

EPIDEMIOLOGY OF IRON DEFICIENCY AMONG SCHOOL GOING ADOLESCENTS IN THE DISTRICT OF KANDY

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Adolescents are a high-risk group for iron deficiency. This study was carried out to find out the prevalence of iron deficiency and the associated factors among adolescents.

In order to represent all adolescents in Kandy district, the study included urban big, urban small, rural and estate schools. 960 subjects in the 13-15 years age group were studied. Haemoglobin and the serum ferritin levels were assessed to determine the iron status.

Among girls, the prevalence of iron deficiency anaemia and iron deficiency (with or without anaemia) was 14.7% and 30.4% respectively. Among boys, 5.7% had iron deficiency anaemia and 19.3% were iron deficient. Of the anaemic, only 39.2% had iron deficiency. Among boys, the prevalence of iron deficiency within the four strata of schools showed a statistically significant difference ($p < 0.002$). In boys, both iron deficiency anaemia and iron deficiency w highest in the estate sector (12.5% and 29.8% respectively). Among girls, prevalence of iron deficiency ranged from 36.8% in urban small schools to 25.7% in the rural schools. The difference in iron status among girls within the four strata was not statistically significant.

The social class of the father was significantly associated with iron deficiency anaemia ($\chi^2_{\text{trend}} = 11.26$; $df = 1$; $p < 0.001$) but not with iron deficiency without anaemia. The children of mothers with an educational level of less than grade 6 had significantly more risk of having iron deficiency anaemia than the children of mothers with an educational level upto advance level and above. (OR = 1.99; CI= 1.01–3.89). Fathers' education, mothers' social class, de-worming status, frequency of haemic iron consumption and consumption of dark green leaves did not differ significantly with the iron status. Subjects who were frequently eating fruits with major meals had a significantly better iron status than the others ($p < 0.05$). The attainment of menarche or the time since menarche did not show a statistically significant association with the iron status.

Results suggest the need to improve the iron status among girls in all types of schools and particularly in boys from estate and urban small schools. It is worthwhile carrying out research to find out whether the iron status could be improved by a socially acceptable practice like consuming fruits with meals. Further studies to determine the prevalence of anaemia due to causes other than iron deficiency are important. The common practice of giving iron supplements to all anaemic is also questionable.