
Title : Comparative Study between the Nutritional and Health Status of Children from a Private School and Municipality School

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Introduction:

Obesity and malnutrition both together are considered as a global epidemic. Malnutrition consists of undernutrition as well as overnutrition and it can have deleterious affects on the health of the children. Under-nutrition continues to be a primary cause of ill health and mortality among children in developing countries. Besides poverty, there are other factors that directly or indirectly affect the nutritional status of children .Obesity in childhood and adolescent is an issue of concern because it is an important predictor of adult obesity. Maintaining a balanced diet and regular exercise is important for all individuals, especially school-aged children (6-15 years). These children are required to eat a variety of foods from each food group to ensure optimal intake of all vitamins and minerals. At the same time, they may face new challenges regarding food choices and habits. Decisions about what to eat are partly determined by what is provided in school, at home, the influences from friends at school, and the media, especially television. Poor nutrition compromises both the quality of life of school-aged children but also their potential to benefit from education. Attaining optimal nutrition involves eating three meals a day and two nutritious snacks, as well as limiting the intake of high sugar and high fat foods. Consuming generous amounts of fruits, vegetables, lean meats and low fat dairy products, including three servings of milk, cheese or yoghurt to meet their calcium requirement, can also prevent many medical problems. This includes becoming overweight, developing weak bones, and developing diabetes. Adequate nutrition of school aged children will also ensure they grow to their full potential, and provide the stepping stones to a healthy life.

Methodology:

The objective of this study was to compare between the nutritional and health status of children from a private school and municipal school.A cross-sectional survey was conducted on children aged 12–15 years. It was a questionnaire based survey with measurement of height, weight, muac and skinfold thickness. Eating practices of children were collected with the help of a pretested questionnaire. Their body mass index (B.M.I) for age was calculated and compared with CDC (2006) standards.

Results:

Total 200 school children were included in the study. The recommended height, weight and BMI of boys (girls) with age 13 years was 158 (150) cms, 40 (42) kgs and 15.7 (17.2) respectively and that for MUAC and triceps skinfold thickness was 27 (26.5) cms and 13.7 (17.8) cms The dietary nutrient intake except iron was significantly higher in private school boys and girls as compared to municipal school boys and girls. On the other hand, dietary iron intake was significantly higher in municipal school boys and girls as compared to private school. There was a significant association of milk and curd [boys ($\chi^2=25.564$, $p<0.001$); girls ($\chi^2=16.206$, $p<0.001$)], paneer [boys ($\chi^2=38.459$, $p<0.001$); girls ($\chi^2=59.166$, $p<0.001$)], cheese [boys ($\chi^2=49.560$, $p<0.001$); girls ($\chi^2=42.174$, $p<0.001$)],egg [boys ($\chi^2=14.731$, $p=0.021$)]; meat, poultry & fish [boys ($\chi^2=38.251$, $p<0.001$); girls ($\chi^2=23.492$, $p<0.001$)] with school type in both boys and girls. There was no significant association of pulse & legumes [boys ($\chi^2=6.645$, $p=0.248$); girls ($\chi^2=9.763$, $p=0.082$)] with school type in both boys and girls. There was no significant association of egg intake with school type in girls ($\chi^2=3.180$, $p=0.365$).Significantly higher percentage of private school boys ($\chi^2 = 33.888$) and girls ($\chi^2=30.11$) indulged in physical activity as compared to public school boys and girls. There was a significant difference in the amount of time spent in physical activity by private and municipal school girls, however, no such difference was seen in girls. There was a significant association of fruits [boys ($\chi^2=28.640$, $p<0.001$); girls ($\chi^2=19.059$, $p<0.001$)], other vegetables [boys ($\chi^2=28.368$, $p<0.001$)], green leafy vegetables [boys ($\chi^2=14.441$, $p=0.006$)], dry fruits [boys ($\chi^2=23.816$, $p=0.021$)] with school type in both boys and girls. There was no significant association of other vegetables ($\chi^2=1.460$, $p=0.691$), green leafy vegetables ($\chi^2=6.388$, $p=0.172$) and dry fruits ($\chi^2=6.231$, $p=0.183$) with school type in girls. Positive association was found between eating out and weight categories, eating breakfast, intake of fresh



fruits and vegetables and soft drinks & low physical activity.

Frequency of overweight and obese children was high in children from higher socioeconomic status and frequency of underweight children was high in children from low socioeconomic status.

Conclusion:

Hence the prevalence of obesity and under nutrition was high amongst the school going children and children need to be given awareness about healthy foods and good nutrition.

References:

- Arora Monika, Nazar Gaurang, Gupta Vinay, Perry Cheryl L, K Reddy Srinath and Stigler Melissa H (2012) Association of breakfast intake with obesity, dietary and physical activity behavior among urban school-aged adolescents in Delhi, India: results of a cross-sectional study
- BMC Public Health:881 doi:10.1186/1471-2458-12-881
- Bes-Rastrollo, Schulze Matthias B, Ruiz-Canela Miguel & Martinez-Gonzalez Miguel A. (2013). Financial conflicts of interest and reporting bias regarding the association between sugar-sweetened beverages and weight gain: a systematic review of systematic reviews. PLoS medicine, 10(12), e1001578.
- Cepeda-Lopez, A. C., Osendarp, S. J., Melse-Boonstra, A., Aeberli, I., Gonzalez-Salazar, F., Feskens, E., & Zimmermann, M. B. (2011). Sharply higher rates of iron deficiency in obese Mexican women and children are predicted by obesity-related inflammation rather than by differences in dietary iron intake. The American journal of clinical nutrition, 93(5), 975-983.
- Chen, H. J., & Wang, Y. (2015). Do weight status and television viewing influence children's subsequent dietary changes & quest; A National Longitudinal Study in the United States. International Journal of Obesity.
- Kamath Prasanna, Bengalorkar Girish (2012) Prevalence of overweight and obesity among adolescent school going children (12-15 years) in urban area, south india. *ijcrr*. 2012; 4(20): 99-105