

The impact of the Social Cash Transfer Scheme on education and labor in Malawi's Ultra Poor Households

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ABSTRACT

We evaluated the impact of the Malawi Social Cash Transfer Scheme (SCTS) on child education and labor in a randomized community trial. Data consists of a longitudinal survey, key informant interviews, and focus group discussions.

The positive impacts include a 5-percentage point difference in enrolment, increased expenditures per child, a one-day decrease in absences, and a 10-percentage point decrease in out-of-home work. Findings are confirmed in qualitative interviews and focus groups.

The SCTS reached its educational goals. However, the Malawi school system requires ongoing investments and improvements for long-term gains in human capital to interrupt the intergenerational cycle of poverty.

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INTRODUCTION

Cash transfer programs have positively impacted child education in countries throughout Latin America and other parts of the world, such as in Bangladesh, Colombia, Ecuador, Honduras, Nicaragua and South Africa (Fiszbein et al. 2009). Government implemented cash transfer programs have led to increases in school enrolment ranging from 0.5 percentage points to nearly 13 percentage points, and, in some places, decreased the percentage of children engaged in child labor and work.

In the last several years, programs providing income grants have been launched in Eastern and Southern Africa, in countries such as Kenya, Malawi, South Africa, and Zambia. While cash schemes differ globally with regards to targeting criteria, implementation, and management, the goals are similar, and generally include alleviating poverty and investing in human capital by improving food security and asset accumulation, access and use of health services, and educational enrolment. In the long-term, these investments in human capital are intended to interfere with the intergenerational cycle of poverty by helping families build financial assets, and engendering children with physical and mental health, educational qualifications and knowledge that lead to employment opportunities.

While the evidence on the impact of conditional cash transfers on education in Latin America is well established; it is only recently that African countries have begun implementing cash schemes, so there is still sparse data to help explain the potential impact of unconditional transfers on child education and labor within poor households in Africa.

In order to begin to fill the research gaps on the impact of cash transfers in resource poor countries, we examined the impact of the Malawi Social Cash Transfer Scheme (SCTS) on child education and labor using mixed quantitative and qualitative methods. The scheme was launched in one district as a pilot in June 2006. The natural rolling out of SCTS provided the opportunity to conduct an independent evaluation of the scheme's impact. Data comes from a randomized community control trial in the district of Mchinji, where the scheme was piloted. The longitudinal evaluation study consists of a quantitative survey from a panel of intervention and control households, qualitative key informant interviews, and focus group discussions with recipient children and community members. Quantitative data collection occurred in March 2007 (baseline) and one year later in April 2008 (endline) and qualitative data collection occurred in October and November 2007 and March 2008.

The impact of cash on child education, labor and work

The impact of cash on education depends upon a range of factors. Countries with lower baseline enrolment may see greater impacts (e.g. nearly 13 percentage points among 7 to 13 year olds in Nicaragua where the baseline enrollment was 72% versus 2.1 percentage points among 8 to 13 year olds in Colombia where baseline enrolment was about 92%) (Maluccio and Flores 2005; Attanasio et al. 2005). The size of the cash transfer, ranging from 7% of pre-transfer consumption among poor beneficiaries in Chile to 27% in Nicaragua, may also impact enrolment and attendance (Galasso 2006; Maluccio and Flores 2005). Children or youth may also have differential impacts based on their age and gender (Fiszbein et al. 2009). For example, in South Africa, where cash payments or the pension have been shown to positively impact enrolment, the greatest improvements are among girls rather than boys (Duflo 2003). Other factors, such as the gender of the parent or caregiver receiving the transfer have impacted enrolment, as in South Africa, with

higher enrolment in female-headed households (Duflo 2003). Socio-economic status has also played an important role in determining the effects of cash transfer schemes, with the greatest impacts in the poorest households (Fiszbein et al. 2009). In Nicaragua, 7 to 13 year olds that were categorized as extremely poor had better enrolment results than poor and non-poor children with gains of approximately 25 percentage points, 14 percentage points, and 6 percentage points respectively (Maluccio and Flores 2005).

In the conditional cash transfer programs, which are common in Latin America, the various requirements that families must meet in order to receive cash may also determine the impact. For example, conditions include mandatory school enrolment, with monthly to quarterly monitoring. In Bangladesh, 75% attendance is required (Khandker et al. 2003). In some countries, cash schemes have school performance or grade progression requirements. These conditions, or behavioral requirements, are levied to ensure that families that have under-invested in human capital use a portion of cash to invest in child health and education. In Africa, cash transfers have not become conditional, partly due to the limited human and financial capacity to monitor them. In Malawi, when recipients are selected, they are told that a portion of the cash transfer is for child education, which is reinforced when they pick up their monthly stipend. However, there is no formal monitoring of enrolment or attendance, but rather recipients gain the financial ability to send children to school if it is their preference. As Fiszbein et. al. (2009) explain, households often make efficient, albeit unpopular, decisions about not schooling children based on the low quality of schooling, low aptitude of youth, or high value of the opportunity costs of schooling.

Supply side limitations within the educational infrastructure vis-à-vis increased demand are another reason that cash transfers in Africa have been unconditional (Schubert and Slater 2006). Elsewhere, cash transfer programs have incorporated ‘supply-side interventions’ to increase the capacity of the educational system, given the anticipated increased demand on the system. For example, in Cambodia and Mexico, schools and classrooms were constructed or rehabilitated, payments were made to parent-teacher associations in Honduras, and books, teaching and library resources were provided in Jamaica (Fiszbein et al. 2009). To date, no Eastern or Southern African countries have made similar supply-side interventions for their educational systems that specifically accompany the cash schemes.

Reducing child labor is a goal of cash transfer programs because work may be physically or mentally harmful, may interfere with schooling, and can undermine educational attainment and future earnings (Fiszbein et al. 2009). For instance, in Mchinji, Malawi, the major reasons reported for children leaving primary school were for employment and to meet family responsibilities (Government of Malawi 2007). Cash transfers may reduce child work by providing the regular income that families need to survive, which, in turn, frees children from their economic responsibilities, and through conditions, which require households to forego work in order for children and youth to attend school. In Mexico, the greatest reductions in work, such as engaging in income generating activities, were among boys aged 12 to 17 years and ranged from 15 to 25 percentage points (Skoufias and Parker 2001). In Nicaragua, Maluccio and Flores (2005) found a 3 to 5 percentage point reduction in work among children 7 to 13 years and 9 percentage point difference among 10 to 13 year olds (Maluccio 2003). While student enrolment increased in Brazil, Cardoso and Souza (2004) found no differences in child work in Brazil, nor were differences in

work found in Columbia or Honduras (Attanasio et al. 2006; Glewwe and Olinto 2004). In Mexico, domestic work decreased among children in cash transfer households (Skoufias and Parker 2001). In Ecuador and Cambodia, researchers and policy makers have identified transition periods, such as when youth transition from primary to secondary school as the most sensitive to dropping out (Edmonds and Schady 2008; Filmer and Schady 2009). In Cambodia, transfers to children for staying in school during times of transitions led to an 11 percentage point reduction in work (Filmer and Schady 2009).

