BODY MASS STATUS AMONG PRIMARY SCHOOL GOING CHILDREN

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ABSTRACT

Background: School going children is important part of our society. Their growth, development and body weight is of utmost significance and presents general health status of a community and nation as a whole. For the assessment of nutritional status WHO Asian cuts-off BMI for age recommended BMI less than 18.5 kg/m considered underweight, 18.5-24.9 normal weight, more than 25 overweight. The objective of this study is to access body mass status among primary school going children of Hyderabad.

Methods: The study design was cross sectional study in which different school of Hyderabad were selected to collect data (semi government and private sector).This study has assessed the body mass index between 7-14 years old age group of both genders of primary school going children of Hyderabad. BMI has calculated with the help of weight and height of the body.

Result: In this study out of 100 children 10%were 7-8 year old 20% were 9-10 year old, 20% were 11-12year old and 30% were 13-14 year old. The analysis shows 80% were underweight (below 18.5), 18% were normal weight (18.5-24.9) and only 2% overweight (above 25) according to the Asian cut-off value of BMI for Asian children. When it was analyzed by gender 62% of the boys and 18% of the girls were underweight, 6% of boys and 12% out of girls were normal weight, 2% of the boys were overweight no girl found overweight in the study. In the above study 80% found underweight, 18% normal weight, 2% overweight.

Conclusion: Under nutrition among the school going children is currently a health problem faced by Hyderabad school going children. There is need to be taken address these problems in order to prevent nation from nutritional deficiency among school going children and buildup a strong and healthy nation in future

Keywords: Malnutrition, BMI, school children, growth retardation, Anthropometric measurement.

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INTRODUCTION

School going children is important part of our society. Their growth, development and body weight is of utmost significance and it presents general health status of community and nation as well [1]. Measurement of height and weight is known as Anthropometric measurement that helps to determine centrile. These indices are used as principal criteria in assuming the adequacy [2]. Anthropometric measurements are the most practical tools for assessing body mass status due to its simplicity and low cost. That is universally applicable, inexpensive and non-invasive technique to access body mass status.

According to WHO recommendation for Asian cutts off BMI for age recommended less than 18.5 underweight, 18.5-24.9 normal weight, more than 25 overweight. (WHO PUBLIC HEALTH) [3]. According to National center for health statistics (NCHS) and centers for disease control and prevention (CDC) gender specific growth chart 2-20 years, according to it if BMI for age percentile is less than 5th percentile the child is said to be underweight, BMI between 5-85 percentiles the child is said to be normal weight and if above 95 percentile then said to be overweight [4].

Underweight is defined as low dietary intake, excessive energy expenditure, and frequent attack of respiratory as well as GIT infections, iron deficiency anemia and low recovery from illness. It effect child progress and becomes cause of low attendance in school along with poor performance in school. It may be due to not having proper diet, lack of knowledge about proper diet and lack of awareness of parents about balanced diet or illiteracy factor of parents. Junk food addiction of boys may be a reason.

While obesity and overweight have adverse effect on child psychological development, low self-steam poor body image, peer interaction of young people with their formatives [5]. Globally, prevalence of childhood overweight and obesity among school going children has been extensively explored. Many interventions had implemented for prevention of childhood obesity in early school years [6]. Overweight might be due to the physical inactivity, sedative lifestyle, and involvement of children more on inactive leisure time activities such as television, net, games on computer, overeating, Intake of high caloric food .Obesity and overweight has been reported in many Asian countries [7]. The objective of this study is to access body mass status among primary school going children of Hyderabad

METHODOLOGY

The study design was cross sectional study in which different school of Hyderabad was selected to collect data (semi government and private sectors i.e hayat school, white house school, city Cambridge school). 100 students' data was taken as a sample size. Duration of study is from 1st October 2014 to 1st December 2014. Data has collected from a convenience sample. Children with age ranges between 7-12 years have been taken from school register of primary section of schools. Weight of the student without shoes was taken by using a bathroom scale while the height

was measured by using a microtoise. BMI for age has been analyzed by Asian cut-off BMI for age. My exclusion criteria were Unwillingness of student, any diseases, age below 7 years and age more than 14 years. Data was collected through interview based questionnaire by researcher. For measuring weight without shoes bathroom scale was used and for measuring height of student microtoise has been used, for taken BMI-for-age there was used reference data of who for Asian cut-off BMI for age. The data was analyzed by statically packets for social sciences (SPSS) version 21. Data was collected from students by interview based questionnaire in the class room with the permission of the Principal of school and remain confidential. Informed consent form was filled out to the Principal of students of different school in Hyderabad

