

Comparative Study of Body Composition of Different Class Employees of Osmanabad District

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Abstract:

The aim of this investigation was to find out the Comparative Study of Body Composition of Different Class Employees of Osmanabad District. In the current investigation, sixty male employees of different class group were selected at random by purposive sampling technique, from Osmanabad district of Maharashtra. The age group was ranging from 25-45 years. Body Composition was measured by using Skin Fold Calipers. The data of fat percentage was collected by Skin Fold Calipers. After that collected data was put into Microsoft Excel to develop Master Chart and then 'F' test (ANOVA) was used for the statistical treatment. To test the hypothesis the level of significance was set at 0.05 level of confidence, after the statistical analysis of data related to the body composition of different class employees of Osmanabad district it was found that there is insignificant difference in Body Composition of different class employees of Osmanabad district, Hence the Researchers Pre-assumed hypothesis is rejected.

Keywords: Body Composition, Different Class Employees.

Introduction:

Body Composition:

In physical fitness, body composition is used to describe the percentages of fat, bone and strength in human bodies. Two people of equal height and body weight may look completely different from each other because they have a different body composition. The human body is

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composed from many major components at the cellular and tissue levels. These include water, minerals, protein and fat. Increases in the stages of fat components are detrimental to health and also sports performance. The mineral components are mainly associated with bone. The assessment of body composition is not only common in sport and exercise sciences but also in medicine. Most of the interest is in quantifying body fat in relation to health and to sports performance. The human body is made up of about 50 elements at the atomic level, of which 98% is due to combination of carbon, oxygen, nitrogen, hydrogen, calcium and phosphorus. At the molecular level, the body is essentially made up of the chemical compounds water, carbohydrates, protein, fat and minerals and these are organized into cells which are the basis of tissues and organs. The relative amounts of adipose tissue, muscle and bone are of importance for health and sports performance, and as a result of methods of body composition analysis have been categorized into fat mass and fat-free mass.

Skin fold method:

The skin fold assessment methods are based on a skin fold test, also known as a pinch test, whereby a pinch of skin is exactly measured by callipers at a number of consistent points on the body to determine the subcutaneous fat layer thickness. These measurements are converted to an expected body fat percentage by an equation. Some formulas require as few as three dimensions, others as many as seven. The correctness of these estimates is more dependent on a person's exclusive body fat delivery than on the number of sites measured. As well, it is of greatest importance to test in a exact location with a fixed pressure. Although it may not give an precise reading of real body fat percentage, it is a consistent measure of body composition alteration over a period of time, provided the test is approved out by the same person with the same technique. The accuracy of the skin fold method is dependent on the technician's skill as well as the type of caliper and the skin fold prediction equation used. When selecting a skin fold caliper for a health/fitness setting, the cost, durability, and degree of precision of the caliper are important considerations.

Objectives: The main purpose of this study was to find out the Comparative study of body composition of different class employees of Osmanabad district.

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Hypothesis: On the basis of literature searched and the researcher's own perception it was hypothesized that there would be significant difference of Body Composition of different class employees of Osmanabad district.

Methodology:

Source of Data: In the present study researcher has taken the male subjects for the study. The source of data was collected from Osmanabad district employees of different class group.

Selection of Subjects: Sixty male subjects were selected for the collection of data (15-class I, 15-class II, 15-class III and 15-class IV employees). The age group was ranging from 25-45 years.

Sampling Method: The subjects were being selected by using purposive sampling method.

Collection of Data: For the collection of data, the subjects were given full administration of the tests which was used for the collection of data in the study. The data of body composition was collected by Skin Fold Caliper. After that collected data was put into Microsoft Excel to develop Master Chart and then 'F' test (ANOVA) was used for the statistical treatment.

Criterion measures:

Following are the criterion measures which were responsible for collection of data, to testing the hypothesis.

S. No	Variables	Test
01	Body Composition	Skin Fold Caliper

Level of Significance: To test the hypothesis the level of significance was set at 0.05 level of confidence which was considered adequate and reliable for the purpose of this study.

Analysis of the Data: After the collection of data from different class employees of Osmanabad district (15-class I, 15-class II, 15-class III and 15-class IV employees), the raw data were

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converted into standard one by using a statistical technique 'F' test (ANOVA) for testing of hypothesis.