The Malawi Social Cash Transfer

The Malawi Social Cash Transfer Scheme (SCTS) is currently operational in seven districts reaching more than 11,000 households throughout Malawi. In Mchinji, by April 2008, more than 3000 households received transfers on a monthly basis with total program expenditures at MK6.1 million (US\$43k) per month. The cash transfer is targeted to ultra poor households that are also labor constrained (Schubert and Kambewa 2006). Ultra poor households are defined as labor constrained households that are in the lowest expenditure quintile or below the food poverty line. Labor constrained households either have no able-bodied adult age 19-64 or have a dependency ratio worse than three so that one adult must care for more than three children, elderly, or chronically ill household members (Schubert and Kambewa 2006). Financed through the Global Fund to Fight AIDS, Tuberculosis and Malaria, the SCTS is implemented by the Government of Malawi at the level of the District Assembly and utilizes a community based targeting strategy, which is described in detail in Miller et al. 2009a.

The base range for monthly transfers in Malawi is MK600 (US\$4.30) for a single person household to MK1800 (US\$12.85) for households with four or more members, while on average, beneficiary households receive MK2,000 (US\$14). The transfer amount depends on the size of the household and the number of school aged children (a MK200 top-up is paid for each primary school aged child and MK400 for each secondary school aged youth). In Latin American countries, the transfer ranges from approximately \$13 to \$50 per month, depending on the country, and the age and number of children (Lagarde et. al. 2007), so that the transfer amounts to about 7% of per capita expenditures in Chile, 20% of per capita expenditures in Mexico, and 27% in Nicaraguaⁱ (Fiszbein et al. 2009). In Malawi, which is much poorer than Latin American countries, the mean is 60% of per capita expenditures, with a range from about 4% to 292% of per capita expenditures. The SCTS will cost an estimated US\$60 million per year by 2012 when 10% of all households per district are included in the scheme (Government of Malawi, 2009).

METHODS

The Boston University Institutional Review Board and the Malawian Health Research Council at the Ministry of Health approved the study protocols submitted for the evaluation.

Sample Selection

In Malawi, districts are divided into village groups consisting of approximately 1000 households for the implementation of the SCTS. In February 2007, the District Assembly identified the next eight village groups eligible for the SCTS, which enabled us to construct an intervention and comparison group, where we could collect baseline data, and follow both groups for one year until

ⁱ These estimates are not directly comparable due to differences in the ways that expenditures and consumption are calculated between countries.

the comparison group began to receive the cash transfer. The scheme's multi-stage, community participatory targeting process was implemented in order to select 10% of the poorest households per village group that are also labor constrained (approximately 100 eligible SCTS beneficiary households per village groups). We randomly assigned four village groups to the intervention and the remaining four to the comparison group creating a sampling frame of all SCTS approved households in the four intervention (408 households) and the four comparison village groups (411 households). The sample selection is described in detail in Miller et al. 2009b.

Data Sources for the Impact Evaluation

Quantitative questionnaires and structured qualitative interview and focus group guides were developed in English, translated into Chichewa, and back translated into English (Miller et al. 2009b). Research assistants (RAs) were trained to use all data collection instruments, which were then pilot tested and revised. The questionnaire and qualitative instruments captured a range of demographic and economic information. The impact of cash on child education was measured using indicators of school enrolment, daily attendance and per child expenditures on education. Child labor was measured using indicators of whether children participated and the number of hours per week spent on child care and adult care, household chores, other family work, and income generating activities.

We visited respondents at their homes where the head of household was interviewed. One challenge faced in data collection and analysis was identifying 'ghost' household members as the SCTS created the incentive for households to exaggerate the number of adults or children living in the house in order to receive more money (Miller et al. 2008a; Miller et al. 2008b). We found that

‘ghost’ members in both intervention and comparison households were listed for the purpose of increasing the monthly allotment from the SCTS, while ‘ghosts’ did not actually live in the house. We identified and removed 110 ghosts from the panel (in 53 households) before the analysis. Based on extensive fieldwork and RA training, we are reasonably confident that we removed most of the ‘ghosts’ from the sample (Miller et. al. 2008b). It is unlikely that information, such as age and date of birth, for made-up children would have been consistent between rounds, that ‘ghost’ children would be available for measurements at multiple time points (anthropometric data was collected), and that RAs would not have noticed the inconsistencies within these households.

School Verification

We created a roster of all intervention children and youth whose household head reported that they were enrolled in school. Next, we met with school officials, including headmasters and teachers, to confirm enrolment and attendance of all students on the roster.

Quantitative Statistical Analysis

During data collection, surveys were checked daily and entered into the Census and Survey Processing System (CSPRO). Concurrent data entry allowed for a second review by the data entry team so that any inconsistencies were sent back to the field team to confirm data. The CSPRO database was exported to Statistical Analysis Software (SAS 9.1) for cleaning and analysis. We calculated univariate and bivariate statistics to examine the differences in education and labor among children depending on their age and intervention status. Next, we computed difference-in-differences estimates to determine the program impacts, which is a typical approach used in randomized community control trials (Ravallion 2003). We calculated the mean difference

between outcome values in the intervention and comparison groups at baseline in March 2007, prior to the transfer in both groups, and in April 2008, when intervention households received the transfer for one year. We used ordinary least squares regression in SAS to estimate the program impact, and its associated p-value, which is the difference between the two mean differences for the given outcome. The double difference methodology accounts for any observable or unobservable between-group differences at baseline by subtracting out existing differences from the equation (Maluccio and Flores 2004). This double difference is the estimate of the program impact (i.e. the difference-in-differences impact estimate, which is reported in percentage points). We also calculated t-tests to determine the size and statistical significance of differences between continuous variables based on school enrolment, per capita cash transfer size, per capita total expenditures and other variables.

Qualitative Data Collection and Analysis

We conducted key informant interviews with teachers (n=13), health (n=8) and agricultural extension workers (n=4), community development assistants (n=6) and traditional leaders (n=22) in the intervention villages. We also conducted focus group discussions with community members from intervention villages (20 focus groups with 205 community members total) and children from intervention households (17 focus groups and 170 children total). Interviews and focus groups were held in village locations conducive to confidential discussions. We interviewed all teachers, health and extension workers that were available, and the traditional leaders from each village group where the scheme was operational. We asked village chiefs to invite community members that were not recipients, civil servants, or involved in targeting recipients to participate in the focus

groups. Finally, all children from SCTS households aged 8-17 within a 15 minute walking distance from where the focus group discussion took place were invited to participate.

