

## A COMPARATIVE STUDY TO ASSESS THE OBESITY, IT'S INFLUENCING FACTORS AND OBESITY RELATED PROBLEMS AMONG WOMEN IN URBAN AND RURAL AREAS OF KAMRUP, ASSAM

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### ABSTRACT

*Obesity has become a chronic disorder affecting the larger population than any other disease in the world and women are more prone to this problem. This is a descriptive survey approach with descriptive comparative design to assess and compare obesity, it's influencing factors and obesity related problems among women of urban and rural areas of Kamrup, Assam. Objectives of the study were: to assess and compare prevalence of obesity among women of urban and rural areas, to identify and compare influencing factors of obesity, to assess and compare obesity related problems among women of urban and rural areas, to find out the association between obesity and demographic variables, to find out association between obesity and influencing factors, to find out association between obesity and obesity related problems. 522 women were selected by multistage systematic random sampling technique, 261 from urban area and 261 from rural area. The findings of the study revealed that prevalence rate of obesity in rural areas was (4.22%) whereas for urban areas was (7.66%). There was no statistical difference (CI 2.37-7.39%, 5.02-11.54%) of obesity among women. There is significant association between obesity and demographic variables such as age, occupation and education. There is significant association between obesity and influencing factors such as number of meals in a day, preference of fast food, eating at least one serving of dairy product every day, physical activity, depression, loneliness, frustration, anxiety, feeling of avoidance by family and friends, family history of obesity, use of medicine were found. There was significant association between obesity and obesity related problems heart disease, diabetes mellitus, hypertension, joint pain.*

**Keywords:** Obesity, Prevalence, Influencing Factors, Obesity Related Problems.

## INTRODUCTION

Obesity is a medical condition in which excess body fat has accumulated to an extent that it may have a negative effect on health. People are generally considered as obese when their body mass index, a measurement obtained by dividing a person's weight by the square of the person's height, is over 30kg/m<sup>2</sup>.(1) Obesity may be defined as an abnormal growth of the adipose tissue due to an enlargement of fat cell size (hypertrophic obesity) or an increase in fat cell number (hyperplastic obesity) or a combination of both.

## METHODOLOGY

Research Approach: The present study aims to assess the obesity, its influencing factors and obesity related problems among women in Urban and Rural areas of Kamrup, Assam. In order to achieve the objectives descriptive survey approach was adopted.

Research design: A comparative descriptive design is used to describe variables and examine differences in variables in two or more groups that occur naturally in a setting.

Study setting :The setting for the study was the urban and rural areas of Kmarup Assam. Urban areas were selected under Fatashil Ambari UHC. Selected areas were Athgaon, GS Colony, Bharalumukh, Kumarpara, ASEB colony. Selected villages for the rural area were under Boko PHC. Name of the villages were Bakarapara , Belpara, Jarapara, Raipara and Pathsalakoth.

Development of the tool : After reviewing literature, discussing with the expert, the investigator prepared a blueprint then structured interview questionnaire was prepared to assess obesity, identify influencing factors and obesity related problems.

Description of tool

Section A-Demographic Data

Section B- structured interview schedule to identify influencing factors of obesity.

Section C-Questions related to obesity related problems

Section D-Assessment Performa

Content validity of the tool

The content validity of the semi structured interview schedule was done by 7 experts.

#### Data collection procedure

A house to house survey was carried out in the selected village of Boko and area of Fatashil Ambari. The sampling technique used in this study was Multistage systematic Sampling Technique. From the sampling frame every 4th number in urban and every 6th number in rural area were selected randomly after selecting first subject.

#### Plan for data analysis

- Frequency and percentage distribution was used for analysis of demographic data
- Frequency and percentage distribution was used to describe the prevalence of obesity
- Frequency and percentage distribution was used to identify influencing factors of obesity
- Frequency and distribution was used to assess obesity related problems
- Confidence interval was used to find out the difference of obesity
- t- Test was performed to find out the difference of influencing factors and obesity related problems.

