

## EDITOR'S NOTE

Issue 38 of the Abstract Digest brings to you a series of studies on nutrition outcomes, including prevalence of stunting and its association with women's empowerment, nutrients in complementary feeding, and the impact of nutritional interventions among lactating mothers. In this issue we have also included two special sections. One features COVID-19 related studies and blogs, and the other features studies that have used the recently released National Family Health Survey-5 data.

Below is the list of peer-reviewed articles. Please click on the title if you wish to go straight to the article or scroll down to explore the abstracts in the pages that follow.

Stay safe and enjoy reading!

### List of peer-reviewed articles in this issue

#### **Nutrients in Complementary Feeding Protect Against Wasting, but Not Stunting: Results from a Multi-Country Longitudinal Cohort Study**

Hoffman. 2021. *The Journal of Nutrition* 151(1): 5–6.

#### **Mapping Changes in District Level Prevalence of Childhood Stunting in India 1998–2016: An Application of Small Area Estimation Techniques**

Srivastava et al. 2021. *SSM Population Health*.

#### **Are Indian Girls Really Better Nourished Than Indian Boys? Evidence From Indian National Family Health Survey 1992–2016**

Upadhyay et al. 2021. *Clinical Epidemiology and Global Health* 9: 251–260.

#### **Women's Empowerment and Child Stunting in India: An Investigation**

Kumar et al. 2020. *Journal of Population and Social Studies* 29: 47–66.

#### **Impact of Nutritional Interventions Among Lactating Mothers on the Growth of Their Infants in the First 6 Months of Life: A Randomized Controlled Trial in Delhi, India**

Taneja et al. 2021. *The American Journal of Clinical Nutrition*; nqaa383.

#### **Three-Year Review of a Capacity Building Pilot for a Sustainable Regional Network on Food, Nutrition and Health Systems Education in India**

Buckner et al. 2021. *BMJ Nutrition, Prevention & Health*.

#### **COVID-19 and the Burden of Ill-Health: A Double Crisis of Disruptions and Inequalities**

Bisht et al. 2020. *Journal of Social and Economic Development*.

## PEER-REVIEWED

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### **Nutrients in Complementary Feeding Protect Against Wasting, but Not Stunting: Results from a Multi-Country Longitudinal Cohort Study**

Hoffman, D.J. 2021. "Nutrients in Complementary Feeding Protect Against Wasting, but Not Stunting: Results from a Multi-Country Longitudinal Cohort Study." *The Journal of Nutrition* 151(1): 5–6. <https://doi.org/10.1093/jn/nxaa334>

In this issue of the *Journal of Nutrition*, a study by Maciel and colleagues from the MAL-ED (Etiology, Risk Factors and Interactions of Enteric Infections and Malnutrition and the Consequences for Child Health and Development) Network presents the impact of specific dietary components of CF on nutritional status in children from 7 countries in Africa, Asia, and South America. Briefly, the authors reported 2 key findings relative to CF: first, that a higher energy intake from CF is protective against underweight at 12 and 24 mo of age and wasting at 18 and 24 mo of age and, second, that a higher zinc intake is protective against underweight and wasting at 12 mo of age and only wasting at 24 mo of age. At the same time, no dietary variable from CF was found to promote linear growth, which is not unexpected, as stunting is an intergenerational condition resulting from a complex interaction between a number of factors, many of which are not dietary. Nonetheless, these results are the first quantitative data from a well-designed and rigorous longitudinal, international cohort study of CF and growth.

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### **Mapping Changes in District Level Prevalence of Childhood Stunting in India 1998–2016: An Application of Small Area Estimation Techniques**

Srivastava, S., H. Chandra, S.K. Singh, and A.K. Upadhyay. 2021. "Mapping Changes in District Level Prevalence of Childhood Stunting in India 1998-2016: An Application of Small Area Estimation Techniques." *SSM Population Health*. Article in press. First published online on February 03, 2021. <https://doi.org/10.1016/j.ssmph.2021.100748>