Research assistants (RAs) were trained in qualitative methods before piloting the instruments and collecting data. RAs transcribed notes and recordings from Chichewa into English and then transcripts were typed. Field supervisors observed RAs and reviewed all Chichewa and English reports to ensure accuracy and consistency between transcripts, as well as verified translations, obtained clarifications as needed, and identified emerging themes. We read and reread transcripts, developed codes for categorizing data, and coded transcripts using NVIVO 8 software. We examined coded text for common themes and the frequency with which they appeared, and then selected typical quotes to illustrate the phenomena.

RESULTS

Quantitative Results: Education

Out of the 811 households interviewed at baseline, 766 households were interviewed at endline, yielding a 94% response rate. Among the households interviewed at baseline and endline, 67% contained children aged 6 to 18 years (Table 1) and in total, the analysis includes 1,244 children and youth (Table 2).

Household Characteristics

[Table 1 about here]

[Table 2 about here]

Overall, in both intervention and comparison households, the majority of the household heads were female, had little or no education, and were over 45 years, with nearly half of household heads

more than 65 years old (Table 2). Moreover, one in three households had no able-bodied adult age 19 to 64 years, but contained children and older persons. Intervention households were slightly larger than comparison households, and at baseline, both had extremely low average monthly expenditures and per capita expenditures. By endline, given the cash transfer, expenditures in intervention households had far exceeded expenditures in comparison households. Despite the above differences between the study groups at baseline, all households demonstrated a high level of economic and demographic vulnerability in March 2007. Even if the demographic differences between households directly influence cash transfer outcomes, the double difference analysis accounts for the differences that may influence estimates of the impact of the cash transfer. Furthermore, we modeled differences in impact based on the household heads' gender, level of schooling, and economic situation at baseline.

[Table 3 about here]

Outcomes

Between March 2007 and April 2008, intervention children and youth experienced a 5 percentage point difference in enrolment, a MK481 (US\$3.43) difference in per child educational expenditures, and a 1.1 day difference in the number of days absent per month compared to non-cash recipient children (Table 4). School enrolment for children aged 6 to 18 years climbed to 95% in intervention households, while on average, intervention children dropped from an average of three absences per month down to one. Each of these impacts is statistically significant.

[Table 4 about here]

Among recipients only, the per capita difference in the size of the cash transfer per household between children enrolled in school and not enrolled in school is MK480 per year ($p < 0.06$).

A more detailed inspection of the impacts disaggregated by age and gender provides insight into how households prioritized which children to send to school and invest household resources in (Table 4). At baseline, enrolment levels are lowest for 6 to 8 and 16 to 18 year olds. There is no consistent pattern of enrolment by gender, while intervention children generally have higher enrolments rates than comparison children. By endline, the double difference impact estimates are greatest for youth aged 16 to 18 years among both boys and girls (Figure 1) with a 23 percentage point difference among older boys compared to between 4 and 8 percentage points for most other children and youth. While a large percentage of youth appear to drop out of school in the comparison group, the intervention youth have remained in school, indicating that the largest impact is for older youth, particularly boys. Furthermore, comparison children in most of the other age groups also experienced gains in enrolment, which might be due to the fact that households knew they were identified as cash transfer recipients and being followed in the research study or expected that enrolment was compulsory to receive the transfer in the future.

[Table 5 about here]

[Figure 1 about here]

At baseline, the number of days of school absences per month ranged from 2.3 days per month to 4.2 days depending on age, gender, and intervention status without any consistent patterns (Table 5). Out of all intervention children, 6 to 8 year old girls had the most days of absences. However, by endline, the double difference impact was greatest among intervention girls aged 6 to 8 years compared to all other children (Figure 2). In all age groups, intervention girls had greater reductions in the number of absences than boys. Again, in most all age groups even the comparison children and youth experienced reductions in the number of days of absence, which is likely due to the aforementioned reasons.

[Table 6 about here]

[Figure 2 about here]

Similar to the previous outcomes, there were few discernible patterns in the differences between per child school expenditures at baseline, except that expenditures did increase by age group in all households. Expenditures were larger for girls than boys in the 12 to 15 year age group, but this is explained by the larger proportion of girls aged 12 to 15 that are in secondary school compared to boys. Among secondary school students in the sample (n=30), school expenditures are higher for boys than girls (annualized MK5,906 for boys and MK3,343 for girls), although expenditures for primary school are not significantly different for boys and girls (boys MK457, girls MK482). Still, the slight difference between boys and girls in the 12-15 year old age group occurs because girls are younger in secondary school (the average age is 14.8 years while boys average 15.8 years), which drives up the average expenditures for girls in that age category. In the 16 to 18 year olds age category, expenditures were greater for boys than girls (Table 7). By endline, the 16 to 18 year old intervention boys again have the greatest difference in educational investment, which is more than twice that of girls in the same age group (Figure 3). Next, 12 to 15 year old intervention girls and boys had the second largest differences in school expenditures. At endline, the pattern of increasing educational expenditures by age holds among both boys and girls in each age category.

[Table 7 about here]

[Figure 3 about here]

In an examination of school enrolment by the gender and education level of the household head, and the baseline poverty levels of households, the following patterns emerge. First, intervention children and youth in male-headed-households only had a 2 percentage point difference in enrolment compared to non-recipient children, versus the 6 percentage point difference among

intervention and comparison children in female-headed households (Figure 4). This is partly because enrolment rates declined slightly in female-headed-comparison households over time, while they slightly climbed in male-headed comparison households from baseline to endline. Second, children from households where the head had no schooling experienced a 3 percentage point difference in enrolment, children from households where the head that had some primary schooling experienced a 6 percentage point difference, and children from households where the head had more than primary schooling experienced a ten percentage point difference compared to non-cash recipient children (Figure 5).

[Figure 4 and 5 about here]

Validation of School Enrolment

In the enrolment verification, 96% of children reported by household heads to be in school were actually enrolled and attending school as confirmed by teachers and headmasters. Among the 4% not in school, about 20% (or 0.8% of all children) were completely unknown and are likely ‘ghost’ children.

Quantitative results: Labor / Work

Child care and adult care

Between baseline and endline, there were no significant differences in the percentage of boys in intervention households that engaged in child or adult care compared to boys in comparison households. Similarly, there was not a significant difference in the percentage of girls that engaged in adult care in intervention versus comparison households. However, there was a 9 percentage point difference in girls providing childcare ($p=0.12$) in intervention versus comparison households. While the percentage of girls providing child care in comparison households decreased, it remained the same in intervention households. Nevertheless, intervention girls and

boys spent nearly the same number of hours providing adult and child care between baseline and endline.

[Table 8 about here]

There were no differences in enrolment rates at endline based on whether or not youth provided adult or childcare. Among all children, the average time spent providing any care was less than two hours per week. Still, out-of-school youth spent more hours providing care than in school youth, which might have led to their dropping out of school.

