

EDITOR'S NOTE

This issue of the Abstract Digest features a global investment framework for social and economic development, a typology and metrics for integrated interventions and research across agriculture, nutrition, and health, along with updates from research on maternal and child nutrition in India from the Experimental Biology Conference held in San Diego in April 2014.

- ▶ A new Global Investment Framework for Women's and Children's Health demonstrates that investing in women's and children's health has high health, economic and social returns. Increasing health expenditure by just \$5 per person per year up to 2035 in 74 high-burden countries was found to yield up to nine times that value in economic and social benefits (Stenberg et al. 2014).
- ▶ Masters and colleagues (2014) propose a typology of interventions to guide as a metric for integration of research methods to help researchers build on each other's results to inform the design of multisector interventions across agriculture, health, and nutrition.
- ▶ The child under-nutrition index and a child nutrition score are used to capture the multi-dimensional nature of child undernutrition showing the variations across various socio-economic groups and inter-state variations and the performance of Indian states in delivering proven essential interventions (Aguayo et al. 2014).
- ▶ One study examines the impact of a community-based frontline worker program spearheaded by the health sector in collaboration with the ICDS and the PDS on undernutrition (Vir et al. 2014). Another pilot program identifies that having a dedicated trained worker to support the mother and the newborn child and assist the nurse in providing various non-clinical activities during the delivery period in hospitals increases the likelihood of mothers receiving counseling on immunization, breastfeeding, family planning, danger signs, nutrition, and postnatal checkups (Varghese et al. 2014).
- ▶ One study provides mothers' perspectives on employment opportunities and their benefits and problems related to child care in the context of MGNREGA scheme (Nair et al. 2014)

Enjoy reading!

Warm regards,

Dr. Rasmi Avula

PEER-REVIEWED LITERATURE

Advancing Social and Economic Development by Investing in Women's and Children's Health: A New Global Investment Framework.

Stenberg, K., H. Axelson, P. Sheehan, I. Anderson, A.M. Gülmezoglu, M. Temmerman, E. Mason, H.S. Friedman, Z.A. Bhutta, et al. J; Study Group for the Global Investment Framework for Women's Children's Health. 2014. *Lancet* 383(9925):1333–1354. doi: 10.1016/S0140-6736(13)62231-X.

[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(13\)62231-X/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(13)62231-X/abstract)

A new Global Investment Framework for Women's and Children's Health demonstrates how investment in women's and children's health will secure high health, social, and economic returns. We costed health systems strengthening and six investment packages for: maternal and newborn health, child health, immunisation, family planning, HIV/AIDS, and malaria. Nutrition is a cross-cutting theme. We then used simulation modelling to estimate the health and socioeconomic returns of these investments. Increasing health expenditure by just \$5 per person per year up to 2035 in 74 high-burden countries could yield up to nine times that value in economic and social benefits. These returns include greater gross domestic product (GDP) growth through improved productivity, and prevention of the needless deaths of 147 million children, 32 million stillbirths, and 5 million women by 2035. These gains could be achieved by an additional investment of \$30 billion per year, equivalent to a 2% increase above current spending.

Agriculture, Nutrition, and Health in Global Development: Typology and Metrics for Integrated Interventions and Research

Masters, W.A., P. Webb, J.K. Griffiths, and R.J. Deckerbaum. 2014. *Annals of the New York Academy of Sciences* DOI: 10.1111/nyas.12352.

<http://onlinelibrary.wiley.com/doi/10.1111/nyas.12352/abstract>

Despite rhetoric arguing that enhanced agriculture leads to improved nutrition and health, there is scant empirical evidence about potential synergies across sectors or about the mix of actions that best supports all three sectors. The geographic scale and socioeconomic nature of these interventions require integration of previously separate research methods. This paper proposes a typology of interventions and a metric of integration among them to help researchers build on each other's results, facilitating integration in methods to inform the design of multisector interventions. The typology recognizes the importance of regional effect modifiers that are not themselves subject to randomized assignment, and trade-offs in how policies and programs are implemented, evaluated, and scaled. Using this typology could facilitate methodological pluralism, helping researchers in one field use knowledge generated elsewhere, each using the most appropriate method for their situation.

