



# Effects of women’s empowerment interventions in food systems

Women are prominent actors within food systems. They ensure food quality and safety, are responsible for nutrition and they process and prepare food for their households. Despite this, relative to men, women face negative and differential access to affordable, nutritious foods. Often, women’s roles are seen as limited, usually that of a provider and mothers, which can restrict their decision-making abilities on feeding and providing for themselves and their families.

Women’s empowerment interventions, specifically gender-transformative approaches, represent a key opportunity to improve nutrition-related outcomes. Still, cross-contextual evidence is scant on the factors that cause poorer nutrition outcomes for women and girls and how women’s empowerment can improve nutrition outcomes.

To address this evidence gap, we conducted a rapid evidence assessment (REA) of 10 studies included in 3ie’s Food Systems and Nutrition evidence gap map (EGM). The map includes studies identified through a systematic literature search of key academic databases and grey literature sources performed for the regular maintenance of the EGM.

## Highlights

- There is scant evidence on women’s empowerment interventions and their effects on nutritional outcomes.
- Available evidence indicates that women’s empowerment interventions can improve food security and food affordability and/or availability.
- Effects on dietary quality and adequacy are smaller, however, the evidence is limited so this is not conclusive.
- Qualitative data from nine additional studies underline the importance of contextualizing interventions and addressing entrenched social norms.
- Qualitative evidence suggests that multi-component interventions seem to be more sustainable than single-focus interventions.
- Adopting gender-transformative approaches that consider norms and target men, may allow women to pursue more livelihood options outside of the house.



In the map, and in this brief, we define women's empowerment interventions as "efforts targeted at increasing women's abilities to make decisions regarding the purchase and consumption of healthy foods."

We included interventions that had outcomes related to food and nutrition security; food affordability and availability; dietary quality and adequacy; anthropometrics; iron, zinc, vitamin A, and iodine status;

and measures of wellbeing. We also conducted a qualitative search for supplementary, contextual data to understand how gender and socio-cultural norms may affect nutritional outcomes.



## Main findings

### Quantitative

**Overall, women's empowerment interventions improve nutrition-related outcomes.** Based on the meta-analysis, empowerment interventions have the largest effect on food security, affordability and availability. Effects on dietary quality and adequacy; weight relative to height, and well-being were smaller. [See Appendix for a list of the included studies.](#)

These effects correspond to women in the intervention group having a 59.5 per cent [95% CI: 50 to 68.1] chance of greater food security than the mean in non-intervention groups. Similarly, women in intervention groups have a 59.1 per cent [95% CI: 53.6 to 64.8] chance of greater food affordability and availability and a 53.6 per cent [95% CI: 52.4 to 54.8] chance of better diet quality and adequacy than the mean of the non-intervention groups. Due to the limited number of included studies for anthropometric and well-being outcomes, our findings on effects on these outcomes are inconclusive.

**The quality of the evidence is overall good.** Of the 10 studies, 1 randomized controlled trial (RCT) study and 2 quasi-experimental design (QED) studies have a low risk of bias. Six RCTs have "some concerns," mainly due to reporting, performance and selection bias. One QED study is high-risk due to reporting bias, spill-over, cross-over and contamination, performance bias, and confounding.

### Qualitative

**Entrenched social norms are often not acknowledged or addressed in interventions.** Many interventions include activities that reinforce women's positions as primary caregivers and providers. Within feeding and nutrition interventions, there are often pro-male biases in food access, particularly for mothers. Within assets and livelihood interventions, this translates into what women are allowed to own. For example, the Transforming the Ultra-Poor (TUP) program in Bangladesh did not acknowledge or address social norms that delineated what type of assets women were allowed to own. Larger livestock, like cattle, were automatically perceived to belong to men because they were higher in value and traded more often. When these assets were transferred to women participants, women did not retain control over them. Studies in places with caste divisions did not consider variation in the experiences and outcomes of women and households from different castes, failing to interrogate intersecting identities (such as gender, caste, and socioeconomic class).

**Community and men's support, in some cases, facilitated impact.**

Therefore, gender-transformative approaches that actively challenge gender norms and power inequities between genders may be effective at facilitating the impacts of women's empowerment interventions. Gender-transformative approaches target an entire community or household to build structural support and buy-in on

interventions. Behavior change communication that targets men and women, for example, may allow women to better communicate with male counterparts to improve familial support and adopt positive nutrition behaviors, such as improved feeding practices.

**Multi-component intervention arms, specifically adding behavior change communication, may be a cost-effective way to reinforce impacts and reduce implementation costs.** The PROACT program in Sierra Leone only improved outcomes when the asset transfers were combined with a behavior change component. Similarly, when added to an asset transfer program, the Transfer Modality Research Initiative (TMRI) women's empowerment behavior change communication component cost \$50 USD per beneficiary per year, which is a relatively low cost compared to stand alone behavior change communication interventions.

**Effects of women's empowerment interventions may take a long time to show results.** Behavior change communication can be slow to expand women's empowerment and households' social status and networks. Impacts often only become apparent in the long term when foundational improvements consolidate. These impacts can be dependent on internal and external factors. Impacts on ultimate outcomes, such as anthropometrics, tend to take years to develop and would only be achieved after a significant social change occurred.

