

Empowering young women

What do we know?

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Executive Summary

Adolescence is a time when many decisions are made that will impact a girl for the rest of her life: for example, whether to stay in school, marry, or start smoking. It is a time of transitions and potential, and often of sexual début. This review (which was originally prepared for the Nike Foundation) asks what we know about what strategies are most effective in empowering adolescent girls, improving their welfare, and how improving their lives can improve the lives of those around them. It reviews the evidence from randomized impact evaluations in the areas of education, health, assets, participation, and safety.

The objectives of the review are to help inform the strategy of those who are investing in adolescent girls by summarizing the lessons learned from previous research, but also to identify major gaps in our knowledge where more research could be particularly helpful.

What do we know and what do we not know?

Education and vocational training

We know a lot about the returns to primary education (and how to promote increased primary education). We know much less about the returns to secondary education and vocational training. Some evaluations are underway in both these areas. Evaluations of vocational education found in Latin America have shown that vocational training linked with apprenticeships improves earnings and employment. But would this approach be effective in the very different labor market contexts of Africa and Asia?

There is substantial evidence that investments in education respond to changes in the costs and returns of education. For example, reducing the cost of education is highly effective in increasing participation of adolescent girls. Similarly, when the returns to investing in girls' education are apparent, such as when there are greater economic opportunities for educated girls, then households invest more in the education of girls.

Girls should not be seen as passive recipients of help. They are not always fully informed of the benefits of staying in school, but when they are, they respond to this information. Similarly, when they are given information about returns in various occupations, they change the types of vocational training they invest in, even moving into training programs for traditionally male occupations.

There is a lot of new evidence about how to improve the quality of education. Common lessons include the importance of accountable teachers and teaching that is appropriate to the level of the child. There is little evidence that providing more inputs to schools without reform increases learning.

Again, it is important not to see adolescent girls as passive recipients of programs. A number of studies show how important student motivation is in impacting learning outcomes. Some programs that sought to increase student motivation were highly successful.

Health

Adolescence is a time when many critical decisions are made that impact long-term health outcomes. Habits from smoking to nutritional patterns to sexual activity are acquired at this time. Behavioral economics is increasingly providing evidence of how humans are not adept at making these types of long-term health decisions, and psychological research suggests that adolescents face particular challenges when making these tradeoffs.

As with education, there is evidence that adolescent girls respond to specific information on health risks and adapt their behavior accordingly, and that people in general are highly sensitive to costs. While there is increasing evidence that people are not very good at investing in preventive health, there is little to no specific evidence on the best way to encourage good habit formation or preventive health strategies in adolescent girls, despite the evidence from the US that adolescents may face particular challenges in making these decisions and may respond to different messaging.

Assets

Evidence suggests that communities treat girls differently when they have higher economic (earning) potential. This suggests that developing economic assets may be a particularly effective way of achieving empowerment. Adolescence is a key time for the development of these assets, especially human capital. Unfortunately, there is little rigorous evidence demonstrating effective ways to increase the earning power and economic assets of adolescent girls (outside education). While some financial and enterprise training has been shown to help improve profitability of microenterprises, other evidence on the impact of microfinance in general and providing capital to women is more discouraging.

Participation and attitudinal change

There is some ongoing work on the effectiveness of direct strategies to promote participation of youth and women in local decision making. Evidence from studies on women suggests that it is possible to help encourage social participation and social networks amongst women (in one case through regular microfinance group meetings). There is very encouraging evidence that participation and attitudes can change. Aspirations of adolescent girls towards work and participation changed in communities that were mandated to elect a woman leader in India. Men also changed their views of women leaders, and more women leaders were voted in even after the quota system no longer operated. When adolescent girls in a community started getting high paying white-collar jobs in India, the community treated girls differently—investing more in their education and health. On the other hand, role models in education were no more effective than the information on returns to staying in school in changing attitudes to education. Community-driven development programs were less successful in changing attitudes toward women or girls.

Safety

Helping girls stay in school is an effective strategy for reducing teenage childbearing and child labor. The evidence on effective ways to reduce gender-based violence is very sparse. The latter is a particularly difficult area of study because programs designed to address gender-based violence may initially raise awareness of the issue and so increase reported violence, even if they are effective in addressing the problem.

What is missing?

While there is much in this review that can be used to inform investment decisions by those seeking to support adolescent girls, there is remarkably little work, completed or ongoing, that addresses the issue of adolescent girls as a unique group with specific needs and behaviors. Given the psychological evidence that adolescents tend to make decisions in a somewhat different way than other age groups, this is a major gap in the literature. Randomized evaluations of adolescent programs that are modeled to study adolescent decision-making explicitly can help generate general insights on the psychology of decision making of young behavior that is critical to formulate more effective youth strategies.

Introduction

Adolescence is a critical time of life when important decisions are made that could dramatically impact the future trajectory of lives: for example, about marriage or whether to stay in school. It is also a period of habit formation, and these acquired habits have potential longer-term consequences for the individual—for example, through smoking, drug use, eating habits that may increase the risk of diabetes and obesity, or sexual activity patterns.

There is significant psychological literature to suggest that adolescents make these decisions in a somewhat different context and with different priorities than other age groups. Adolescents, for example, tend to be more influenced by potential social reactions and their peers than other age groups. They often face stricter budget constraints and have a higher discount rate than adults. Because they are transitioning from one set of institutions (school and parents) to another (work or a new family) there is a risk that they fall through the cracks.

The Nike Foundation is among the few foundations, agencies, and groups that focus their efforts exclusively on adolescents, and particularly adolescent girls, in the developing world.

This review updates and expands the 2006 literature review “What do we know about the return of investing in adolescent girls? An action-oriented literature review for the Nike Foundation.” As with the 2006 review, the research presented here centers on randomized evaluations, which are the most robust method of indentifying effective development programs. We focus on research completed and published since 2006, with an emphasis on the themes and approaches that have since emerged as central to the Nike Foundation—education, health, assets, participation, and safety.

1.1 Objectives

There are three objectives: a) update and expand the 2006 review, b) indentify gaps in our knowledge in this important area, and c) help the Nike Foundation decide which gaps they would like to try to fill with additional research.

1. Update and expand the knowledge base on empowerment strategies

The presented research centers on rigorous quantitative evaluations, and in particular on randomized field experiments, partly because this is the area where J-PAL has most to contribute and because this type of rigorous evaluation provides the most reliable evidence on what works and what does not work in empowering adolescent girls.

Wherever we refer back to the findings from the 2006 review, in order to avoid too much repetition, we provide more detail on research completed and published since 2006. We also give particular attention to the themes and approaches that have since emerged as central to the Nike Foundation’s investment strategy.

The focus of the review is adolescent girls aged 10-24. However, there are still relatively few studies that specifically target this age group. We therefore sometimes draw on studies that target women or children to the extent that the objectives of the programs studied are similar to those of many adolescent programs and to the extent that there are many adolescents covered in these studies. For example, programs targeting women entrepreneurs may have lessons for programs that target entrepreneurs in the 16-24 age group and many of the women in these programs fall into Nike’s age range.

2. Identify gaps in the knowledge base about what works

The review highlights the Nike approaches and themes on which there is little or no rigorous impact evaluation as well as the major empowerment research questions, particularly touching on commonly used approaches and on pressing policy issues.

3. *Identify promising and implementable research ideas to fill the gaps*

This identification of gaps can then feed into the prioritization of future research in the area of adolescents. For this reason, in addition to highlighting the current gaps in knowledge, we also mention ongoing research that will help fill the identified gaps.

1.2 How the review is organized

The 2006 review focused on the four themes: education, health, agency and voice, and economic opportunity/labor market outcomes. But, as mentioned above, Nike has since changed how it categorizes its investments, and for this review we organize by the new themes:¹

Education—programs to improve quantity and quality of education both within and outside formal education institutions, as well as programs that have a training component

Health—programs to improve health, both physical and mental

Assets—programs to develop assets, including financial, land, and microenterprises

Participation—programs to facilitate integration and participation in communal life

Safety—programs to safeguard personal security, including negotiation skills and knowledge of individual rights.

Within and across each theme, Nike is targeting programs using one or more of the following approaches: media campaigns, education/training, incentives/grants, mentoring, girl-friendly services, recruiting/grouping/networking, enabling environment, and organizational development. Therefore, within each theme we cross reference these approaches. In the conclusion we draw some common lessons from across different sectors about what type of approaches work and what this means for how we should approach policy and programming for adolescent girls.

In each theme section, we will first review what we knew in 2006 as well as what the major questions were, then we will update and expand with research and questions that have since emerged. At the end of the review we present an assessment of the major remaining questions and how they could be answered.

¹ Of the old themes: *Agency and voice* is now distributed among participation, safety, and education, depending on the approach. *Economic opportunity/labor market outcomes*, is now distributed between education and assets, also depending on the approach. *Safety*, is a new category subsuming research that fell under “agency and voice;” for example, programs with a life skills component.

2. Education

This theme includes programs that aim to improve quantity and quality of education, both within and outside formal education institutions as well as training programs.

Education remains one of the most studied aspects of adolescent empowerment. However, the vast majority of work has been done on primary education. The observational literature is substantive and it suggests that education has a strong impact on a range of outcomes including health, fertility and economic opportunity. Many of the associations established by this literature have now been supported by rigorous evaluations. There is also substantial evidence on how to increase schooling of both boys and girls and how to improve the quality of education. But here, the results of rigorous evaluations do not always support the previous conventional wisdom or the observational and non-experimental literature.

There is a growing, though still small, body of rigorous work on post-primary school training, such as secondary education and vocational training, which are potentially important areas for adolescence. Some vocational training approaches have been found to work in Latin America but have not yet been tested elsewhere. In Asia there is some work on out-of-school livelihoods training for women that may be relevant and some ongoing evaluations on training for adolescent girls in Asia and Africa.

We proceed as follows: Section 2.1, Baseline, covers the evidence and gaps in 2006; Section 2.2 covers new evidence on Formal Primary and Secondary Education; Section 2.3, Vocation Training. We cover livelihood training, financial literacy and entrepreneurship training under Section 5, Assets. As there was a lot of evidence on education in the 2006 review, here we focus on evidence that has come out or been refined since 2006.

2.1 Baseline—evidence and gaps in 2006

What we knew in 2006

Education has a positive causal effect on wages, sexual behavior, fertility, and infant mortality—we knew this largely on the strength of the very substantive observational literature supported by a few randomized evaluations. Since 2006 the evidence that keeping girls in school reduces adolescent child bearing has strengthened.

The most effective ways were to increase participation by girls were to improve health and to reduce the costs of schooling—again, we knew this on the basis of a substantive observational literature and the few randomized evaluation available at the time. Another important indicator was the large influx of first-time learners into schools when many countries introduced free primary education.

What the gaps, and strategies to fill them, were in 2006

The following gaps were identified:

What is the return to investing in secondary education for girls?

This remains an important question. Then as now, the question was: given the higher costs, are the returns to secondary school high enough to justify prioritizing investment in formal secondary education relative to other aspects of empowerment?

At the time of the 2006 review, there was an ongoing evaluation of a secondary school scholarship program in Kenya. The program provided scholarships to qualified boys and girls who were too poor to afford secondary school. The evaluation had to be moved to Ghana, because—fortunately—after the 2007 elections, secondary school became free in Kenya. Since every willing qualified

student could now attend, there was no longer a way to create a comparison group for the evaluation. The evaluation in Ghana is ongoing, and we report on some preliminary findings below.

How important are non-economic factors (like chore burden and menstruation management) in preventing girl's access to education?

In 2006 we found a lot of evidence that reducing the cost of going to school was a very effective way of increasing girl's attendance at school. We had less evidence on barriers that are often mentioned such as adequate sanitation for menstruating girls and the need for girls to do chores at home. Since then more evidence has emerged on the responsiveness of school going to economic incentives—costs go down, attendance goes up, returns to education go up, so does attendance. There has also been some evidence emerging on non-economic factors.

How do we improve learning?

With more and more children going to school, how do we make sure that their investment pays off (i.e. how do we increase the quality of education)? There were a number of ongoing evaluations in 2006, many of which are now complete. We now have a much better idea of what works and what does not in improving learning. Two important lessons for adolescent programming are that student motivation is key to improved outcomes, and that interventions can be effective at improving motivation.

What is the role of vocational education and how can it best be delivered?

This was identified as a major gap in our knowledge in 2006. While some evidence has emerged since then, there is still little evidence on this important question.

2.2 Formal education—primary and secondary

What are the returns to investing in secondary education?

Enrollment rates in secondary school are low. To what extent is access the problem? Are people choosing not to invest in secondary education because the returns are high? We still do not know as much as we would like about the returns to secondary education, and what people know about them. An ongoing research project in Ghana is looking at these questions.

- **Scholarships help girls to attend secondary school, but the scholarship take-up rate among girls is lower than among boys**

Fees remain a major barrier to secondary school for many poor girls, and senior secondary school is the area where the gender gap is the largest. A program in Ghana is providing scholarships for secondary school to 682 academically qualified boys and girls who would otherwise have great difficulty attending secondary school because the cost is too high.

The ongoing randomized evaluation is estimating the impact of scholarships on secondary school enrollment rates as well as the medium and long-term effects of secondary education on earnings, health, and other life outcomes. The sample includes 2,064 students between 13 and 25 years old, with a mean of 17 years. They are split evenly between boys and girls. Of these 682, half boys and half girls, were randomly selected to receive a 4-year scholarship (the “treatment”). All the boys sampled had passed the senior secondary school entry exam in 2008, but since only few girls pass this exam, finding enough girls from the 2008 cohort proved difficult. For this reason, close to a third of girls in the sample were already one year out of junior high school at the time they were sampled for the study (in other words, they had passed the entry exam in 2007 but had not enrolled by 2008). While the school year in Ghana runs from September to June, scholarship winners were notified in January 2009. They thus enrolled in the second term of the 2008/2009 academic year.

This is common practice in Ghana, and the data so far suggests that they caught up quickly to the other students.

The results as of March 2010 are as follows:

Without the scholarship boys are more likely to enroll than girls—among those who did not win a scholarship, 17percent of the boys end up enrolled compared to 12percent of the girls.

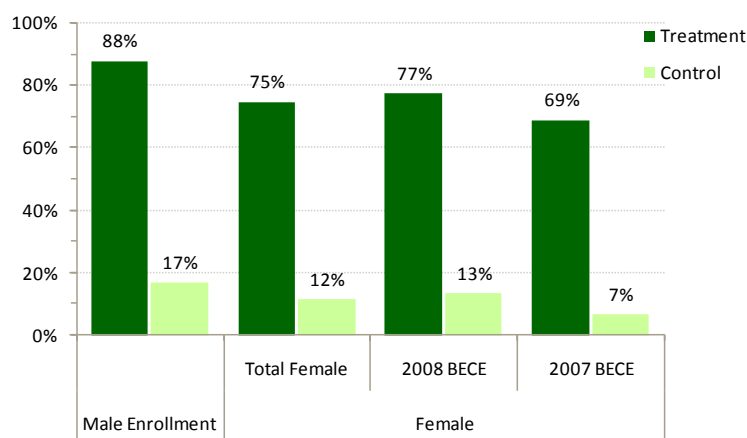
Among those winning a scholarship, take up is lower for girls—only 75percent of girls took up the scholarship compared to 88percent of boys.

