Impact of a Kenyan National Poverty Program on Early Pregnancy

Authors

Sudhanshu Handa, Carolyn Huang, Carolyn Halpern, Audrey Pettifor, Harsha Thirumurthy

Research question / Topics to be studied

Social cash transfers (SCTs), an increasingly popular anti-poverty program in developing countries, have been found to achieve gains in schooling, health and nutrition of children, and improve the general welfare of recipient families (Schultz, 2004; Hodinott and Skoufias, 2004; de Janvry et al., 2006; Handa and Davis, 2006; Adato and Basset, 2009). Recently, a set of groundbreaking studies found SCTs to have strong impacts on delaying sexual debut of young women (Baird, et al., 2010; Baird et al., 2011). These findings have far-reaching implications for social and welfare policy, given HIV's intricate ties with poverty in sub-Saharan African countries. However, only a few studies have examined extensions of these ideas – whether SCTs could have impact upon early pregnancy and how migration might influence SCT's interventional effects upon young women. To this end, this study attempts to better understand the relationship between SCTs and their influence on fertility and early marriage among women aged 12-24, using a social experiment designed around the Government of Kenya's Cash Transfer for Orphans and Vulnerable Children (CT-OVC).

Theoretical focus

Early marriage among young women can have stunting effects on a woman's lifetime welfare by reducing her human capital development early in life. In poorer households, withdrawing a child from school is a financial precaution the family may draw upon during economic hardship. Likewise, marrying young daughters off may be a strategy invoked to reduce economic burden (Oleke et al., 2006; Palermo and Peterman, 2009).

SCTs are positioned to protect against such underinvestment of young women's human capital by offsetting the costs of investing in them. By providing predictable sums of money, SCTs can enable households to sustain short-term consumption shocks without having to make decisions that can have long term deleterious consequences for children and young women.

Description of the Program

The Government of Kenya's CT-OVC is an unconditional SCT and the country's flagship social protection program. The objective of the program is to provide support to families with orphans and vulnerable children in order to facilitate their development. It currently reaches 135,000 households nationwide and over 280,000 OVC. Families qualify for the program based on government-determined criteria, the presence of an OVC under the age of 18, and being in the poorest 20 percent of the income distribution. Targeting is done first by the community, and then

verified by the Ministry of Gender, Children and Social Development through a household survey of those chosen by the community.

Research Design

The impact evaluation of the Kenya CT-OVC is a cluster randomized longitudinal design with a baseline household survey conducted in 2007 and two follow-up surveys in 2009 and 2011. The design exploited delayed entry in the program to create a control group. Four Locations (fourth administrative unit in Kenya below province, district and division) in each of the seven expansion districts were selected for expansion; two Locations in each district were randomly chosen to serve as controls and the program was implemented in the other two Locations per district. The baseline survey contained 1,542 and 755 intervention and control households respectively (a ratio of 2:1). The 2011 follow-up contained 1,280 and 531 intervention and control households. A comparison of characteristics of household across the three waves indicates that attrition is random.

Data and Findings

Our study uses data collected from the 2011 wave. We restrict our sample to young women age 12-24 and excluded women who had been married or pregnant at baseline, and so who could not have been affected by the program.

Our primary outcome is whether or not the respondent had ever been pregnant after baseline. We run MLE probit models on repeated cross-sectional data. Our models include basic controls for all household head variables; area of residence (Nairobi or not); relationship of the child to the head of the household, and age of the respondent. We include a dummy for treatment status to test whether young women in households that received the program were less likely to have ever been pregnant. We begin with a basic model that controls for exogenous variables only. We then add (separately) controls for whether the girl had been married, a constructed educational threshold variable (1 if currently enrolled or had completed Standard 8) to capture education attainment given age, and finally, a control to examine whether there were "dosage" effect differences between women who had migrated out of the household during the study period and those who had not. Each of these three variables is a potential mediator in the relationship between treatment status and pregnancy.

We find that controlling for only the basic demographic variables leads the treatment group to a 5.2 percentage point reduction in likelihood of being pregnant. Including the additional control for being married diminished the protective effect of being in the treatment group, indicating that about .6 percentage points of the treatment effect is explained by early marriage. When we include the educational threshold variable, we see that education has a mediating effect on pregnancy – that is, the impact of the CT-OVC on delaying child birth occurs by keeping women in school longer. The fourth model tests whether there are any "dosage" effects if a woman migrated in and out of the household during the study period. Consistent with our hypothesis,

women who had not participated in the program for the entire time were associated with an 11.6 percentage point increase in the likelihood of being pregnant relative to women who had stayed in the household during the entire four year study period, and the direct effect of the intervention is reduced to 3 percentage points and is no longer statistically significant.

Our initial findings indicate that the CT-OVC has a statistically significant impact in delaying pregnancy among young women 12-24. Marriage is only a partial mediator for this effect. The more important causal pathway appears to be through schooling, and by keeping young women from moving out of the household.

Impact of CT-OVC on ever being pregnant

	(1)	(2)	(3)	(4)
T	-0.0520*	-0.0458*	-0.0337	-0.0299
	(-2.37)	(-1.96)	(-1.58)	(-1.42)
head female	0.0141	0.0176	0.0214	0.0179
	(0.71)	(0.84)	(1.10)	(0.93)
head age	0.000981*	0.000701	0.00129**	0.00114*
	(2.06)	(1.38)	(2.73)	(2.47)
head higrade	-0.00478*	-0.00148	0.000809	0.00168
	(-1.99)	(-0.60)	(0.35)	(0.73)
nairobi	-0.0252	-0.0340	-0.0345	-0.0328
	(-0.99)	(-1.32)	(-1.43)	(-1.36)
rel_child	-0.115***	-0.00494	-0.0990***	-0.0625**
	(-5.84)	(-0.19)	(-5.12)	(-3.07)
rel_gchild	-0.0990***	0.00176	-0.0758***	-0.0575*
	(-4.62)	(0.06)	(-3.52)	(-2.55)
age	0.0500***	0.0432***	0.0427***	0.0417***
	(16.19)	(13.55)	(14.32)	(14.02)
ever_wed		0.531***		
		(9.34)		
completed Standard 8			-0.296***	-0.281***
			(-7.81)	(-7.42)
migrated				0.116***
				(5.17)
N	1646	1646	1646	1646

Marginal effects; *t* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$