

EDITOR'S NOTE

As India continues its dual battle – one against coronavirus pandemic and the second against malnutrition, this issue of Abstract Digest brings to you a collection of articles that are primarily India-focused and a few of them discuss measurement of outcomes and implications. Given below is the list of peer-reviewed articles in this issue on the outcomes, determinants and interventions pertaining to maternal and child nutrition. Please click on the title if you wish to go straight to the article or scroll down to explore the abstract in the pages that follow.

Stay safe and enjoy reading!

List of articles in this issue

Tracking Progress in Anthropometric Failure among Children in India: A Geospatial Analysis

Singh et al. 2020. *Epidemiology* 10(4).

Association does not imply prediction: the accuracy of birthweight in predicting child mortality and anthropometric failure

Swaminathan et al. 2020. *Annals of Epidemiology* 50: 7-14.

A typology of dietary and anthropometric measures of nutritional need among children across districts and parliamentary constituencies in India, 2016

Beckerman-Hsu et al. 2020. *Journal of Global Health* 10(2): 020424.

Does the Choice of Metric Matter for Identifying Areas for Policy Priority? An Empirical Assessment Using Child Undernutrition in India

Rajpal et al. 2020. *Social Indicators Research*.

Is fatigue a cue to obtain iron supplements in Odisha, India? A mixed methods investigation

Yilma et al. 2020. *BMJ Open* 10: e037471.

Malnutrition and poverty in India: does the use of public distribution system matter?

Panda et al. 2020. *BMC Nutrition* 6(41).

Effect of home-based newborn care on neonatal and infant mortality: a cluster randomised trial in India

Rasaily et al. 2020. *BMJ Global Health* 5(9).

Costing and Cost-Effectiveness of a Mobile Health Intervention (ImTeCHO) in Improving Infant Mortality in Tribal Areas of Gujarat, India: Cluster Randomized Controlled Trial

Modi et al. 2020. *JMIR Mhealth Uhealth* 8(10): e17066

Counseling Is a Relationship Not Just a Skill: Re-conceptualizing Health Behavior Change Communication by India's Accredited Social Health Activists

Ved and Scott. 2020. *Global Health: Science and Practice* 8(3): 332-334.

Nutrition-Sensitive Agriculture: A Systematic Review of Impact Pathways to Nutrition Outcomes

Sharma et al. 2020. *Advances in Nutrition*: nmaa103.

Urbanization and food consumption in India

Pandey et al. 2020. *Scientific Reports* 10: 17241.

Geo-mapping of COVID-19 risk correlates across districts and parliamentary constituencies in India

Subramanian et al. 2020. *Harvard Data Science Review*.

Lessons from COVID-19 pandemic for the child survival agenda

Subramanian et al. 2020. *Journal of Global Health* 10(2): 020357.

PEER-REVIEWED

Tracking Progress in Anthropometric Failure among Children in India: A Geospatial Analysis

Singh, S.K., P. Menon, and A. Chaudary. 2020. "Tracking Progress in Anthropometric Failure among Children in India: A Geospatial Analysis". *Epidemiology* 10(4). <https://www.omicsonline.org/open-access/tracking-progress-in-anthropometric-failure-among-children-in-india-a-geospatial-analysis-113817.html>

Background: This paper deals with three key indicators of anthropometric failure viz. stunting, wasting, and underweight, their significant correlates, and spatial dependence across 640 districts of India. The paper uses data from three different rounds of NFHS conducted from 1998 to 2015. The spatial analysis uses district-level information collected first time in NFHS-4 (2015-16).

Methods: Analytical methods used in this paper include multivariate logistic regression to examine the adjusted effects of various predictors and predicted probabilities to explain changes in the likelihood of anthropometric failures over time. Besides, bivariate LISA maps and spatial error models provide spatial dependence and clustering in anthropometric failures among children.

Results: Results highlight that women's education, maternal nutrition, birth order, birth weight, and the wealth quintiles of households were essential markers of the anthropometric failures among the children. The likelihood of anthropometric failures declined considerably during 1998-2005 in comparison to 2005-15, especially among the children from the wealthiest quintiles. Spatial clustering in the prevalence of anthropometric failures portrayed that Moran's I values were significant for the utilization of ICDS services and mothers having low BMI. The univariate Moran's I statistics were 0.62 and 0.72 for stunting and underweight, respectively. When spatial weights were considered, the autoregression model noticeably became stronger in predicting the prevalence of stunting and underweight.

