

# IMPROVING CHILD NUTRITION AND DEVELOPMENT THROUGH PRESCHOOLS IN MALAWI

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## SUMMARY

Some 12,000 community preschools in Malawi serve 45 percent of the country's preschool population. Yet because of food insecurity and communities' difficulties in providing preschoolers with a midmorning meal, these schools may not survive. To address this challenge, Save the Children and the University of Malawi's Chancellor College designed a preschool-based nutrition and agriculture intervention aimed at helping rural communities to produce and prepare more nutritious foods for preschools and for households year-round. An IFPRI-led cluster-randomized controlled trial in 60 preschools in the southeastern district of Zomba found that after just one year of the intervention, agricultural production, the quality and frequency of preschool meals, and household and child dietary diversity had all improved. The intervention also had an impact on the diets and growth of the preschoolers' younger siblings. These results suggest that preschools can provide an effective platform for scaling-up nutrition and agriculture interventions, benefiting not only the preschools but also communities, households, and children in their first 1,000 days.

## BACKGROUND

Community-based childcare centers (CBCCs) are small community-managed preschools that aim to prepare 3- to 6-year-old children for school in a safe and stimulating learning environment. Almost all of Malawi's 12,000

CBCCs, which serve about half of the country's preschool children, are supported entirely by the community. The CBCCs' continued operation depends on communities' capacity to manage and maintain them. A mapping of 690 CBCCs in four districts in 2011 found that half were closed; the main reason cited was lack of food. Closures are particularly common during the lean season, when food insecurity is high and communities are unable to provide children with a midmorning snack (porridge). Without this snack, children stop going to the center, and the preschool eventually closes. The preschools' survival is therefore contingent on food security, community capacity, and resilience.

In 2013, Save the Children surveyed 100 CBCCs across four districts and found that, despite the odds, some communities still managed to provide food for the CBCCs all year long. Community leadership, organization, and capacity largely seemed to determine whether a community would succeed in keeping its preschool open year-round. Save the Children's research found that with basic training, communities could provide the CBCCs with more nutritious meals, rather than basic maize porridge, and that families would then replicate these meals at home, potentially benefiting younger siblings too.

## THE INTERVENTION

Drawing on existing nutrition, agriculture, and livelihood activities, Save the Children and Chancellor College

developed a CBCC-based nutrition and agriculture intervention using CBCC gardens and meals as a platform for training and practicing new agricultural, meal preparation, and planning techniques that could be reproduced at home.

## AGRICULTURE COMPONENT

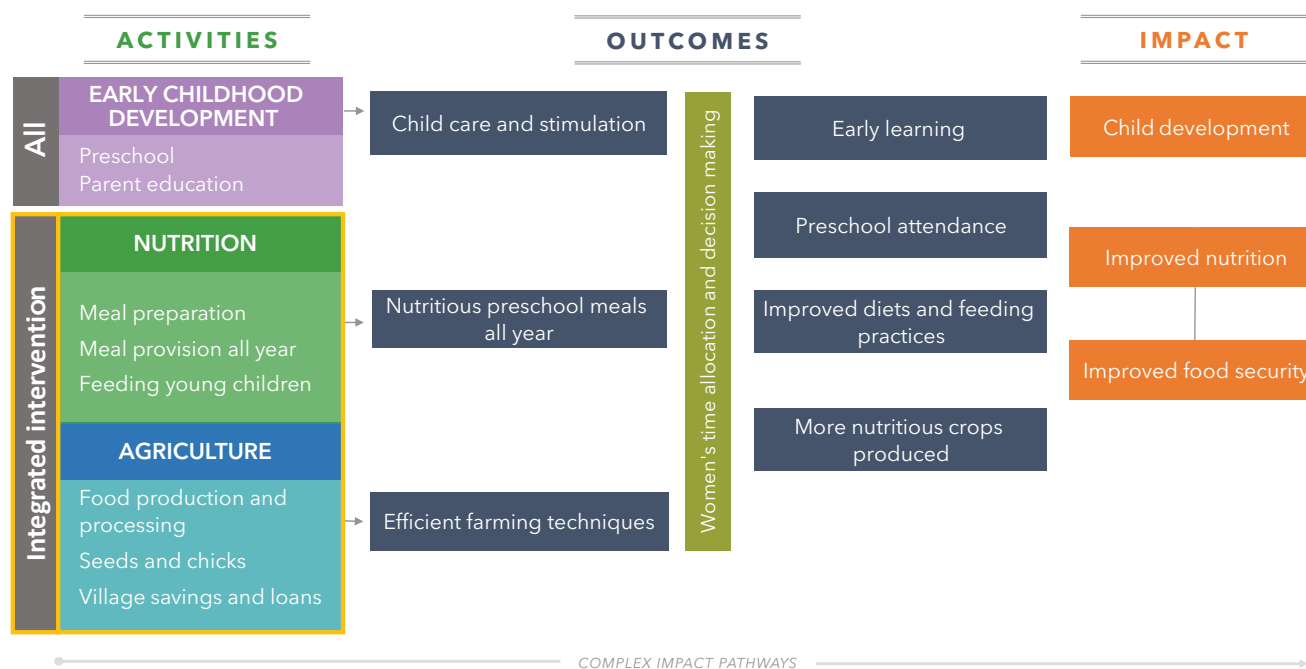
Before the two main planting seasons, government agriculture extension development officers (AEDOs) held three days of training for parents, CBCC Management Committee representatives, farmers, and community agents on land preparation, selection of nutritious crops, agriculture production techniques, pest and disease management, manure-making and application, harvesting, storage, and processing, and chicken rearing. The CBCC gardens were used as demonstration sites for new agricultural production techniques. Afterward, AEDOs visited the communities once a month to check on progress and help address any problems. Households and CBCCs in the intervention group also received crop and vegetable seeds, sweet potato vines, and chicks. Village savings and loans (VSL) groups were formed to

