Rapid Survey of Wasting and Stunting in Children: What's New, What's Old and What's the Buzz?

RAJIB DASGUPTA, [*]DIPA SINHA AND [#]VEDA YUMNAM

From Centre of Social Medicine and Community Health, Jawaharlal Nehru University, New Delhi; [*]Department of Economics, Ambedkar University; and [#]Department of Social Work, Tezpur University, Tezpur; India.

Correspondence to: Dr Rajib Dasgupta, Centre of Social Medicine & Community Health, Jawaharlal Nehru University, New Delhi 110 067, India. dasgupta.jnu@gmail.com

Nationwide Rapid Survey on Children (RSoC), conducted by the Ministry of Women and Child Development and UNICEF in 2013-14 showed a marked improvement in the status of the child malnutrition over the third National Family Health Survey (NFHS-3) that was conducted in 2005-06. Despite some impressive gains in the anthropometric indicators of malnutrition, the absolute levels remain high, and of concern. Despite these gains, the feeding indicators remain stagnant. The programmatic responses need to adopt a multi-sectoral comprehensive approach with regular and comprehensive nutrition surveillance and recognize the epidemiological diversity.

Keywords: *Anthropometry, Protein energy malnutrition, Stunting, Wasting*.

The Government of India has recently released the National and State level factsheets of the Rapid Survey on Children (RSoC) that was conducted jointly by the Ministry of Women and Child Development and UNICEF [1]. This state-level dataset was awaited as it is about a decade from the previous comparable data from the third National Family Health Survey (NFHS-3) in 2005-06 [2]. The recently released Global Hunger Report and the Global Nutrition Report portend some of these gains [3,4]. We focus on two key aspects: (*i*) the emerging trends, and (ii) and the contemporary policy discourse.

WHAT'S UP AND WHAT'S DOWN?

There is a significant improvement in the child malnutrition levels between NFHS-3 and the RSoC. The prevalence for stunting in under-five children has decreased from 48% to 38.7%; and there is also a decline in prevalence of underweight (42.5% to 29.4%) and wasting (from 19.8% to 15.1%). The absolute levels of child malnutrition continue to be high. Most states showed improvements in levels of stunting; remarkable gains (among the large states) were noted in Andhra Pradesh, Chhattisgarh, Gujarat, and Madhya Pradesh. Jharkhand reported very little improvement in stunting (2.5%) but large gains in wasting (16.7%) (***Fig.* 1**).

The distribution of stunting and wasting in states showed interesting shifts. With declines in stunting, some states have recorded higher prevalence of wasting, a phenomenon noted as well in the changes between NFHS-2 and NFHS-3. ***Table* I** shows the distribution by RSoC data by following the earlier method of mapping inter-state distribution of acute and chronic malnutrition by computing terciles for wasting and stunting and tracking the changes in their respective positions [5,6]. A notable change is Bihar and Gujarat switching places between high wasting and high stunting category and medium wasting and high stunting category. This is explained by Gujarat reporting no change in the status of wasting despite an impressive 9.9 percentage point improvement in stunting. With decreases in stunting, quite a few states now feature in the axis of high wasting (***Table* I**).

A comparison of levels of stunting in Indian and African children with similar multi-dimensional poverty index is instructive - Bihar (49.4%) and Liberia (42%) / Sierra Leone (45%); Jharkhand (47.3%) and Angola (29%) / Mozambique (43%); Madhya Pradesh (41.6%), Chhattisgarh (43%), Uttar Pradesh (50.6%) and Senegal (19%)/ Malawi (48%)/ D R Congo (25%). The South Asian Enigma therefore continues (despite recent declines), and requires an understanding beyond anthropometric indicators.

There is large-scale improvement in exclusive breastfeeding rates among children under six months of age (from 46.4% to 64.9%). Of concern is the decline in infant and young child feeding (IYCF) practices; this was already quite poor. The proportion of children aged 6-23 months who had a minimum dietary diversity has significantly gone down. The NFHS reports minimum dietary diversity separately for breastfed and non-breastfed children (the average of both has been reported here). The RSoC factsheet on the other hand has not made such a distinction. The full report and data may clarify if there is an issue of definitional inconsistencies between the two surveys.

