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A study on prevalence and causes of obesity in children 6-12 years of Sultanpur

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Abstract

India is the second most popular country in the world that comprises ~17% of the world's population and contributes to 16% of the world's deaths. Nutritional status of the Indian population varies significantly across the regions. Certain regions are associated with extremely high rates of childhood under nutrition (ranging from 20% to 80%), where as others have a high prevalence of adult under nutrition (<50%), an some have both. The present research study entitled "A study on prevalence and causes of obesity in children in 6-12 year of Sultanpur district" were conduct using the following methodology on the nature of problem in obesity. The main objectives of this study were to determine the prevalence and causes of obesity in children (6-12 years) and assess their nutritional status. A total of 100 children of 6-12 year were randomly selected for this study. In which 54 female and 46 male samples were taken from the Sultanpur district. For the collection of primary published reports research studies, bulletins government publication and news paper etc. After analyzing the results obtained it was concluded that the economic status was good and also their good education but 63 per cent of respondent were overweight and 37 per cent of respondent were obese, due to their bad eating habit and frequent snacking behavior. And also 42 per cent respondent preferred Maggie and 37 per cent of respondents were preferred patties/Samosa, and 19 per cent respondents preferred Chips and 2 per cent respondents preferred none.

Keywords: Disability, atherosclerosis, breathlessness, osteoarthritis premature death

Introduction

Obesity is due to positive energy balance, the intake of calories is more than the expenditure of energy. Obesity is a state in which there is a generalized accumulation of excess adipose tissue in the body leading to more than 20 per cent of the desirable weight is a condition where the body weight is 10-20 per cent greater than the mean standard weight for age, height and sex. Obesity invites disability, disease and premature death. Obesity is a chronic disease. Excess body weight is a hindrance, leading to breathlessness on moderate exertion and predisposes a person to diseases like atherosclerosis, high blood pressure, stroke, diabetes, gall bladder disease and osteoarthritis of weight bearing joints and varicose veins.

India is the most popular country in the world that comprises-17% of the world's population and contribution to 16% of the world's deaths. Nutritional status of the Indian population varies significantly across the regions. In children, a healthy weight varies with age and sex. Obesity in children and adolescents is defined not as an absolute number but in relation to a historical normal group.

Obesity among children is a serious disease stalking urban India. Doctors say the disturbing trend will lead to numerous health complication not only in childhood, but also later on in life. "Obesity in childhood is going to be the root of diabetes and heart related problems in adults. That is why above-30 has already become a dangerous age for the obese," warns Dr. Sushil sanghi, a child specialist in jaipur who says even smaller cities are now seeing the phenomena. Many erroneously think it is only a metro phenomenon. Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health, leading to reduced life expectancy or increases health problems.

Obesity increases the likelihood of various diseases, particularly heart disease, type 2 diabetes. Obstructive sleep apnea, certain types of cancer, and osteoarthritis. Obesity is most commonly caused by a combination of excessive food energy intake, lack of physical activity, and genetic susceptibility, although a few cases are caused primarily by genes, endocrine disorders,

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medications or psychiatric illness. Evidence to support the view that some obese people eat little yet gain weight due to a slow metabolism is limited; on average obese people have a greater energy expenditure than their thin counterparts due to the energy required to maintain an increased body mass.

Objective

To determine the prevalence and causes of obesity in children.

Methods and materials

Scientific methodology is necessary for a successful study as it directly indicates words the authenticity of the research and attempt has been made to provide to detail of methods and techniques devices and procedure applied for conducting the research. A present study entitled "A study on prevalence and causes of obesity in children 6-12 year of Sultanpur"

Research design

• Selection of location

The location of the study will be Sultanpur district.

• Sample Size

Sample size consisted of 100 children aged between 6-12 years children were randomly selected from urban and rural area of the selected area.

• Questionnaire prepare

A self-prepared questionnaire was used for collecting the relevant information regarding the study and random sampling will be used.

• Statistical Analysis

The collected data were analyzed with the help of the following way-

Percentage %	=	$n/N \times 100$
n	=	number of respondents
N	=	Total Number of Observation

Methods of enquiry and collection of data

Survey methods was adopted in order to collect the data from the selected respondents with the help of developed questionnaire schedule. The schedule included aspects which led to the fulfillment of the objective of this study.