Conclusions: Evidence on significant correlates and spatial dependence of anthropometric failure shed the importance of strengthening multisectoral convergence in various nutrition-specific and nutrition-sensitive interventions in combating the anthropometric failures in the context of nature and patterns emerging in various hotspots and cold spots.

Association does not imply prediction: the accuracy of birthweight in predicting child mortality and anthropometric failure

Swaminathan, A., R. Kim, and S.V. Subramanian. 2020. "Association does not imply prediction: The accuracy of birthweight in predicting child mortality and anthropometric failure". *Annals of Epidemiology* 50: 7-14. <https://doi.org/10.1016/j.annepidem.2020.08.001>

Purpose: Epidemiologic studies often conflate the strength of association with predictive accuracy and build classification models based on arbitrarily selected probability cutoffs without considering the cost of misclassification. We illustrated these common pitfalls by building association, prediction, and classification models using birthweight as an exposure and child mortality and child anthropometric failure as outcomes.

Methods: Nationally representative samples of 188,819 and 164,113 children aged less than 5 years across India were used for our analysis of mortality and anthropometric failure, respectively. We assessed outcomes of neonatal, postneonatal, and child mortality as well as stunting, wasting, and underweight. Birthweight was the main exposure. We used adjusted and unadjusted logistic regression models to evaluate association strength, univariable and multivariable logistic regression models trained on 80% of the data using 10-fold cross-validation to evaluate predictive power, and classification models across a series of possible misclassification cost scenarios to evaluate classification accuracy.

Results: Birthweight was strongly associated with five of six outcomes ($P < .001$), and associations were robust to covariate adjustment. Prediction models evaluated on the test set showed that

birthweight was a poor discriminator of all outcomes (area under the curve < 0.62), and that adding birthweight to a multivariable model did not meaningfully improve discrimination. Prediction models for anthropometric failure showed substantially better calibration than prediction models for mortality. Depending on the ratio of false positive (FP) cost to false negative (FN) cost, the probability cutoff that minimized total misclassification cost ranged from 0.116 (cost ratio = 7:93) to 0.706 (cost ratio = 4:1), TPR ranged from 0.999 to 0.004, and PPV ranged from 0.355 to 0.867..

Conclusions: Although birthweight is strongly associated with mortality and anthropometric failure, it is a poor predictor of child health outcomes, highlighting that strong associations do not imply predictive power. We recommend that (1) future research focus on building predictive models for anthropometric failure given their clinical relevance in diagnosing individual cases, and that (2) studies that build classifiers report performance metrics across a range of cutoffs to account for variation in the cost of FPs and FNs.

A typology of dietary and anthropometric measures of nutritional need among children across districts and parliamentary constituencies in India, 2016

Beckerman-Hsu, J.P., P. Chatterjee, R. Kim, S. Sharma, and S.V. Subramanian. 2020. "A typology of dietary and anthropometric measures of nutritional need among children across districts and parliamentary constituencies in India, 2016." *Journal of Global Health* 10(2): 020424.

<https://dx.doi.org/10.7189%2Fjogh.10.020424>

Background: Anthropometry is the most commonly used approach for assessing nutritional need among children. Anthropometry alone, however, cannot differentiate between the two immediate causes of undernutrition: inadequate diet vs disease. We present a typology of nutritional need by simultaneously considering dietary and anthropometric measures, dietary and anthropometric failures (DAF), and assess its distribution among children in India.

Methods: We used the 2015-16 National Family Health Survey, a nationally representative sample of children aged 6-23 months (n = 67 247), from India. Dietary failure was operationalized using World Health Organization (WHO) standards for minimum dietary diversity. Anthropometric failure was operationalized using WHO child growth reference standard z-score of <-2 for height-for-age (stunting), weight-for-age (underweight) and weight-for-height (wasting). We also created a combined anthropometric measure for children who had any one of these three anthropometric failures. We cross-tabulated dietary and anthropometric failures to produce four combinations: Dietary Failure Only (DFO), Anthropometric Failure Only (AFO), Both Failures (BF), and Neither Failure (NF). We estimated the prevalence and distribution of the four types, nationally, and across 640 administrative districts and 543 Parliamentary Constituencies (PCs) in India.