The four rounds of National Family Health Survey (NFHS) conducted during 1992-93, 1998-99, 2005-06 and 2015-16 is main source to track the health and development related indicators including nutritional status of children at national and state level in India. Except NFHS-4, earlier three rounds of data were unable to provides district-level estimates of childhood stunting due to the insufficient sample sizes. The small area estimation (SAE) techniques offer a viable solution to overcome the problem of small sample size. Therefore, this study uses SAE techniques to derive district level prevalence of childhood stunting corresponding to NFHS-2 (1998-99). Study further estimated GIS maps, univariate Local indicator of spatial autocorrelation (LISA) and Moran's I to understand the trend in district level childhood stunting between NFHS-2 and NFHS-4. Estimates obtained by SAE techniques suggest that prevalence ranges from 20.7% (95%CI: 18.8-22.7) in South Goa district of Goa to 64.4% (95%CI: 63.1-65.7) in Dhaulpur district of Rajasthan during 1998-99. The diagnostic measures used to validate the reliability of estimates obtained by SAE techniques indicate that the model-based estimates are reliable and representative at district level. Results of geospatial analysis indicates substantial reduction in childhood stunting between 1998 and 2016. Out of 640, district about 81 district experience reduction of more than 50%. At the same time 60 district experience less than 10% of reduction between 1998 and 2016. Spatial clustering of childhood stunting remains same over the study period except few addition cluster in Maharashtra, Andhra and Meghalaya in 2016. The district level estimates obtained from this study might be helpful in framing decentralized policies and implementation of vertical programs to enhance the efficacy of various nutrition interventions in priority districts of the country.

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### Are Indian Girls Really Better Nourished Than Indian Boys? Evidence From Indian National Family Health Survey 1992–2016

Upadhyay, K., and A. Singh. 2021. "Are Indian Girls Really Better Nourished Than Indian Boys? Evidence From Indian National Family Health Survey 1992–2016." *Clinical Epidemiology and Global Health* 9: 251–260. <https://doi.org/10.1016/j.cegh.2020.09.007>

**Objective:** Studies on child malnutrition find no evidence of gender difference in childhood stunting (48% for both boys and girls) in India. Several States show a better nutritional status of girls than boys. Therefore, we argued that in an environment of high mortality among girls, the surviving girls are highly wanted and thus are healthier. Therefore, child nutritional status cannot be studied independent of mortality. **Methods:** We used three rounds of data from the National Family Health Survey 1992-93, 1998-99, 2015-16 to examine whether Indian girls are really better nourished than boys. Height for age z-score (HAZ), as defined by the World Health Organization was used to measure the health of children. We first imputed the HAZ for dead boys and girls using multiple imputation techniques. Second, these imputed HAZ for dead boys and girls were combined with HAZ of surviving boys and girls to provide a simulated HAZ separately for boys and girls. **Results:** Results show that relative reduction in average HAZ was slightly higher for girls than boys in each of three rounds of NFHS. Although the relative decline in average HAZ was higher for girls than boys, the simulated z-scores after incorporating the average HAZ for dead children suggest no significant difference between the overall HAZ of boys and girls in any of the three surveys. **Conclusion:** We do not find enough evidence to establish the effect of mortality selection in explaining the better nutritional status of girls compared with boys in India. Our findings are consistent across the three rounds of NFHS and at different levels of mortality.

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### Women's Empowerment and Child Stunting in India: An Investigation

Kumar, R., and S. Lakhtakia. 2020. "Women's Empowerment and Child Stunting in India: An Investigation." *Journal of Population and Social Studies* 29: 47–66. <https://so03.tci-thaijo.org/index.php/jpss/article/view/225656>

Child stunting is associated with substantial impediments to human development and loss in human capital. An important factor contributing to the prevalence of stunting, a manifestation of malnutrition among children, is believed to be women's lack of empowerment. This paper, therefore, aims to describe the trends and variations in child stunting in India using data from the National Family and Health Survey. This study also seeks to find the factors associated with child stunting, with particular focus on the influence of women's empowerment. We analyzed stunting across various socioeconomic groups, and applied chi-square tests and logistic regression modeling to determine whether any significant association existed between the different dimensions of women's empowerment and child stunting. We found that the financial autonomy of women is one of the factors which is associated with a reduction in the odds of being a child stunted. Other reasons that decrease the odds of child stunting are maternal health, measured by body mass index, and the number of antenatal visits during pregnancy. Women's empowerment can, therefore, play an essential role in improving child nutrition.

