The Impact of Cash Transfers on the Educational Attainment, Sexual Behavior, and HIV Status of Adolescent Girls in Malawi

Researchers:

Sarah Baird

Ephraim Chirwa

Richard Garfein

Craig McIntosh

Berk Ozler

Sector(s): Education, Gender, Health, Social Protection

Location: Zomba District, Malawi

Sample: 3,796 unmarried girls aged 13-22

Target group: Secondary schools Students Women and girls

Outcome of interest: Communicable diseases Enrollment and attendance HIV/AIDS Sexual and reproductive health

Intervention type: Cash transfers Conditional cash transfers Unconditional cash transfers

AEA RCT registration number: AEARCTR-0000036

Data: Cash or Condition? Evidence from a Cash Transfer Experiment

Research Papers: Effect of a Cash Transfer Programme for Schooling on Prevalence of HIV and Herpe..., Cash or Condition? Evidence from a Randomized Cash Transfer Program, When the Money Runs Out: Do Cash Transfers Have Sustained Effects on Human Capi..., The short-term impacts of a schooling conditional cash transfer program on the ...

Partner organization(s): Gates Foundation, Gender Action Plan (GAP), Global Development Network (GDN), International Initiative for Impact Evaluation (3ie), Knowledge for Change Program (KCP), National Bureau of Economic Research (NBER), NBER African Successes, Spanish Impact Evaluation Fund, World Bank

Cash transfers are popular development programs, but little is known about their long-term impacts and whether conditionality is essential to achieving positive outcomes in health and education. In Malawi, researchers tested the relative effects of providing conditional and unconditional cash transfers to teenage girls and their families. Among girls enrolled in school at the start of the program, conditional cash transfers increased school attendance and reduced HIV prevalence while unconditional transfers were more effective in helping girls delay marriage and childbearing in the short-term. Improvements among the unconditional cash transfer group quickly dissipated, while conditional cash transfer beneficiaries who had dropped out of school before the program experienced sustained improvements in educational attainment, marriage, and fertility outcomes two years after transfers ended.

Policy issue

Cash transfers are an increasingly popular tool for development. Over 29 low- and middle-income countries have conditional cash transfer programs (CCTs), and over the past decade, there has also been a rise in other types of transfer programs, such as unconditional cash transfers (UCTs). CCT programs condition payments on activities widely seen as beneficial, such as by requiring beneficiaries to attend school, or regular health checkups. These programs aim to reduce poverty in the short-term, but also improve welfare in the long run by developing beneficiaries' skills, physical capital, or health. Evidence has shown that cash transfers can improve outcomes on which they are often conditioned, such as educational attainment, in the short-term. While recent evidence also suggests that CCTs can improve long-run educational attainment, it is less clear whether these programs impact indirect outcomes like fertility, employment, or earnings in the long run, after beneficiaries stop receiving payments. It is also unclear how important conditionality is to changing recipients' behavior, as UCTs have been shown to improve child health and education without the costs of monitoring recipients' compliance with various conditions. Can CCTs improve educational, health, marriage and fertility outcomes in the long run, after participants stop receiving payments? Can UCTs achieve similar impacts without conditioning payments on desired activities?

Context of the evaluation

When this study began in late 2007, Malawi was among the poorest countries in sub-Saharan Africa. More than three-quarters of its population lived in rural areas and most were subsistence farmers. The per capita income in 2008 was US$760, far below the regional average of US$1,973. The country also performed poorly on measures of education and health. Only 24 percent of secondary school-aged youth enrolled in school in 2008. Further, 14 percent of the adult population was infected with HIV, and among young adults, prevalence was more than four times higher for women than for men in 2004.

Zomba district, where this study took place, had high levels of poverty, low school enrollment, and high HIV prevalence, similar to other districts of southern Malawi. The study participants were unmarried girls between the ages of 13 and 22, who lived in the district's urban center, Zomba city, as well as rural villages. Among participants who had dropped out of school by the start of the program, about 45 percent had started childbearing compared to 2 percent among in-school girls. Further, girls who had dropped out were about 2 years older than in-school girls, on average.



Young women in Zomba district of Malawi

Photo credit: Sarah Baird

Details of the intervention

Researchers evaluated the effect of two cash transfer programs on a range of outcomes, including educational attainment, marriage, childbearing, and prevalence of sexually transmitted diseases up to two years after transfers ended. They compared a conditional and an unconditional cash transfer program to test the effect of conditioning payments on school attendance.

