



## SURVEY OF OVERWEIGHT AND OBESITY AMONGST SCHOOL CHILDREN AGED 10 - 15 YEARS OF VADODARA

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### ABSTRACT

The purpose of the study was to conduct the survey of overweight and obesity in school going children aged 10 to 15 years of Vadodara. Total 802 girls and boys were selected from different school of Vadodara. The study further delimited to western part of Vadodara. Total 330 (41.15%) girls and 472 (58.85%) boys were surveyed for the study. Height and weight were measured and BMI was calculated. Overweight and obesity was assessed by BMI for age. The 85th and 95th centiles of BMI for age and sex based on International curves have been recommended as cut off points to identify overweight and obesity. The results found that total 19.39% girl and 16.10 % boy subjects were found overweight and 13.03% girls and 7.84% boys were reported as obese in the study.

**Keywords:** BMI, Over Weight and Obese.

### INTRODUCTION

In India, under nutrition attracted the focus of health workers, as childhood obesity was rarely seen. But over the past few years, childhood obesity is increasingly being observed with the changing lifestyle of families with increased purchasing power, increasing hours of inactivity due to television, video games and computers have replaced outdoor games and other social activities. Television is major cause. Research indicates that children eat junk foods high in fats, sugar, and carbohydrates while playing video and computer based games, united with a lack of physical activities. The World Health Organization has described obesity as one of

today's most neglected public health problems. Following the increase in adult obesity, the proportions of children and adolescents who are overweight and obese have also been increasing. Globally, an estimated 10 per cent of school-aged children, between 5 and 17 yr of age, are overweight or obese. The obesity causes the high health risks including diabetes, cardiovascular diseases, osteoarthritis and cancers. Obesity affects both the mental and physical health. The potential medical complications like hypertension, coronary artery disease, diabetes Mellitus and psychological issues of depression, poor self-image, and difficulties in both the home and social environment. Obesity problem in children is main focus of parents as well as teachers. There are multiple causes of being overweight. Fatness is rooted in genetic, biological, behavioral and cultural factors. Normally children become obese when they take more calories than the body burns up. Today's parents are quite busy in their professional career and have less time to prepare nutritious meal for their school going children. Children become habitual to fast food because these foods are easily accessible and they enjoy eating with friends. New research published in the International Journal of Obesity notifies that obesity doesn't affect a child's health but it can also have damaging effect on their education and ability to learn. Overweight children are isolated and feel awkward in many situations and it directly affects their studies.



## METHODS

The subject (N=802) were selected from government high school of 8 to 10th standard aged from 10 to 15 years of Vadodara city by random sampling technique. Height and weight were measured and BMI was calculated. Overweight and obesity was assessed by BMI for age. The 85th and 95th centiles of BMI for age and sex based on International curves have been recommended as cut off points to identify overweight and obesity.

## RESULTS

TABLE 1  
CLASSIFICATION OF NORMAL, OVERWEIGHT AND  
OBESE STUDENTS

Years	Boys (472)			Girls (330)		
	Normal	Over Weight	Obese	Normal	Over Weight	Obese
10-11	161	27 (16.77%)	11 (6.83%)	59	15 (25.42%)	07 (11.86%)
12-13	93	20 (21.51%)	08 (8.60%)	87	27 (31.03%)	17 (19.54%)
14-15	105	29 (27.62%)	18 (17.14%)	77	22 (28.57%)	19 (24.67%)
Overall	359	76 (16.10%)	37 (7.84%)	164	64 (19.39%)	43 (13.03%)

The 16.77% of the total strength of boys were found overweight and the 6.83% were found obese. In girls 25.42% and 11.86% were found overweight and obese respectively in 10-11 years. In 12-13 year boys 21.51% overweight and 8.60% obese students were reported. While in girls overweight and obese were noted 31.03% and 19.54% respectively in same age group. In 14-15 years age group prevalence of highest overweight and obese boys were found (27.62% and 17.14% respectively) in selected samples. Children's daily physical activity and inactive time were compared between obese children by t-test 6.4 and it was founded highly significant. Further the result shows that the television watching average time in normal is less than 35 minutes and in the other two groups it is more than 1 hrs. The result of parent education is also differing in the normal, overweight and obese. More than 76%

parents of normal subject are educated till HSC level. In the other hand the obese and overweighted children's parents were educated highly but working.

## CONCLUSIONS

The prevalence of overweight and obesity in children of school in vadodara city was high. Lack of physical activity is a main cause of obesity in children. The inclination towards a sedentary lifestyle such as lack of physical activity, watching TV and playing game on mobile was evident amongst the school children. Further it is advised that obesity can be prevent by adopting healthy life style including the eating pattern, increasing physical activities and decreasing sedentary activities.

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