



## Nutritional Status and Dietary Diversity of Rural Children in a Maize-based Farming System of Tanzania

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### Abstract

The hunger target of the Millennium Development Goal 1c (MDG 1c) to halve the proportion of undernourished people in developing countries by 2015 has not been met. Understanding the intricacies of inadequate dietary intake is the most important step required to design and implement the solutions towards the eradication of malnutrition. We determined dietary diversity and nutrition status of children below five years of age in Babati District, Tanzania, by conducting a cross sectional survey of the dietary intake among 356 households (HHs). Food consumption data were collected using 24-h dietary recall. Anthropometric measurements were performed using the WHO standard procedures. The anthropometric indices were derived using the WHO Anthro software version 3.2.2. The overall prevalence of stunting, underweight and wasting was 54.7%, 20.8%, and 2.6%, respectively. The prevalence of both stunting (58.1%) and underweight (20.9%) among boys was higher compared to girls (50.5% and 20.6%, respectively). Stunting levels were highest (69%) among children of 24 - 35 months. Seventy one percent of children were fed with less than five food groups per day. Consumption of legumes and nuts correlated more with low levels of stunting ( $p = 0.009$ ,  $r = -0.174$ ). The dietary diversity score of the children was positively correlated with household dietary diversity score ( $p < 0.001$ ,  $r = 0.287$ ). Within first 1000 days, a statistically significant negative correlation between the stunting level and child's dietary diversity score ( $p = 0.049$ ,  $r = -0.0224$ ) and consumption of dairy products ( $p < 0.001$ ,  $r = -0.449$ ) existed. There was a statistically significant negative correlation between wasting and consumption of flesh foods ( $p = 0.001$ ,  $r = -0.208$ ). The prevalence of stunting and underweight was highest with strong association between dietary score and nutritional status of children.

**Key words:** Children, dietary diversity, nutritional status, household.

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