**Table 1: Effects from studies included in the rapid evidence assessment**

| Outcomes                               | # of included effects (total number of beneficiaries) | Overall effect size [95% CI] | Estimated percentile change compared to control group [95% CI] | Heterogeneity of overall effect (Q and I <sup>2</sup> ) | Range of effects |
|--|---|------------------------------|--|---|------------------|
| Food security                          | 4 (12,545)  | 0.24**<br>[0.00; 0.47]       | 9.5%<br>[0; 18.1%]   | 111.16***,<br>97.3%                                     | 0.07 to<br>0.67  |
| Food affordability and/or availability | 6 (12,972)  | 0.23***<br>[0.09; 0.38]      | 9.1%<br>[3.6%; 14.8%]  | 187.27***,<br>91.99%                                    | -0.11 to<br>0.49 |
| Diet quality and adequacy              | 4 (16,025.5)  | 0.09***<br>[0.06; 0.12]      | 3.6%<br>[2.4%; 4.8%]   | 0.53***, 0%   | 0.076 to<br>0.14 |
| Weight relative to length              | 2 (1156.6)  | 0.12**<br>[0.00; 0.23]       | 4.8%<br>[0; 9.1%]  | 0.12, 0%  | 0.06 to<br>0.12  |
| Well-being outcomes                    | 2 (10,100)  | 0.08*<br>[0.01; 0.15]        | 3.2%<br>[0.4%; 6%]   | 2.9*, 65.6%   | -0.11 to<br>0.04 |

Notes: \*\*\* indicates a p-value < 0.01; \*\* p-value < 0.05; \* p-value < 0.1

## Implications for policymakers

**Women’s empowerment interventions have the potential to improve food security, affordability, and diet diversity outcomes.** Effects on dietary quality and adequacy, final anthropometric outcomes and well-being are less certain due to a lack of evidence.

**Integrate gender transformative approaches into interventions** as they can support gender equality, an important component of feminist

development policies. Gender transformative approaches can engage men and boys to successfully empower women, such as by influencing men who are heads of household or leaders in the community. These approaches require cultural and social understanding of local contexts and should consider the intersectionality between gender, socio-economic class, and caste or ethnic divisions.

**Long-term interventions and evaluations should be prioritized** to document slow changes. Multi-component interventions, which combine livelihoods interventions with behavior change communication, may also be prioritized to ensure that women are able to take full advantage of the implemented interventions.





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## Implications for researchers

**There are some gaps in the evidence:** For instance, only a few studies were found in South Asia and Sub-Saharan Africa, while no studies were found from South America, North Africa, and the Middle East. While asset transfer and training were components in almost all studies, behavior change communication components were a part of four studies. More evidence is needed on diet quality and adequacy, mental well-being outcomes, and the status of micronutrients.

**Future studies should try to avoid biases** including outcome measurement bias, reporting bias, spill-over, cross-over and contamination, performance bias, confounding, and selection bias. The use of administrative data and

anthropometric measures as far as possible can help address performance bias. Authors should explicitly state that outcome measurement is blinded or argue convincingly why self-reported outcomes, which are common in this area, would not be affected by performance bias. To reduce reporting bias, authors can use pre-analysis plans, falsification tests, or measure the effect on placebo outcomes. To avoid confounding, randomization and a sufficient set of control variables or other analytical approaches must be used.

**Consider contextual factors that might affect the outcomes is essential in future studies** due to the complexity of women's empowerment interventions. Mixed

method studies and process evaluations can help to better understand why and how an intervention worked or not in specific contexts.

**Equity considerations might also be useful to understand how the interventions function.** For instance, looking at how the interventions affected women of different castes in India and Bangladesh might have resulted in additional nuances. Future research should look at long-term outcomes, such as social norms, that cannot be captured in short intervention or evaluation periods, to make sure the data are sufficient and complete (Marquis et al. 2015; Haque et al. 2021; Blakstad et al. 2020). Finally, cost evidence is needed to know if the impacts were economically efficient.

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## Limitations

The studies included in this rapid assessment include those identified through the systematic search for the Food Systems and Nutrition Evidence Gap Map (updated January 2022).

While we are confident that this provided a systematic search, due to the breadth of that search, it may not have been as targeted as what would be standard for a systematic review.

Interventions functioning outside of the food system were not considered. Single coding was used for the qualitative portion of this work.





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### Additional Qualitative Studies

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## What is a rapid evidence assessment?

A rapid evidence assessment is a targeted systematic review. Similar to a systematic review, it uses a systematic approach to search and screen studies for inclusion in the review. To make it rapid, the search strategy may be limited to certain databases and the scope may be narrowed to focus only on a few intervention types. The REAs are most suitable for focused research questions which have limited evidence bases, little heterogeneity and do not require nuanced analytical approaches. Like systematic reviews, REAs use pre-specified systematic methods to search and screen studies for inclusion, extract and analyze data and synthesize information around a framework. However, REAs may change steps to accelerate the process.

## About the rapid evidence assessment

This brief is based on the GIZ-funded *Berretta, Miriam, et al. "Rapid evidence assessment on women's empowerment interventions within the food system: a meta-analysis."* Submitted for review at Agriculture & Food Security (2022). The authors found and appraised the quality of ten impact evaluations on women's empowerment interventions on nutritional outcomes from the [Food System and Nutrition Evidence Gap Map](#), published in 2021. This rapid evidence assessment did not conduct an additional search but rather selected studies from an existing synthesis product. An additional qualitative search found nine qualitative studies for analysis.


## About this brief

This brief was authored by Meital Kupfer, Charlotte Lane and Miriam Berretta. They are solely responsible for all content, errors and omissions. This review and brief have been commissioned and funded by Germany's Federal Ministry for Economic Cooperation and Development (BMZ) through Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) through its "Knowledge for Nutrition" Programme. The contents are the responsibility of the International Initiative for Impact Evaluation (3ie) and do not necessarily reflect the views of GIZ or the Government of Germany. This brief was designed and produced by Akarsh Gupta and Tanvi Lal.

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