**Original Article**

# Prevalence of obesity and overweight among housewives of Karachi, Pakistan

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**Objective:** To determine the prevalence of obesity and overweight among housewives of Karachi, Pakistan.

**Methodology:** In this cross-sectional study, housewives attending different hospitals, fulfilling inclusion criteria for the study received a Questionnaire adopted from a previous study done in Iran. Questionnaire was filled with trained assistants and had questions regarding demographic information in addition to the questions relevant to Physical and physiological status.

**Results:** Out of 250 housewives, BMI of 4.8% was in the category of underweight, 31.6% participants were normal, 30.4% were overweight and 33.2% were obese.

**Conclusion:** Prevalence of obesity and overweight was found to be high. It can be reduced by encouraging awareness about the factors associated with obesity and overweight as well as help us to prevent them at the primordial level. (Rawal Med J 202;46:62-64).

**Keywords:** Obesity, overweight, body mass index.

## INTRODUCTION

Body Mass Index (BMI) is the ratio of weight in kilograms to area in square meter.[1] The occurrence of obesity has globally increased about two times since 1980.[2] Obesity, a health hazard of epidemic extent worldwide, defined as BMI greater than 30.0kg/m and overweight as BMI between 25 and 29.9 kg/m2" [WHO].[3] As per WHO report, percentages were about 39% of adults of age 18 and over and about 13% were overweight and obese, respectively, whereas about 87million children below the age of 5 were found overweight or obese. Researchers anticipate that in 2020, the occurrence of obesity among 35 year olds will be 30- 37% in men and 34- 44% in women.[3]

Obesity is most commonly related to elevated level of serum triglycerides.[4] Obesity is linked with more food consumption and caloric imbalance. Obesity is highly linked with one's body composition; the fat and non-fat elements. The fat component constitutes about 3 percent of the total weight in men and 12 per cent in women. The percentage is higher in women because it includes sex-specific fat, such as that found in the breast tissue, the hip and other sex-related fat deposits.[5] The aim of this study was to determine the prevalence of obesity and overweight among housewives of our area.

## METHODOLOGY

The study was conducted at different hospitals of Karachi, focused on 250 housewives of 18 to 65 years of age. Convenient, non-probability sampling was used as the sampling technique. The exclusion criteria included other than housewives, any trauma to cervical spine (whiplash injury), osteoporosis of cervical spine, cervical myeloma, complex regional pain syndrome, systemic or local infections or any cervical spine surgery because sometimes these conditions may lead to gain or loss weight. Informed consent was taken from all participants.

Self-made questionnaire was use which included questions regarding demographic information in addition to the questions relevant to the aim of the study (physical and physiological status).

**Statistical Analysis:** Statistical analysis was performed using SPSS version 21.

## RESULTS

We had 250 housewives with age range from 18-60 years. We found that 83 (33.2%) were in obese category (Table).

**Table. BMI of participants.**

| Body Mass Index (BMI) | Frequency | Percentage |
|---|---|---|
| Underweight (BMI< 18.5) | 12 | 4.8% |
| Normal weight (BMI 18.5-24.9) | 79 | 31.6% |
| Overweight (BMI 25-29.9) | 76 | 30.4% |
| Obese (BMI >30) | 83 | 33.2% |

**Fig. Waist to hip ratio.**
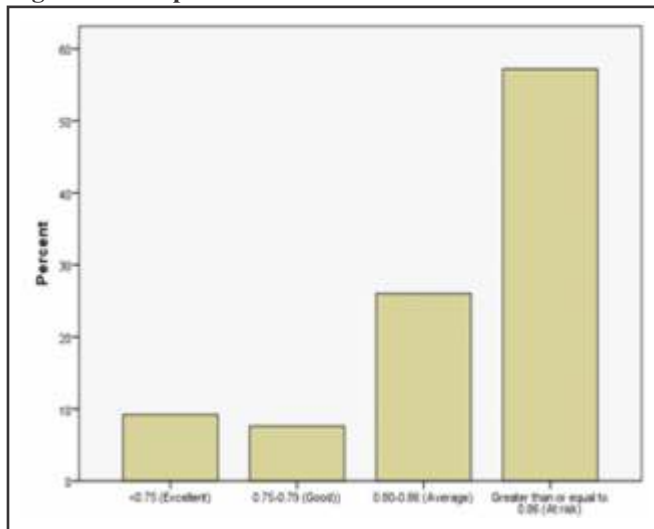


Overweight and obesity were on the upper side among women with low education. Smoking rate was 4.4% and 2.4%, ex-smoker and current smoker, respectively. Wait to hip showed in the Figure.

## DISCUSSION

The motivation behind this study was to explore obesity among housewives, a group that has not been much targeted in Pakistan. The data shows greater consistency with local findings of the high prevalence of overweight and obesity in women of Srinagar, Nepal and Iran and some other countries in the Middle East.[5-8] As in other studies in developing countries, obesity shows marked influences and is very much likely to increase with age and is more common in women with low educational background.

Prevalence of obesity among adult females of Srinagar was 9.4%.[8] whereas in a study carried on Nepali adults women, the prevalence of overweight and obesity was 24.5% and 1.8%, respectively.[9] As women who are unemployed (housewives) suffer more from being overweight and obese than employed women, A study from Iran revealed that overweight and obese in housewives were 34.5% and 24.4%, respectively. In contrast these values in employed women were 30.7% and 14.5% in the same correspondence i.e. overweight and obese.[7,10,11]

The prevalence of overweight and obesity in our study is higher than the values reported in Srinagar and Nepal i.e. 30.4% and 33.2%, respectively. Overweight and obesity is shown to be negatively affected with smoking. Smoking rate among women according to our study was 4.4% and 2.4%, Ex-smoker (who had quit smoking) and current smoker, respectively. This is similar to a study from Iran by Janghorbhani et al who found rate among women of 5.8%.[8]

Another finding that requires attention is urban residency. Urban residents commonly seem to have an increased BMI than people staying in villages (rural areas).[12] Overweight and obesity is on upper side of the graph among women who were married than among never married persons.[8] Our outcomes show this consistency as well. Similar to many of the previous studies carried out,[3,13,14] our results also showed that overweight and obesity were on the upper side of the graph among women with low education.

High blood pressure (HTN) and obesity had increased prevalence rate in the population of Lagos (southwest Nigeria) HTN was directly proportional to the increasing age.[15] Our results are similar. A study among 253 Nigerian grade students showed a strong and positive relation between Blood sugar level and BMI, especially among female students.[16] The results of our study show greater similarity to this research.

It would not be wrong to say that excess body weight appears to be up to greater extent common in Pakistan. Both the primary and secondary level care i.e. preventive and curative efforts are required in a short time to prevent this health hazard and fasten weight maintenance and weight loss awareness and cumbersome this epidemic health issue.

The results of this study facilitates us a vision for advanced studies furthermore regarding obesity among housewives, as well as for developing interventional strategies. In Pakistan, it is highly needed that more advanced studies should be done and should be continued with public health

enhancement strategies like awareness programs regarding physical fitness, nutrition and obesity.

## CONCLUSION

Obesity and overweight were high in our study and can be reduced by encouraging awareness about the factors associated with obesity and overweight as well as help us to prevent them at the primordial level.

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Analysis and interpretation of the data: Muhammad Riaz Baig, Muhammad Faizan
Drafting of the article: Muhammad Waqas, Muhammad Umair Sheikh
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