Secondary enrollment rate, with and without the scholarship, are lower among girls who had taken the exit exam in 2007, i.e., those who had been out of school longer—while 77percent of the girls who took the exit exam in 2008 take up the scholarship, only 69percent of those who exited in 2007 take up the scholarship; 13percent of those who exited in 2008 and did not win the scholarship end up enrolling anyway, compared to 7percent of those who exited in 2007. These results suggest that, the more time passes between primary and secondary school, the less “enrollable” girls become.

Pregnancy rates were lower among scholarship winners—0.9percent of the girls reached in the comparison groups report being pregnant compared to zero percent of the scholarship winners.

The following graph and table summarize:

Male and female enrollment in January 2009 (term 2) and April 2009 (term 3), by group



Scholarships in Ghana—a comparison of the recipients and non-recipients as of September 2009, disaggregated by gender (Note: scholarships were first given out in January 2009)

	Female			Male		
	Treatment	Comparison	T-stat of difference	Treatment	Comparison	T-stat of difference
Enrolled in senior secondary school or vocational school	71.2% N=271	17.1% N=561	-18.13***	84.6% N=267	22.0% N=509	-20.87***
In apprenticeship	5.9%	10.4%	2.14**	0.7%	4.6%	2.85***

	N=271	N=556		N=267	N=505	
Working for pay	2.6% N=271	7.7% N=556	2.93**	1.1% N=267	15.7% N=508	6.41***
Is married	1.1% N=271	2.5% N=560	1.33	0.0% N=267	0.2% N=509	0.72
Has children	10.7% N=271	11.1% N=560	0.16	0.0% N=267	0.8% N=509	1.45
Is Pregnant	0.0% N=269	0.9% N=554	1.56			

*=Signification at 10% level; **= Significant at 5% level; ***=significant at 1% level

- Duflo, Esther, Pascaline Dupas, and Michael Kremer. 2010. Preliminary Report to the Ghana Ministry of Education on Innovations for Poverty Action's Secondary School Education Project.

How do we increase quantity of education?

Much of the popular discussion around improving access of girls to formal education has focused on cultural attitudes toward girls: on the fact that girls are needed at home to do chores, the lack of appropriate sanitation facilities that may prevent girls going to school when they are menstruating, and safety. However, in 2006 we discussed the large amount of literature showing that some of the most effective ways of increasing access to formal education for girls were relatively straightforward--in particular, reducing the cost of education and improving child health. Studies completed since 2006 have confirmed these findings and also looked specifically at some of the possible pathways discussed above, including chores and menstruation management. While there is still little experimental work in this area, what there is contradicts some conventional wisdom. The evidence in general is consistent with girls and their parents making economic calculations about the costs and benefits of sending their girls to school.

Here is a summary of what we now know:

- Informing girls and their parents of the economic returns to education can increase attendance and reduce dropout rates.
- Conditional cash transfers can boost education. They can reduce child labor and increase post-secondary matriculation. Results hold in Africa as well as Latin America, where these programs were first tested.
- Greater economic opportunity for girls increases investment in education of girls
- Access to modern menstrual management does not seem to improve attendance of girls
- Reducing the chore burden in urban Morocco increased leisure time but had no effect on time spent on productive activities, including schoolwork,
- There are peer effects in participation by out-of-school children,

Below we provide fuller summaries of the programs and evaluations that generated this evidence.

- **Information on the returns to schooling increases attendance and test scores**

Parents and students can only respond to the economic incentives for education if they know about the existence and size of the incentives. Two studies suggest that parents and students do not always know the full economic benefits of additional investment in formal education, and that when they do they respond strongly. Providing information on the economic benefits of staying in school is one of the cheapest ways to improve access to education and these studies suggest that it can be very effective.

Information on the earnings of adolescents who finish primary school boosted attendance of boys and girls in Madagascar—teachers provided students (aged 9-15) and parents with information on average wages for those who did and did not finish primary school. In some schools role models from the local area who had finished school came to talk about their experience. A randomized evaluation found that providing this information increased attendance by 3.5 percentage points. But having role models provide the information does not help.

- Nguyen, Trang. 2008. "Information, Role Models, and Perceived Returns to Education: Experimental Evidence from Madagascar." Unpublished Manuscript, J-PAL at MIT.

Information on returns to education improves participation, for boys in Dominican Republic—the intervention provided male students with information on returns of education in their community and in the whole country. The information was read out to the students. The information included both the mean differences and the percentage differences of incomes of workers with different levels of education (primary, secondary, and university). The evaluation found that most boys thought that the return to education was low, even though actual returns are high. Information aligned perceptions of returns with actual returns. The least poor students were less likely to drop out, with no effect on schooling outcomes for the poorest students.

- Jensen, Robert. 2010. "The (Perceived) Returns to Education and the Demand for Schooling." *Quarterly Journal of Economics*, 125(2).

- **Reducing the chore burden had no effect on education**

Women and adolescent girls spend a considerable amount of time doing household chores. There is a concern that this may interfere with the ability of adolescent girls to attend school and to do homework.

A randomized study in urban Morocco looked at the impact of chore burden on education. A utility company provided in-house water connections to individual families on credit. The credit was to be repaid in regular installments added to the water bill. The evaluation found that access to piped water in the home increased the quantity of water used. There was no effect on water-borne illnesses, probably because the household already had access to clean water of the same quality from the public tap. The households report having more time for daily activities (shopping, housework, watching TV), but report spending more time only on TV-watching; and they report having more time for socializing (visiting or receiving visitors, family). There was no effect on productive activity, neither on the labor market nor on school. But there were fewer conflicts in-house and with neighbors, and the households reported increased satisfaction and perceptions of quality of life and happiness.

The results suggest that increased convenience may increase mental well-being, but that reduced chore burden does not always translate into greater productivity. This study did not provide any evidence that providing a connection in the home would reduce the mobility of women and their social integration. This was in urban Tangiers, Morocco; effects may be different in a more conservative environment.

- Devoto, Florencia, Esther Duflo, Pascaline Dupas, William Pariente, and Vincent Pons. 2009. Happiness on Tap: The Demand for and Impact of Piped Water in Urban Morocco. Unpublished Manuscript
- **Access to modern menstruation management technology had no effect on attendance**

It has been postulated that difficulties in managing menstruation may reduce participation of girls in school. We find only one randomized evaluation that examines this hypothesis. The program provided menstrual cups to in-school girls (and their mothers/guardians) in Nepal. The evaluation examined the following questions: Does access to menstrual management products improve attendance? Does access to menstrual management products improve learning? Does it affect how girls spend their time during their periods?

The evaluation finds that the program had no effect on attendance and no effect on test scores. There is some qualitative evidence that cups increased convenience of blood management and increased mobility (walking and cycling). There is no evidence that menstrual cups affect daily activity, gynecological health, or self-esteem.

The main effect seems to have been substitution away from menstrual cloths to cups as the primary means for managing menstrual blood. Estimates for the number of school days missed during girls' periods are 0.64 days per year based on official attendance data and 1.3 days per year based on girls' diaries. The gain from menstrual cups is estimated at 0.5 school days per year. It is not surprising, then, that there was no effect on learning. It did reduce time spent on doing laundry (washing menstrual cloths) by 22 minutes per menstrual cycle.

The qualitative evidence on convenience is intriguing insofar as it suggests that the menstrual cups do increase well-being on the margin. Other studies have found that convenience goods increase happiness—as discussed in the Morocco example above.

Another intriguing finding is that girls report that the reasons why they are less likely to come to school on period days is not the inability to manage menstrual blood but rather the physical effects of menstruation (cramps, fatigue). This qualitative finding is similar to that found in the baseline for the Bangladesh study that found girls did not avoid going to school because of sanitation, but they did miss school due to cramps. This suggests that helping girls manage the pain associated with menstruation might be more effective than addressing sanitation issues. This would require further study to confirm.

- Oster, Emily, and Rebecca Thornton. 2009. "Menstruation and Education in Nepal." Unpublished Manuscript, Harvard: Working Paper No w14853, NBER; forthcoming in American Economic Journal: Applied Economics.
- **Greater economic opportunity for girls boosts investment in both the nutrition and education of girls**

In line with the view that adolescents and their parents are making an economic calculation when they decide whether to invest in girls' education, there is important emerging evidence that greater economic opportunity for adolescent girls leads to greater human capital investment in younger girls. When parents see concrete evidence of returns to investing in girls, parents make that investment.

A program that boosted the potential earnings capacity of adolescent girls by bringing recruiters from telephone answering services to rural communities around Delhi in India found that families throughout the community responded by investing more in younger girls, including sending them to school more and by investing more in their nutrition and health.

The evaluation finds that recruitment and placement services increased employment by 4 percentage points among younger women, with no effect on older women and men. In treatment villages, girls were 5 percentage points more likely to be in school, weighed 0.97kg more, and were 1.24 cm taller, reflecting greater nutrition and medical care. There was no effect on boys, and the

investment in boys did not suffer in comparison; that is, parents did not seem to shift investment away from boys to girls. There is also evidence of an impact on gender-related norms and practices (this is discussed further under participation/attitudes).

- Jensen, Robert. 2010. Returns to Human Capital and Gender Bias: An Experimental Test for India. Unpublished manuscript, UCLA.
- **Conditional cash transfers can increase education. They can also increase enrollment and reduce child labor, increase post-secondary matriculation, and boost education in Africa**

Conditional cash transfers (CCTs) provide cash grants to families if they send their children to school or get them immunized. CCTs can change the economic benefits of sending children to school very dramatically. In 2006 we discussed the large evidence showing that providing CCTs could increase participation in education for girls and boys. Since then, the research has begun to move in two directions. First, would CCTs work in poorer countries? Would they work as well, for example, in Africa as they do in Latin America? In short, do CCTs generalize? Second, what components of a CCT make it effective? Is it the conditionality or is it the increase in income? Is it the targeting to women? An adjunct to this second question is, If more than one component is effective, what is the relative effectiveness of the components? A number of randomized experiments examining these questions have been completed and others are underway.

Even very small cash transfers boost education for girls in Africa—an intervention in rural Malawi provided cash transfers, monthly transfers of varying size made to the girl and to the household. For some girls these transfers were conditional on school attendance, for others they weren't. The size of the transfer to each girl randomly varied between \$1 and \$5; transfers to households randomly varied between \$4 and \$10; the minimum transfer was \$5 per month, the maximum was \$15, and the average was \$10. The program also paid school fees in full directly to the secondary school.

An ongoing randomized evaluation finds that the intervention increased re-enrollment rates and reduced dropout rates. There is no evidence that increasing the total transfer has strong additional impact on attendance over the minimum transfer of \$5 and no evidence of effect of conditionality on schooling and literacy. Higher transfers given to girl had greater effect on attendance and progress than transfer given to parent. There is no evidence of spillovers at end of the first year.

These results imply that strong positive impacts of CCTs established in Latin America may apply to Africa—assuming that the service is available, and the delivery institutions are in place and are strong. Of particular interest is the strong effect on re-enrollment, which suggests that there is scope for using relatively small incentives to reintegrate out-of-school young women and so improve their education outcomes.

- Baird, Sarah, Craig McIntosh, and Berk Ozler. 2009. Designing Cost-Effective Cash Transfer Programs to Boost Schooling among Young Women in Sub-Saharan Africa. Unpublished Manuscript: Policy Research Working Paper No 5090, The World Bank.

CCTs increase school enrollment and have a negative effect on child work—a randomized evaluation in Ecuador showed that CCTs had large, positive effects on school enrollment, and large, negative effects on child work. The effects are larger than for PROGRESSA. They come from a smaller transfer than that made in PROGRESSA and also in a poorer country than Mexico, a country that has lower enrollment rates. An interesting aspect of the program is that the enrollment requirement was never explicitly enforced or monitored in Ecuador. The larger impact may come from the lower baseline enrollment. There is no difference by gender, which may be due to the fact that, according to the authors, there is no gender disparity in educational attainment in Ecuador—enrollment rates are marginally higher for girls than for boys. Mean years of schooling of the adult population ages 15 and older is 6.5 years.

- Norbert Schady and Maria Araujo. 2006. Cash transfers, conditions, school enrollment, and child work: Evidence from a randomized experiment in Ecuador. World Bank Policy Research Working Paper 3930, The World Bank.

Conditioning on re-enrollment and on graduation and matriculating in tertiary education works, but the timing of the transfer payment does not seem to matter—an experiment in Colombia tried to measure the relative effectiveness of the components of a CCT for education. The evaluation compared three CCTs: (1) a standard CCT based on attendance; (2) an attendance CCT with payment delayed to the time of re-enrollment; (3) a CCT conditioned on graduation and enrollment in tertiary education rather than on attendance.

The evaluation found that the incentives increase attendance, pass rates, enrollment, graduation rates and matriculation at tertiary schools. Timing of payment has no effects on attendance compared to basic treatment. Incentives for graduation and matriculation are very effective, increasing enrollment and secondary and tertiary schools. There are strong peer effects on attendance with a size similar to the direct effect.

But the results on the within-family dynamics suggest that we need to study the effects of CCTs on family members who are not subject to the conditions, such as non-participating siblings. Children that had been registered for the CCT but were not selected for the program end up attending school less and working more in the labor market if one of their siblings is in the program. These differences may reflect that families have reallocated resources between registered children (and away from girls in particular) due to the treatment. This suggests that program-eligible siblings may end up siphoning family resources away from ineligible siblings, which could increase inequality. This may be important for program with age cut-offs, particularly when they are first introduced.

There also seems to be some gender variation in the size of the effect. Though the differences are not statistically significant, boys seem to show greater changes in attendance and work patterns than girls; the boys experience the bulk of the reduction in work hours and girls the increase in school enrollment. This is consistent with the fact that boys tended to work more at baseline. These results, particularly those for girls, suggest that the way families allocate educational opportunities in the presence of CCTs requires more research.

- Barrera-Osorio, F., M. Bertrand, L. Linden, and F. Perez-Calle. 2008b. "Conditional cash transfers in education: Design features, peer and sibling effects: Evidence from a randomized experiment in Colombia." NBER Working Paper 13890

- **Networks can affect the participation of out-of-school children**

What is the effect of peer networking on enrollment and attendance of children in a community-based education program? The program encouraged some children and looked at their participation in their network. Having a treated friend will increase participation by about 20percent of main effect, but there is no evidence that additional treated friends affect participation. The effect of the friend comes from bilateral ties, where both the child and the friend indicate that they spend time together.

