The Impact of Cash Transfers on Early Childhood Health and Cognitive Development in Nicaragua

Researchers:

Karen Macours

Norbert Schady

Renos Vakis

Sector(s): Education, Health, Social Protection

Location: Nicaragua

Sample: 4,021 households from 106 communities in 6 municipalities

Target group: Children under five

Outcome of interest: Cognitive development Food security Nutrition

Intervention type: Cash transfers Early childhood development Training Conditional cash transfers

AEA RCT registration number: AEARCTR-0001794

Data: Cash Transfers, Behavioral Changes, and Cognitive Development in Early Childhoo...

Partner organization(s): BASIS Research Program on Poverty, Inequality and Development, United States Agency for International Development (USAID), World Bank

In many low- and middle-income countries, young children suffer from delays in cognitive development that have serious implications for them as adults. While a growing body of evidence suggests that preschool access and nutritional supplementation programs enhance the cognitive development of young children, many parents in these countries lack the resources necessary to make these investments. In Nicaragua, researchers examined the impact of a national conditional cash transfer (CCT) program on early childhood health and development. They found that the program caused substantial and lasting improvements in child health and development outcomes. However, it seems that program components other than, or in addition to, the cash transfers appear to drive these effects.

Policy issue

In many low- and middle-income countries, young children suffer from delays in cognitive development that have serious implications for them as adults. Theory suggests that schooling and training have limited success if children do not have adequate cognitive and social skills at early ages. While a growing body of evidence suggests that preschool access and nutritional supplementation programs enhance the cognitive development of young children, many parents in low- and middle-income countries lack the resources necessary to make these investments. Moreover, there is little research on the effectiveness of programs that attempt to increase what parents spend on child development, either by increasing income or by encouraging households to spend more on nutritious foods, early stimulation, or health care.

Context of the evaluation

This study took place in six municipalities in northwest Nicaragua, selected partially for their extreme level of poverty. Of households surveyed, 81 percent consumed less than one dollar per person per day. These low per capita expenditures could mean households consume insufficient nutritious foods, which could lead to developmental delays in children. In fact, 27 percent of children in these households have extremely low height for their age. And about 85 percent of children in the sample are at least 21 months behind in language skills.

In the aftermath of a drought, and in order to provide a short-run safety net for poor families who might otherwise deal with low income by taking children out of school or reducing food consumption, in 2005, the Government of Nicaragua implemented Atención a Crisis, a conditional cash transfer (CCT) program which provided families with cash grants conditional upon their children's attendance at school and health check-ups. The program was also intended to promote long-run upward mobility and poverty reduction by increasing households' assets, diversifying income, and improving child development.



A family operates their market stall together in Nicaragua.

Photo credit: Karen Macours

Details of the intervention

Researchers, in collaboration with the Nicaraguan Ministry of Family, tested the effect of Atención a Crisis on development in early childhood. The Nicaraguan Government randomly selected 106 villages into intervention or comparison groups. In intervention villages, all households who qualified based on a proxy-means test and whose primary child caregiver attended a registration assembly were randomly allocated to one of three treatment groups:

1. *Basic CCT:* All households received bimonthly transfers that totaled US$145 during the year-long program, even if they did not have children. The transfer was in principal conditional on regular preventative health check-ups for children younger than age of 7, however in practice this was not monitored, and households faced no penalties for non-compliance. Households with children between 7 and 15 received an additional US$90 per household, and an extra US$25 per child, as long as they were enrolled in and attended school.
2. *CCT and Vocational Training:* In addition to the basic CCT, households in this treatment group received a scholarship that allowed one family member to attend a vocational training course offered in the municipal headquarters to build new skills and diversify income.
3. *CCT and Lump-Sum Grant:* In addition to the basic CCT, households in this group received a US$200 grant for productive investments, which was intended to encourage recipients to start a small non-agricultural business to diversify their income sources. Receiving the entire grant was conditional upon development of a business plan and starting the business.

During enrollment and on paydays, program staff also provided CCT recipients in all intervention groups with information on the importance of varied diets, health, and education. This information was meant to influence the composition of goods households consumed. All transfers were paid to the children's main caregiver in the household, almost always a woman.

Baseline data was collected in 2005, and follow-ups were conducted in 2006 and 2008. Surveys focused on take-up of the interventions, as well as consumption, purchasing habits, child health, nutrition, and motor development, and tests for child cognitive and socio-emotional development.

Results and policy lessons

Impact on Child Health and Development: Among households that received the Atención a Crisis program, child health and cognitive development outcomes increased by 0.09 standard deviations relative to the comparison group. The effect size, while modest, is not trivial: CCT-eligible households showed increases in child development that were similar to what could be expected from a 50 percent increase in mothers' education.[1] These effects persisted two years after the cash transfers ended, suggesting that the effects were not solely due to increased income but were due to some other aspect of the program such as information from program staff on the importance of varied diets, health, and education, that the transfers were issued to women, or both.

Relationship between Expenditures and Child Development: While households in the CCT plus Lump-Sum Grant group received US$200 more than the Basic CCT group over the year, and had higher expenditure levels during and (in particular) after the program, they did not have significantly different child development outcomes.

Impact on Determinants of Child Development: The evaluation also found that the Atención a Crisis program, regardless of treatment arm, had a large effect on inputs into child development. CCT-eligible households increased the share of total expenditures spent on vegetables by 3 percentage points and on animal proteins by 9 percentage points. They also provided more early stimulation to their children and made more use of preventive healthcare. These effects remain significant even after controlling for the increase in expenditures afforded by the cash transfers, suggesting the effects come from a change in household decision-making rather than just increased income.

The evaluation suggested that program components other than, or in addition to, the cash transfer appeared to be important in improving child health and development. The provision of information that accompanied the transfers, or the fact that transfers were made to women, or both, could be part of the explanation. A better understanding of what features of this and other cash transfer programs account for improvements in child development is an important priority for future research.



Macours, Karen, Norbert Schady, and Renos Vakis. 2012. "Cash Transfers, Behavioral Changes, and Cognitive Development in Early Childhood: Evidence from a Randomized Experiment." American Economic Journal: Applied Economics 4(2): 247-273.

1. There is a large body of literature that finds that increasing mothers' education leads to improved child outcomes in health and education.