Scoring Child Nutrition in India: Measuring the Performance of States

Aguayo, V., G. Singh, and N. Badgaiyan. 2014. *Economic & Political Weekly XLIX (14)*.

<http://www.epw.in/special-articles/scoring-child-nutrition-india.html>

Essential nutrition interventions are found to be strongly associated with lower under-nutrition levels in India. This is shown by constructing and comparing a child undernutrition index and child nutrition score, both of which use data from India's latest National Family Health Survey (NFHS-3). The CUI indicates that 16 of the 28 states have high or very high levels of child under-nutrition. The CNS indicates that 24 states have poor or very poor performance in delivering essential nutrition interventions for children. The strongest association between the CUI and the CNS is that states with higher CNS tend to have lower CUI. Effective state governance systems need to prioritise programmes to scale up the coverage and equity of proven interventions in the fight against child under-nutrition in India.

Impact of Community-Based Mitanin Programme on Undernutrition in Rural Chhattisgarh State, India.

Vir S. C., A. Kalita, S. Mondal, R. Malik. 2014. *Food & Nutrition Bulletin 35(1): 83–91*.

<http://www.ncbi.nlm.nih.gov/pubmed/24791582>

BACKGROUND: Community health workers known as mitanins undertook family-level counseling and mobilized the community to improve coverage of maternal and child health services in the state of Chhattisgarh, India. The Nutrition Security Innovation (NSI) project was launched in selected blocks with additional inputs for promoting appropriate complementary feeding practices and disseminating information on Public Distribution System (PDS) entitlement. Within 3 years of project implementation, all NSI inputs in the project group (PG) were scaled up in the entire state. **OBJECTIVE:** To study the impact of interventions on nutritional status in PG and non-NSI comparison group (CG) blocks. **METHODS:** Quasi-experimental mixed methods were used. The sample consisted of 3,626 households with children under 3 years of age and 268 mitanins. **RESULTS:** A ratio of 1 mitanin per 250 to 500 population was effective. The coverage of exclusive breastfeeding, timely introduction of complementary feeding, DPT immunization, and antenatal care services was more than 70%. The PDS reached almost 90% of beneficiaries. In both the PG and the CG, one-third of children were undernourished, with one-quarter of children undernourished by 6 months of age. The prevalence of low birthweight was over 40%, and half of all women were undernourished. The estimated annual average reduction rate (AARR) for the entire state was estimated to be 4.22% for underweight and 5.64% for stunting. **CONCLUSIONS:** The strategy of Mitanin Programme in the Indian state of Chhattisgarh was unique with the implementation of direct nutrition actions being spearheaded by the health sector and community health volunteers in coordination with the Integrated Child Development Services (ICDS) and the Public Distribution System (PDS). The highest priority was given to interventions in the first 92 weeks of life. This implied ensuring frequent counseling and delivery of services through the entire pregnancy period and continued follow up till the children were at least one year of age. An accelerated decrease in the annual rate of reduction of underweight and stunting was observed. The emerging findings point to the significant contributions that can be made by the National Rural Health Mission (NRHM) in India by involvement of community health volunteers known as Accredited Social Health Activists (ASHAs) towards reducing the persistent problem of undernutrition in the country.

Fostering Maternal and Newborn Care in India the *Yashoda* Way: Does This Improve Maternal and Newborn Care Practices During Institutional Delivery?