RESULT

In this study 100 primary school going children were included from semi private and private school of Hyderabad and Sindh province. They were belonging to 7 to14 age group. The whole data was analyzed by Asian cut-offs BMI for age. Out of 100 children 70% were boys and 30% were girls. According to the age distribution out of 100 children 10%were 7-8 year old 20% were 9-10 year old, 20% were 11-12year old and 30% were 13-14 year old. The analysis shows 80% were underweight (below 18.5), 18% were normal weight (18.5-24.9) and only 2% overweight (above 25) according to the Asian cutt value of BMI for Asian children. When it was analyzed by gender 62% of the boys and 18% of the girls were underweight, 6% of boys and 12% out of girls were normal weight, 2% of the boys were overweight no girl found overweight in the study. In the above study 80% found underweight, 18% normal weight, 2% overweight.
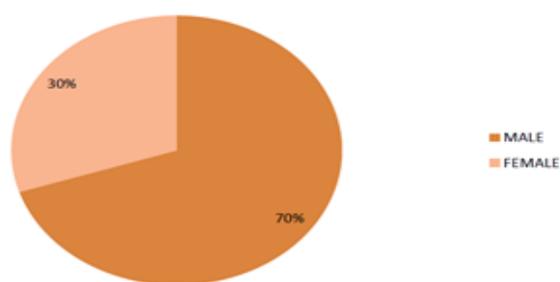
Figure 1: Gender difference

Figure 2: BMI frequency

Figure 3: BMI with gender difference
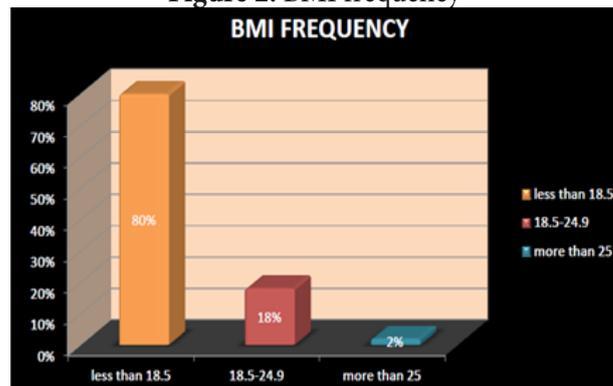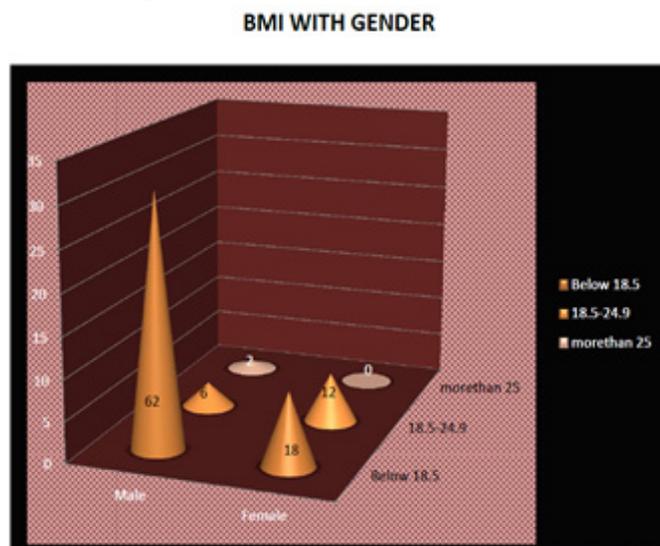

BMI WITH GENDER

DISCUSSION

Children are the future of country their health is very important for the progress of nation. Any country cannot accelerate their economic development without ensuring child health and development. The overall prevalence of underweight in the studied school children was 80% (below 18.5%). The prevalence of underweight in boys was 62% and girls were 18%. The prevalence of underweight was more among boys compared to girls. It may be due to not having proper diet, lack of knowledge about proper diet and lack of awareness of parents about balanced diet or illiteracy factor of parents. Junk food addiction of boys may be a reason. Izharul Hassan conducted his study in Azad Nagar School in Bangalore he reported 65.5% prevalence of underweight [12].

In this present study out of 50 children 18% children had normal nutrition status. The above finding is may be due to children belonging to private and semiprivate schools and they have awareness about balanced diet and availability of balanced food or it may be due to the belonging of children from educated family and literacy of parents and awareness of parents toward balanced diet and need of balanced diet for their children growth [13].

In this study out of 50 children the overall prevalence of overweight was 2%. The prevalence of overweight by gender distribution it was found in boys, no girls found overweight in this study, this may be due to the less sample size of this study. Furthermore sample size required to conclude it authentically. Overweight might be due to the physical inactivity, sedative lifestyle, and involvement of children more on inactive leisure time activities such as television, net, games on computer, overeating, Intake of high caloric food. Obesity and overweight has been reported in many Asian countries. Healthy lifestyle and healthy eating should be encouraged among all age groups, Media, school administration, awareness campaigns, reduce poverty, promotion of family planning can increase socioeconomic growth on any country especially Asian countries.

CONCLUSION

Under nutrition among the school going children is currently a health problem faced by Hyderabad school going children. There is need to be taken address these problems in order to prevent nation from nutritional deficiency among school going children and buildup a strong and healthy nation in future. There is need to take action and start camping at national or domestic level should try to decrease poverty from country and educate students and their parents and clarifying hallmark of under nutrition and over nutrition.

RECOMMENDATION

- Health education, nutritional education may be made as part of school curriculum part from regular educational activities in community.
- Improvement of health services.
- Better school health services.
- Alleviation of poverty.

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Citation