Household chores

Between baseline and endline, boys and girls in intervention households had a significant increase in the percentage that did chores compared to youth in non-transfer households. However, there was no difference in the number of hours spent on chores between intervention and comparison children from baseline to endline. Household heads reported that boys spent about 1 to 2 hours per week on chores and girls spent 2 to 3 hours per week on chores.

Children in school had higher rates of doing chores than out-of-school youth (75% vs. 62%, $p < 0.0001$); however, on average, out-of-school youth spent more time doing chores (2.3 hours per week vs. 1.9 hours, $p < 0.0001$) than in school youth.

Family work

The percentage of children that engaged in family work (e.g. work on a farm, caring for animals etc.) increased among boys, resulting in an 8 percentage point difference between intervention and comparison children ($p = 0.10$). Family work did not appear to influence school enrolment though, given that there were no differences in enrolment rates between children that reportedly did and those that did not do family work.

Income Generating Activities

Intervention and comparison children had a statistically significant difference in the percentage of boys and girls working on income generating activities (e.g. domestic work in someone else's house, day labor, selling things, making things for sale, doing repairs, guarding valuables) from baseline to endline. Boys had a 10 percentage point reduction ($p < 0.004$) in the percent that participate in IGAs and girls had a 9 percentage point reduction ($p < 0.01$).

Furthermore, IGAs do appear to interfere with enrolment as the percentage of children doing IGAs is 19% for out-of-school youth and 10% for in-school-youth. Enrolment is 92% among children not doing IGAs and 85% among those engaged in IGAs ($p < 0.004$)

Qualitative Results

Community Member Focus Groups

In the focus groups with community members, participants discussed the cash transfer impacts that they witnessed and described how the transfer had led to intervention children going to school, attending more days of school, families investing a portion of the transfer in education, and reductions in child work. Various participants from each of the 20 village groups were in agreement, without any discordance from other focus group attendees, that they had witnessed these impacts in multiple intervention households.

Yes, those that I have seen, like I said they are using their money properly. They are helping their children. They have bought them uniform and school materials. Nowadays these children do not miss classes as it was before and they are doing well at school. [Male community member]

School enrolment has also improved. Children are now going to school because they have uniforms and a lot of them have stopped herding cattle, and are in school. [Male community member]

The condition of the orphans has improved greatly! Before this scheme they were not able to get things like soap and clothes, and they were forced to do small jobs due to the fact that people were not helping them. They had

stopped going to school, and they generally felt very bad ...; but now things have turned around for them. They have been enrolled in school. There has been a big difference... [Female community member]

Others had standard eight children who would have dropped school for lack of fees when they were selected to secondary school but they are able to pay fees. [Male community member]

Some had no single child in school but now they have managed to send at least one. For example, one beneficiary had 6 children who were not in school but now 5 of these children are now schooling and they have school uniform, books and writing materials like pens and pencils. [Male community member]

In addition to that, it is not only the school in [local town], but even here. In the past a lot of children were missing classes during the rainy season. They feared to go there when they were hungry. This has now changed because children do not have to think of going for ganyu [piece work] after school. When they go to school they do have the confidence that they are going to find food at home. This is making them to concentrate on their studies. [Male community member]

Child Focus Groups

Within the 17 focus groups with children aged 8 to 17 years, children and youth frequently discussed how they were now attending school and missing fewer days because they had adequate food, school supplies, and soap, and were no longer expected to work in fields. They described the ways in which their caregivers were investing in their schooling. There were no children who deviated from these reports in any of the focus groups. Typical quotes that help explain improvements in indicators of education follow:

Concentration was difficult then because we went to school while hungry and could only see darkness on the chalk board because of hunger, but now we go to school with full stomachs. [10-year-old male].

Also when one is hungry he/she cannot learn properly because the heart trembles. [13-year-old female].

Like in my case I used to running away from school before knocking off time just because of hunger but now I don't miss any class for this reason. [11-year-old male]

Because we come here with full stomachs there is no reason to miss classes. [12-year-old female]

We are only two in this household, I and my 15 year old sister. She is now able to have breakfast before going to school. She is also going to school regularly. She no longer wastes school time by doing ganyu as she is assured of money every month. [17-year-old male head household]

Before the transfer, we had no money for school fees, pens and exercise books so we would be absent from school. We also had no shoes and we could not go to school because we were ashamed of ourselves but now we have shoes and proudly go to school. [14-year-old female]

We have more chance because we have everything in life, our parents receive money from the cash transfer; we have food, school uniforms, exercise books, pens, and clothes. While our friends don't have that, sometimes the teacher sends them back home from school because they don't have school uniforms, pens, and exercise books. [15-year-old male]

Before the transfer we would be absent from school to watch for the growing maize from monkeys, but now parents hire people to do this while we go to school. [9-year-old male]

Community Key Informant Interviews

Similarly, key informants including school teachers, health workers, agricultural extension workers, traditional leaders and others reported that children were benefiting from cash transfers in multiple ways. Households were investing in food, clothing, school fees and other items and not requiring children to do day work outside the home. As a result, children and youth could attend school regularly, re-enroll if necessary, or continue on to secondary school. Key informants explained how these changes occurred:

Most children that were being sent to do ganyu in order to get food have stopped doing ganyu. They are now concentrating on school. There is great improvement indeed. Children and orphans are abused if a household does not have resources. With cash, a household is able to get their needs. I have interviewed some orphans on how they are staying ... and they all tell me that they are staying well... [Agricultural Extension Worker]

In the past these children were not coming to school due to lack of care at home. The children are now coming to school without many absences. Enrollment has also increased because of the transfers. In the past, there used to be a low number of children especially in the third term. Out of a number that was over 1,000 in the first term, the number was coming up to 600 plus by the third term. This year in the first term we had 1060 pupils and now the number is at 997. This is a great improvement on the number of children attending school. [School Teacher]

Before the cash transfer, many pupils dropped out of school due to lack of school uniforms; some were busy doing piece works with their parents; lack of school materials like notebooks, pencils; or lack of food. [School Teacher]

There is a very big improvement on cases of child labor: Children are no longer employed to herd cattle instead, they are back to school. They are no longer working in tobacco estates especially those from recipient households. [Agricultural Extension Worker]

Children who stopped schooling, are now back to school because they have enough food, better clothes, school uniform, and writing materials. [Recipients] have managed to send their children to school. [Those] who dropped out due to lack of clothes, school materials, uniforms and school fees especially those in secondary schools are back in school. [Community Development Assistant]

In most beneficiary households, there are orphans, elderly people and the sick. With this cash transfer, orphans who were not going to school are back to school because they have uniforms, good clothes and have enough food to eat before going to school. [Health Worker]