The program provides community-based classes for out-of-school children. It is open to all out-of-school children, but provides special encouragement for a randomly selected subset of children, including discussions with parents, visiting children to bring them to class, and making active efforts to retain them if they stop attending. Peer effects could come from (1) complementarities between friends in completing school work (like a study group); (2) when attendees or their families provide information to one another on the value of attendance; (2) when children attend because they want to be with their friends who are also going (like a play group)

Treatment increases participation of treated children (the efforts to reach to individual students were effective). Child-level randomization results in variation in the density of the treated within

the child networks, allowing measurement of effects on attendance within the network. Treating children leads to higher participation levels. There is no evidence that treating additional children impacts attendance. Bilateral ties—in which two children report being each other’s friend—are more important than unilateral ties. Having a treated sibling has a similar impact as having a treated friend. A friend’s attendance has impact on a child’s own attendance.

- Berry, James and Leigh Linden. 2009. Bridge Classes and Peer Networks among Out-of-school Children in India. Unpublished Manuscript.

What is the best way to improve learning?

Most of the findings on how to improve learning are from primary schools. However, we include the main findings here because the general findings are very consistent across projects and thus may translate into older age groups. In addition, in developing countries, poorer children tend to start school late, so many of those in primary school are adolescents.

Here is a summary of the common lessons that have emerged from many rigorous studies:

- Additional inputs (teachers, textbooks) unaccompanied by other reforms are not sufficient to improve learning.
- Improving accountability of teachers is critical to improving learning in formal schools. The right incentives can improve accountability but the design of these incentives has to be done carefully or they will not work.
- Providing education that is aimed at the right level for the child is critical for learning. This can be achieved through a variety of approaches—from remedial education programs to tracking to technology.
- Student motivation is important for learning and can be increased through incentives.

Below we provide fuller summaries of the programs and evaluations that generated this evidence.

- **Additional inputs do not improve learning without reform**

A number of randomized evaluations examined the effects of inputs (textbooks, teachers, flipcharts, etc.) and found them to have little, if any, impact on learning (test scores). The findings suggest that inputs on their own may not improve learning, and that it may be necessary to change other aspects of learning, such as how the classroom is organized, or the pedagogy and incentives of teachers and students.

More textbooks had no effect on test scores—a program in Kenya that lowered the ratio of children to textbooks from four to two was found to have no effect on the test scores of the average student. Textbooks increased the scores of children with high pretest scores as well as the probability that those who made it to the final year of school (a highly selective group) were more likely to transition to secondary school. But the average student did not see an improvement in test scores. The authors suggest that the reason is because most students could not read the textbooks, which were in English—a third language for most of the students. An attempt to provide inputs from which everyone could benefit (for example, flip charts that provided information graphically and more simply) did not improve test scores either.

- Glewwe, Paul, Michael Kremer, and Sylvie Moulin. 2009. "Many Children Left Behind? Textbooks and Test Scores in Kenya." *American Economic Journal: Applied Economics*, 1(1): 112–35.

Extra teachers alone had no effect on test scores—a program in India designed to ensure that informal schools were open regularly and to encourage more girls to attend provided a second teacher--wherever possible, a woman--to these schools. While attendance of girls did increase, test scores did not. One reason was that the teachers started taking turns showing up to work and teacher absenteeism rose.

- Banerjee, Abhijit, S. Jacob, and M. Kremer, with J. Lanjouw and P. Lanjouw, "Moving to Universal Education! Costs and Tradeoffs," MIT mimeo, 2005.

Smaller class sizes in India did not improve test scores—a program in India provided remedial education to some children in urban Indian schools. Under the program children falling behind were pulled out of their classes to get special help. Those not receiving special help experienced smaller class sizes for a large part of the day. While those getting remedial help benefited from the program (see below) those who simply benefited from smaller class sizes did not see improved test scores.

- Banerjee, Abhijit, Shawn Cole, Esther Duflo, and Leigh Linden. 2007. "Remedying Education: Evidence from Two Randomized Experiments in India," Quarterly Journal of Economics, 122 (3): 1235-64.

Extra teachers alone did not have an effect on test scores—a program in Kenya provided funds to schools to hire extra teachers to relieve overcrowding in the lower grades. The extra teachers were fully qualified, but young and inexperienced (specifically, they were recent teacher's college graduates) and unlike the regular teachers, the extra teachers were hired on one-year renewable contracts. In some schools, students were assigned to classes based on their initial test scores. In other schools, the students were randomly assigned to regular teachers or extra teachers. Thus, those assigned to the regular teachers had the same experience as those in the control group, except that they had smaller class sizes. Even though class size fell from an average of 82 to 44, this group with smaller class sizes did not do better than the control group.

- Duflo, Esther, Pascaline Dupas, and Michael Kremer. 2009. "Peer Effects, Teacher Incentives, and the Impact of Tracking: Evidence from a Randomized Evaluation in Kenya." Unpublished Manuscript, J-PAL at MIT.

- **Improving the accountability of teachers improves learning**

Absenteeism of teachers is high across the developing world. For example, , on an average day in Uganda, 27 percent of teachers are not in school. One reason may be that teachers tend to get paid whether they come to work or not, and there is little real oversight from their supervisors. Making teachers truly accountable and improving incentives reduces absenteeism and increases test scores--but incentives have to be carefully designed (see "Showing up is the First Step" J-PAL 2009).

Teachers who can be hired and fired by local communities increased test scores—a program in Kenya hired extra teachers to relieve overcrowding. The extra teachers were fully qualified but young and inexperienced, being recent teacher's college graduates. Unlike the regular teachers, the extra teachers were hired on one-year renewable contracts. In some schools, students were randomly assigned regular teachers or contract teachers. In addition, in some schools the parents' committee was trained to monitor and manage the contract teachers. Children assigned to the less experienced contract teacher did better than those assigned to the regular teacher. A major reason was that the contract teacher turned up 74 percent of the time, compared to just 45 percent of the time for regular teachers. Children with contract teachers in schools where the parents' committee had been trained did particularly well. Elsewhere the regular teacher tried to hand their class over to the contract teacher, but where the parents' committee had more oversight, the contract teacher had their backing to prevent this abuse.

- Duflo, Esther, Pascaline Dupas, and Michael Kremer. 2009. "Peer Effects, Teacher Incentives, and the Impact of Tracking: Evidence from a Randomized Evaluation in Kenya." Unpublished Manuscript, J-PAL at MIT.

This result is similar to that found in India, where remedial education teachers on short-term contracts had succeeded in increasing test scores, while reduced class sizes for regular teachers did not lead to increased test scores. In that case, however, the effects of the short-term contract cannot be disentangled from the effects of the remedial curriculum itself and the effects of peers of comparable achievement.

- Banerjee, Abhijit, Shawn Cole, Esther Duflo, and Leigh Linden. 2007. "Remedying Education: Evidence from Two Randomized Experiments in India," *Quarterly Journal of Economics*, 122 (3): 1235-64.

Teachers facing incentives (in-kind prizes based on student performance) increased test scores but only in the short-run—a program in Kenya provided primary school teachers with cash prizes based on the average performance of children in grades 4 to 8. (The exam is administered annually by the government.) Test scores increased in program schools. But pedagogy did not change, teacher attendance did not increase, homework assignments did not increase, teachers spent more time on test preparation, and the test scores increased the most on exams that were linked to incentives and did not persist after the program—all of which suggests that teachers were teaching to the test. So, while incentives do work, we have to be careful with how they are structured or else we run the danger of changing the proximal outcomes (here, test scores) without changing the outcomes that we ultimately care about (learning.)

- Glewwe, Paul, Nauman Ilias, and Michael Kremer. 2008. Teachers Incentives. Unpublished Manuscript, J-PAL at MIT.

A similar program in India also found that test scores in math improved by 0.28 standard deviations and 0.16 standard deviations in language when teachers were rewarded for student attendance. As in Kenya, the teachers did not show up more often, but they did put in more effort, including increased test preparation. In this study, the author is more positive about the results, suggesting that improved test scores--however they are achieved--have a benefit. This is certainly borne out in the Israel study discussed below. Nevertheless, these various studies suggest that linking pay to attendance might be more cost-effective than linking it to test scores, particularly if long-term learning (rather than just increased test scores) is the main goal.

- Muralidharan, Karthik and Venkatesh Sundararaman. 2009. Teacher Performance Pay: Experimental Evidence from India. NBER Working Paper no 15323.

- **Adapting learning levels to the right level for the child improves learning**

Many observational studies have made the point that the curricula in poor countries are often not well adapted to the needs of poor students (for example, see *The Public Report on Basic Education in India* published in 1999). This problem is exacerbated by children missing school due to sickness or labor needs at home

Tracking students into classes based on their initial level of learning increased test scores in Kenya—the extra teacher program in Kenya discussed above hired extra teachers on renewable contracts to relieve overcrowding. This allowed the schools to split their first grade class into two sections. In some of the schools, students were assigned to the class based on pretest scores, with the top and bottom halves of the distribution assigned to different sections. Both those students in the more and less advanced tracks benefited from the system, with those assigned to the bottom section gaining most in the basic competencies. Estimates suggest that the effects are particularly large for girls in math. These findings suggest that when the students in a class have comparable preparation levels, the teachers can tailor the curriculum to their students.

- Duflo, Esther, Pascaline Dupas, and Michael Kremer. 2010. "Pupil Teacher Ratios, Teacher Management, and Education Quality." Unpublished Manuscript, J-PAL at MIT.

Remedial instruction focusing on basic math and reading sharply increased test scores—Pratham, an Indian NGO, hired local young women with some secondary education, trained them for two weeks, and deployed them to local schools as teacher's aides specializing in remedial instruction. The remedial curriculum targeted students in grades three and four who did not have first-grade math and reading competencies. These students were pulled out of the regular classroom and worked with the teacher's aide for half of the four-hour school day.

- Banerjee, Abhijit, Shawn Cole, Esther Duflo, and Leigh Linden. 2007. "Remedying Education: Evidence from Two Randomized Experiments in India." *Quarterly Journal of Economics*, 122 (3): 1235-64.

There was a large effect on test scores. A similar study done in South Africa and funded by USAID found similar, highly positive results.

- USAID Southern Africa. Integrated Education Program: Impact Study of SMRS Using Early Grade Reading Assessment in Three Provinces in South Africa. July 2009.

Rapid, remedial reading instruction increased test scores—in rural areas, Pratham trained local volunteers (usually educated youth from the village) for a week in its reading pedagogy and encouraged them to run after-school reading programs. The program increased literacy among third and fourth graders by 7.9 percent. Those who could only recognize letters at baseline and who attended the read class were 26 percent more likely to be able to read stories at the endline.

- Banerjee, Abhijit V., Rukmini Banerji, Esther Duflo, Rachel Glennerster, and Stuti Khemani. 2010. "Pitfalls of Participatory Programs: Evidence from a Randomized Evaluation in Education in India." *American Economic Journal: Economic Policy*, 2(1): 1-30.

Technology can also allow teaching to be adjusted to the right level for a student—in India, Pratham provided software to schools that had computers but no software, and trained teachers how to use it. The software was designed to improve math learning and adapted the difficulty of questions to how well the student performed. Students' test scores increased in math by 0.47 standard deviations—a massive effect.

- Banerjee, Abhijit, Shawn Cole, Esther Duflo, and Leigh Linden. 2007. "Remedying Education: Evidence from Two Randomized Experiments in India." *Quarterly Journal of Economics*, 122 (3): 1235-64.

- **Student motivation and effort is important for increased learning**

When thinking about education policy and programs, the motivation and choices made by the child or adolescent are often ignored. Learning levels are low so we put in more stuff—more textbooks, more teachers. Teachers are not motivated or are not performing well, so we change their incentives. We assume that all children want to learn sufficiently to work hard despite the difficult conditions, and we don't need to think about their motivation very much. But there is increasing evidence that child and adolescent motivation and effort matters a lot. A number of programs successfully increased test scores by focusing on incentivizing students in a wide range of ways.

Direct payment to students for performance increases matriculation rates, especially for girls—in Israel, to enroll in post-secondary schooling, a student must receive a matriculation certificate (similar to high school graduation). Cash incentives were used to increase certification rates among low achievers. The experiment used school-based incentives, giving awards to all who passed in the treatment schools. Direct payments were made to students for completion and for doing well in certain subjects on the high school exit exam. A study found that the program increased certification among girls, but had no effect on boys. It affected girls who had a high ex-ante chance of certification: the group of girls for whom the certificate was within reach and therefore were more likely to see a payoff from increased studying. Increase in girls' matriculation

rates translated into higher chance of college attendance. Even though much of the increase in certification came through improved test-taking strategies (rather than increased underlying learning), these girls were more likely to enroll in higher education five years later. There are long-run economic benefits to receiving incentives to work harder. Economically, cash incentives had an internal rate of return of 7.3 percent. Female matriculation increased partly because girls devoted more time to studying for the exam.

- Angrist, Joshua, and Victor Lavy. 2008. The effect of high stakes high school achievement awards: Evidence from a Group Randomized Trial. *AER* (forthcoming.)

The prospect of winning a scholarship motivated students and improved test scores in Kenya—a program provided scholarships to sixth grade girls who performed in the top 15 percent on tests administered by the government. Winners received a grant of US\$6.40 to cover school fees paid to her school, a grant of US\$12.80 for school supplies to her family, and public recognition. The program led to more effort by students and teachers, and test scores rose by 0.19 standard deviations (0.27 in the district where the program was administered best)—a very large increase. Interestingly, the increased effort was not just concentrated amongst highly performing girls most likely to win the scholarship—boy and girls who were unlikely to win (as well as teachers), worked hard and performed better.

- Kremer, Michael, Edward Miguel, and Rebecca Thornton. 2009. Incentives to Learn. *Review of Economics and Statistics* 91 (3): 437-456
- **Specific information on which individuals can act improves education, but more general information to communities designed to encourage collective action is less effective**

Information on the returns to staying in school improves attendance and test scores—an intervention in Madagascar provided families and students with information on how much adolescents would earn if they stayed in school. In some schools this basic information was accompanied by a local role model; that is, someone from the area who had stayed in school and who visited the schools to share their story (15 of the 72 role models were female). The adolescents were 9-15 year old boys and girls. A randomized evaluation found that providing basic information increased attendance and test scores. Test scores rose by 0.2 standard deviations on average and 0.37 standard deviations for those whose initial perceived returns to schooling were below the statistics provided. There was no benefit to having role models come in and provide the information.

- Nguyen, Trang. 2008. "Information, Role Models, and Perceived Returns to Education: Experimental Evidence from Madagascar." Unpublished Manuscript, J-PAL at MIT.

Providing information to communities on the quality of education and the channels open to them to press for change did not improve learning—an intervention in India facilitated sharing of information on school quality with the community using report cards on reading ability of children (shared with the teachers, local representatives, and parents in village-wide meetings.) The program also provided information about government-mandated village education committees, which have the responsibility for overseeing the schools and assistant teachers. A randomized evaluation found no effect on community participation, teacher effort, or learning. Village education committees were not active either in the treatment or control areas.