Results: Nationally, 80.3% of children had dietary failure and 53.7% had at least one anthropometric failure. The prevalence for the four DAF types was: 44.0% (BF), 36.3% (DFO), 9.8% (AFO), and 9.9% (NF). Dietary and anthropometric measures were discordant for 46.1% of children; these children had nutritional needs identified by only one of the two measures. Nationally, this translates to 12 181 627 children with DFO and 3 281 913 children with AFO; the nutritional needs of these children would not be captured if using only dietary or anthropometric assessment. Substantial variation was observed across districts and PCs for all DAF types. The interquartile ranges for districts were largest for BF (29.8%-53.0%) and lowest for AFO (5.5%-13.4%).

Conclusions: The current emphasis on anthropometry for measuring nutritional need should be complemented with diet- and food-based measures. By differentiating inadequate food intake from other causes of undernutrition, the DAF typology brings precision in identifying nutritional needs among children. These insights may improve the development and targeting of nutrition interventions.

Does the Choice of Metric Matter for Identifying Areas for Policy Priority? An Empirical Assessment Using Child Undernutrition in India

Rajpal S., R. Kim, L. Liou, W. Joe, and S.V. Subramanian. 2020. "Does the choice of metric matter for identifying areas for policy priority? An empirical assessment using child undernutrition in India". *Social Indicators Research*. <https://doi.org/10.1007/s11205-020-02467-9>

Ratio-based prevalence and absolute headcounts are the two most commonly accepted metrics to measure the burden of various socioeconomic phenomenon. However, ratio-based prevalence, calculated as the number of cases with certain conditions relative to the total population, is by far the most widely used to rank burden and consequently for targeting, across different populations, often defined in terms of geographical areas. In this regard, targeting areas exclusively based on prevalence-based metric poses certain fundamental difficulties with some serious policy implications. Drawing the data from the National Family Health Survey 2015–2016, and Census 2011, this paper takes four indicators of child undernutrition in India as an example to examine two contextual questions: first, does the choice of metric matter for targeting areas for reducing child undernutrition in India? and second; which metric should be used to facilitate comparisons and targeting across variable populations? Our findings suggest a moderate correlation between prevalence estimates and absolute headcounts implying that choice of metric does matter when targeting child undernutrition. Huge variations were observed between prevalence-based and absolute count-based ranking of the districts. In fact, in various cases, districts with the highest absolute number of undernourished children were ranked as relatively lower-burden districts based on prevalence. A simple comparison between the two approaches—when applied to targeting undernourished children in India—indicates that prevalence-based prioritization may miss high-burden areas where substantially higher number of undernourished children are concentrated. For developing populous countries like India, which is already grappling with high levels of maternal and child malnutrition and poor health infrastructure along with intrinsic socioeconomic inequalities, it is critical to adopt an appropriate metric for effective targeting and prioritization.

Is fatigue a cue to obtain iron supplements in Odisha, India? A mixed methods investigation

Yilma, H., E. Sedlander, R.N. Rimal, and S. Pattnaik. 2020. "Is fatigue a cue to obtain iron supplements in Odisha, India? A mixed methods investigation". *BMJ Open* 10: e037471. <http://dx.doi.org/10.1136/bmjopen-2020-037471>

Objectives: This study aims to understand if fatigue, the main symptom of anaemia, is a health concern that cues women and their referent groups to obtain iron folic acid supplements.

Design: This is a mixed methods study that consisted of a cross-sectional perceptual mapping and card sorting activity along with 16 focus group discussions with women of reproductive age, mothers-in-law and men. Participants of the perceptual mapping and card sorting activity were asked to compare images of anaemia-related items and concepts. Participants in the focus group discussions were asked about their daily life, aspirations and concerns among women and perceptions of anaemia and iron supplementation in the community. The quantitative data were analysed through multidimensional scaling and analyses of variance in SPSS. The qualitative data were analysed through applied thematic analysis using NVivo.

Setting: Bhubaneswar, Odisha, India.

