

Health Status of School Children of Vantamuri Primary Health Centre, Belgaum District

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Abstract

Background: School children, aged between 6-15 years form one fifth of our country's population. They are the neglected group and do not receive as much attention as the under fives enjoy. Providing comprehensive health care to them should be sought as they are the country's future. So, the present study was conducted to determine the nutritional status of school children and also to know the morbidity pattern among them. **Methods:** The present cross sectional study was carried out in all the primary and high schools, covered under Vantamuri Primary Health Centre, District Belgaum. Data collection was done under the 'Suvarna Arogya Chaitanya Karyakrama', conducted between 1st August to 31st August 2012. **Results:** A total of 5203 (79.1%) students were present on the day of examination. Among them, 52.6% were boys and 47.5% were girls. Of the total children examined, underweight, stunting and wasting was present in 21.2%, 21.7% and 24.9% respectively. One or the other morbidity was present in 92.1% of the children. Dental caries, anemia and defective vision were more prevalent among adolescents.

Keywords: School children; Wasting; Stunting; Underweight; Morbidity pattern; Primary health centre.

Introduction

School health programme is an important aspect of any community health programme. As children occupy the major portion of population of the country and also belong to

age group in which good healthful living style could be inculcated, it is all the more important to impart them with right knowledge at right time as they are the one who disseminate knowledge in the community. School health services provide an ideal platform to detect the health problems early and treat them. Continuing good health at school age is essential if children are to sustain the advantages of a healthy early childhood.

With more and more school enrolments taking place, schools have become the convergence centers for health and education programmes. Due to widespread poverty

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compounded by illiteracy and limited awareness, many school children suffer from conditions that can be prevented by appropriate health education. Good health increases enrolment and reduces absenteeism. The age group is non earning, depended on family and easily accessible for the health assessment, care, and education. This group is on the threshold of adulthood on whom the progress and welfare of the community depends. Therefore it is necessary to provide targeted services to improve their health status.[1]

School health surveys offer an excellent opportunity to screen a large size of this population with minimum resources. The present study was undertaken to know the nutritional status and morbidity pattern of school children.

Materials and Methods

A cross sectional study was conducted among primary and secondary, government and government aided school children studying between standards I to X belonging to 38 schools covered under Vantamuri Primary Health Centre of Belgaum District, under the purview of 'Suvarna Arogya Chaitanya Karyakrama', a school Health Initiative of Government of Karnataka, held in the month of August 2012.[2] Data was collected using a predesigned and pretested proforma. Weight was measured without any footwear to the nearest 0.1 kg using a standard weighing machine. Height was measured

without any footwear to the nearest 0.1 cm using a standard calibrated bar. The nutritional status of the child was classified as underweight, stunted, and wasted as per their weight for height, height for age and weight for age respectively according to the World Health Organisation (WHO) standards for that age.³ Children who were between -2 SD and -3 SD were considered as moderately underweight, stunted and wasted for their age and children < -3 SD as severely underweight, stunted and wasted for their age. Morbidities were identified by appropriate history and detailed clinical examination.

Statistics

Data collected was analysed using percentages and the chi square test to assess the associations between variables.

Results

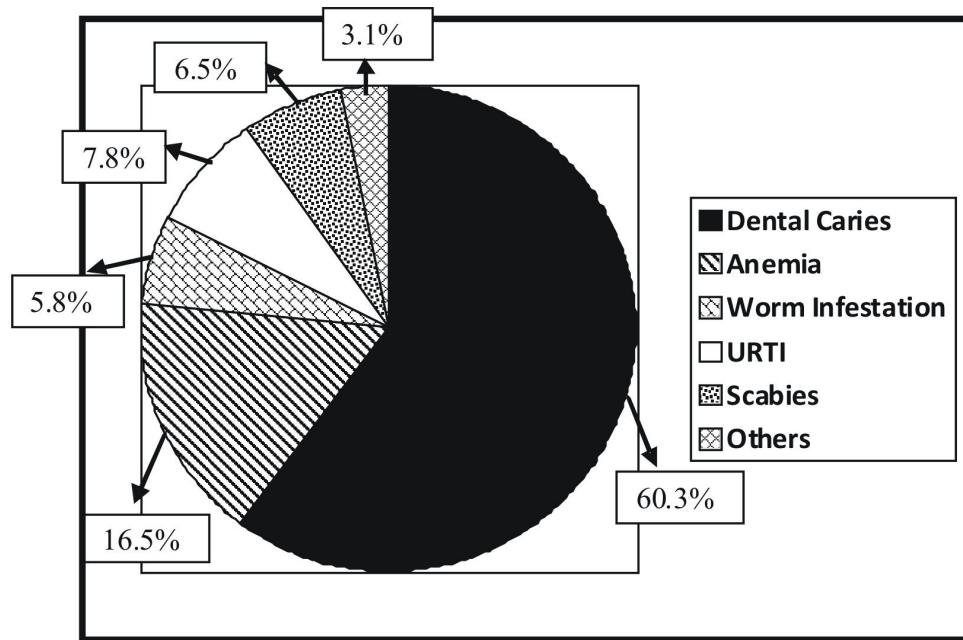
A total of 6581 students were enrolled in 38 schools surveyed. On the day of examination, 5203 (79.1%) students were present. Of them, 2718 (52.6%) were boys and 47.5% were girls. Male students' enrolment was proportionately higher as compared to females, but attendance was better for girls (79.6%) than for boys (78.6%). The students examined varied from 6.2% to 12.4 % for the various standards. Amongst the children examined, the prevalence of moderate underweight, stunting and wasting was 18.2%, 18.4% and 21.8% respectively, and prevalence of severe

