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Original Article

Assessment of Obesity and Overweight in Different Age Group In School Going Children

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ABSTRACT

Background: In developing countries the prevalence of obesity has exhibited a dramatic increase. It has been seen that obesity is now present in 60% of women and 50% of men in many of the countries. Adolescence is a critical phase of developing obesity due to widespread changes in biological, social and psychological behaviors. The Aim of Present study is to assess the prevalence of overweight children amongst different age groups.

Materials and Methods: The present cross-sectional survey was conducted involving 800 subjects from government and private primary school, covering all the 3 socioeconomic classes. All the classes from the first to the eighth grade in each selected school were included in the study. The questionnaire included personal details age, grade, gender, date of birth and school name in addition to anthropometric measurements in first part. All the data obtained was arranged in a tabulated form and analyzed using SPSS software.

Results: Children were obese and 8 were overweight in group A and Minimum obese 7 Children were obese and 11 were overweight in group B of 6 years of age, 7 Children were obese and 11 were overweight in group A and 10 Children were obese and 5 were overweight in group B of 7 years of age. Minimum overweight children found in 10 year of age and maximum in 11 years age in Group A Minimum obese in found in 10 years of age and maximum in 11 years of age, Minimum overweight children found in 7 years of age and maximum in 10 years age in Group B.

Conclusion: From the above study we can conclude that there is lack of awareness amongst children and parents regarding obesity and its health effects.

KEYWORDS: Adolescence, Obesity, Health.

INTRODUCTION

In developing countries the prevalence of obesity has exhibited a dramatic increase. It has been seen that obesity is now present in 60% of women and 50% of men in many of the countries. The percentage of overweight children and adolescents also has increased, by almost 50%, in the last two decades of the 20th century.[1] Around the globe, disease profiles are transforming at an increased pace catching the attention of medical professionals and policy makers.[2]

This is particularly true in low and middle-income countries that form the major bulk of the global population. The emerging epidemics of obesity, cardiovascular disease (CVD) and diabetes form the crux of this phenomenal change. Overweight and Obesity amongst Primary School Children has become a colossal epidemic causing serious public health concern and has contributed to 2.6 million deaths around the world every year.[3]

Children are increasingly becoming vulnerable to overweight and obesity. The risk factors include high calorie diet, sedentary life style, lack of physical activity, extra munching of calorie dense food like chips during free time. Obesity is independently responsible for causing several dreadful diseases like cerebrovascular disease, Diabetes, orthopaedic, pulmonary and renal disorders which are responsible for increasing the risk of morbidity and mortality as well as reducing life expectancy.[4] Adolescence is a critical phase of developing obesity due

to widespread changes in biological, social and psychological behaviors. For prevention of adult obesity, it is essential to prevent and manage childhood obesity.[5] The Aim of Present study is to assess the prevalence of overweight children amongst different age groups.

MATERIALS AND METHODS

The present cross-sectional survey was conducted involving 800 subjects from government and private primary school, covering all the 3 socioeconomic classes. All the classes from the first to the eighth grade in each selected school were included in the study. After having consent, the researcher measured the height, and weight for each student in classroom and then the students were asked to take the questionnaire to their homes to be filled by one of their parents or guardians and to bring it back the next day. Students aged between 6 and 12 years were included, while students less than 6 or more than 12 year of age were excluded from the study.

A self-administered questionnaire was used. The questionnaire included personal details age, grade, gender, date of birth, school name in addition to anthropometric measurements in first part. The second part was to be filled by one of the parents. The section was concerned about frequency of eating fast food, drinking carbonated beverages, information about the sedentary/activity level of individual, socioeconomic status of family, and information about parents such as weight, height. All the data obtained was arranged in a tabulated form and analyzed using SPSS software.

Table 1: Sex wise distribution in different study group

Subjects	Group A (Private School going children)	Group B (Govt. School going children)
Male	225	250
Female	175	150
Total	400	400

Table 2: Age wise distribution of obese and non-obese subjects in study groups

Age	Group A (n=400)		Group B (=400)	
	Obese	Non Obese but over weight	Obese	Non Obese but over weight
6	17	8	7	11
7	7	11	10	5
8	16	13	9	14
9	13	13	10	17
10	18	6	3	20
11	9	18	15	6
12	10	14	7	11

RESULTS

Table 1 shows the different study groups with sex wise distribution which includes 225 male and 175 female children studying in private school (Group A). 250 male and 150 female children going to Govt. School (Group B) Table 2 shows the age wise distribution obesity and overweight among different study groups. 17 Children were obese and 8 were overweight in group A and Minimum obese 7 Children were obese and 11 were overweight in group B of 6 years of age, 7 Children were obese and 11 were overweight in group A and 10 Children were obese and 5 were overweight in group B of 7 years of age, 16 Children were obese and 13 were overweight in group A and 9 Children were obese and 14 were overweight in group B of 8 years of age, 13 Children were obese and similar number of overweight found in group A and 10 Children were obese and 17 were overweight in group B of 9 years of age, 18 Children were obese which maximum number of obese and 6were overweight in group A and 3 Children were obese and 20were overweight in group B of 10 years of age, 9 Children were obese and 18 were overweight in group A and 15 Children were obese and 6 were overweight in group B of 11 years of age, 10 Children were obese and 14 were overweight in group A and 7 Children were obese and 11 were overweight in group B of 12 year of age. Its also shows Minimum obese in found in 7 year of age and maximum in 10 year of age, Minimum overweight children found in 10 year of age and maximum in 11 years age in Group A. Minimum obese in found in 10 years of age and maximum in 11 years of age, Minimum overweight children found in 7 years of age and maximum in 10 years age in Group B.

