

# The Impact of a Nutrition-Focused Livelihoods Program on Child Health and Nutrition in Burkina Faso



PHOTO: RICCARDO MAYER

Almost half of all deaths of children under five years of age are attributable to malnutrition, and despite the decline in numbers, progress continues to be very slow. Malnutrition and under-nutrition, in particular, affect mainly households living in poverty. Recent research has shown that holistic livelihood programs can have a wide range of benefits for these poor families, from increasing household consumption and income to improving food security and mental health. This evaluation measured the impact of a multifaceted program on nutritional status, productive assets, and income. The program adapts the graduation approach, which combines a comprehensive set of interventions to enable ultra-poor households to develop sustainable livelihoods and resilience. It features a cash unconditional transfer, a productive investment (livestock or seeds), and a nutrition component (distribution of fortified flour), and nutrition education.

## Key Findings

- » The program **reduced chronic malnutrition** among children under five by about a third. This impact is driven by a 22 percent decrease in food insecurity compared to the comparison group.
- » The program increased the number of plots, the size of productive land, and the value of productive assets. These results suggest that the program had a **multiplicative effect on household outcomes**: they invested more in both the nutrition of their young children and in their productive assets to improve future welfare.
- » The results in both nutrition and productive assets were only significant when the full version of the program was implemented: **cash transfers + productive asset + nutrition component**.

### RESEARCHERS

Adrien Bouguen, Aliou Diallo, Andrew Dillon

### PARTNERS

Terre des Hommes, Action Against Hunger, Save the Children, GRET, Wupakuwe, Tin-Toa, Helvetas

### COUNTRY

Burkina Faso

### IPA STAFF

Aliou Diallo, Estelle Plat

### TIMELINE

2017-2020

### SAMPLE

168 villages

### TYPE OF STUDY

Randomized controlled trial (RCT)

## The Challenge

Globally nearly half of all deaths in children under age five are attributable to under-nutrition, translating into the loss of about 3 million young lives a year.<sup>1</sup> Malnutrition and under-nutrition, in particular, affect mainly households living in poverty. Recent research has shown that holistic livelihood programs, such as the [Graduation model](#), can have a wide range of benefits for these poor families, from increasing household consumption and income to improving food security and mental health.

## Context

More than 44 percent of people in Burkina Faso live on less than US\$1.90 per day, the international benchmark for extreme poverty. Agriculture, much of it seasonal, employs nearly 80 percent of the active labor market leaving many parts of the country vulnerable to food insecurity during the lean season. At the same time, about 3.7 million people, or 18 percent of the population, suffer from under-nutrition, and about 2.9 million people have severe food insecurity.<sup>2</sup> The incidence of under-nutrition is higher among children under five years of age. Childhood mortality in Burkina Faso is more than double the global average: 81.6 out of every 1,000 children born die before their fifth birthday.<sup>3</sup> Despite a significant improvement in recent years, under-nutrition in Burkina Faso remains endemic.

The Graduation model provides families with a range of services, including income-generating assets, training, access to savings accounts, consumption support, and coaching visits, and variations of the model have been successfully replicated in several contexts. This study aimed to test whether an adapted program design, which focuses on strengthening households' ability to cope with crises, leads to improvements in child nutrition and household food security.

The PROMIRIAN/RESIAN "Projet Multidimensionnel Intégré de Résilience à l'Insécurité Alimentaire et Nutritionnelle" adapts the Graduation model to try to provide a lasting solution to the problem of food insecurity by coupling a nutrition component with emergency cash assistance (during lean periods) and investments in household productive assets. The program was funded by the Emergency Trust Fund (FFU) of the European Union (EU) and implemented by a consortium of NGOs led by Action Contre la Faim (ACF) in the Eastern region and Terre des Hommes (TdH) in the region Boucle du Mouhoun.



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## The Evaluation

In Burkina Faso, researchers evaluated the impact of a nutrition-focused livelihoods program on children's nutritional status, productive assets, and income. One hundred sixty-eight villages were randomly assigned into four groups:

**Group 1: Cash transfers:** Eligible households in 42 selected villages were offered a total of 20,000 West African Francs (about US\$35) each month over the duration of the lean season (June to September) in the first year, and 15,000 West African Francs (about US\$25) each month the following year.

**Group 2: Cash transfer + productive asset:** In addition to the cash transfer, eligible households in 41 villages were offered the option to choose from livestock vouchers which can be exchanged for sheep or chickens, or seed vouchers which can be exchanged for improved seed varieties. Vouchers are valued to purchase approximately 3 sheep or 11 chickens, or improved seeds. Participants received farm training according to the asset they've chosen: animal husbandry, or water and soil conservation and restoration techniques.

