



# COMPARATIVE STUDY OF ANTHROPOMETRIC MEASUREMENT AMONG INDIVIDUAL, TEAM AND COMBAT GAME PLAYERS IN MEERUT REGION

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## Abstract

*The objective of this investigation was designed to know compare the anthropometric measurement (standing height, chest, leg length, body weight) individual, team and combat game players. Another aim of the investigation was to compare the anthropometric measurement individual, team and combat game players. The subjects of this study were selected from the players in Meerut Region (U.P.). The total numbers of subjects for this study were 60 players (20 players for individual game, 20 players for team game and while another 20 players is combat game in Meerut Region) subjects of age ranged between 16-20 years were selected randomly. The Criterion measures for this investigation were some measurements of body such as: standing height, chest, leg length, body weight, administered to measure the selected variables. The ANOVA (Analyze of variance) is implied to find out significant difference among three groups i.e. individual, team and combat game players. The result of the data reveals the insignificant difference found was found standing height, chest, leg length and significant difference found were found body weight among individual, team and combat game players.*

**Keywords:** Anthropometric Measurement, Standing Height, Chest, Leg Length, Body Weight

## INTRODUCTION

Anthropometric estimations are a progression of quantitative estimations of the muscle, bone, and fat tissue used to survey the organization of the body. The center components of anthropometry are tallness, weight, weight record (BMI), body boundaries (abdomen, hip, and appendages), and skin fold thickness. These estimations are significant on the grounds that they speak to analytic models for stoutness, which essentially builds the hazard for conditions, for example, cardiovascular sickness, hypertension, diabetes mellitus, and some more. There is further utility as a proportion of nourishing status in youngsters and pregnant ladies. Also, anthropometric estimations can be utilized as a gauge for physical wellness and to quantify the advancement of wellness.

There are a few potential signs for anthropometric estimations. In kids, signs fuse impeding, wasting, and being underweight. Thwarting is when youths have a low height for-age, squandering is a low weight-for-stature, and underweight is a low weight-for-age. Mid-upper arm periphery (MUAC) is a practical estimation in youngsters or pregnant ladies as a marker of dietary status. BMI is another generally utilized file of healthful status and utilized as a measure of unhealthiness in youngsters and grown-ups. BMI is helpful to distinguish heftiness and the seriousness of corpulence. Anthropometric estimations are regularly additionally utilized as a component of the assessment of wellness in competitors.

Few skin-fold destinations accessible for estimation. Some basic locales incorporate the biceps, triceps, iliac peak, thigh, calf, sub scapular, midsection, and chest. The specific procedure can fluctuate, however we will talk about one technique utilizing the triceps for instance. For the triceps skin fold, snatch the skin 2 cm over the middle of the correct upper arm press and pointer to make a skin fold, at that point place the calipers at the midpoint. The remainder of the regular locales can be estimated comparably by snatching the skin 2 cm away from the estimating site. The BMI estimation is the weight in kilograms, separated by the stature in meters squared. (<https://www.ncbi.nlm.nih.gov/books/NBK537315/>)

In creating nations, wellbeing and prosperity are likewise estimated by an individual's ability to perform work and oppose sickness. In any case, the impact of wholesome status as a marker of wellbeing and sickness is obscure. In this manner, the current examination was led to assess the exactness of the anthropometric markers as of now used to group wholesome status in the young populace of Maputo, Mozambique. We speculated that youngsters and teenagers delegated malnourished would show lower levels of physical movement, less work limit, and less fortunate wellbeing pointers. (Prista, Antonio, 2003)

## METHODOLOGY

The players were selected from the deferent Sports Stadium in Meerut Region (U.P.) The total numbers of subjects for this study were 60 players (20 players for individual game, 20 players for team game and while another 20 players is combat game in Meerut Region) subjects of age ranged between 16-20 years was selected randomly. Necessary data were collected for standing height, chest, leg length, body weight with the help of Measuring tape, Stadiometer and Weighing Machine. For compare the anthropometric measurement selected variables i.e. standing height, chest, leg length, body weight, among three groups, individual, team and combat game players, ANOVA (Analyze of variance) statistical technique was computed. To find out the significant difference between anthropometric measurements selected variables i.e. standing height, chest, leg length, body weight, among three groups, individual, team and combat game players, the level of significant was set at level of .05.

## RESULTS OF THE STUDY

To find out standing height among the means of individual, team and combat game players, analysis of variance statistics was used and presented in table-01.

