



REFANI PAKISTAN STUDY:

A cRCT of the effectiveness and cost-effectiveness of different cash transfer programmes on child nutrition status.

Overview on Trial and Results

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BACKGROUND

In the last few years, the Government of Pakistan has been especially committed to investing in nutrition, however undernutrition in children still continues to be widespread in the country. Poverty and food insecurity are at the root of undernutrition in Pakistan, with many poor households not having adequate access to available foods. Since 2013, the European Union, in partnership with Action Against Hunger and others, has been implementing the Women and children/infant Improved Nutrition in Sindh (WINS) programme in Dadu District, Sindh Province. WINS is an integrated food security, WASH and nutrition programme reaching more than one million malnourished women and children in Sindh province with malnutrition treatment and evidence based advocacy to improve nutrition practices, food security and livelihoods.

In collaboration between ENN and Action Against Hunger, the REFANI Pakistan study aligned with the on-going implementation of the WINS programme, using a mixed methods approach to assess the short and longer-term effectiveness of seasonal cash transfer programmes (CTPs) on the nutritional status of mothers and children.

This study aimed to: (a) compare the nutrition status of children receiving seasonal unconditional cash transfers

(UCTs), or a fresh food voucher, with those only receiving standard WINS care after 6 months and at 1 year; (b) assess the costs and cost-effectiveness of the different interventions; (c) understand the factors that determine the ways in which households use the different transfers; and (d) explore the role of the different processes involved in the study outcomes and how they interact with the context.

STUDY DESIGN AND METHODS

This study adopted a theory-based approach determining *how* the interventions work by looking at the processes involved and the impact achieved, as well as a cost-effectiveness analysis (CEA). The REFANI Pakistan study was a four-arm longitudinal cluster randomised controlled trial, with integral economic and mixed methods process evaluations. All beneficiaries in the villages of the study arms had access to the 'standard' WINS programme. Villages were randomised into one of four groups – (1) those receiving WINS standard care only and those with the WINS standard care plus; (2) a seasonal UCT; (3) a seasonal "double" UCT; and (4) a seasonal fresh food voucher.

STUDY ARM	DESCRIPTION
(1) Comparison Group (WINS)	Standard WINS intervention
(2) Seasonal Cash Transfer + WINS - 'standard cash'	CT of Pakistani Rupee (RS) 1,500 per month plus the standard WINS intervention
(3) Seasonal 'Double' Cash Transfer + WINS - 'double cash'	CT of RS 3,000 per month plus the standard WINS intervention
(4) Seasonal Voucher + WINS	Voucher transfer of RS 1,500 per month plus the standard WINS intervention

Eligible households were those identified at baseline as poor or very-poor using wealth ranking, and those with a child aged 6-48 months. The sample size aimed to measure over 5,000 children among 2,500 households.

Any child in participating households who became severely wasted during the study continued to receive standard out-patient therapeutic (OPT) care with complementary food vouchers (CFVs) for two months after discharge. Study households selected from intervention/comparison areas were given five key messages which have been designed for WINS. Action Against Hunger regularly monitored food markets and economic changes; this information was used to make any necessary adjustments to UCT values according to inflation.

Finally, the study used qualitative and quantitative methods to assess financial and economic resource use for each study arm. The CEA used a societal perspective to estimate costs to participating households, communities, etc., in terms of direct and indirect costs (i.e. opportunity costs), and additionally, used accounting data on the financial resources used.

PRIMARY RESEARCH QUESTIONS

The key question driving the REFANI Pakistan study was: How effective are the different CTPs (cash and voucher) at reducing the risk of undernutrition during the lean season and up to 1 year in children < 5 years from poor and very poor households with access to an integrated WASH/FSL/BCC programme aimed at reducing the risk of undernutrition in children aged 6-59 months? Primary outcomes were the prevalence of wasting (as measured by weight-for-height Z-score (WHZ) <-2 or the presence of bilateral pitting oedema) in children < 5 years and mean WHZ. Impact was assessed at 6 months (short-term) and at 1 year (medium-term) after baseline.

Additional REFANI Pakistan research questions delved deeper into impact on the prevalence of anaemia, morbidity, food security, dietary diversity and various other questions around the pathways through which the interventions function – i.e. the ways the transfers are utilised by households and identification of the barriers and/or drivers of nutritional status based upon the REFANI theory of change (ToC)¹.

STUDY RESULTS

At six months, compared to the comparison group, the 'Double Cash' arm saw a decrease in risk of a child being wasted, an increase in mean WHZ scores and a decrease in risk of a child being severely wasted. Also compared to the comparison group, the voucher arm saw an increase in mean WHZ and increase in mothers BMI, however also observed negative impacts: decrease in mean haemoglobin concentration in mothers and children, and an increase in risk of anemia in mothers. The only impact observed by the 'Standard Cash' arm, compared to the comparison arm, was negative; a decrease in mean haemoglobin concentration in mothers. Lastly, All arms saw an increase in household and individual dietary diversity.

These significant impacts on primary outcomes were only observed at the six-month interval. However, at both month six and twelve, all three intervention groups saw lower odds of being stunted, being severely stunted and mean height-for-age-z-score.

ANALYSIS

Analysis of results is still ongoing, including a pathway analysis into why the 'Double Cash' arm had an impact on wasting reduction, and why it did not also observe an improvement in haemoglobin status. Further analysis is also being conducted to see what occurred in the voucher arm, seeing that there was an increase in WHZ score, yet also a decrease in haemoglobin status.

ETHICAL CONSIDERATIONS

Ethical approval has been attained from the National Bioethics Committee in Pakistan and the Western Institutional Review Board (WIRB). The study's International Standard Randomised Controlled Trial Number (ISRCTN) is 10761532. Consent has also been sought at the village, household and individual levels for participation in the study.

FUTURE PLANS

The researchers are currently submitting two journal articles on; nutritional impact and pathway analysis. Final analysis on qualitative data collected is underway to better understand the results from the study. Final REFANI-Pakistan articles and other REFANI outputs are expected in Summer 2017. For more information, links to additional materials and the REFANI-Pakistan study protocol, please visit www.refani.org.

¹ The REFANI ToC has been embargoed, pending peer-review publication.