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THE IMPACT AND COST OF CHILD MARRIAGE PREVENTION IN RURAL ETHIOPIA

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Background

It is estimated that over 100 million girls will be married during their childhood—before the age of 18¹—in the next decade, and 14 million will be married by age 15.² Child marriage is frequently prevalent in rural locations of poor countries, characterized by low levels of development and limited school and work opportunities.³

The negative impact of child marriage spans health, development, and demographic consequences. Ninety percent of first births to girls under age 18 take place in the context of marriage,⁴ and not to unwed mothers as is often assumed. Childbearing typically follows these unions with early first births being the most risky. Pregnancy and delivery complications are the main reasons for death among girls aged 15–19, and girls who bear children before age 15 are five times more likely to die of pregnancy-related causes compared to older mothers.⁵ Some studies in sub-Saharan Africa suggest that girls who marry early have substantially increased risk of HIV infection—roughly 50 percent higher—compared to their unmarried sexually active peers,⁶ with the excess risk related to frequent intercourse, limited condom use, and husbands who are older and more likely to be HIV positive compared with boyfriends of unmarried girls.⁷

Girls married as children usually enter marriage with low levels of education or no education whatsoever, and limited knowledge and skills to negotiate marital roles.⁸ For example, in Ethiopia, 79 percent of girls who married before

the age of 15 had never been to school.⁹ They also tend to have larger age differences with their husbands than those married later, which compromises their power within marriage, including decisions related to family planning (FP), childbearing, and maternal, newborn, and child health (MNCH) services.¹⁰ Lastly, child marriage is associated with increased total fertility and contributes significantly to population momentum.^{11,12} This occurs because child marriage shortens the time span between generations and increases the number of years that females spend childbearing.

In most of the developing world, young people are increasingly marrying at later ages. Among young women in sub-Saharan Africa, educational expansion has a relatively

¹ United Nations Children's Fund (UNICEF). 2001. *Early Marriage: Child Spouses*, Florence, Italy, UNICEF.

² Bruce, J. "Child Marriage in the Context of the HIV Epidemic," Population Council: Transitions to Adulthood Brief, no. 11, Sept. 2005.

³ Lloyd, C, ed. *Growing Up Global: Changing Transitions to Adulthood in Developing Countries*, Wash. DC: Nat'l Academies Press, 2005.

⁴ Haberland N et. al. "Early Marriage and Adolescent Girls," Youthnet: Youthlens on RH and HIV/AIDS, Brief no. 15, August 2005.

⁵ Murphy E, Carr D, "Powerful Partners: Adolescent Girls' Education and Delayed Childbearing," PRB brief, Sept 2007.

⁶ Clark S, 2004. "Early marriage and HIV risks in sub-Saharan Africa," *Studies in Family Planning*, 35(3) 149-160. Glynn, JR, et al. 2001. *Why do young women have a much higher prevalence of HIV than young men?* *AIDS*, 2001; 15 (suppl 4): S51-S60.

⁷ Clark S, Bruce J, Dude A. 2006. "Protecting young women from HIV/AIDS: The case against child marriage," *Int'l Fam Plan Persp*, 32(2): 79-88.

⁸ UNICEF. 2011. *State of the World's Children 2011: Adolescence, An age of Opportunity*, New York: UNICEF, February.

⁹ Erulkar A. 2013 "Early marriage, marital relations and intimate partner violence in Ethiopia," *International Perspectives on Sexual and Reproductive Health*, 39(1): 6-13.

¹⁰ Mensch B, Bruce J, Greene M, *The Uncharted Passage: Girls' Adolescence in the Developing World*, NY: Population Council, 1998.

¹¹ Raj A, Saggurti N, Balaiah D, et. al. 2009. "Prevalence of child marriage and its effect on fertility and fertility control outcomes of young women in India: A cross sectional observational study," *The Lancet*, 373(9678): 1883-1889.