TABLE-01

**Analysis of variance in standing height among the means of individual, team and combat game players**

Source of Variance	D.F	SS	MSS	F-ratio
<b>Between Group</b>	<b>2</b>	<b>25.433</b>	<b>12.717</b>	<b>.933*</b>
<b>Within Group</b>	<b>57</b>	<b>776.75</b>	<b>13.627</b>	

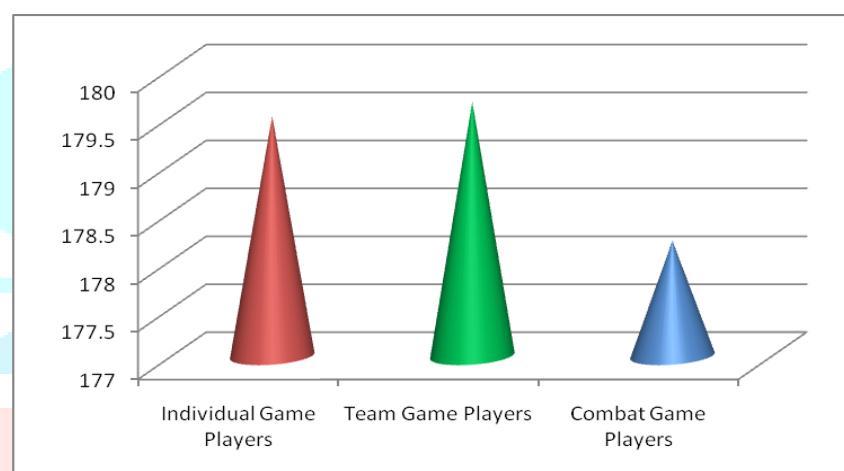
\*Insignificant at .05 level

\*F-Value required to be significant at .05(2, 57) = 3.16

The value shown in table-01 clearly indicates that the F-Value calculated is much lower than the required value to be significant. Hence it is stated that, no significant relationship exist among the means of individual, team and combat game players in relation to their standing high level.

The scores are also illustrated in the figure-01

figure-01



To find out leg length among the means of individual, team and combat game players, analysis of variance statistics was used and presented in table-02.

TABLE-02

**Analysis of variance in leg length among the means of individual, team and combat game players**

Source of Variance	D.F	SS	MSS	F-ratio
<b>Between Group</b>	<b>2</b>	<b>7.3</b>	<b>3.65</b>	<b>.328*</b>
<b>Within Group</b>	<b>57</b>	<b>633.55</b>	<b>11.115</b>	

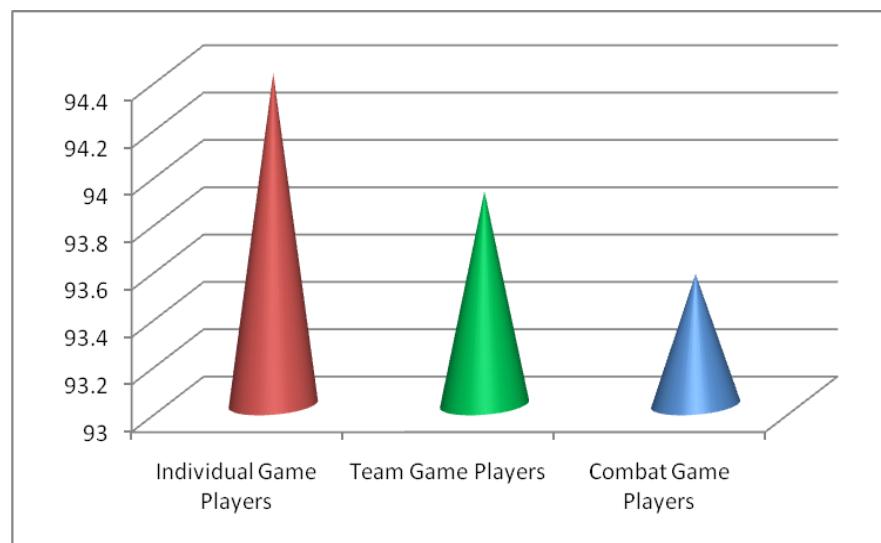
\*Insignificant at .05 level

\*F-Value required to be significant at .05(2, 57) = 3.16

The value shown in table-02 clearly indicates that the F-Value calculated is much lower than the required value to be significant. Hence it is stated that, no significant relationship exist among the means of individual, team and combat game players in relation to their leg length level.

The scores are also illustrated in the figure-02

figure-02



To find out chest among the means of individual, team and combat game players, analysis of variance statistics was used and presented in table-03.

TABLE-03

Analysis of variance in chest among the means of individual, team and combat game players

Source of Variance	D.F	SS	MSS	F-ratio
Between Group	2	150.10	75.05	1.416*
Within Group	57	3020.75	52.996	

