EFFECTIVENESS OF NUTRITION EDUCATION IN
SOCIAL PROTECTION PROGRAMS

Evidence from the
Transfer Modality Research Initiative (TMRI)

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Motivation

- Most existing evidence from evaluations (by IFPRI and others) of major safety nets in Bangladesh show reduced household poverty and improved food security but few improvements in child nutritional status.

- This leads to two key questions:
  1. Are large-scale social protection interventions that increase resources sufficient to improve child nutrition?
  2. Are there constraints other than resources, such as nutrition knowledge, that also need to be addressed?

➢ This is one of the focal set of issues addressed by the Transfer Modality Research Initiative (TMRI) in Bangladesh.
Objectives of the Transfer Modality Research Initiative (TMRI)

- The overall objective of the research is to generate definitive evidence on which safety net transfer modalities work best for the ultra poor in rural Bangladesh.

- The research has the following specific objectives:
  1. Measure the impact and cost-effectiveness of transfer methods on these key outcomes:
     - household income
     - household food security
     - child nutrition
  2. Evaluate the process of delivering benefits at the operational level and solicit feedback from program participants.
TMRI – Basic Design

- Two-year (May 2012 – April 2014) project designed by IFPRI and implemented by the UN World Food Programme (WFP). Used randomized control trial with 5 treatment arms and controls:
  - **Cash:** Monthly cash transfer of Taka (Tk) 1,500 (about US$19 per month) (north & south)
  - **Food:** Monthly food transfer of 30 kg of rice, 2 kg of lentil pulse and 2 liters of micronutrient fortified cooking oil (north & south)
  - ½ **Food and ½ Cash:** Tk 750 and 15 kg of rice, 1 kg of mosur (lentil) pulse and 1 liter of micronutrient fortified cooking oil (north & south)
  - **Cash+BCC:** Monthly cash transfer AND Nutrition Behavior Change Communication (north)
  - **Food+BCC:** Monthly food transfer AND Nutrition Behavior Change Communication (south)
  - **Controls** (north & south)
Evaluating Impacts

- IFPRI developed a cluster randomized controlled trial (RCT) design to evaluate impacts of transfer modalities.
- Randomly assigned 50 clusters (villages) to each of the five groups (four treatment arms, one control) in each of the 2 regions (northwest and south).
- Selected 10 households from each village who met the following criteria: (1) be poor; (2) have at least one child aged 0-24 months; and (3) not receive benefits from other safety net interventions.

  - **Selected 500 clusters and 5,000 households (4,000 participants and 1,000 control households)**

- We used RCT with “before-and-after” and “with-and-without” differences for estimating the impact of transfers.
- We used the analysis of covariance (ANCOVA) regression to estimate impact.
Household Surveys for Impact Evaluation

- The required quantitative data for impact evaluation come from three household surveys.
- The first household survey, carried out in April 2012 (just before the start of transfers), provided the information needed for the baseline study.
- A first follow-up survey was conducted in June 2013, just after completing 12 months of transfer distributions.
- A second follow-up or endline survey was conducted in April 2014, during the 24th month of transfer distribution.
  - Panel data with low attrition (<3%) at endline, random (not correlated with intervention assignment).
Adding BCC to transfers causes a greater increase in “diet quantity” in terms of household caloric intake

Absolute change (kcal/day)

North

- Cash only: 75
- Food only: 143
- Cash+Food: 83
- Cash+BCC: 282

South

- Cash: 23
- Food: 8
- Cash+Food: 38
- Food+BCC: 141

Statistically significant
Not significant
Adding BCC to transfers causes a greater increase in per-calorie expenditure

Absolute change (taka)

### North

<table>
<thead>
<tr>
<th></th>
<th>Per-calorie food expenditure (Tk/1,000 kcal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash only</td>
<td>1.80</td>
</tr>
<tr>
<td>Food only</td>
<td>0.94</td>
</tr>
<tr>
<td>Cash+Food</td>
<td>1.20</td>
</tr>
<tr>
<td>Cash+BCC</td>
<td>4.35</td>
</tr>
</tbody>
</table>

**Statistically significant**

### South

<table>
<thead>
<tr>
<th></th>
<th>Per-calorie food expenditure (Tk/1,000 kcal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>1.68</td>
</tr>
<tr>
<td>Food</td>
<td>1.21</td>
</tr>
<tr>
<td>Cash+Food</td>
<td>1.75</td>
</tr>
<tr>
<td>Food+BCC</td>
<td>4.22</td>
</tr>
</tbody>
</table>

**Statistically significant**
Calculation of the WFP Food Consumption Score

(# of days consumed of each food group in past 7 days, weighted by “nutritional importance”)

<table>
<thead>
<tr>
<th>Group</th>
<th>Food items</th>
<th>Food group</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rice and other cereals</td>
<td>Staples</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Beans, lentils, peas and nuts</td>
<td>Pulses</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Vegetables and leaves</td>
<td>Vegetables</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Fruits</td>
<td>Fruits</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Beef, goat, poultry, eggs, and fish</td>
<td>Meat, eggs and fish</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Milk, yogurt, and other dairies</td>
<td>Milk</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Sugar, sugar products, and honey</td>
<td>Sugar</td>
<td>0.5</td>
</tr>
<tr>
<td>8</td>
<td>Oils, fats, and butter</td>
<td>Oil</td>
<td>0.5</td>
</tr>
</tbody>
</table>
All modalities significantly increased household diet quality in both regions: Adding BCC gives a greater impact  
(using WFP’s “Food Consumption Score”: 0-112)
Adding BCC increases the frequency of several food groups consumed by children <42 months: North (impacts significant at ≤10% level)
Adding BCC increases the frequency of several food groups consumed by children <42 months: South (impacts significant at ≤10% level)
In the north, “Cash + BCC” improved child nutritional status in terms of reducing the prevalence of stunting by 7.3 percentage points, but other modalities did not.

No treatment arm had any impact on any measure of anthropometric status of children in the south.
Conclusions

- Overall, all transfer modalities in both northwest and southern regions cause meaningful improvements in nearly all measures of consumption.
- However, the addition of nutrition BCC to transfers consistently causes much larger improvements than transfers alone.
- In northwestern Bangladesh, cash transfers combined with nutrition BCC decreased child stunting 7.3 percentage points over the two years of the project – an achievement almost three times the national average decline.
Policy Implications

▪ If policy objective is to improve the diets of poor households, both cash and food transfers are effective.

▪ If policy objective is to improve the nutritional status of children from the poorest households, transfers alone are inadequate.

▪ High quality Behavior Change Communication together with transfers – especially cash transfers – can significantly improve child nutrition and anthropometric outcomes.

▪ Although the impacts of cash and food transfers on most outcomes are quite similar, the delivery cost of cash transfer is considerably lower than that of food transfer. Therefore, cash transfers are more cost-effective than food transfers.
Policy Uptake

- Evidence from the TMRI is prompting the Bangladesh government and development partners to consider adding nutrition BCC into social protection programs.

- For example, encouraged by TMRI results, the Ministry of Women and Children Affairs (MoWCA) is piloting the Investment Component for Vulnerable Group Development (ICVGD) program for destitute women, which adds a cash grant for investment, fortified rice distribution, and nutrition BCC to existing VGD activities.
Thank you

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