



Short Communication

Analyzing Body Fat among University Students

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Abstract

Epidemiological survey revealed half of the death in the world is due to cardiovascular diseases and obesity (the excess accumulation of fat) is the leading cause of many cardiovascular diseases. The present work focus on studying the health of college going youth students. 100 students of 18-28 year of age were purposively selected from Lovely Professional University Punjab India during the year 2014. Data was collected using OMRON Body composition monitor with scale Model HBF-362 and statistical interpretation of the data was done using descriptive and t-ratio at 0.05 level of significance. The result discovered that majority of the population were having normal fat percentage but other professional students were having higher amount of body fat. In total 4% of the students were obese and 32% were having higher amount of body fat.

Keywords: Percent body fat, Body composition monitor with scale Model HBF-362.

Introduction

Almost 30% of the world’s population is living in poverty under starvation, although majority of the world population is facing the greatest ever challenge of cardiovascular diseases caused by obesity. The World Health Organization defines obesity as ‘abnormal or excessive fat accumulation that presents a risk to health’. To lead healthy and prosperous life it is essential to maintain healthy weight and normal amount of body fat². In the modern world which is characterized by mechanization, Environmental crisis, inactive lifestyle, unhealthy diet pattern leads to overweight and obesity consequently give birth to plethora of cardiovascular diseases like heart attack, cardiac arrest, arteriosclerosis and Diabetes etc. which are the leading cause of deaths all around the world. The present survey will shed much needed light on the health of the youth students who are the future of the country. The study will also show the difference in the pattern of fat accumulation in total body in active and less active group, such studies will help the masses to be aware of obesity and related problems associated with it, so that timely modification in lifestyle can lead to healthy individual.

Objectives: i. To analyze fat among college going youth students. ii. To compare total body fat percentage between Physical Education and Other Professional Students.

Methodology

Survey method was used to collect the data on 100 samples aged 18-28 were purposively selected from Lovely professional University, Punjab, India from among different professional courses (Education, physical education. M Tech, B Tech, EEE, ECE, MCA, BCA, BSC, and MSC) Data on fat percentage was collected using OMRON Body composition monitor with scale Model HBF-362, utmost care was given during data collection data was collected in the early morning to counter any alteration in the findings. Data was statically analyzed using descriptive statistics and independent sample t-test.

Results and Discussion

The mean shows both the girls and boys were having normal fat percentage as naturally women is having higher amount of fat in comparison to men which is evident from the data. On analyzing the scores in-depth it was evident that majority of girls (68%) were having normal fat percentage, (18%) low body fat, (10%) were approaching towards obesity and 4% were obese. In the boys section almost same pattern exists where majority of students were having normal fat percentage, (18%) low body fat, 12% approaching towards obesity and 4% were obese.

Table-1
Descriptive Statistics

Groups	N	Mean		SD	Range		Skewness	
		Stat	Std. error		Min.	Max.	Stat.	Std. error
Girls	50	25.18	0.76	5.39	23.10		0.21	0.34
					13.50	36.60		
Boys	50	14.76	0.70	4.96	23.80		1.1	0.34
					7.30	31.10		