The schedule included the following information:

1. General information
2. Nutrition status through anthropometric measurement
3. Dietary information

General profile

Data regarding general profile of respondents were collected using the first part of the schedule. This section covered the aspects including respondents name, age, and sex, religion, status, type of family, income, educational status and all these are important for knowing the respondents socio-economic status. The age of each respondent was ascertained with the help of their date of birth.

Dietary survey

A dietary survey was conducted as described by Srilakshmi (2005). The food consumption frequency was recorded in terms of cereals, pulses, milk and milk products, green leafy vegetables, roots and tubers, fruits meats and poultry, fats oils and sugar, Diet surveys constitute and essential part of any complete study of nutritional status of individuals or groups, providing essential information on nutrient intake levels,

sources of nutrients, food habits and attitudes. The nutrient intake of the subjects was calculated on the basis of 24 hour dietary recall method. The diet was calculated for calories, protein fat, fiber, calcium, iron, vitamin A, Vitamin C and thiamine. The nutrient intake was calculated using the food composition tables by and compared with the ICMR standard values. Eating habits and dietary pattern of the respondents were recorded.

Anthropometric measurement

Anthropometric Measurement of variations of physical dimensions. Hence, anthropometric measurements are useful criteria for assessing nutritional status. The anthropometric measurement included height (cm) and weight (kg) which were recorded using the procedure prescribed by. Body Mass index (BMI) was calculated.

a. Height Measurement

Height (cm) of the subjects was taken with the help of a measuring tape by sticking it on the wall. The subjects were made to stand erect, looking straight, buttocks, shoulders and head touching the wall, heels together, toes apart and hand hanging loosely by the sides, height (cm) was recorded in centimeters.

b. Weight Measurement

The personal weighting machine of maximum capacity of 120 kg. And the minimum division of 0.5 kg. Was used to weight all the subjects and scale was set to zero. The respondents were made to stand erect on the weighting scale without foot wear, not leaning against or holding anything and the weight was recorded in kg. The scale was adjusted to zero after each measurement.

World health organization expert committee (1995) classification of BMI

Classification	BMI
Normal	18.5-24.29
Over weight	≥ 25.00
Pre-obese	25.99-30
Obese	≥ 30.00
Obesity grand- I	30-34.99
Obesity grand- II	35.00-39.99
Obesity grand-III	≥ 45.00

Clinical signs and symptoms

The nails tongue, gums, teeth and general appearance of each subject were examined, in order to find out sign of nutritional deficiencies were present. Observations were recorded on the schedule as given in appendix-A (park, 2007).

Result and Discussion

The empirical result & discussion have been presented the purpose of convenience. The collected data were categorized, analyzed, tabulated & interpreted as per objective of the study.

Table 1: Distribution of respondents on the basis of their age

Age (Years)	Frequency (N=100)	Percentage (%)
6-8	41	41
9-12	59	59
Total	100	100

Above table shows that maximum 59% respondents belonged to 9-12 year age, whereas minimum 41% respondents belonged to 6-8 years age group.

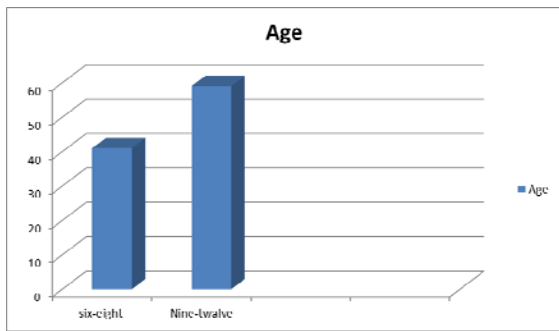


Fig 1: Distribution of respondents on the basis of their Age

Table 2: Distribution of respondents on the basis of their Gender

Gender	Frequency (N=100)	Percentage (%)
Female	54	54
Male	46	46
Total	100	100

Above table shows that maximum 54% respondents were Female, whereas minimum 46% respondent were Male.