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### Impact of Nutritional Interventions Among Lactating Mothers on the Growth of Their Infants in the First 6 Months of Life: A Randomized Controlled Trial in Delhi, India

Taneja, S., R.P. Upadhyay, R. Chowdhury, A.V. Kurpad, H. Bhardwaj, T. Kumar, P. Dwarkanath, B. Bose, S. Devi, G. Kumar, B. Kaur, R. Bahl, and N. Bhandari. 2021. "Impact of Nutritional Interventions Among Lactating Mothers on the Growth of Their Infants in the First 6 Months of Life: A Randomized

Controlled Trial in Delhi, India." *The American Journal of Clinical Nutrition*; nqaa383.  
<https://doi.org/10.1093/ajcn/nqaa383>

**Background:** In lower-middle-income settings, growth faltering in the first 6 mo of life occurs despite exclusive breastfeeding. **Objective:** The aim was to test the efficacy of an approach to improve the dietary adequacy of mothers during lactation and thus improve the growth of their infants. **Methods:** Eligible mother–infant dyads (infants  $\leq 7$  d of age) were randomly assigned to either intervention or control groups. Mothers in the intervention group received snacks that were to be consumed daily, which provided 600 kcal of energy—with 25–30% of energy derived from fats (150–180 kcal) and 13% of energy from protein (80 kcal). Micronutrients were supplemented as daily tablets. We provided counseling on breastfeeding and infant-care practices to mothers in both groups. The primary outcome was attained infant length-for-age z scores (LAZ) at 6 mo of age. Secondary outcomes included exclusive breastfeeding proportion reported by the mother, maternal BMI and midupper arm circumference (MUAC), hemoglobin concentrations in mothers and infants, and the proportion of anemic infants at 6 mo of age. **Results:** We enrolled 816 mother–infant dyads. The intervention did not achieve a significant effect on LAZ at 6 mo (adjusted mean difference: 0.09; 95% CI: –0.03, 0.20). Exclusive breastfeeding at 5 mo was higher (45.1% vs. 34.5%; RR: 1.31; 95% CI: 1.04, 1.64) in the intervention group compared with the controls. There were no significant effects on mean hemoglobin concentration or the proportion of anemic infants at 6 mo of age compared with the control group. We noted significant effects on maternal nutritional status (BMI, MUAC, hemoglobin concentration, and proportion anemic). **Conclusions:** Postnatal supplementation of 600 kcal energy, 20 g protein, and multiple micronutrients daily to lactating mothers did not affect infant LAZ at age 6 mo. Such supplementation may improve maternal nutritional status.

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### Three-Year Review of a Capacity Building Pilot for a Sustainable Regional Network on Food, Nutrition and Health Systems Education in India

Buckner, L., L. Buckner, H. Carter, A. Ahankari, R. Banerjee, S. Bhar, S. Bhat, Y. Bhattacharya, D. Chakraborty, P. Douglas, L. Fitzpatrick, S. Maitra-Nag, S. Mukherjee, S. Ray, A. Roy, A. Saha, M. Sayegh, M. Rajput-Ray, L. Tsimpli, and S. Ray. 2021. "Three-Year Review of a Capacity Building Pilot for a Sustainable Regional Network on Food, Nutrition and Health Systems Education in India." *BMJ Nutrition, Prevention & Health*. <http://dx.doi.org/10.1136/bmjnph-2020-000180>

**Background:** In Kolkata (India), there are high rates of malnourished children (45.9%) under the age of three, impacting growth, organ development, function, and cognition. Mothers have a major role to play during this crucial development stage, with research showing nutrition knowledge, attitudes and practices (KAP) of mothers are important determinants of childhood malnutrition. **Aims:** To document 3 years of capacity building towards a sustainable nutrition education network in Kolkata, India, while assessing the ability to perform data collection in the form of needs assessments, impact assessments and capacity reviews. **Methods:** Descriptive review and analysis of engagement and impact from 3 years of work by the NNEdPro Global Centre for Nutrition and Health, initiating locally led nutrition education interventions. Mapping to the Indian National Nutrition Strategy was also performed to review adherence to nationwide priorities surrounding nutrition and determine the wider application potential of the network. **Results:** Two simultaneous projects were taken forward by a team of local healthcare professionals and student champions. Project 1—medical college workshops for medical student nutrition education with added focus on underserved populations, Project 2—preparation for a 'Mobile Teaching Kitchen' (MTK) in marginalised communities to empower local women as nutrition educators. Data collection methods used for analysing markers of impact and sustainability were semi-structured interviews of the community members, and KAP questionnaires to assess response to educational sessions. **Conclusion:** With local support it is possible to create and sustain fieldwork for an extended period with meaningful outputs and impact.