DISCUSSION

A multicentric study has reported that an overall prevalence of overweight/obese to be 18.2%.[6] Studies carried out in Delhi also have shown similar results.[7,8] The prevalence of obesity was higher among children attending private schools as compared to those attending government schools. This can be due to influence of socioeconomic status, lifestyle and age.[9,10] However, nowadays the prevalence of obesity amongst government school children was high. This can be due to the fact that there is easy accessibility and affordability of junk foods and motorized transportation which results in decreased physical activity and increased food consumption.[11] In our study, 17 Children were obese and 8 were overweight in group A and 7 Children were obese and 11 were overweight in group B of 6 years of age, 7 Children were obese and 11 were overweight in group A and 10 Children were obese and 5 were overweight in group B of 7 years of age, 16 Children were obese and 13 were overweight in group A and 9 Children were obese and 14 were overweight in group B of 8 years of age, 13 Children were obese and similar number of overweight found in group A and 10 Children were obese and 17 were overweight in group B of 9 years of age, 18 Children were obese which maximum number of obese and 6 were overweight in group A and 3 Children were obese and 20 were overweight in group B of 10 years of age, 9 Children were obese and 18 were overweight in group A and 15 Children were obese and 6 were overweight in group B of 11 years of age, 10 Children were obese and 14 were overweight in group A and 7 Children were obese and 11 were overweight in group B of 12 year of age. It also shows minimum obese was found in 7 year of age and maximum in 10 year of age, minimum overweight children found in 10 year of age and maximum in 11 years age in Group A. Minimum obese in found in 10 years of age and maximum in 11 years of age, Minimum overweight children found in 7 years of age and maximum in 10 years age in Group B. Various studies have shown that an increase in adipose tissue leads to a higher risk of development of high blood pressure amongst in children and adolescents.[12] The chief limitation of present study was that it was restricted to one area (may not be representative of the whole nation). In our country, there is an urgent need to increase the awareness through health education programs amongst children regarding obesity and its ill effects.

CONSLUSION

We can conclude that there is lack of awareness amongst children and parents regarding obesity and its health effects. There is an urgent need to inculcate a positive attitude amongst them towards healthy lifestyle. In our study there were majority of subjects between 8-10 years of age that were overweight.

REFERENCES

1. Misra A, Khurana L: Obesity and the metabolic syndrome in developing countries. The Journal of Clinical Endocrinology & Metabolism 2008, 93:s9- s30.
2. Monteiro CA, Conde WL, Popkin BM: Is obesity replacing or adding to undernutrition? Evidence from different social classes in Brazil. Public health nutrition 2002, 5:105-12.
3. Raj M, Kumar RK: Obesity in children & adolescents. The Indian journal of medical research 2010, 132:598.
4. OdgenCl, Carroll MD,Curtin LR, et al. Prevalence of high body mass index in US children and adolescents 2007-2008 JAMA 2010;303:242-9.
5. Ministry of Health and Population GoN. Nepal population report 2011. Kathmandu, 2011.
6. Khadilkar VV, Khadilkar AV, Cole TJ, Chiplonkar SA, Pandit D. Overweight and obesity prevalence and body mass index trends in Indian children. Int J Pediatr Obes. 2011;6:216-24.
7. Marwaha RK, Tandon N, Singh Y, Aggarwal R, Grewal K, Mani K. A study of growth parameters and prevalence of overweight and obesity in school children from Delhi. Indian Pediatr. 2006;43:943-52.
8. Sharma A, Sharma K, Mathur KP. Growth pattern and prevalence of obesity in affluent schoolchildren of Delhi. Public Health Nutr. 2007;10:485-91.
9. Ramachandran A, Snehalatha C, Vinitha R, Thayyil M, Kumar CK, Sheeba L, et al. Prevalence of overweight in urban Indian adolescent school children. Diabetes Res Clin Pract. 2002;57:185-90.
10. Goyal RK, Shah VN, Saboo BD, Phatak SR, Shah NN, Gohel MC, et al. Prevalence of overweight and obesity in Indian adolescent school going children: its relationship with socioeconomic status and associated lifestyle factors. J Assoc PhysiciansIndia.2010;58:151-8.
11. Mahshid D, Noori AD, Anwar TM. Childhood obesity, prevalence and prevention. Nutrition J. 2005;4:24.
12. Stabouli S, Papakatsika S, Kotsis V. The role of obesity, salt and exercise on blood pressure in children and adolescents. Expert Rev Cardiovasc Ther. 2011;9:753-61.

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