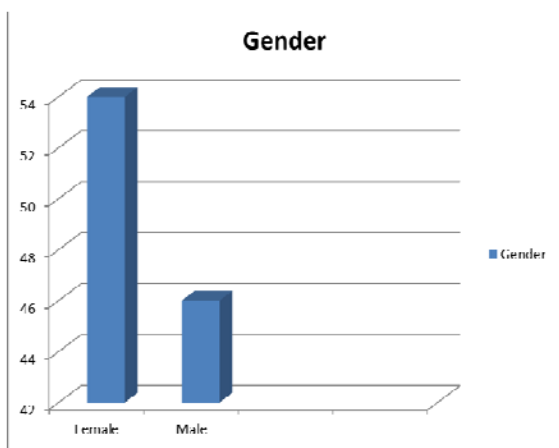


Fig 2: Distribution of respondents on the basis of their Gender

Table 3: Distribution of respondents on the basis of their Religion

Religion	Frequency (N=100)	Percentage (%)
Hindu	99	99
Muslim	1	1
Total	100	100

Above table shows that maximum 99% respondents were Hindu, whereas minimum 1% respondent were Muslim.

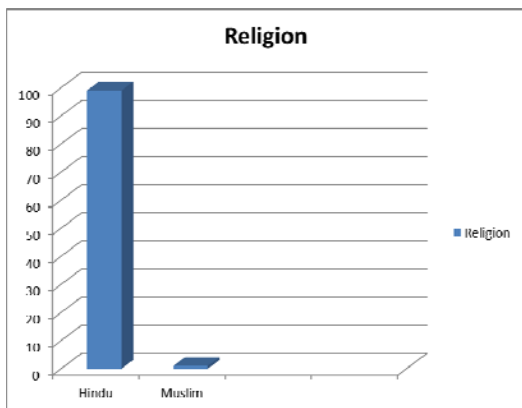


Fig 3: Distribution of respondents on the basis of their Religion

Table 4: Distribution of respondents on the basis of their Education

Education	Frequency (N=100)	Percentage (%)
Illiterate	0	0
Secondary	100	100
High school	0	0
Total	100	100

Above table shows that maximum 100% respondents were belonged to Secondary.

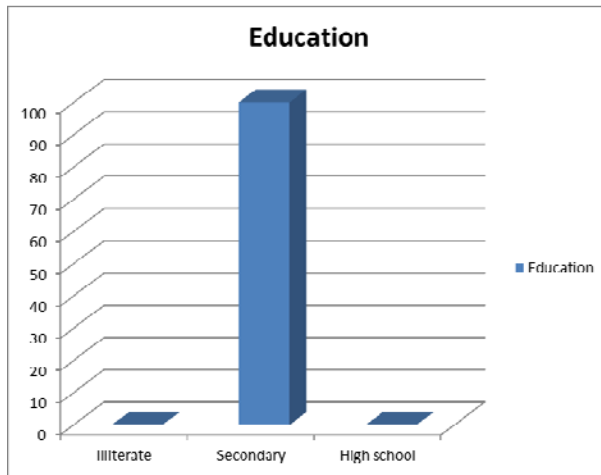


Fig 4: Distribution of respondents on the basis of their Education

Table 5: Distribution of respondents on the basis of their Occupation

Occupation	Frequency (N=100)	Percentage (%)
Business	46	46
Farming	3	3
Job	51	51
Total	100	100

Above table shows that maximum 51% respondents have job, and 46% respondents were business, whereas minimum 3% respondents were in farming.

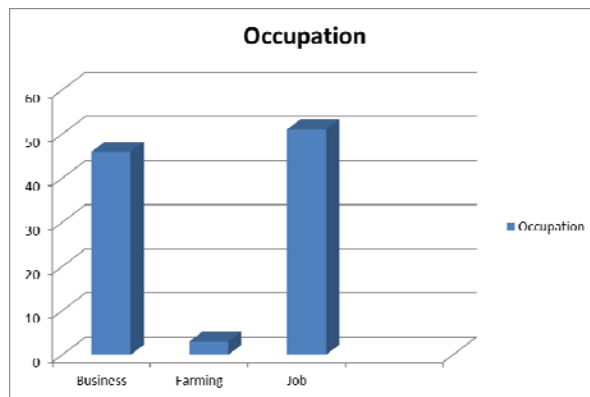


Fig 5: Distribution of respondents on the basis of their Occupation

Table 6: Distribution of respondents on the basis of their Family type

Family type	Frequency (N=100)	Percentage (%)
Nuclear	52	52
joint	48	48
Total	100	100

Above table shows that maximum 52% respondents belong from Nuclear Family, whereas minimum 48% respondents belong from Joint Family.