This initiative demonstrates that it is possible to use healthcare professionals, students and volunteers with low-intensity training and a low-cost approach to produce action research with considerable impact and results in rapid, reliable and robust manner.

## NON-PEER REVIEWED

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### The Intersectional Role of Paternal Gender-Equitable Attitudes and Maternal Empowerment on Child Undernutrition in India

Sharma, A.J., and M.A. Subramanyam. 2021. *Social Epidemiology*, Indian Institute of Technology, Gandhinagar, India. <https://doi.org/10.1101/2021.02.03.21251084>

**Objectives:** Undernutrition is a major global health concern, especially for the low- and middle-income countries. Despite several programmatic efforts by the government, prevalence of undernutrition among Indian children under five years was about 38% in 2015. While studies have extensively investigated the influence of sociodemographic and maternal related factors on child undernutrition, the paternal factors and their interactions with other causal factors are understudied. To fill this gap, we conducted an intersectional analysis to assess the relationship between maternal, paternal, and wealth related factors with stunting and severe stunting among underfives in India. **Methods:** We used a sample of 22,867 mother-father-child triads from the fourth round of India's National Family Health Survey (2015-16). We fitted survey adjusted logistic regression models and further adjusted our models for several sociodemographic variables. **Results:** Our statistical models revealed that even among children from poorer households, those with either an empowered mother or a father with gender-equitable attitudes versus those with none such parents, had a lower odds of stunting (AOR: 0.92, CI: 0.84, 1.02) and severe stunting (AOR: 0.87, CI:0.77, 0.98), independent of all covariates. **Conclusion:** We argue that while women's autonomy could reduce the risk of child undernutrition, focusing on men's attitudes towards gender equity also holds promise for reducing undernutrition. Our findings not only underscore how patriarchy is embodied in undernourished children, but also suggest programmatic interventions to address this deep-rooted scourge in India.

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### Take Home Rations (THR) and Cash Transfers for Maternal and Child Nutrition: A Synthesis of Evidence in India

Narayanan, S., and S. Shah. 2020. "Take Home Rations (THR) and Cash Transfers for Maternal and Child Nutrition: A Synthesis of Evidence in India." Report S-18016-IND-1. International Growth Centre. New Delhi, India. <https://www.theigc.org/publication/take-home-rations-thr-and-cash-transfers-for-maternal-and-child-nutrition-a-synthesis-of-evidence-in-india/>

Devoting public resources to reducing micronutrient deficiencies in children is essential for improved health, and is associated with large economic returns in the long-run through better productivity, lower health costs, and intergenerational transmission of these benefits. The Government of India has a long history of interventions focused on maternal and child health, through cash and in-kind transfers of various types. A key component of the former has been the provision of food rations under the Integrated Child Development Services (ICDS) scheme's Supplementary Nutrition Program (SNP), established in 1975. Currently, as part of the SNP, pregnant women and mothers of children aged 6 months to 3 years receive monthly Take Home Rations (THR), and children aged 3-6 years receive a daily hot meal at the anganwadi (or crèche). Apart from this nationwide in-kind support, the central government also administers cash transfer programmes for pregnant women and lactating mothers. The Janani Suraksha Yojana (JSY) programme delivers cash conditional on an institutional birth. This study is a synthesis of existing evidence on both types of programmes, with a particular focus on ICDS/THR and JSY, along with a set of recommended policy actions. Existing data

from large-scale datasets suggest that THR currently has a wider reach than cash and the prospect of transitioning to cash will likely exclude many current beneficiaries. Even as there is only limited evidence on the effectiveness of THR, there is little compelling evidence to date that warrants a shift away from THR to cash transfers. Most importantly, however, there has not been adequate attention to the possibility of a combination of a cash and in-kind transfer. An approach that combines cash with in-kind (including “wet” meals) needs serious consideration.

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### **Impact of Public Distribution System on Quality and Diversity of Food Consumption**

Ghosh, S.M., and I. Qadeer. 2021. “Impact of Public Distribution System on Quality and Diversity of Food Consumption.” *Economic & Political Weekly* 56(5).

