

Prevalence of Obesity among Adults in Selected Offices of Guwahati, Kamrup, Assam, with a View to Develop Information Booklet: A Descriptive Study

Moirangthem Bijaya Devi¹, Manju Chapagain², Reshma Begum³

¹MSc. Nursing, Department of Community Health Nursing, Asian Institute of Nursing Education, Guwahati, Assam, India

²Assistant professor, Department of Medical Surgical Nursing, Asian Institute of Nursing Education, Guwahati, Assam, India

³Lecturer, Department of Medical Surgical Nursing, Asian Institute of Nursing Education, Guwahati, Assam, India

Corresponding Author: Moirangthem Bijaya Devi

DOI: <https://doi.org/10.52403/ijhsr.20230834>

ABSTRACT

Background: Obesity is a non-communicable disease characterized by abnormal growth of adipose tissue resulting from enlargement of fat cell size or increase in fat cell number or combination of both which leads to the major risk factor of cardiovascular disorders.

Aim and Objective: To assess the prevalence of obesity among adults in selected offices of Guwahati, Kamrup, Assam.

Methods and materials: A descriptive survey design was used to accomplish the objectives. 152 adults were selected as sample by using convenience sampling technique. Demographic performance, weighing scale, measuring tape and self-report were used to assess the prevalence of obesity.

Results: The study result shows that out of 152 adults, majority 84(55.3%) were obese, 39(25.7%) were normal weight, 27(17.8%) were overweight and only 2(1.3%) were underweight. The mean score of BMI was 25.58 ± 4.33 with minimum score of 18.10 and maximum score of 36.48. The demographic variable dietary pattern had statistically significant association with the prevalence of obesity at $p < 0.05$ level.

Conclusion: Hence, more interventions and more research are required in order to prevent from obesity, because obesity is one of the major risk factors of non-communicable diseases.

Keywords: Prevalence, obesity, adults, information booklet.

INTRODUCTION

According to WHO. "Health is a state of complete physical, mental and social wellbeing not merely an absence of disease or infirmity". In recent years this statement has amplified to include the ability to lead socially and economically productive human life.¹

. Obesity is defined as an abnormal growth of the adipose tissue due to an enlargement

of fat cell size or increase in fat cell number or combinations of both. Obesity is expressed in terms of body mass index (BMI), a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults.² Adulthood is the period in the human lifespan, beginning at the age of 20 or 21 years followed by old age at about 60 years. In fact, in 2020, more than 2 billion adults

(39% of the adult global population) were overweight (BMI > 25). Of those, over 600 million were obese (BMI > 30). The fundamental cause of obesity and overweight is an energy imbalance between calories consumed and calories spent. Studies from the different parts of the world have established that lifestyle modification with physical activity and healthy diet can prevent and control from overweight and obesity.³

PROBLEM STATEMENT

“Prevalence of obesity among adults in selected offices of Guwahati, Kamrup, Assam, with a view to develop information booklet: A descriptive study”.

OBJECTIVES

1. To assess the prevalence of obesity among adults in selected offices of Guwahati, Kamrup, Assam.
2. To find out the association between prevalence of obesity among adults with selected demographic variables.
3. To develop an information booklet.

METHODS

The research approach adopted for the study was quantitative research approach. Non probability convenience sampling technique was used to select 152 samples. The study was conducted in selected offices of Guwahati, Assam. The tools used for the study were weighing machine and measuring tape to assess the prevalence of obesity. The technique used for the study was self-report, biophysical measurement and BMI calculation. The sample were categories obese, overweight, normal and underweight by using BMI classification, recommended for the Asia pacific region (WHO 2000).

DESCRIPTION OF TOOLS

The tool used for the study consisted of two sections, it includes:

Section-1 Demographic data. It consisted of age, sex, religion, educational status, occupation, monthly family income, types

of family, dietary pattern, exercise, heard the term obesity, family history of obesity and history of hormonal disorder.

Section -II Biophysical measurement.