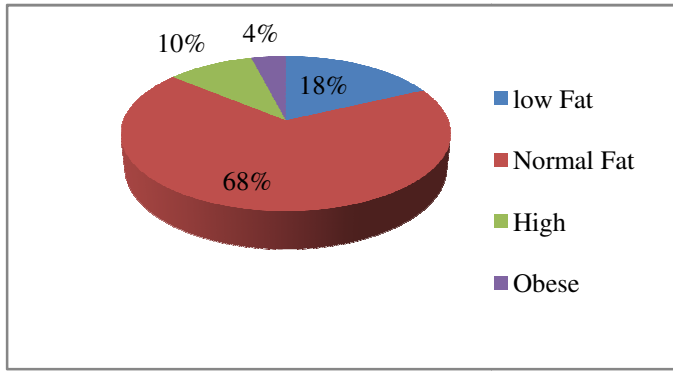


Figure-1
Girls

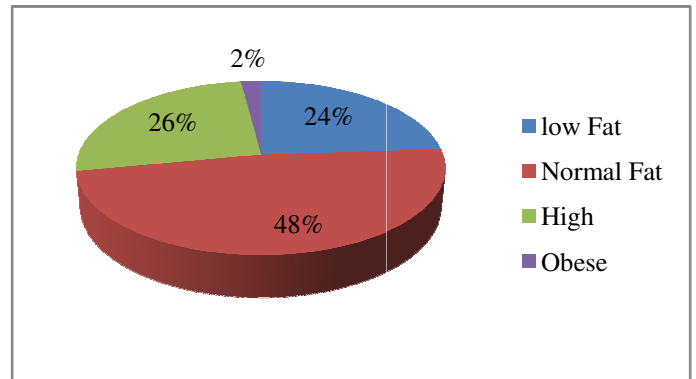


Figure-4
Other professional students

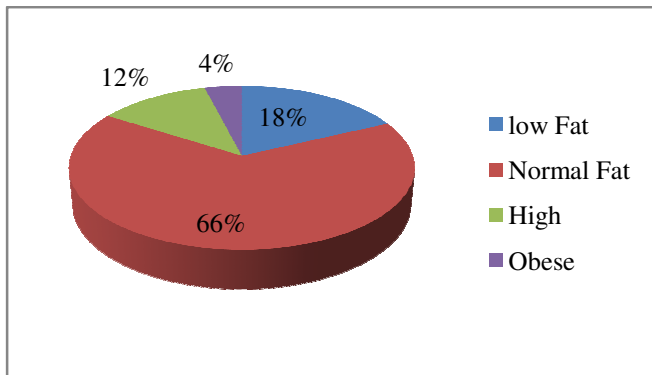


Figure-2
Boys

Table-2

Comparison of Total Body Fat between Physical Education and other Professional Students

Sample	Levene's Test for Equality of Variances	Mean	SD	Sig. (2-tailed)	Df.	t-ratio
Physical Education	0.35	18.13	7.18	0.14	98	-1.47
Other Professional		20.16	6.46			

The must met condition for using two sample t-ratio for unrelated groups is that the variance of the two groups must be equal, to test the equality of the variance levene's test was used the p-value .35 was above 0.05 thus it can be assumed that variance of both the groups was equal. On seeing mean value it was revealed that physical education students were having lower amount of body fat than other professional students now to ascertain if the difference was significant are not the result of Independent t-test revealed insignificant difference as the p-value .14 at 0.05 for 98 df. is above 0.05. Thus the null hypothesis of equality of population means is accepted and it revealed both the groups were having almost same amount of fat. Instead most of the physical education students (46%) were having low amount of fat accumulation and other professional students 26% were having higher amount of body fat, in total 4% students were obese.

Effect Size: To measure standardized mean difference between two groups effect size was calculated: $- M_1 - M_2$ divided by population standard deviation applying the formula on obtained values 18.13-20.16 divided 6.46 it becomes 0.31. The value of effect size revealed low variation in both the groups in the accumulation of body fat.

Discussion: The present study was aims at analyzing the total body fat percentage among the college going youths. The study revealed 67% of the youths were having normal amount of total body fat, but 22% of the youths were having high amount of fat present in the body at the age of 18-28 and 4% youths were found obese. In order to ascertain difference in total body fat percentage physical education and other professional students were compared, the result revealed insignificant difference but 26% other professional students were inclined towards obesity and having high amount of fat percentage, it may be because physical education students participate in regular physical activities and thus most of the students were having normal or low amount of body fat which is a good sign.

It is suggested that regular physical education class if also provided to other professional students the situation may be improved.

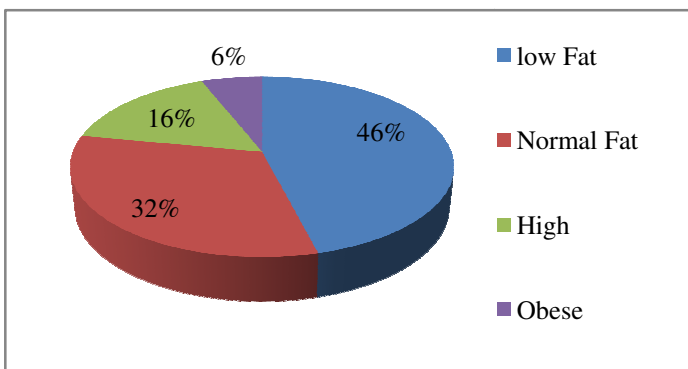


Figure-3
Physical education students

Conclusion

On the basis of the findings of the study conclusions has been drawn that both Girls and boys were having normal amount of body fat and as normal girls were higher in body fat as compare to boys. Majority of the students were having normal amount of body fat. Other professional students were having higher amount of total body fat accumulation as compare to the physical education students.

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