



Comparatives study of Anthropometric Measurement and Body Composition of Selected Games players at Inter-University Level of Gujarat University and H. N. G. University

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Introduction

The intense desire of wealth has made our hearth like a stone. The values of life seem to be disappeared. The competitive life of the people, living on time-base only, has given the birth to the mental tension. We see that the diseases like diabetes, migraine and high blood pressure have attacked us.

Anthropometric techniques are used to measure the absolute and relative variability in size and shape of the human body. Depending on the objective, anthropometric instrumentation may include weighing scale, anthropometry, skin fold calipers, body volume tanks, and bioelectrical impedance analyzers. Similarly, radiographic instruments and x-ray scanners such as dual-energy-ray absorption meters and ultrasound densitometers are used for quantifying cortical bone density, bone mass, subcutaneous fat density, and lean body mass.

Anthropometry follows a rigorous set of guidelines that include standardization of the measurement techniques, uniform landmarks, and establishing conditions of the measurements. Various references have been developed that can be used as base lines for expressing absolute and relative deviation from the average. Techniques of data analysis include the expression of individual values in the form of Z scores (the individual value minus the reference mean for the age and sex, divided by the corresponding standard deviation). Thus, an individual measurement may be expressed as being either close to the 50th percentile or above or below the 95th or 5th percentile.

Today, anthropometry plays an important role in industrial design, clothing design, ergonomics and architecture where statistical data about the distribution of body dimensions in the population are used to optimize products. Changes in life styles, nutrition and ethnic composition of populations lead to changes in the distribution of body dimensions (e.g., the obesity epidemic), and require regular updating of anthropometric data collections.³

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Today we consider ourselves as civilized and modern but not happy. For example, poisonous tablets for discharging body bowels and other harmful tables. In order to get the strength we can't live

without tonics. The demand for the tablets for back pain and sleep are constantly increasing. Today's young generation is tending towards alcoholic materials and becomes responsible of their own decline.

Statement of the Problem

The purpose of this study to compare anthropometric measurement and body composition of selected games players at inter-university level of Gujarat University and H. N. G. University.

Objectives of the study

1. In this study, the players of Basketball and Handball who are selected at interuniversity level of Gujarat University and H. N. G. University Patan, were selected.
2. The age group was between 18 to 21 years.
3. In this study, the anthropometric variables like Chest and Hand were taken into consideration.
4. In this study, the body composition variables like Body Mass Index were taken into consideration.

Limitations

1. The Geographical and Natural conditions were considered as study limitations.
2. In this study, the Caste related differences were not being taken into consideration.
3. In this study, the differences regarding the diet were not being taken into consideration.
4. The activities other than the training program of the students were considered as the limitations of the study.

Hypothesis

It was hypothesized that there will be significant difference between Gujarat University players and H. N. G. University players.

ANALYSIS OF DATA AND RESULTS OF THE STUDY

In this chapter the research, the description of research process has been done. The aim of this study was to compare anthropometric and body composition of different games players selected at inter-university level of Gujarat University and H. N. G. University, of the age group 18 to 21 years.

The researcher was wishing to study the anthropometric variables like Chest, Hand and body composition variable Body Mass Index of players of Basketball and 24 the players of Handball who are selected at inter university level of Gujarat University and H. N. G. University Patan.

Statistical Analysis of Data

To check the mean differences of the 24 players of Basketball and 24 players of Handball who are selected at inter university level of Gujarat University and H. N. G. University Patan, "t" test was taken in consideration.

ANTHROPOMETRIC ASPECTS

TABLE 1(CHEST)

The difference of the significance of the mean of the Basketball players in the performance of Chest

Group	Gujarat Vidyapeeth	H. N. G. University Mean	Mean Difference	"t"
Basketball Players Mean	22.14	20.69	1.45	1.482

*The standard of significance was at 0.05 level "t" 0.05(11) = 2.228

From above table it is found out that in the chest test of basketball players mean of Gujarat University players is 22.14 and that of H. N. G. University players mean is 20.69. The mean difference is 1.45 received "t" ratio is 1.482, which is less than 2.228. Hence, it is not significant at 0.05 level

TABLE 2(CHEST)

The difference of the significance of the mean of the Handball players in the performance of Chest

Group	Gujarat Vidyapeeth	H. N. G. University Mean	Mean Difference	"t"
Handball Players Mean	21.38	19.82	1.56	1.691

*The standard of significance was at 0.05 level "t" $0.05(11) = 2.228$

From above table it is found out that in the chest test of handball players mean of Gujarat University players is 21.38 and that of H. N. G. University players mean is 19.82. The mean difference is 1.56 received "t" ratio is 1.691, which is less than 2.228. Hence, it is not significant at 0.05 level.

