



Implementation evidence on nutrition interventions in India

By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons.

Sustainable Development Goal Target 2.2

India is a signatory to the global nutrition goals and has set ambitious national targets to improve maternal and child nutrition under the National Nutrition Mission, or POSHAN Abhiyaan,¹ thus demonstrating a strong national policy commitment. The mission also recognises that reaching these nutrition targets will require programmatic actions that tackle a wide range of multisectoral determinants of nutrition outcomes. These programmatic actions include health and nutrition interventions during the ‘first 1,000 days’, as well as a range of interventions in other sectors.

Highlights

- We identified and reviewed 368 papers after systematically screening peer-reviewed and grey literature.
- Only a small fraction of papers discussed barriers and facilitators to implementation, despite implementation-related challenges being the likely cause of India’s lagging performance in nutrition.
- Uttar Pradesh, Gujarat, Bihar, Odisha and Maharashtra were the most studied states, with almost 40 per cent of papers examining interventions in these states.
- The ICDS, one of India’s oldest flagship programmes, has attracted much academic interest, with more than 60 per cent of papers examining its implementation.
- Behaviour change counselling and micronutrient supplementation were the most studied nutrition-specific interventions, while fortification, weighed during pregnancy and delayed cord clamping were the least studied.
- More than 50 per cent of the papers examined implementation outcomes at the participant level; within these papers, around 79 per cent of the outcomes were about coverage and participant uptake.

India's two large-scale, national flagship programmes – the Integrated Child Development Services (ICDS) programme and the more recent National Health Mission – include most recommended interventions during the first 1,000 days. However, the literature assessing the effectiveness of these interventions in improving nutrition outcomes is far from conclusive. Implementation and utilisation challenges are often discussed as factors that prevent programmes from delivering to their potential. Studying programme implementation is therefore critical, because it can shine a light on where improvements may be needed in programme design, delivery and uptake for better impact.

Methodology

The database search strategy and the intervention–outcome matrix that is the basis for the implementation research gap map were developed iteratively, in consultation with stakeholders and experts. We conducted systematic searches across 13 databases and also manually

3ie, in collaboration with the International Food Policy Research Institute, has consolidated evidence from implementation research on nutrition-specific interventions in India published between 2000 and 2018. This first-ever country-focused implementation research gap map provides an overview of evidence on implementation outcomes at programme, frontline worker and participant levels. The map focuses on a range of nutrition-specific interventions – food supplementation, fortification, micronutrient supplementation, behaviour change counselling, and management of severe and acute malnutrition.² This brief presents key highlights of this implementation research gap map.

searched 32 websites using keywords. We followed a step-by-step process for screening and coding the identified papers, starting with the removal of duplicates, followed by title and abstract screening, full-text screening and finally full-text coding.

What is implementation research?

Implementation research helps 'shine a light on the often-bumpy interface between what can be achieved in theory and what happens in practice', given the real-world challenges that affect programme implementation Peters et al. (2013 p.12).³

Implementation outcomes were studied at three levels

- access, targeting, adequacy, monitoring and cost at the programme level;
- coverage, acceptability, knowledge, motivation, compliance and/or performance, quality of engagement and time-use at the frontline worker level; and
- coverage, acceptability, knowledge, feasibility, and uptake and/or compliance at the participant level.