- Banerjee, Abhijit V., Rukmini Banerji, Esther Duflo, Rachel Glennerster, and Stuti Khemani. 2010. "Pitfalls of Participatory Programs: Evidence from a Randomized Evaluation in Education in India." *American Economic Journal: Economic Policy*, 2(1): 1-30.

2.3 What are the gaps in Education?

We now know a lot more about what works in education, but there are some gaps in this knowledge.

What are the returns to secondary education? Important as it is, this question remains unanswered. There is now an evaluation going on in Ghana, but there needs to be more evaluation in other contexts.

What drives the impact of education CCTs: does the effect come from increased income or does it come from staying in school? CCTs have proven very effective at raising human development outcomes, including education, but they are also very expensive to run and to administer. Even though CCTs seem to be more acceptable politically than outright “welfare” payments, if their impact on education comes from increasing the income of the recipient family rather than forcing them to access public services, then it may be more cost-effective to do the unconditional transfers. There are now a number of pending evaluations, including in Malawi and in Morocco. Their findings will clarify the options available to politicians and policymakers looking to use CCTs for education.

What is the best way to increase education for out-of-school girls and young mothers? Some out-of-school girls still value education and would want to complete their education, if not outright return to school. What options can we use to harness their desire to further their education in spite of competing obligations? Can small incentives bring girls back to school? Would different models of learning work for these groups?

How best can we improve school-to-work transitions? Are there scalable programs that can curb dropout in later years, or facilitate entry into the labor market? Can entrepreneurship training and school-based vocational training help?

3. Health

Adolescent health (male or female) has not received the same level of attention as child health, especially compared to children under five. One reason is that children under five are more likely to die than adolescents. Yet, even though adolescence may be a relatively healthy time of life, adolescence is a crucial time for establishing future health. Adolescents make decisions (for example about marriage or sexual debut) that can dramatically impact their future health trajectory. It is also a period of habit formation with potential longer-term health consequences for the individual, through smoking, excessive drinking, risky sexual behavior, crime and drug use.

Adolescents, arguably more than any other age group, are therefore faced with important and difficult decisions about tradeoffs between short-term utility and long-term costs. For example, whether to limit or completely abstain from enjoyable but risky activities (smoking, drinking, sexual intercourse, etc.) and to invest now (participate in school, live more healthily) for long-term payoffs. But even as adolescents are making these critical decisions, they may find it particularly difficult to make the right one. Emerging evidence from the new area of behavioral economics shows how unadapted humans are at making sacrifices now for long-term payoffs. This is particularly hard when the benefits are uncertain and a long way off. Some work in the US and observational studies suggest that adolescents may find it particularly challenging to make these tradeoffs and may be vulnerable to making short-term decisions. What is not clear, however, is whether this is because of lack of information, lack of experience of the costs and benefits, financial constraints, or because they tend to discount the future more than other age groups. Better understanding of this is crucial to designing better programs to help adolescents make the decisions that will lead to better futures. Work in the US also suggests that adolescents tend to be influenced by different messages—placing more emphasis on peers, social reactions, and personal identity than adults. There has been little work in the literature to test whether more effective messages can be designed to better influence the decisions of adolescent girls based on an understanding of what matters to adolescents.²

One area that has received more attention than others is early pregnancy and risky sexual activity of youth. However, even here there are many outstanding questions. In particular, many of the evaluations that have been conducted are of programs that contain many different elements and do not attempt to test the effectiveness of particular pieces, making it impossible to do relative cost effectiveness calculations of alternative approaches.

We proceed as follows: Section 3.1, Baseline, summarizes the evidence and gaps in 2006; Section 3.2, Media/Information Campaign; Section 3.3, Health Education; Section 3.4, Adolescent-Friendly Services Incentives; Section 3.5, Relieving Financial Constraints—Pricing, Saving and Insurance; Section 3.6, Incentives as a Way to Change Behavior.

² Evidence reviewed by: O'Donoghue, Ted and Matthew Rabin. 2001. Risky behavior among youth: Some issues from behavioral economics. In Risky behavior among youth: An economic analysis. ed. Jonathan Gruber. University of Chicago Press. Chicago.

3.1 Baseline—evidence and gaps in 2006

What we knew in 2006

We knew some things, but less than we would like, about reproductive health, nutrition, and teaching and changing behavior, with much of the knowledge based on observational studies supported by some randomized studies.

Adolescent mothers and their children fare much worse than older mothers—how much of this is due to selection is unclear (for example, poorer and less educated women have children at younger ages). However, improving access to care for this group is important in improving adolescent health. Improved nutrition for this group improved child health.

Improving health improves schooling and staying in school improves health. Healthier children go to school more and staying in school reduces pregnancy rates in adolescence. The later finding came from studies in Kenya and has since been shown to be true in Ghana.

Providing adolescents with specific information about the risks of different sexual behaviors changed behavior, while standard teaching to avoid risky sexual behavior had little impact. Telling girls that older men were more likely to be infected with HIV than young men dramatically reduced childbearing with older men; the standard HIV curricula led to more marriages but not fewer births.

What were the gaps in 2006 and strategies to fill them

In 2006 we identified the question of how to influence girls' behavior as a key gap. However, this is such a large and critical area that it needs to be broken down into sub-questions that can be more easily tackled. Our understanding of the question since 2006 has also been influenced by the growing area of behavioral economics, which focuses on what influences behavior in general, and in particular why humans often take on behaviors that are, or appear to be, counterproductive, or fail to invest in behaviors that have long-term benefits.

In thinking about strategies to influence adolescents to invest in their health, it is worth separating out the possible reasons for why they might not undertake the investment:

Do adolescents lack of information they need to make the right decisions?

How important are financial constraints? Would adolescents invest more in health if it were cheaper or if they had financial instruments that could help them plan for or pay for healthcare?

Do adolescents, like other age groups, under-invest in preventive care and underappreciate the costs of behaviors because of a psychological tendency towards temptation and discounting long-term impacts? Are short run incentives, subsidized health prevention products, or mass distribution effective ways to address these psychological issues?

3.2 Information/ Media Campaigns

Adolescent girls are often considered to have little power to influence their circumstances and thus unable to respond proactively to information. However, one study has shown that providing specific information to girls can have an important effect on behavior. This is only one study and it would be useful to test this in additional situations, for there is a lot more to be learned about the most effective way to provide information, particularly to adolescents who, research suggests, tend to be particularly influenced by peers and to be concerned by social reactions and matters of identity. There are two ongoing studies on information targeting youth.

Here is a summary of what we now know:

- Adolescent girls respond to specific information on which they can act

Below we provide fuller summaries of the programs and evaluations that generated this evidence as well as information on ongoing studies which will test whether this finding holds in other contexts and countries.

- **Providing actionable information on how to reduce own risk can change sexual behavior of teenagers**

A randomized evaluation found that providing information on the relative risk of HIV infection by partner's age led to a 28percent decrease in teen pregnancy, an objective proxy for the incidence of unprotected sex. Self-reported sexual behavior data suggests substitution away from older (riskier) partners and towards protected sex with same-age partners. In contrast, the official abstinence-only HIV education curriculum had no impact on teen pregnancy. This suggests that teenagers are responsive to risk information, information that they can put to immediate use; and that their sexual behavior is more malleable on the how-to margin rather than on the whether-to margin, that is, on the type of sex they will have and with whom, rather than on whether or not to have sex. This suggests that providing information on how to reduce risk could be important for reducing youths' overall risk of HIV infection.

- Dupas, Pascaline. 2010. Do Teenagers Respond to HIV Risk Information? Evidence from a Field Experiment in Kenya. Unpublished Manuscript, UCLA.

- **Some ongoing evaluations on information/media program targeting youth**

Providing Sexual and Reproductive Health Advice via SMS in Uganda—many teenagers lack access to reliable information about sexual and reproductive health, and the information gap can have big consequences. Can an SMS-based service help fill the knowledge gap? Will teens use the service? Will their behavior change as a result? The service allows users to request reproductive and sexual health advice via SMS, as well as to query a clinic directory that includes clinic locations, services offered, and schedules. The research project seeks to test the impact of the service on 1) knowledge of sexual and reproductive health, and 2) related behavior, both self-reported and observed (risky behavior, clinic visits, seeking preventive health services). The service is available to the whole population; treatment takes the form of marketing in a random selection of trading centers. Data sources include an individual survey, a community survey, and institutional data from clinics. Mapping locations from which SMS are sent will also allow the analysis of geographic spillover patterns.

Evaluating the Effectiveness of Profamilia's Online Sexual Education Modules—Profamilia, a Colombian non-profit, provides sexual and reproductive health services, recently launched an internet-based education service. The evaluation measures the impact of providing public school students in Colombia with access to five modules of Profamilia's sexual education curriculum. The question is whether the internet modules are an effective tool to improve knowledge, and sponsor medium-term behavioral change among Colombian high school students who have direct access to the course, as well as whether this has any effect on their peers.

3.3 Health Education

Health education programs go beyond providing specific pieces of information about aspects of health—they provide much more context in an ongoing education environment. A number of studies have examined the effectiveness of alternative approaches to changing behavior, particularly sexual behavior, through health education.

The evaluations on health education are dominated by sexual and reproductive health focused on HIV prevention. HIV education programs try to reduce vulnerability by providing young people with the information, life skills, and services that they need to reduce their vulnerability to HIV.

Given the scope and urgency of the problem, there are many programs. Topics covered include refusal skills, self-efficacy, self-esteem, information on HIV and other STI, information on prevalence by age, sexuality, contraception, abstinence, and access to reproductive health care, sexual moral and social values, respecting the wishes and rights of others, reducing alcohol and drug use, and intimate partner violence.

In this section we discuss HIV education programs and in the next, programs to increase access to services. The discussion centers on four randomized evaluations of programs in sub-Saharan Africa, the region where vulnerability is highest. The range of the interventions and the outcomes they target is broad, with interventions targeting individuals, schools, households, and communities.

First, we summarize the four exemplary programs, then we summarize what we have learned from these programs with regards to improving knowledge and behavior.

Four exemplary HIV education programs in sub-Saharan Africa³

- **The Mema kwaVijana (“Good Things for Young People”) Project in rural Tanzania**

This program targeted ages 12-19. It aimed to delay sexual debut, reduce number of partners, increase condom use, and increase use of health services. It included four components: in-school sexual and reproductive health education (teacher-led curriculum-driven learning as well as peer-led, activities-driven learning using methods such as a drama, stories, and games); youth friendly services; community-wide condom distribution by and for youth; and community activities, including video.

The impact evaluation was experimental, with twenty communities randomly assigned to receive the intervention. There was long-term follow-up, and biological outcomes were measured. The intervention substantially improved knowledge, reported attitudes and reported condom use in both sexes, and reported sexual behavior in males, but had no consistent impact on biological outcomes (HIV, HSV, gonorrhea, and chlamydia); and for females only (trichomoniasis and pregnancy).

The intervention had a substantial impact on knowledge and reported attitudes. It had a substantial impact on reported behavior change. There was some evidence of increasing benefit with more years of exposure to the intervention, perhaps because of longer exposure to the in-school intervention, or perhaps because of earlier (younger-age) exposure to the intervention. There is some evidence of a greater effect on males than on females, particularly on reported behaviors. There was no consistent impact on biological outcomes. There was no evidence of increased HIV, STI, or pregnancy rates, which suggests that sexual education does not increase risk. And there was no evidence of short-term reduction in the risk of HIV, other STIs, or pregnancy.

— Ross DA et al. 2007. *AIDS* 21(14):1943-1955. Cited in Mavedzenge et al (2010).

³ For a fuller review of the first three programs and other youth-HIV programs, see:

Mavedzenge, Sue Napieralal, Aoife Doyle, and David Ross. 2010. “HIV prevention in young people in sub-Saharan Africa: A systematic review.” Infectious Disease Epidemiology Unit, Department of Epidemiology and Population Health, London School of Hygiene and Tropical Medicine.

The full review is to be found at:

<http://www.evidence4action.org/images/stories/documents/srgreview.pdf>

- **Regai Dzive Shiri (“Let Them Become Birds...”) Project in rural Zimbabwe**

This project takes its name from the first half of a Shona proverbial couplet, “Regai dzive shiri; Zai harina muto,” meaning “Let them become birds, for the egg yields no gravy,” a proverb used to point out that they get greater rewards who show the patience to delay and let things come to complete fruition. The project targets adolescents in the second year of secondary school (Form 2), aged, on average, 15 years. It aims to delay sexual debut, increase condom use, reduce number of sex partners, and increase use of sexual health services. There were four components: in-school sexual and reproductive health education; sexual and reproductive health education for out-of-school delivered through community groups; youth friendly health services; and community awareness raising sessions for parents and adults. Both the in- and out-of-school education was taught by professional peer educators using participatory methods. The peer-educators had completed the sixth and final year of high school (that is, had taken their Advanced Level exam). The reproductive health services trained health workers to improve clinic accessibility to youth. The community program was a 22-session intervention to improve knowledge and communication between adults and youth about reproductive health.

The randomized evaluation included long-term follow-up and biological outcomes. There was an increase in knowledge about STD acquisition, but not HIV acquisition, and pregnancy prevention increased for both boys and girls. Self-efficacy is a person’s level of belief in his ability to accomplish an action; it is considered important for ability to negotiate cooperative safe-sex behaviors. Girls saw increased self-efficacy for condom use, sexual refusal, and HIV-testing.

- Cowan FM, Pascoe S, Langhaug L, et al. 2009. The Regai Dzive Shiri Project: the results of a cluster randomised trial of a multi-component HIV prevention intervention for young people in rural Zimbabwe. *Submitted*. \ Cited in Mavedzenge et al (2010).

- **Stepping Stones in the Cape Province, South Africa**

This program targeted ages 15-26 years, both in-school and out of school. It aimed to increase condom use, reduce number of partners, reduce casual and transactional sex partners, reduce intimate partner violence, and reduce alcohol and drug use. The program comprised thirteen sessions, each three hours, three peer group meetings, and a community meeting—a total of fifty hours over six to eight weeks. The intervention was delivered by trained staff of the same gender and a comparable age to the participants.

The randomized evaluation found a positive change in transactional sex at 12 months for men, but no effect at 24 months; for women there was a negative effect--an increase in reported transactional sex at 12 months, but no effect at 24 months. There was a reduction in intimate partner violence by men at 24 months. There was a reduction in problem drinking for men at 12 months, but no effect at 24 months. And there was a reduction in HSV incidence at 24 months.

- Jewkes R, Nduna M, Levin J, et al. 2008. Impact of stepping stones on incidence of HIV and HSV-2 and sexual behaviour in rural South Africa: cluster randomised controlled trial.[see comment]. *BMJ*.337:a506. *Cited in Mavedzenge et al (2010)*.