<https://www.epw.in/journal/2021/5/special-articles/impact-public-distribution-system-quality-and.html>

The public distribution system is criticised for encouraging the poor to satiate their hunger with cheap cereals at the expense of other non-cereal food items, thus indirectly aggravating deficiencies of protein and other nutrients. An in-depth analysis shows that this is not actually so; the consumption of some non-cereal foods increases with the consumption of cereals, indicating a complementary relationship. This becomes possible through the implicit savings the PDS generates for its beneficiaries, due to subsidised cereal prices. Despite this, nutrient deficiency among poorer sections persists, and a comprehensive expansion of the PDS introducing certain non-cereal foods into its ambit can help tackle this issue.

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### **Improving Maternal Health Using Incentives for Mothers and Health Care Workers: Evidence from India**

Debnath, S. 2021. “Improving Maternal Health Using Incentives for Mothers and Health Care Workers: Evidence from India.” *Economic Development and Cultural Change* 69(2). The University of Chicago Press Journals. Chicago, Illinois, United States.

<https://www.journals.uchicago.edu/doi/abs/10.1086/703083?journalCode=edcc>

This paper studies the role of incentives for mothers and health care workers in the use of maternal and child health services. Using variations in date of birth, eligibility, and transfer size for a conditional cash transfer program in India, I find that overall delivery at a health care facility for eligible women increased by 5 percentage points. The incentives also significantly increased the use of pre- and postnatal care services and immunization. The program reduced early-neonatal deaths but had no impact on late-neonatal mortality. I also find that larger incentives to health workers are associated with relatively higher utilization rates compared with larger incentives to mothers.

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### **Working With Women’s Groups To Improve Nutrition in India**

Raghunathan, K., and S. Desai. 2021. “Working With Women’s Groups To Improve Nutrition in India,” *Economic & Political Weekly* 56(5). [https://knowledgecommons.popcouncil.org/departments\\_sbsr-pgy/1208/](https://knowledgecommons.popcouncil.org/departments_sbsr-pgy/1208/)

A comprehensive literature review summarises what is known about the implementation and effectiveness of women’s groups in improving nutrition outcomes, and highlights key areas that the next generation of studies could focus on, both from implementation and evaluation standpoints. Women’s groups are undoubtedly widespread; our focus now should be on building robust evidence on how to actualise their substantial potential.

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### POSHAN Abhiyaan Budget Brief

Kapur, A., and M. Paul. 2021. "POSHAN Abhiyaan." Accountability Initiative Budget Brief 13(4). New Delhi, India. <https://accountabilityindia.in/publication/poshan-abhiyaan/>

POSHAN Abhiyaan is Government of India's (GoI's) flagship scheme that aims to holistically address the prevalence of malnutrition in India through the use of technology, convergence, behavioural change, training, and capacity building. In Budget 2021-22, the scheme has been combined with ICDS and relaunched as Saksham Anganwadi and POSHAN 2.0. Against the backdrop of the COVID-19 pandemic, this brief uses government data to report on the following:

- Past trends in GoI allocations, releases, and expenditures, and impact of the pandemic on programme finances;
- Types and nature of activities conducted under the erstwhile behaviour change component of the programme; and
- Progress on targets set for nutritional outcomes.

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### Integrated Child Development Services Budget Brief

Kapur, A., and M. Paul. 2021. "Integrated Child Development Services." Accountability Initiative Budget Brief 13(3). New Delhi, India. <https://accountabilityindia.in/publication/integrated-child-development-services/>

Integrated Child Development Services is Government of India's (GoI's) flagship programme aimed at providing basic education, health, and nutrition services for early childhood development. It has now been combined with POSHAN Abhiyaan to form Saksham Anganwadi and POSHAN 2.0. Against the backdrop of the COVID-19 pandemic, this brief uses government data to analyse:

- Required funds, allocations, and releases;
- Changes in coverage and service delivery due to the COVID-19 pandemic;
- Human resources; and
- Malnutrition status

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### Special Edition of UNICEF WINS Newsletter

<https://mailchi.mp/57696c0b210f/unicef-working-to-improve-nutrition-at-scale-issue-8021189?e=240e75cd31>

In this issue, find 22 COVID-19 publications and 24 regular publications:

- COVID-19 programme response, supporting countries to quickly adapt and respond to the global COVID-19 pandemic.
- Advocacy and communication including the call by UNICEF's Executive Director for scaling up food fortification efforts globally.
- Technical support including the launch of the Global Nutrition Cluster Technical Alliance in support to humanitarian action.
- Programming guidance such as the new guidance to improve the quality of complementary foods and feeding in early childhood.
- Food systems for children to protect and promote nutritious, safe, affordable, and sustainable diets for children, everywhere.