Varghese, B. R. Roy, S. Saha, and S. Roalkvam. 2014. *PLoSOne* 9(1): e84145. doi: 10.1371/journal.pone.0084145

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3893122/>

BACKGROUND: The Yashoda program, named after a legendary foster-mother in Indian mythology, under the Norway-India Partnership Initiative was launched as a pilot program in 2008 to improve the quality of maternal and neonatal care at facilities in select districts of India. Yashodas were placed mainly at district hospitals, which are high delivery load facilities, to provide support and care to mothers and newborns during their stay at these facilities. This study presents the results from the evaluation of this intervention in two states in India. **METHODS:** Data collection methods included in-depth interviews with healthcare providers and mothers and a survey of mothers who had recently delivered within a quasi-experimental design. Fifty IDIs were done and 1,652 mothers who had delivered in the past three months were surveyed during 2010 and 2011. **RESULTS:** A significantly higher proportion of mothers at facilities with Yashodas (55 percent to 97 percent) received counseling on immunization, breastfeeding, family planning, danger signs, and nutrition compared to those in control districts (34 percent to 66 percent). Mothers in intervention facilities were four to five times more likely to receive postnatal checks than mothers in control facilities. Among mothers who underwent cesarean sections, initiation of breastfeeding within five hours was 50 percent higher in intervention facilities. Mothers and families also reported increased support, care and respect at intervention facilities. **CONCLUSION:** Yashoda as mothers' aide thus seems to be an effective intervention to improve quality of maternal and newborn care in India. Scaling up of this intervention is recommended in district hospitals and other facilities with high volume of deliveries.

Impact of mothers' employment on infant feeding and care: a qualitative study of the experiences of mothers employed through the Mahatma Gandhi National Rural Employment Guarantee Act.

Nair, M., P. Ariana, and P. Webster. 2014. *BMJ Open* (4): e004434. doi:10.1136/bmjopen-2013-004434

<http://bmjopen.bmj.com/content/4/4/e004434.full>

Objective: To explore the experiences of mothers employed through the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) using focus group discussions (FGDs) to understand the impact of mothers' employment on infant feeding and care. The effects of mothers' employment on nutritional status of children could be variable. It could lead to increased household income, but could also compromise child care and feeding. **Setting:** The study was undertaken in the Dungarpur district of Rajasthan, India. **Participants:** Mothers of infants <12 months of age. Ten FGDs, two in each of the five administrative blocks of the study district were conducted. The groups were composed of a minimum of 5 and maximum of 8 participants, giving a total of 62 mothers. Thematic analysis was conducted to assess patterns and generate emergent themes. **Results:** Four major themes were identified—'mothers' employment compromises infant feeding and care', 'caregivers' inability to substitute mothers' care', 'compromises related to childcare and feeding outweigh benefits from MGNREGA' and 'employment as disempowering'. Mothers felt that the compromises to infant care and feeding due to long hours of work, lack of alternative adequate care arrangements, low wages and delayed payments outweighed

the benefits from the scheme. **Conclusions:** This study provides an account of the trade-off between mothers' employment and child care. It provides an understanding of the household power relationships, societal and cultural factors that modulate the effects of mothers' employment. From the perspective of mothers, it helps to understand the benefits and problems related to providing employment to women with infants in the MGNREGA scheme and make a case to pursue policy changes to improve their working conditions.

Can Nutrition Rehabilitation Centers Address Severe Malnutrition in India?

Dasgupta, R., S. Ahuja, and V. Yumnam. 2014. *Indian Pediatrics* 51(2):95–99.

<http://www.indianpediatrics.net/feb2014/95.pdf>

Madhya Pradesh has made remarkable progress in facility based management of severe acute malnutrition, and has developed a model that is being replicated in many states. India has uniquely high prevalence of both stunting and wasting, implying that both severe acute malnutrition and severe chronic malnutrition co-exist. This study sought to explore design issues of nutritional rehabilitation centers in order to inform its effectiveness in settings where the prevalence of chronic poverty and malnutrition is high. Our analysis attributes the limited success (marked by poor cure rates and high non-responder rates) to high prevalence of chronic malnutrition, particularly in nutritional rehabilitation centers located in peripheral areas. There is a failure to recognize severe chronic malnutrition as an epidemiological entity and gear wide-ranging programmatic and social interventions.