- **Primary School AIDS Prevention Program in Western Kenya**

This program consisted of four interventions: (1) The Teacher Training Program, which provided in-service training for primary school teachers to enhance the delivery of the national HIV/AIDS education curriculum; (2) The Active Learning Reinforcement Program, which promoted student debates on the role of condoms and essay competitions on how they can protect themselves from HIV; (3) The Relative Risk Information Program, which provided adolescents with information about variation in HIV prevalence (risk) by age and sex, with the aim of reducing incidence of cross-generational sex, which exposes girls to higher HIV risk; and (4) The Reducing the Cost of Education Program, which provided free school uniforms, with the aim of keeping teenagers in school longer.

Altogether, 328 schools (with 70,000 students in grades five through eight) participated in the programs. All of them received the national AIDS education program, and some were randomly selected to participate in one or more of these four additional programs.

The Teacher Training Program increased the amount of time devoted to the HIV/AIDS curriculum; it had no impact on students' knowledge and behavior; had no impact on teenage childbearing rates; and increased the likelihood that girls who had started childbearing were married to the fathers of their children.

The Active Learning Reinforcement Program increased students' knowledge and increased the likelihood of boys reporting having used a condom;

The Relative Risk Information Program reduced teenage pregnancy by reducing the number of girls involved in unprotected sexual relations with older partners.

The Reducing the Cost of Education Program increased retention rates, reduced teenage pregnancy and reduced marriage.

- Duflo, Esther, Pascaline Dupas, Michael Kremer, and Samuel Sinei. 2006. "Education and HIV/AIDS prevention: evidence from a randomized evaluation in Western Kenya," Unpublished Manuscript, J-PAL at MIT.

What have we learned about HIV Education

- **HIV education improves knowledge and attitudes**

Increasing knowledge—in nearly all the programs we see an increase in knowledge about STIs and HIV, protection from STIs and HIV, and about safe practices.

Attitudes—there is also some evidence of improved attitudes to sex and towards people living with HIV .

- **HIV education improves life skills**

There is some evidence of improved condom, refusal, and HIV-testing for girls.

- **Effects on reported condom use are mixed**

There is evidence that some of the programs increase reported condom use.

- **Effect on sexual debut and number of partners**

There is evidence that education can reduce reported sexual debut and number of partners.

- **Effects on biological outcomes are mixed**

HIV—none of the programs saw reductions in HIV. This is probably because there were too few cases to be able to detect an effect, if there was one.

Sexual Transmitted Infections—only one program (Stepping Stones) saw a positive impact on HSV2 rates.

Pregnancy rates—there is evidence that education can reduce pregnancy rates.

- **We need more studies that randomize the intervention components to enable us to better pinpoint the salient aspects of a comprehensive program, and we need reports of cost analysis to allow us to compare cost-effectiveness**

Only one of the programs above randomized by component. More of this would allow us to compare the relative effectiveness of the program components. Also there are few reports addressing cost-effectiveness.

3.4 Improving services (youth-friendly services)

Both Mema kwaVijana and Regai Dzive Shiri have “youth-friendly service” components. These programs aim to improve access to services for youth. They train the service providers to deliver services to youth (knowledge, skills, and attitudes) and they make services more youth-friendly (better hours, privacy protections, lower costs, condom distribution by youth).

There was no effect on seeking care for STI symptoms or seeking family planning services at 36 months and 96 months in Mema kwaVijana. And there was no effect on seeking clinic services in the past year or seeking treatment for STI symptoms at 48 months in Regai Dzive Shiri.

Mema kwaVijana also enlisted youth to distribute condoms. There was a positive impact on first condom use during the intervention; a positive effect on condom use at 36 months, but no effect at 96 months. Females report using a condom during their last sexual encounter with a non-regular partner at 96 months. But it is not obvious that this effect can be attributed to the condom distribution by youth.

- **Some ongoing evaluations on youth-friendly services**

Distribution of condoms through hairstylists—an evaluation in Zambia is examining the effects of distributing condoms through trained hairstylists.

Mobile VCT services and free two-year supply of condoms delivered at home—in a long-term follow-up to the Primary School HIV/AIDS Prevention Education Program (above), J-PAL is looking at the impact of these two programs on HIV and STI transmission, using Herpes Simplex Virus Type 2 (HSV-2) as a biomarker. The study is attempting to follow up on approximately 19,000 students who were enrolled in class 6 in 2003 in schools that participated in the original program. Students who can be followed up on and those who consent are surveyed and tested for STIs. The effectiveness of additional HIV/AIDS prevention strategies is also being examined. Specifically, students in the study population were randomized to one of four intervention groups: 1) VCT only; 2) VCT plus free two year supply of condoms; 3) free two years supply of condoms only; and 4) the comparison group. These interventions are being offered during the first follow-up period (Phase 1) and their impact will be measured during a second wave of HSV-2 testing (Phase 2) beginning in 2011. This set-up will enable us to measure the impact of VCT and provision of free condoms on sexual behavior and risk of HIV transmission.

3.5 Relieving financial constraints to health access—pricing, savings, and insurance

Adolescent girls tend to access healthcare less frequently than other groups. Young mothers are less likely to have prenatal checkups or give birth in a clinic; in Bangladesh, adolescent girls are significantly less likely to visit a clinic during their last illness than their brother. Evidence on how much of this lack of access is due to financial constraints and to what extent it can be addressed through financial instruments, like savings and insurance, is beginning to be collected through randomized evaluations. While these financial instruments are not targeted specifically at adolescent girls, it is possible that young women and adolescent girls may benefit disproportionately from them.

Effect of insurance on health—Many microfinance institutions in India and other countries have started providing health insurance to their clients, motivated by their success in delivering credit to the poor. An evaluation is looking at how this access to insurance impacts the health of women and adolescent girls, and particularly their utilization of health services.

Pregnancy financing to increase number of women delivering in hospitals— a program in India will provide a financial product (a loan with a savings component) designed to promote institutional delivery.

Saving for health—a program in Kenya is examining will offer health savings products. In rural areas, Rotating and Savings Credit Associations (ROSCAs) will be used; and in urban areas vouchers will be used. (The women will invest in vouchers that can be redeemed for health products at a local pharmacy.) In particular, this project targets informal commercial sex workers, who increase their supply of unprotected, better compensated sex in response to household health shocks, substantially increasing their risk of HIV infection in the process. In this project, every dollar that women invest in these vouchers will tie their hands into health investments.

3.6 Subsidized pricing and access to health

Around the world, people underinvest in preventive health. This is true even when people do not face binding financial constraints. Yet, a series of experimental studies have shown that reducing the price of preventive health products can have a dramatic impact on the take up of these products. Very similar results have been found for a range different products (bednets, water purification chemicals, deworming drugs) and countries (Kenya, Uganda, and Zambia). While these studies have not looked particularly at adolescents the similarity of findings across different countries and products suggests that they may tell us something quite fundamental about health behavior. They are therefore worth keeping in mind when designing programs for adolescent girls. A summary of results from these studies can be found in “The Price is Wrong” (J-PAL Bulletin 2011).

3.7 Incentives as a way to change behavior

The findings of behavioral economics not only suggest that people underinvest in preventive health, and discount long-term costs of behaviors, it also suggests potential strategies for addressing poor decision making. To the extent that people overweigh short-term costs and benefits, an effective way of changing behavior is to provide small up-front incentives. Existing research has found this to be an effective way to encourage adults to make one-off investments in health, ongoing evaluations are starting to look at this approach to encourage changes in sexual behavior in adolescents.

Here is a summary of what we now know:

- Small, in-kind incentives have had big impacts on health behavior in adults

Below we provide fuller summaries of the programs and evaluations that generated this evidence.

- **Very small, non-cash incentives can encourage women to seek immunization services for children**

A program in Rajasthan, India sought to raise immunization rates, which remained low despite free immunization. The low rates are often attributed to unreliable health services and deep resistance to immunization. Another factor may be up-front costs. Research suggests that parents may delay undertakings with large future rewards if they face small up-front costs. Small incentives could mitigate the effects of these costs. The NGO piloted two interventions: reliable service, by holding travelling immunization camps in the villages at a fixed date; and increased incentives, by giving the mothers a 1 kg bag of lentils (valued at INR 40, or just under US\$1). Immunization rates were 6 percent in the control group, 17 percent in the group offered reliable service, and 38 percent in the group offered both reliable service and incentives. This suggests that small, non-cash incentives can encourage women to seek medical services, such as immunization. This intervention is relevant for young women who have started childbearing, as is likely for some of the women in the cohort (10 to 22 years) targeted by Nike Foundation.

— Banerjee, Abhijit., Esther Duflo, Rachel Glennerster and Dhruva Kothari. 2008. “Improving Immunization Coverage in Rural India: A Clustered Randomized Controlled Evaluation of Immunization Campaigns with and without Incentives.” Unpublished Manuscript, J-PAL at MIT.

- **Some ongoing evaluations on client-side incentives for health**

There is interesting ongoing work on the effects of incentives on health on young women.

Short-term financial incentives on sexual behavior and HIV—Bjorkman, Corno, de Walque, and Svensson are looking at the impact of short-term financial incentives on sexual behavior and HIV incidence among young women. Their study is from a randomized controlled field trial in Lesotho.

Financial incentives to remain HIV-negative on sexual behavior—Kohler, Tauro, and Thornton are looking at effects of financial incentives to remain HIV-negative in Malawi.

- **Some ongoing evaluations on provider-side incentive**

Incentives can also be given to those who supply services. Here is an example of an ongoing evaluation looking at the role of incentives in distribution of condoms to women:

Supply-side incentives in the distribution of female condoms—a program in Zambia is distributing female condoms through hair salons and barbershops. Sellers will be offered four different types of incentives and the effects of these will be compared. Because many clients are repeat customers, hair stylists both know their customers and have the opportunity to follow up on a first-time purchase to encourage repeat use, and troubleshoot any barriers to future purchase. The familiarity between the stylist and her client creates the potential for successful targeting of female condom sales to "at-risk" customers. Furthermore, during the period that a client is in the salon, he or she is a captive audience, allowing the stylist to provide the necessary information on the product and answer any questions that the client might have. These characteristics of the interaction between the stylist and her clients represent possible advantages over promoting female condoms through typical vendor networks, such as chemist shops or bars, or by the NGO itself. Researchers will work with both stylists who own their own hair salons or barbershop—and are thus leading entrepreneurs in their communities—as well as stylists who are working for others, who will be provided with an opportunity to be trained as a micro-entrepreneur under the project.

- **Improving health through automatic micronutrient distribution**

If people are not good at making investments in preventive health, one approach is to make it automatic—as with the inclusion of fluoride in water in the US, iodine in salt, or vitamin D in milk. One difficulty with this approach is that the poorest often grow their own food and so cannot benefit from nutritional supplementation of this kind. One attempt to provide micronutrient supplementation to food in India to address anemia—a major nutritional problem for adolescent girls--was addressed through a randomized evaluation.

The preliminary analysis shows that take up of the program was far from automatic. While iron was meant to be added to flour by the millers on a regular basis, usually they only did this when specifically requested. Take up was 60percent at the peak, but it fell to down 40percent one year into the program, and to 30percent at the end of the program. The program was effective when take up was high, reducing anemia by 7 percentage points and reducing weakness and fatigue. These impacts disappeared when the take up rates fell. The preliminary analysis does not disaggregate by gender.

— Banerjee, Abhijit, Esther Duflo, and Rachel Glennerster. 2009. Reducing Anemia through Iron Fortification of Grain in Udaipur, India. Unpublished Manuscript, J-PAL at MIT.

3.8 What are the gaps in health?

What is the impact of adolescent habit-setting and decision making on health? Do adolescents make decisions differently? Do the decisions turn into habits? It is important that we

understand and exploit what is different about adolescents. For that we need to understand a lot more than we do about what constraints and opportunities adolescents in developing countries face, what they want and what they need, what they do to fulfill their wants and needs, and what their attitudes to risk are. These are the inputs into their decisions and tradeoffs, and understanding these would allow us to design better programs. How do the decisions of adolescents become habits? And what levers does this habit-formation process provide the policymaker?

Can the framing of health messages targeted at adolescents make a difference? We see that adolescents respond to information. Would framing of the information increase the size of this response, both its intensity and persistence? What is the best messaging for adolescents?

What is the role of peer effects? It is conventional wisdom that adolescents are more susceptible to peer effects. Are they? If so, how do peers affect decision making and habit-setting and how teenagers respond to information?

What is the role of incentives? Adolescents respond to education incentives (scholarships, cash prizes, and so on) and incentives have been shown to change health decision making for other age groups. What role can incentives play in the health behavior of adolescents?

What are the effects of structural factors on health outcomes? For example, does economic empowerment reduce HIV? How would addressing underlying inequalities in voice impact health? It is commonly believed that structural gender inequalities in political representation and economic wellbeing may have an effect on health. Do they, in fact? And if so, do we have to first get rid of the underlying inequality before we can impact health?

What is the role of financial constraints? Adolescents may seek healthcare less than other groups because there are fewer household financial resources earmarked for their health needs. Do such financial constraints impact adolescent health? If so, would access to insurance, savings, and credit impact health outcomes?

What is the impact of youth-friendly services? Beyond reducing out-of-pocket costs for health goods and service, many programs have included components aimed at making health services friendlier to the youth as a way to increase use of the services. The evaluations have tended to evaluate the program as a whole and not component by component. As such we still don't know much about the impact of youth-friendly services.

4. Participation

In this section we discuss any evidence (and the gaps in evidence) on the best way to promote participation of adolescent girls in decision making processes in the community and the household. We also discuss participation in community life, including access to social networks. We proceed as follows: Section 4.1, Baseline, covers the evidence and gaps in 2006; Section 4.2, Education/Training; Section 4.3, Social Networking, covers “recruiting/grouping/networking”; and Section 4.4 covers attitude change. We include evidence that has come out or been refined since 2006.

4.1 Baseline—the evidence and gaps in 2006

What we knew in 2006

In 2006 we presented evidence showing that adolescents, and particularly adolescent girls, often have the lowest levels of participation in decision making processes—from voting to attending village meetings. We provided data on how little participation adolescent girls had in household decisions, even ones such as their own marriage. While we had some evidence on the magnitude of the problem, there was very little evidence about how to boost youth (and particularly young girls’) participation, or how these decisions would change if girls had more of a voice. But participation is not just about decision making; it is also about social networks. In some contexts there is a concern that mobility restrictions mean that adolescent girls--particularly those who do not attend school--have restricted social networks. What is the best way to increase their social participation?

As in other areas, what little we do know tends to relate to women rather than adolescent girls.

What the gaps and strategies to fill them were in 2006

1. *What is the best way to increase girls’ participation in decision making—then called “voice and agency”—both within the household and the community?*

Is the best way to promote participation by adolescent girls indirect--that is, by increasing their education or the economic position? Does that make them better able to participate and make others in society value them more? How effective are programs that seek to directly influence participation—either by mandating that decision making processes include youth and women, training communities to include youth and women in their decision making, or by mandating positions of power to youth or women?

At the time of the 2006 review, there was an evaluation of a Community Driven Development program in Sierra Leone, which encouraged participation of women and youth in community decision making. The evaluation of the *Kishoree Kontha* program in Bangladesh is ongoing.