Weight: The weighing scale was calibrated at the beginning of every session before measuring the participant. Participants were weighted in their light clothing without shoes. **Height:** The investigator measured the heights of the subjects without the footwear with the participants standing straight and looking forward, taking into account that heels, buttocks, shoulder and head are close to the vertical wall surface and keeping a scale straight on the head. A point was marked by the pencil on the wall. The reading was taken and BMI was calculated by using the formula [BMI = Kg/Ht (m²)]. The participants were categorized as per taking into consideration the cut off points recommended for the Asia Pacific Region (WHO2000)

WEIGHT STATUS	BMI, kg/m ²
Underweight	< 18.5
Normal	18.5 – 22.9
Overweight	23.0- 24.9
Obese	≥25

RESULTS

Section-1 Description of demographic variables.

It is observed that out of 152 respondents majority 43(28.3%) were belong to the age group of 31-40 and 51-60 years of age, 121(79.6 %) of respondents were belong to male, 124(81.6%) of respondents were belongs to Hindu ,83(54.6%) of respondents were graduate and others, 116(76.3%) of respondents were government employee , 58(38.2%) of respondents were actively work, 83(54.9%) of respondents were grade iv staff, 62(40.8%) of respondents had monthly income between Rs. 9232-27048, 128(84.2%) of respondents live in nuclear family, 141(92.8 %) of respondents were non-vegetarian, 97(63.8%) of respondents were not perform exercise, 122(80.3%) of respondents were not getting

information about the term obesity, 15(9.9%) got information from mass media (TV, radio, internet), 142(93.4%) were no

family history of obesity, and 143(94.1%) respondents were not having hormonal disorder.

Table-1: Frequency and percentage distribution of adults with their demographic variables. n=152

AGE IN YEARS	FREQUENCY (f)	PERCENTAGE (%)
21 – 30	28	18.4
31 – 40	43	28.3
41 – 50	38	25.0
51 – 60	43	28.3
GENDER		
Male	121	79.6
Female	31	20.4
Transgender	-	-
RELIGION		
Hindu	124	81.
Muslim	24	15.8
Christian	2	1.3
Others	2	1.3
EDUCATIONAL STATUS		
Primary school	3	2.0
High school	34	22.4
Higher secondary	32	22.1
Graduate and above	83	54.6
TYPE OF JOB		
Government employee	116	76.3
Private employee	36	23.7
NATURE OF WORK		
Active	58	38.2
Partially active	53	34.9
Passive	41	27.0
POSITION IN THE WORK PLACE		
Manager and administrator	21	13.8
Supervisor	34	22.4
Clerical staff	44	28.9
Grade IV staff	53	34.9
MONTHLY FAMILY INCOME		
Rs. ≤ 9226	3	2.0
Rs.9232-27048	62	40.8
Rs. 27654-46098	39	25.7
Rs.46095-68961	32	21.1
Rs.68957-92185	9	5.9
Rs. 92191-184,370	7	4.6
Rs. ≥184,376	-	-
TYPE OF FAMILY		
Nuclear	128	84.2
Joint	23	15.1
Extended	1	0.7
DIETARY PATTERN		
Vegetarian	11	7.2
Non-vegetarian	141	92.8
PERFORMANCE OF EXERCISE		
Yes	55	36.2
No	97	63.8
HEARD THE TERM OBESITY		
Yes	30	19.7
No	122	80.3
SOURCES OF INFORMATION		
Health professional	4	13.3
Mass media (TV, Radio, Internet)	15	50
Friends and relatives	7	23.4
Others	4	13.3
FAMILY HISTORY OF OBESITY		
Yes	10	6.6
No	142	93.4
PRESENCE OF HORMONAL DISORDER		
Yes	9	5.9
No	143	94.1

Section II: Description of prevalence of obesity among adults.

