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Morbidity Profile and Nutritional Assessment of School Children in the Rural Field Practice Area Under Government Medical College, Srikakulam, Andhra Pradesh: A Descriptive Cross-Sectional Study

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ABSTRACT

The prevalence of malnutrition is not only global problem, which also one of the major health problems in low-and middle-income countries. Assessment of nutritional status of children is an important route to "Tracking the Triple Threat of Child Malnutrition" such as Wasting, Stunting and Malnutrition. To assess the nutritional status among the study population by using anthropometric measurements and to study the morbidity pattern among school children in rural area of Srikakulam. A community based descriptive study was done among school children through screening camp. Data was collected by clinical and ophthalmic examinations and participants were recruited by universal sampling method. This study is assessed nutritional status of the children, found that Under nutrition (severe:12%, moderate: 11%), Stunting (severe: 5%, moderate: 22%) and Wasting (sever: 17%, moderate: 11%). The results of the study indicate that under nutrition (23%) is still an important problem among <10 years age group-children.

INTRODUCTION

In globally, stunting affected an estimated 22.3 per cent or 148.1 million children under 5 by 2022 and Wasting threatened the lives of an estimated 6.8 per cent or 45 million children, Overweight affected an estimated 5.6 per cent or 37 million children by 2022. Nutritional assessment not only serves as a means for evaluating the health but also provides an important measurement of the quality of life. School children are ideal population for growth assessment to prevent certain diseases in adults' life^[1]. And school health services are considered to be an ideal platform to detect and address health problems in children at earliest. Early diagnosis of childhood problems by regular health check-ups in school can prevent complications in future and provide quality of life. According to school health programme of India, provided health services such as screening of general health, assessment of nutritional status, visual acuity, hearing problems, dental check-up, skin diseases, congenital defects, physical disabilities, learning disorders, behavior problems etc^[1,2]. Poor healthy conditions in school children are leads to common problems like low school enrolment, school absenteeism, early dropout and poor academic performance. Thus, the assessment of the morbidity pattern and nutritional status among children is a very important step in early life^[3-6]. There is limited studies/information about morbidity profile of school children in our study area.

MATERIALS AND METHODS

A school-based screening camp was done at rural field practice area, Srikurmam by department of community medicine, government medical college, Srikakulam. A total 251 school children of standard between 3rd-9th was included for the study and children were brought to the RHC than screening was done. And information like socio demographic details, morbidity profile, nutritional status of children was collected. Materials are used for data collection, such as Weighing machine, non-stretchable measuring tape, Torch, Stethoscope, Snellen's chart and WHO growth charts are used for national status assessment. Participants were recruited by universal sampling method and interview done with semi structured questionnaire than Clinical, Ophthalmic examination was done. A pediatrician and an ophthalmologist were called on next day and the examination findings were confirmed and necessary referrals were done.

RESULTS AND DISCUSSIONS

Sociodemographic Details: In the screening camp, total 251 children were examined and assessed the nutritional status. Out of 251 children, males were 133

(52.9%) and females 118 (47.1%) respectively. Regarding age, majority of children were aged between 12-14 years (74.1%) and mean age of the participants is 12.6 (Fig. 1).

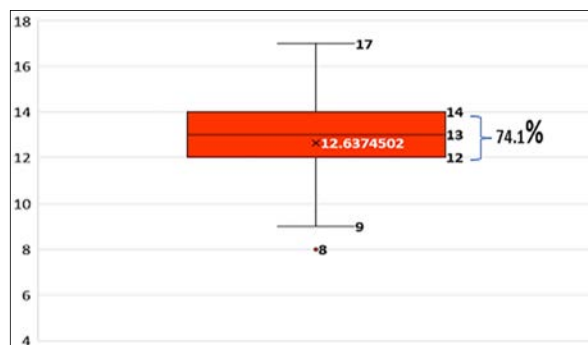


Fig 1: Box and Whisker Plot Showing Age-Wise Distribution of Study Population

Assessment of Nutritional Status: Out of 251 children, only 26 aged between birth to 60 months were included for assessment of underweight, as per WHO standards. Found that severe underweight, moderate underweight were 12%, 11% respectively. (Fig. 2)

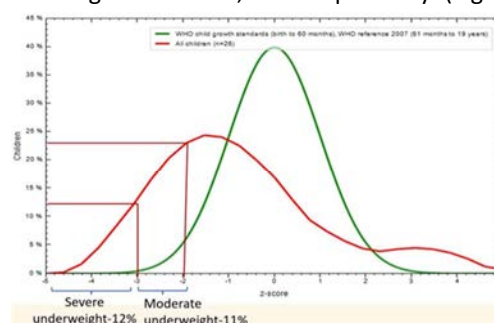


Fig 2: Distribution of Weight-for-Age, Z Score Comparing with Who Standards 2007

The chronic malnutrition of participants was assessed by height for age growth chart compare with WHO standards, with 5% severe and 22% moderate stunting. (Fig. 3) And the acute malnutrition also assessed by BMI for age growth chart, that severe, moderate thinness is 17% and 11% respectively. (Fig. 4)

