Prevalence of Obesity among School Children

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ABSTRACT

In the present scenario childhood obesity is a burning problem worldwide. The consequences of childhood obesity dramatically perceived and it leads to severe life threatening illness such as heart diseases, hypertension, behavioral disorder and so on. So the investigator felt need that to identify the childhood obesity among school children. Quantitative approach with descriptive survey research design was adapted and 80 school children studied 9th & 10th standard at Apollo English High School were choose by non probability convenient sampling technique. Data were gathered and analyzed by descriptive & inferential statistics. The study findings revealed that 38.75% of school children had Grade-1 obesity and 11.25% & 3.75% of school children had Grade-II obesity & Grade-III obesity respectively. The investigator found that there were five variables such as father education, father occupation, mother education, monthly income of the family and place of residence had association with obesity.

Introduction

As developing countries industrialization and urbanization the standards of living continue to rise, weight gain and obesity are posing a threat to the health of the citizens Obesity is perhaps the most prevalent form of malnutrition in developed countries both among adults and children. It has been estimated to affect 20 to 40 per cent of children and adolescents in developed countries. It is now vying with other traditional public health concerns such as,under nutrition and infectious disease are significant contribution to the ill health of people in developing countries. Obesity is a key determinant can important risk factor for other non communicable disease such as non insulin dependent diabetes mellitus, cardiovascular disease including hypertension and certain cancers. (Jayanthi sri karthi, 2010)

Obesity is an excessive accumulation to body fat such that individual are at least 10 percent heavier than their ideal body weight. It can be assessed by the square of height in meters. BMI= kg/m2. A BMI of <18.5 is under weight, 18.5 – 24.9 is normal range, 25-29 is overweight, 30-34.9 is obesity I, 35-39.9 is obesity II, and >40 is obesity III. (WHO 2009)

Childhood obesity is a key public health concern, given its dramatic rise in many countries over the past decade and accompanying negative health consequence (Harris et al., 2011).

Need For the Study

Globally the number of overweight children under the age of 5years were estimated in the year 2010 was over 42 million in which close to 35 million of them were living in developing countries. It has been estimated that worldwide over 22 million children under the age of 5 are obese, and one in 10 children is overweight. A wide range of prevalence levels exist, with the prevalence of overweight in Africa and Asia was below 10 per cent and in the Americas and Europe above 20 per cent. The proportion of school-age children affected will almost double by 2010 compared with most recently available surveys from the late 1990s up to 2003.

Rapidly changing dietary practices and a sedentary lifestyle have led to increasing prevalence of childhood obesity (5-19 yr) in developing countries recently: 41.8% in Mexico, 22.1% in Brazil, 22.0% in India, and 19.3% in Argentina. Moreover,

secular trends indicate increasing prevalence rates in these countries: 4.1 to 13.9% in Brazil during 1974-1997, 12.2 to 15.6% in Thailand during 1991-1993, and 9.8 to 11.7% in India during 2006-2009

Various studies of other country indicates that the prevalence of overweight and obesity amongst children of all ages is increasing in developing countries in the past few decades and studies from India also showed the increased prevalence of obesity. Indian data regarding current trends in childhood obesity are emerging. A recent study conducted among 24,000 school children in south India showed that the proportion of overweight children increased from 4.94 per cent of the total students in 2003 to 6.57 per cent in 2005 demonstrating the time trend of this rapidly growing epidemic. The overall prevalence of overweight was 9.3% among boys and 10.5% among girls; 5.2 and 4.3% were obese, respectively (kotian-2003). The prevalence of overweight was higher among the adolescents of the high socioeconomic status group. A similar study done in Hyderabad, Andhra Pradesh showed that the prevalence of overweight was 7.2%but in Kerala the prevalence of overweight alone is 12% and whereas obesity is 6.3%, among the 12 to 17 year age group. Study on 707 children in the age group of 10-15 years at Chennai, Tamil Nadu revealed that 10% of the subjects were overweight and 6% of them were obese. Ramesh from of overweight and obesity increases with the age and is found to be high in the age group 15 yrs.

Statement of the Problem

A study to identify the prevalence of obesity among school children in a selected school of Puducherry.

Objectives

To identify the obesity among school children based on BMI by WHO. Associate the level of obesity with selected demographic variables.

Delimitation

➢ The study is limited to school boys and girls in the age group of 5 to 17 years.
➢ The study is limited to the school children studying in selected school.