¹² Bruce J, Bongaarts J. 2009. "The new population challenge," in: Mazur L, ed., *A Pivotal Moment: Population, Justice, and the Environmental Challenge*, Washington, DC: Island Press.

strong link to delays in marriage age.¹³ Despite an overall trend to later age at marriage, certain social, political, economic, or environmental shocks can be associated with reversals of this trend. For example, rates of child marriage among Syrian refugees in Jordan were found to be increasing perhaps as a household strategy to ensure the safety of the girl or alleviate household stresses. From 2011 to 2013, registered marriages that involved an underage girl increased from 12 to 25 percent.¹⁴

Child marriage prevention programs

While one in three girls in developing country will be married before age 18, most child marriage prevention programs are small-scale and unevaluated. Lee-Rife and colleagues (2012) undertook a systematic review of 23 evaluated child marriage interventions in developing countries, among which five were in sub-Saharan Africa. Nonetheless, the review found that—while evidence is limited—the most effective approaches in delaying child marriage were those that empower girls, offer incentives such as conditional cash transfers, and engage communities.¹⁵ A more recent review by Hindin and Fatusi (2014) explored both published and grey literature and found most of the successful programs included a conditional cash transfer, supporting the findings of the earlier review.¹⁶

For example, the *Berhane Hewan* program in Ethiopia offered a conditional asset transfer (goat) to families who kept their girls unmarried during the two-year pilot. In addition, girls were given school supplies and communities engaged in community conversations on the harmful effects of child marriage. After two years of intervention, girls aged 10 to 14 in the *Berhane Hewan* site were one-tenth as likely to be married and three times more likely to be in school, compared to girls residing in the control area.¹⁷

Most evaluation plans lack rigorous costing data. This is a particular weakness of cash transfer schemes as programmatic cost would affect the ability to upscale successful schemes for large populations. For example, despite the successful impact of the *Berhane Hewan* program in Ethiopia, there were lingering doubts about the scalability of providing a \$25 goat to families (amounting to \$1 per month for the two-year pilot), an amount which could not be justified in the absence of rigorous costing data.

Interventions such as the *Zomba* scheme in Malawi offered households a conditional cash transfer of between \$4 and \$10 per month and offered girls between \$1 and \$5 per month.¹⁸ While *Zomba* was found to reduce school dropout

¹³ Mensch B, Singh S, Casterline J. 2005. Trends in Timing of the Age at Marriage among Men and Women in the Developing World, New York: Population Council Working Paper no. 202.

¹⁴ UNICEF. 2014. A Study on Early Marriage in Jordan in 2014, Amman: UNICEF country office.

¹⁵ Lee-Rife A, Malhotra A, Warner A, Glinski AM. 2012. What works to prevent child marriage: A review of the evidence, *Studies in Family Planning*. Dec;43(4): 287-303.

¹⁶ Hindin M. and Fatusi O. 2014. Exploration of Young People's Sexual and Reproductive Health Assessment Practices, Johns Hopkins University, September.

¹⁷ Erulkar A, Muthengi E. 2009. "Evaluation of *Berhane Hewan*: A program to delay marriage in rural Ethiopia," *International Perspectives on Sexual and Reproductive Health*, 35(1): 6-14.

¹⁸ Baird S, Gardein R, McIntosh C, et. al. 2012. Effect of a Cash Transfer Programme for Schooling on Prevalence of HIV and Herpes Simplex Type 2 in Malawi: A cluster Randomised Trial, *The Lancet*, published online February 15, 2012.

by roughly 40 percent, it is unclear if such schemes can be feasibly scaled-up to large populations in poor countries, given the monthly expense and the magnitude of payments.

As a result of the limited information on cost and scalability of conditional cash transfer programs, the Population Council and partners designed research to determine if simple, cost-contained interventions could be effective at delaying marriage in child marriage hotspots in sub-Saharan Africa. The research includes rigorous costing data, providing evidence for subsequent expansion of successful approaches. This brief outlines the results of the research in the Amhara region of Ethiopia.

Study Location

The Amhara region in Ethiopia is the second largest region in the country, with an estimated population of 21 million. The region is 88 percent rural and largely relies on agriculture, producing cereals such as teff, barley, wheat, and maize. The region is dominated by ethnic Amhara and is overwhelmingly Orthodox Christian. Overpopulation leading to shortage of land, land degradation, and drought are recurrent problems in the region. Based on tabulations of 2011 Ethiopia DHS, 60 percent of Amhara girls were married by age 18 and 34 percent were married by age 15. Among girls aged 20 to 24, 64 percent have never been to school and only 7 percent have attained the secondary level. In the Amhara region, we partnered with the Amhara Regional Bureau of Women, Children and Youth Affairs, which is the regional bureau of the Ethiopian Ministry bearing the same name.