Double-Fortified Salt Is Efficacious in Improving Indicators of Iron Deficiency in Female Indian Tea Pickers.

Haas, JD., M. Rahn, S. Venkatramanan, G. S. Marquis, M. J. Wenger, L. E. Murray-Kolb, A. S. Wesley, and G. A. Reinhart. 2014. *The Journal of Nutrition* 144(6):957-964. doi: 10.3945/jn.113.183228.

<http://jn.nutrition.org/content/144/6/957.full>

Poor iron status affects 50% of Indian women and compromises work productivity, cognitive performance, and reproduction. Among the many strategies to reduce iron deficiency is the commercial fortification of iodized table salt with iron to produce a double-fortified salt (DFS). The objective of this study was to test the efficacy of DFS in reducing iron deficiency in rural women of reproductive age from northern West Bengal, India. The participants were 212 women between 18 and 55 y of age who worked as full-time tea pickers on a large tea estate. Participants in the randomized, controlled, double-blind study were assigned to use either DFS or a control iodized salt for 7.5 to 9 mo. The DFS was fortified with 3.3-mg ferrous fumarate (1.1-mg elemental iron) per kg of iodized salt, whereas the control salt contained only iodine (47 mg/kg potassium iodate), and both salt varieties were distributed gratis to the families of participants at 0.5 kg/mo for each 2 household members. At baseline, 53% of participants were anemic (hemoglobin <120 g/L), 25% were iron deficient (serum ferritin <12 mg/L), and 23% were iron-deficient anemic. Also, 22% had a transferrin receptor concentration >8.6 mg/L and 22% had negative (<0.0 mg/kg) body iron stores. After 9 mo the participants receiving DFS showed significant improvements compared with controls in hemoglobin (+2.4 g/L), ferritin (+0.13 log₁₀ mg/L), soluble transferrin receptor (20.59 mg/L), and body iron (+1.43 mg/kg), with change in status analyzed by general linear models controlling for baseline values. This study demonstrated that DFS is an efficacious approach to improving iron status and should be further evaluated for effectiveness in the general population.

Effect of a behaviour-change intervention on handwashing with soap in India (SuperAmma): a cluster-randomised trial

Biran, A., W. Schmidt, K. S. Varadharajan, D. Rajaraman, R. Kumar, K. Greenland, B. Gopalan, R. Aunger, and V. Curtis. 2014. *Lancet Global Health* 2: e145–e154.

[http://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(13\)70160-8/abstract](http://www.thelancet.com/journals/langlo/article/PIIS2214-109X(13)70160-8/abstract)

Objective: To investigate the effectiveness of a hygiene promotion intervention based on germ awareness in increasing handwashing with soap on key occasions (after faecal contact and before eating) in rural Indian households. **Methods:** Cluster randomised trial of a hygiene promotion intervention in five intervention and five control villages. Handwashing was assessed through structured observation in a random sample of 30 households per village. Additionally, soap use was monitored in a sub-sample of 10 households per village using electronic motion detectors embedded in soap bars. **Results:** The intervention reached 40% of the target population. Germ awareness increased as well as reported handwashing (a possible indicator of perceived social norms). Observed handwashing with soap on key occasions was rare (6%), especially after faecal contact (2%). Observed handwashing with soap on key occasions did not change 4 weeks after the intervention in either the intervention arm (-1%, 95% CI -2%/+0.3%), or the control arm (+0.4%, 95% CI -1%/+2%). Data from motion detectors indicated a significant but small increase in overall soap use in the intervention arm. We cannot confidently identify the nature of this increase except to say that there was no change in a key measure of handwashing after defecation. **Conclusion:** The intervention proved scalable and effective in raising hygiene awareness. There was some evidence of an impact on soap use but not on the primary outcome of handwashing at key times. However, the results do not exclude that changes in knowledge and social norms may lay the foundations for behaviour change in the longer term.

