Harnessing Women’s Empowerment in Agriculture to improve Nutritional Status of Mothers, Children, and Adolescents in Rural Ethiopia

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February 2020
Addis Ababa
Ethiopia
OUTLINE

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- Objective of the study
- Methods and materials
- Results with discussion
- Strengths and limitations
- Conclusion and recommendation
INTRODUCTION

- Sub Saharan Africa (SSA) continues to be the most food insecure region due to repeated drought, famine and malnutrition.
  - Food production needs to increase by 60% over the next 15 years to feed the rapidly growing population and demands for nutritious food. (FAO, 2009)

- One reason agriculture in SSA is underperforming is because women face more constraints than men in access to productive resources.

- It is important to unlock this and other critical bottlenecks to empower women to ensure rapid agricultural transformation in Africa.
WOMEN’ S EMPOWERMENT

- Is among the most effective nutrition sensitive interventions to improve women and children’s nutritional status

- Halts the downward spiral (underlying, intermediate and immediate causes) to malnutrition.

- Improves efficiency and welfare outcomes of interventions.
ABBREVIATED WOMEN’S EMPOWERMENT IN AGRICULTURE INDEX (A-WEAI)

- A survey-based index designed to measure the empowerment, agency, and inclusion of women in the agricultural sector.
  (Hazel M. et.al 2015)

- Includes 5 domains of empowerment
OBJECTIVE

To investigate women’s empowerment in agriculture and its association with the nutritional status of children (6-59 months), adolescent girls (10-19 years) and mothers in rural, resource-limited settings of Ethiopia.
SPECIFIC OBJECTIVES

1. Determine the **level of women’s empowerment** in rural cash crop producing areas of Ethiopia

2. Assess the **association of women’s empowerment in agriculture** with nutritional status of women, children and young adolescent girls

3. Identify **specific A-WEAI component indices** associated with nutritional status of women, children and adolescent girls

4. Describe **community awareness** about women’s empowerment in agriculture and perceived indicators
METHODS AND MATERIALS

Study setting
Selected rural districts of the Gedeo zone, SNNP Region - a leading coffee producing area in Ethiopia

Study Period
February to August 2019

Study Design
A community-based, cross-sectional mixed methods design
Study Population

- 428 mothers/caretakers and their husbands (or other male household decision maker)

- Children (6-59 months) and adolescent girls (10-19 years old) in the households of selected districts

- Qualitative FGDs were held with women aged 15-49, who were residents in the study area
Inclusion criteria

✓ Households with mother/caretaker with at least one under-five child and adolescent girl
✓ Families who have lived in the areas for at least six months

Exclusion criteria

• Children with a critically ill mother/caretaker
• Participants who were chronically ill
• Participants with a congenital malformation
Outcome Variables

The nutritional status of:

- Children (stunting, wasting)
- Adolescents (BMI & Dietary Diversity)
- Women (BMI & Dietary Diversity)
**SAMPLING PROCEDURE**

- Two categories (rural and semi-urban) based on access to road and proximity to zonal capital Dilla
- Simple random sampling technique used to select two districts, six kebeles selected altogether
- Household list obtained from kebele administrator, local health extension workers and Health Development Agents (HDAs)
- Proportional allocation

**Qualitative Exploration**

A total of 4 FGDs with 30 willing mothers or caretakers were conducted
Table 1: Domains used to compute the Women’s Empowerment in Agriculture Index (25)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Indicator</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>Decisions on production</td>
<td>Sole or joint decision-making over food and cash-crop farming, livestock.</td>
</tr>
<tr>
<td>Resources</td>
<td>Ownership of assets/ Access to and decisions on credit</td>
<td>Sole or joint ownership of major household assets. Asset disposal and acquisition.</td>
</tr>
<tr>
<td>Income</td>
<td>Control over use of income</td>
<td>Sole or joint control over income and expenditures.</td>
</tr>
<tr>
<td>Group Membership</td>
<td>Group membership</td>
<td>Is woman an active member in at least one economic or social group.</td>
</tr>
<tr>
<td>Time</td>
<td>Workload</td>
<td>The individual is defined as adequate on workload if the number of hours she worked per day was less than the time poverty line of 10.5 hours in the previous 24 hours.</td>
</tr>
<tr>
<td>Overall WEAI</td>
<td>5 Domains of Empowerment</td>
<td>The empowerment in the overall WEAI 5DE percentage represents an individual who is empowered in some combination of the weighted indicators reflecting at least 80% total adequacy.</td>
</tr>
</tbody>
</table>
Data Analysis