Table No. 1**Mean difference of Body Composition of different class employees**

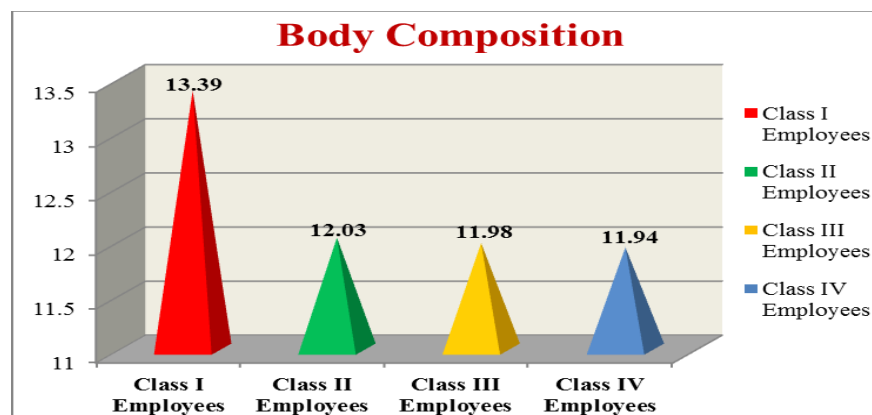
Name of Group	Mean
Class I Employees	13.39
Class II Employees	12.03
Class III Employees	11.98
Class IV Employees	11.94

Table No. 1: indicates that the mean of the I group (Class I Employees) is 13.39, Mean of the II group (Class II Employees) is 12.03, Mean of the III group (Class III Employees) is 11.98 and Mean of the IV group (Class IV Employees) is 11.94. There is mean difference of Body Composition of different class employees, whether is significant or not it can be shown by using special statistical technique 'F' test (ANOVA).

Graph-1

Graphical Representation of Mean difference of Body

Composition of different class employees



Comparative Study of Body Composition of Different Class Employees of Osmanabad District**Table No. 2**

Showing One Way Analysis of Variance (ANOVA) of

Body Composition of different class employees

Source of variance	df	Sum of squares	Mean Variance	F Calculated	F Tabulated
Between Groups	K-1 4-1=3	647.22	7.21	0.64	2.84
Within Groups	N-K 60-4=56	625.57	11.17		

Table No. 2: indicates that the value of Tabulated 'F' is 2.84 and the value of Calculated 'F' is 0.64 which is less than tabulated 'F' at 0.05 level of confidence so that there is insignificant difference in different class employees (class I, class II, class III and class IV Employees), hence the researchers' Pre-assumed hypothesis is rejected.

Conclusion:

In the beginning of this study it was hypothesized that there would be a significant difference of body composition of different class employees of Osmanabad district, but after the statistical analysis of data related to the body composition of different class employees (class I, class II, class III and class IV Employees), it was found that there is insignificant difference in body composition of different class employees of Osmanabad district, Hence the Researchers Pre-assumed hypothesis is rejected.

References:

Ali, Jawed, Handbook of Sports and Exercise Science, (New Delhi: Khel Sahitya Kendra), 2012.

Anand, Shyam, Upkar's UGC NET/JRF/SLET Physical Education, (Agra: Upkar Prakashan), 2007.

Bucher, C. A, Foundation of Physical Education, St. Louis: The C. V. Mosby Co. 1960.

Clarke, H. Harison, Application of Measurement for Evaluation in Physical Education, Minneapolis Minnerotta: Berger Publishing Co., 1967.

Kansal, Devinder K., Textbook of Applied Measurement, Evaluation and Sports Selection, (New Delhi: Sports and Spiritual Science Publications), 2008.

Lakshmi, Vijay, Physical Fitness, (Delhi: Vivek Thani, Khel Sahitya Kendra), 2009.

MacLaren, D., et.al., Sports and Exercise Physiology, (New York: Bios Scientific Publishers), 2000.

Sharma, J.P., Exercise Physiology, (New Delhi: Vivek Thani, Khel Sahitya Kendra), 2010.

West and Bucher, "Foundation of Physical Education and Supports", Santa Clara: Times Mirror, 1987.