## COVID-19

### PEER-REVIEWED

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#### **COVID-19 and the Burden of Ill-Health: A Double Crisis of Disruptions and Inequalities**

Bisht, R., R. Saharia, and J. Sarma. 2020. COVID-19 and the Burden of Ill-Health: A Double Crisis of Disruptions and Inequalities. *Journal of Social and Economic Development*.

<https://link.springer.com/article/10.1007/s40847-020-00117-x>

This paper attempts to show how the novel coronavirus disease (COVID-19) has disrupted routine health services in India and has created further inequalities in the society.

### NON-PEER REVIEWED

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#### **Adaptations to Community-Based Acute Malnutrition Treatment During the COVID-19 Pandemic**

Wrabel, M., S. King, and H. Stobaugh. 2021. "Adaptations to Community-Based Acute Malnutrition Treatment During the COVID-19 Pandemic." COVID-19 Field Article. Field Exchange Issue 64.

Emergency Nutrition Network. Oxfordshire, United Kingdom.

<https://www.enonline.net/fex/64/covid19cmamadaptations>

Past epidemics demonstrate that disrupted health and nutrition services can be especially deadly for young children. Therefore, after the onset of the COVID-19 pandemic, guidance was quickly released by UNICEF, the Global Nutrition Cluster (GNC), Global Technical Assistance Mechanism for Nutrition (GTAM) and the World Health Organization (WHO). This guidance suggested a range of adaptations to acute malnutrition management programmes to enable service continuity (UNICEF, 2020a; UNICEF, 2020b) while reducing the risk of virus transmission (Robertson, 2020; World Vision, 2020). In response, a variety of programme adaptations were implemented around the world yet questions remained. Which adaptations have been implemented by whom and where? What are the operational implications and lessons learned?

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#### **Leveraging Artificial Intelligence To Reach Fathers and Support Child Nutrition in India During COVID-19**

World Bank Blogs. 2020. "Leveraging Artificial Intelligence To Reach Fathers and Support Child Nutrition in India During COVID-19." Accessed February 21, 2021.

<https://blogs.worldbank.org/digital-development/leveraging-artificial-intelligence-reach-fathers-and-support-child-nutrition>

India is fighting a dual battle against malnutrition and COVID-19. The lockdown has disrupted access to rations and other essential services, closed schools (cutting off midday meals for children), and led to job losses, putting millions of families in India at even higher risk of extreme poverty and malnutrition.

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#### **India: How COVID-19 Accelerates Malnutrition in Women and Children**

Institute of Peace and Conflict Studies. 2020. "India: How COVID-19 Accelerates Malnutrition in Women and Children. Accessed February 21, 2021.

[http://www.ipcs.org/comm\\_select.php?articleNo=5737](http://www.ipcs.org/comm_select.php?articleNo=5737)

The COVID-19 pandemic and measures to contain it have had inevitable negative impacts. Rising unemployment, food supply disruption, a downturn in international trade, etc, pose serious challenges to the already precarious Indian food and nutrition security. Women and children will continue to bear a disproportionate burden of the pandemic-accelerated health and food crisis.

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### **Eradicating Malnutrition in India During COVID-19**

The Borgen Project. 2020. "Eradicating Malnutrition in India During COVID-19." Accessed February 21, 2021. <https://borgenproject.org/malnutrition-in-india-during-covid-19/>

Amid the COVID-19 pandemic, India's struggle with malnutrition has been playing out behind the scenes. Despite consistent economic growth, nutritional deficiencies have plagued India's adults and children for years.