**Group 3: Cash transfer + productive asset + nutrition component:** Eligible households in 42 villages received cash transfers, productive assets, and a nutrition component. Eligible households were offered an allotment of enriched flour each month for any pregnant or nursing women, or young children aged 6 to 23 months. Eligible households were also given materials to grow small gardens for personal consumption.

**Comparison group:** Households in 43 villages did not receive any of the aforementioned interventions.

Additionally, all households in the 168 villages received a set of interventions to improve the commune/village governance and collective behavior and to raise awareness about under-nutrition. Governance interventions included developing accountability mechanisms in town halls, early-warning committees, and surveillance systems. Nutrition interventions included under-nutrition awareness campaigns and training mothers to recognize the signs of under-nutrition. Note: The evaluation does not measure the impact of this component, as it is consistent in all villages.

In selecting the eligible households, the research team applied the Household Economy Approach (HEA), which identifies the most vulnerable households with the help of the community. First, researchers conducted an exhaustive census at the village level. Then, through assemblies, members of the community categorize villages as very poor, middle, or well-off according to their knowledge of the local context. By combining these two sources of information, on average 21 households per village were selected to participate.

The household selection process lasted from December 2017 to February 2018. The initial survey was conducted between March and June 2018. The program duration was two years. The research team conducted an intermediate survey in 2019 and the final survey in 2020. An additional survey to measure the long-term impacts will be performed in 2021.

# Findings

**The program reduced chronic malnutrition<sup>4</sup> among children under five by about a third after two years.** This positive effect was identified in households that received the full intervention (cash transfer, productive investments, nutrition). The impact seems to be driven by an increase in calorie intake. Eligible households report having access to more food and more consistently over time (22% reduction in severe food insecurity compared to the comparison group). No changes were detected in anemia levels or on the dietary diversity index.

**The program had moderate effects on acute malnutrition<sup>5</sup> after one year.** The researchers found a 1.2 percentage point decrease in the percentage of children under the age of five with acute malnutrition one year after the start of the program. However, these effects did not persist in the final survey conducted two years after the start of the program.

**The program was effective in combating food insecurity and malnutrition only when it was implemented with all its components.** Researchers found no impact among group 1 (only conditional transfers) and group 2 (conditional transfers and productive investments).

**Households that received the full version of the program (group three) increased land cultivated,** both in the number of plots (an increase of 0.24 percentage points) and the total size of property (a 15 percent increase compared to the comparison group). The program also increased the value of the herd by approximately US\$22 compared to the comparison group. Again, these results are valid for group three only, suggesting that the complete version of the program had a multiplicative effect on household behavior: they invest more in both the nutrition of their young children and in their agricultural production and livestock.

**The program had no effect on non-agricultural/livestock activities or household income.** Researchers hypothesize the cash transfer is used primarily for food consumption by the household which leaves little additional cash to invest in non-agricultural/livestock activities. Similarly, the weak effects of the program on agricultural/ livestock (only significant for group 3) limit families' ability to increase their income.

# Conclusion

The lack of a significant effect among groups 1 and 2 suggests that specific nutrition programs (distribution of flour, cereals, training of mothers) should be implemented to significantly improve nutrition. Furthermore, the fact that only households in group 3 can invest in their productive assets underscore the importance of introducing the complete version of the program to generate long-term investment both in nutrition and livelihoods.

## References

1. World Health Organization (WHO), "Children: Improving Survival and Well-Being," accessed April 23, 2021, <https://www.who.int/news-room/fact-sheets/detail/children-reducing-mortality>.
2. The Food and Agriculture Organization (FAO), "The State of Food Insecurity in the World," 2014, <http://www.fao.org/3/i4646e/i4646e.pdf>.
3. United Nations, *World Mortality 2019: Data Booklet* (UN, 2019), <https://doi.org/10.18356/f6cceeef-en>.
4. Chronic malnutrition is a condition that develops when children do not eat the correct balance of nutrients in the first 1,000 days of life (from conception to the age of two), resulting in the stunting of their mental and physical development.
5. Acute malnutrition is a form of under-nutrition caused by a decrease in food consumption and/or illness that results in sudden weight loss or oedema (fluid retention).

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**Writers:** Adrien Bouguen, Aliou Diallo, Andrew Dillon | **Editor:** Ana Tamayo | **Designer:** Michelle Read

**General Inquiries:** [contact@poverty-action.org](mailto:contact@poverty-action.org) | [www.poverty-action.org](http://www.poverty-action.org)

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