



ISSN: 2456-0057  
IJPNPE 2018; 3(1): 2210-2213  
© 2018 IJPNPE  
[www.journalofsports.com](http://www.journalofsports.com)  
Received: 26-11-2017  
Accepted: 28-12-2017

**Keshav Singh Yadav**  
Research Scholar Jiwaji  
University Gwalior, Madhya  
Pradesh, India.

**Dr. Keshav Singh Gurjar**  
Deputy Director, SOS,  
Department of Physical  
Education Jiwaji University,  
Gwalior, Madhya Pradesh, India

## Anthropometric variables of attackers in football

**Keshav Singh Yadav and Dr. Keshav Singh Gurjar**

### Abstract

The purpose of this study the profile of Anthropometric Measurement among Inter University Football Players performance of defending skill on the basis of selected anthropometric measurements. Twenty (20) male attacker football players were selected as subjects for this study. The subjects were selected from Top four teams of west zone inter university players. Subjects were divided into three groups (each group consists of twenty players) on the basis of their position of play. The total number of subjects (N=20) Attackers footballers. The age levels of the subjects were ranged from 18 to 25 years. All the subjects belong to different social economic conditions. Selection of variables Anthropometric measurements Body weight, Standing height, Arm length Leg length, Fore-leg length. Thigh girth, Calf girth, Foot length. According to objectives of the study to gathering the data Analysis of descriptive statistics were used. (Mean Standard Deviation). Significant was set at 0.05. The results of the study have shown that was significance mean difference on body weight, standing height, Arm length, and leg length, fore leg length, and foot length, anthropometric measurements of attacker skill of football players. The main objective of present study was to describe the anthropometric variables of attackers in the game of football. The Data had been plotted on graph and descriptive statistics have been calculated for the purpose of describing the anthropometric variables of attackers. On the basis of findings of the study it was concluded that the body weight, standing height, arm length, leg length, fore leg length, thigh girth, calf girth and foot length of the attackers were ideal for the game of football and very less deviation was find from the mean value of all the anthropometric variables, which shows that the top four teams of interuniversity level players had almost same anthropometric characteristics to play the game of football and achieve high level performance.

**Keywords:** Anthropometric, measurements, football, Attacker, arm length, weight, height, etc.

### Introduction

Soccer is the most popular sport in Iran and is a much acclaimed sport worldwide. Soccer stands ahead in the list of professionally played sports and is widely accepted amongst people of all ages. 'It is reported that in every sports event, top level performers require a particular body size and shape, while other aspects could be nearly similar.

Football is a team game. Team games are sports where body size, shape, body composition and level of fitness, all play an important part in providing distinct advantages for specific playing positions particularly at the highest levels of performance where there is a high degree of player specialization.

The overall performance and fitness of soccer players largely depends on the important factors like the body size, proportions, the physical and body compositions. Historically, the height and weight, both indicators of the overall size of the body, have been used extensively with age and sex, to identify optimal combinations of these variables in groups of children, teenagers and young adults, in various types of physical activities. Body size, particularly weight, the standard references to express the physiological parameters (e.g. the  $vo_2$  max. M l. Kg. as  $-1$  min.  $-1$ ), while the thickness of skin folds is often used to identify overweight and obesity, and to establish the relationship between overweight and physical fitness related to health and life expectancy. Therefore, anthropometry is crucial as it relates to physical activity and sports sciences.

### Objective of the study

Objective of this study was to describe the anthropometric variables of attackers in the game of football.

**Corresponding Author:**  
**Keshav Singh Yadav**  
Research Scholar Jiwaji  
University Gwalior, Madhya  
Pradesh, India.

**Methodology**

**Selection of the subjects**

Twenty male football players (attackers) from top four teams of west zone inter university tournament were selected as subject for the present study and their age levels were ranged from 18 to 25 years. All the subjects belong to different socioeconomic status and conditions. It was assumed that all the footballers (attackers) were well trained as they are the members of top four teams of west zone inter university tournament.

