

## INHERITED FACTOR RELATED TO CHILDHOOD OBESITY AND ITS PREVENTION

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### ABSTRACT

Overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. Body Mass Index is a simple index of weight / height that is commonly used to classify overweight and obesity in adults. They have inherited gene from their parents that make their bodies weight easily. This would have been a very good trait hundreds of years ago, when food was hard to find and people were very active. Today, though, this can work against people who have these genes. Genetics is not the only cause of obesity. To become obese, children must also eat more calories than they need for growth and energy. Environment factors are that surround the children and influence their feed intake and physical activity. These factors are seen in various setting such as at home, in school, and in the community. At home, the parent-child interaction is very crucial as parents can influence children food choices and motivate them to have a healthy lifestyle. The objective of this study- To assessment of obesity awareness among school going children, to know about the heredity and parent inherited factor that leads to obesity. Total of 100 school going student were selected from two different schools of Lucknow District.

**KEYWORDS:** Overweight, Childhood Obesity, Genetic & Environment Factor

### INTRODUCTION

Obesity may be defined as an abnormal growth of the adipose tissue due to an enlargement of fat cell size or an increase in fat cell number or a combination of both. Obesity is often expressed in term of body mass index (BMI). Overweight is usually due to obesity but can arise from other causes such as abnormal muscle development or fluid retention. Obesity increases the likelihood of various diseases, particularly heart disease, type 2 diabetes, obstructive sleep apnoea, certain type of cancer, and osteoarthritis. Obesity is most commonly caused by combination of excessive food energy intake, lack of physical activity and genetic susceptibility, although a few cases are caused primarily by gene, endocrine1 disorder, medication 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 required to maintain an increase body mass. Overweight and obesity are defined as abnormal or excessive fat accumulation that presents a risk to health. A crude population measure of obesity is the body mass index (BMI), a person's weight (in kilograms) divided by the square of his or her height (in meters). A person with a BMI of 30 or more is generally considered obese. A person with a BMI equal to or more than 25 is considered overweight. Overweight and obesity are major risk factors for a number of chronic diseases, including diabetes, cardiovascular diseases and cancer. Once considered a problem only in high income countries. Some children are at greater risk of obesity because of genetic

factors. They have inherited gene from their parents that make their bodies weight easily. This would have been a very good trait hundreds of years ago, when food was hard to find and people were very active. Today, though, this can work against people who have these genes. Genetics is not the only cause of obesity. To become obese, children must also eat more calories than they need for growth and energy. Genetics may have a greater contribution in children obesity than people previously thought. New studies estimate that the effect of genes account for 90-95% of the percent body fat (PBF) in children, while the remaining 5-10 % is attributed to learned the behaviour. While there is general acceptance that hereditary conditions incline to human obesity, it is often assumed that such factors would affect metabolic rate or the selective transforming of surplus of calories into fat. Environment factors are that surround the children and influence their feed intake and physical activity. These factors are seen in various setting such as at home, in school, and in the community. At home, the parent-child interaction is very crucial as parents can influence children food choices and motivate them to have a healthy lifestyle. Children spend most of their time at school, so school can promote healthy food choices and physical activity among them. Community's lack of accessibility and affordability of healthy food can affect the nutrition of these children. Their lack of activity may be because of lack of facilities like safe side walks, bike paths, and safe parks.

### Objective

- To know about the heredity and parent inherited factor that leads to obesity.
- To assess and prevent obesity among the school children.
- To create awareness among the school going children to word obesity.

### Methodology

**Period of Study** -The time taken for the study was one year that is July 2016 to may 2017

**Study Design**- The approach for this study was purposively one. By using questionnaire schedule

### Sampling Procedure

**Sampling Size**- The sample size of the study was restricted up to 100 samples.

**Sampling Design**- Purposive random sampling method was used to collect the sample for this study. Sample comprise of 100 school going children's including boys and girls from Kendriya vidyalaya (Bijnaur) and Nalanda Public Inter College.

