

A Study on Association Factors of BMI and Prevalence of Obesity in Punjabi University Patiala Research Scholars

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Abstract

This study was designed to deal with a study on association factors of BMI and prevalence of obesity in research scholars of Punjabi University, Patiala. Successive cross-sectional representative surveys study, including the association of weight, height and age with BMI. Body mass index was calculated from measured weight and height. Overweight and obesity were defined as follows: morbidly Obese (BMI > 40); obese (BMI 30-40), overweight (BMI 25-30), Normal (BMI 20-25), and Under Weight (BMI < 20). In this study sixty five inmates (N=65) were selected from Punjabi university, Patiala. The subjects are research scholars from assorted departments in Punjabi university, Patiala. Following procedure are used to take the data for BMI from the respective sampling weights of the subject are taken by using of digital weighing machine in kg and height was taken by using of stadiometer scale in cm. The data pertaining BMI were statistically analysed by the use of descriptive frequency percentile method. The obtained BMI association factors (Weight, Height and Age) are tested for significance at 0.05 level of confidence by Crosstabs Chi-Square Tests. Based on the observation and findings from this study, it is concluded that 1.60% students are in obesity, Whereas 6.20% students are in underweight, 26.60% are in overweight and 65.60% are in normal in Punjabi university, Patiala. The results of Chi-square test shows that there is association between weight and BMI of sample respondent but there is no association were found on sample respondents age and height.

Introduction

Obesity is a nagging problem in the developed economies country. For developing countries like India, morbid obesity has not yet become a public health priority. Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have a negative effect on health, leading to reduced life expectancy increased health problems. Obesity increases the likelihood of various diseases, particularly heart disease, type 2 diabetes, obstructive sleep apnea, certain types of cancer, and osteoarthritis. Obesity is most commonly caused by a combination of excessive food energy intake, lack of physical activity, and genetic susceptibility, although a few cases are caused primarily by genes, endocrine disorders, medications, or psychiatric illness. On average, obese people have greater energy expenditure than their thin counterparts due to the energy required to maintain an increased body mass. Dieting and exercising are the main treatments for obesity. Obesity is a leading preventable cause of death worldwide, with increasing rates in adults and children. Authorities view it as one of the most serious public health problems of the 21st century. Based on Third National Family Health Survey. International Institute for Population Sciences, 2005–2006, Mumbai in India, states which topped the list of rates of obesity are Punjab 30.3% males, 37.5% females, Kerala 24.3% males, 34% females and Goa 20.8% males, 27% females.

Design

Successive cross-sectional representative surveys study, including the association of weight, height and age with BMI. Body mass index was calculated from measured weight and height. Overweight and obesity were defined as follows: morbidly Obese (BMI > 40); obese (BMI 30-40), over weight (BMI 25-30), Normal (BMI 20-25), and Under Weight (BMI < 20).

$$\text{BMI} = \text{weight (kg)} / \text{height (cm)}$$

Methodology & Results of the Study

For this study sixty five inmates (N=65) were elected from Punjabi university, Patiala. The subjects are research scholars from assorted department in Punjabi university, Patiala. Following procedure are use to take the data for BMI from the respective sampling weights of the subject are taken by using of digital *weighing machine in kg and height was taken by using of stadiometer scale in cm*. The data pertaining BMI were statistically analyses by the use of descriptive frequency percentile method. The obtained BMI association factors (Weight, Height and Age) are tested for significance at 0.05 level of confidence by Crosstabs Chi-Square Tests.

Table 1 – Descriptive Statistics of Sample Respondents

S. No		Weight	Height	Age	BMI
1.	N	64	64	64	64
2.	Mean	2.47	1.89	1.47	2.25
3.	S.D	.872	.693	.534	.642
4.	Variance	.761	.480	.285	.413
5.	Range	3	3	2	4

Table 2: Percentile of BMI Association Factors

weight	Nos	Percentage	Height (cm)	Nos	Percentage	Age	Nos	Percentage
Below 55	7	10.9%	Below 165	18	28.1%	Below 27	35	54.7%
56 - 65	29	45.3%	166 - 175	36	56.2%	27 -29	28	43.8%
66 - 75	19	29.7%	176 - 185	9	14.1%	Above 29	1	1.6%
Above 75	9	14.1%	Above 185	1	1.6%	Total	64	100.0%
Total	64	100.0%	Total	64	100.0%			

The result Among the Following N=65 subject shows 45% of students comes under the weight range from 56-65kg,29.7%students are 66-75kg,14.1% are <75kg and also 10.9%are

>55kg. In Height of the subject are 56.2% of students comes under the height of 166-172cm, 28.1% are >165cm, 14.1% are 176-185cm and 1.6% of students comes under <185cm. According to the age 57% are >27 years old, 43.8% are 27-29 years old, and 1.6% are <29.

Table 3: Obesity Range in Punjabi university, Patiala

BMI	Frequency	Percent
Below 19	4	6.2
19 - 24	42	65.6
25 - 30	17	26.6
Above 40	1	1.6
Total	64	100.0

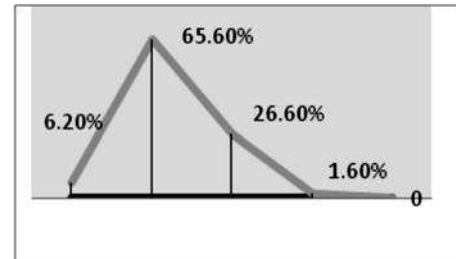


Table 4: Results of Chi-Square Tests

	Value age	d.f	Sig.	Value Height	d.f	Sig.	Value Weight	d.f	Sig.
Pearson Chi-Square	4.421	6		8.632	9		43.650	9	
Likelihood Ratio	4.695	6		6.738	9		36.309	9	
Fisher's Exact Test	7.369		.499	10.772		.358	31.790		.000*
Linear-by-Linear Association	.034	1		.245	1		25.589	1	
N of Valid Cases	64			64			64		

In Chi-Square test the significant value of the weight was 0.000* so that weight sample respondent to BMI was significant. This was significant at 0.05 level of confidence. In age the significant value was 0.499 that higher than the p value so there is no significant difference on age. 0.058 was the significant value of height of the subjects. That value was higher than the p value so there was no significant at 0.05 level of confidence.

Conclusion

Based on the observation and findings from this study it is concluded that 1.60% students are in obesity, Whereas 6.20% students are in underweight, 26.60% are in overweight and 65.60% are in normal in Punjabi university, Patiala. The results of Chi-square test show that there is association between weight and BMI of sample respondent but there is no association was found on sample respondents age and height. From this result it is concluded that increasing the amount of weight causes obesity in the human beings and produced health related disease in nature. In order to obesity prevention is the best ideal method. who are in overweight obesity and underweight students are suggested to counseled with physical education trainee, practice daily physical activity such as yoga, and maintaining healthy balance diet. BMI normal students are recommended to maintain their BMI in normal as lifelong.

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