## **National Family Health Survey (NFHS-5)**

### **NON-PEER REVIEWED**

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#### **What Causes Poor Child Health in India? Reflections from NFHS-5**

Kumar, N., and A. Mitra. 2021. "What Causes Poor Child Health in India? Reflections from NFHS-5." IEG Working Paper No. 414. Institute of Economic Growth. New Delhi, India. [http://iegindia.org/upload/profile\\_publication/doc-060121\\_131211WPP414.pdf](http://iegindia.org/upload/profile_publication/doc-060121_131211WPP414.pdf)

This paper based on the data from the NFHS-5 examines various indicators of child health in India. A variety of correlates have been considered in order to understand the causes of poor health outcomes and reflect on effective strategies which may contribute to better health of the children. The inter-spatial variations bring out certain specific patterns based on which insights are developed. A major deterioration in the food value seems to have occurred, causing stunting, wasting, underweight and anemia among the children. Mothers' diet, access to medicines, antenatal care and education and participation in the decision-making process within the household are some of the important factors to bring in improvement in child health. Besides, the role of sanitation, vaccine and breast feeding comes out clearly in restoring the health of the children.

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#### **What Do We Learn About the Swacch Bharat Mission From the NFHS-5 Fact Sheets?**

Spears, D., N. Franz, and D. Coffey. 2021. "What Do We Learn About the Swacch Bharat Mission From the NFHS-5 Fact Sheets?" IZA Policy Paper No. 172. IZA Institute of Labor Economics. Bonn, Germany. <http://ftp.iza.org/pp172.pdf>

How much did rural sanitation in India change under the five years of the Swacch Bharat Mission? The best nationally representative statistics on sanitation in India have long come from the Demographic and Health Surveys, known as the National Family and Health Surveys in India. The fifth round, conducted in 2019 and 2020, was interrupted by the pandemic, but limited summary statistics have been released for some states. Here we analyze these statistics. We conclude that about half of the rural population in the four large Indian states of Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh continued to defecate in the open at the end of the Swacch Bharat Mission.

## UPCOMING EVENTS & DEADLINES

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### CMAM 20 Years On: Going to Scale in Fragile Contexts A Practitioners' Conference

The CMAM 20 Years On conference marks the 20th anniversary of the Community-based Management of Acute Malnutrition (CMAM) pilot, which marked a huge leap forward in the detection and treatment of child wasting and nutritional oedema and for child survival more broadly.

Two decades on, the fundamentals of the original model – community mobilisation, use of a ready-to-use-therapeutic food, and simple assessment and treatment protocols - remain very much intact and central to its effectiveness. At the same time, practitioners and policy makers have been continuously adapting the approach to local contexts, health systems, and community structures in an effort to reach the millions of children in need of treatment services.

Some of these adaptations have been consolidated as best practice while others have not been well documented or evaluated. In the context of COVID-19, many adaptations are being fast-tracked to support continued nutrition treatment during the pandemic. Consensus is lacking on which adaptations should be taken forward and in which contexts they may be most effective.

Meanwhile, a number of structural and resource-related barriers to scale up persist, including funding, human resources, supply chains and coordination. The 2020 Global Action Plan (GAP) on Child Wasting sets out a framework to better prevent and treat child wasting to achieve the Sustainable Development Goal of reducing the proportion of children who are wasted from 7.3% to less than 5% by 2025 and less than 3% by 2030. Work is also underway to develop road maps for countries with a high burden of wasting targets to achieve these targets.

**When:** March 22-25, 2021

**Where:** Online

**For more information:** <https://www.accelevents.com/e/CMAM2021>

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### Nutrition 2021

Nutrition 2021 Live Online returns June 7 – 10, with the great science, collaboration and inspiration you've come to expect – in an all-virtual format for maximum accessibility and convenience. Join a truly global audience for Nutrition 2021 Live Online, June 7-10, to experience ground-breaking research, connect with peers from all over the world, engage with the greatest minds in nutrition, and see the latest technologies, products and services in the virtual exhibit hall.

**When:** July 10-13, 2021

**Where:** Online

**For more information:** <https://meeting.nutrition.org/>

## 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.

## CONTACT US

Email us at [IFPRI-POSHAN@cgiar.org](mailto:IFPRI-POSHAN@cgiar.org)

### IFPRI-NEW DELHI

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

NASC Complex, CG Block, Dev Prakash Shastri Road, Pusa, New Delhi 110012, India

T +91.11.66166565

F +91.11.66781699

<http://poshan.ifpri.info/>

### IFPRI-HEADQUARTERS

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

2033 K Street, NW, Washington, DC 20006-1002 USA

T. +1.202.862.5600 F. +1.202.467.4439

Skype: IFPRIhomeoffice

[ifpri@cgiar.org](mailto:ifpri@cgiar.org)

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