Nutrition Links Study Results

World Vision Global Health, Nutrition and HIV Community of Practice Webinar

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Harmonizing nutrition knowledge

- Targeted training improved nutrition knowledge within the health sector
- Training for the non-health sector improved nutrition knowledge and collaborations

(Aidam, 2018)
Effect of Monitoring and Supportive Supervision on Health Staff Performance

Changes observed in aspects of community based growth promotion skills when health staff were monitored 3 months apart.
Diversifying household food production

At baseline, only about 1/3 (36%) of households in the district had a home garden and grew dark green leafy vegetables.

- DGLV: 36%
- OFSP: 18%
- Fruits: 51%

OFSP: Orange flesh sweet potato
DGLV: Dark green leafy vegetables

(Colecraft 2017)
Did the intervention contribute to diversifying household food production?

**YES!** Production increased especially for dark green leafy vegetables such as *bokoboko* (waterleaf) & *alefu* (Amaranth)
Did the intervention contribute to diverse household food production?

YES! Dramatic increase in the availability of eggs in the intervention households (110 ± 51 eggs/week)

USE OF EGGS COLLECTED:
TOTAL OF 1,243,271

- Sold: 28%
- Consumed: 3%
- Inputs purchased: 34%
- Other uses: 36%

Other uses = undeclared, gifted, damaged, pass-on-the-gift repayment

(Afua 2017)
Did the intervention activities decrease time given to child care?

**No.** Intervention caregivers spent the same amount of time on child care activities as caregivers in control communities.

The amount of leisure time was lower.
Diversity of children’s diet

At baseline, only about half of mothers and infants (6-12 mo) had a diverse diet.

\[ \text{Diverse: child} \geq 4 \text{ foods; mother} \geq 5 \text{ foods} \]

(Colecraft 2017)
Diversity of children’s diet

The child’s diet was more diverse if

(i) the mother’s diet was diverse

(ii) the household grew nutrient-rich crops

(iii) the child was older
Did the intervention contribute to a diverse child’s diet?

Yes!

“We were taught how to prepare good food; not just any kind of food. The food must play a specific role in our body. We must eat healthy foods, energy giving foods, body building foods and protective foods. You must eat all these foods every day so that you will be strong and healthy.”

[FGD, Community based Growth Promotion].
Did the intervention contribute to a diverse child’s diet?

**YES.** The change from baseline to endline was greater in the intervention group for diet diversity (≥ 4 foods).

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Endline</th>
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</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Δ=63 % pts</td>
<td>Δ=53 % pts</td>
</tr>
<tr>
<td>Control</td>
<td>Δ=53 % pts</td>
<td></td>
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</table>

(P<0.05)
What factors contributed to a diverse diet?

<table>
<thead>
<tr>
<th>If...</th>
<th>the odds of having a diverse diet was...</th>
<th>compared to...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participated in the intervention</td>
<td>(65% higher)</td>
<td>being in the control group</td>
</tr>
<tr>
<td>Mother had secondary education</td>
<td>(268% higher)</td>
<td>having no formal education</td>
</tr>
<tr>
<td>Lived in a high wealth household</td>
<td>(53% higher)</td>
<td>living in a low wealth household</td>
</tr>
<tr>
<td>Mother not married/cohabitation</td>
<td>(69% lower)</td>
<td>being married</td>
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</table>

Odds ratios were adjusted for clusters and phase of enrollment.
Did the intervention contribute to lower food insecurity?

**PARTLY.** Intervention households in the second year experienced less food insecurity ($p<0.01$)

“Because of [the garden] we did not eat only one-way food. Mmm [smiling] like eating banku every day, eating banku everyday, we don’t eat like that. [smiling]”

(Dallman, 2017)
**Did the intervention contribute to lower child morbidity?**

*No.* Symptoms of illness were related to other factors.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Increased risk</th>
<th>Decreased risk</th>
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<tbody>
<tr>
<td>Fever</td>
<td>Past history of fever, higher maternal depression</td>
<td>Male, higher hemoglobin</td>
</tr>
<tr>
<td>Cough</td>
<td>Past history of cough, higher maternal depression</td>
<td></td>
</tr>
<tr>
<td>Diarrhea</td>
<td>Higher child age, low maternal diet diversity, higher maternal depression</td>
<td>Higher age when weaned</td>
</tr>
</tbody>
</table>

Adjusted for clusters and phase of enrollment

(Karimi, 2017)
Did the intervention contribute to better growth indicators?

YES! The intervention improved weight-for-age. It decreased the decline over time.

**Adjusted difference due to the intervention**

+0.15 Z-scores ($P<0.05$)

**Unadjusted baseline-endline:**
- Intervention $\Delta = -0.13$ WAZ
- Control $\Delta = -0.32$ WAZ
Did the intervention contribute to better growth indicators?

**YES!** The intervention improved linear growth. It reduced the decline in length-for-age over time.

**Adjusted difference due to the intervention**

+0.22 Z-scores  
(P<0.01)

**Unadjusted baseline-endline:**

Intervention $\Delta = -0.38$ LAZ  
Control $\Delta = -0.64$ LAZ
Child growth indicators

Overall, stunting increased ($p<0.001$) and wasting decreased ($p<0.05$) over time. The intervention did not affect these rates.
Why did the intervention not affect stunting?

- Most children are > -2 SD cut-off
- Largest changes is above -2 SD

*Intervention vs. Control*

- Percentage (%)
- Length-for-age Z-score
Summary

- In this region of rural Ghana, there had been little diversity in children’s diets.

- The integrated intervention – nutrition education, income generation, and gardening - resulted in improved children’s diet.

- Increased activities for women did not negatively affect time spent on child care.

- The integrated intervention led to improved indicators of nutritional status for children.

- Integrated interventions can be supported through collaborative multi-sector services.
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