Researchers selected 176 enumeration areas (EAs), or administrative subdivisions containing around 250 households each, from urban, semi-rural, and rural areas of Zomba district for the study. In each EA, researchers randomly selected a portion of unmarried girls aged 13 to 22 to participate in the program. Researchers assigned half of the EAs to receive cash transfers while the other half served as a comparison group that did not receive transfers.

Researchers then divided the 88 cash transfer EAs into groups of different transfer types, as illustrated in the table below. Within these EAs, a subset of girls who were in school at the start of the study ("baseline schoolgirls") received offers for either conditional transfers, unconditional transfers, or neither, while girls who had dropped out of school at the start of the study ("baseline dropouts") received offers for conditional cash transfers in program EAs.

Table 1. Research design and intervention groups

	Program EAs (88 EAs)					**Comparison EAs**
	Conditional Transfer (46 EAs)		Unconditional Transfer (27 EAs)		No Transfer (15 EAs)	(88 EAs)
Baseline schoolgirls (2,907 girls)	Offered a CCT (506 girls)	Within-village comparison (179 girls)	Offered a UCT (283 girls)	Within-village comparison (243 girls)	No Transfers (201 girls)	No Transfers (1495 girls)
Baseline dropouts (889 girls)	Offered a CCT (436 girls)					No Transfers (453 girls)

In total, researchers interviewed 3,796 girls (2,907 baseline schoolgirls and 889 baseline dropouts) for the study. Researchers randomly assigned girls in the CCT or UCT groups to receive either US$1, $2, $3, $4, or $5 per month (MWK 141, 282, 423, 565, or 706 per month in 2009). The girls' parents also received a transfer of US$4, $6, $8, or $10 per month (MWK 565, 847, 1129, or 1412 per month), which randomly varied by EA. The average total transfer to a household was US$10 per month (MWK 1412) for ten months a year, or nearly 10 percent of the average household consumption expenditure in Malawi in 2009. Both transfer programs ran for the ten months of the school year over two years, or from February 2008 to December 2009.

- **CCT Group**: In addition to the above transfer amounts, in the CCT group, the program also paid secondary school fees for the girls receiving transfers. Participants had to attend 80 percent of the days school was in session each month to receive that month's transfer.
- **UCT Group**: The program increased the transfer amounts for secondary school girls in the UCT group by the average secondary school fee in order to match the total value of transfers received in the CCT group. Otherwise, participants in both groups received the same amounts. Girls in the UCT group received their payments by showing up at a transfer location each month, and their school attendance was not checked before receiving transfers. Even though girls in the UCT group generally understood that there were no requirements for them to receive the transfer, they knew that the program was intended to promote education.

Researchers followed up with participants one to two years after the transfers began to collect information on school enrollment, attendance, fertility, and marriage and understand the short-term effects of the program while transfers were ongoing or had just ceased. Further, to evaluate participants' sexual health, nurses and counselors certified by Malawi's Ministry of Health tested a subset of girls for HIV and herpes simplex virus type 2 (HSV-2), a sexually transmitted infection more common than HIV, eighteen months after the program started. To understand the medium-term effects of the programs, researchers followed up with participants more than two years after participants stopped receiving cash transfers, or four to five years after they first began. By this time, participants were 18 to 27 years old.

Results and policy lessons

Researchers found that CCTs and UCTs given to teenage girls and their families improved a wide range of outcomes. The unconditional variation of the program did not impact school attendance or test scores, but was effective in helping baseline schoolgirls delay marriage and childbearing in the short-term. However, short-term improvements among the UCT group quickly dissipated, while baseline dropouts who received the CCT experienced sustained improvements in educational attainment, marriage, and fertility outcomes two years after the program ended.

- *School enrollment, attendance, and test scores:* Within 1 to 2 years after transfers began in the CCT groups, baseline dropouts experienced a 45 percentage point increase in their school enrollment rate while baseline schoolgirls experienced an 8 percentage point increase (relative to 12 and 84 percent of baseline dropouts and schoolgirls enrolled in the comparison group). Attendance was also 8 percentage points higher among baseline schoolgirls in the CCT group, relative to a comparison group average of 81 percent. Relative to the comparison group, girls in the CCT group performed better on tests of English reading comprehension and cognitive ability.
- The UCT program, on the other hand, positively impacted enrollment but had no effects on attendance or test scores of baseline schoolgirls. Baseline schoolgirls who received the UCT program enrolled in 0.23 additional terms on average throughout the six-term program (relative to a comparison group average of 4.8 terms, or an increase in enrollment among CCT baseline schoolgirls of 0.54 terms).