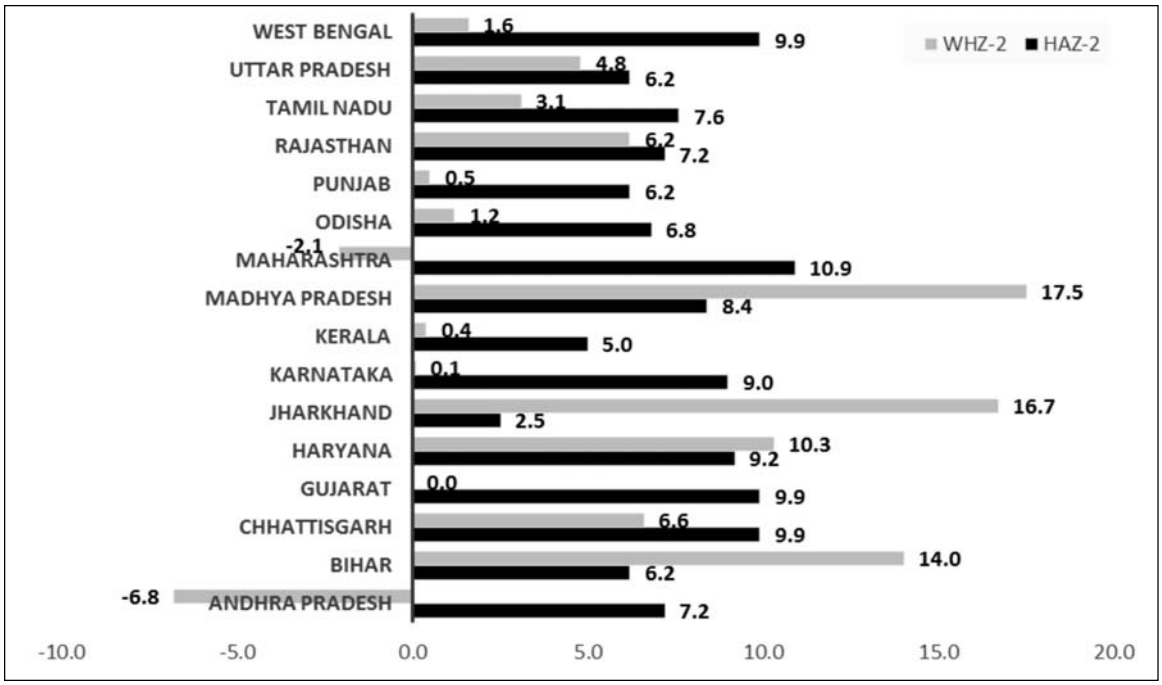

Fig. 1 *Percentage changes between NFHS3 and RSOC in stunting and wasting.*

What's not new?

High levels of stunting indicate continuing large-scale prevalence of chronic malnutrition. Other correlates of social determinants such as open defecation and sanitation, while recording some improvement, continue to be abysmally low. Critical indicators that continue to be worrying are low birth weight, early age at marriage and low adolescent BMI. Equally serious are issues of complementary feeding, dietary diversity and breastfeeding indicators.

High prevalence of chronic malnutrition with acute exacerbations exemplifies chronic poverty and multiple deprivations [7]. The percentage of children in the 6-35 months age group accessing supplementary nutrition is as low as 22.8% in Uttar Pradesh, while it is much higher at 65.3% in Andhra Pradesh, 70.3% in Himachal Pradesh, 82.8% in Chhattisgarh and 89.2% in Odisha.

TREATMENT AS AN ATTRACTIVE ILLUSION

In this epidemiologic backdrop, two news items call for a careful examination. A civil society collective appealed to policymakers (in a press release) on July 23, 2015 to "declare malnutrition as a medical emergency to save India's children dying of hunger" [8]. The Press Trust of India quoted the Union Minister for Tribal Affairs on August 4 that his Ministry will identify and document medicinal herbs helpful in the treatment of malnutrition [9].

The moot question: can malnutrition be 'treated'? Current mainstream global notions draw upon African experiences where Severe Acute Malnutrition (SAM) is triggered by acute crises such as drought, crop failure and civil wars. Classical SAM is a medical emergency (with high risks of mortality) requiring feeding with ready to use therapeutic foods (RUTF) along with other medical interventions. The predominant form of malnutrition in India is significantly different from the classical SAM and standardized protocols for treatment are not as effective, requiring much longer duration to achieve targeted weight gains even with RUTF. This is on account of high levels of underlying stunting. Stunting signifies chronic undernutrition and has no scope for 'cure' in a therapeutic mode.

Programmatic implications are thus primarily two-fold: (*i*) blend and combine multiple approaches for management of malnourished children in community and institutional settings; and (*ii*) a breadth of interventions to address multi-dimensional poverty and prevent chronic malnutrition through long-term and multi-sectoral efforts at building community capacity and support structures. Critical weaknesses include shortage of pediatricians even at the district hospital level (recently released rural health service data point to shortfalls up to 90% in high burden states), and a cogent strategy for continuum of care [10].

BRIDGING THE GAP

Gaps remain in nutrition programming in the country at

TABLE I DISTRIBUTION OF STUNTING AND WASTING ACROSS STATES

Stunting	*Wasting*								
	Low			*Medium*			*High*		
	Moved to (2013-14)	*Moved from (2005-6)*	**No change*	*Moved to (2013-14)*	*Moved from (2005-6)*	**No change*	*Moved to (2013-14)*	*Moved from (2005-6)*	**No change*
Low	Sikkim	Goa, Jammu & Kashmir	-	Delhi, Nagaland, Mizoram	Kerala, Tamil Nadu	-	Kerala, Tamil Nadu, AP, Goa	-	-
Medium	Haryana, Uttarakhand, Assam, Jammu & Kashmir	Andhra Pradesh, AP, Nagaland, Sikkim	Punjab, Manipur	-	Odisha	Rajasthan, Himachal Pradesh	West Bengal, Odisha, Maharashtra, Andhra Pradesh Karnataka	-	-
High	-	West Bengal, Delhi, UP, Assam, Mizoram	-	Bihar, UP Meghalaya	Gujarat, Haryana, Maharashtra, Uttarakhand, Karnataka	Chhattisgarh	Gujarat	Bihar, Meghalaya	Jharkhand, Madhya Pradesh

** from NFHS-3 (2005-06) to RSoC (2013-14); UP: Uttar Pradesh; AP: Arunachal Pradesh.*

all levels. The release of the much-delayed RSoC data is welcome. Regrettably, there is no institutional mechanism in place to ensure regular availability of anthropometric data at national, state and district levels. The NFHS-4 seems to be indefinitely delayed. The first step towards meaningful planning and monitoring would be to put in place a regular and comprehensive nutrition surveillance system and incorporate it with the Mother and Child Tracking System (MCTS). It is hoped that this, long with a multi-sectoral comprehensive approach towards tackling malnutrition in all its forms, is what the long-awaited National Nutrition Mission will encompass. The Sustainable Development Goal 2.2 calls for ending all forms of malnutrition by 2030, including achieving by 2025 the internationally agreed targets on stunting and wasting in children under five years of age. It's a rocky road ahead; difficult, if not impossible!

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