

# Prevalence of Obesity among School Going Children in Selected Schools

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**Abstract:** School age is a significant period of human life. It is the segment of life span that extends from age 6 to 12 years. This is a time of gradual growth and development with steadier and more even progress in both physical and emotional aspects. Children develop a taste for a variety of high-calorie foods, combined with the tendency toward more sedentary activities, have contributed to an epidemic of childhood overweight. It is a serious handicap to the social life of a child. Obesity refers to the state of weighing more than average for height and body built. **Methodology:** A descriptive- cross sectional study was undertaken to assess the prevalence of obesity in school children at selected schools, Nellore District Andhra Pradesh. The sample size was 200 school going children and the Non-probability convenience sampling technique was used for selection. of subjects. Prevalence of obesity was determined by measuring HT and WT & B.M.I classification. Semi structured questionnaire was used to assess the dietary and physical activity. **Results:** Findings show that among 200 children 20% (40) are normal 35.5% (71) were overweight and 44.5% (89) were obese. Term maturity and dietary pattern showed significant association with the prevalence of obesity. **Conclusion:** the study concludes that prevalence of obesity is high among school children, Dietary habits and physical activity have significant association with prevalence of obesity.

**Keywords:** Prevalence, obesity, overweight, school children, Physical activity, Dietary habits.

## 1. Introduction

Growth and development usually referred to a unit and express the sum of the numerous changes that take place during the life time of an individual. The child's body becomes large and more complex. The personality simultaneously expands in the shape and complexity. Growth and development are influenced by the factors like chronic diseases, genetic, endocrine, growth potentials, intrauterine life, emotional, nutritional, environmental, seasonal and socio-economic conditions along with all the other factors nutrition is the important contribution in Indian children. Obesity is one of the most prevalent nutritional disease of children and adolescents in many developed and developing countries. The WHO (2011) has declared obesity as one of the top ten health risks in the world and one of the top five in developed nations. Existing WHO standards and data from 79 developing countries including a number of industrialized countries suggest that about 22 million children of 5 to 16 years old are with obesity worldwide. Prevalence of obesity among children in developing countries are consistently high. Even in countries like India, which are typically known for high prevalence of under nutrition, a significant proportion of overweight and obese children now coexist with those who are under nourished.5 Increasing relative weight trends in populations have caused much concern among health care providers

## 2. Statement of the Problem

A Study to Assess The Prevalence Of Obesity Among School Going Children In Selected Schools At Nellore District.

## Objectives

- 1) To Assess the prevalence of obesity among school going children.
- 2) To Associate the prevalence of obesity with socio demographic variables of school going children.

## Assumptions

1. Obesity is common among school children

## 3. Materials and Methods

A descriptive cross sectional study was conducted in selected schools at Nellore District. A sample size of 200 school going children(6-12 yrs) were selected by Busing - Probability convenience sampling technique. Semi Structured questionnaire was used to assess the dietary habits and physical activity and height and weight were measured and BMI was calculated to determine the prevalence of obesity among school children.

## Plan for Data Analysis

Data analysis was analyzed by using descriptive statistics and inferential statistics.

## Descriptive Statistics

Frequency and percentage distribution of demographic variables of children.

## Inferential Statistics

chi-square test was computed to find association between the with prevalence of obesity and the demographic variables.

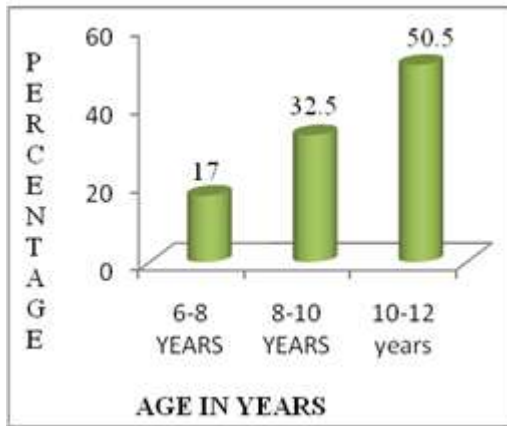


Figure 1: Percentage distribution of school children based on the age.

