

Abstract Title Page
Not included in page count.

Title: The Impact of an Unconditional Cash Transfer on Early Child Development: The Zambia Child Grant Program

Authors and Affiliations:

David Seidenfeld (American Institutes for Research)

Leah Prencipe (American Institutes for Research)

Sudhanshu Handa (University of North Carolina)

Laura Hawkinson (American Institutes for Research)

Abstract Body

Limit 4 pages single-spaced.

Background / Context: The environments to which children are exposed shape their early childhood development. Social intervention programs often aim to improve household environments, so that those environments will help improve ECD (Irwin et al. 2007). Conditional cash transfer (CCT) programs have a track record of increasing cognitive learning abilities and improving health by improving nutrition and increasing access to health services (Macours, Schady, & Vakis, 2008) (Fernald, Gertler, & Neufeld, 2008). However, little research has been conducted on unconditional cash transfers despite their growing prevalence in Africa including South Africa, Zambia, Zimbabwe, Kenya, Malawi, Lesotho, and Uganda. Undirected by the strong incentive structure put in place by CCT programs, UCT programs have a considerable structural difference, and therefore patterns of understanding ECD outcomes from CCT intervention are not necessarily directly applicable to UCT programs. Research is needed to understand if and how unconditional cash transfer programs impact early childhood development outcomes.

Unconditional cash transfers do not necessarily have a direct mechanism to affect early child outcomes. In conditional programs the cash transfer is tied to specific family behaviors that can improve child development, such as taking their child to the clinic for regular check-ups tie. Nonetheless, UCT programs have the potential to affect child developmental outcomes indirectly if the cash transfer impacts family behaviors that improve child outcomes. The impact of a UCT program on child nutrition depends on both the size of the transfer and household consumption patterns. UCTs do, however, have the ability to free up caregiver time and resources previously allocated to basic needs such maintaining an adequate livelihood. In a report on ECD, the World Health Organization noted a worldwide imbalance between maintaining adequate resources for the family and family care/time itself. In developing countries, children are frequently left at home alone or with siblings thus limiting the cognitive and social development potential attached to spending time with adults (Irwin et al., 2007). If UCTs free up parental time and resources to be reoriented towards children, parents may provide more stimulation and support for learning in their interactions with children.

Purpose / Objective / Research Question / Focus of Study: We implemented a randomized control trial with 2,515 households to investigate the impact of the child grant program on a range of protective and productive outcomes. The study includes over 3,000 children aged 3-7, one of the largest longitudinal samples of young children in a cash transfer evaluation, that allows us to estimate effects of the program on early childhood development (ECD) outcomes. We included a number of ECD indicators such as availability of learning materials, adult support for learning and school readiness, non-adult care, and pre-school attendance, the first time these indicators are studied in an evaluation of a cash transfer program in Africa. We selected ECD indicators from UNICEF's Multiple Indicator Cluster Survey (MICS). The MICS has been conducted in over 100 countries over the last 20 years. Thus, our study uses internationally validated indicators that can be compared to other ECD studies around the world.

Setting: In 2010, Zambia's Ministry of Community Development, Mother and Child Health (MCDMCH) started the rollout of the CGP in three districts with the highest rates of child mortality and poverty: Kaputa, located in Northern Province; Shongombo, located in Western

Province; and Kalabo, also located in Western Province. All three districts are near the Zambian border with either the Democratic Republic of Congo (Kaputa) or Angola (Shongombo and Kalabo). These districts represent some of the most remote locations in Zambia, making them a challenge for providing social services, and are some of the most underprivileged communities in Zambia.

Population / Participants / Subjects: The evaluation study contains a sample of 2,514 households, with 14,565 people, almost all of whom live below the extreme poverty line (95 percent). Almost one-third (4,793) of the sampled individuals are children under age 5, with the largest number under one year old (1,427), making the study unique for cash transfer evaluations in Africa—the sample has the largest proportion of children in this age range. This very young study sample is also exciting given the increased recognition of the importance of the first 1000 days of life for a child’s future development. Among the recipients, 99 percent are female and among children under five years old, half are female.

Not only is the sample comprised of a large number of children, but these households are also very poor. At baseline, the average household has 5.7 household members spending approximately 40 kwacha (U.S. \$8) per person per month. This is equivalent to approximately 26 cents a day per person. Additionally, only five percent of households have a roof made of purchased material and only three percent have a floor made of purchased materials. The maternal education level is only four years for these households, meaning that, on average, the mothers in the sample have not graduated from primary school.

Intervention / Program / Practice: The CGP is a categorically targeted program--any household within the district with a child under 5 years old is eligible. Recipient households receive 60 kwacha (ZMW) per month (equivalent to U.S. \$12) irrespective of household size, an amount deemed sufficient by the MCDMCH to purchase one meal a day for everyone in the household for one month. The goal of the CGP is to reduce extreme poverty and the intergenerational transfer of poverty through five primary areas: income, education, health, food security, and livelihoods. Payments are made every other month through a local pay point manager, and there are no conditions to receive the money. In the initial phase of the program, only households with children under age three were enrolled to ensure that every recipient household would receive the transfers for at least two years.