- STATA 14 & SPSS - 22 Software Package
- A-WEAI Scoring STATA codes (available)
- Children not measured or with anthropometric Z-score values outside the biologically plausible range were excluded (Laz <-6/>6 And WHz <-5/>5)
Ethics Approval

- Ethical approval was obtained from Dilla University College of Medicine and Health Science IRB
- Official cooperation letter was obtained from Gedeo zone health department
- For data collected from children and adolescents under 18, assent was made and consent from guardian/parents was obtained prior to study activities
RESULTS – KEY BACKGROUND CHARACTERISTICS

- Overall response rate was 98.6%.
- The mean (± SD) age of children was 25.1 (± 13.46) months.
- The mean maternal and adolescent girls’ age was 32.1 (± 4.6) and 14.1 (± 2.7) years, respectively.
- The mean household size was 6.5 ± 1.6 SD persons.
NUTRITIONAL STATUS

- Level of malnutrition is one of the highest, even compared to national and regional figures (EDHS 2016, 2019)

- Partly due to lowest level of women’s empowerment in the area (3.7%) and other agricultural, economic and knowledge-related factors

Figure 2: Prevalence of child, adolescent and maternal malnutrition in rural Gedeo zone, SNNPR, Ethiopia, August 2019.
WOMEN’S EMPOWERMENT IN AGRICULTURE BY DIMENSIONS OF EMPOWERMENT

Abreviated-Women’s Empowerment in Agricultural Index (A-WEAI)

Figure 3: Dimensions of Women’s Empowerment in Agricultural Index in rural Gedeo zone, SNNPR, Ethiopia; August 2019.
Qualitatively……..

Decision on production

- Most discussants described that they make solo or joint decisions regarding cash crop farming and livestock rising

- For other discussants, decision is made by husbands - they believe the husband has the power and strength to cultivate the land and harvest crops
Access to productive capital

- Cultural influence does not allow them to have productive capital in their own name

- Belief held that after marriage females are their husbands property and they will provide for them

- A few participants believe that they can receive bequests from their family, but they also believe that there is not equal distribution of the bequest among females and males
Access to Credit

- Some discussants mentioned that the whole money was managed by their husbands and women don‘t have any right to manage money.

- Belief that if a woman has money, she may disobey and leave her husband.

- Similarly, they also mentioned that some husbands took the whole money and used it for their needs.
Time allocation

Consistent with quantitative findings such that almost all women reported high workload

Group participation

Almost all FGD participants confirmed active participation in different local women's groups like ‘ekub’, ‘edir, women health development army (HDA) and others
## ASSOCIATION OF A-WEAI AND CHILDHOOD MALNUTRITION

<table>
<thead>
<tr>
<th>WEAI Domains</th>
<th>Stunted</th>
<th>Wasted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No ( %) AoR (95% CI)</td>
<td>No ( %) AoR (95% CI)</td>
</tr>
<tr>
<td>Overall WEAI 5DE:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empowered</td>
<td>9 (60) 1</td>
<td>11 (78.6) 1</td>
</tr>
<tr>
<td>Disempowered</td>
<td>232 (58.9) 0.71 (0.16, 3.27)</td>
<td>291 (76.6) 0.87 (0.14, 5.42)</td>
</tr>
<tr>
<td>Input into production decisions:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empowered</td>
<td>110 (43.5) 1</td>
<td>75 (30.4) 1</td>
</tr>
<tr>
<td>Disempowered</td>
<td>116 (87.2) 8.85 (3.66, 21.39) *</td>
<td>10 (8.1) 0.16 (0.05, 0.48) *</td>
</tr>
<tr>
<td>Control over use of income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empowered</td>
<td>106 (54.9) 1</td>
<td>51 (27.3) 1</td>
</tr>
<tr>
<td>Disempowered</td>
<td>125 (61) 0.35 (0.16, 0.75) *</td>
<td>41 (20.9) 2.17 (0.95, 4.96)</td>
</tr>
<tr>
<td>Livestock Density Score</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;=1</td>
<td>139 (63.2) 1</td>
<td>46 (21.8) 1</td>
</tr>
<tr>
<td>2-3</td>
<td>25 (50) 0.38 (0.18, 0.80) *</td>
<td>19 (38) 2.03 (0.88, 4.69)</td>
</tr>
<tr>
<td>4+</td>
<td>79 (52) 0.62 (0.24, 1.57)</td>
<td>32 (21.9) 0.75 (0.28, 2.01)</td>
</tr>
</tbody>
</table>
RESULTS AND DISCUSSIONS