Participants: Women of reproductive age (n=30), mothers-in-law (n=30) and married men (n=30) were randomly selected to participate in the perceptual mapping and card sorting exercise. A separate sample of each group was randomly selected for the focus group discussions (n=148).

Primary and secondary outcome measures: We collected perceptions of dissimilarity between anaemia-related items, including fatigue and medical items; the extent to which these items were perceived as important to health or likable; and qualitative information about gender norms.

Results: Cognitive maps and card sorting revealed that fatigue was conceptualised distinctly from items related to medical treatment and that perceptions around fatigue's importance to health were low. Women from the focus groups reported that fatigue is a regular part of their daily life.

Conclusion: Our results indicate that fatigue is currently not an adequate cue to seek treatment, perhaps due to the normalisation of fatigue as a part of women's daily life.

Malnutrition and poverty in India: does the use of public distribution system matter?

Panda, B.K., S.K. Mohanty, I. Nayak, V.D. Shastri, and S.V. Subramanian. 2020. "Malnutrition and poverty in India: Does the use of public distribution system matter?" *BMC Nutrition* 6(41). <https://doi.org/10.1186/s40795-020-00369-0>

Background: Large scale public investment in Public Distribution System (PDS) have aimed to reduce poverty and malnutrition in India. The PDS is the largest ever welfare programme which provides subsidised food grain to the poor households. This study attempts to examine the extent of stunting and underweight among the children from poor and non-poor households by use of public distribution system (PDS) in India.

Methods: Data from the National Family and Health Survey-4 (NFHS-4), was used for the analysis. A composite variable based on asset deprivation and possession of welfare card provided under PDS (BPL card), was computed for all households and categorised into four mutually exclusive groups, namely real poor, excluded poor, privileged non-poor and non-poor. Real poor are those economically poor and have a welfare card, excluded poor are those economically poor and do not have welfare card, privileged poor are those economically non-poor but have welfare card, and non-poor are those who are not economically poor and do not have welfare card. Estimates of stunting and underweight were provided by these four categories. Descriptive statistics and logistic regression were used for the analysis.

Results: About half of the children from each real poor and excluded poor, two-fifths among privileged non-poor and less than one-third among non-poor households were stunted in India. Controlling for socio-economic and demographic covariates, the adjusted odds ratio of being stunted among real poor was 1.42 [95% CI: 1.38, 1.46], 1.43 [95% CI: 1.39, 1.47], among excluded poor and 1.15 [95% CI: 1.12, 1.18], among privileged non-poor. The pattern was similar for underweight and held true in most of the states of India.

Conclusions: Undernutrition among children from poor households those excluded from PDS is highest, and it warrants inclusion in PDS. Improving the quality of food grains and widening food basket in PDS is recommended for reduction in level of malnutrition in India.

Effect of home-based newborn care on neonatal and infant mortality: a cluster randomised trial in India

Rasaily, R., N.C. Saxena, S. Pandey, B.S. Garg, S. Swain, S.D. Iyengar, V. Das, S. Sinha, S. Gupta, A. Sinha, S. Kumar, A. Pandey, R.M. Pandey, H.S. Sachdev, M.J. Sankar, S. Ramji, V.K. Paul, and A.T. Bang on behalf of the ICMR-HBMYI Study Group. 2020. "Effect of home-based newborn care on neonatal and infant mortality: a cluster randomised trial in India". *BMJ Global Health* 5(9). <http://dx.doi.org/10.1136/bmjgh-2017-000680>

Background: Home-based newborn care has been found to reduce neonatal mortality in rural areas. Study evaluated effectiveness of home-based care delivered by specially recruited newborn care workers- Shishu Rakshak (SR) and existing workers- anganwadi workers (AWW) in reducing neonatal and infant mortality rates.

Methods: This three-arm, community-based, cluster randomised trial was conducted in five districts in India. Intervention package consisted of pregnancy surveillance, health education, care at birth, care of normal/low birthweight neonates, identification and treatment of sick neonates and young infants using oral and injectable antibiotics and community mobilisation. The package was similar in both intervention arms—SR and AWW; difference being healthcare provider. The control arm received routine health services from the existing health system. Primary outcomes were neonatal

and young infant mortality rates at 'endline' period (2008–2009) assessed by an independent team from January to April 2010 in the study clusters.

