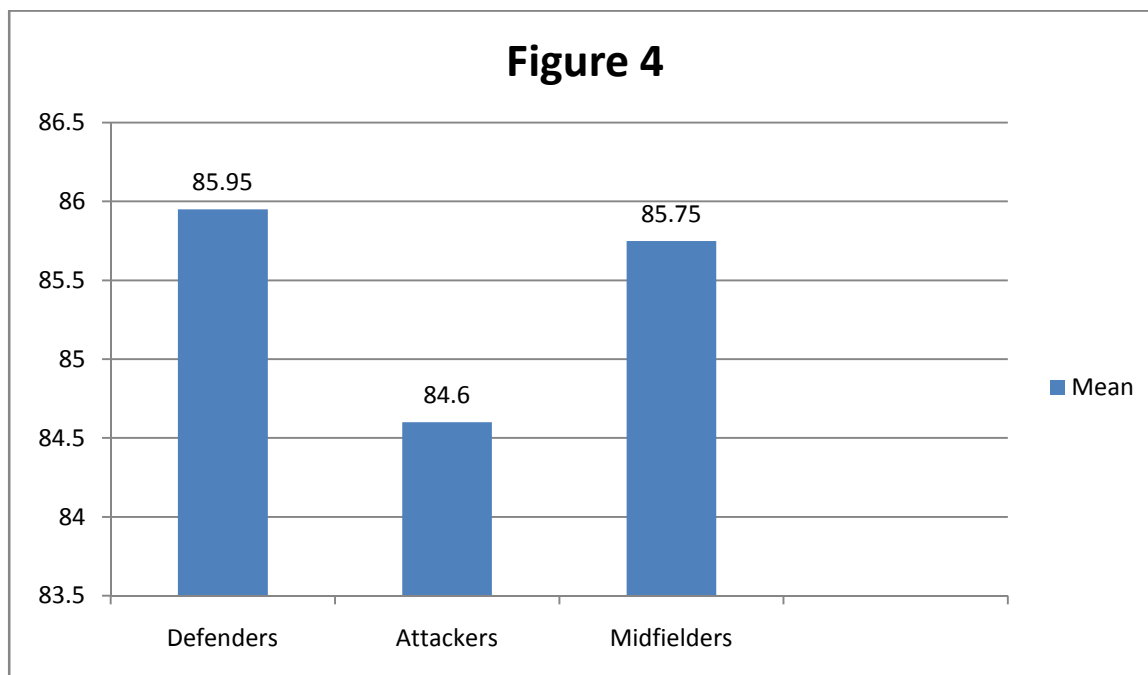
**Figure 2 showing the Mean difference of Anthropometric measurements (Weight) among Defenders, Attackers and Midfielders foot ball players.**



**Figure 3 showing the Mean difference of Anthropometric measurements (Thigh girth) among Defenders, Attackers and Midfielders foot ball players.**



**Figure 4 showing the Mean difference of Anthropometric measurements (Leg Length) among Defenders, Attackers and Midfielders foot ball players.**



#### **Discussion:-**

**The** results of the study revealed that the anthropometric measurements of height, weight, thigh girth and leg length had no significant differences among defenders, attackers and midfielders of football players.

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