Methodology

The study compared and tested simple interventions to delay the age at marriage, in order to identify the most cost effective, scalable minimum package needed to prevent child marriage. We implemented separate child marriage prevention strategies in different woredas of Awi zone in Amhara, Ethiopia.

Interventions tested

We tested four different interventions to delay the age at marriage including community dialogue, promotion of education, a conditional asset transfer, and a comprehensive model including all the approaches. In one woreda of the Amhara region, we implemented community dialogue on the harmful effects of child marriage in an attempt to address social norms surrounding the practice. A facilitator's guide was developed to standardize messaging on the importance of girls' education and the negative impacts of child marriage. Facilitators were recruited and trained on the facilitation techniques as well as the guide. Discussion groups were formed composed of adult men and women as well as adolescent girls and community leaders. Discussion groups met on a weekly basis for 16 weeks, led by the facilitator. Once groups completed the 16 weeks of discussions, new groups were formed with different community members.

In another woreda, schooling was promoted to unmarried girls aged 12 to 17. Girls who registered for **schooling promotion** took school materials with the agreement from girls and their families that they would remain unmarried and in-school for the two-year duration of the pilot. Girls received 12 notebooks—one for each subject—and two pens, twice per year at the beginning of each school term.

In Ethiopia, the **conditional asset transfer** (CAT) offered to girls was two high-yield chickens provided each year on the condition that the girls remained unmarried and in school during the previous year. Chickens were chosen for two reasons. During the previous project in Ethiopia, Berhane Hewan, a goat was provided but seen by partners in the project to be too costly to be scalable. In addition, partners

preferred to provide an asset that was traditionally reared and controlled by girls and that was easier to procure and transport at the time of award. In addition to the award of chickens, girls received training from the local agricultural extension workers on how to rear chickens.

One woreda included all the project components, or a **comprehensive model**: community dialogue, schooling promotion, and a conditional asset transfer. In addition, a **control woreda** was included in the study where no intervention took place. Interventions were implemented for 28 months.

Research Design

This was a quasi-experimental research design with interventions executed in different geographical areas for just over two years. The research was designed to determine if interventions impacted upon the prevalence of child marriage and school attendance at the level of the population. Separate, cross-sectional, population-based baseline and endline surveys were undertaken before the interventions were established and after 28 months of intervention. At each round of survey, 2,500 girls aged 12 to 17 were sampled, 500 per study woreda, or cell, in order to measure the prevalence of child marriage at the level of the population, regardless of participation in the interventions. In each study cell, 17 enumeration areas (EAs) underwent a household listing in order to establish a sampling frame; 30 girls and 6 parents were selected for interview in each EA. Female interviewers conducted the interviews. Informed consent was obtained from the parent or guardian of the sampled adolescent and informed assent was obtained from the adolescent girl. Where a girl was married, it was considered that she was an emancipated minor and provided her own consent. Midway through the intervention, a small-scale qualitative study was undertaken to understand perceptions of the intervention.

At the beginning of the study, a spreadsheet was developed to enable systematic compilation of all project costs. Cost categories included staff time, office expenditures, training and meeting costs, travel expenditures, and purchase of

commodities. Cost data was updated in the spreadsheet on a monthly basis by Population Council staff. On a yearly basis, costing data was validated by a costing expert.

Our key outcomes were percent of girls aged 12 to 17 years who had ever been married and who were attending formal schooling or who had attended in the previous year. Because the earlier Berhane Hewan study suggested that child marriage interventions may operate differently among younger versus older adolescents, we conducted subgroup analysis separately on respondents 12 to 14 and 15 to 17. Descriptive statistics compared levels of marriage and school attendance by study cell and time of survey. In addition, Poisson regression was used to model risk ratios, separately, of being married and attending school at baseline and endline, controlling for age, ethnicity, and socioeconomic status.

Unfortunately, the control site for Ethiopia had to be eliminated. The control site proved to be significantly different from the intervention sites because it was a resettlement area for people from other parts of the country. As a result, the population in this area was frequently unfamiliar to each other. Marriage arrangements in Ethiopia are rooted in family ties and the desire to strengthen bonds between families who are essentially known to each other and/or neighbors. As such, the marriage market in this area was compromised and rates of marriage were extremely low and uncharacteristic of the region. As a result, we model the RR of being married at endline in each of the sites, with reference to the baseline.

Results

At baseline 2,444 Ethiopian girls aged 12 to 17 were interviewed, amounting to a 98 percent response rate of the desired sample size. At endline, 2,436 girls were interviewed (97 percent of the desired sample size).

