

How evidence informed new sanitation experiments in India

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Highlights

Evidence impact

- The disappointing effects of promoting latrine construction and use on health informed the evaluation of an alternative sanitation model that incentivised commitment to latrine use.
- The findings contributed to the design and focus of a new evidence programme led by the Bill & Melinda Gates Foundation, the Research Institute for Compassionate Economics and 3ie.

Factors that contributed to impact

- The researchers evaluated interventions that mimicked India's flagship total sanitation campaign (1999–2014) and hence were able to provide context-relevant insights.
- Research findings prompted further research, as they appeared to contradict the commonly accepted notion and systematic review evidence that improved sanitation improves health.
- Thomas Clasen, a leading water, sanitation and hygiene researcher – as the principal investigator on the study – contributed to raising the profile of the findings in media.
- [Scant rigorous evidence](#) and null findings of the 3ie-supported evaluation sharpened the need for additional research into what works to promote latrine use.

Impact evaluation details

Title: [Effectiveness of a rural sanitation programme on diarrhoea, soil-transmitted he...](#)

Authors: Thomas Clasen, Sophie Boisson, Parimita Routray, Belen Torondel, Melissa Bell, Oliver Cumming, Jeroen Ensink, Matthew Freeman, Marion Jenkins, Mitsunori Odagiri, Subhajyoti Ray, Antara Sinha, Mrutyunjay Suar, Wolf-Peter Schmidt

Status : Completed June 2015



Context

Repeated episodes of diarrhoea and chronic infection in early childhood are a leading cause of child malnutrition and impair physical development and cognitive function. According to [UNICEF data](#), almost 60 per cent of diarrhoeal deaths worldwide stem from unsafe drinking water, and poor sanitation and hygiene.

At a time when India was falling short of the 2015 Millennium Development Goals target for sanitation and child health, researchers from the London School of Hygiene & Tropical Medicine worked with WaterAid India, United Artists Association and their local non-

governmental partners in Odisha's Puri district to promote latrine construction and use for two years, and to evaluate whether and how it affected diarrhoea, soil-transmitted helminth infections and malnutrition amongst children.

In accordance with the Indian government's Total Sanitation Campaign, the intervention involved mobilising communities and households in villages characterised by high levels of open defecation, childhood diarrhoea and helminth infections to build and use latrines, through information, education and communication activities. The intervention also included monetary support, and provision of local technology and hardware supplies for the construction of household and institutional latrines.

The 3ie-supported evaluation, a cluster randomised controlled trial conducted between May 2010 and December 2013, studied 4,586 households in 50 intervention villages and 4,894 households in 50 control villages.

Evidence

The intervention increased average village-level latrine coverage from 9 per cent to 63 per cent in the 50 villages where WaterAid India and its partners implemented the programme. By contrast, average village-level latrine coverage increased from 8 per cent to 12 per cent in the control villages where the partners did not implement the programme.

The evaluation found no evidence that mobilising households and promoting latrine construction and use reduced exposure to faecal contamination or prevented diarrhoea, soil-transmitted helminth infection or child malnutrition. This led the researchers to conclude that, to deliver genuine health gains, sanitation improvement approaches should incorporate approaches to improve latrine use.

Evidence impacts

Informed the evaluation of another rural sanitation model

The evaluation finding that promoting latrine infrastructure could not be assumed to lead to health gains contributed to the evaluation of a different rural sanitation model that emphasised the use of improved facilities. The evaluation, described in a [working paper titled 'Toilets Can Work'](#), leveraged the researchers' partnership with Gram Vikas, another Odisha-based organisation. Gram Vikas' programme focuses on community-led integrated water and sanitation improvement. It uses water as an incentive to encourage all households in a village to commit to building and using sanitation infrastructure.

Contributed to the design of a new research programme

The evaluation findings, alongside those from other studies, informed the design of an [evidence programme to promote latrine use in rural India](#). The programme, which is managed by 3ie and supported by the Bill & Melinda Gates Foundation and the Research Institute for Compassionate Economics, focuses on identifying context-relevant interventions to promote the use of improved sanitation infrastructure.

‘We partnered on the evidence programme because...a series of evaluations, including Clasen and colleagues’ 2014 study in Odisha, gave us the picture that reducing open defecation in rural India is challenging and needs new ideas.’ — Radu Ban, senior program officer, evidence and measurement – water, sanitation and hygiene, Bill & Melinda Gates Foundation

Suggested citation

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