Table 1: Distribution of students according to nutritional status (N=5203)

Criteria	Normal		- 2 to - 3 SD		< - 3 SD	
	No	(%)	No	(%)	No	(%)
Weight / Age (Underweight)	4077	78.4	946	18.2	180	3.4
Height / Age (Stunting)	4127	79.3	958	18.4	118	2.3
Weight / Height (Wasting)	3906	75.1	1144	21.9	153	3.0

SD: Standard Deviation

Figure 1: Morbidity Profile of school children



underweight, stunting and wasting was 3.5%, 2.3% and 2.9% respectively (Table 1).

Amongst those who were underweight, prevalence was high in students of class I (27.9%) and it was least in class IX (5.6%) and this difference was statistically significant ($p < 0.001$). Although, underweight was more prevalent in boys (53.6%), severe underweight was more in girls (61.7%) and this was found to be statistically significant ($p = 0.001$). Of the stunted children, prevalence was more in children of class VII (23.9%) and it was least in class X (8.6%) and there was statistically significant difference ($p < 0.001$). Moderate and severe stunting was more in boys (51.7%, 71.1%) than girls (48.3%, 28.8%) and this association was statistically significant ($p = 0.001$). The pattern of prevalence of wasting was similar to underweight, with its prevalence being high in class I (41.9%) and least among students of class X (8.2%). This difference was also statistically significant ($p < 0.001$). Wasting was more prevalent in boys (53.6%) but severe wasting was highly prevalent in girls (62.8%) and was statistically significant ($p = 0.001$).

Taking morbidities into consideration, among the children examined 4793 (92.1%) had one

or the other morbidity, and a majority (58.3%) of them had multiple morbidities. The prevalence of morbidity ranged from as high as 99.3% for class I to 58.7% for class X. Morbidities were found to be higher in boys (68.0%) than girls (32.0%) and this difference was estimated to be statistically significant ($p < 0.001$). Most commonly encountered morbidity in our study was dental caries (59.2%) followed by anemia (14.6%). Cardiac disease was the least (0.4%) common morbidity identified (Figure 1). Dental caries was the major type of morbidity in primary school children (Class I to IV) and was distributed equally among both the sexes. The prevalence of anemia was highest among girls of standard VII, scabies was mostly seen in boy students of class II and worm infestation and respiratory tract infections were most commonly noted in the boys of class III.

Discussion

In the present study, 79.1% children were present at the time of survey and girls' attendance was better (79.6%) which was similar to the findings of study conducted in

Dehradun,[4] where their total attendance was 78.0% and that of girls was 80%. Children who had wasting and severe wasting in our study constituted 18.2% and 3.5% respectively which was low compared to a study conducted in Ludhiana,[5] where severely wasted children formed 6.8%, but majority of children with wasting were seen in age group between 11-16 years corresponding to class VI-X as against our findings where maximum wasting was noted in Class I children. The probable reason for higher rate of wasting in Class I and II students could be, high prevalence of malnutrition amongst under fives in our study area.

The Ludhiana study also showed that 5.5 % children were severely stunted which is also higher than our study (2.3%). Nevertheless, stunting in our study was significantly higher amongst students of class VII which is in accordance with the Ludhiana study, where stunting was more among children in the age group of 11-15 years where growth spurt occurs. Underweight in school children has been studied in small surveys in Madras,[6] and Kerala[7] where the prevalence of severe underweight was 3.6% and 4.2% respectively which is higher than that of our study where in the prevalence was 3.4% and it was higher in students of lower classes (I - III).

In our study, one or other kind of morbidity was found in 92.1% of children, which was much higher than compared to studies conducted in Dehradun[4] and Ludhiana.[5] Dental caries was the most common morbidity among children of standard I to IV (63.8%) and anemia in students of class X (66.0%). These findings were similar to that of a study conducted in Kathmandu,[8] where the prevalence of dental caries was 60.4% and that of anemia was 58.0%. The higher rate of anemia in adolescent girls is because of the increased requirement and poor nutritional intake.

Conclusion

The health and nutritional status of school

children was found to be unsatisfactory in our study area. The prevalence of severe underweight, stunting and wasting was 3.4%, 2.3% and 3.0% respectively. The commonly noted morbidities were dental caries (60.3%) and anaemia (16.5%). The consequences of malnutrition and anaemia are; high level of morbidity, mortality and disability. This study highlights the need for a better school health program with more emphasis on improving personal hygiene of the students, control and prevention of communicable diseases. The need of the hour is to ensure overall improvement of children's nutritional well being with the collaboration of governmental and non-governmental agencies.

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