Findings: A total of 6623, 6852 and 5898 births occurred in the SR, AWW and control arms, respectively, during the endline period; the proportion of facility births were 69.0%, 64.4% and 70.6% in the three arms. Baseline mortality rates were comparable in three arms. During the endline period, the risk of neonatal mortality was 25% lower in the SR arm (adjusted OR 0.75, 95% CI 0.57 to 0.99); the risks of early neonatal mortality, young infant mortality and infant mortality were also lower by 32%, 27%, and 33%, respectively. The risks of neonatal, early neonatal, young infant, infant mortality in the AWW arm were not different from that of the control arm.

Interpretation: Home-based care is effective in reducing neonatal and infant mortality rates, when delivered by a dedicated worker, even in settings with high rates of facility births.

Costing and Cost-Effectiveness of a Mobile Health Intervention (ImTeCHO) in Improving Infant Mortality in Tribal Areas of Gujarat, India: Cluster Randomized Controlled Trial

Modi, D., S. Saha, P. Vaghela, K. Dave, A. Anand, S. Desai, and P. Shah. 2020. "Costing and Cost-Effectiveness of a Mobile Health Intervention (ImTeCHO) in Improving Infant Mortality in Tribal Areas of Gujarat, India: Cluster Randomized Controlled Trial". *JMIR Mhealth Uhealth* 8(10): e17066 <https://doi.org/10.2196/17066>

Background: During 2013, a mobile health (mHealth) program, Innovative Mobile Technology for Community Health Operation (ImTeCHO), was launched in predominantly tribal and rural communities of Gujarat, India. ImTeCHO was developed as a job aid for Accredited Social Health Activists (ASHAs) and staff of primary health centers to increase coverage of maternal, neonatal, and child health care.

Objective: In this study, we assessed the incremental cost per life-years saved as a result of the ImTeCHO intervention as compared to routine maternal, neonatal, and child health care programs.

Methods: A two-arm, parallel, stratified cluster randomized trial with 11 clusters (primary health centers) randomly allocated to the intervention (280 ASHAs, n=2,34,134) and control (281 ASHAs, n=2,42,809) arms was initiated in 2015 in a predominantly tribal and rural community of Gujarat. A system of surveillance assessed all live births and infant deaths in the intervention and control areas. All costs, including those required during the start-up and implementation phases, were estimated from a program perspective. Incremental cost-effectiveness ratios were estimated by dividing the incremental cost of the intervention with the number of deaths averted to estimate the cost per infant death averted. This was further analyzed to estimate the cost per life-years saved for the purpose of comparability. Sensitivity analysis was undertaken to account for parameter uncertainties.

Results: Out of a total of 5754 live births (3014 in the intervention arm, 2740 in the control arm) reported in the study area, per protocol analysis showed that the implementation of ImTeCHO resulted in saving 11 infant deaths per 1000 live births in the study area at an annual incremental cost of US \$163,841, which is equivalent to US \$54,360 per 1000 live births. Overall, ImTeCHO is a cost-effective intervention from a program perspective at an incremental cost of US \$74 per life-years saved or US \$5057 per death averted. In a realistic environment with district scale-up, the program is expected to become even more cost-effective.

Conclusions: Overall, the findings of our study strongly suggest that the mHealth intervention as part of the ImTeCHO program is cost-effective and should be considered for replication elsewhere in India.

Editorial

Counseling Is a Relationship Not Just a Skill: Re-conceptualizing Health Behavior Change Communication by India's Accredited Social Health Activists

Ved, R., and K. Scott. 2020. "Counseling Is a Relationship Not Just a Skill: Re-conceptualizing Health Behavior Change Communication by India's Accredited Social Health Activists". *Global Health: Science and Practice* 8(3): 332-334. <https://doi.org/10.9745/GHSP-D-20-00426>

Key Messages

- As both community members and health system functionaries, the capacity of India's community health workers—accredited social health activists (ASHAs)—to improve health outcomes depends on their relationships with families and the support they receive from the health system.
- Training ASHAs on interpersonal communication, such as how to convey the right messages in a persuasive manner, is an important step to improve their impact as health behavior change communicators. However, it is not sufficient.
- Effective counseling also requires that ASHAs have strong positive relationships with community members. These relationships are developed over time as ASHAs link communities to high quality health services and showcase their capacity to directly meet key health needs.

