**Prevalence of Iron Deficiency Anemia among Adolescent School Children of Manipur, India**

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**Abstract**

**Background:** Iron deficiency anemia (IDA), one of the most common types of nutritional anemia worldwide is considered a major public health problem in developing countries. Prevalence in India remains alarmingly high. Population of Manipur, a small state in the north-eastern part of India, is different with distinct race, culture, socio-demographic pattern and dietary habits. Therefore, this cross-sectional study was conducted to determine the prevalence and risk factors of IDA among apparently healthy school children of Manipur, India.

**Methods:** Three hundred and seventy-nine blood samples (163 males and 216 females) were collected randomly from urban and rural school children in the age group of 13 to 19 years from Imphal west and Thoubal districts of Manipur respectively. Eligible participants were subjected to haemoglobin (Hb) estimation and serum ferritin (SF) assay. Moreover, a questionnaire was designed to collect demographics, food and drink habits, hygienic practices and socioeconomic status. BMI of the students were also recorded.

**Results:** The overall prevalence of IDA was 23.2% (n = 88), of whom 81.81% were females (n = 72) and 18.18% were males (n = 16). Prevalence of IDA among the males and females was higher in the rural compared to urban schools but not statistically significant. Correlation between BMI and Hb was significant (*p* < 0.05) but not with serum ferritin status. Students belonging to the middle income group had the highest prevalence of ferritin deficiency followed by the high income group and low income group respectively. Both the Hb and serum ferritin levels of students who do hand wash before meals were significantly higher than those who do not. Both hemoglobin and serum ferritin levels do not differ significantly among students who prefer home-made traditional food and junk food.

**Conclusion:** This study revealed that the majority of the students, especially females, have IDA that might become worse by malnutrition, lifestyle habits, and lack of awareness. Our results suggest that IDA can be prevented by providing proper knowledge on the healthful diet, improved lifestyle, and harmful effect of IDA to the students.

**Keywords:**IDA, school children, Manipur.