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A profile study of body composition of college educators

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Abstract

Physical fitness is important concept of human being in daily life. The body composition is one of the major components of health related physical fitness. It is related with the most common health issues. The purpose of this study was to investigate the fat% of college educators. Participants were 84 (Male 50 & Female 34) College educators aged between 25-55 years old were selected by using convenience sampling technique. Omron Fat Monitor was used to assess the fat% of college educators. The assessment was undertaken within the instruction of the tool developer. Further the data was analysis with help of descriptive statistics i.e. Mean, Standard Deviation & Percentile. Result shows that the 68% male & female were found in high fat% Category.

Keywords: Physical fitness, body composition, fat%

1. Introduction

Physical fitness is the ability to complete the tasks without undue fatigue. Physically fit person is able to perform daily tasks with more energy and effectively. Physical fitness is the combination of multiple components i.e. muscular strength, Muscular endurance, cardiovascular endurance, Flexibility and body composition. Daily physical activity can improve physical fitness. To improve and to maintain daily exercises are beneficial. Exercise is helping to prevent the development of obesity, hypertension, and cardio vascular disease. Physical activity and exercise can have immediate and long term health benefits. The trained heart provides better nourishment to the entire body. Muscular activity plays an important in the development of the organic systems of the body, including the digestive, circulatory, excretory, heart regulatory, respiratory and other body system. Vuori (1995)^[1], states that an adequately functioning musculoskeletal system is very important for functional capacity and quality of life. Functional capacity could be improved through physical exercise. A large numbers of studies indicate that endurance exercise will elicit a 10 mm/hg average reduction in individuals with mild essential hypertension. Cardio respiratory fitness reduce cardio vascular disease, diabetes, some cancers osteoporosis, arthritis as well as aided in lowering blood pressure and the maintenance of a healthy weight.

Body mass index is one of the better tools for body composition. It is related with the height and the weight of the participants. But in case of more or lean muscle mass it not exactly reflects the proportion of fat% and lean body mass. Therefore researcher selected the fat% as a tool for body composition. Research evidence reveals that the BMI and Fat% has positive relationship. College educators are facing different health issues. The nature of the job is very stressful. The speech disorders were found in large scale in teaching professionals. Some evidence reflects the common issues in teaching profession. Lack of physical activity is one of the reasons of the health issues in this profession. More academic and sedentary work of nature may lead to the obesity, stress, depression. A low level of physical activity is a risk factor for weight gain. Regular physical activity changes body composition also contributes to weight loss and weight maintenance. Obesity is one of the reasons to impact their daily schedule and life style. Due to inactivity and Stress College educators may face some issues like obesity, hypertension, diabetes, and musculoskeletal problems etc.

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2. Materials and Methods

2.1 Research Method

To investigate the body composition of the college educator descriptive survey method was used to carry out this research.

2.2 Participants

Total 84 college educators (aged between 25-55 years) from different colleges from Maharashtra were selected by using convenient sampling technique.

2.3 Tools for Data Collection

2.3.1 Body Fat Monitor (HBF-306): Omron body fat

monitor measures the body fat percentage by the bioelectrical impedance (BI) method. The electric resistance is determined by facilitation of electric conductivity and the distance of electricity conduction.

2.3.2 Procedure: To calculate the body fat percentage from the electric conductivity between both hands, the following five items 1) electric resistance, 2) height, 3) Weight, 4) age, and 5) gender and a formula are employed.

Formula: Body fat percentage (%) = {Body fat mass (kg)/ Body weight (kg)} x 100

Assessment

Body Fat%	Low	Normal	Slightly high	High
Male	Less than 10%	10% or more and less than 20%	20% or more and less than 25%	25% or more
Female	Less than 20%	20% or more and less than 30%	30% or more and less than 35%	35% or more

(This figures indicated based on the reference from obesity assessment recommended by Lohman (1986) and Nagamine (1972))

3. Results and Discussion

To analyse the fat% researcher was used descriptive statistics, mean, Standard deviation & percentile in this study.