The good thing about the scheme is that: ...parents are now able to send their children to school instead of encouraging them to go for 'ganyu' (piece works), and are able to buy them school uniforms. [School Teacher]

Before this scheme the number of absenteeism was high so these pupils were lagging behind in lessons, and this time around, it is as if they are catching up, [School Teacher]

I have observed that most of these children are now performing much better than before. And they also do not miss school as much as before the transfer since now they no longer have to go and do ganyu for money. [School Teacher]

In the past children in these recipient households were being humiliated due to the fact that they were lacking uniforms and they were unable to attend school. Now they are able to come to school because they have uniforms. In the past their parents could only afford to give them food and not a school uniform. [School Teacher]

DISCUSSION

Overall, the cash transfer appears to lead to important impacts on education and work, with improvements in enrolment, increased investment in schooling, decreases in absences, and decreased work outside the home, albeit with differential impacts based on the age and gender of children or youth. Compared to South Africa, where girls experienced the greatest educational impacts, the gender patterns found in Malawi are less consistent. Overall, while girls had the largest decrease in days absent, intervention boys transitioning into secondary school had the greatest improvements in enrolment and investments in schooling. This phenomenon is similar to the situation in Ecuador and Cambodia, where transitional periods proved to be important, and cash helped facilitate students into secondary school. While the comparison households demonstrated the typical dropping out of school in the transition time between the 12 to 15 and 16 to 18 year age categories, this did not happen in intervention households. Key informants confirmed this finding qualitatively, by describing how intervention youth entered secondary school because regular cash transfers provided adequate household income to overcome the higher costs of secondary school and free students from working.

In contrast to Mexico and Honduras where domestic work decreased, the percentage of children in intervention households engaged in household chores increased in Malawi, which may be because chores and ganyu (day labor) are substitutes. Children that do not have to do outside day labor may be expected to perform more household chores. However, chores and childcare did not appear to

interfere with schooling, as was the case in Brazil, as rates of enrolment did not fluctuate based on whether children engaged in chores and childcare. Boys and girls in intervention households had similar differences in work so that they were both more likely to do household chores and less likely to do work outside the home. The increase in the percentage of children or youth doing chores is not surprising however, given that cash enabled families to acquire food that needed to be purchased and prepared, as well as materials to repair housing, and other inputs. Transfers enabled children to switch from work outside of the household (for cash) to non-cash household chores that did not interfere with schooling.

The decrease in child work or income generating activities in Malawi (10 to 11 percentage point difference for girls and boys respectively) was bigger than in the Latin American countries, where there was a 5 percentage point reduction in Nicaragua.

Extension workers, community members and local leaders confirmed these themes in qualitative interviews. Children reported that they are working less, more likely to be in school, missing fewer classes, and that they are more prepared to learn with full stomachs. In a separate analysis of these households, the positive and significant impact of cash on food security and child health was confirmed (Miller et al. 2009b; Miller et al. 2009c). These gains in food security and health might have also reduced the number of days that children were absent from school.

While there are no requirements upon receiving cash transfers in Malawi, respondents might have believed there were conditions given that the Community Social Protection Committee members and district officials regularly, but informally, reinforced the social norm that children and youth

should be in school. The comparison group may have also believed that enrolment was mandatory and strove to enroll children in order to ensure that they would eventually receive the transfer. It is not clear what changes will occur over time once recipients realize that enrolment and attendance is not required for inclusion in the scheme.

Similar to the situation in other countries, children and youth in female-headed-households had greater gains in enrolment than those in male-headed-households, suggesting that perhaps cash transfers should be targeted to female-headed-households for the greatest gains in education. Likewise, and not surprisingly, intervention children in households where the head had higher levels of education (at least some secondary schooling) experienced greater differences over time than children from households that had primary only or no education. Household heads with more education may value education more than their less educated counterparts; however they also had higher per capita expenditures so they may be more able to afford to send youth to school, while the poorest households may still not have the income needed to prioritize education.

The validation exercise confirmed that 96% of children and youth who were reportedly enrolled were actually attending school. The overall 5 percentage point difference in enrolment is on par with the enrolment impacts seen in conditional cash transfer programs throughout Latin America, raising enrolment rates among intervention children and youth in Malawi from 90% at baseline to 95% at endline. However, on average, the transfer is approximately 60% of per capita expenditures in Malawi versus about 7% to 27% in Latin American countries, which might give policymakers higher expectations for its impact, although the level of poverty in Malawi is more severe than in the aforementioned countries. Again, these estimates are not directly comparable because of

differences in methods of calculation. Still, the significant difference in the size of the cash transfer for children enrolled in school and not enrolled (MK40 per capita per month or MK480 per year $p=0.06$) suggests that income poverty might still be a factor keeping the out-of-school youth from returning to school (the average difference in educational expenditures between intervention and comparison children from baseline to endline was MK481 (US\$3.43) per year per child.

In this study, neither student performance, nor achievement was assessed quantitatively, given that primary schools rank children rather than assigning non-subjective test scores that can be examined at multiple time points. The high dropout rates throughout the year make a comparison of rankings less useful. Thus, the degree to which improved enrolment, increased expenditures, and reduced absences and child work impacts student achievement, and will lead to greater human development and capital among children in Malawi, remains unclear and under researched.

Furthermore, as previously mentioned there are no supply-side interventions to accompany the cash transfer that would bolster the educational infrastructure in Malawi, given the existing limited capacity and increased demand. The grave challenges within the educational system include the national pupil-to-qualified teacher ratio, which in 2007, was 1:88. The national pupil-to-classroom ratio was 1:140 and 1:130 in Mchinji (Government of Malawi, 2007). In addition, per day, nearly 20% of teachers are absent so that classes are ‘doubled up’ (Government of Malawi, 2007). Grade repetition is so common that, on average, students take approximately 2.4 years to complete one full grade (Government of Malawi 2008). Infrastructure is also problematic. Out of 1,148 primary school classrooms in Mchinji, 23% were ‘temporary’ constructed from makeshift materials (Figure 6).

[Figure 6 about here]

(Government of Malawi, 2007). Thus, many primary school children are learning beneath a tree, which is nearly impossible during the rainy season. While 190/198 schools have no electricity, many have inadequate or no sanitary facilities (Government of Malawi, 2007). Nationally, in 2007, only 74% of students passed the primary school certificate (Government of Malawi, 2007).

Consequently, the reasons that some youth are out of school, despite the cash transfer should be further explored prior to any policy changes. For example, are households where children are still not going to school making efficient choices because they believe that the quality of schooling is insufficient or because they know that youth lack the aptitude to perform well, and their time is better spent helping out at home or earning income? Beyond overcrowded classrooms, inadequate resources and facilities, poor student teacher ratios, schools can also be hostile environments where children and youth are abused and bullied (Burton 2005).

