

# To Assess the Public Awareness about Obesity Among Adult Populace of Lahore

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## ABSTRACT

**Objectives:** To explore the level of awareness about obesity among general population and to formulate the strategies to improve the awareness.

**Design:** A cross sectional study

**Place and duration:** Community health camp in slum area of Lahore 2006

**Patients and methods:** A total of one hundred participants were interviewed. The structured questionnaire was filled at the spot to obtain sociodemographic information after taking verbal informed consent. Height, weight, pulse, blood pressure were recorded. Chi Square test was used as test of significance. P-value was set at 0.05 and confidence level at 0.95.

**Results:** A total of one hundred (100) participants were interviewed. Overall frequency of obesity in the study population was twenty percent (20%) The prevalence of hypertension increased with increasing age and body mass index ( $p < 0.05$ ). Thirty five percent (35%) could define obesity and this awareness was significantly associated with educational level ( $p < 0.05$ ). Lack of physical activity, card playing and televisionization was observed in sixty percent (60%) of participants while thirty three percent (33%) were overweight ( $p < 0.05$ ). Seventy percent were having meals outside and snacks.

**Conclusion:** High frequency of obesity, hypertension, lack of physical activity, unhealthy nutrition, and faulty dietary habits were observed in the study population. Emphasis on health education and use of electronic media is recommended to improve the public awareness of the risk factors and warning trends of the obesity.

**Key words:** Awareness, life style, obesity, overweight, risk factors,

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## INTRODUCTION

Overweight and obesity are defined as abnormal or excessive fat accumulation that presents a risk to health. A crude population measure of obesity is the body mass index (BMI), a person's weight (in kilograms) divided by the square of his or her height (in metres). A person with a BMI of 30 or more is generally considered obese. A person with a BMI equal to or more than 25 is considered overweight<sup>1</sup>.

Overweight and obesity are major risk factors for a number of chronic diseases, including diabetes, cardiovascular diseases and cancer. Once considered a problem only in high income countries, overweight and obesity are now dramatically on the rise in low- and middle-income countries, particularly in urban settings<sup>1</sup>.

With the arrival of televisions, computers, video games, remote controls, washing machines, dish washers and other modern convenience devices, the majority of people are leading a much more sedentary lifestyle compared to their parents and

grandparents. Some decades ago shopping consisted of walking down the road to the high street where one could find the grocers, bakers, banks, etc. As large out-of-town supermarkets and shopping malls started to appear, people moved from using their feet to driving their cars to get their provisions. In some countries, such as the USA, dependence on the car has become so strong that many people will drive even if their destination is only half-a-mile away<sup>2</sup>. The less you move around the fewer calories you burn. Physical activity has an effect on how your hormones work, and hormones have an effect on how your body deals with food. Several studies have shown that physical activity has a beneficial effect on your insulin levels - keeping them stable. Unstable insulin levels are closely associated with weight gain<sup>2</sup>.

The prevalence of obesity and overweight is increasing world wide because of major changes in life style in the past few decades<sup>3</sup>. There are large differences in population prevalence of obesity within countries and population subgroups. Pakistanis are adopting a progressively unhealthy life style with increased sedentary entertainment such as television, computer and video games resulting in physical inactivity while an increased consumption of

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junk foods have resulted in unhealthy dietary habits. These habits have fueled the epidemic of obesity<sup>4</sup>. Awareness comprises a human's perception and cognitive reaction to a condition or event. Awareness does not necessarily imply understanding, just an ability to be conscious of, feel or perceive<sup>5</sup>.

The prevalence of obesity in the developing world is on the increase<sup>6</sup>. Obesity is increasingly becoming common and mainly driven by demographic and epidemiological transition and changing life style among the people<sup>7</sup>. Obesity continues to affect increasing number of people, the level of awareness, control and prevention of obesity is low.

This study was conducted to assess the level of awareness, frequency of obesity, determine the modifiable life style risk factors in the study population and to make recommendations.

## MATERIALS AND METHODS

A cross sectional study was conducted on those who visited community health camps in Lahore in 2006. After taking verbal consent a structured questionnaire was filled. Information about family history of obesity, knowledge about obesity and history of smoking was obtained.

Standard heights and weights were measured in meters and kilograms respectively and BMI was calculated. A BMI equal to or more than 25 was considered overweight while BMI equal to or more than 30 was considered obese, less than 18.5 was considered underweight and from 18.5 to 24.9 were taken as normal. Hypertension was also considered to be present if the patient was a known case of hypertension.

Data was analyzed by using SPSS version 10.0. Percentages are given for categorical variables whereas mean and standard deviations for quantitative variables. Chi Square test of significance was used for qualitative and t-test for quantitative variables to assess the association.