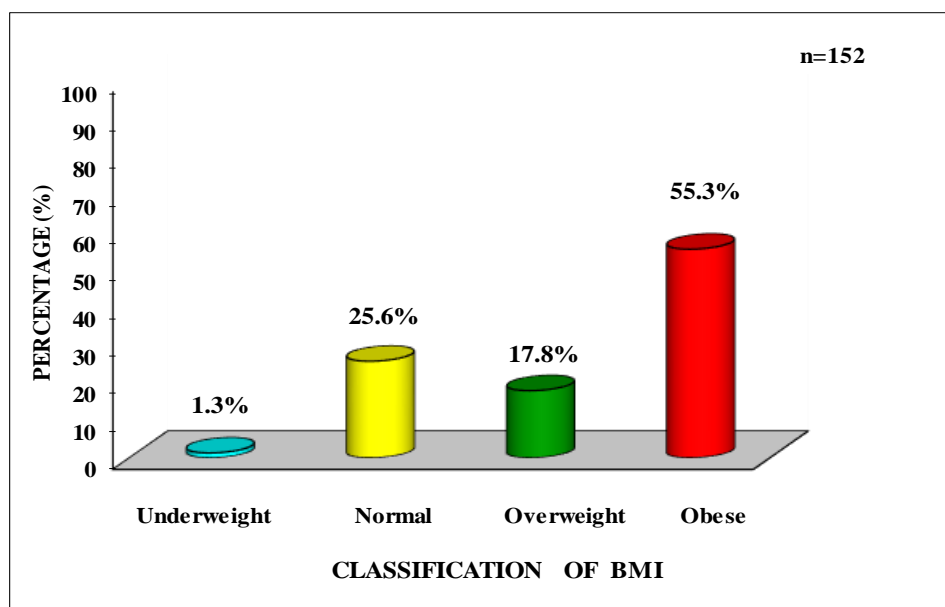


Figure-1: Cylindrical diagram showing percentage distribution of obesity among adults according to the classification of BMI

From figure 1, it has been observed as follows, that out of the 152 respondents(adults): majority 84(55.3%) were obese, 39(25.7%) were normal, 27(17.8%) were overweight and 2(1.3%) were underweight. Out of 84(55.3%) obese, 64(76.1%) were male and 17(20.23%) were female.

Table-2: Frequency and percentage distribution of adults according to the classification of BMI. n=152

BMI	MEAN	MEDIAN	S. D	RANGE
Underweight (<18.5)	25.58	25.45	±4.33	18.10-36.48
Normal (18.5 – 22.9)				
Overweight (23.0 – 24.9)				
Obese (≥25)				

The data presented in the above table 2 depicts that the mean score of BMI was 25.58±4.33 with minimum score of 18.10 and maximum score of 36.48. The median value was 25.45.

Section III: Determined the association between the prevalence of obesity among adults with their selected demographic variables.

Table-3: Association of prevalence of obesity among adults with their selected demographic variables. n=152

Demographic Variables	Chi-Square p-value / Fisher Exact test p-value	Remark
Age in years	p=0.296	NS
Gender	p=0.691	NS
Religion	p=0.733	NS
Educational status	p=0.595	NS
Type of job	p=0.278	NS
Nature of work	p=0.084	NS
Position in the work place	p=0.076	NS
Monthly family income	p=0.213	NS
Type of family	p=0.213	NS
Dietary pattern	p=0.024*	S
Do you perform exercise?	p=0.963	NS
Have you heard about the term obesity?	p=0.668	NS
If yes, from where did you get the information?	p=0.580	NS
Do you have any family history of obesity?	p=0.158	NS
Do you have any hormonal disorder?	p=0.746	NS

*p<0.05, S – Significant, p>0.05, N.S – Not Significant

Table 3 depicts that the demographic variables such as age, gender, religion, educational status, occupation, monthly family income, type of family, sources of information, family history of obesity, and presence of hormonal disorder had shown no significant association with the prevalence of obesity. Only the dietary pattern had shown statistically significant association with the prevalence of obesity at $p < 0.05$ level ($p = 0.024$).