### Tool of the Study

**Anthropometric Measurements**- For anthropometric measurement (weight, height, waist and hip circumference) the following equipment is needed (Body tap measure, Weight machine).

**Statistical Analysis**- SPSS version 20 was used to draw meaningful inferences from the collected raw data.

## RESULTS AND DISCUSSIONS

The data on sample characteristics were analyzed using descriptive statistics and presented in term of frequency, percentage. The data obtained from sample are presented in term of Age.

**Testing of Hypothesis**

Ho: there is no significant difference between the boys and girls and awareness of nutritional information.

Assessment of awareness among school going children

**Table 1: Mean, SD, t-Value of the Respondent on the Basis of Awareness about the Nutritional Information among School Going Children**

S.No	Awareness	School Going Children (9-13)						T	Significant Value
		Boys			Girls				
		N	Mean	SD	N	Mean	SD		
1.	Awareness about nutritional information	56(56.0%)	1.21	.419	44(44.0%)	1.09	.291	.98	.001

The above table (1) show that the majority of 56% of boys were aware about nutritional information rather than girls 44%. Boys respondent ( $\mu=1.21$ ) and girls respondent ( $\mu=1.09$ ) aware about nutritional information.

The null hypothesis is rejected hence alternative hypothesis is accepted. So the data reported significant difference between the boys and girls aware about nutritional information.

**TESTING OF HYPOTHESIS**

Ho: there is no significant difference between the boys and girls and awareness of the disease effect obesity.

**Table 2: Mean, SD, t-value of the Respondent on the Basis of Awareness about the Disease that Effect Obesity among School Going Children**

S.No	Disease	School Going Children (9-13)						T-Value	Significant T Value
		Boys			Girls				
		N	M	SD	N	M	SD		
1	Cardiovascular	7(7.0%)	2.73	.674	5(5.0%)	2.77	.642	-.305	.572
2	Hypertension	1(1.0%)			0				
3	Obesity	48(48.0%)			39(39.0%)				

The above table (2.) shows that the majority of 48% of boys were aware about disease that effect obesity and 39% of girls were about disease that effect obesity.

The table also show that (2) show that boys ( $\mu=2.73$ ) and girls ( $\mu=2.77$ ) aware about of the disease that effect obesity (9-13).

The null hypothesis is rejected hence alternative hypothesis is accepted. So data reported significant difference between the boys and girls aware about disease that effect obesity.

**Table 3: Description of Heredity and Parent Inherited Factor that Leads to Obesity**

S.No	Respondent	School Going Children				Total
		Boys (7-9yr)		Girls (7-9yr)		
		N	%	N	%	
1	Yes	35	35.0	28	28.0	63%
2	No	24	24.0	13	13.0	37%
3	Total	59	59.0	41	41.0	100%

**Distribution of the Respondent on the Basis of the Obesity Runs in Obesity**

This table (3) shows that obesity was run in 35% of boy's family and 28% of girl's family.

**DISCUSSIONS**

Obesity in childhood was significantly related to risk of obesity. Our study supports the hypothesis that the environment in early life can determine risk of obesity. Our study has advantage over previous similar ones because of its contemporary nature, small sample size, longitudinal design, and the use of multivariable analysis. The most critical observers of cause of obesity. Obesity may increase the risk of obesity through genetic mechanisms or by shared familial characteristics in the environment such as food preference.

**CONCLUSIONS**

Good nutrition is a basic requirement for good health. Therefore, sound knowledge of the needs of children is essential for guiding them properly. During school age years, children begin to establish habits for eating and exercise that stick with them for their entire lives. If children establish healthy habits, their risk for developing many chronic diseases will be greatly decreased.

**RECOMMENDATIONS**

1. Nutritional awareness programmes should be organized for mothers in the urban areas.
2. Parents must play their part as well as, by providing healthy food in the home and encouraging physical activity by limiting their children's recreational television, video game and computer time to less than two hours a day. Although many social factors affect children's eating and activity habits, parents can exert a profound influence on their children by promoting healthy foods and an active lifestyle from an early age.

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