**Anthropometric measurements**

1. Body weight
2. Standing height
3. Arm length
4. Leg length
5. Fore-leg length
6. Thigh girth
7. Calf girth

**Findings**

**8. Foot length**

Before the administration of test the research scholar personally meet the football players (attackers) and they were advised to assemble at 400 meter track, for conducting the test at different specific date, the research scholar briefly explained the test item, there was no ambiguity regarding test all the subject cooperated voluntarily, the test was conduct for two days in each place and it was conducted only in the evening session between 4:30 - to 6:30 pm. The relevant data regarding anthropometric measurement football players (attackers) was collected personally and with the help of other experts and research scholar to reduce the chances of error in data collection.

**Statistical technique**

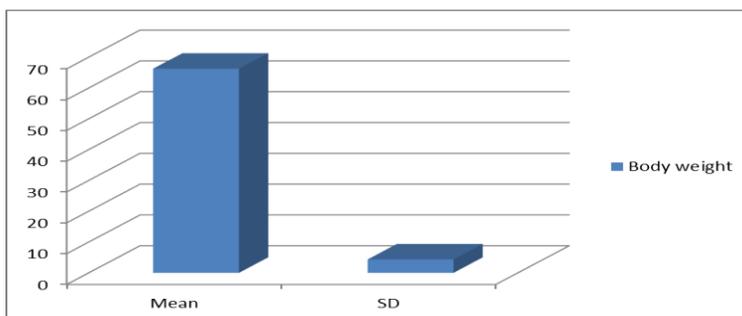
In order to find out the characteristics of attackers in football descriptive statistics was employed.

**Table 1.1:** Descriptive Statistics of Attackers

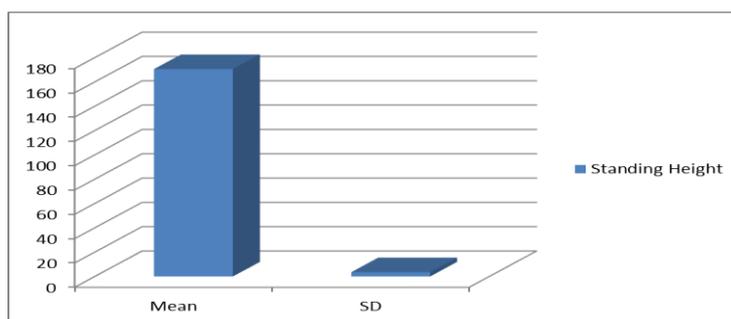
	N	Mean	SD	SE	95% confidence interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Body weight	20	66.26	4.37	.978	64.21	68.31	52.50	72.80
Standing Height	20	170.56	3.52	.78	168.91	172.20	159.50	174.10
Arm Length	20	29.81	1.46	.328	29.122	30.49	27.50	32.10
Leg Length	20	38.13	1.440	.322	37.460	38.809	34.10	40.20
Fore Leg Length	20	20.21	1.106	.247	19.69	20.73	18.10	22.20
Thigh Girth	20	19.95	1.32	.295	19.33	20.56	17.90	22.80
Calf Girth	20	13.75	.458	.102	13.53	13.96	12.70	14.50
Foot Length	20	9.76	.540	.120	9.51	10.01	8.80	10.50

Table-1 shows anthropometric characteristics of attacker in football with the help of descriptive statistics (Mean and standard deviation of all the variables in the study. Body weight, standing height, arm length, leg length, fore leg

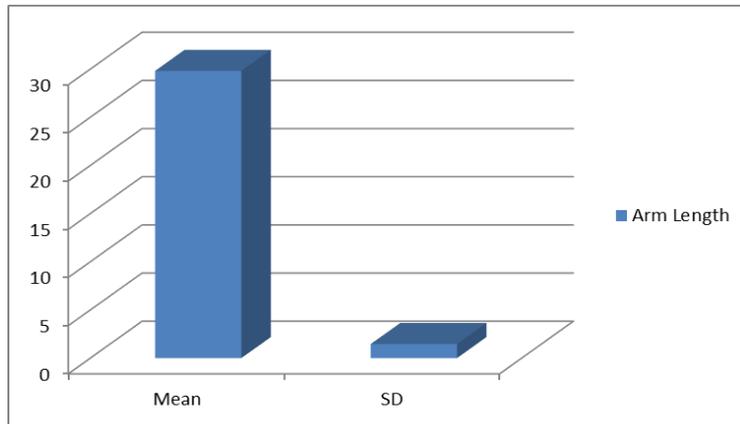
length, thigh girth, calf girth and foot length mean and standard deviation were  $66.26 \pm 4.37$ ,  $170.56 \pm 3.25$ ,  $29.81 \pm 1.46$ ,  $38.13 \pm 1.440$ ,  $20.21 \pm 1.106$ ,  $19.95 \pm 1.32$ ,  $13.75 \pm .458$  and  $9.76 \pm .540$  respectively.



