

A Descriptive Study to Assess the Prevalence of Overweight and Obesity by Calculating BMI (Body Mass Index) among Women in an Urban Area of Bhiwadi (Rajasthan)

Sharmila

Amity College of Nursing, Amity University Gurgaon, Haryana, India

Abstract: Over the past two decades there has been a dramatic rise in the prevalence of obesity throughout the world. India is facing the rapid rise in generalized and obesity among adolescents and adults. Obesity is important risk factors for non-communicable diseases. The WHO reported that the principal reason for this excess weight problem is an energy imbalance between calories consumed and calories expended. Increasing intake of foods high in energy and decreasing level of physical activity due to increasing urbanization, changing modes of transportation and sedentary working environments. **Methods:** A descriptive study was used to assess the prevalence of overweight and obesity by calculating BMI among women in an urban area of Bhiwadi (Rajasthan). **Objectives:** Assess the prevalence of overweight and obesity by calculating BMI among women. Associate BMI finding with their selected demographical variables and clinical variables among women. Sample size 50 was selected by using convenient sampling technique. **Procedure:** A self-preparing data collection technique was used in order to obtain data, measured physical characteristics such as height and weight. **Result:** Chi square test was used to find out the association of findings with their selected demographical variables and clinical variables among women. Out of 50 samples 15(30%) women are underweight, 10(20%) women's having normal body weight, 10(20%) women overweight and 15(30%) are obese. Demographic variables age, religion, education, occupation and socio-economic status not associated with obesity. **Conclusion:** Prevalence of overweight was high as compared to obesity in community area; the history of any other illness and medications was strongly associated with obesity. Obesity is the main cause of chronic illness and risk of being obese is increasing in women, so this study aims to identify the prevalence of generalized obesity among selected urban community people and identifying the influencing factors for the same.

Keywords: Prevalence, Overweight, Obesity, BMI, Women

1. Introduction

According to WHO overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. In developing and developed countries, obesity has reached epidemic proportions. Worldwide obesity has nearly tripled since 1975. In 2016, more than 1.9 billion adults, 18 years and older, were overweight. 650 million were obese. 39% of adults aged 18 years and over were overweight in 2016, and 13% were obese. 38 million children under the age of 5 were overweight or obese in 2019. Over 340 million children and adolescents aged 5-19 were overweight or obese in 2016. In India obesity is reaching epidemic proportions, with morbid obesity affecting 5% of the population. Indians are genetically predisposed to fat accumulation particularly around the waist. According to national family health survey data the prevalence of overweight and obesity is highest in north India, with percentage being high as 30% in males and 37.5% in females.

Body mass index (BMI) is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults. It is defined as a person's weight in kilograms divided by the square of his height in meters (kg/m^2). Raised BMI is a major risk factor for non-communicable diseases such as:

- Cardiovascular diseases (mainly heart disease and stroke), which were the leading cause of death in 2012;
- Diabetes;

- Musculoskeletal disorders (especially osteoarthritis – a highly disabling degenerative disease of the joints);
- Some cancers (including endometrial, breast, ovarian, prostate, liver, gallbladder, kidney, and colon).

Finally, in fat-prone women, birth control pills cause the body to produce increased amounts of fat and water. Estrogen alone will cause increased deposition of fat. Sedentary lifestyle particularly sedentary occupation and inactive recreation such as watching television promote mortality and morbidity related to overweight and obesity, obesity is associated with higher socio-economic groups. Use of certain drug e.g. corticosteroids, contraceptive, insulin, Beta adrenergic blocker, etc. can promote weight gain

Obesity is one of the major modifiable factor for non-communicable diseases in India. Risk factors such as age, gender, genetic factors, physical inactivity, eating habits, endocrine factors, socio economic status and drugs play a role in increasing obesity. Obesity can occur at any age and generally increased with age. Infants with excessive weight gain have all increased incidence of obesity in later life. There are many reasons why women have more body fat than men.

2. Objectives

- 1) Assess the prevalence of overweight and obesity by calculating BMI among women.

Volume 10 Issue 2, February 2021

www.ijsr.net

Licensed Under Creative Commons Attribution CC BY

- 2) Associate BMI finding with their selected demographical variables and clinical variables among women.

Review of Literature

Edmunds L.D (2015) A study was conducted to elucidate some of the social impacts on over-weight and obesity in children has on families. Health care practitioners may become aware of these impacts of not similarly affected. Purposive sample of parents (n=58). With over weight and obese children (n=48) from three areas in United Kingdom was used. There are many social situations that have an impact on the child directly on parents, and on the family in general. The child and his/her family in a broader context with improved understanding of the complexity if raising an over weight child.

Hassink. K. (2013) A study was conducted the obesity prevention should be at the forefront if our approach to these epidemic problem and the goal of health care providers, public health officials, community and families. The problems of the obese child or no longer solely those of increased risks of disease, but of disease itself health care providers are increasingly challenged to provide evaluation and treatment for the serious co morbidities and complication of obesity in childhood. Many of these co morbidities and complications are "invisible" and require careful and focused history and laboratory evaluation to elicit. Treatment of the complication and co morbidity should be focused on preventing progression, reversing the disease process, and achieving control of obesity with family-based life style changes that will allow the child to maintain a healthy balance between his or her genetic predisposition and the environment.

3. Methodology

Study design: In this study descriptive approach was used to assess the prevalence of overweight and obesity among women's.

Setting: This study is being conducted in selected urban community at Bhiwadi.