Special Update from the Annual Scientific Sessions of the American Society for Nutrition in San Diego (April 26-30)

The American Society for Nutrition is a constituent society of the Federation of American Societies for Experimental Biology (FASEB) and holds its annual scientific session in conjunction with FASEB. Nutritionists from across the world come together to share new developments in the field across the lifecycle and spanning the spectrum of biological and implementation research and policy influence. Here we share with you research on maternal and child nutrition and program and policy work pertaining to India. The links below are peer-reviewed research abstracts published in the FASEB Journal, 2014.

Estimating the cost of scaling up direct nutrition interventions at national and subnational levels: insights from India

McDonald, C., P. Menon, S. Chakrabarti. 2014. *The FASEB Journal* 28 (1) 632.15.

http://www.fasebj.org/content/28/1_Supplement/632.15

Maternal anemia, iron deficiency, and pregnancy outcomes in India

Finkelstein, J., C. Duggan, T. Thomas, B. Bose, T. Samuel, K. Srinivasan, and A. Kurpad. 2014. *The FASEB Journal* 28 (1) 804.10.

http://www.fasebj.org/content/28/1_Supplement/804.10

Preschool based point-of-use fortification with micronutrients for six months reduces anaemia with modest effects on growth in rural India

Nagalla, B., R. Kankipati, M. K. Nair, S. Fernandez-Rao, R. Punjal, K. Hurley, N. Tilton, K. Harding, G. Reinhart, and M. Black. 2014. *The FASEB Journal* 28 (1) 624.22.

http://www.fasebj.org/content/28/1_Supplement/624.22

Iron-biofortified pearl millet improves attentional function in Indian adolescents, a 6-month randomized controlled trial

Scott, S., L. Murray-Kolb, M. Wenger, S. Udipi, P. Ghugre, and J. Haas. 2014. *The FASEB Journal* 28 (1) 619.2.

http://www.fasebj.org/content/28/1_Supplement/619.2.short

Consuming iron-biofortified pearl millet increased hemoglobin concentrations and prevented a decline in energy efficiency in Indian girls

Beer, H., S. Luna, L. Pompano, E. Przybyszewski, S. Udipi, P. Ghugre, and J. Haas. 2014. *The FASEB Journal* 28(1) 646.7.

http://www.fasebj.org/content/28/1_Supplement/646.7

Changes in brain dynamics as a function of changes in body iron status: effects on attentional function in Indian adolescents following consumption of iron-biofortified pearl millet

Wenger, M., S. Scott, L. Murray-Kolb, E. Cooper, P. Ghugre, S. Udipi, and J. Haas. 2014. *The FASEB Journal* 28(1) 389.2.

www.fasebj.org/content/28/1_Supplement/389.2

Empowering adolescent girls against anemia in West Bengal, India

Chakraborty, P. and I. Bhattacharyya. 2014. *The FASEB Journal* 28 (1) 1014.6.

http://www.fasebj.org/content/28/1_Supplement/1014.6.short

Antenatal care and counseling measures increase iron and folic acid receipt among pregnant women in Bihar, India

Wendt, A., M. Young, R. Stephenson, A.W. Girard, U. Ramakrishnan, and R. Martorell. 2014. *The FASEB Journal* 28(1) 256.3.

http://www.fasebj.org/content/28/1_Supplement/256.3

Vitamin B12 status in pregnant women and their children in India

Finkelstein, J., A. Kurpad, T. Thomas, B. Bose, T. Samuel, K. Srinivasan, and C. Duggan. 2014. *The FASEB Journal* 28(1) 135.6.

