



PREVALENCE OF OVERWEIGHT AND OBESITY IN NAVI MUMBAI SCHOOL CHILDREN.

Pediatrics

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ABSTRACT

Obesity has emerged as a global epidemic with a rising trend among school children worldwide. Children who are overweight or obese are not only at a greater risk of developing metabolic syndrome (type 2 diabetes, hypertension and cardiovascular disease), but also are at risk of getting non-communicable diseases (cancer and musculoskeletal disorder) in adulthood. Hence it was needed to find prevalence of overweight and obesity among the school children and then counsel children with greater emphasis on management and prevention strategies.

Material and Method:- So the present cross sectional study aims to determine the prevalence of overweight and obesity among randomly selected 1020 apparently healthy school children of Navi Mumbai between 5 – 12 years of age and to identify any variation as per age and gender. For reference revised IAP (Indian Academy of Pediatrics) body mass index (BMI) charts/tables were used. BMI was calculated by formula weight in Kgs/height in meter square (kg/m^2).

Result:- The prevalence of overweight and obesity in the present study were 9.9% and 23.8% respectively. Girls were found to be overweight and obese at earlier age than boys. Boys were more affected by overweight and girls were more affected by obesity with a prevalence of 7.7% and 12.1% respectively.

Conclusion:- Prevalence of overweight and obesity among school children in Navi Mumbai was high. It urgently needs measures to prevent the consequences.

KEYWORDS

Body Mass Index, Obesity, Overweight, Iap Bmi Tables

Introduction:-

Overweight and obesity are emerging as major health problem in developing countries. Worldwide obesity has nearly tripled since 1975. Over 340 million children and adolescents aged 5-19 were overweight or obese in 2016 [1]. Economic and nutritional transition has made a severe impact on human health by changing dietary habits and life style with decrease the physical activity, resulting in rising prevalence of overweight and obesity [2]. Childhood obesity is major risk factor for developing metabolic syndrome and predisposing to non-communicable disease later in life [3-5]. Various studies have reported increased prevalence of overweight and obesity in India, emphasizing timely intervention for its control [6-8]. Hence the present study was undertaken to find the prevalence of overweight and obesity in school children of Navi Mumbai.

Material and method :-

After the proper approval from the institutional ethical and scientific committee, school principal and consents from both parents and children, a cross-sectional observational study was conducted with randomly selected 1020 normal Indian school children between age 5-12 years. The study was conducted from February 2018 to April 2018. Somatic parameters like age, weight and height were recorded at the time of examination. The range of age, weight and height were defined. Age was recorded in years. Standing height was measured in cm with standard stadiometer to nearest 1mm without shoes. Weight was measured in Kgs to nearest 100 gm with minimal school uniform clothing with standard calibrated bathroom scale. All measurements were taken by one observer. BMI was calculated by formula weight in Kgs / height in meter square (kg/m^2). To define overweight and obesity in children from 5-18 years of age, revised IAP (Indian Academy of Pediatrics) recommended adult equivalent of 23 and 27 cut-offs body mass index (BMI) tables were used separately for girls and boys [9].

Analysis

Out of 1020 children, 447 were girls and 573 were boys. 54 children were found to be overweight and 121 children were found to be obese. The prevalence of overweight and obesity reported in the present study was 9.9% and 23.8% respectively. Boys were more affected by overweight and girls were more affected by obesity with a prevalence of 7.7% and 12.1% respectively. The high prevalence of overweight was seen among girls aged 8-9 years and boys aged 9-10 years and obesity was seen among girls aged 8 years and boys aged 12 years [Table 1]. The prevalence of overweight and obesity reported in the present study is higher than different studies conducted in different parts of India. This could be explained on basis of different study population and cutoff points used to define the BMI status for

overweight and obesity by IAP BMI standards (2015) and the International Obesity Task Force standards (IOTF 2000) for different studies [8-12].

Table 1. Distribution of age with obesity and overweight for girls and boys

Age	No. Girls	No. Obese	No. Over Weight	% Obese	% Over Weight	No. Boys	No. Obese	No. Over Weight	% Obese	% Over Weight
5	51	7	0	14%	0%	67	5	3	7%	4%
6	49	3	1	6%	2%	64	5	3	8%	5%
7	52	3	0	6%	0%	68	7	6	10%	9%
8	53	11	1	21%	2%	62	9	6	15%	10%
9	48	5	4	10%	8%	99	13	10	13%	10%
10	50	9	4	18%	8%	74	6	7	8%	9%
11	66	5	0	8%	0%	66	9	4	14%	6%
12	71	10	0	14%	0%	65	12	5	18%	8%
13	7	1	0	14%	0%	8	1	0	14%	0%
	447					573				
Prevalence				12.1%	2.2%				11.7%	7.7%

Conclusion and Recommendation:-

High prevalence of overweight and obesity was seen with revised Indian Academy of Pediatrics (IAP) 2015 cut off BMI standards considering the for school students in the age group of 5 to 12 years in navi mumbai. Is the world shifting from undernutrition to overnutrition? Obesity is a serious disease as a result of an imbalance between calories consumed and calories expended. The dramatic rise in childhood obesity in developing countries is considered a major driving force behind the high prevalence of the pediatric metabolic syndrome and non-communicable disease. The findings from my study provides alarming evidence-based data on the considerable prevalence of childhood obesity which requires timely intervention for its control. This can be done by launching and strengthening the new school health programmes strategies aimed at reducing caloric intake as increasing fiber intake, reducing the consumption of junk foods and saturated fat and increasing caloric expenditure through regular exercise, encouraging physical activity.

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