Title: Identifying Individual and Household Level Predictors of Undernutrition Among 6–59 Months Children in Bangladesh: A Multivariate Approach

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Abstract: Globally malnutrition is considered one of the greatest threats to public health, particularly in low- and middle-income countries. The present study examined the extent of undernutrition and the associated determinants among children aged 6–59 months in Bangladesh using data from the Nutrition Survey of Bangladesh (NSB), 2017–18. The sampling frame of NSB 2017–18 was specified by a 30 (locations) × 30 (households) cluster approach where 20 locations were from rural areas and the other 10 were from urban areas. Out of the sampled households, 566 children aged between 6 and 59 months were included in the analysis. Determinants of three anthropometric measures, weight-for-age (stunting), weight-for-height (wasting), and weight-for-age (underweight), were analyzed using a multiple logistic regression model. The prevalence of stunting, underweight, and wasting of children was 34.5%, 40.6%, and 20.1%, respectively. Although the child's age, family size, cleanliness of the residential area, and food insecurity were significant determinants of malnutrition, inadequate and low-quality protein consumption strongly predicted the development of underweight and stunting in infants and children. The odds of being stunted were 2 times (adjusted odds ratio [AOR]: 2.02, 95% confidence interval [CI]: 1.17–3.46; $p = 0.011$) and underweight was almost 2.5 times (AOR: 2.41; 95% CI: 1.27–4.56; $p < 0.01$) higher, respectively, among children who consumed inadequate amounts of protein. Because the percentage of children from wealthy families was relatively low in the present study, cleanliness of residential areas, food insecurity, and inadequate protein intake are likely to be key drivers of malnutrition in Bangladesh, which might be significantly reduced with better coverage of preventive nutrition programs.

Keywords: Malnutrition, Undernutrition, Underweight, Wasting, Nutrition Survey of Bangladesh (NSB), Anthropometric measures, Logistic regression

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