help households save and access funds to start small businesses, purchase supplies for the CBCCs, and use in cases of emergency. Farmers were organized into groups to increase their bargaining power and to get better prices for their inputs and produce.

## NUTRITION COMPONENT

CBCC Management Committee members, CBCC caregivers (teachers), lead farmers, and parents received a three-day nutrition training to help them plan and prepare nutritious meals for the CBCCs and households. The training focused on essential nutrition and hygiene practices and CBCC meal planning and adaptation for the household and younger children, as well as how to select nutritious foods in different seasons and to prepare, preserve, and store food. Government AEDOs and nutrition assistants trained participants using cooking demonstrations, small-group practice sessions, and discussions. By taking turns preparing CBCC meals, parents continued to practice new recipes at the CBCC, which they then replicated at home.

**FIGURE 1** *Activities, Outcomes, and Impact*



Source: IFPRI

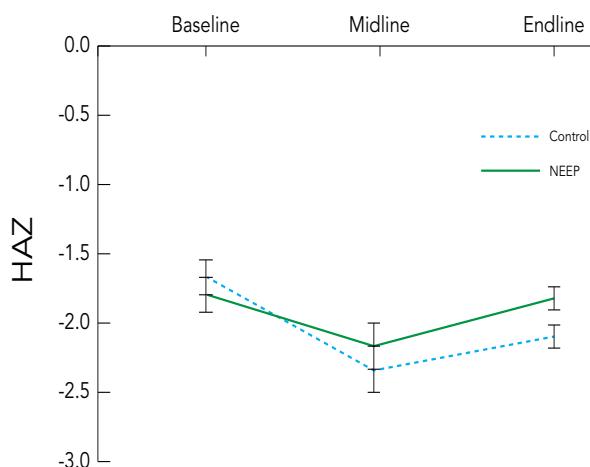
## THE EVALUATION

A cluster-randomized trial was set up to evaluate the impact of the CBCC nutrition and agriculture intervention on preschool meals, household production, and diets, as well as the nutritional status and development of preschool children and their younger siblings. The evaluation was led by IFPRI in partnership with Chancellor College and Save the Children.

The study was conducted in 60 rural communities in Zomba District with CBCCs supported by Save the Children's Early Childhood Care and Development (ECCD) program. Each community was randomly assigned either to the nutrition and agriculture intervention or the control group. The evaluation targeted all children younger than 7 years old in the study area and their parents. Study outcomes focused on individual and household dietary diversity, household food production (quantity and diversity), child growth, and child development. In all, 1,200 households were surveyed (20 per community). A follow-up survey that was conducted at the end of 2017 to examine longer-term trends is currently under analysis.

To gather data at multiple levels—child, caregiver, household, community, and CBCC—the evaluation combined quantitative and qualitative methods with two rounds of surveys timed one year apart (2015 and 2016).

