Impact of a combined nutrition and agricultural intervention on time-use and dietary diversity of women smallholder farmers in Teso Sub County, Kenya

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Background

- Women constitute an essential agricultural workforce and play a crucial role in food provision of the entire household.
- Nutrition and agricultural interventions may intensify women’s fieldwork by increasing time invest in agricultural activities and unintendedly result in inadequate care and nutrition practices.1

Methods

Figure 1: Study design

- Nutrition Education & Agriculture Interventions
- Time-Use
- Nutritional Outcomes

Intra-households dynamics, social norms, migration

Change agriculture practices
- introduction of kitchen gardens with buffer strips and new crops

Change in productive activities
- subsistence cropping → farming

Nutritional Status
- household, individual

Food Consumption
- child feeding practices, nutrition knowledge, food intake, dietary diversity

Food Environment
- food availability, cultural and social acceptability

Change in nutrition practices
- age appropriate feeding practices, diversification of diets, number of meals

Changes in care activities
- household tasks, food preparation → cooking, feeding

Figure 2: Project activities embedded in the Theory of Change: framework (Modified after: Johnston et al., 2015)

Results

Figure 3: Children’s Dietary Diversity Scores at Baseline and Endline

- None of the interventions had an influence in the ∆cooking time
- Warming time significantly higher in the combined intervention than Nutrition Education and Control

Figure 4: Time-use in Baseline and Endline

Table 1: Time-use and dietary diversity of women smallholder farmers in Teso Sub County, Kenya

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Baseline (n = 107)</th>
<th>Endline (n = 116)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutritional Education</td>
<td>∆1.9</td>
<td></td>
</tr>
<tr>
<td>Combined Agriculture and Nutrition Education</td>
<td>∆1.3</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>∆1.3</td>
</tr>
</tbody>
</table>

None of the interventions had an influence in the ∆cooking time. Warming time significantly higher in the combined intervention than Nutrition Education and Control.

Conclusions

- Nutrition Education changed positively dietary diversity of children and women without impacting cooking time but negatively time used for farming activities.
- Time-use data is decisive for nutrition security when promoting nutrition education and innovative agricultural approaches.