

Nutritional Status of Middle School Girls of Durg and Dhamtari Districts of Chhattisgarh

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Abstract

As per the World Health Organization (WHO) Body Mass Index (BMI) is the indicator of the nutritional status of an individual. It gives a quick estimation of nutritional status. Data for height (cms) and weight (Kgs) has gathered to derive the BMI and the various categories were distributed among the 210 female subject from the Government middle schools, one from urban area Durg and one from rural area Kurud, distt. Dhamtari Chhattisgarh. The results were very alarming as many of girls (>90%) were falling under malnourished-over nourished category very few (<10%) were falling under normal category of BMI.

KEYWORDS: Body Mass Index, Height and Weight

INTRODUCTION

As per the World Health Organization (WHO) Body Mass Index (BMI) is the indicator of the nutritional status of an individual. It gives a quick estimation of nutritional status. It is used by the WHO to estimate the lifestyle status and living standard of the population of any country. It's very easy and continent to use and easy to calculate and classify the different groups as obese (over Nourished) normal and under weight (mal nourished). As per requirement the users classified these categories more than 3 categories. Now a days the Government providing the mid day meals to attract more children as well as to improve the nutritional and health status. In this scenario the girl child have more emphasis for better growth and development.

Under the light of above introduction. The girl child will be the initiator of next generation and will have to be better growth and development. So to determine the girl child's health the problem for this study is stated as, "Nutritional Status of School Going Girls."

The main purpose of the present study is to determine the nutritional status of school going girls. As the schools are the nursery for growth and development and the place from a strong citizens should groom and make the country strong. Also the school is the primary source of the players. The more participation in sports will ensure more healthy school environment. The purpose of this study will draw attention of teachers and educators for the nutritional status with special reference of BMI according to the WHO. It will further help to prepare special programs for physical education and sports and also

helpful to prepare diet plans for mid-day-meals. The results of this study will not only helpful to the coaches to know nutritional status of the school girls; but, also help the coaches and trainers to make specific training plan according the nutritional / health status of school going girls.

The hereditary characteristics has not considered. Physical training background of the subjects has not been considered. Extra-curricular activities, if any, of the selected subjects were not entertained. Daily routine activities of the subjects has also unknown and has not been disturbed. The specific motivational techniques has not implied while collection of data.

METHODOLOGY

Total 210 female subjects were selected using simple random sampling method from middle classes of one Government school of Urban area and one Government school of rural area from Durg and Dhamtari Districts in Chhattisgarh state of India.

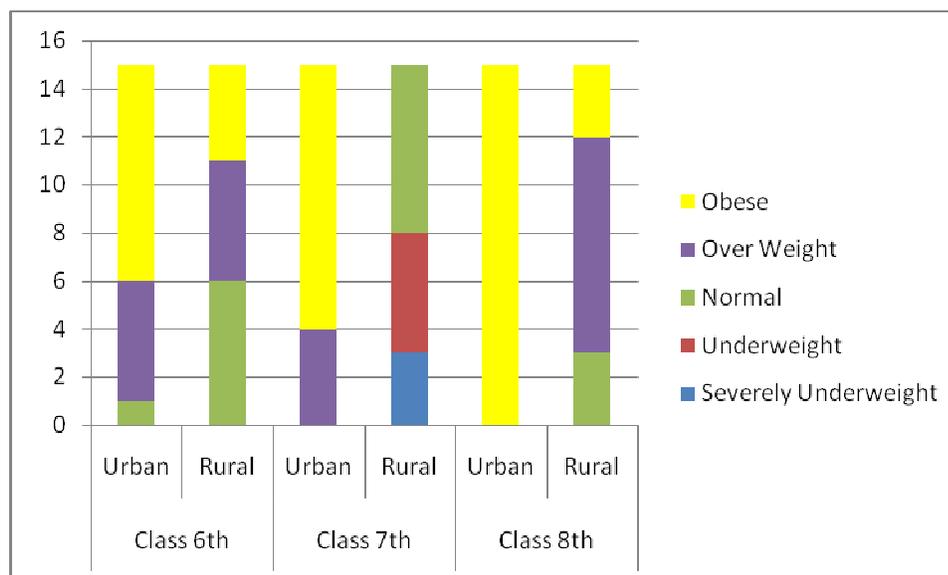
Standing stature and body weight is considered as Criterion Measures. Standing stature is measured in centimeters (cms) with accuracy of 1 millimeter (mm) as per the methodology given in Kansal (2008). Body weight is measured in Kilograms (Kg) with accuracy of 1 cm as per the methodology as prescribed in Kansal (2008). Stadiometer, Weighing machine, score sheet, writing material, score recorders (partner) were used for collection of data. The significance level α is set to 0.05 level. From the collected data BMI were derived with the help of $BMI = \text{weight (Kg)} \times \text{Height(m)}^{-2}$ equation. Categorization of index gathered from above equation has done as per the following norms given by the WHO (1996 and 2007) i.e. Below 16.5 - Severely Underweight; Above and equal to 16.5 but less than 18.5 - Underweight; Above and equal to 18.5 but less than 25 - Normal; Above and equal to 25 but less than 30 - Over Weight and Above and equal to 30 - Obese. From the BMI Calculation the various categories of nutritional status of school going girls were calculated and presented in percentage table and histograms.

RESULTS

Table no. 1: BMI Classification distribution of girl's students of Middle school; i.e. from class 6th, 7th and 8th; from urban and rural area.

BMI Categories	Class 6 th				Class 7 th				Class 8 th			
	Urban	%	Rural	%	Urban	%	Rural	%	Urban	%	Rural	%
Severely Underweight	0	0	0	0	0	0	3	20	0	0	0	0
Underweight	0	0	0	0	0	0	5	33.3	0	0	0	0
Normal	1	6.7	6	40	0	0	7	46.7	0	0	3	20
Over Weight	5	33.3	5	33.3	4	26.7	0	0	0	0	9	60
Obese	9	60	4	26.7	11	73.3	0	0	15	100	3	20
Total	15	100	15	100	15	100	15	100	15	100	15	100

Figure no.1: BMI Classification distribution of girl's students of Middle school; i.e. from class 6th, 7th and 8th; from urban and rural area.



Very less are falling under normal weight category i.e. only 1 (6.7%) in urban 6 (40%) in rural from class 6th; Only 7 (46.7%) from rural from 7th class and only 3 (20%) in rural 8th class. This is very alarming situation of malnutrition or on the other hand we can say may be it is because of improper health and hygiene care of girls students.

CONCLUSION & RECOMMENDATIONS

Most of the girls are malnourished as per the guidelines of World Health Organization. As most of them (>60%) falls under over weight and obese category. Very few girls from middle school are falling under normal category. This study needs to apply over large number of samples of urban and rural area. This study gives very disconcert scene for the health of school girl child. The malnourished children attracts the attention of the researchers, health education, physical education experts to give proper emphasis for the betterment of the health status of girl child.

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