**FIGURE 2** Height-for-age Z-scores for children aged 6 to 24 months in the intervention and control communities at time 0 (baseline), time 1 (midline, 6 months later), and time 2 (endline, 12 months later).



Source: IFPRI

Midterm (after 6 months) data were also collected on certain indicators.

The results after one year of implementation of the intervention showed improved caregiver knowledge of nutrition, household dietary diversity, diversity of agricultural production, and preschool meal quality and frequency. The intervention improved dietary intake of both the preschoolers (3- to 6-year-olds) and their younger siblings (aged 6 to 24 months), driven by a higher frequency of consumption of nuts, pulses, fruits, and vegetables. The intervention also had a protective effect on growth of the younger siblings, though not of the preschoolers themselves (see Figure 2).

## WHAT THE EVIDENCE TELLS US

The results suggest that preschools can provide an effective platform for scaling-up an integrated nutrition and agriculture intervention, supporting the objectives of three sectors at the same time—nutrition, agriculture, and early childhood development.

In Malawi, CBCCs are highly valued by the community because they provide childcare and prepare young children for school. Food insecurity is not only one of the main barriers to the success of CBCCs but also a daily challenge for families, especially during the lean season. Communities are therefore motivated to find solutions. The CBCC-based intervention facilitates community integration of agriculture and nutrition practices that simultaneously address food insecurity, malnutrition, and child development, benefiting the CBCC, community, household, and children, including children in their first 1,000 days. Strong community and parent engagement in and ownership of CBCCs mean that the benefits reach all household members, including younger siblings, ensuring long-term sustainability.

This study is the first to explicitly examine the impact of a preschool meals program on dietary choices alongside nutrition, child development, and agriculture outcomes. The program cost was low, with no cash or food transfers (just start-up seeds).

## FURTHER READING

- 3 min video: "Growing Food Growing Futures," <https://vimeo.com/219710521>
- Blogpost: <http://massp.ifpri.info/2017/06/09/reflections-from-a-policy-discussion-on-multi-sectoral-action-for-improved-nutrition/>
- Meeting report: [http://massp.ifpri.info/files/2017/06/Multisectoral-food-and-nutrition\\_Event-Summary.pdf](http://massp.ifpri.info/files/2017/06/Multisectoral-food-and-nutrition_Event-Summary.pdf)
- Scientific paper: A. Gelli et al., "Improving Child Nutrition and Development through Community-Based Childcare Centres in Malawi—The NEEP-IE Study: Study Protocol for a Randomised Controlled Trial," *Trials* 18, no. 1 (2017), <https://doi.org/10.1186/s13063-017-2003-7>
- Presentation summary: A. Twalibu et al., "Improving Child Nutrition and Development through Community-based Child Care Centres (CBCCs) in Malawi (2018)," ENN Field Exchange, <https://www.ennonline.net//fex/57/cbccsinmalawi>

## NOTES

- <sup>1</sup> M. J. Neuman, C. McConnell, and F. Kholowa, "From Early Childhood Development Policy to Sustainability: The Fragility of Community-Based Childcare Services in Malawi," *International Journal of Early Childhood* 46 (April 2014): 81-99, <https://doi.org/10.1007/s13158-014-0101-1>.
- <sup>2</sup> M. Katundu, Hilton Wraparound Project Evaluation Report, Save the Children, 2014.
- <sup>3</sup> Wellness and Agriculture for Life Advancement (WALA) program, USAID Food for Peace, the Guide for Agricultural Production Practices, Government of Malawi, and the Nutritious Meals for CBCCs, Save the Children, and the Conrad N. Hilton Foundation.
- <sup>4</sup> A. Gelli et al., "Improving Child Nutrition and Development through Community-based Childcare Centres in Malawi—The NEEP-IE Study: Study Protocol for a Randomised Controlled Trial," *Trials* 18:284 (2017), <https://doi.org/10.1186/s13063-017-2003-7>.

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This project note synthesizes the main findings on the impact of the CBCC nutrition and agriculture intervention in Malawi. Complete results appear in the open-access article "[Using a Community-Based Early Childhood Development Center as a Platform to Promote Production and Consumption Diversity Increases Children's Dietary Intake and Reduces Stunting in Malawi: A Cluster-Randomized Trial](#)," in the October 2018 issue of the *Journal of Nutrition*. Any opinions stated herein are those of the author(s) and are not necessarily representative of or endorsed by IFPRI, PATH, DFID, A4NH, Save the Children, or the University of Malawi.

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