## RESULTS

A total of 100 patients **took** part in the study. The mean age was 40±12 years. Sixty percent (60%) of the population was matriculation or more. Higher education was found to be significantly associated with the awareness of the obesity. 75% of the overweight were ≥ 40 years of age, 70 % were having positive family history, previously known hypertensives were 10 percent whereas 25 percent were smokers. Lack of physical activity was reported in 60% of the study population. Most common form of exercise was walking. 33% of the participants were

overweight while Overall frequency of obesity in the study population was twenty percent (20%).

Hypertension was more frequent in older age persons and advancing age was found to be statistically significantly associated with the development of hypertension. Hypertensives were having higher BMI compared with normotensives. 40% were able to define hypertension. There was a statistically significant association between ability to define hypertension and educational level and previous diagnosis. No significant association was seen between age and ability to define obesity. The results are summarized in the following table.

Variable	Value	Frequency	%age
Age	≥ 40	75	75
Education	≥ Matric	60	60
Having Knowledge	Yes	33	33
Not Having Knowledge	Yes	67	67
Family history	Positive	70	70
Physical inactivity	Yes	60	60
BMI	≥ 25	30	30
Hypertension	≥140/90	35	35
Smoking	Yes	25	25
Overweight	BMI>25	33	33
Obese	BMI>30	20	20

## DISCUSSION

A study indicated that *obesity* prevalence rates for Pakistani populace were as follows for adults aged 25 to 64 years, moving from low to middle to high socioeconomic status: for rural areas, 9%, 15%, and 27%; for urban areas, 21%, 27%, and 42%.<sup>1</sup> These figures are alarmingly high for rural and urban areas but especially for urban areas. The same study also indicated a prevalence of obesity in Pakistan for the age group 25 to 64 at 13% for males and 23% for females. These figures are closer to obesity prevalence rates for US adults 20 years and older, especially for females (20% for males, 22% for females)<sup>1</sup>.

Obesity and overweight status is also related to type-2 diabetes mellitus. In a WHO study it was shown that 16 % had a BMI <18.5, (underweight), 36.8 % had a BMI between 18.5-24.9 (normal), 44.6% had a BMI 25-26.9 (overweight) and 17% were obese with a BMI of > 27<sup>4</sup>.

The health burden from overweight and obesity in Pakistan is currently underestimated. It was noted that 67 % of the respondents were not aware about their disease. This is in consistence with other studies showing low detection of obesity<sup>13</sup>.

There is definite evidence that Non Communicable Diseases are initiated by unhealthy lifestyle and risk factors like unhealthy diet, obesity, televisionisation, computerization, smoking and lack of physical activity among the major modifiable lifestyle issues. The frequency of overweight or obesity and lack of physical activity were high in the study group 20 and 60 % respectively. These figures are higher than reported earlier<sup>14</sup>.

Diet is considered to be a very important risk factor of NCD. Shifting from vegetarian food to animal origin like meat, fat and others have significantly increased the risk of obesity, diabetes mellitus, coronary heart disease, cancer and stroke<sup>14</sup>. The changing dietary habits observed in the study populace like taking meals outside and snacks are noteworthy and influx of fast food chains like McDonaldisation, KF Cisation, Coca Colaisation is becoming a norm and a symbol of social status. High amount of saturated fats, cholesterol and refined sugars in these diets are associated with increased incidence of obesity, hypertension and NCD.

This Study had some limitations. It was conducted on selected persons, so there is a possibility of selection bias.

## CONCLUSION

This study throws light on an alarming increase of obesity as a result of prosperity and changing lifestyle among the populace. It also identified the knowledge gap exists in identification of obesity. It is known that Non Communicable Diseases are preventable through interventions against the modifiable risk factors. It is thus imperative to formulate priorities and design public health interventions to increase public awareness of the warning signs and risk factors of Non Communicable Diseases and provide them information to adopt and maintain healthy lifestyle. What is not widely known is that the risk of health problems starts when someone is only very slightly overweight, and that the likelihood of problems increases as someone becomes more and more overweight. Many of these conditions cause long-term suffering for individuals and families. In addition, the costs for the health care system can be extremely high.

The good news is that overweight and obesity are largely preventable. The key to success is to achieve an energy balance between calories consumed on one hand, and calories used on the other hand.

**Suggestions and recommendations:** Overweight and obesity, as well as their related chronic diseases, are largely preventable. At the individual level, people can:

- Achieve energy balance and a healthy weight;
- Limit energy intake from total fats and shift fat consumption away from saturated fats to unsaturated fats;
- Increase consumption of fruit and vegetables, as well as legumes, whole grains and nuts;
- Limit the intake of sugars; and
- Increase physical activity - at least 30 minutes of regular, moderate-intensity activity on most days.
- More activity may be required for weight control.
- If you smoke, quit or do so in moderation.

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