- Two years after cash transfers had ended, baseline schoolgirls in both the CCT and UCT group had, on average, completed the same highest grade level as those in the comparison group (10.4 years of schooling), and secondary school completion rates did not improve. However, CCTs led baseline dropouts to complete an additional 0.6 years of education relative to baseline dropouts in the comparison group, who had an average of 7 years of education.
- *Marriage and childbearing:* The UCT program delayed marriage and childbearing among baseline schoolgirls in the short-term, while the CCT program did not. Baseline schoolgirls in the UCT group were nearly 8 percentage points (or 44 percent) less likely to be married (relative to 18 percent in the comparison group) and 7 percentage points (or 27 percent) less likely to become pregnant (relative to 25 percent in the comparison group). It appears that the unconditional transfer allowed girls who dropped out of school–and who therefore would have stopped receiving conditional payments–to support themselves without relying on a husband or having transactional sex with older men, thereby delaying marriage and childbearing. Among baseline dropouts, girls in the CCT group were 12 percentage points (41 percent) less likely to be married and equally likely to be pregnant as baseline dropouts in the comparison group.
- Neither the UCT program nor the CCT program impacted marriage, number of children, or age of first birth among baseline schoolgirls two years after the end of transfers. Almost immediately after the program ended, there was a spike in marriages and pregnancies among baseline schoolgirls in the UCT group, which may be related to lower reported levels of female empowerment among the UCT group. However, the CCT program had large effects on marriage and fertility rates among baseline dropouts in the medium-term. Two years after the end of transfers, baseline dropouts in the CCT group were 11 percentage points (13 percent) less likely to be married and 4 percentage points (4 percent) less likely to have been pregnant compared to baseline dropouts in the comparison group. Baseline dropout girls who received the CCT had also given birth slightly fewer times and were 0.43 and 0.27 years older when they first married or first gave birth.
- *Sexually transmitted diseases:* Both transfer programs decreased HIV and HSV-2 prevalence among baseline schoolgirls in the short-term. Among these girls, 1.2 percent of those who were offered either CCTs or UCTs tested positive for HIV, compared with 3 percent of girls in the comparison group. The HSV-2 prevalence was less than 1 percent among girls offered either CCTs or UCTs and 3 percent in the comparison group. For baseline dropouts, the CCT program did not impact the prevalence of HIV or HSV-2.
- Among baseline schoolgirls, lower HIV prevalence in the short-term did not persist two years after the program, when HIV prevalence was similar across the CCT, UCT, and comparison groups, on average. As in the short-term, CCTs did not reduce HIV prevalence among baseline dropouts, or reduce risky sexual behavior. HSV-2 prevalence was not measured in the medium-term follow-up.
- *Labor market participation and empowerment:* In the medium term, baseline schoolgirls and dropouts in the CCT or UCT groups did not experience any change in their labor income or the proportion of hours they spent in self-employment or paid work relative to those in the comparison group. Baseline dropouts in the CCT group had 37 percent lower wages in the past three months than baseline dropouts in the control group, which may reflect the fact that they were in school longer and may have less work experience.
- For baseline schoolgirls and dropouts, the CCT program had no impact on self-reported subjective wellbeing, measured on a scale from 0 to 10 with 10 being the best possible life the participant could have compared to 5 years ago, or empowerment, which was measured using an index on self-esteem, social participation, aspirations, and other factors. Baseline schoolgirls in the UCT program experienced a decline in empowerment concentrated among married girls, which may be related to the earlier spike in marriages.

Taken together, these results suggest that while unconditional cash transfers may have provided transient benefits, only conditional cash transfers to baseline dropouts impacted school attainment, early marriage, and pregnancy in the medium term. However, CCTs did not improve labor market or sexual health outcomes in the medium term. Given the tradeoffs between UCTs and CCTs, policymakers should view UCTs and CCTs as complements: UCTs can guarantee a basic level of protection even for

those unable to comply with conditions, while CCTs can provide an incentive to invest in health and education.

1. Baird, Sarah, Craig McIntosh, and Berk ÌÐzler. 2011. "Cash or Condition? Evidence from a Randomized Cash Transfer Program." Quarterly Journal of Economics 126 (4): 1709-1753. 2. Baird, Sarah, Ephraim Chirwa, Craig McIntosh, and Berk ÌÐzler. 2010. "The Short-Term Impacts of a Schooling Conditional Cash Transfer Program on the Sexual Behavior of Young Women." Health Economics 19(2010): 55-68. 3. Baird, Sarah J, Richard S Garfein, Craig T McIntosh, and Berk ÌÐzler. 2012. "E?ect of a Cash Transfer Programme for Schooling on Prevalence of HIV and Herpes Simplex Type 2 in Malawi: A Cluster Randomised Trial." Lancet 379(2012): 1320-1329.