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Delivering for Nutrition in South Asia

Equity and Inclusion

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Social Protection

Diets & Health Systems

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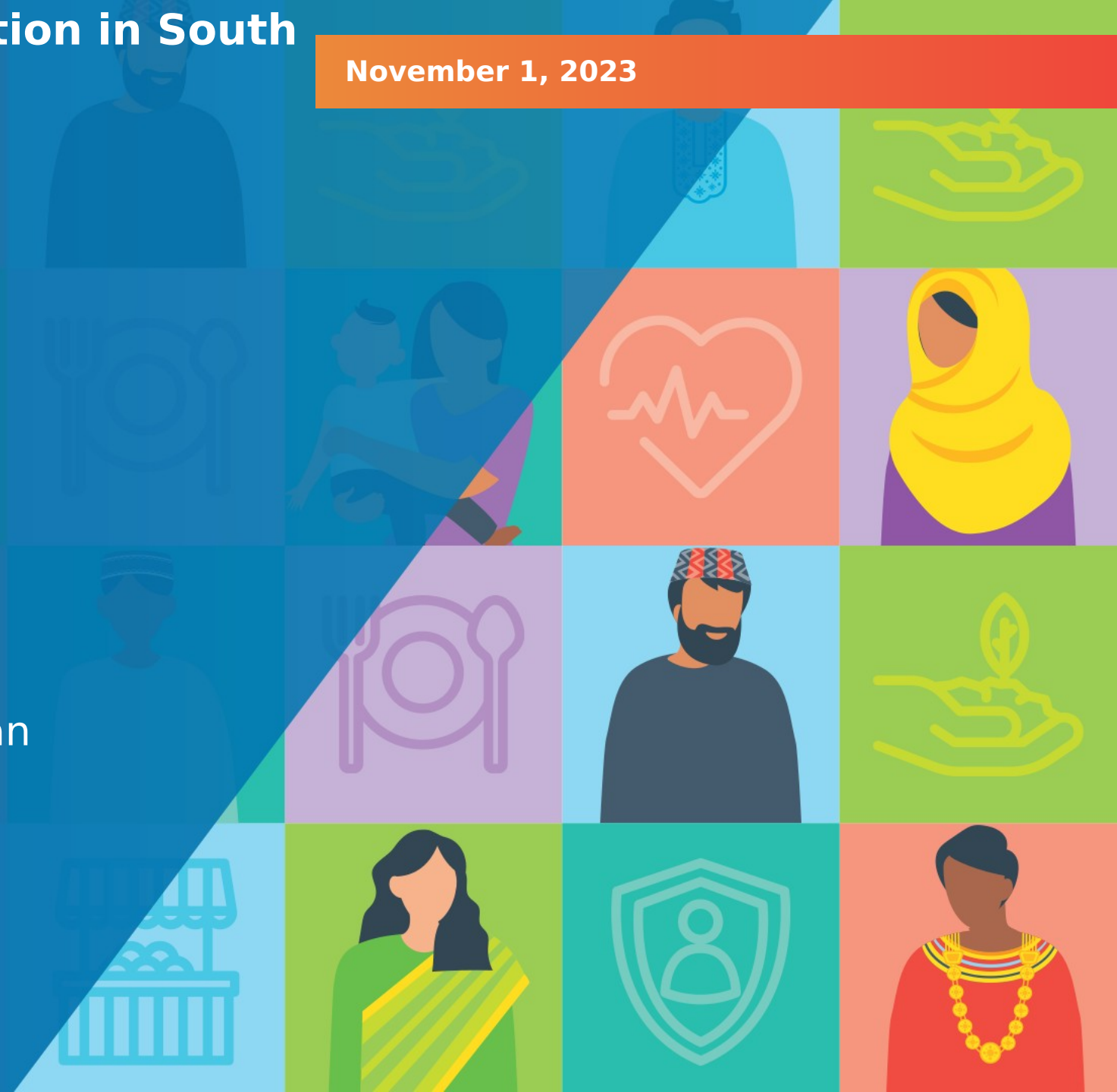

Effectiveness of cash transfers combined with lipid-based nutrient supplement and/or behavior change communication to prevent stunting among children in district Rahim Yar Khan, Pakistan

Center of Excellence for Women & Child Health

Aga Khan University, Pakistan

Objectives

Objective of Cluster Randomized Controlled Trial:

- *Evaluate the effectiveness of unconditional cash transfers(UCT) combined with lipid-based nutrient supplement (LNS) and/or social and behavior change communication (SBCC) to prevent stunting among children 6-23 months in marginalized populations.*

Objective of Process Evaluation:

- *Identify the bottlenecks, opportunities and operational factors to improve proposed programme design and study outcomes*

Methods

Study design	*A 4-arm cluster randomized controlled trial*
Study phases	1. **Formative research** *to develop SBCC package* 2. **A 4-arm cluster randomized trial** *to determine the effectiveness of different intervention packages* 3. **Six-monthly Process evaluations** *to identify key bottlenecks, opportunities and improve program implementation* 4. **Cost effectiveness analysis** *to assess the cost of each intervention package*
Study arms and sample size	*(1) UCT alone = 400* *(2) UCT + SBCC = 400* *(3) UCT + LNS = 400* *(4) UCT + LNS + SBCC = 400*
Unit of randomization	• *LHW catchment area as the unit of randomization to deliver the intervention package.* • *Of the 1600 LHW catchment areas or clusters identified, a total of 200 clusters were randomly selected and assigned into 1 of 4 study arms*.