http://www.fasebj.org/content/28/1_Supplement/135.6

Food consumption of Indian adolescents in a globalizing world

Shaikh, N., S. Patil, U. Ramakrishnan, and S. Cunningham. 2014. *The FASEB Journal* 28(1) 1014.5.

http://www.fasebj.org/content/28/1_Supplement/1014.5?related-urls=yes&legid=fasebj;28/1_Supplement/1014.5

The acceptability of an innovative feeding bowl and spoon to improve maternal and child nutrition in India

Collison, D., P. Kekre, S. Srikantiah, P. Verma, S. Melgen, N. Kram, J. Colton, W. Blount, and A. Webb-Girard. 2014. *The FASEB Journal* 28(1) 633.5.

http://www.fasebj.org/content/28/1_Supplement/633.5.short?related-urls=yes&legid=fasebj;28/1_Supplement/633.5

Measure of Complementary Feeding Index (CFI) and Nutritional status in children of 7-24 months of age: A cross-sectional study in rural India

Anwar, F., R. Srivastava, and S.P. Singh. 2014. *The FASEB Journal* 28(1) LB453.

http://www.fasebj.org/content/28/1_Supplement/LB453.short

Education and work incentives for frontline workers (FLW) and household (HH) socioeconomic status (SES) influence delivery of health and nutrition interventions in Bihar, India

Avula, R., K. Kosec, B. Holtemeyer, P. Tyagi, S. Hausladen, and P. Menon. 2014. *The FASEB Journal* 28(1) 624.5.

http://www.fasebj.org/content/28/1_Supplement/624.5

Opportunities and challenges for intersectoral convergence (IC) in the delivery of nutrition interventions in India

Avula, R., S.S. Kim, R. Ved, M. Pradhan, and P. Menon. 2014. *The FASEB Journal* 28(1) 632.16.

http://www.fasebj.org/content/28/1_Supplement/632.16.short

NON PEER-REVIEWED LITERATURE

Reducing Child Undernutrition: Past Drivers and Priorities for the Post- MDG Era

Smith, L, and L. Haddad. 2014. *IDS Working Paper 2014(441)*

<https://www.ids.ac.uk/publication/reducing-child-undernutrition-past-drivers-and-priorities-for-the-post-mdg-era>

As the post-MDG era approaches in 2016, reducing child undernutrition is gaining high priority on the international development agenda, both as a maker and marker of development. Revisiting Smith and Haddad (2000), we use data from 1970-2012 for 116 countries, finding that safe water and sanitation, women's education and empowerment, and the quantity and quality of food available in countries have been key drivers of past reductions in stunting. Income growth and governance played essential facilitating roles. Complementary to nutrition-specific and nutrition-sensitive programmes and policies, accelerating reductions in undernutrition in the future will require increased investment in these priority areas.

Informal Monitoring and Enforcement Mechanisms in Public Service Delivery: Evidence from the Public Distribution System in India.

Nagavarapuy, S., and S. Sekhri. 2014.

http://people.virginia.edu/~ss5mj/UP_TPDS.pdf

This paper shows that social networks provide informal monitoring and enforcement services that can curb leakages and improve the efficacy of public service delivery. We examine India's Targeted Public Distribution System, under which poor households are entitled to subsidized grains and fuel, and show that Scheduled Castes (SC) are more likely to buy grains when facing SC delivery agents. Using our theoretical and empirical framework, we show that increased informal monitoring drives our findings. Our structural estimates indicate that welfare gains from caste-based monitoring are approximately one-fifth of the average subsidy. Welfare gains from expanding program generosity, as envisioned in the recent National Food Security Bill, are lower than the subsidy cost due to an increase in delivery agents' incentives to black market goods.

Has Dietary Transition Slowed Down in India: An Analysis Based on 50th, 61st and 66th Rounds of NSS.