Nevertheless, despite these challenges to the school system, studies from all over the world find important benefits from more years of education. According to the 2004-05 Integrated Household Survey data, there is a standard Mincerian average rate of return to education of 13.6% per annum for each year of schooling (World Bank, Government of Malawi 2008). Fiszbein et al. (2009) describe the “Diploma Effect” whereby students may have improved potential even if they attend poor schools but acquire skills and traits such as discipline, motivation and responsibility that prepares them for the workplace. Additionally, the benefits of educating women include higher future earning, lower fertility, reduced infant mortality, higher immunization rates for children, greater crop yields, and lower rates of HIV (Herz and Sperling 2004).

The Malawi government's total recurrent budget for education in 2007 was US\$89 million with an additional US\$6.2 million for development projects (Government of Malawi 2007). Also in 2007, under separate initiatives, the governments of Canada, Germany, the UK and the US, the African Development Bank and the World Bank contributed funding (approximately US\$60 million) for building classrooms, teacher training, school resources, curriculum development and so forth (Government of Malawi 2007). The ongoing funding and partnerships and adequate implementation of these projects is critical to improving the educational sector and experience of students in Malawi. The evidence from the evaluation of the SCTS confirms that the cash transfer is achieving its goal of helping families overcome income poverty in order to improve the education of children and youth. Students are showing up to school—regularly—with uniforms, full bellies, and pens and notebooks in hand. However, to build the human capital that will effectively interrupt the intergenerational cycle of poverty, supply side improvements in the educational system are essential so that students are learning and acquiring the skills and knowledge necessary to pull their families out of poverty.

This evaluation captures impacts on cash recipients over one year. The evidence illustrates how families have prioritized education, but it is not clear whether these gains will hold, particularly in the face of the challenges within the educational system. This underscores the need for improvements in the education sector and longer-term follow up of cash recipients. Furthermore, given that cash to households effectively boosts investment in education, with variations based on age and gender, policymakers might consider whether it makes sense to focus on a particular age or gender groups in order to maximize gains. For example, additional policies (i.e. more money or conditions) might lead to better outcomes in certain groups. New studies show the links between

girls staying in school and reduced HIV and early pregnancies (De Walque 2004). Cash transfers may prove to be a tool useful for poverty reduction, human development, reproductive health, and HIV prevention.

References

- Attanasio, O., Fitzsimmons, E., and Gomez, A. (2005). “*The impact of a conditional education subsidy on school enrollment in Colombia.*” Unpublished manuscript. Institute for Fiscal Studies, London.
- Attanasio, O., Fitzsimmons, E., Gomez, A., Lopez, D., Meghir, C., and Mesnard, A. (2006). “*Child education and work choices in the presence of a conditional cash transfer programme in rural Colombia.*” Working paper W06/01. Institute for Fiscal Studies. London.
- Burton, P., (2005). “*Suffering at School: Results of the Malawi Gender-Based Violence in Schools Survey.*” Institute for Security Studies, Pretoria.
- Cardoso, E., and Souza, A.P. (2004). “*The impact of cash Transfers on child labor and school attendance in Brazil.*” Working paper 04-W07, Department of Economics, Vanderbilt University, Nashville, TN.
- De Walque, D. (2004). “*How Does Educational Attainment Affect the Risk of Being Infected by HIV/AIDS? Evidence from a General Population Cohort in Rural Uganda.*” World Bank Development Research Group Working Paper. The World Bank. Washington, D.C.
- Dufflo, E. (2003). “*Grandmothers and granddaughters: Old-age pensions and intrahousehold allocation in South Africa.*” World Bank Economic Review. 17(1):1-25.
- Edmonds, E.V. and Schady, N. (2008). “*Poverty alleviation and child labor.*” Policy Research Working Paper 4702. The World Bank. Washington, DC.
- Filmer, D. and Schady, N. (2009). “*Who benefits? Scholarships, School enrollment and work of recipients and their siblings.*” Unpublished manuscript. The World Bank. Washington, DC.
- Fiszbein, A., Schady, N., Ferreira, F., Grosh, M., Kelleher, N., Olinto, P., and Skoufias, E., (2009). Conditional Cash Transfers: Reducing present and future poverty. The World Bank. Washington. DC.
- Galasso, E. (2006). “*With their effort and one opportunity: Alleviating extreme poverty in Chile.*” Unpublished manuscript. The World Bank. Washington DC.
- Glewwe, P. and Olinto, P. (2004). “*Evaluating the impact of conditional cash transfers on schooling: An experimental analysis of Honduras.*” Unpublished manuscript. University of Minnesota, Minneapolis.
- Government of Malawi. (2007). *Education Statistics 2007 Malawi.* Department of Education Planning, Ministry of Education Science & Technology, Education Management Information System (EMIS). Lilongwe.

- Government of Malawi (2008). *National Education Sector Plan 2008-2017*. Ministry of Education, Science and Technology. Lilongwe.
- Government of Malawi. (2009). “Concept Note for GF Round 9: Proposal to support the consolidation and the scale up of the Malawi Social Cash Transfer Scheme.” Ministry of Economic Planning and Development. Lilongwe.
- Herz, B. and Sperling, G.B. (2004). *What Works in Girls’ Education: Evidence and policies from the developing world*. Council on Foreign Relations. New York.
- Khandker, S.R., Pitt, M.M., and Fuwa. N. (2003). “*Subsidy to Promote Girls’ Secondary Education: The Female Stipend Program in Bangladesh*.” Unpublished manuscript. The World Bank. Washington. DC.
- Lagarde, M., Haines, A., and Palmer, N. (2007). *Conditional cash transfer for improving uptake of health interventions in low-and middle-income countries: A systematic review*. JAMA:298(16):1900-1909.
- Maluccio, J.A. (2003). “*Education and Child labor: Experimental evidence from a Nicaraguan Conditional Cash Transfer Program*.” Prepared for Child Labor in Latin America. International Food Policy Research Institute.
- Maluccio, J.A. and Flores, R. (2005). *Impact Evaluation of a conditional cash transfer program: The Nicaraguan Red De Proteccion Social*. Research Report 141. International Food Policy Research Institute. Washington, DC.
- Miller, C., Tsoka, M, and Reichert, K. (2009a). “*Targeting Cash to Malawi’s Ultra Poor: A Mixed Methods Evaluation*.” Submitted Feb. 2009. In review.
- Miller, C., Tsoka, M., Reichert, K. (2009b). “*The impact of the Social Cash Transfer Scheme on food security in Malawi*.” Food Policy. Submitted Jan. 2009. In review.
- Miller, C., Tsoka, M., Reichert, K. (2009c). “*The Malawi Social Cash Transfer and the impact of \$14 per month on child health and growth*.” Submitted Jan. 2009. In review.
- Miller, C., Tsoka, M, and Reichert, K. (2008a). *Targeting Evaluation: External Evaluation of the Mchinji Social Cash Transfer Pilot*. Boston University School of Public Health. Available online at <http://childresearchpolicy.org>.
- Miller, C., Tsoka, M, and Reichert, K. (2008b). *Impact Evaluation: External Evaluation of the Mchinji Social Cash Transfer Pilot*. Boston University School of Public Health. Available online at <http://childresearchpolicy.org>.
- National Statistics Office. (2008). *Population and Housing Census: Preliminary results*. Government of Malawi. Available online at <http://www.nso.malawi.net>. Accessed December 18, 2008.

