



Nigeria Inclusive Sanitation
Webinar Series

Webinar 3: Evidence on how
to improve WASH
infrastructure in Nigeria

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@TheIFS

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Joint work with L. Abramovsky, B. Augsburg, P. Jervis, B. Malde

Children's health: benefits of improving both nutrition and WASH

This study was funded by CPP @TheIFS



Motivation



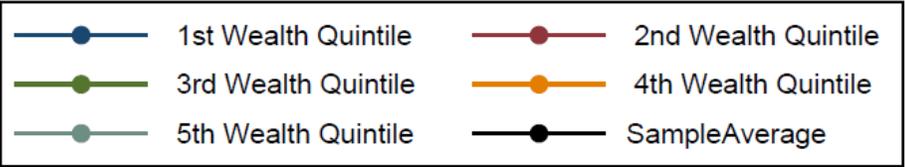
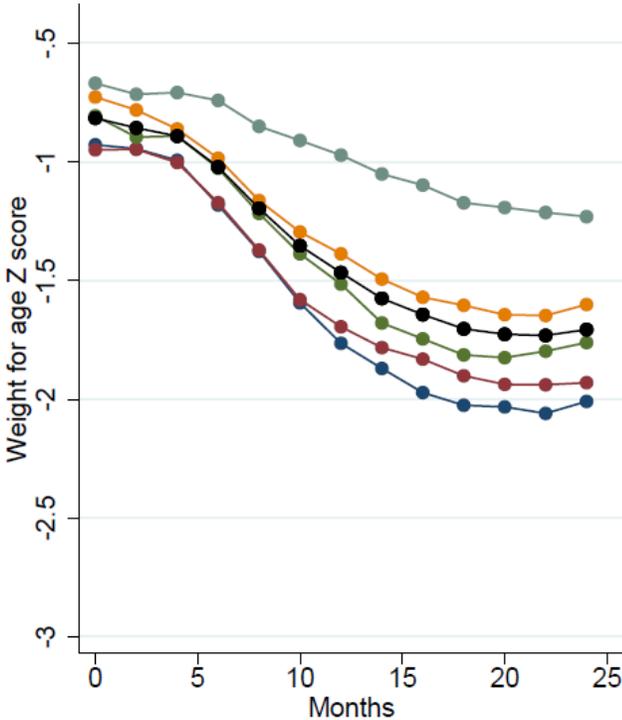
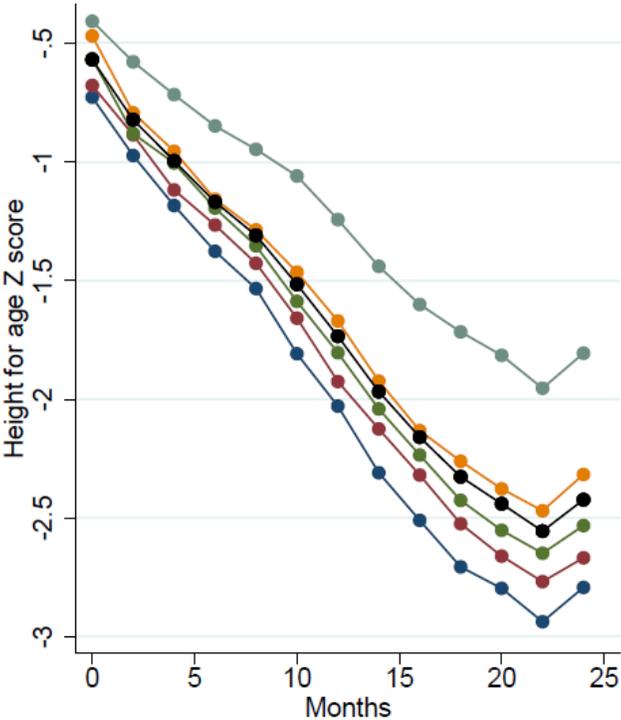
- Over 200 million children under the age of 5 don't reach their estimated developmental potential
 - Early development has long term impacts on health, cognitive function and economic wellbeing
 - 22% of children under 5 stunted, concentrated in the developing world (Nigeria 35%, Philippines 30%)
- Good reasons to believe that better WASH practices makes nutrition investments more productive in terms of child growth:
 - Breastmilk can provide protection against bad disease environment
 - Diarrhoea, and environmental enteropathy - inflammation of the gut - makes it difficult to absorb nutrients
- Little quantitative evidence on the combined effect of WASH and nutrition on child health

This study



- Aim: Understand the individual and combined contribution of WASH and nutrition on children's height and weight growth
 - Analysis accounts for the fact that nutritional choices and WASH practices might be based on shocks and preferences that are unobserved by the researcher, which would lead to incorrect estimates if ignored
- Data: Cebu Longitudinal Health and Nutrition Survey
 - Cohort study of approx. 2800 kids born between May 1, 1983 and April 30, 1984 in 33 communities in and around Cebu City, Philippines
 - Surveys: in-utero, at birth, then every 2 months until 24 months of age
 - Detailed measures of inputs:
 - Nutritional intake: use protein, but also try other measures,
 - WASH: combine many variables reflecting sanitary conditions at home into one index - toilet ownership, child feces disposal practices at 18 months, water source and treatment, soap expenditures

Outcome measures: child height and weight



Findings: both WASH and nutrition matter



- Both protein intake and better WASH individually lead to better child height and weight outcomes
- Improved WASH generates a small but robust and statistically significant improvement in the effect of protein on child height and weight :
 - Consider child given an additional egg a day between the ages of six months and two years
 - At 10th percentile of the WASH distribution, would be 2.57 cm taller by the age of two years
 - At 90th percentile of the WASH distribution, the increase would be 2.73cm

Main policy takeaways

- This result provides one explanation for the puzzle of stubbornly high stunting rates in some countries, despite significant income growth
 - E.g., in India there have been improvements in nutrition, but WASH investments lagged
- Better child health can come from a combination of improvements in both nutrition and WASH behaviours
 - This suggests it is important to design approaches to target both WASH and nutrition
- This study focused on the importance of WASH infrastructure and behaviour at home
 - Important to consider improving WASH behaviours also in childcare and education settings
 - This can ensure children's exposure to pathogens is reduced in all relevant settings, in both rural and urban contexts

THANK YOU

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