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Association between BMI and the demographic variables

S.no	Demographic variables	Calculative value	Table value	Significant
1	Age	1.5238	16.92	NA
2	Sex	1.361	16.92	NA
3	Father education	48.4499	36.42	A
4	Mother education	43.72	30.14	A
5	Father occupation	65.50	30.14	A
6	Mother occupation	4.969	18.31	NA
7	Income	152.065	30.14	A
8	Birth order of the child	20.555	30.14	NA
9	Number of child	8.7927	30.14	NA
10	Type of family	1.5875	16.92	NA
11	Place of residence	165.18	16.92	A
12	Habit of taking junk foods	11.5526	30.14	NA
13	Which junk food like more	49.77	67.50	NA

NA-Non Association, A-Association   P=0.05 Statistical value

School children who are available during the data collection period

Methodology

▪ **Research approach:** Quantitative research approach
▪ **Research design:** Descriptive survey research design
▪ **Setting of the study:** High School
▪ **Population:** School children.
▪ **Sample:** School children studying class 9 and 10
▪ **Sampling techniques:** Non probability convenient sampling technique
▪ **Sample size:** 80
▪ **Description of the instrument**
○ **Part 1 - Demographic profile :** Age, parent's education, occupation, income of the family, birth order of the child, number of the child in the family and type of family.
○ **Part 2- Physical measurement :** Height , Weight, BMI = weight (kg) / Height (m^2)
▪ **Classification of BMI based on WHO classification**
▪ **Data analysis:** Data analysis was done with the help of descriptive and inferential statistics.

Data Analysis and Interpretation

Majority (91.25%) samples were 12-14 years and (8.75%) samples were 14-18 years. Among these 60% were males and 40% were females. The education of fathers, 18.75% were illiterate, 16.25% had primary school education, 27.5% had secondary school education, 36.25% had higher secondary and 1.25% had graduate& above.

The education of mothers, 31.25% were illiterate, 13.75% had primary school education, and 36.25% had secondary school education, 18.75% had higher secondary.

The occupation of fathers, 48.75% was farmer, 21.25% were self employee, 13.75% were private employee, 16% were government employee. The occupation of mothers, 83.75% was house wife, 12.5% were farmer and 3.75% were private employee.

The family monthly income status of their parents was less than 5000, was only 35%. 52.5% of family earning Rs.5001-10000& 10% of family earning Rs.10001-15000 were as 2.5% of family earning above Rs.15000. The birth order of child, 27.5% of school children were 1st child, 46.25% of school children were 2nd child, 16.25% of school children were 3rd child, 10% of school children were 4th child.

The number of child in the family revealed that 58.755% of family had two child and quarter (25%) percentage of family had three child were as 12.5% and 3.75% of family had four & one child respectively.

Most of the school children (60%) belong to nuclear family system & 40% of school children belong to joint family system. According to place of residence, three fourth of school children were residing in rural settings and remaining students were from urban settings.

Distribution of school children based on BMI

Majority of the children's 38.75% were grad – I obesity with the range of (25-29%) and 11.25% of the children's in the grade – 2 obesity with the range of (30-40%) and 3.75% of the children's were grad – 3 obesity with the ranges of (>40) and 37.5% of the children were underweight with range (<19%) and 8.75% of the children are having normal BMI with the range of (19-25%).
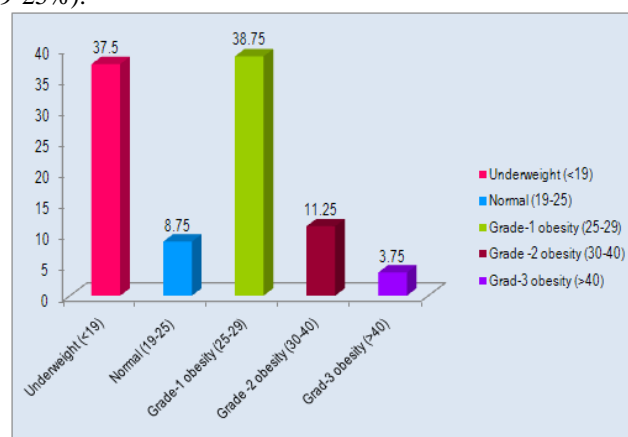
This study results were supported by several researchers Nazismi, Siddiqui, S. Bose, S. Shaji Thanoop, Preetam B. Mahajan. These investigators suggested that childhood obesity is increasing every now and then and it becomes a greatest threat to the country as well as for the world.

The following variables such as father education and mother educational, father occupational status, income of the family and place of residence had association with BMI.

This was supported by Jayanthi Srikanth. The study reports stated that the socio demographic factors which influence obesity were sex, parents, education, income, type of family, number of children in the family, order of birth.

Conclusion

Obesity is one among the primary priority problem of World Health Organization and is the most serious public health challenge of the twenty first century. The problem is global and is steadily affecting many low and middle income countries,

particularly in the urban settings. Overweight and obesity during childhood is a matter of rowing concern in India also. Most individuals develop their eating and activity patterns during childhood. The transition in nutrition and life style by the popularity of fast foods, soft drinks, sedentary life style, and lack of exercise, increased television watching and computer use are the common trends adopted by children today. The health sector as well as public must take an initiation to eliminate this problem through periodical obesity screening programme, nutritional counseling regarding selection of food items to the parents, encourage physical activity.

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