

## ANTHROPOMETRIC DIFFERENCES AMONG INTER SCHOOL FOOTBALL WINNERS AND LOSERS

<sup>1</sup>Sikandar Pal <sup>2</sup>Dr. Mandeep Thour<sup>2</sup>

<sup>1</sup>Research scholar, Department of Physical Education, Panjab University, Chd-160014

<sup>2</sup> Assistant Professor Department of Physical Education, S.G.G.S College, Sec. 26, Chd

### Abstract

*In the present study, an attempt has been made to compare the anthropometric variables between state level football inter-school winners and losers. The study was carried out on 50 male football players (25 winners and 25 losers) of the age group 16 to 19 years. All the participants were assessed for height, weight, chest circumference, thigh circumference and calf circumference. An independent samples t-test revealed that winners had significantly higher height ( $p<0.01$ ), lesser weight ( $p<0.01$ ) and significant difference existed in chest, thigh and calf circumferences. Further investigations are needed on the above studied variables along with fitness and physiological variables to assess relationships among.*

**Keywords:** Anthropometric, height, weight, circumference.

### INTRODUCTION:

Football is probably the most popular game worldwide but there is still limited scientific information available concerning the physique and performance qualities of elite Indian footballers. The game comprises activities like sprint and jumps in attack and defense. It also requires aerobic capacity as the game lasts one and half hour, sometimes even longer than the official time. These short- and long-lasting activities are performed over the entire game, so, both aerobic and anaerobic capacities are very important to exhibit better performance (Singh and Sing 2010). 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 (Bandyopadhyay, 2007).

Anthropometry refers to the measurement of the human individual. An early tool of physical anthropology, it has been used for identification, for the purposes of understanding human physical variation, in anthropology and various attempts to correlate physical with racial and psychological traits. Anthropometry involves the systematic measurement of the physical properties of the human body, primarily dimensional descriptors of body size and shape (Masanovic,2019). Anthropometry refers to the measurement of the size and proportion of human body and its different parts. It is the comparative study of the dimensions of the human body. It involves making precise, highly standardized measurements so that size and shape can be described objectively. Anthropometry precisely is the systematic quantitative representation of the human body (Chinna and Kaur, 2018). Anthropometric techniques are used to measure the absolute and relative variability in size and shape of the human body.

In football game the anthropometric measurement is important variable which decide the performance of the player. But the anthropometric measurement is not understood by the large number of people as well as in the football field (Dash and Mishra, 2021). In football most of the interested variables like motor fitness variables, physiology variables etc. But the less importance getting variable was anthropometric variable. In football game the anthropometric variables play an important role (Silva and Gaya, 2013).

#### **OBJECTIVE OF THE STUDY:**

- a) To study the anthropometric characteristics of inter school football winners and losers.
- b) To study the body types of inter school football winners and losers.

#### **MATERIALS AND METHODS:**

The present study was conducted on 50 young male subjects (winners = 25 and losers = 25) of age group 16-19 years. The subjects were randomly selected from the different schools affiliated to Punjab Board of School Education irrespective of their caste, religion, dietary habits and socioeconomic status. The age of each subject was calculated from the date of birth as recorded in his institute. The height of the subjects was measured with anthropometric rod to the nearest 0.5 cm (HG72, Nexgen ergonomics, Canada). The weight of subjects was measured by using portable weighing machine to the nearest 0.5 kg.

Skin fold thickness measurements of the subjects were measured by slim guide skin fold caliper. Girths were taken with the steel tape to the nearest 0.5 cm.

## Statistical analysis

Values are presented as mean values and SD. Independent samples t tests were used to test if population means estimated by two independent samples differed significantly. Data was analyzed using SPSS Version 16.0.

## RESULTS:

**Table 1: Physical parameters and circumferences of winners and losers**

Variables	Winners		Losers		t-value
	Mean	SD	Mean	SD	
Height	62.24	2.80	54.28	6.93	5.32
Weight	1.83	0.03	1.7	0.06	5.86
Chest circumference	86.16	8.19	77.84	4.74	4.39
Thigh circumference	49.04	1.09	44.12	2.66	8.53
Calf circumference	34.92	1.89	32.4	1.41	5.34

**\*Significant at 0.05 level**

Table 1 shows the descriptive statistics for physical parameters of inter school football winners and losers players. Mean body height of winners was significantly higher than those of losers ( $p < 0.01$ ). There was no significant difference between weight ( $p > 0.01$ ) of both groups. The t value for chest circumference is 4.39. The p-value is  $< .00001$ . The result is significant at  $p < .05$ . The t value for thigh circumference is 8.33. The p-value is  $< .00001$ . The result is significant at  $p < .05$ . The t value for calf circumference is 5.34. The p-value is  $< .00001$ . The result is significant at  $p < .05$ .

## DISCUSSION AND CONCLUSION:

In the present study the anthropometric characteristics of the athletes have not been evaluated in relation to their performance, but were instead compared with each other. This study indicates the existence of differences among the players of different games. The overall results showed that apart from height significant differences existed in most of the anthropometric characteristics between winners and losers.

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