

Title : Assessing Malnutrition in an Urban Slum using different indicators**Author(s) :** Dr. Digambar Sharma ^a, Kasturi Sen Ray ^b**Institution :** ^a Center for Health and Social Sciences, Tata Institute of Social Sciences, Mumbai, Maharashtra, India; ^b Department of Nutrition, Deemed University Mumbai, Mumbai, Maharashtra, India**Keywords :** *Assessment of malnutrition, Nutrition Index, Standards.***Introduction:**

India has become self-sufficient on its food production but availability and accessibility is still a serious concern to eliminate hunger and its consequence. It is important to identify and locate the deprived pockets in population. It is critical for policy makers and health service providers to use the correct indicator for rational allotment of resources to the needy sections of population. Commonly used Global Hunger Index (GHI) scores, a macro level index, cannot be used at the local level. A local nutrition index score using GHI method, based on primary anthropometric and calorimetric data collected from an urban slum population was developed and compared with –available Nutrition Index Scores of GHI for Maharashtra (State), India (Country), South Asia (Region), Globe (World) & other indices of undernutrition such as Underweight, Stunting, Wasting, Undernourishment rates (Calorie deficient) and Cumulative Index of Anthropometric Failure (CIAF)

Methodology:

This study included 220 children under 5 years of age and 100 adults. Age, Weight, Height, MUAC data for children and 24 hour calorie-intake data for adults were collected. 'Undernutrition' rates were calculated using 'WHO revised MGRS 2006' and 'ICMR Indian' Standards. 'Undernourishment' rates (calorie deficiency) was calculated using 'Minimum Dietary Energy Requirement' according to the Indian and FAO standards.

Results:

The Hunger index score varied greatly when different references or standards were used for the same set of data. 'Undernourishment rates' using Indian & FAO standards were 27 percent and 6 percent, respectively. Local Index score using Indian standards for both 'underweight' and 'undernourishment' yielded a score of 30.26, considered "extremely alarming"; using WHO standards for 'underweight' and Indian standards for 'undernourishment' yielded score of 18.86, considered "serious"; using WHO standards for 'underweight' and FAO reference for 'undernourishment' yielded an score of 11.86, a score lower than GHI 2013 score of 13.8 but still "serious". Anthropometric indices showed 29.3 percent Underweight, 27 percent Stunted, 25.7 percent Wasted and 24.3 percent malnutrition as per MUAC, using WHO standards (z scores). Highest rates of undernutrition were found in children aged 2 to 4 years. The prevalence of undernutrition using CIAF was highest (48.18 percent of children) which includes all forms of Anthropometric Failure.

Conclusion:

The study shows GHI methodology can be applied to sub-national and sub-state pockets within a country when national reference values or standards are used to calculate the hunger index scores. The 'Local Hunger Index Score' is a potent indicator when standards and references are critically selected to guide resource allocation at micro-level prioritizing under-privileged pockets. More research into newer indicators such as Local Hunger Index Scores and CIAF is required to establish advantages over traditional indicators.

References:

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