- National Statistical Office and ORC Macro. (2005). *Malawi: DHS, 2004 - Final Report*. Zomba, Malawi and Calverton, Maryland. Online at http://www.measuredhs.com/pubs/pub_details.cfm?ID=575&srchTp=advanced. Accessed December 22, 2008.
- Ravallion, M. (2003). "Assessing the poverty impact of an assigned program." In The Impact of Economic Policies on poverty and Income Distribution. Eds. Francois Bourguignon and Luiz A Pereira da Silva. World Bank and Oxford University Press, New York.
- Schubert B, Kambewa P. (2006). *Designing a Pilot Social Cash Transfer Scheme for Malawi. First Report*. United Nations Children's Fund, Lilongwe.
- Schubert, B. and Slater, R. (2006). *Social Cash Transfers in Low-Income African Countries: Conditional or Unconditional?* Development Policy Review: 24(5). 571-578.
- Skoufias, E. and Parker, S.W. (2001). "Conditional cash transfers and their impact on child work and schooling: Evidence from the Progressa Program in Mexico." *Economia* 2(1): 45-96.
- World Bank and Government of Malawi. (2008). *Malawi Poverty and Vulnerability Assessment*. Washington D.C.

TABLES

Table 1. Intervention and comparison households

	C	I
Total number of households in full study	392	374
Number of households with children aged 6 -18 years (included in this analysis)	239	275
Percentage of all households with children	61%	74%

C = Comparison, I = Intervention

Table 2. All children at Baseline (n=1,244)

Basic demographics at baseline	C n=522 %	I n=722 %
Gender (boy)	46	52
Age (in March 2007)		
6-8 years	16	20
9-11 years	30	27
12-15 years	40	40
16-18 years	14	14

C = Comparison, I = Intervention

Table 3. Characteristics of household with children included in the analysis

	C n=285	I n=328	
Household head			
Level of education of household head			
No schooling	57%	45%	**
Some primary schooling	39%	48%	
Some secondary schooling	4%	4%	
Age of household head			
19-44	25%	27%	**
45-64	25%	31%	
65+	50%	44%	
Female headed	69%	66%	
Household characteristics			
Percentage of households with no fit adult aged 19-64 years	41%	31%	*
Household size	5.1	5.9	*
Monthly total expenditures			
Baseline	MK606	MK771	*
Endline	MK904	MK6,180	***
Monthly per capita total expenditures			
Baseline	MK137	MK139	
Endline	MK208	MK1,263	***
Mean cash transfer			
Household		MK2,323	
Per capita		MK460	
Transfer as mean percentage of per capita expenditures		60%	

C = Comparison, I = Intervention

Table 4. Educational indicators for children aged 6-18 years

Age of child/youth	Round	C	I	Double Difference	
Percentage enrolled in school n=1215	<i>Baseline</i>	87	90		
	<i>Endline</i>	87	95	5 percentage points	*
Median MK per child (annualized) n=1215	<i>Baseline</i>	131	277		
	<i>Endline</i>	263	790	MK481	***
Mean number of days absent per month n=1122	<i>Baseline</i>	3.2	2.9	1.1 days per week	***
	<i>Endline</i>	2.4	1.1		

* p-value <0.10, ** p-value<0.05, *** p-value<0.01

Table 5. School enrolment by gender and age

Age of child / youth	Round	Boys			Girls		
		C	I	Double Difference (Percentage points enrolment)	C	I	Double Difference (Percentage points enrolment)
6-8	<i>Baseline</i>	73	83		84	92	
	<i>Endline</i>	79	94	0.05	95	98	-0.05
9-11	<i>Baseline</i>	91	91		91	91	
	<i>Endline</i>	94	98	0.04	94	98	0.04
12-15	<i>Baseline</i>	91	94		88	92	
	<i>Endline</i>	91	95	0	83	95	0.07
16-18	<i>Baseline</i>	89	83		71	88	
	<i>Endline</i>	68	87	0.23 **	63	88	0.08

* p-value <0.10, ** p-value<0.05, *** p-value<0.01

Table 6. Absenteeism: Number of days of school missed per month by gender and age

Age of child / youth	Round	Boys			Girls		
		C	I	Double Difference (Days absent / week)	C	I	Double Difference (Days absent / week)
6-8	<i>Baseline</i>	2.8	3.1		2.8	3.3	
	<i>Endline</i>	2.5	1.4	-1.4	2.7	1.0	-2.3 **
9-11	<i>Baseline</i>	3.1	2.4		2.6	3.1	
	<i>Endline</i>	1.8	1.3	0.2	1.9	1.0	-1.5 *
12-15	<i>Baseline</i>	2.9	3.0		4.0	2.9	
	<i>Endline</i>	2.9	1.2	-1.9 **	2.0	1.0	-2.0 *
16-18	<i>Baseline</i>	4.2	2.3		3.0	3.1	
	<i>Endline</i>	3.5	1.0	-1.0	2.6	.9	-0.4 *

*p-value<0.10, ** p-value<0.05, *** p-value<0.01

Table 7. Educational expenditures in Malawi Kwacha per child enrolled in school (annualized)

Age of child / youth	Round	Boys				Girls			
		C	I	Double Difference (MK per child)		C	I	Double Difference (MK per child)	
6-8	<i>Baseline</i>	9	88			53	48		
	<i>Endline</i>	217	424	127		113	455	346	***
9-11	<i>Baseline</i>	76	115			90	98		
	<i>Endline</i>	153	492	301	***	159	531	364	***
12-15	<i>Baseline</i>	138	119			169	174		
	<i>Endline</i>	214	775	580	***	235	841	601	***
16-18	<i>Baseline</i>	427	728			163	375		
	<i>Endline</i>	805	2226	1119		663	1324	449	

*p-value<0.10, ** p-value<0.05, *** p-value<0.01

Table 8. Child work / labor

Age of child / youth	Round	Boys				Girls			
		C	I	Double Difference (Percentage points work)		C	I	Double Difference (Percentage points work)	
Child care	<i>Baseline</i>	19	27			42	40		
	<i>Endline</i>	14	21	0.1		33	40	9	
Adult care	<i>Baseline</i>	19	20			30	24		
	<i>Endline</i>	20	18	-3.5		27	25	4	
Chores	<i>Baseline</i>	64	61			87	78		
	<i>Endline</i>	59	67	11	**	81	84	11	***
Family work	<i>Baseline</i>	26	28			30	27		
	<i>Endline</i>	32	44	9	*	33	33	3	
Income Generating Activities (IGAs)	<i>Baseline</i>	12	11			16	16		
	<i>Endline</i>	18	6	-11	***	15	6	-10	***

