Abstract

A cross-sectional study was conducted in a nonindustrial (Desopran) and industrial area (Haldia) of Purba Medinipur District, West Bengal, India, to assess the effect of socio-economic factors on undernutrition among the children. Maternal education plays a central role in children's health and nutrition in the nonindustrial area. Living conditions and socio-economic status are linked with mother's education, which in turn determines the health and development of a child. The Composite Index of Anthropometric Failure (CIAF) is a single indicator that reflects the overall rate of three conventional indices of undernutrition: underweight, stunting and wasting. The study was undertaken among 621(308 boys and 313 girls) nonindustrial and 621 (307 boys; 314 girls) industrial Bengalee children aged 3–12 years from the Purba Medinipur district of West Bengal, India. Height (cm) and weight (kg) were recorded, and NCHS standard values were used to calculate z-scores (<–2SD). The same data were used to calculate CIAF as an indicator of 'anthropometric failure'. The prevalence of anthropometric failure among the children was 59.40%. Chi-squared analysis was employed to evaluate the significance of association between nutritional indicators and socio-economic parameters in the two sexes. Multiple binary logistic regression (MBLR) analyses (including the stepwise forward method) were also performed. Odds ratios with 95% confidence intervals were used to assess the risk of having anthropometric failure. Results showed that mother's education was significantly associated with undernutrition controlling for the other factors considered. A very high prevalence of undernutrition is persisting in this region of India despite national nutritional supplementation programmes being operational. More attention to the improvement of living conditions and hygiene, and more particularly the education of women in this population, might be effective in attaining improved child growth and health. Data were analyzed using chi-square test and binary as well as stepwise multiple logistic regression analysis. Low monthly per capita income (Odds ratio, OR = 2.1; p< 0.001) and households having two or fewer rooms (OR = 1.55, p < 0.001) were independently associated with a higher risk of anthropometric failure in the industrial area. Factors having a direct impact on earnings that provide basic infrastructure for a healthy livelihood seemed to be the major predictor of anthropometric failure among children.