

Effect of diet and socio-economic status in school going girls with anemia in Guwahati, Assam

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Abstract: Anaemia is a global health problem. About 40% of the world's population suffers from anaemia and school going girls are one of the most vulnerable age group. Hence the objective of the study was to determine prevalence and distribution anaemia among school going girl students of Assam.

Key words: Haemoglobin, Packed cell volume, Peripheral blood smear, and Red blood cell count, School girls, Anaemia.

Introduction

WHO identified anemia as the most common nutritional deficiency disorder causing serious health concern among the pregnant women.[1] Haemoglobin level of less than 13g/dl in men and less than 12g/dl in women is called anemia.[2] WHO defined adolescent as life spanning ages between 10-19 year and this period of life marked by specific development attribute such as rapid physical growth and development, physical, social, physiological maturity.[3] school going girls from rural areas with low socio economic status and malnutrition can also be contributing factor for anemia.[4]

Objective

The present study was design to estimate hemoglobin concentration of school going student (girls) by cyanmethaemoglobin method, packed cell volume (PCV) by Wintrobe's method, peripheral blood smear examination and RBC count by heamocytometric method.

Material and method

Sample size:A total 81 sample will be collected from the student of Bonda Anchalik Medium English School.

Inclusion criteria:

- 1) Age of students: 11-15 years
- 2) Only girls
- 3) Girls not having menstruation during the collection

Exclusion criteria:

- 1) No boys
- 2) Age more than 16 years
- 3) Girls with menstruation cycle going on during collection.

Blood collection-5ml in EDTA vial

Haemoglobin estimation by cyanmethaemoglobin method.

Packed cell estimation by Wintrobe's method.

Peripheral blood smear examination and total RBC count will be done by heamocytometric method.

Result and discussion:

Anemia is major public health concern in pre-school children and pregnant women in developing world. According to our finding, school going girls are one of the most vulnerable age group, owing to malnutrition and their socio-economic status. 81 school going girls (11-15 years) selected from the Bonda anchalik medium English school where included in the study. The study revealed anemia (62%) in the school girls student is prevalent. Out of which 82% were mild anemic, 14% were moderately anemic and 4% of the subject were severely anemic. Various parameter like the BMI, status of menstruation, dietary habits, number of children at home, type of family the students belong to and their socio-economic status consider for the study are found to relate with Hb and PCV. However, numbers of siblings or children at home, dietary habits as vegetarian or non-vegetarian have not shown any kind of uniformity in the results.

Conclusion

In conclusion, the present study revealed anemia to be major health problem among the school going girls in Bonda anchalik English medium school. The prevalence of anemia was more among girls who were 11-15 years of age. A high prevalence of mild anemia as compared to moderate and severe anemia was observed in this study.

References

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