Key findings

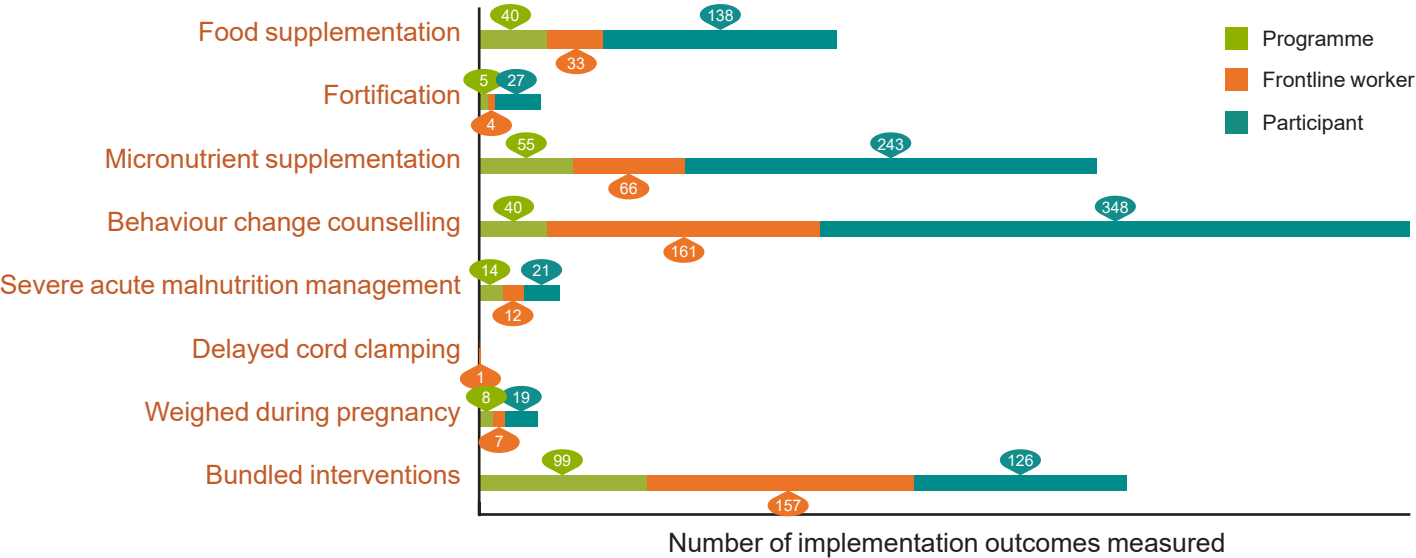
Evidence is significant but unevenly distributed across interventions and outcomes.

Behaviour change counselling (N = 549 instances), micronutrient supplementation (N = 364 instances) and bundled interventions (N = 382 instances) were the most studied interventions. Within behaviour change counselling, breastfeeding counselling was the

most studied intervention, while papers examining iron and folic acid supplementation were the biggest contributor to research in the micronutrient supplementation category. Given that iron and folic acid supplementation has been an important policy focus in India, it is not surprising that a large volume of literature focuses on implementation of these programmes.

Because intervention coverage and take-up are important indicators tracked as part of programme performance, participant-level implementation outcomes comprising intervention coverage and participant uptake were the most studied, followed by frontline worker outcomes.

Figure 1: Implementation outcomes measured across different interventions



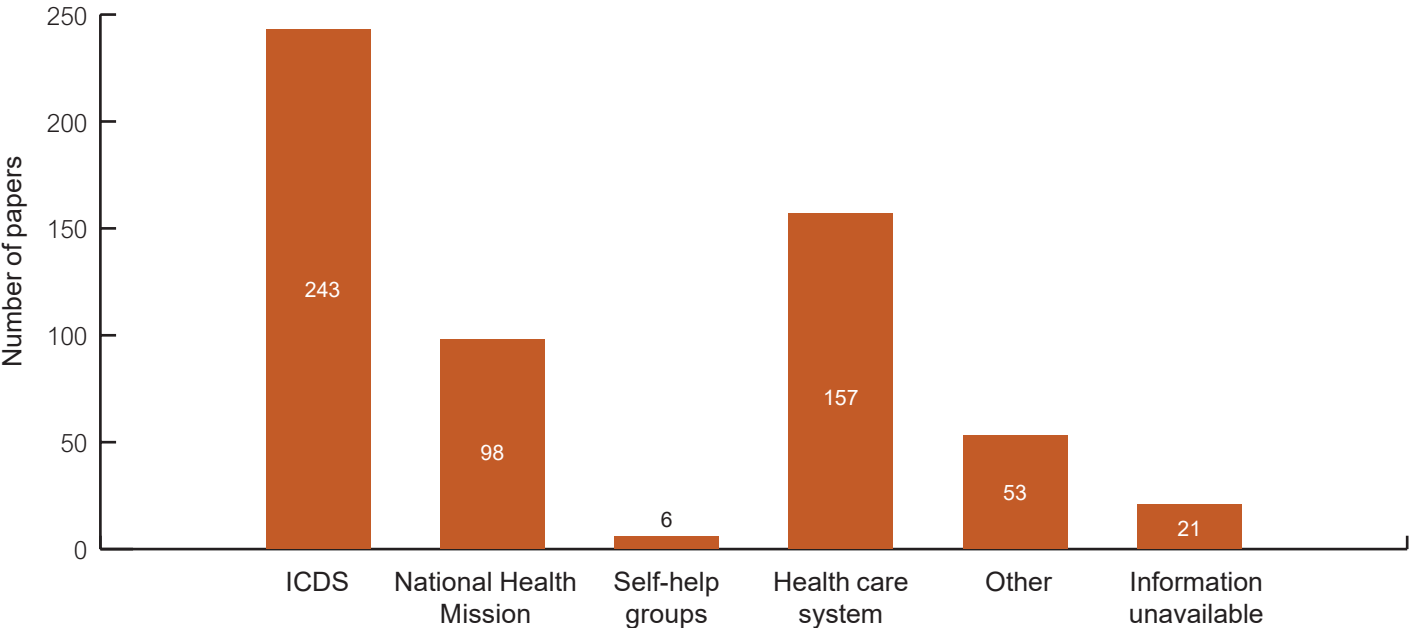
There is a prominent focus on the ICDS programme.