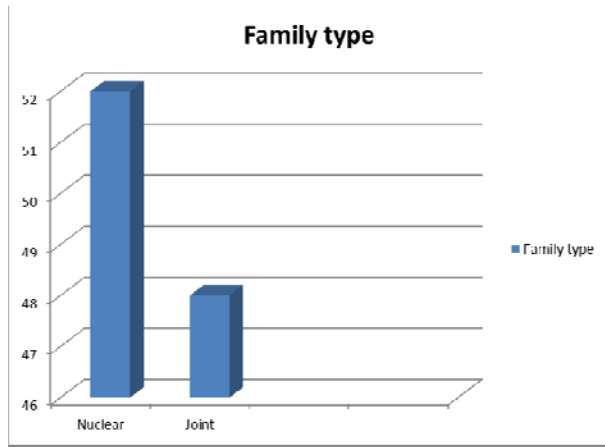


Fig 6: Distribution of respondents on the basis of their Family type

Table 7: Distribution of respondents on the basis of their Family income

Family income	Frequency (N=100)	Percentage (%)
Below 10000	12	12
10000-20000	20	20
Above 20000	68	68
Total	100	100

Above table shows that maximum 68% respondents were belonged above 20000 and 20% respondents were belonged 10000-20000, whereas minimum 12% respondents belonged below 10000.

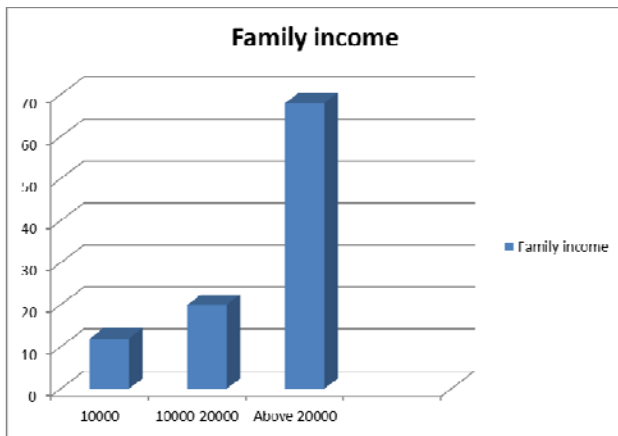


Fig 7: Distribution of respondents on the basis of their Family income

Table 8: Distribution of respondents on the basis of their Food habit

Food habit	Frequency (N=100)	Percentage (%)
Vegetarian	36	36
Non-vegetarian	0	0
Ovatarian	64	64
Total	100	100

Above table shows that maximum 64% respondents were ovatarian, whereas minimum 36% respondents were vegetarian.



Fig 8: Distribution of respondents on the basis of their Food habit

Table 9: Distribution of respondents on the basis of their living area

Area	Frequency (N=100)	Percentage (%)
Rural	56	56
Urban	44	44
Total	100	100

Above table shows that maximum 56% respondents were belonged in rural area, whereas minimum 44% respondents were belonged in urban area.

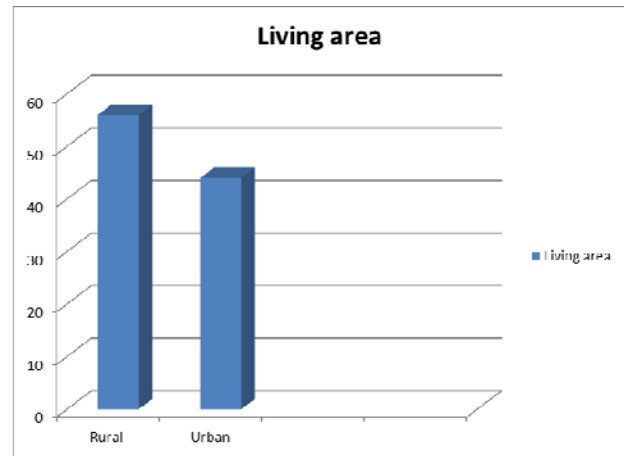


Fig 9: Distribution of respondents on the basis of their living area

Table 10: Distribution of respondents on the basis of their meal take

Meal take	Frequency (N=100)	Percentage (%)
Twice	16	16
Thrice	48	48
Four times	36	36
More than above	0	0
Total	100	100