Perspective

Nutrition-Sensitive Agriculture: A Systematic Review of Impact Pathways to Nutrition Outcomes

Sharma, I.K., S.D. Prima, D. Essink, and J.E.W. Broerse. 2020. "Nutrition-Sensitive Agriculture: A Systematic Review of Impact Pathways to Nutrition Outcomes". *Advances in Nutrition*: nmaa103. <https://doi.org/10.1093/advances/nmaa103>

The role of agriculture in reducing undernutrition is widely recognized, yet there is also consensus on the need to make the sector nutrition-sensitive. Evidence on the impact pathways from nutrition-sensitive agriculture (NSA) interventions, agricultural interventions with specific nutrition objectives, and actions detailing each temporal stage to reach nutrition outcomes is limited, however. We thus synthesized study results regarding impact of NSA interventions on nutrition outcomes relating to undernutrition, and constructed an impact pathway by mapping the evidence on each temporal stage from interventions to nutrition outcomes. We used Preferred Reporting Items for Systematic Reviews and Meta-Analyses to conduct and report our systematic review of studies on NSA interventions implemented in low- and lower-middle-income countries. Forty-three studies that met the inclusion criteria were extracted and synthesized across impact and pathways analyses. We carried out a thematic analysis of the effect of NSA interventions using evidence-based indicators and constructed the pathways by adopting a published framework on agriculture to nutrition pathways. Our findings reveal that NSA interventions can significantly improve dietary practices, and have the potential to enhance care practices and reduce occurrence of diseases, indicating their effectiveness in simultaneously addressing multiple determinants of undernutrition. However, NSA interventions have a lesser impact on nutritional status. NSA interventions lead to nutrition outcomes through 5 key pathways: food production, nutrition-related knowledge, agricultural income, women's empowerment, and strengthening of local institutions. We emphasize the need to carefully design, implement, and evaluate interventions with consideration for factors affecting impact pathways. Future research should focus on the effect of interventions combining multisector components, and pathways through non-food-production-related income, women's empowerment, strengthening of local institutions, food prices at intervention level, and expenditure on health care.

Urbanization and food consumption in India

Pandey, B., M. Reba, P.K. Joshi, and K.C. Seto. "Urbanization and food consumption in India". *Scientific Reports* 10: 17241. <https://doi.org/10.1038/s41598-020-73313-8>

The shift towards urban living is changing food demand. Past studies on India show significant urban–rural differences in food consumption. However, a scientific understanding of the underlying relationships between urbanization and food consumption is limited. This study provides the first detailed analysis of how urbanization influences both quantity and diversity of food consumption in India by harnessing the strength of multiple datasets, including consumer expenditure surveys, satellite imagery, and census data. Our statistical analysis shows three main findings. First, in contrast to existing studies, we find that much of the variation in food consumption quantity is due to income and not urbanization. After controlling for income and state-level differences, our results show that average consumption is higher in urban than rural areas for fewer than 10% of all commodities. That is, there is nearly no difference in average consumption between urban and rural residents. Second, we find the influence of urbanization as a population share on food consumption diversity to be statistically insignificant ($p\text{-value} > 0.1$). Instead, the results show that infrastructure, market access, percentage working women in urban areas, and norms and institutions have a statistically significant influence. Third, all covariates of food consumption diversity we tested were found to be associated with urbanization. This suggests that urbanization influences on food consumption are both indirect and multidimensional. These results show that increases in the urban population size alone do not explain changes in food consumption in India. If we are to understand how food consumption may change in the future due to urbanization, the study points to the need for a more complex and multidimensional understanding of the urbanization process that goes beyond demographic shifts.