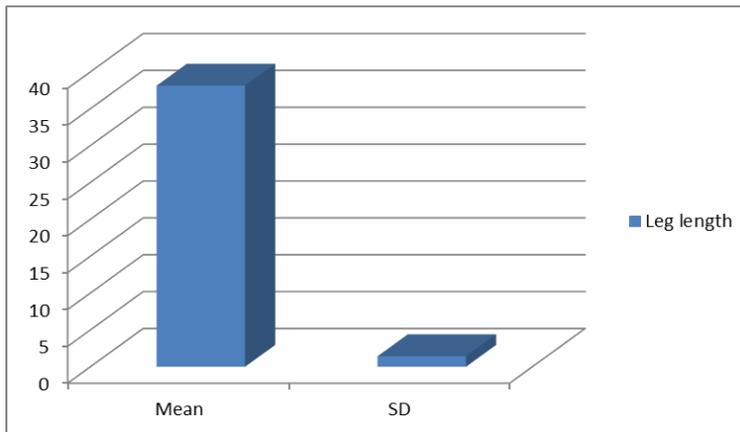
**Fig 1:** Body weight



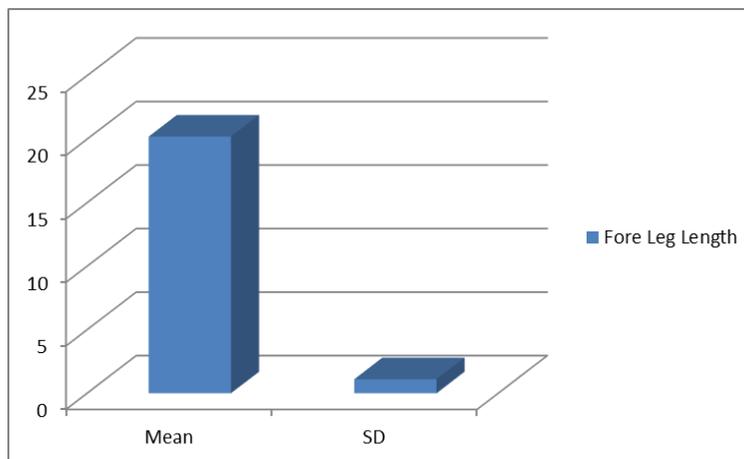
**Fig 2:** Standing Height



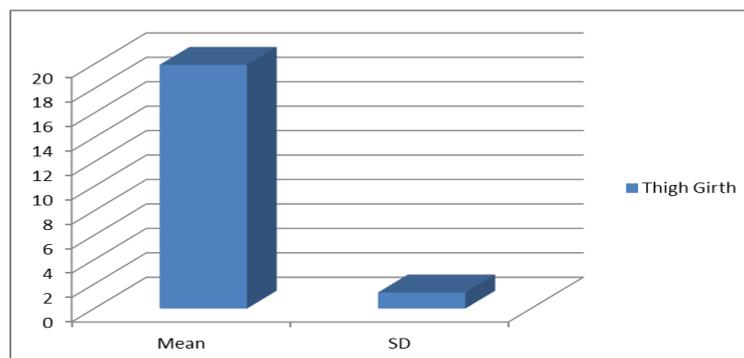
**Fig 3: Arm Length**



**Fig 4: Leg length**



**Fig 5: Fore Leg Length**



**Fig 6: Thigh Girth**

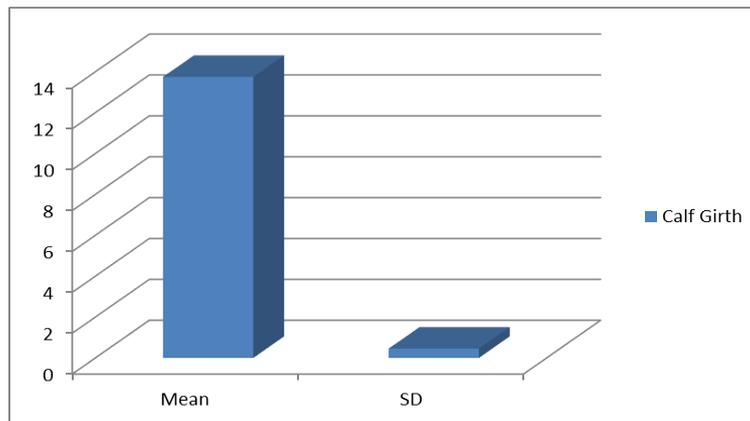


Fig 7: Calf Girth

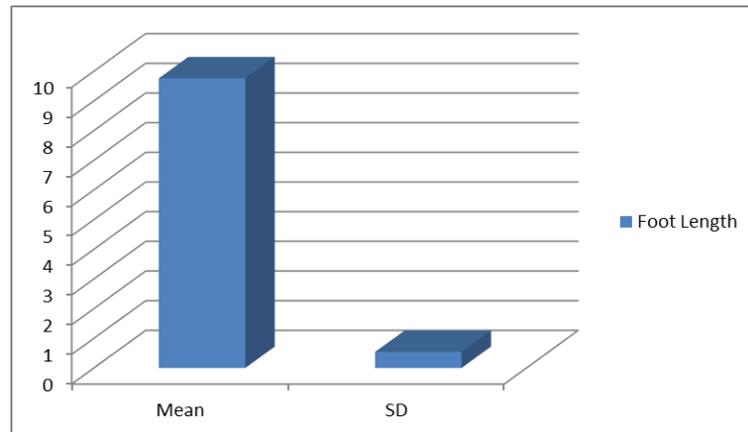


Fig 8: Foot Length

### Discussion of findings and Conclusion

The main objective of present study was to describe the anthropometric variables of attackers in the game of football. The Data had been plotted on graph and descriptive statistics have been calculated for the purpose of describing the anthropometric variables of attackers. On the basis of findings of the study it was concluded that the body weight, standing height, arm length, leg length, fore leg length, thigh girth, calf girth and foot length of the attackers were ideal for the game of football and very less deviation was find from the mean value of all the anthropometric variables, which shows that the top four teams of interuniversity level players had almost same anthropometric characteristics to play the game of football and achieve high level performance.

### References

1. De Garay, Al Levine L, Carter JEL. Genetic and Anthropological Studies of Olympic Athletes. Academic Press, New York 1974.
2. T Reilly. Science and Soccer, London: E & Fn Spon, 1996.
3. Malina RM, Morano PJ, Barron M, Miller SJ. Cumming SP, Kontos AP 2006.
4. Reeves SL, Poh BK, Brown M, Tizzard NH, Ismail MN. Anthropometric measurements and body composition of English and Malaysian Footballers. Mal J Nutr. 1999;5(149):79-86.
5. Association of football, retrieved on January 21st, 2013 from [http://en.wikipedia.org/wiki/ Association\\_football](http://en.wikipedia.org/wiki/Association_football).
6. Reilly T, Bangsboand J, Franks A. Anthropometric and Physiological Predispositions for Elite Soccer, Journal of Sports Sciences 2000;18:669-683.
7. Kamlesh ML, Sangral MS. Principles and History of

Physical Education (Ludhiana: Prakash Brothers) 1981, 108.

8. Doneash Seaten *et al*, Basic Book of Sports (England Cliffs, N.J.: Prentice. Hall, Inc. 1956, 1.
9. German Rieckehoff. The Purpose of Sports, Olympic Review 1977;118:471.