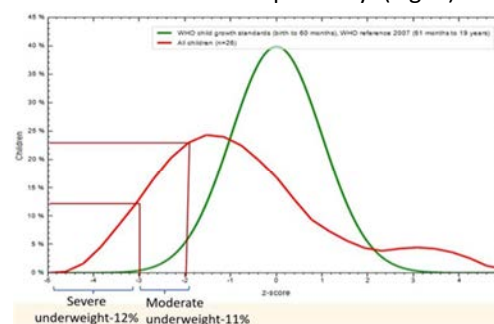


Fig 3: Distribution of Height-for-Age, Z Score Comparing with Who Standards 2007

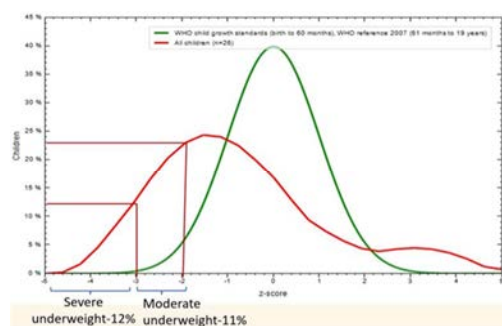


Fig 4: Distribution of BMI-for-Age, Z Score Comparing with Who Standards 2007

Morbidity Profile: At the screening camp, we are assessed morbidity profile of the participants and found that Acute respiratory tract infections were (2.7%), Dental caries (0.4%), Blurring of vision (7.9%), Hearing difficulty (0.4%), Scabies (2.3%) and Headache (5.1%) remaining were not having any symptoms of particular diseases. Visual acuity of participants was examined by Ophthalmologist can see below (table 1).

Table 1: Distribution of Visual Acuity

Visual Acuity	Right Eye (N)	Left Eye (N)
6/6	223	224
6/6 (Partial)	03	04
6/9	14	07
6/12	03	03
6/18	03	04
6/24	02	03
6/36	02	04
6/60	01	02

The Visual Acuity of right eye is 223 at 6/6. Out of 251 children, 33(13%) of the children were identified with refractive errors during the screening camp. Out of 33 children and 2 were identified with severe refractive error (6/60). Out of 33 children, 32(96.96%) We're not using spectacle and only 1(3.04%) using spectacles.

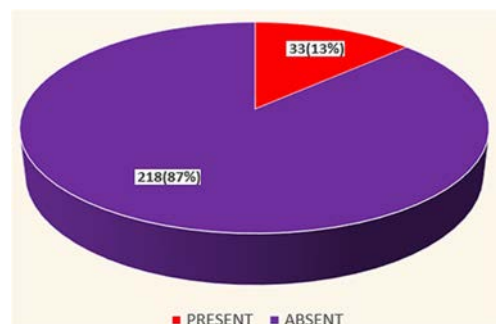


Fig 5: Pie Chart Showing Prevalence of Refractive Errors

A school survey was done at rural area of Srikakulam, found that males were 133 (52.9%) and females 118 (47.1%) respectively and mean age of the participants is 12.6 ± 1.5 years. In NFHS 3, one out of every five children are wasted, almost half of them (48%) are chronically malnourished or stunted and 43% percent of them are underweight for their age^[1]. Compare with our study findings 27% stunted and 23% underweight

is less. Abraham SB *et al.* study showed, 30.7% children were thin (low BMI for age). Pallor (39.5%), myopia (34.9%) and dental caries (14.7%) were the common morbidities observed among children^[2]. Our study found that, Acute respiratory tract infections were (2.7%), Dental caries (0.4%), Blurring of vision (7.9%), Hearing difficulty (0.4%), Scabies (2.3%), Headache (5.1%) and 13% of the children were identified with refractive errors. Many factors like school environment, personal hygiene, water safety and sanitation factors, inadequate lightning were influence to nutritional condition of the participants. Out of 251 children, 13% were identified refractive error due to inadequate light and ventilation in class rooms.

CONCLUSION

The proportion of children with refractive error was 13.14% with moderate to severe errors being 5.6%. The results of the study indicate that under nutrition (23%) is still an important problem among <10 years age group-children. The percentages of malnourished children were found as 27% stunted and 28% thinness. Few parents who were not aware of their child defective vision and nutritional status were called and counseling was given. Health staff and teachers were requested to follow up those identified with defective vision and who were given referrals.

REFERENCES

1. Syed, S. and R. Rao, 2015. Factors influencing nutritional status of school children in an urban slum of Hyderabad, India. *Int. J. Contemp. Pediatr.*, 2: 335-339.
2. Abraham, S., R. Chauhan, M. Rajesh, A. Purty and Z. Singh, 2015. Nutritional status and various morbidities among school children of a coastal area in South India. *Int. J. Res. Med. Sci.*, 3: 718-722.
3. Amruth, M., S. Kumar, A.G. Kulkarni, S.V. Kamble and I.M. Ismail., 2015. A study on nutritional status and morbidity pattern among primary school children in Sullia town, South India. *Indian Journal of Basic and Applied Medical Research.*, 4: 100-112.
4. Srivastava, A., S.E. Mahmood, P.M. Srivastava, V.P. Shrotriya and B. Kumar, 2012. Nutritional status of school-age children - A scenario of urban slums in India. *Arch. Public Health*, 70: 1-8.
5. Singh, J.P., P. Kariwal, S.B. Gupta, A.K. Singh and D. Imtiaz., 2014. Nutritional status and morbidity among school going children: A scenario from a rural India. *Scholars Journal of Applied Medical Sciences.*, 2: 379-383.
6. Bhattacharyya, H., G. Medhi, S. Pala, A. Sarkar, W. Lynrah and O. Kharmujai, 2020. Nutritional status and personal hygiene practices of primary school children: A cross-sectional study from Meghalaya, India. *J. Family Med. Primary Care*, 9: 5506-5510.