TABLE-3 (HAND)

The difference of the significance of the mean of the Basketball players in the performance of Hand

Group	Gujarat Vidyapeeth	H. N. G. University Mean	Mean Difference	"t"
Basketball Players Mean	74.58	70.00	4.58	3.311*

*The standard of significance was at 0.05 level "t" $0.05(11) = 2.228$

From above table it is found out that in the hand test of basketball players mean of Gujarat University players is 74.58 and that of H. N. G. University players mean is 70.00. The mean difference is 4.58 received "t" ratio is 3.311, which is more than 2.228. Hence, it is significant at 0.05 level.

TABLE -4 (HAND)

The difference of the significance of the mean of the Handball players in the performance of Hand

Group	Gujarat Vidyapeeth	H. N. G. University Mean	Mean Difference	"t"
Handball Players Mean	70.92	66.00	4.92	2.696*

*The standard of significance was at 0.05 level "t" $0.05(11) = 2.228$

From above table it is found out that in the hand test of handball players mean of Gujarat University players is 70.92 and that of H. N. G. University players mean is 66.00. The mean difference is 4.92 received "t" ratio is 2.696, which is more than 2.228. Hence, it is significant at 0.05 level.

BODY MASS INDEX**TABLE -5**

The difference of the significance of the mean of the Basketball players in the performance of Body Mass Index

Group	Gujarat Vidyapeeth	H. N. G. University Mean	Mean Difference	"t"
Basketball Players Mean	23.23	20.65	2.58	3.144*

*The standard of significance was at 0.05 level "t" $0.05(11) = 2.228$

From above table it is found out that in the body mass index test of basketball players mean of Gujarat University players is 23.23 and that of H. N. G. University players mean is 20.65. The mean difference is 2.58 received "t" ratio is 3.144, which is more than 2.228. Hence, it is significant at 0.05 level.

BODY MASS INDEX

TABLE-6

The difference of the significance of the mean of the Handball players in the performance of Body Mass Index

Group	Gujarat Vidyapeeth	H. N. G. University Mean	Mean Difference	"t"
Handball Players Mean	22.01	20.07	1.96	1.905

*The standard of significance was at 0.05 level "t" $0.05(11) = 2.228$

From above table it is found out that in the body mass index test of handball players mean of Gujarat University players is 22.01 and that of H. N. G. University players mean is 20.07. The mean difference is 1.96 received "t" ratio is 1.905, which is less than 2.228. Hence, it is significant at 0.05 level.

Discussion of Findings

Statistical analysis shows that, there is no significant difference in anthropometric aspects of chest test between basketball players of Gujarat University and H. N. G. University; received "t" ratio was 1.482 which is not significant at 0.05 % level. When mean was compared of the two groups of basketball players it was found that Gujarat University player's chest measurement was more than H. N. G. University players.

In anthropometric aspects of chest test between handball players of Gujarat University and H. N. G. University; received "t" ratio was 1.691 which is not significant at 0.05 % level. When mean was compared of the two groups of handball players it was found that Gujarat University player's chest measurement was more than H. N. G. University players.

In anthropometric aspects of hand test between basketball players of Gujarat University and H. N. G. University; received "t" ratio was 3.311 which is significant at 0.05 % level. When mean was compared of the two groups of basketball players it was found that Gujarat University player's hand measurement was more than H. N. G. University players.

In anthropometric aspects of hand test between handball players of Gujarat University and H. N. G. University; received "t" ratio was 2.696 which is significant at 0.05 % level. When mean was compared of the two groups of handball players it was found that Gujarat University player's hand measurement was more than H. N. G. University players.

In body composition aspects of b.m.i. test between basketball players of Gujarat University and H. N. G. University; received "t" ratio was 3.114 which is significant at 0.05 % level. When mean was compared of the two groups of basketball players it was found that Gujarat University player's b.m.i. was more than H. N. G. University players.

In body composition aspects of height test between handball players of Gujarat University and H. N. G. University; received “t” ratio was 1.905 which is not significant at 0.05 % level. When mean was compared of the two groups of handball players it was found that Gujarat University player’s b.m.i. was more than H. N. G. University players.

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