Table 1: Frequency and percentage distribution of prevalence of obesity among school going children (n=200)

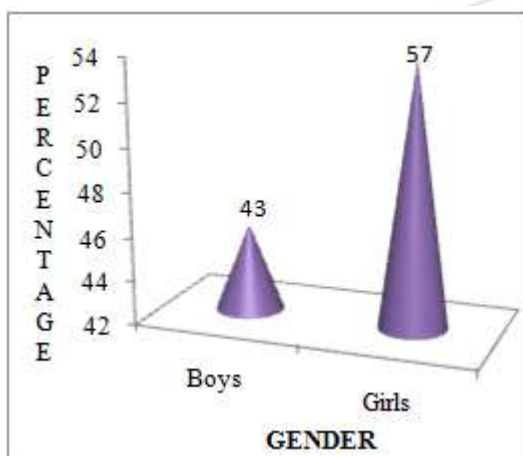


Figure 2: Percentage distribution of school children based on Gender.

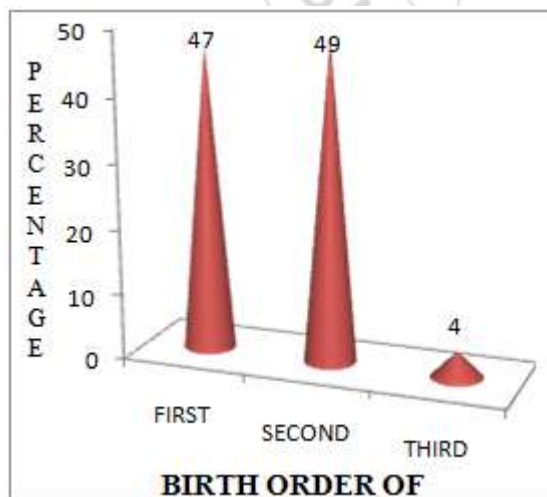


Figure 3: Percentage distribution of school children based on birth order

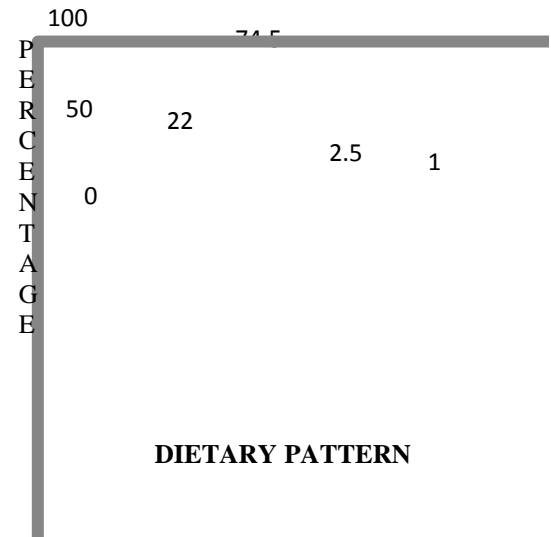


Figure 4: Percentage distribution of school children based on dietary pattern.

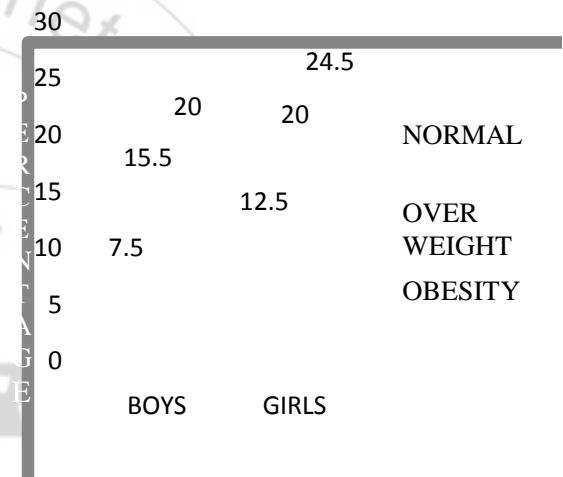


Figure 5: Percentage distribution based on prevalence of obesity

TABLE NO -2 A ASSOCIATION OF PREVALENCE OF OBESITY WITH SOCIO DEMOGRAPHIC VARIABLES OF SCHOOL GOING CHILDREN (N=200).