Above table shows that maximum 48% respondents were thrice, and 36% respondents were fourth time, whereas minimum 16% respondents were twice and 0% respondents more than above.

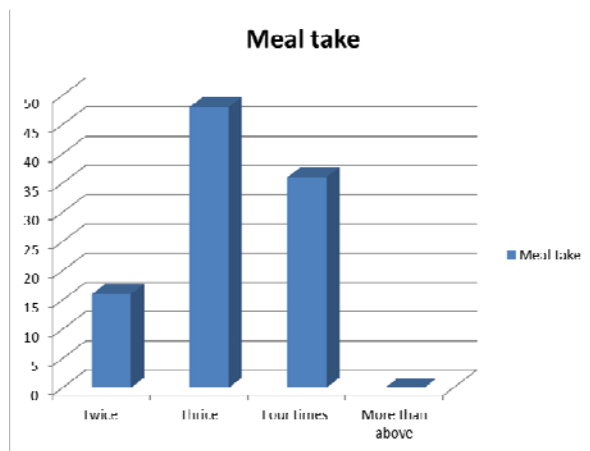


Fig 10: Distribution of respondents on the basis of their meal take

Summary & Conclusion

Obesity is due to positive energy balance, the intake of calories is more than the expenditure of energy. Obesity is a state in which there is a generalized accumulation of excess adipose tissue in the body leading to more than 20 per cent of the desirable weight is a condition where the body weight is 10-20 per cent greater than the mean standard weight for age, height and sex. Obesity invites disability, disease and premature death. Obesity is a chronic disease. Excess body weight is a hindrance, leading to breathlessness on moderate exertion and predisposes a person to diseases like atherosclerosis, high blood pressure, stroke, diabetes, gall bladder disease and osteoarthritis of weight bearing joints and varicose veins.

The present study entitled "A study on prevalence and causes of obesity in children (Age 6-12) in Sultanpur district" total 100 respondents of was selected for study purpose. Area simple random sampling was taken for sampling. Primary and secondary data was collected through questionnaire method. In the study that maximum 59% respondents belonged to 9-12 year age, whereas minimum 41% respondents belonged to 6-8 years age group. Maximum 54% respondents were Female, whereas minimum 46% respondent was Male. Maximum 99% respondents were Hindu, whereas minimum 1% respondent were Muslim. Maximum 100% respondents were belonged to Secondary. Maximum 51% respondents have job and 46% respondents were business, whereas minimum 3% respondents were in farming. Maximum 52% respondents belong from Nuclear Family, whereas minimum 48% respondents belong from Joint Family. Maximum 68% respondents were belonged above 20000 and 20% respondents were belonged 10000-20000, whereas minimum 12% respondents belonged below 10000. Maximum 64% respondents were ovatarian, whereas minimum 36% respondents were vegetarian. Maximum 56% respondents were belonged in rural area, whereas minimum 44 % respondents were belonged in urban area. Maximum 48% respondents were thrice and 36% respondents were fourth time, whereas minimum 16% respondents were twice and 0% respondents more than above meal taken.

Limitation of the study

- In the study the method of the data collection was questionnaire in collection of data by this method often have lack of reliability then obtained result not reliable.
- Science the study is carried out for short period so that the time and other resources are limited to an extent.
- The sample size of this study was restricted and area of study of limited the obese children`s in Sultanpur district

Acknowledgement

All glory to the almighty, whose blessing in the success behind this project praise pride and perfection belong to almighty. So first of all I would like to express my deepest sense of gratitude to the omniscient power of the universe, the almighty God.

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