Between baseline and endline surveys, child marriage declined significantly among both older and younger adolescents. **Among girls aged 12 to 14, child marriage declined from 5 to 2 percent; among those 15 to 17, 25 percent had ever been married at baseline compared to 15 percent at endline.**

Table 1 shows the adjusted risk ratios at endline for having ever been married in the four study arms with reference to the baseline, after adjusting for age, ethnicity, and socioeconomic status. Among girls aged 12 to 14, those residing in the community dialogue site at endline had less than half the risk of being married compared to their counterparts at baseline (RR = 0.42). Girls 12 to 14 in the education promotion arm had 90 percent less risk of being married at endline compared to their counterparts at baseline (RR = 0.09). Among girls aged 15 to 17, those residing in the conditional asset transfer arm and the comprehensive model had roughly half the risk of being married at endline compared to their counterparts at baseline (RR = 0.57 for conditional asset transfer; RR = 0.38 for comprehensive model).

Community members in Ethiopia expressed appreciation for a number of approaches:

I got the chickens through my daughter. She is 15 and unmarried and she is going to school. The two chickens have helped to support her schooling. I am separated from their father and there is no one to support me—I am poor. The sale of the eggs has helped her to buy exercise books and pens. It has also helped to buy hair lotion and shoes, so it is very good.

– Mother of girl in conditional asset transfer cell

TABLE 1: Adjusted risk ratios (and 95% confidence intervals) for Ethiopian girls having ever been married at endline, with reference to the baseline, by study cell and age group

	Age 12 to 14	Age 15 to 17
Community sensitization	0.42 (0.25, 0.70)**	0.81 (0.60, 1.09)
Education promotion	0.09 (0.01, 0.71)*	0.78 (0.46, 1.31)
Conditional asset transfer	0.28 (0.07, 1.09)	0.57 (0.35, 0.90)*
Comprehensive model	0.36 (0.07, 1.68)	0.38 (0.23, 0.61)***

Note: Weighted data ¹ Adjusted for age, ethnicity and socioeconomic status

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

In community conversations with my family and friends, I discuss the harm of underage marriage. Girls have to attend school just the same as the boys, and parents who are involved in underage marriage will be excluded from community support such as borrowing and lending of goods. The sanctions are very tough.

– Girl participating in comprehensive model

No impact of the interventions on schooling in Ethiopia was detected (results not shown). This could be due to the increasing rates of enrollment that are due to a large and successful government re-enrollment campaign that took place during the course of the intervention.

Program costs

The cost of approaches per girl served ranged from \$20 to \$32 per year. Cost estimates included commodities provided, staff time, and monitoring and supervision costs. Both community dialogue and schooling promotion cost an estimated \$20 per girl per year, while the conditional asset transfer cost \$32 per girl per year.

Discussion

Most intervention research simply measures the impact of approaches on target groups, without regard to the feasibility of scaling-up effective interventions. This study contributes to the very limited literature examining the scalability of design, impact and cost of interventions that can be implemented to address a widespread problem, at scale in poor settings. Our findings reflect that it is possible to implement simple, cost-contained interventions to prevent child marriage and promote schooling.

Unfortunately, it was not possible to use the control site in the analysis, owing to inherent differences that could not be controlled for between this site and the other intervention sites. While the findings of this study are therefore less robust, our results are nonetheless consistent with some of the findings from other settings. Similar to the Tanzania study, we found that economic models such as the conditional asset transfer seems to be effective in delaying marriages among older adolescents, 15 to 17. This suggests that, as girls age and pressure mounts to marry them off, more intensive economic interventions are needed to persuade parents and communities to delay marriages. For younger girls, discussion of norms and support to stay in school appear to be sufficient to delay marriages. In addition, while levels of premarital sex in rural Ethiopia are low, knowledge of contraceptives and family planning services, and awareness of fertility should be promoted among adolescents. A focus on schooling, family planning, and fertility awareness can reduce vulnerabilities to child marriage.

Following this study, Population Council and partners are exploring upscaling approaches in the Beneshangul-Gumuz region of the country, while continuing to monitor programmatic impact and cost. We will assess locations where child marriage is the most prevalent, in order to maximize the cost effectiveness of interventions. In addition, we will explore the feasibility of providing assets other than goats and chickens, in an attempt to lower programmatic cost and reduce logistical burdens inherent in providing livestock.

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