

Researchers

Adrien Bouguen
Santa Clara University

Andrew Dillon
Northwestern University

Staff

Aliou Diallo
Research Manager

Timeline

2017-2020

Study Status

Results

Study Type

Randomized Evaluation

Sample Size

168 Villages

Research Implemented by IPA

Yes

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



In This Image
Nutrition livelihoods program

Abstract

Almost half of all deaths of children under five years of age are attributable to malnutrition, and despite the decline in numbers, alleviation continues to be slow. In Burkina Faso, researchers evaluated whether a nutrition-focused livelihoods program consisting of a cash transfer, productive asset, and nutrition intervention can impact child nutrition, household income, and assets. After two years, the program successfully reduced chronic malnutrition by about one-third and increased the productive assets of participants. When components of the program were implemented individually, no statistically significant impacts were observed. While the program's impacts on malnutrition remained generally positive one year later, the effects on household income, property size, and investments disappeared.

Policy Issue

Globally nearly half of all deaths of children under 5 are attributable to undernutrition, translating into the loss of about 3 million young lives a year.[1] Malnutrition and undernutrition, in particular, mainly affect households living in poverty. Recent research has shown that holistic livelihood programs, such as the [Graduation Approach](#), can have a wide range of benefits for these poor families, from increasing household consumption and income to improving food security and mental health. 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.

Context of the Evaluation

More than 44 percent of people in Burkina Faso live on less than \$1.90 dollar 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 undernutrition, and about 2.9 million people have severe food insecurity.[2] The incidence of undernutrition 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.[3] Despite a significant improvement in recent years, undernutrition in Burkina Faso remains endemic.

PROMIRIAN/ RESIAN ("Projet Multidimensionnel Intégré de Résilience à l'Insécurité Alimentaire et Nutritionnelle") adapts the [graduation approach](#) 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.

Details of the Intervention

In Burkina Faso, researchers evaluated the impact of a nutrition-focused livelihoods program on children's nutritional status, household productive assets, and household income. A total of 168 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 could be exchanged for sheep or chickens, or seed vouchers which could be exchanged for improved seed varieties. Vouchers were valued to purchase approximately 3 sheep or 11 chickens, or improved seeds. Participants received farm training according to the asset they chose: 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 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 undernutrition. Governance interventions included developing accountability mechanisms in town halls, early-warning committees, and surveillance systems. Nutrition interventions included undernutrition awareness campaigns and training mothers to recognize the signs of undernutrition. Note: The evaluation did not measure the impact of this component, as it was consistent in all villages.

In selecting the eligible households, the research team applied the Household Economy Approach (HEA), which identified 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, 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, the final survey in 2020, and a follow-up survey in 2021 to measure the long-term impacts.

Results and Policy Lessons

The full program reduced chronic malnutrition^[4] among children under five by about a third after two years. This positive effect was identified in households that received full intervention (cash transfer, productive investments, nutrition). The impact seemed to be driven by an increase in calorie intake. Eligible households report having access to more food and more consistently over time (22 percent reduction in severe food insecurity compared to the comparison group). The effects on chronic malnutrition remained in the follow-up survey one year later, but to a lesser extent because some children tend to emerge naturally from chronic malnutrition as they grow older. The number of children with mild anemia also decreased slightly in group 3, suggesting that nutritional quality could have improved because of the program.

The full program had moderate effects on acute malnutrition^[5] 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. These effects did not persist in the final survey conducted two years after the start of the program. However, in the follow-up survey, acute malnutrition had decreased by two percentage points.

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). However, they did not have evidence to conclude that a program that only contained the nutrition component would be effective. It is possible that the positive effects observed were the result of an interaction between the three components.

The value of agricultural equipment increased for full program participants (Group 3). At the final survey, the value had increased by 12 percent. However, the effects were weaker in the follow-up, suggesting that the end of the intervention reduced investment in agricultural equipment.

The program had no effect on livestock income. Researchers hypothesize that households prioritized the cash transfer's use to meet food consumption needs with little leftover to generate significant investment in livestock activities. Only households that received the full version of the program (group 3) experienced significant effects, but the effects disappeared in the follow-up survey. Part of this issue was because the transfers reduced the sale price of animals, which in turn reduced income from livestock.

In addition, one-third of the livestock that were not sold had been lost (e.g., stolen or dead from disease) by the end of the intervention. The livestock that survived were likely used to meet household food needs. 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.

Sources

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/f6cceeefe-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).

Partners



Terre des Hommes



Action Against Hunger



Save the Children



Group For Research and Technology Exchanges (Gret)



Tin-Tua



Helvetas

July 19, 2023