2. *What are the consequences of increasing voice for the young woman and for her present and future household?*

Before we can assess the consequences of increasing participation on young women, there first would have to be causal evidence that participation has increased. The ongoing evaluation will give us insight into this question. Long-term evaluations of education and asset development programs that are shown to increase participation will also yield insights.

3. *Is there a virtuous circle where exposing a community to the benefits of participation by women and youth changes how they are perceived by the community and by themselves, leading to greater aspirations and participation going forward?*

Many programs require participation in particular decision making processes of groups with less voice—including women and youth—although few target young women specifically. The

assumption is that the community will learn the benefits of their participation and the women and youth will learn how to participate effectively. The hope is that with this learning the participation benefits will continue after the program ends. Even if young women are not specifically targeted in these programs, it remains possible that they benefit particularly from the learning, and their aspirations and expectations may be strongly influenced by seeing the role models of older women participating at a key developmental point in their lives.

We know of some randomized evaluations. The first was on the use of role models to increase schooling for girls in Madagascar. The findings of this evaluation are given above, under Education. The second was on the possible effects of women leaders on the aspirations and outcomes of girls; we discuss the results below, in Section 4.3, Mentoring.

4. *What is the best way to improve participation in community life and build social networks for adolescent girls? How does greater participation change aspects of the lives of girls—for example, their mental health?*

Adolescent girls have some of the highest levels of mental health issues, which some have connected to low participation in social networks--particularly in communities where their mobility is restricted, and early marriage moves them away from their networks at an early age.

4.2 Education as a way to promote participation

Better educated women tend to participate more in decision making in their communities and households. Those who marry as adolescents tend to have less participation in decision making. Whether these effects are causal—or the result of other common factors, such as poverty or societal attitudes—is not yet clear. Ongoing evaluations, including those on secondary education in Ghana and promoting education for adolescent girls in Bangladesh, will help answer this question.

4.3 Economic empowerment as a way to promote participation

It is hard to distinguish the impact of economic empowerment of adolescent girls on their participation from the impact of education, as more educated girls tend to have more economic power. Little work has been done on this question for adolescent girls. In 2006 we discussed how evidence showed that women had more control over money that they brought into the household than money that came into the household from their husband. Many have suggested that providing microfinance to women could therefore change the way decisions are made in the household. Recent evidence, however, raises questions about this hypothesis. A randomized evaluation of microfinance in India targeted at women found that it had no impact on how decisions were made in the household, at least within the first 18 months (the time frame over which the project was conducted). We provide more information on this evaluation under Section 5: Assets.

- Banerjee, Abhijit, Esther Duflo, Rachel Glennerster, and Cynthia Kinnan. 2010. "The Miracle of Microfinance? Evidence from a Randomized Evaluation." Unpublished Manuscript, J-PAL at MIT.

4.4 Direct programs to promote participation

Many programs attempt to directly influence participation of underrepresented groups in decision making outside the home, particularly focusing on youth and women (although rarely young women specifically). Some of these provide training and facilitation. Community Driven Development programs often require participation of women and youth in decision making processes for that particular program, in the hope that that experience will spill over into other decision making processes in the community. Another approach is to mandate that women or youth are placed in positions of power in the community. Again, few projects target adolescent girls

specifically, but there are evaluations of the general approach of attempting to directly impact participation of groups with low participation.

An evaluation in Sierra Leone promoting participation of youth and women through facilitation and example will shortly have results—this evaluation examines the extent to which participation in decision making processes can be influenced by programs that directly attempt to change these processes and make them more participatory. Results will be available by early summer 2010.

- Casey, Glennerster, Miguel. 2010. The impact of CDD in Sierra Leone. Unpublished data, J-PAL at MIT.

Mandating women's participation in local politics changes the decisions that are made and leads to more women being elected in the future when the mandates are removed—A third of village leaders are required to be women under a constitutional provision in India. Many states randomly selected the villages where this provision would apply. Those villages that had women leaders invested more in the goods women cared about (like water) and more women attended village meetings. More recent work shows that villages that were mandated to have a woman in two consecutive elections were more likely to elect a woman after the mandate was removed. In other words, exposure changed attitudes towards women leaders.

- Beaman, Lori, Raghavendra Chattopadhyay, Esther Duflo, Rohini Pande, and Petia Topalova. 2009. Powerful Women: Does Exposure Reduce Bias? QJE 124 (4): 1497–1540.

4.5 Social networks

Participation is not just about participation in household decision making. It also includes participation in community life and social networks. Is it possible for outside programs to boost social networks? And what impact does this have, for example, on long run social capital? Again, this issue has mainly been looked at in the context of women rather than adolescent girls.

- **Group lending with frequent meetings can increase social capital, by broadening and deepening social networks**

An experiment working with a microfinance program in India looked at the impact of requiring women to meet weekly or monthly in their microfinance groups. The objective of the study was to see if these meetings engendered social networks that persisted beyond the program and provided more social capital—for example, a greater willingness to help out when a member was in trouble.

More frequent meeting increases social capital—the experiment randomly varied the number of times microfinance client groups met (either once a week or once a month). It measured social interaction outside the meeting and also one year after the loan had been fully repaid.

Results shows that small changes in meeting frequency produce large gains in social capital investment in a short time: After five months, relative to a client in a monthly group, a client in a weekly group was 90percent more likely to know her group members' family (by name) and to have visited them in their homes. She was also 16percent more likely to know about social activities at another group member's house. One year after completing the loan cycle, weekly clients remain 50percent more likely to attend social events together and 29percent more likely to say that they would help one another in the event of a health emergency.

Group members are more likely to share because they trust each other more--not because they are altruistic—the experiment measured cooperative behavior among clients, using a field experiment analogous to a trust game. Weekly clients are more likely to send a lottery to a group member. To disentangle altruism from trust and reciprocity, the experiment varied the divisibility of the transfer, which is constrained by the receiver's ability to share their earnings with the sender.

Experimentally generated social interactions increased giving only when the prize was easily divisible, indicating that more frequent interactions lead to higher levels of trust rather than pure altruism.

These findings demonstrate the potential for policy interventions, such as micro-lending, to fundamentally alter the shape of social networks--at least among women in urban areas of the developing world. Small changes in the degree of interaction among women in poor urban neighborhoods of developing countries can significantly enhance their social capital. Both the women and the MFI can benefit from this increase in social capital. Not only are social externalities of regular group interaction an important component of the value of microfinance lending, but the endogeneity of social capital has potentially important implications for default and delinquency in group lending. Besides increasing access to credit, MFIs can have other impacts on women's empowerment, by broadening and deepening social networks.

- Feinberg, Benjamin, Erica Field, and Rohini Pande. 2009. Does Group Lending increase Social Capital? Evidence from a Field Experiment in India. Unpublished Manuscript.

4.6 Role models as a way to change attitudes of adolescents

In this section, we discuss in more detail the extent to which providing role models and exposure to women and young women who take on nontraditional roles can change attitudes and customs. Some of the experiments were discussed briefly under direct programs for promoting participation, but we discuss them in more detail here.

Here is a summary of what we now know:

- Exposure to female leaders under quotas changes the aspiration of adolescent girls with regards to occupation, age at marriage and fertility
- Exposure to female leaders through quotas changes stereotypical perceptions of women leaders and leads more women to be elected even after the mandates are removed
- Greater economic opportunity for adolescent girls in a particular community changes the way the community treats girls in that community
- Seeing examples of women with fewer children in TV soap operas reduces fertility

Below we provide fuller summaries of the programs and evaluations that generated this evidence.

- **Exposure to counter-stereotypical women—women in positions of leadership and power—changes the attitudes of adolescent girls vis-à-vis desired education, desired fertility, and desired occupation**

Legislation in India mandated that a third of leadership positions should be reserved for women. How does this affect the aspirations of teenage girls? Does frequency of exposure to women leaders matter? The evaluation found that exposure (particularly twice in a row) changes the expressed aspirations of adolescent girls with regards to (1) occupation, (2) fertility, and (3) education. Girls are more likely to declare wanting a higher education job (such as doctor, engineer, teacher, legal professional, or nurse), wanting to marry later, and wanting to attain a higher education.

- Beaman, Lori, Raghavendra Chattopadhyay, Esther Duflo, Rohini Pande, and Petia Topalova. 2009. Unpublished data, J-PAL at MIT.

- **Exposure to women leaders under gender quotas reduced discrimination based on stereotypes about effectiveness of women and increased the number of women elected when quotas are withdrawn**

The gender gap in politics is common to nearly all countries that do not have quotas for women. The gap may reflect gender discrimination by voters, which can take two forms. Voters may have a distaste for female candidates based on the belief that women should not be political leaders. Or they may vote against female candidates based on stereotyped perceptions of women as ineffective leaders, stereotypes that persist further when voters are not exposed to women leaders in their daily lives. But what happens when the national government introduces gender quotas that reserve leadership positions for women in local councils, thereby mandating exposure to local female leaders?

A randomized evaluation of political quotas in rural councils in India found the following:

Quotas for women help overcome bias based on stereotypes of female leaders—Voters, particularly men, who have never experienced political reservation, generally have distaste for the idea of female leaders by one whole point on a scale from 1 to 10. Mandated exposure to a female leader does not reduce men’s stated distaste for female leaders, but radically alters perceptions of their effectiveness. After two consecutive terms with a mandated female leader, men perceive female leaders to be as effective as their male counterparts.

Women’s biases against female leaders are largely unaffected by quotas, consistent with their limited participation in local politics—few women could name their current councilor and less than 1 in 6 women have ever approached a councilor about personal or village issues. Mandated exposure to female leaders had little effect on women’s knowledge and awareness of local politics, and possibly as a result, had only moderate effects on women’s bias against female leaders.

Political parties field more female candidates and more women are elected even when quotas are no longer in place—in councils where the head-councilor position had been reserved for a women in two elections preceding, almost twice as many women stood for election and won seats in unreserved councilor positions, compared to councils which had either never been reserved or reserved only once.

- Beaman, Lori, Raghavendra Chattopadhyay, Esther Duflo, Rohini Pande, and Petia Topalova. 2009. Powerful Women: Does Exposure Reduce Bias? QJE 124 (4): 1497–1540.

Experimental evidence from urban India also supports the finding that the electoral gains persist post-election are drawn—the study looks at elections in the city of Mumbai, and finds that the probability of a woman winning an election conditional on a constituency having been reserved for women in the previous election is at least five times higher. The data suggest that reservations work by introducing into politics women who are able to win election after the reservations are withdrawn, and by allowing political parties to learn that women can win elections.

- Bhavnani, Rikhil. 2009. “Do Electoral Quotas Work After They Are Withdrawn? Evidence from a Natural Experiment in India,” American Political Science Review 103 (1):23-35.

- **Economic opportunity for girls seems to lead to a change in attitudes**

Economic historians have studied the impact of changing labor markets on attitudes to women. As white-collar jobs became more prevalent, it became more acceptable for women to work outside the home. Educational, fertility, and participation choices also change. A study in India attempted to

assess how exposing communities to greater economic opportunities for adolescent girls change the attitudes of girls and the community around them. The program did this by linking communities with recruiters for high-paying telephone work in Delhi. The program led to a big increase in adolescent girls from the community receiving these white-collar jobs and then tested how this changed attitudes to adolescent girls.

The randomized evaluation found evidence of an impact on gender norms and practices. Households in treated villages were more likely to report that it was acceptable for girls to live alone before marriage, to work before and after marriage or before childbirth, and that the elderly should not be so ashamed for receiving help from their daughters. There is also lowered expectation of dowry. These results also suggest that social norms are malleable and that economic factors can lead to changes in attitude.

— Jensen, Robert. 2010. Returns to Human Capital and Gender Bias: And Experimental Test for India. Unpublished manuscript, UCLA.

○ **Exposure to TV soap operas where characters have small families reduced fertility**

A non-experimental but well-identified evaluation showed that as a particular brand of progressive TV soap operas was disseminated over time across rural Brazil, desired fertility and actual fertility fell. While the results mainly came from older women stopping having children at an earlier age, rather than adolescents postponing starting having children, the results are an intriguing glimpse into the power of mass media to change social attitudes.

— La Ferrara, Leiana, Alberto Chong, and Suzanne Buryea. 2008. Soap Operas and Fertility: Evidence from Brazil. Bread Working Paper No 172.

4.7 Where are the gaps in participation?

What is the relative effectiveness of education, income contribution, and life skills on participation in the household? Participation starts in the household. It is widely believed that education, income, and life skills may impact how much voice a person is given in household decision making. Would increasing the outcomes of young women along these dimensions increase their participation in household decision making? And if so, what is the relative effectiveness of these possible interventions?

Do changes at the community level affect participation of girls in the household? We see that mandated political reservation for adult women in the local councils increases their participation in communal decision making, and also led to changes in attitudes. Are there any spillovers from the women to the girls? Does increased and visible participation of women in the community increase the participation of girls in the household or in the community? How about community mobilization, whereby the community is encouraged to include girls and youth in general in decision making? does that affect the participation of girls now, in other projects, and/or the long-run?

Does the participation of girls change the decisions? The working (if unstated) assumption is that when it comes to making tradeoffs, the decision making body, however it is constituted, is going to sacrifice the well-being of those who are not represented. For that reason women and girls and youth must be represented,. If this is really the case, then greater participation by girls is likely to change the decisions that are reached and those decisions would reflect the interests of girls. But is that in fact what happens? Are the interests of girls underrepresented and not reflected in the decisions reached by the body? How would increased participation change the decision making processes and the decisions?

Are there spillovers to participation between various aspects of community life? If we increase the participation of girls in one area of decisions, does that change involvement in other

areas? Do the practical skills and self-efficacy that they may acquire via participation carry over to other dimensions of their life, or are the skills ad hoc?

What is the role of participating in peer-led projects? Can peer-led projects be a forum for learning participation for both the leaders and the rest of the participants? And are peer effects a useful way to spread participation? For example, can we harness peer-led health programs as a forum for teaching practical participation?

Does what works for women work for girls? We have seen how mandating participation can increase the voice of women in the community. Can mandating participation of girls in leadership positions in peer-led organizations increase the participation of girls?

5. Developing Assets

If money is power, then potentially the most effective way to empower adolescent girls is to improve their economic earning potential. Even if adolescents don't become higher earners, adolescence is a time for developing assets that can be turned into economic potential throughout the rest of life. In addition to directly impacting the future prosperity of the girls, the acquisition of those assets has the potential to change how society treats adolescent girls. In line with the Nike Foundation definition, we use the term "assets" here to mean financial assets, practical skills, land, and enterprises.

We proceed as follows: Section 5.1, Baseline, covers the evidence and gaps in 2006; Section 5.2 covers financial assets; and Section 5.3 covers microenterprise. We include evidence that has come out or been refined since 2006.