*p-value <0.10, ** p-value<0.05, *** p-value<0.01

Figure 1. Double difference estimates for intervention versus control children by age and gender for enrolment

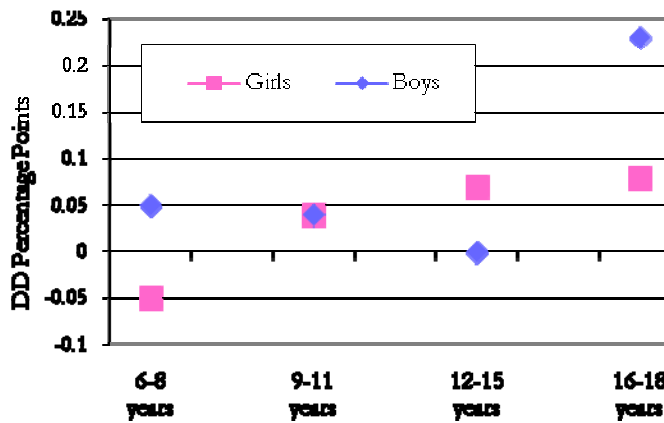


Figure 2. Double difference estimates for intervention versus control children by age and gender for number of days absent per month

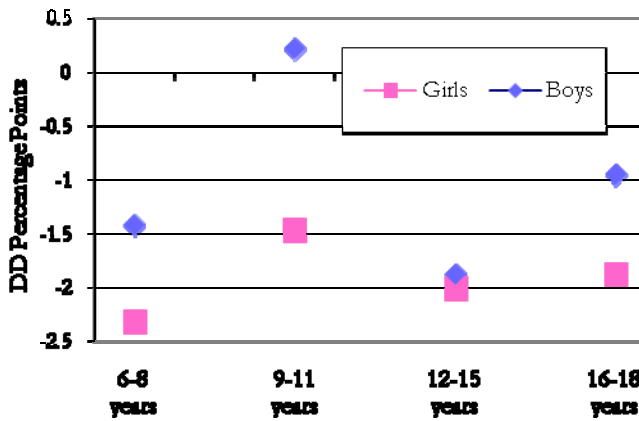


Figure 3. Double difference estimates for intervention versus control children by age and gender for educational expenditures per student

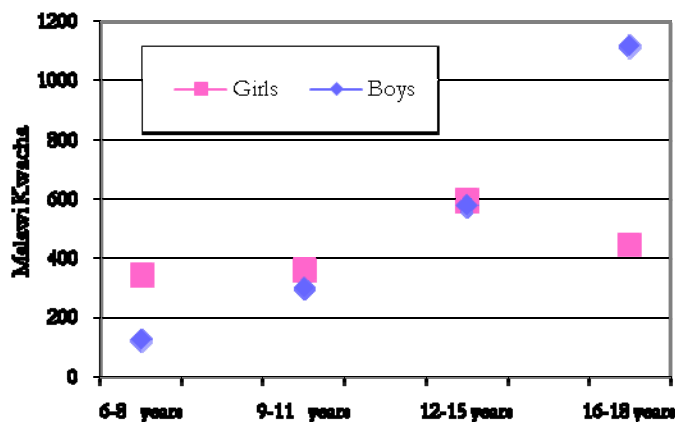


Figure 4. Enrolment over time for intervention versus control children by gender of the household head

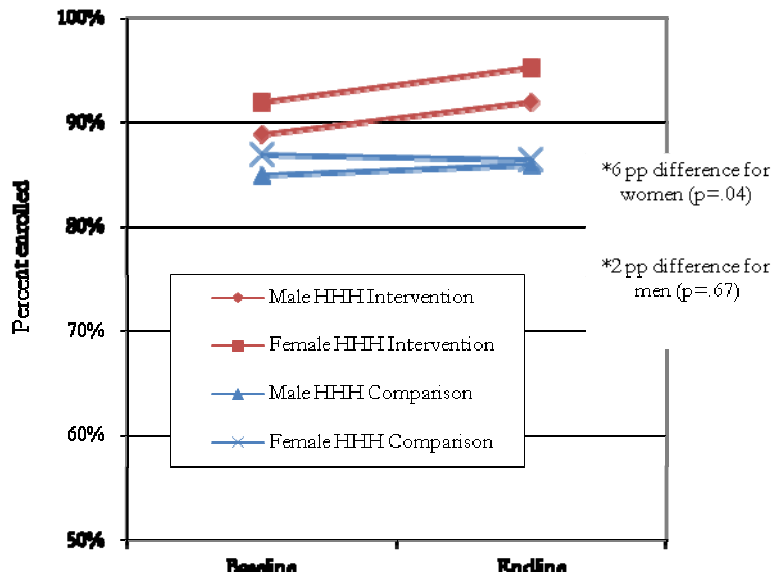


Figure 5. Enrolment for intervention versus control children by education level of the household head

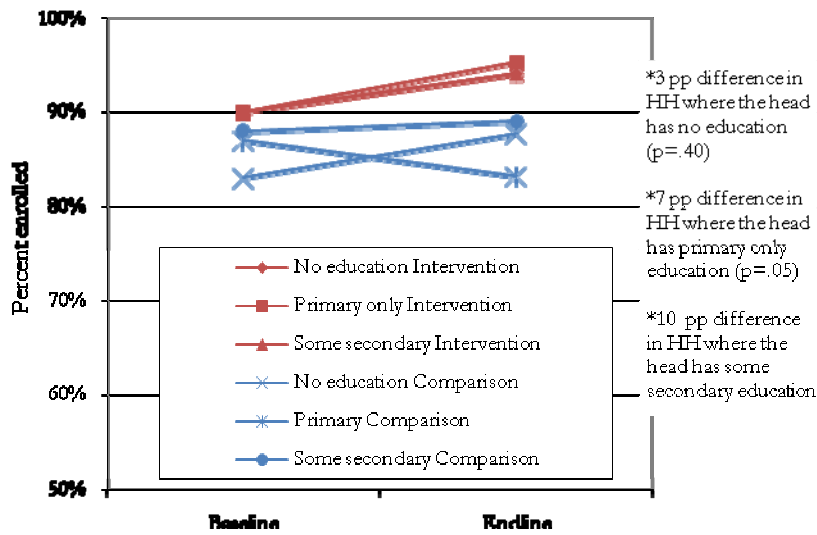


Figure 6. Primary school for 60 children in Mchinji District



Photo by C. Miller