s. n o	Demographic variables	Poor Knowledge	Average Knowledge	Adequate Knowledge	Chi-Square	
1.	<b>No. of children</b>				<b>C=205</b>	
	a) First child	9	4.5 38	19	13	<b>T=102</b>
	b) Second child	7	3.5 14	7	12	<b>df=4</b>
	c) Third child	9	4.5 12	6	44	<b>S***</b>
						<b>P=.001</b>
2	<b>Dietary Pattern</b>					<b>C=205</b>
	a) Vegetarian	5	2.5 24	12	15	<b>T=102</b>
	b) Non-Vegetarian	18	9 79	39.5	52	<b>df=6</b>
	c) Lacto-Vegetarian	1	0.5 3	1.5	1	<b>S***</b>
	d) Ova -Vegetarian	1	0.5 -	-	1	<b>S***</b>
						<b>P=.001</b>

Prevalence of obesity	Frequency (F)	Percentage (%)
Normal	40	20
Over weight	71	35.5
Obesity	89	44.5
Total	200	100

S NO	DIETARY HABITS	FREQUENCY	PERCENTAGE
1.	No. of meals		
	a) 1-2 times	29	14.5
	b) 3-4 times	146	73
	c) 5-6 times	15	7.5
	d) more than 6 times	10	5
2.	Intake of animal food		
	a) Yes	185	92.5
	b) No	15	7.5
3.	Frequency of taking animal food		
	a) Daily	5	2.5
	b) Weekly	123	61.5
	c) Twice a week	47	23.5
	d) Monthly	25	12.5
4.	Intake of Milk and Milk products		
	a) Yes	95	47.5
	b) No	105	52.5
5.	Frequency of taking milk products per day		
	a) Once daily	98	49
	b) Twice a day	68	34

#### 4. Discussion

##### Findings related to prevalence of obesity among school going children:

With regard to prevalence of obesity among 20(40%) are normal, 35.5%(71) were overweight and 44.5%(89) were obese. With regard to prevalence of obesity among girls 21 (10.5%) are normal, 32(16%) were overweight and 47 (23.5%) were obese.

A study from NCT of Delhi reported the prevalence of OB as 7.4%.<sup>2</sup> While another study done in school children in Punjab reported prevalence of overweight (OW) and obesity (OB) to be 11.1% and 14.2% respectively. A study conducted in Pune documented the prevalence of Obesity 5.7% and Over weight 19.9%.

**Association of prevalence of obesity with socio demographic variables:** shows that there is significant association between the prevalence of obesity with age, Term maturity and dietary pattern. The study conducted by S Kaur, SN Dwivedi, R Lakshmy and U Kapil documented that the prevalence of over weight and obesity was higher in the High Income Group as compared to Low Income Group and Middle Income Group for all age groups, highlighting the possible role of change in the dietary pattern and physical activities with increase in income levels.

#### 5. Recommendations for Further Study

- 1) The similar study can be conducted with large sample size in different settings.
- 2) The study can be conducted to determine the correlation between the prevalence of obesity and the dietary pattern and physical activity for adolescents in selected schools.
- 3) A comparative study can be conducted between the rural and urban children to find out rate of prevalence of obesity.
- 4) An interventional study can be conducted to reduce the risk of obesity among adolescent children.

5) A structured teaching programme can be conducted to adolescent age children to reduce the risk of obesity and over weight.

#### 6. Conclusion

The study concludes that the prevalence of obesity is high among school children and is influenced by the dietary pattern and physical activity.

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