5.1 Baseline—the evidence and gaps in 2006

What we knew in 2006

Much of the literature on programming to directly increase economic opportunity, such as microfinance, tends to focus on women. There was little evidence on how to directly increase opportunities for girls. There was, however, some evidence that increased economic opportunities could change the type of education that girls received.

What the gaps and strategies to fill them were in 2006

1. *Other than education (covered elsewhere) what are the best ways of improving the economic opportunities for girls?*
2. *What is the impact of providing improved economic opportunities for adolescent girls?*

Programs here have tended to focus on women, but are beginning to focus on girls--in particular, skills development, livelihood training and financial assets.

Because of the paucity of information on the impact of development of assets for girls, we include below four evaluations on programs for women, two on the impact of microfinance, one on capital grants for enterprise development, and one on microfinance and social capital.

5.2 Access to credit

Microfinance is widely thought to be a powerful way to increase economic opportunities both for women and adolescent girls. There is relatively little rigorous evidence on the impact of microfinance for women, let alone for girls. Emerging evidence suggests that microfinance does help women start new businesses, but the impact on their economic position may not be as large as some had hoped.

Both of the evaluations examined the short run effects of microfinance, so it is still possible that microfinance can have bigger impacts on economic opportunity in the longer term. However, the findings are consistent with observational data suggesting that very few enterprises of microfinance borrowers translate into large businesses. Most enterprises stay small—enough for the borrower to barely subsist on, but hardly more.

Microfinance in India led to the creation of more businesses but does not increase profits or consumption—a randomized evaluation of a classic group-lending microfinance program for women in India found that the percentage of households creating new businesses rose from 5.3 to 7 with the introduction of microfinance. Greater competition did not force down profits in existing businesses, nor did access to finance lead to an increase in profits. One interesting result from the study is that microfinance seemed to help a certain group of borrowers invest in longer-term assets. While overall consumption did not change with microfinance, there was a shift in the pattern of consumption. Borrowers who were most likely to start a new business cut down on consumption of temptation goods (like eating out) and invested more in durable goods (for both their business and their home). While individuals could have made this switch without microfinance—i.e. cut down on temptation goods and saved the money to invest in durable goods—the results suggest that microfinance helps women (some of whom are adolescents) make short-term sacrifices for long-term gain.

- Banerjee, Duflo, Glennerster, and Kinnan. 2010. The miracle of microfinance? Evidence from a randomized evaluation, Unpublished Manuscript, J-PAL at MIT.

Microfinance in the Philippines led to increased profits for men but not for women—A microfinance organization in the Philippines extended loans to a random sample of individuals at or near the cutoff for its lending programs. Most of these individuals had existing businesses. Access to credit led to a rise in profits for men but not for women.

- Karlan, Dean and Jonathan Zinman. 2009. Expanding Microenterprise Credit Access: Using Randomized Supply Decisions to Estimate the Impacts in Manila..

5.3 Financial literacy skills

Financial literacy and entrepreneurship training interventions have the potential to increase the economic potential of girls (and the women they become). There is little evidence so far of the benefits of this type of training.

Financial literacy for adolescents

In addition to the ongoing evaluations of livelihood programs for adolescents, which have financial literacy components, there are other ongoing evaluations on financial literacy for adolescents.

- **Some ongoing evaluations of stand-alone financial literacy programs for adolescents**

There are also programs that focus on delivering savings education outside. We find two such programs in Uganda. Both are under experimental evaluation:

Micro-savings education in primary school to smooth the cost of education—a program in Uganda, designed to reduce cost-related dropout, helps schools and students open bank accounts and encourages children and families to save. The intervention could both incentivize and financially enable students to stay in school, and also smooth the payment of registration fees which are normally paid in a lump sum. What’s more, the program could also engender a culture of savings among students. The evaluation compares four different treatments: pure savings (i.e. the bank account alone), commitment savings (e.g. certificate deposit accounts with a penalty for early or non-education related withdrawals), commitment savings with matching, and pure matching. Which of these has the greatest impact? What is their relative effectiveness?

Lifetime of Saving, teaching the practice of saving—a program in Uganda provides financial literacy training and a specialized group savings product to youth with goals of producing “lifetime savers.” FINCA will develop a special youth group savings account to be offered to youth groups in the relevant treatment groups. This account will require those members of a club who are 18 or

over to act as signatories, while the names of all members of the club will be on the account. The clubs randomly selected to participate will be informed of this savings account (and encouraged to use it) by trained FINCA mobilizers. Clubs randomly selected to receive the financial literacy training will be led through a specially modified curriculum. This curriculum will be based on a general youth financial education curriculum developed by the Global Financial Education program (a partnership between Freedom from Hunger and Microfinance Opportunities.) Freedom from Hunger (FFH) will be sending a representative to Uganda to help with the adaptation of the curriculum to the Ugandan context and the specific purposes of the study. The evaluation is measuring the effects of the savings account and financial literacy on the financial awareness, attitudes, knowledge, and behaviors of Ugandan youth.

Financial literacy for adults

As there are no results on the effectiveness of financial literacy programs for adolescents we briefly review what is known about the effectiveness of financial literacy programs for adults. These tend to have been incorporated into microfinance programs. In other words both for women and adolescents, financial training tends to be offered as part of a larger program or as an appendage to another program, but hardly ever as a stand-alone program.

We know of two completed experimental evaluations on financial literacy programs for women:

- **Financial literacy training did not succeed in drawing households into the formal financial system**

An experiment in Indonesia compared the impact of financial literacy training and subsidies on whether a household opens a bank account. The training focused on how to open a bank account and the small grant ranged between US \$3 and \$14. The study found that financial literacy education has no effect on the likelihood of opening a bank savings account for the full population, but it did have an impact among those with low initial levels of education and financial literacy. In contrast, modest subsidies have large effects. An increase from \$3 to \$14 leads to a threefold increase (3.5percent to 12.7percent) in share of households opening an account. Drawing women into the formal financial system is only one potential benefit of financial literacy. However, financial training was not effective in achieving this goal, whereas price reductions were.

- Cole, Shawn, Thomas Sampson, and Bilal Zia. 2009. "Money or Knowledge: What drives demand for financial service in emerging markets?" Unpublished Manuscript, J-PAL at MIT and Harvard Business School.

- **Simple training focusing on rules of thumb may be more effective than intricate programming**

An experimental evaluation tests different approaches of teaching record keeping skills to micro entrepreneurs. They find that a simple, rule-of-thumb based approach to teaching does better than a more intricate training program. The results suggest that an improvement in these skills increases sales, and in particular helps to reduce months of very poor sales outcomes.

- Drexler, Alejandro, Greg Fischer and Antoinette Schoar. 2010. "Financial Literacy Training and Rule of Thumbs: Evidence from a Field Experiment", Unpublished Manuscript, J-PAL at MIT.

- **Some examples of ongoing evaluations of financial literacy for adults**

We know of many ongoing randomized evaluations. Here are some examples:

Financial literacy training and savings account labeling—a study in Ghana compares the effects of a savings product that allows the labeling of funds within an account so that deposits can be directed to a specific goal, such as health, education or business savings to financial training. Some of people with labeled accounts will receive six fifteen-minute financial literacy lessons.

Questions include: How financial literacy education impacts the decision to open a labeled savings account? Which combination of account type and education results in highest take-up as well as larger and more frequent deposits?

Financial literacy and business training on microfinance clients—a study in the Philippines is examining the effects on the MFI of offering business and financial literacy education to their clients. The services could improve client financial decision-making, lower default rates, increase loan sizes, and expand client base. But they add extra costs to the MFI and they put extra demands on clients' time and so could equally to higher dropout rates.

Financial Literacy, debt trap, and savings—a study in the Philippines is examining the effects of three financial interventions—financial literacy training, paying off debts from moneylenders, and commitment savings—on the long-run business outcomes of vendors and shopkeepers in public markets. These entrepreneurs usually borrow their capital from moneylenders at high interest rates.

Financial education via the radio and video—a program in Peru is examining the impact of standard financial education program for microfinance complemented by video clips and a radio program. Only the treatment group will be told about the existence of the radio program and they will also receive incentives to encourage them to tune in.

5.4 Entrepreneurship Training

Much of the entrepreneurship training that is done is in the context of microfinance and there are few programs or evaluations that focus specifically on adolescents. Training for adolescences tends to focus on the more general issues through livelihood training and that usually within the context of large programs with other goals. There are relatively few competed evaluations on entrepreneurship training and what there is provides mixed evidence—one program was not effective while another (more intensive) program was effective. Fortunately, there are a number of ongoing evaluations in this area.

Here is a summary of what we now know:

- A business training offered as part of microfinance improves knowledge but had no consistent effect on profits
- A business consulting services seemed to improve productivity

Below we provide fuller summaries of the programs and evaluations that generated this evidence.

- **Business training offered as part of microfinance improves knowledge but has no consistent effects on revenue, profits or employment.**

A program in Peru provided entrepreneurship training in the form of classroom-style interactive lectures for preexisting clients of a group lending microcredit program for women. The lessons focused on basic business and recordkeeping skills, and targeted micro and not small and medium enterprises. The randomized treatment groups received thirty to sixty minute entrepreneurship training sessions during their normal weekly or monthly banking meeting over a period of one to two years. The randomized comparison groups remained as they were before, meeting at the same frequency but solely for making loan and savings payments.

An evaluation examined the marginal impact of adding business training to group-lending program for these female micro-entrepreneurs. It found that business knowledge increased, but that no consistent improvements occurred for business revenue, profits, or employment. There was, however, some suggestive evidence of stronger impacts for those with less interest in receiving

training as self-reported in a baseline survey as well as some suggestive evidence of an increase in the revenues during bad months.

Another finding is that client retention went up for microfinance institution. This suggests an increase in satisfaction or happiness with the overall service and also that the entrepreneurship training may have been perceived as the ancillary service it was.

- Karlan, Dean, and Martin Valdivia. 2011. "Teaching Entrepreneurship: Impact of Business Training on Microfinance Institutions and Clients". *Review of Economics and Statistics*, forthcoming.
- **Business consulting services improved productivity**

In a sense, the move towards entrepreneurship training is implicit recognition that women may lack more than just access to financial capital; they may also lack the human capital they need to make a success of their business effort, and in particular they may lack managerial skills. Entrepreneurship training could increase this, but in the short term it is possible provide consulting services by teaming the entrepreneur up with a local professional. This is similar to the tradition of providing agricultural extension services to farmers; only here the consulting services are like business extension services for micro-entrepreneurs.

A randomized evaluation examined the effect of these business consulting services to small and medium enterprises in Mexico. The small businesses were paired with a consultant from one of a number of local management consulting companies for the period of one year. Consultants were asked to (1) diagnose the problems that prevented the firms from growing, (2) suggest solutions that would help to solve the problems and (3) assist the firms in implementing the solutions. The cost of the consulting service was highly subsidized. Early results show that the consulting services had a positive effect on firms' productivity. Productivity increased significantly, either measured as the residual from a productivity regression or return on assets. Monthly firm sales and profits are also higher in the treatment group than in the control group (78 percent and 110 percent, respectively). The estimated effects are economically large but are only significant at the 10 percent level, likely because the data is noisy and the sample size is relatively small (433 firms in total). The described impact of consulting services is much larger than the estimates of improved access to capital for small businesses found in the literature.

There are many questions: How do the effects disaggregate by gender? What are the long-run effects: is there imparting of skills, and do the business owners learn to go it on their own? How does it work for micro-entrepreneurs, particularly those in poorer parts of the world?

- Bruhn, Miriam, Dean Karlan, and Antoinette Schoar. 2010. "The Impact of Offering Consulting Services to Small and Medium Enterprises: Evidence from a Randomized Trial in Mexico," mimeo.
- **Some ongoing business training programs**

We also know of many ongoing evaluations on entrepreneurship training for adults. Here are some examples:

Returns to micro and small-enterprises management consulting—a program in Ghana pairs with MSEs, initially offering intensive support focusing on business development and management, and then providing routine consulting services and advice throughout the year. Half the businesses will receive only consulting services and half will receive a grant of \$200 to invest in their business. The study examines the individual impact of the consulting services, capital, and a combination of both.

Training women to grow microenterprises—an evaluation in Sri Lanka found very low returns to capital for female-owned microenterprises (see below, under Developing Assets). This may be because women start their businesses in sectors that are dominated by women, and these sectors also have low efficient scale and little scope for growth. The program provides business

training and capital to women with two goals: getting women who are considering starting a business to do so in sectors that have more scope for growth, and getting women in these low-return sectors to switch to more profitable sectors. Separate business training courses are being offered to out-of-work women who intend to join the work force the following year as well as to women working in female-dominated low-return occupations. Half the women who complete the training will also receive a cash grant. An important innovation of this program is that it targets women who are not enrolled in a microfinance organization. This helps us to estimate what the returns to training and capital grants are on the average poor woman and to identify those who are not being well-served by existing institutions.

Enterprises for ultra-poor women after war—Young women and girls in particular have suffered economically and educationally from twenty years of war in northern Uganda. An international organization has developed an innovative program of micro-enterprise development to help transition between humanitarian and development assistance in a post-conflict environment, which could help the large number of extremely vulnerable young women--especially young mothers--in northern Uganda. There are four components to the program: brief business skill training (BST), group formation and dynamics training, an individual start-up grant, and regular follow-up by field staff.

5.5 Capital Grants

- **Small capital grants to microenterprise owners led to an increase in profits for male owners, but not for female owners**

If women have more restricted access to capital and credit than men, then it is possible that capital grants could advance the entrepreneurial activities of those women who do not have access to microfinance.

A program in Sri Lanka gave capital grants to microenterprise owners. Half of the capital was given as cash with no conditions attached (because money is fungible) and half were purchases of equipment or working capital selected by the business owner. Two thirds of the grants were \$100 and the rest were \$200, representing between 50percent and 100percent of the baseline median capital stock.

Monthly profits increase by 9percent for businesses owned by men. Women fail to invest any portion of the small grant but do invest as much or more of the larger grant, but they still realize no return. Both investment rates and returns to investment decrease as the proportion of female owners in the sector increases. And large differences between sectors remain even when controlling for sector. Even though the sample sizes are smaller beyond the male/female division, the study also finds evidence that is consistent with more efficient outcomes where the enterprise owner has more decision making power in the household or where the spouse is more cooperative with regard to the management of the enterprise. The results do not mask differences in household liquidity, ability, or attitudes towards risk, and are not explained by division of labor or social constraints. This suggests that in trying to understand the outcomes of men and women, it is important to consider not just their capital constraints, but also competing demands on them from the household as well as intra-household bargaining dynamics.

The authors also suggest (see above) that women get worse returns because they herd into sectors dominated by women, but these sectors also have low returns and present little change for growth. This is something to keep in mind when considering the menu of skills to include in a livelihoods program, for example.

- de Mel, S., D. McKenzie and C. Woodruff. 2008. "Are Women More Credit Constrained? Experimental Evidence on Gender and Microenterprise Returns." *American Economic Journal: Applied Economics*, 1(3):1-32.