Sample size: 50

Sampling technique: Convenient sampling technique

Inclusion criteria:

- Women who were interested to participate in the study.
- Women who were available at the time of data collection.

Exclusion criteria

Women who are not interested to participate

Women who not available at the time of data collection.

Procedure of data collection- A self-preparing data collection technique was used in order to obtain data, measured physical characteristics such as height and weight. The study samples were assured of confidentiality of their responses.

Scoring criteria

Table 1: BMI range the scoring criteria:

S.No.	Category	BMI (kg /M ²)
1.	Underweight	16-18.5
2.	Normal	18.5-25
3.	Overweight	25-30
4.	Obese	Over 30

Data analysis: The data obtained from 50 respondents was analyzed by using descriptive and inferential statistics follows; A master data sheet was prepared and compiled demographic data, containing selected sample characteristics and analyzed using frequency and percentage distribution. Chi square test was used to find out the association of findings with their selected demographical variables and clinical variables among women. Out of 50 samples 15(30%) women's are underweight, 10(20%) women's having normal body weight, 10(20%) women overweight and 15(30%) are obese.

Demographic variables age, religion, education, occupation and socio-economic status not associated with obesity.

Table 2: Clinical variables history of any other illness and any other medications

S.No.	Clinical Variables	Under weight	Normal	Over weight	Obese	df	X ²
1.	History of any other illness						
a.	Yes	5	8	10	3	3	8.25*
b.	No	5	8	8	3		
2.	History of any other medication						
a.	Yes	5	8	12	5	3	26.5*
b.	No	6	0	5	9		

*Significant at 0.05 level of significance

Clinical variables such as family history of obesity, history of any other illness, history of any other medication, history of eating disorder, history of any other exercise schedule and history of any previous surgery. The analysis revealed that the history of any other illness and history of any other medication was strongly associated with obesity.

4. Discussion

Demographic variables age, religion, education, occupation and socio-economic status not associated with obesity, clinical variables such as family history of obesity, history of any other illness, history of any other medication, history of eating disorder, history of any other exercise schedule and history of any previous surgery. The analysis revealed that the history of any other illness and history of any other medication was strongly associated with obesity.

Yarlini B, Eduardo V. (2009) conducted study the prevalence of overweight-obesity increased substantially in all countries. Comparing the first to the latest survey in Bangladesh, the prevalence of overweight-obesity increased from 2.7 to 8.9% [age and parity-adjusted prevalence ratio (PR): 2.42; 95% CI: 1.88, 3.13]; in Nepal, from 1.6 to 10.1% [adjusted PR: 4.18; 95% CI: 3.00, 5.83]; and in India, from 10.6 to 14.8% [adjusted PR: 1.28; 95% CI: 1.20, 1.36]. These increases were observed in both rural and urban areas and were greater in rural areas.

Kalra S, Unnikrishnan A. G(2012) concluded result that increasing trend in obesity among the urban and also in the rural population (>20 years) in Chennai, South India. In a decade, the prevalence of obesity had increased by 1.7-fold in the city. Obesity rates were higher among women, as reported from many other countries. The prevalence of overweight was lower among the urbanizing rural population, than in the urban areas.

[9] Cairella G, casagnil, lambert A, etal, over weight and obesity in Italian children.2008 july-aug; 20(4) : 315-27
 [10]D. B. Kumah, K. O. Akuffo, J. E. AbakaCann, D. E. Affram, and E. A. Osaе, Prevalence of Overweight and Obesity among Students in the Kumasi Metropolis, Journal of Nutrition and Metabolism, Volume 2015 (2015), Article ID 613207, 4 pages, <http://dx.doi.org/10.1155/2015/613207>

5. Conclusion

The study revealed prevalence of overweight and obesity among the community people. Therefore, there is a need to establish effective prevention and health promotion programmes in the community. Prevalence of overweight was high as compared to obesity in community area; the history of any other illness and history of any other medications was strongly associated with obesity. Obesity is the main cause of chronic illness and risk of being obese is increasing in women, so this study will help to find out the prevalence and contributing factors about overweight and obesity so that problem will be addressed and making general public aware to reduce the risk factors.

6. Limitations

The limitations of the study are-
 The study was limited to only women of urban area.

7. Recommendations

- a) The study can be done in large population to generalize the findings.
- b) Randomized sampling technique can be done in future study.
- c) The study can be done in women of rural area.
- d) A comparative study can be conducted between urban and rural community.

References

- [1] World Health Organization. Washington DC Obesity and overweight. World Health Organization. 2013.
- [2] Medicine Net. Fat differences in men vs women article, Why are women the Fatter Sex?. 2002.
- [3] Edmunds L.D. social implication of overweight and obesity in children opener ltd. England unitd kingdom. July 2015 24; 13(3); 191-200.
- [4] Hassink. K. Nemours children's clinic-wilmington DE 19899, USA. 2013 Dec(9); 14(5):500-510.
- [5] Yarlini B, Eduardo V. Nationally Representative Surveys Show Recent Increases in the Prevalence of Overweight and Obesity among Women of Reproductive Age in Bangladesh, Nepal, and India. J Nutri. 2009;139(11)2139– 2144. doi: jn.109.112029
- [6] Kalra S, Unnikrishnan A G. Obesity in India- The weight of the nation. J Med NutrNutraceut. 2012;1 (1)37-41.
- [7] doi: 10.4103/2278-019X.94634
- [8] <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>