Gaiha, R., N. Kaicker, K. Imai, V. S. Kulkarni, and G. Thapa. 2014.

http://www.webmeets.com/files/papers/IEA/2014/245/IEA%20World%20Congress_Nidhi%20Kaicker.pdf

Our study examines changes in diets over the period of 1993-2009. Diets have shifted away from cereals towards higher consumption of fruits, vegetables, oils and livestock products. Using household data, a food diversity index (FDI) is constructed, based on five food commodities. Significant price effects

that vary over time are confirmed, as also income/expenditure effects. Over and above these effects, more sedentary life styles and less strenuous activity patterns played a significant role in shaping dietary patterns. An important finding is slowing down of dietary transition in the more recent sub-period 2004-09. Clues relate to weakening or strengthening of food price, expenditure and life-style effects over time. Using an instrumented measure of FDI in the second stage, and all other exogenous variable, its effects on nutrients' intakes are analysed. A common finding that food diversity is associated with better quality diets and higher intakes of nutrients is not corroborated. While there is a reduction in calorie intake, there are increases in protein and fat intakes. A case is made for provision of public goods, nutrition labelling, regulation of food standards, and consumer awareness of healthy diets, food fortification and supplementation, and active involvement of the private sector in adhering to the regulatory standard and nutritional norm.

Does inequality affect the consumption patterns of the poor? – The role of "status seeking" behaviour.

Marjit, S., S. Santra., and K.K. Hati.2014. Munich Personal RePEc Archive.

http://mpra.ub.uni-muenchen.de/54118/1/MPRA_paper_54118.pdf

We consider a situation where the relatively 'poor' are concerned about their relative income status with respect to a relevant reference group. Such a concern is explicitly introduced in a utility function to study the consumption and saving behavior of the poor in terms of a static and dynamic model. The static model points toward a possible conflict between income based and nutrition-based measure of poverty. The dynamic model exhibits the possibility of a higher rate of accumulation coupled with an inadequate nutritional intake, relative to a situation where there is no such concern for status. Thus, growth with malnutrition may also imply a conflict between different measures of poverty. Both the models point toward a direct and negative relationship between inequality and share of nutritional consumption as reflected in the consumption of food. Finally the paper looks at the empirical relationship between inequality and consumption across districts within states of India. The hypotheses that inequality impacts consumption patterns via status effect cannot be rejected. In fact the impact seems to be significant across a number of the Indian states.

UPCOMING EVENTS

South East Asian Ministries of Education Organization Regional Center for Food and Nutrition (SEAMEO RECFON) Course Announcement Regional Training 2014

SEAMEO RECFON will be conducting a series of regional post graduate courses on nutritional assessment in October 2014.

Where: Jakarta, Indonesia

When: October 6th – 20th, 2014

Application deadline: September 15th, 2014

For more information: <http://seameo-recfon.org/index.php/component/content/article/78-event/302-car-training-2014.html>

4th World Congress on Public Health

The World Federation of Public Health Associations, which includes 96 Full member, Associate and Sustaining Member Associations is holding its triennial conference on the above dates. With such a diverse international membership, attendance at this Congress presents a golden opportunity to present practical innovation and evidence-based approaches to the world's many public health problems.

The full spectrum of MNCH, urban health, Health System Strengthening, Universal Health Care and community participation; climate and environmental change; innovative approaches to health promotion, communication and advocacy; NCDs, infectious and communicable disease prevention and control will be covered.

Where: Kolkata, India

When: Feb 11- 15 2015

For more information and to submit an abstract: <http://www.14wcph.org/>

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Public Health Foundation of India (PHFI)

One World South Asia

Vikas Samvad

Coalition for Sustainable Nutrition Security in India

Save the Children, India

Public Health Resource Network (PHRN)

Vatsalya

Centre for Equity Studies

ABOUT POSHAN

Partnerships and Opportunities to Strengthen and Harmonize Actions for Nutrition in India (POSHAN) is a 4-year initiative that aims to build evidence on effective actions for nutrition and support the use of evidence in decisionmaking. 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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