Research Design: The CGP impact evaluation randomized communities into treatment and control groups to estimate the effects of the program on recipients. Ninety communities designated by Community Welfare Assistance Committees (CWACs) were randomly selected (out of 300) to be in the study sample. Then these 90 CWACs were randomly assigned to either the treatment condition (45 CWACs) to start the program in December 2010 or to the control condition (45 CWACs). Randomization occurred within each of the three study districts. We collected baseline data in October 2010 (prior to households in the treatment arm entering the program) and a 24-month follow-up survey in October 2012.

Data Collection and Analysis: The ECD measures in this study are survey items reported by the primary cash transfer recipient during wave 2 of the Child Grant Program impact evaluation, which 95 percent of the time is the female head of household. The ECD survey items were drawn

from the Multiple Indicator Cluster Survey, Round 4 (MICS4). The MICS is an international household survey initiative developed by UNICEF to assist countries worldwide in gathering and analyzing data on family and child well-being. The child development indicators include measures of access to learning materials, learning supports offered to children, care adequacy, participation in early childhood education, and an early child development index that measures child developmental skills in multiple domains of learning. In this paper, we report on two measures of family behaviors or resources that may improve child learning (books in the home and support for learning), and three measures of child developmental outcomes derived from the child development index (language/cognition abilities, following directions, working independently).

This study reports on the effects of the program for ECD outcomes after two years of program implementation. We estimate program impacts on individuals and households using a differences-in-differences (DD) statistical model that compares change in outcomes between baseline and follow-up and between treatment and control groups. The DD estimator is the most commonly used estimation technique for impacts of cash transfer models and has been used, for example, in Mexico's Progresa program (Rawlings & Rubio, 2005) and Kenya's Cash Transfer for Orphans and Vulnerable Children (Kenya CT-OVC Evaluation Team, 2012). We use cluster-robust standard errors to account for the lack of independence across observations due to clustering of households within CWACs.¹ We use inverse probability weights to account for the nine percent attrition in the follow-up sample (Wooldridge, 2002). We also test for interactions of high maternal education level (five or more years) and large household size (greater than or equal to five members). Finally, we test each subsample for maternal education (high followed by low), followed by each subsample of household size (large followed by small).

Findings / Results: We find that the program increases the number of households with three or more books by 1.5 percentage points, from 1.5 percent of households to three percent of households. This effect holds for all subgroups except for small households. Children who grow up in households where books are available are likely to receive, on average, three more years of schooling than children from homes with no books. This relationship holds regardless of a caregiver's level of education, occupation or class, and it applies to rich and poor countries alike (Evans, Kelley, Sikora, & Treiman, 2010). However we find no impact on the number of households that own at least one book. Thus, it seems that households who already own at least one book end up using the transfer to purchase more books, while the program has no effect on those who do not own any books prior to receiving the grant.

The support for learning indicators were summed to create a scale from 0-6, with one point for each activity that an adult aged 15 or over participated with the child. The CGP impacts the support for learning scale by 0.497, meaning that the CGP households have nearly .5 more activities attributable to the program than non-CGP households. This impact is driven by large households, as well as for male children. However, both high and low maternal education levels show impacts, suggesting that the program increases learning activities in CGP households regardless of the mother's education level.

¹ <http://www2.sas.com/proceedings/sugi23/Posters/p205.pdf>

For the full sample, the CGP impacts the child's ability to follow directions by 10.5 percentage points, with 65 percent of children in beneficiary households following directions. These results are driven by small households, households with high maternal education, and for males only. There are no impacts on the child's ability to work independently. There were no program impacts on the language cognition scale, although effects on cognition and language development may be longer term than the material and social support outcomes, or the behavioral outcomes.

Conclusions: The rigorous evidence about UCTs in Africa shows that these programs can have strong impacts on an array of outcomes including increased food security, diet diversity, improved living conditions, hygiene and sanitation, increased productivity, and even spillover effects for non-beneficiaries living in the same community. However, until now there was no evidence about how the program might affect early childhood development, arguably the most critical developmental time in a person's life. If cash transfers can improve a person's early childhood development, then the benefits of the program extend well beyond the period of receiving cash, making the program much more valuable than estimated through just looking at the usual protective and productive impacts mentioned above. This study provides some of the first evidence that unconditional cash transfers can affect a person's early childhood development. The results presented here are limited by the relatively small breadth and depth of the ECD investigation, since it was not the primary purpose of the survey that collected the data. Therefore, this study suggests that there is reason to believe that UCTs can affect early child development and more research should pursue this line of inquiry. From a policy perspective, the evidence showing that UCTs can affect child development means that the benefits from UCTs might be much greater and impact beneficiaries' lives much longer than previously estimated, making UCT programs that much more cost effective.

Appendices

Not included in page count.

Appendix A. References

References are to be in APA version 6 format.

Appendix B. Tables and Figures
Not included in page count.