No significant association was observed between multi-dimensional empowerment of women and child nutritional status:

- The # of women who were empowered for the 5DE may have not been large enough to detect an association

Qualitatively

- Almost all participants believe that disempowering women in agriculture has a great effect on nutritional status of children and mother
- No participant suggested negative health outcomes of women’s empowerment
RESULTS AND DISCUSSIONS

- Children whose mothers were disempowered were 9 times more likely to be stunted than those of empowered mothers in this dimension [AOR8.85, 95% CI (3.66, 21.39)]

- Consistent with findings of previous studies showing greater household decision-making power among women fostering improvements in child health and nutrition
Children of mothers who were disempowered for control over resources (income) were 65% less likely to have a stunted child than their counterparts [AOR 0.35, 95% CI (0.16, 0.75)].

Some FG participants believe that even if the woman is empowered due to poor utilization of resources, her children and herself may still be affected by malnutrition.

Also believe that disempowering women contributes to high childhood malnutrition and effect on women’s psychology.
RESULTS AND DISCUSSIONS

- Families with a livestock density score of two to three had a 62% less risk of having a stunted child, compared to households with lower livestock density [AOR 0.38, 95%CI (0.18, 0.80)].

- Consistent with previous studies and could be related to the fact that children from farm households owning livestock were less likely to be growth retarded than children of farmers without livestock.
ASSOCIATION OF A-WEAI AND ADOLESCENT NUTRITION

Multivariate associations* between five domain of A-WEAI and nutritional status among adolescent girls (10-19) in rural Gedeo, August 2019.

<table>
<thead>
<tr>
<th>WEAI Domains</th>
<th>Underweight (BMI &lt; 18.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CoR (95 % CI)</td>
</tr>
<tr>
<td>Input into production decisions:</td>
<td></td>
</tr>
<tr>
<td>Empowered</td>
<td>1</td>
</tr>
<tr>
<td>Disempowered</td>
<td>3.42 (2.19, 5.32)</td>
</tr>
<tr>
<td>Resources</td>
<td></td>
</tr>
<tr>
<td>Empowered</td>
<td>1</td>
</tr>
<tr>
<td>Disempowered</td>
<td>0.83 (0.56, 1.24)</td>
</tr>
<tr>
<td>Group Membership (Leadership):</td>
<td></td>
</tr>
<tr>
<td>Empowered</td>
<td>1</td>
</tr>
<tr>
<td>Disempowered</td>
<td>3.42 (2.19, 5.32)</td>
</tr>
</tbody>
</table>
RESULTS AND DISCUSSION

- Women who were disempowered on production decision were 4.4 times more likely to have underweight adolescent girl than empowered women.

- Can be explained by maternal autonomy and motivation to participate in order to increase nutritional benefits of her children.

- The FGD participants also believe that if a woman is empowered on production decisions, she tries to harvest nutritionally valuable crops for her children.
CONCLUSION AND RECOMMENDATIONS

- Generally, the level of women’s empowerment in agriculture was low (3.7%). Need to work towards multi-dimensional empowerment of women in agriculture through education, communication and life trainings.

- Strengthen IEC and BCC activities about gender, women’s empowerment, and nutrition, with a special emphasis on cultural norms and values.
CONCLUSION AND RECOMMENDATIONS

- Disempowerment on input into production decisions and control over income were among the domains which negatively influenced child nutrition, therefore need to strengthen the level of empowerment of women.

- Misutilization of resources (income) among disempowered women is another contributing factor to childhood stunting.

- Education and introduction of alternative saving mechanisms for women is very important.
CONCLUSION AND RECOMMENDATIONS

- Household livestock density affects child growth so government and other stakeholders should emphasize agricultural diversification in rural cash crop producing areas to end the high level of malnutrition.

- Strengthen and deepen the existing level of community perception and attitudes towards women’s empowerment.

- Additional studies are needed to determine whether interventions to improve women’s empowerment will improve child, adolescent and maternal nutrition.
I would like to thank

Almighty God

To Growth through Nutrition Activity and Tuft University.

To Tuft’s technical advisors; Sibhatu Biadgilign, Rahel Gizaw, and Abdulhalik Workicho, Bethelhem Ephraim (Save the children)

To our Senior Advisor, Dr. Tadesse Alemu Zerfu

Child Fund ‘Balaya’ non-governmental office

Gedeo Zone Health office, Dilla Zuria and Wonago district health offices and kebele leaders different health centers
Empowering the women farmer is feeding the future generation!

I Thank You