ICDS is one of the largest nutrition programmes in India, reaching nearly 20 million

pregnant and lactating women and 82 million children. Numerous nutrition initiatives have also leveraged the ICDS for last mile delivery of services.

Therefore, it comes as no surprise that more than 60 per cent of the papers included some assessment of its various components.

Figure 2: Distribution of evidence by delivery platform



Note: 'Other' includes project-specific delivery channels set up by government, private entities or NGOs for last mile delivery of services. Twenty-one papers did not provide any information on the delivery platform.

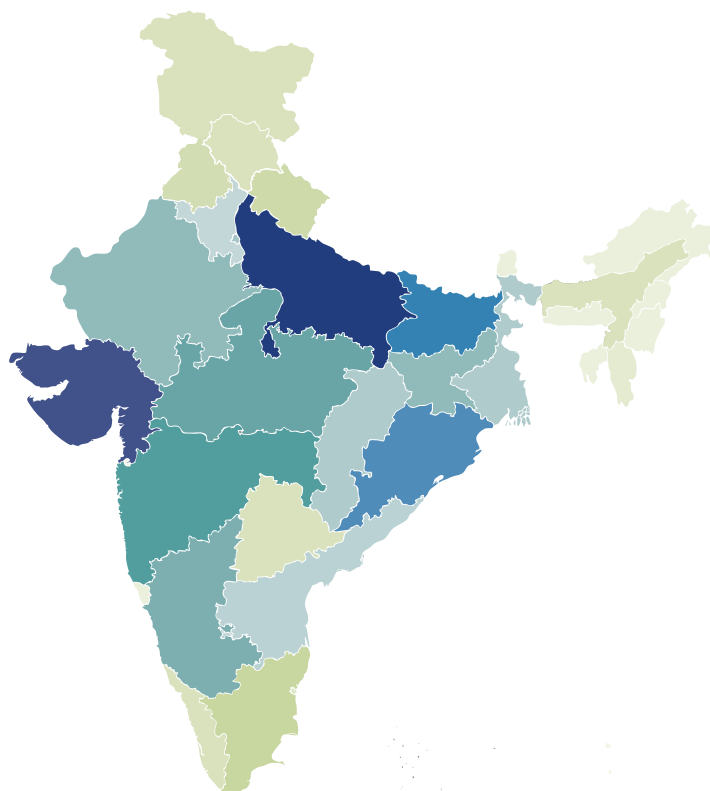
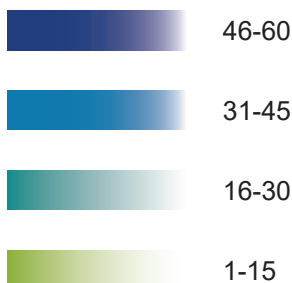
Key findings

Implementation research focus is uneven across Indian states. In terms of evidence distribution across states, Uttar Pradesh (59), Gujarat (51), Bihar (41), Odisha (36) and Maharashtra (29) were the five states

most covered by the available implementation research studies. It is difficult to assess why that might be the case, but the evidence is well focused given that Uttar Pradesh, Bihar and Maharashtra are the three

most populous states in India, according to the 2011 census. At the same time, this does mean that several states are not as well served by contextually relevant evidence.

No of papers



Gaps remain: priorities for future research

Despite the growth in the implementation evidence base around nutrition in India, significant gaps persist. We have the following recommendations to help increase the availability and relevance of implementation research to support India's nutrition efforts:

■ Set research priorities in context:

National and state governments alike should develop high-priority implementation research questions. This would entail closing gaps in under-researched topics – such as fortification, weighed during pregnancy and delayed cord clamping – and generating context-relevant evidence in underserved states. Given the limited attempts to understand whether implementation outcomes vary by demographics of the targeted group, these gaps in coverage equity need to be better studied.