Geo-mapping of COVID-19 risk correlates across districts and parliamentary constituencies in India
 Subramanian, S.V., O. Karlsson, W. Zhang, and R. Kim. 2020. “Geo-mapping of COVID-19 risk correlates across districts and parliamentary constituencies in India”. *Harvard Data Science Review*.
<https://hdsr.mitpress.mit.edu/pub/sgoxm3ve>

In the current stage of the COVID-19 pandemic, as countries open up after an extended period of lockdown, it is important to assure the population that their health is not being sacrificed. In this article, we develop a geomapping approach to identify high-risk areas by considering four nonclinical risk correlates for COVID-19. These are population density, percentage of the population that is exposed to crowding in a household, percentage of the population without access to handwashing facilities, and percentage of the population over 65 years of age. We provide an empirical proof-of-concept demonstration for this approach for India at two critical geographic units: districts and parliamentary constituencies, collectively responsible for policy administration and governance. Our findings suggest that the geographies of the four nonclinical risk correlates are largely independent of one another (i.e., at most, there is a small correlation between measures). We avoid applying differential weights to the four measures or combining these measures into a single index, as there is an intrinsic rationale for viewing them separately since they represent mostly independent dimensions of risks that require different responses. Our primary objective was to leverage currently available data to provide decision makers detailed information and geovisualization, identifying areas with potentially differential susceptibilities to COVID-19. The information provided here can be used as a means for further ground verification and, when appropriate, for impact planning and intervention, as well as providing a rationale for eventual efficacy assessment of different nonpharmaceutical interventions. While this exercise is primarily descriptive at this stage, the estimates generated are new, rigorous, and have high relevance for timely policy discussions. We use data from the Demographic and Health Surveys, which have extensive geographic coverage and high level of standardizations, making our highly accessible approach easy to extend to other low- and middle-income countries. We share this conceptualization of geomapping, and all the data and codes used for this exercise, to encourage wider applications and advancements.

[Viewpoints](#)

Lessons from COVID-19 pandemic for the child survival agenda

Subramanian, S.V., P. Chatterjee, and O. Karlsson. 2020. "Lessons from COVID-19 pandemic for the child survival agenda". *Journal of Global Health* 10(2): 020357.

<http://www.jogh.org/documents/issue202002/jogh-10-020357.htm>

The public discourse around the COVID-19 pandemic has been strikingly quantitative. Worldwide, the mainstream media has regularly informed the public of confirmed COVID-19 cases and deaths, including projections of worst-case scenarios drawn from esoteric epidemiological models. The prominence and visibility of data, regardless of its completeness or quality, underscored the threat of COVID-19 to policy makers and lay individuals alike. It also prompted governments to swiftly lock down their societies, despite the socioeconomic disruptions and human suffering associated with such lockdowns. The widespread media coverage of COVID-19 data and swift response from governments highlight the potency of real-time data, and contain important lessons for public health policy, which when applied, could raise the profile of other health issues and spur action among key stakeholders.

NON-PEER REVIEWED

Visit [POSHAN website](#) to explore issues of our **COVID-19 Nutrition Digest** – a collection of recently published peer-reviewed and other resources, including research articles blogposts, opinion pieces etc. These are collated from various sources, and analyze the impacts of COVID-19 pandemic on the outcomes, determinants and coverage of interventions related to maternal and child nutrition.

- **COVID-19 Nutrition Digest** (Sep 2020) - <http://poshan.ifpri.info/2020/10/12/covid-19-nutrition-digest-september-2020/>
 - **COVID-19 Nutrition Digest** (Aug 2020) - <http://poshan.ifpri.info/2020/08/11/covid-19-nutrition-digest-august-2020/>
 - **COVID-19 Nutrition Digest** (July 2020) - <http://poshan.ifpri.info/2020/07/20/covid-19-nutrition-digest-july-2020/>
 - **COVID-19 Nutrition Digest** (June 2020) - <http://poshan.ifpri.info/2020/06/05/covid-19-nutrition-digest-june-2020/>
 - **COVID-19 Nutrition Digest** (May 2020) - <http://poshan.ifpri.info/2020/05/21/covid-19-nutrition-digest-may-2020/>
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Diets of children and adolescents: Unlocking current and future gains for human and planetary health

EAT, and UNICEF. 2020. *Diets of children and adolescents: Unlocking current and future gains for human and planetary health*. Oslo, Norway.

https://mcusercontent.com/fb1d9aabd6c823bef179830e9/files/f2c2e930-99c3-4b5a-bbad-a924ec21cb54/EAT_UNICEF_Meeting_Report.pdf

The urgent need for food system transformation to ensure the health of people and the planet is now globally recognized. However, the special dietary and nutritional needs of children have not been sufficiently considered in this agenda, nor the role children and adolescents themselves can play in improving their food environments. To gain a better understanding of what is required to achieve healthy diets for children and adolescents within planetary boundaries, EAT and UNICEF convened 29 experts from governments, academia, development agencies and youth organisations for the workshop "Diets of children and adolescents: Unlocking current and future gains for human and planetary health" in Oslo, Norway, from March 4–6 2020. During the three-day workshop, participants reviewed the latest evidence on healthy and sustainable diets for children and adolescents, identified research gaps and opportunity areas for action, and explored the role children and adolescents can play in advancing food systems transformation.