## RESULTS

- Majority (47.1%) of the women of urban area and (37.2%) of women in rural area belongs to 20-30 years of age group.
- Majority (79.7%) of women in urban area belong to the Hindu religion. Similarly (85.4%) of women in rural area belongs to the Hindu religion .
- Majority of women are home maker in both urban (50.6%) and rural (79.7%) areas.
- Majority of women are married in both urban (74.3%) and rural (83.5%).
- Majority of women are educated higher secondary & above in urban areas (48.3%) and where as in rural area majority of them are educated up to high school (43.3%).
- Prevalence rate of obesity in rural areas of Kamrup, Assam was (4.22%) (95% CI=2.37-7.39) where as for urban areas of Kamrup, Assam was (7.66%) (95% CI=5.02-11.54). There was no statistical difference of obesity among women of rural and urban areas of Kamrup, Assam.

- It was found that there was significant difference in number of meal in a day (t value 6.23; p value <0.001), preference of fast-food (t value 7.52; p value <0.001) loneliness (t value 2.24; p value .025), frustration (t value 7.01; p value <0.001), anxiety (t value 7.45; p value <0.001), drink alcohol (t value 1.98; p value .048) use of medicines {Contraceptive drugs, oral hypoglycemic agents for diabetes, antihypertensive drugs, antipsychotic drugs (t value 3.22; p value .001) of women of rural and urban areas of Kamrup, Assam at 0.05 level of significance.
- It was found that, the heart disease and diabetes mellitus were statistically different (t value 2.15; p value .032 and t value 2.19; p value .029 respectively) among women of rural and urban areas of Kamrup, Assam at 0.05 level of significance.
- Age (6=19.33) occupation (12=53.041), education (9=36.227) was significantly associated to each other at 0.05 level of significance.
- Number of meal (6=14.881), preference of fast food (3=32.33), eating at least one serving of dairy product every day (3=18.55), physical activity (6=35.899), depression (3=10.31), loneliness (3=15.106), frustration (3=27.668), anxiety (3=21.832), feeling of avoidance by family and friends (3=16.33), family history of obesity (3=131.1750, use of medicine {Contraceptive drugs, oral hypoglycemic agents for diabetes, antihypertensive drugs, antipsychotic drugs (3=36.077)} were significantly associated to each other at 0.05 level of significance.
- Heart problem (3=8.117), diabetes mellitus (3=35.308), hypertension (3=30.449) and joint pain (3=36.52) were significantly associated to each other at 0.05 level of significance.

## CONCLUSION

Majority of women had normal BMI in both urban and rural areas of Kamrup, Assam. The prevalence of obesity in rural areas was (4.22%) and (7.66%) in urban areas of Kamrup Assam. The result revealed that Influencing factors i.e. number of meals in a day, preference of fast food, loneliness, frustration, anxiety, drinking alcohol and use of medicine have significant difference among women in urban and rural areas of Kamrup, Assam. Obesity related problems, heart disease and diabetes mellitus was significantly different. Demographic variables age,



occupation, education included in the study was found to have significant association with obesity. There was significant association between obesity and some of the influencing factors such as number of meals in a day, preference of fast food, eating at least one serving of dairy product (milk, cheese, ghee, curd) everyday, physical activity, depression, loneliness, frustration, anxiety, feeling of avoidance by family and friends, family history of obesity, use of medicine (contraceptive drugs, oral hypoglycemic agents for diabetes, antihypertensive drugs, antipsychotic drugs). There was significant association between obesity and obesity related problems. Obesity happens to be modifiable risk factor which also reflects the need to give more emphasis on physical activity, dietary habits and maintenance of normal body weight. Lifestyle modification and regular monitoring could be done to prevent from getting obese and also many obesity related problems.