DISCUSSION

In the present study majority 43(28.3%) were belong to the age group of 31-40 and 51-60 years of age, 121(79.6 %) of respondents were belong to male, 124(81.6%) of respondents were belongs to Hindu ,83(54.6%) of respondents were graduate and others, 116(76.3%) of respondents were government employee, 58(38.2%) of respondents were actively work, 83(54.9%) of respondents were grade iv staff, 62(40.8%) of respondents had monthly income between rs. 9232-27048, 128(84.2%) of respondents live in nuclear family, 141(92.8 %) of respondents were non-vegetarian, 97(63.8%) of respondents were not perform exercise, 122(80.3%) of respondents were not getting information about the term obesity, 15(9.9%) got information from mass media (Tv, radio, internet), 142(93.4%) were no family history of obesity, and 143(94.1%) respondents were not having hormonal disorder.

Pertaining to the prevalence of obesity, it was observed that out of 152 respondent's majority 84(55.3%) were obese, 39(25.7%) were normal, 27(17.8%) were overweight and 2(1.3%) were underweight. This is comparable with a study conducted by Lemamsha H, Randhawa G, Papadopoulos C. (2019)⁴ among Libyan adults, which depicted that out of out of 401 Libyan adults 42.4% were obese, 32.9% were overweight, and 24.7% were normal weight.

Out of 84(55.3%) obese, 64(76.1%) were male and 17(20.23%) were female. This is comparable with a study conducted by

Lemamsha H, Randhawa G, Papadopoulos C. (2019)⁴ which depicted that out of 42.4% obese, 47.4% in women compared to 33.8% in men, respectively.

However, this is in contrast to a study conducted by Akpa R Gbary, Kpozohouren A, et al. (2014)⁵ among the adults, which depicted that of the prevalence of obesity was significantly higher in women (27.39%) than in men (2.73%).

The mean score of BMI was 25.58 ± 4.33 with minimum score of 18.10 and maximum score of 36.48. the median value was 25.45.

The demographic variables such as age, gender, religion, educational status, occupation, monthly family income, type of family, sources of information, family history of obesity, and presence of hormonal disorder had shown no significant association with the prevalence of obesity. Only the dietary pattern had shown statistically significant association with the prevalence of obesity at $p < 0.05$ level ($p = 0.024$).

CONCLUSION

From the present study it was concluded that there was a high prevalence of obesity among adults. An information booklet was distributed among the overweight and obese participant, so that it will help to increase their knowledge and self-care practice. The evidence presented in this study suggests that more interventions are needed and more research is required in order to prevent from obesity, because obesity is one of the major disease burdens of non-communicable diseases.

Declaration by Authors

Ethical Approval: Approved

Acknowledgement: None

Source of Funding: None

Conflict of Interest: The authors declare no conflict of interest.

REFERENCES

1. Janifer S, Geetha Lakshmi K, Microbiology M. Hospital for Diabetes and Diabetes Research Centre, WHO Collaborating

- Centre Chennai-600013. India Chennai; 2016.
2. Park K. Park's textbook of preventive and social medicine. Bhanot; 2011.
 3. Obesity worldwide - statistics & facts [Internet]. Statista. [cited 2022 Nov 18]. Available from: <https://www.statista.com/topics/9037/obesity-worldwide/>.
 4. Lemamsha H, Randhawa G, Papadopoulos C. Prevalence of Overweight and Obesity among Libyan Men and Women. *Biomed Res Int*. 2019 Jul 15;2019:8531360. doi: 10.1155/2019/8531360.
 5. Gbary AR, Kpozehouen A, Houehanou YC, Djrolo F, Amoussou MPG, Tchabi Y, et al. Prevalence and risk factors of overweight

and obesity: findings from a cross-sectional community-based survey in Benin. *Glob Epidemic Obes* [Internet]. 2014;2(1):3. Available from: <http://dx.doi.org/10.7243/2052-5966-2-3>

How to cite this article: Moirangthem Bijaya Devi, Manju Chapagain, Reshma Begum. Prevalence of obesity among adults in selected offices of Guwahati, Kamrup, Assam, with a view to develop information booklet: a descriptive study. *Int J Health Sci Res*. 2023; 13(8):245-250. DOI: <https://doi.org/10.52403/ijhsr.20230834>