Improving maternal nutrition in South Asia: Implications for child wasting prevention efforts

Murira, Z., and H. Torlesse. 2020. "Improving maternal nutrition in South Asia: Implications for child wasting prevention efforts". *Field Exchange* 63, October 2020. p92.

www.enonline.net/fex/63/maternalnutritionsouthasia

The South Asia region has made remarkable gains in child survival over the past two decades. Child deaths are now concentrated in the neonatal period because of the success in preventing and treating childhood illnesses (UN IGME, 2019; Hug et al., 2019). In comparison, the rate of decline in child malnutrition has been slow. High prevalence rates and burdens persist and the region remains home to over half of the world's wasted children (25.1 million) and nearly 40% of the global stunting burden (56.1 million) (UNICEF, WHO and World Bank, 2020). The prevalence of child wasting in the region (14.8%) is just below the World Health Organization (WHO)'s 'very high' threshold of 15%. Wasting increases the vulnerability of children to infectious diseases and death and raises the risk of stunting and its associated long-term consequences on development. These risks accumulate with the frequency, duration and severity of wasting episodes (Richard et al., 2014; Schoenbuchner et al., 2019). They are also greater for children who are wasted at birth or in early infancy (Mwangome et al., 2019), a period of life that has received relatively less attention in wasting prevention and treatment efforts.

Using Social Audits to Improve Delivery of State Nutrition-related Services: Lessons from the CAN Program

Gordon, J., N. Nisbett, and J.P. Tranchant. 2020. "Using Social Audits to Improve Delivery of State Nutrition-related Services: Lessons from the CAN Program". Brighton: IDS.

<https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/15702>

This short brief summarises the key findings from the IDS-led independent evaluation of the Collective Action for Nutrition (CAN) Social Audit programme in Odisha, India. The CAN programme was designed and implemented by the NGO, Society for Promoting Education and Rural Development (SPREAD) between 2016-2019. The evaluation was carried out between 2017-2019 in partnership with Development Corner Consulting (DCOR), India, with support from the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH). Findings from the evaluation provide new evidence on the effectiveness of the social audit model for improving state nutrition services in India and lessons learned for replication and scale up.

UPCOMING EVENTS & DEADLINES**21st International Congress on Nutrition and Health**

Theme: Exploring the Benefits and Advancements in Nutrition and Health Care during COVID-19

When: November 3-4, 2020

Where: Webinar

For more information: <https://health.nutritionalconference.com/>

3rd International Conference on Nutrition, Food Science and Health Management

Theme: Let's build healthiness rather than tracing diseases

When: December 1-2, 2020

Where: Webinar

For more information: <https://health-nutrition.conferenceseries.com/>

ABOUT POSHAN

Partnerships and Opportunities to Strengthen and Harmonize Actions for Nutrition in India (POSHAN) is a multi-year initiative that aims to build evidence on effective actions for nutrition and support the use of evidence in decision-making. It is supported by the Bill & Melinda Gates Foundation and led by IFPRI in India.

ABOUT ABSTRACT DIGEST

In each issue, the POSHAN Abstract Digest brings you some of the new and noteworthy studies on maternal and child nutrition. It focuses on India-specific studies and also brings to you other relevant global or regional literature with broader implications for maternal and child nutrition. The Abstract Digest is based on literature searches to identify selected studies that we think are most relevant to nutrition issues in India and to Indian programs and policies. We share with you a collection of abstracts from articles published in peer-reviewed journals, as well as selected non-peer-reviewed articles by researchers in reputed academic and/or research institutions and which demonstrated rigor in their research objectives, methodology, and analysis. The abstracts in this document are reproduced in their original form from their source, and without editorial commentary about specific articles.

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