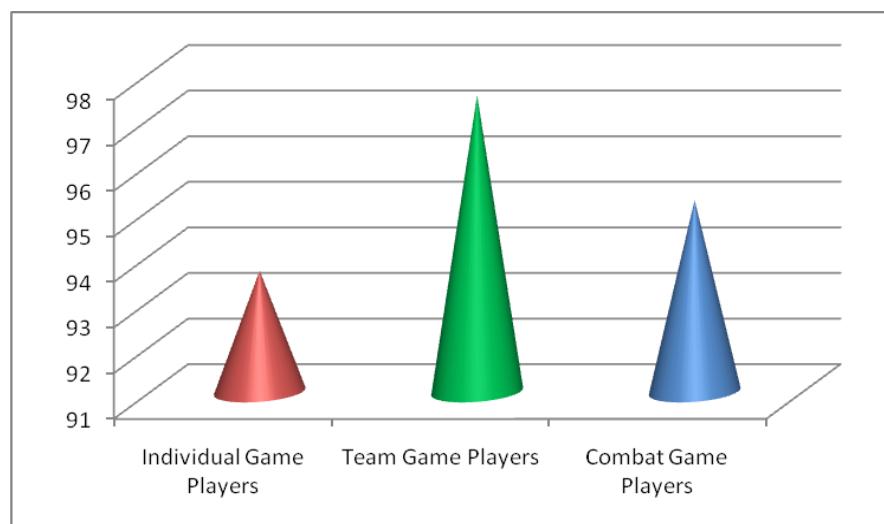
\*Insignificant at .05 level

\*F-Value required to be significant at .05(2, 57) = 3.16

The value shown in table-03 clearly indicates that the F-Value calculated is much lower than the required value to be significant. Hence it is stated that, no significant relationship exist among the means of individual, team and combat game players in relation to their chest level.

The scores are also illustrated in the figure-03

figure-03



To find out weight among the means of individual, team and combat game players, analysis of variance statistics was used and presented in table-04.

TABLE-04

## Analysis of variance in weight among the means of individual, team and combat game players

Source of Variance	D.F	SS	MSS	F-ratio
Between Group	2	165.70	82.85	3.509*
Within Group	57	1345.95	23.613	

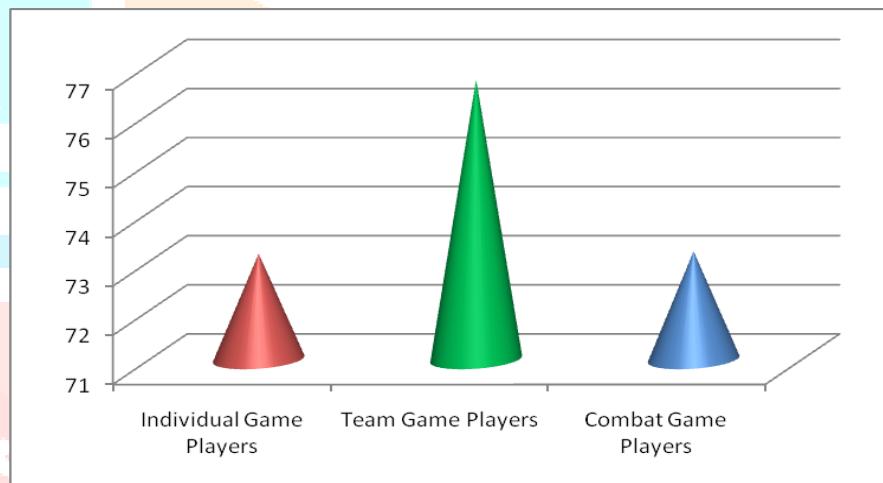
\*Significant at .05 level

\*F-Value required to be significant at .05(2, 57) = 3.16

The value shown in table-04 clearly indicates that the F-Value calculated is higher than the required value to be significant. Hence it is stated that, significant relationships exist among the means of individual, team and combat game players in relation to their weight level.

The scores are also illustrated in the figure-04

figure-04



## DISCUSSION OF THE RESULTS

The present investigation was designed to know the anthropometric measurement among individual, team and combat game players in Meerut Region. The purpose of this study was many folds and revealed some specific differences among the players. Though, the Master Student did not tend to explore personal life of students but, some of the facts could not be unattended hence, found necessary to know the anthropometric measurement among individual, team and combat game players in deferent Sports Stadium in Meerut Region (U.P.). The measuring tape, stadiometer, weighing machine test used for the purpose helped to know the significant difference in various anthropometric measurement among individual, team and combat game players.

The result of the study was to compare the anthropometric measurement among individual, team and combat game players. Though these exist insignificant difference among individual, team and combat game players. Where the calculated mean difference not found in standing height, leg length and chest and calculated mean difference found in body weight. The result is in the direction of Chhina Sartaj Singh, Karanjit Singh and Raj Kaur (2018), conduct a study on topic, "comparison of anthropometric measurements among the different groups of the throwers" All the athletes were measured for height, weight, lengths of body parts, diameters of body parts and circumferences of body parts. One-way ANOVA revealed that the significant differences were reported in height ( $p<0.05$ ), weight ( $p<0.05$ ), length measurements ( $p<0.05$ ), diameters of body parts ( $p<0.05$ ) and circumferences of the body parts

(p<0.05) among the different groups of throwers. Post-hoc analysis revealed that discus throwers were the tallest among the throwers. In the same way, the discus throwers had highest diameters among different groups of throwers. The shot putters had highest weight and circumferences among the different groups of throwers.

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