■ Close the gaps in measuring the full spectrum of implementation outcomes:

Most papers do not systematically capture relevant information through the programme causal chain. They also provide limited insights on factors affecting implementation. There appears to be a clear preference for studying implementation outcomes that are easy to measure and can be tracked as part of regular programme monitoring. Implementation outcomes such as programme access, participant feasibility and quality of frontline worker engagement with programme participants remain unexplored.

■ Strengthen research capacity:

National and state research institutes should invest in strengthening the capabilities for conducting implementation research

in nutrition to help address India's lagging performance in meeting nutrition targets.

■ Identify and create opportunities for funding implementation research:

National and global funding platforms should create grant opportunities to help close critical gaps in nutrition implementation research. Additionally, national and state programmes should consider including earmarked budgets for implementation research.

■ Support translation of research into practice:

Create adequate mechanisms to ensure that governmental and non-governmental programme implementers use available implementation research, and that strong linkages are created between implementers and researchers to support topically and geographically relevant implementation research.

How to read the implementation research gap map

The map is available on 3ie's evidence gap map platform. Bubbles at intersections between interventions and outcomes denote the existence of at least one study. The larger

the bubble, the greater the volume of evidence. In the online version, hovering over a bubble displays a list of studies for that particular intervention and outcome combination.

Users can filter the evidence by study design, states, milieu (rural/urban), implementer type, delivery platform and nutritional outcomes.

Implementation research gap map

Implementation outcomes

		Programme level					Frontline worker/ Health worker level							Participant level					Cross-cutting	
Interventions		Programme access	Programme targeting	Programme adequacy	Programme monitoring	Programme cost	FW coverage	FW acceptability	FW knowledge	FW motivation	FW compliance/performance	FW quality of engagement	FW time-use	Participant coverage	Participant acceptability	Participant knowledge	Participant feasibility	Participant uptake/compliance	Barriers	Facilitators
Fortification	Food supplementation	•		•		•	•	•	•	•	•	•	•	•	•	•		•	•	•
	Micronutrient powder											•		•	•			•		
	Fortification of commonly consumed goods			•		•						•		•	•	•	•	•	•	•
	Iron & folic acid supplementation			•		•	•		•		•	•		•	•	•	•	•	•	•
Micronutrient supplementation	Vitamin A supplementation			•		•	•		•		•	•		•	•	•		•	•	
	Calcium supplementation			•		•								•		•		•		
	Zinc supplementation			•		•	•		•		•			•		•		•	•	•
	Other micronutrient supplementation			•					•					•		•		•	•	
Behaviour change counselling	Breastfeeding counselling		•	•		•	•		•		•	•		•	•	•		•	•	•
	Kangaroo mother care counselling			•		•		•	•		•			•	•	•		•	•	•
	Complementary feeding counselling			•		•	•		•		•	•		•		•		•	•	•
	Growth monitoring & counselling			•		•	•		•		•		•	•		•		•	•	
	Severe acute malnutrition management		•	•		•	•		•		•			•		•		•	•	•
	Delayed cord clamping								•											
	Weighed during pregnancy			•					•		•			•				•		
	Bundled intervention*	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

• Studies



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About this map

This brief is based on a gap map [Implementation evidence on nutrition interventions in India](#) by Stuti Tripathi, Pooja Sengupta, Abhirupa Das, Marie Gaarder and Urmi Bhattacharya. This map provides quick and easy access to published and grey

literature on the implementation of nutrition-specific interventions in India. Drawing on the analysis of the 368 included studies, the implementation research gap map reveals concentrations of evidence where we may know more than we think, and key

gaps where limited or no evidence exists. This map will be a useful tool for policymakers who want to learn more about programme implementation and point researchers to where gaps in evidence exist and more studies are needed.

Endnotes

¹ POSHAN Abhiyaan, or the Prime Minister's Overarching Scheme for Holistic Nutrition, is the Indian government's flagship programme to improve nutritional outcomes amongst children, adolescents, and pregnant and lactating women using the levers of technology, behaviour change communication, capacity building and convergence.

² A 'bundled interventions' category was added later, comprising papers that measure implementation outcomes at the system level, such as quality of ICDS centres.

³ Peters, DH, Taghreed, A, Olakunle, A, Akua, AI and Nhan, T, 2013. Implementation research: what it is and how to do it. BMJ, 347, f6753.

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