## REFERENCES

1. Obesity and Overweight Fact Sheet N0311 WHO. January 2015, Retrieved 2 February 2016. Available from <https://en.wikipedia.org/wiki/Obesity>.
2. Park K. Park's textbook of preventive and social medicine, 22nd edition, Jabalpur India: M/s. Banarsidas Bhanot publishers: 2013; p. 367.
3. WHO. Obesity: Preventing and managing the global epidemic. 2000 Available from [https://www.who.int/nutrition/publications/obesity/WHO\\_TRS\\_894/en/](https://www.who.int/nutrition/publications/obesity/WHO_TRS_894/en/)
4. Medical Research Council, Obesity research: background Available from <https://mrc.ukri.org/research/initiatives/obesity-research/obesity-research-background/> <http://mrc.ukri.org/initiative>.
5. Navadeh, S., Sajadi, L., Mirzazadeh, A., Asgari, F., & Haghazali, M. (2011). Housewives' obesity determinant factors in Iran; national survey - stepwise approach to surveillance. *Iranian journal of public health*, 40(2), 87–95.
6. Binu J, and Harnagale R. A Study on the prevalence of overweight and obesity and its influencing factors among rural geriatric population in Kerala. *International Journal of current microbiology and applied sciences*. 2014; Vol: 3(9); 284-293
7. Tiwari R, Srivastava D, Gour N. A cross sectional study to determine prevalence of obesity in high income group colonies of Gwalior city, *Indian J Community Med*. 2009 Jul; 34 (3). p 218-222
8. Rathnayake KM, Roopasingam T, Wickramasighe VP. Nutritional and Behavioral Determinants of Adolescent obesity: a case control study in Sri Lanka, *BMC Public Health*. 2014; 14:: 1291. Published online 2014. Dec 17. doi: 10.1186/1471-2458-14-1291
9. Must A, Spadano J, Coakley EH, Field AE, Colditz G, Dietz WH. The disease burden associated with overweight and obesity. *JAMA*. 1999; 282(16): p1523-1529
10. Kumara DK, Vijaya K, Kirana ER. Prevalence Of Obesity and Its Associated factors in an urban area of Andhra Pradesh, *Sri Ramachandra Journal of Medicine*, 2013 Jan- June, Vol. 6(1).

11. Available from  
[https://www.sriramachandra.edu.in/university/pdf/research/journals/jan-jun-2013/jan\\_june\\_2013.pdf](https://www.sriramachandra.edu.in/university/pdf/research/journals/jan-jun-2013/jan_june_2013.pdf)
12. Agrawal P, Mishra V. Role of Lifestyle And Diet in Emerging Obesity in Indian women and its impact upon their health status.2004 IUSSP XXV INTERNATIONAL POPULATION CONFERENCE tours, France 2005 July 18-23.
13. Handysides R. Allan and Landless N. Peter. Adventist world -Unity of Diversity.2013;p 11
14. URL;[www.wikipedia,the free encyclopedia](http://www.wikipedia,the free encyclopedia)
15. Mbochi WR. Overweight and obesity prevalence and association socioeconomic factors, physical activity and dietary intake among women in Kibera division, Nairobi.2010 November.
16. Sidik MS And Rampal L. The prevalence and factors associated with obesity among adult women in Selangar, Malaysia. published online 2009 Aril 9, doi:10.1186/1447-056x-8-2.
17. Am SR, Kr E, Dole N. Pregnancy related weight gain-a link to obesity? nutrition reviews Pubmed 2004, 62(7):p.105-111.
18. (The Epidemiology of Obesity: A Big Picture Adela Hruby, PhD, MPH and Frank B. Hu, MD, PhD, MPH, NCBI, NIH)
19. ( Epidemiology of obesity WHO)
20. Bhardwaj SD, Shewte MK, Bhatkule PR, Khadse JR. Prevalence of Risk Factors for Non Communicable Disease in a Rural Area of Nagpur District, Maharashtra- A WHO STEP wise approach, International Journal of Biological & Medical Research, Int J Biol Med Res.2012;3(1):p 1413-1418
21. Kaur G, Bains K, and Kaur H. "Body Composition, Dietary Intake and Physical Activity Level of Sedentary Adult Indian Women," Food and Nutrition Sciences, Vol. 3 No. 11, 2012, pp. 1577-1585. doi: 10.4236/fns.2012.311206.