Title: Prevalence of undernutrition among primary level children of Red Laterite Zone areas of Bankura District, West Bengal, India

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A cross-sectional study was undertaken to determine the nutritional status of primary level children of Chhatna, Bankura District, West Bengal, India (a red laterite zone area, with poor soil fertility) based on their body mass index (BMI), weight for age, and height for age. A total of 285 children (5 < age < 10 years) from two villages (Dalpur and Ghosergram, approximately 260 km from Kolkata) were studied. Anthropometric measurements, including height and weight were measured using standard protocols. BMI, weight for age, and height for age were calculated and utilized as a measure of nutritional status. The extent of undernutrition (WHO norms Z Score < Median + 1 SD to Median - 2SD) was found to be high (11%). The frequency of undernutrition was significantly higher in boys (17%) than girls (7%). A high prevalence of stuntedness was found (15%), for boys being 14%, and for girls 16%, the difference being insignificant stastically. Overall 16.5% were found to be underweight; for boys being 11% and for girls 20%, and the difference was statistically significant. As per the World Health Organization criterion, the prevalence of undernutrition is considered as 'high'. In order to fully understand the causes and consequences of child undernutrition, further research is needed on the rural population of this red laterite zone of West Bengal, India.