3.1 Tables and Figures

The calculated table and analysis of fat% of college educators as follows:

Table 1: Overall descriptive Statistics of Fat% of college educators

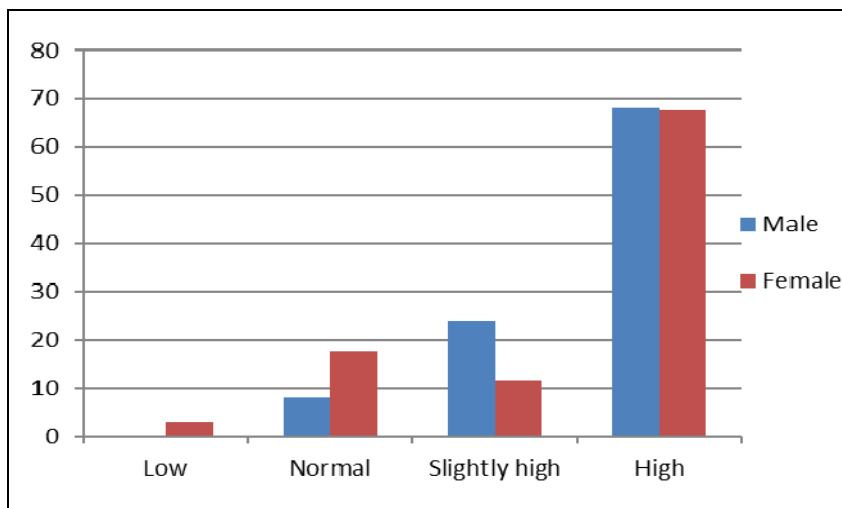
	Female	Male
N	34	50
Mean	35.7324	26.6760
Std. Deviation	6.99145	4.56457

Table No. 1 shows that the total no of participants were 84 (Female 34 & Male 50). The mean score of the fat% for female educators was 35.73(S.D. 6.99) and for male it was 26.67 (S.D. 4.56). It means that the male and female educators have high percentage of fat & its fall in high category of fat percentage.

Table 2: Descriptive statistics of Fat% of Male and female

Fat% Category	Female		Male	
	Frequency	Percent	Frequency	Percent
Low	1	2.9%	0.0	0.0%
Normal	6	17.6%	4	8%
Slightly high	4	11.8%	12	24%
High	23	67.6%	34	68%
Total	34	100.0%	50	100%

The Table No.2 shows that the category wise distribution of fat% percentage among male & female college educators. Low category has only 2.9% in female category and no one found in low category in male educators. In normal category 17.6% female and 8% male lied in this category. 11.8% female and 24% male has in slightly high category of fat%. In the last category of fat% which is high category almost 68% female & male found in this category.



Graph 1: Category wise distribution of fat% among male & female college educators

4. Result & Discussion

In this research college educator has found in high risk of getting major diseases, because almost 70% college educators lies in high fat% category. The lifestyle of the college educators also has remarkable impact on the body composition. They are dealing with lots of stress in their

professional life. Sindhu K. P (2014) [2] in her study on work stressors among college teachers, it was obvious that a majority of teachers experienced stress in their work. Four occupational stressors, overload, job control, resources and communication, and job characteristics contributed significantly to the commitment of academics to their

institutions. (Barkhuizen N and Rothmann S (2013) ^[3]. High and moderate body-fat-percent subjects were associated with high prevalence of coronary artery disease and the coronary-risk factors hypertension, diabetes mellitus, higher body-mass index and sedentary lifestyle (Singh et al, 2013) ^[4]. The prevalence of hypertension, high fasting serum glucose, high serum total cholesterol and low high-density lipoprotein cholesterol and their clustering were all raised with increases in BMI or waist circumference (Zhou et al, 2002)⁵. Therefore researcher concluded that increasing the level in Fat percentage in college educators is dangerous for their health and work efficiency.

5. Conclusion: Majority of the college educators (male & Female) has high level of fat percentage.

6. References

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