Intervention Packages

- **Cash-based transfers:** **4,834 PKR**, *and then* **5,000 PKR** *on quarterly basis was provided by BISP, Government of Pakistan.*

- **Lipid-based nutrient supplement (LNS):** *A monthly ration of 30 sachets of LNS (Wawamum); one sachet of 50g per day to each child provided for 18 months during 6-24 months of age.*

- **Social & behaviour change communication (SBCC):** *SBCC included monthly house-house visits, and quarterly community sessions with IEC materials by LHWs.*

Study outcomes

The primary study outcome *was to reduce the prevalence of stunting among children at the age of 24 mo.*

Secondary outcomes

- *Reduction in the prevalence of wasting and underweight among children at 24 months of age.*
- *Improvement in IYCF practices.*
- *Improved nutrition, hygiene and health related knowledge and practices.*
- *Uptake of health services and interventions.*

JMIR RESEARCH PROTOCOLS Khan et al

Protocol

Specialized Nutritious Food Combined With Cash Transfers and Social and Behavior Change Communication to Prevent Stunting Among Children Aged 6 to 23 Months in Pakistan: Protocol for a Cluster Randomized Controlled Trial

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CORRECTED PROOF

Effectiveness of unconditional cash transfers combined with lipid-based nutrient supplement and/or behavior change communication to prevent stunting among children in Pakistan: a cluster randomized controlled trial

Sajid Bashir Soofi ✉, Shabina Ariff, Gul Nawaz Khan, Atif Habib, Sumra Kureishy, Yasir Ihtesham, Masawar Hussain, Arjumand Rizvi, Muhammad Sajid, Naveed Akbar ...
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ABSTRACT

Background

In Pakistan, the prevalence of stunting among children younger than 5 y has remained above WHO critical thresholds (≥30%) over the past 2 decades.

Key Results

Compliance of LNS among children 6-24 months of age

Variables	UCT + LNS (n = 428)	UCT + LNS + SBCC (n = 431)	P-value
	Mean (SD)	Mean (SD)	
Days observed	533.5 (± 41.7)	529.7 (± 41.9)	0.282
Days LNS received	500.5 (± 60.9)	509.9 (± 61.1)	0.024
Days LNS consumed	418.2 (± 83.1)	481.4 (± 83.4)	<0.001
Percent compliance to LNS (days consumed/days observed*100)	82.7 (± 11.2)	94.1 (± 11.3)	<0.001
Number of sachets received	474.9 (± 87.2)	496.9 (± 87.5)	<0.001
Number of sachets consumed	382.6 (± 84.6)	419.2 (± 84.9)	<0.001
Number of LNS sachets shared with others family members	50.3 (± 34.5)	15.3 (± 34.6)	<0.001

Household utilization of unconditional cash transfers

Variables	UCT n = 430	UCT+SBCC n = 431	UCT + LNS n = 426	UCT+LNS+SBCC n = 430
	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
UCT received quarterly (PKR)	4703 ± 267	4694 ± 267	4540 ± 266	4560 ± 267
Spending on food	2434 ± 1569	2067 ± 1571	2696 ± 1562	2606 ± 1569
Spending on transport	891 ± 1041	656 ± 1042	1190 ± 1036	1020 ± 1041
Spending on health/medicine	796 ± 1185	577 ± 1187	314 ± 1180	316 ± 1185
Spending on clothing	62 ± 326	41 ± 327	48 ± 325	20 ± 326
Spending on education/school fee	15 ± 79	57 ± 79	16 ± 79	11 ± 79
Spending on other items	506 ± 948	1296 ± 949	275 ± 944	587 ± 948

Pooled and adjusted prevalence of stunting, wasting and underweight in children 6-24 months of age

Variables	Stunting[1] (95% CI)	Wasting[1] (95% CI)	Underweight[1] (95% CI)
UCT	41.7 (37.9, 45.4)	9.5 (7.6, 11.3)	21.9 (18.7, 25.2)
UCT + SBCC	44.8 (40.3, 49.3)	9.7 (7.8, 11.6)	22.1 (18.5, 25.8)
UCT + LNS	38.5 (34.3, 42.7)	8.4 (6.5, 10.3)	20.8 (17.3, 24.3)
UCT+LNS+SBCC	39.3 (35.1, 43.4)	8.6 (6.5, 10.7)	21.6 (17.8, 25.4)
P-values (pairwise comparison)[2]			
UCT vs. UCT + SBCC	0.147	0.858	0.727
UCT vs. UCT + LNS	0.029	0.231	0.529
UCT vs. UCT+LNS+SBCC	<0.001	0.608	0.597
UCT + SBCC vs. UCT + LNS	0.415	0.151	0.823
UCT + SBCC vs. UCT + LNS + SBCC	0.107	0.452	0.883
UCT + LNS vs. UCT + LNS + SBCC	0.562	0.424	0.910

[1]Prevalence are accounted for cluster, gender and age.

[2]P values were obtained from generalized linear model using a log link and binomial distribution.

Conclusions

- Use of UCT combined with LNS and SBCC were shown to be effective in reducing the prevalence of stunting in children at 24 months of age in low-and-middle-income settings.

- Scaling up of the UCT, in combination with LNS and SBCC sessions is recommended to improve the nutritional status of children living in marginalized populations.

- Further larger-scale evaluation is needed to confirm these findings and to determine the sustainability and long-term impact of these intervention packages on child undernutrition.

Thanks


TEAR TO OPEN
wawa mum
LNS-MQ
Lipid-based Nutrient Supplement
Medium Quantity
To prevent malnutrition for children
6 months and older
Eat one sachet per day
Not for Sale or Exchange
For Export to Afghanistan