5.6 Vocational training

In 2006 there was very little rigorous evidence on the effectiveness of vocational training programs or what made them most effective. Research done for the 2007 World Development Report shows that rates of return to most training programs are low and that few programs pass cost-effectiveness. In general, vocational training was found to be most effective for those at the high end of the wage distribution but often had less effect for those at the bottom. There now is more evidence on the impact of vocational training, though most of this evidence comes from programs in Latin America, and a need for more research on the returns to vocational training in Asia and Africa remains.

Here is a summary of what we now know:

- Vocational training delivered in a trade school and combined with an apprenticeship has been shown to work for both men and women in Latin America. It increases earnings and formal sector employment and it reduces occupation segregation.
- These programs are thought to work best when combined with work placement (there was no comparison to training without job placement). They are also thought to work for women because they have included components expressly design to facilitate the participation of women, such as providing a childcare stipend.
- Informing girls of the relative returns to training in male- relative to female-dominated trades can increase girls' enrollment in higher return vocational training courses, such as construction, mechanics, driving, and computers.

Below we describe the models of vocational training as well as provide fuller summaries of the programs and evaluations that generated this evidence.

The five models of vocational training

We start by looking at the models that have been used to deliver vocational skills. There are five models:

Secondary school practical subjects—in some secondary school systems, students have to take what are called “practical subjects” in addition to their traditional academic subjects (e.g. geography, history, and so on). For example, in Zimbabwe, students in secondary school often have to take two “practical” subjects. These may include, agriculture, bricklaying, sewing (called “Fashion and Fabrics”), cooking (called “Food and Nutrition”), technical drawing (draftsmanship), woodwork, metalwork, and bookkeeping (accounting). Of course what subjects are available to the students depends on the resources of the school: in order to offer, say, metalwork, a school must have a metal workshop.

We do not know of any evaluation of the impact of these practical subjects.

Apprenticeships—this involves learning a trade on the job. We do not know of an evaluation of apprenticeship programs.

Technical trade school and apprenticeship—in this model, vocational training is given as a form of “tertiary” or post-secondary education. Students that do not continue on the academic track after secondary school go to what are sometimes called “technical colleges” where they learn a trade. Specialties include mechanics (aircraft, train, automotive), accounting, construction, secretarial, boilermaker, and electrician. These are formal schools on par with (primary) teachers’ college, agricultural college, and nursing college. The training can take years. Because it aims to produce professional artisans who will work in the formal sector, the classroom learning is often combined with an apprenticeship in industry. The colleges can be private or public.

We know of two evaluations of this model, both of them in Latin America (Peru and Colombia). We discuss these below.

Community recreational centers—some community recreational centers will have, along with other recreational facilities, staffed workshops where people can learn certain skills, such as carpentry, welding, typing, sewing, wound dressing, and so on. The courses are often very short and geared towards the one skill. (A good way to think of these training centers is to think of recreational hobby shops at some American colleges, where students can go and work wood or make jewelry under guidance from the shop manager.) These are often available in urban communities.

We do not know of any evaluations of this model.

Livelihoods training—this is often given by NGOs and other groups in the community (such as religious groups or women’s groups). The focus is on teaching income-generating activities, such as how to produce goods (batiks, knitwear, soap, clothes, cookware, cups, dishes made from salvaged metal); enterprises at local markets; and small-scale import and export (for example, women from Zimbabwe would take their batiks to South Africa by bus, sell them there, and buy goods to resell in Zimbabwe). NGOs in South Asia have used this model to train girls, for example, on cultivating crops and vegetables, poultry farming, poultry and livestock vaccination, tailoring, hairdressing and other non-agricultural businesses, such as community health work.

NGO income-generating training programs are almost never given in isolation; they are often part of a larger program. They have rarely been subject to impact evaluation. We know of two quantitative but non-experimental evaluations of this type of program that have been completed. There are two ongoing experimental evaluations of this model, one of which has preliminary results.

As livelihoods training focuses mainly on the development of financial assets we discuss the evidence on it under “Assets” in Section 5.

What is the impact of technical training combined with apprenticeship?

Two randomized evaluations found this approach to be very effective. They found it works best when it is combined with work placement and with measures expressly facilitating the participation of young women.

- **Technical training in Colombia (Jovenes en Accion)**

The program provided the following: (1) six months’ training (3 in-classroom, 3 on-the-job), with the classroom training being provided by nonprofit and for-profit institutions, and on-the-job training by legally registered companies as unpaid internships; and (2) a living stipend, including money for childcare: trainees without children received a stipend of \$2.20 a day for food and transportation, but women with children under 7 received a stipend of \$3.00 a day, with the extra 80 cents going toward childcare.

The randomized evaluation examines the following questions: Does vocational training impact employment, earnings, hours worked? Do the effects vary by gender?

The evaluation finds that women spent more time on training. The program increased probability of employment, probability of formal sector employment, probability of having a contract, and days and hours worked for women. Employment effects were smaller for men. The program increased salary earnings of both men (8percent) and women (18percent), and the internal rates of return are higher for women (14percent) than for men (5percent).

This suggests that vocational training is promising for youth employment in middle-income countries. More research is needed to see if the results hold for poorer countries, such as those in

sub-Saharan Africa. Additional support for women with children may increase their ability to take advantage of programs.

- Attanasio, Orzio, Adriana Kugler, and Costas Meghir. 2008. Training Disadvantaged Youth in Latin America: Evidence from a Randomized Trial. Unpublished Manuscript, NBER Working Paper No 13931.

- **Technical training in Peru (ProJoven)**

This randomized study confirms the positive results of a similarly designed vocational training program in Peru. Non-randomized evaluations of this program also found no difference between men and women on hourly wages. There were, however, some differences in employment rates and occupational segregation. For employment rates, training had greater impact for women than for men, with employment rates for women being 6percent higher than comparable women who did not participate after 12 months, and 15.2percent higher after 18 months. The employment rates of participating men were 11percent lower than for comparable non-participating men. The evaluation also suggests that the program reduced occupational segregation in the targeted group.

- Ñopo, Hugo, Miguel Robles, and Jaime Saavedra. 2007. "Occupational Training to Reduce Gender Segregation: The Impacts of ProJoven." Research Department Working Paper #623. Washington, DC: Inter-American Development Bank.

- **Technical training in Kenya**

This program provided young people with vouchers to attend a trade school of their choice to complete a course in a trade of their choice. Preliminary findings of a randomized evaluation to estimate returns to vocational training in Kenya found that providing simple, actionable information to girls on the relative returns to female-dominated trade (e.g. beauty and tailoring) and male-dominated trade (e.g. construction, mechanics and computers) led to a 10 percentage point increase in girls' enrollment in higher return, traditionally male-dominated courses.

- Hjort, Jonas, Michael Kremer, Isaac Mbiti and Edward Miguel. Vocational Education in Kenya: Demand, Gender and Impacts.

5.7 Livelihoods training

What is the impact of livelihoods training?

In a recent article, Elizabeth Katz reviews evaluations of livelihoods programs that were conducted by the Population Council, one of the major players in this area. None of the evaluations were experimental and some of the training programs were not of high quality, so it is difficult to draw conclusions.

A non-experimental evaluation of a six-day livelihoods program in India did not improve income for adolescent girls—a program called Action for Slum Dwellers' Reproductive Health Allahabad (ASRHA) integrated vocational training and saving opportunities into a reproductive health program for girls 14-19 in Uttar Pradesh, India. The program was a training course over six days, with the first four focusing on reproductive health and the last two focusing on peer-led training. The training focused on sewing, weaving, and jewelry-making; girls were also given help opening a saving account at either a post office or a bank. The evaluation used a non-random and unmatched comparison group of adolescent girls who participated only in the reproductive health component, and found no effect, with only 10percent of the trained girls reporting income from selling products they had made. However, this training program was extremely short, almost a parenthetical add-on to a program that was mainly about reproductive health.

A non-experimental evaluation of the BRAC training program was more successful—A second program, Kishoree Abhijan, was run by BRAC and another Bangladeshi NGO, the Center for Mass Education and Science. It covered life skills through mentoring, training on gender and discrimination in health and nutrition, legislation and legal rights, and livelihood skills, including savings and credit. The evaluation relied on propensity score matching and found an increase in labor market participation in Bangladesh during the course of the program.

- Katz, Elizabeth. 2008. "Programs Promoting Young Women's Employment: What works?" The Adolescent Girls Initiative, The World Bank.

There is beginning to be experimental evaluation in this area, both in Asia and in Africa. We know of two randomized impact evaluations, both with funding from the Nike Foundation: *Kishoree Kontha in Bangladesh*, being evaluated by Rachel Glennerster and Erica Field; and *BRAC's Adolescent Development Program (ADP) in Uganda*. This latter provides livelihood training in six demand-driven activities (cultivating crops and vegetables, poultry farming, poultry and livestock vaccination, tailoring, hairdressing and other non-agricultural businesses, such as community health work). It is being evaluated by Bandeira and her colleagues. There are some initial results from this evaluation:

- **Preliminary results from an evaluation in Uganda suggests that livelihoods training may be filling a gap for out-of-school girls and that, contrary to policymakers' fears, the training does not draw girls away from school**

Training programs can attract out-of-school adolescents without reducing school attendance of others. The evaluation is not complete and there are no results on how effective the training is; however, results so far suggest that young, single mothers who are alienated from their families are more likely to participate. Girls from poorer households are more likely to participate. Girls who are currently in school are less likely to participate.

These descriptive results have some implications for the design and management of programs for adolescents. They suggest that these livelihood programs may be filling an unmet need, particularly among single mothers and poorer out-of-school girls. An important finding is that, contrary to the fears of many policymakers, the programs do not seem to be drawing girls out of school. This may have to do with perceptions of the program to the beneficiaries and their guardians. This may change if girls who participate begin to have better economic outcomes than girls who remain in the academic track for longer.

- Bandeira, Oriana, Robin Burgess, Markus Goldstein, Selim Gulesci, Imran Rasul, and Munshi Sulaiman. 2009. "Participating in Adolescent Training Programs: New Evidence from Uganda." Unpublished Manuscript.

5.8 Recruiting and job placement

Greater earning potential and attitudes towards girls

As discussed above, a study in India examined this question by linking some communities with recruiters for high-paying, white-collar jobs.

The evaluation finds that recruitment and placement services increased employment by 4 percentage points among younger women, with no effect on older women and men. The result was that the community started investing more in girls. Girls in treatment villages were 5 percentage points more likely to be in school. They weighed 0.97kg more and were 1.24cm taller, reflecting greater nutrition and medical care. There was no effect on boys and the investment in boys did not take a hit.

There is also evidence of an impact on gender norms and practices. Households in treated villages were more likely to report that it was acceptable for girls to live alone before marriage, work before and after marriage or before childbirth, and that the elderly should not be so ashamed for receiving help from their daughters. There is lowered expectation of dowry.

These results also suggest that social norms are malleable and that economic factors can lead to rapid social and cultural change.

- Jensen, Robert. 2010. "Returns to Human Capital and Gender Bias: And Experimental Test for India." Unpublished manuscript, UCLA.

5.9 Where are the gaps in assets?

What is the impact of financial literacy? This remains an open question, partly because financial literacy programs may have focused on women, and specifically on the links between literacy and access to microcredit. There are now beginning to be programs on youth, including girls. These programs have also expanded the set of financial products to include savings for education and health. The evaluations seek to compare the impacts on savings of learning about products and those of learning and also having a small seed grant to open a savings account.

What are the impacts of entrepreneurship and business training? Entrepreneurship and business training programs have been delivered to women. Can similar programs have a greater impact on girls? Would the programs work better in conjunction with vocational training? If so, what combination or sequence would work best? How would teaching girls to recognize opportunity and to navigate the economic environment work? Would learning to do an environmental scan work better than being provided information on the relative returns in various industries?

What is the impact of capital grants? We see that for women providing capital grants alone did not increase profits, but what would be the impact for girls making that school/training program transition to work? Would capital grants work best combined with services on the relative returns in various industries and business training?

What is the impact of providing productive assets for girls? For example, Heifer International provides livestock to poor families. What is the impact of providing such assets to girls? What is the impact on their well-being, on attitudes towards girls, and on participation?

What are the long-term impacts of economic empowerment? Few programs have achieved economic empowerment for girls. Those that have been able to, have done so in the narrower context of cash transfers. But there are potential tensions between such short-run empowerment and long-term economic empowerment. What are the long-term impacts of such programs on girls? What are their impacts compared to other forms of economic empowerment?

What is the impact of vocational and livelihoods training in Africa? We have seen that vocational training has marked impacts on the employment and earning potential of young women in Latin America. Can such programs work in Africa, where countries are, on average, poorer? Ongoing evaluations in Kenya and Uganda will provide some answers on these questions.

6. Safety

Safety was not a stand-alone theme in the 2006 review. While there is work on child marriage, there is little experimental work on other aspects of safety. Section 6.1 summarizes three forms of vulnerability—child marriage, child labor, and gender-based violence. Section 6.2, 6.3. and 6.4 summarize work in these three areas in turn.

6.1 Forms of vulnerability

Child marriage—Early female marriage remains common in much of the developing world. It is often associated with worse socioeconomic and health outcomes for young women and their children. Adolescent girls who start childbearing before they reach full physical maturity, as many married adolescents do, have higher rates of maternal morbidity and mortality. When they marry, girls are usually forced to drop out of school to work full-time in the household. This limits their education and economic opportunities. Women with less education and income have poorer health outcomes, higher fertility, and less healthy children. The status of young brides within the household is often low, with little bargaining power, less reproductive decision making, and vulnerability to sexual, physical, and psychological violence. Married girls often have limited mobility, reducing their access to health services. Raising marriage until a reasonable age, at least until the age of consent, has the potential to both directly and indirectly benefit the health and well-being of today’s adolescent girls, as well as the health and wellbeing of their children.

Child labor—like child marriage, child labor also curtails childhood and increases the vulnerability of children. Whereas child marriage disproportionately affects girls, child labor affects both boys and girls.

Gender-based violence—The United Nations Declaration on the Elimination of Violence against Women defines violence against women as “any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivations of liberty, whether occurring in public or private life.”

6.2 Preventing child marriage and adolescent childbearing

Observational studies show that women who have children while they are still adolescents tend to have much worse health outcomes, as do their children. Because those who marry young are different in many ways from those who marry later, it is difficult to tease out the causal impact of child marriage and pregnancy. However, there are beginning to be experimental evaluations in these areas as well as of programs designed to reduce child marriage and adolescent childbearing.

Here is a summary of what we now know:

- Keeping girls in school reduces marriage rates
- CCTs for education can reduce marriage rates among out-of-school girls
- Scholarships for girls have been found to have effects on age of marriage

Below we provide fuller summaries of the programs and evaluations that generated this evidence.

- **Keeping girls in school delays marriage**

Reducing the cost of education keeps girls in school and delays marriage—a program in Kenya reduced the cost of schooling by providing school uniforms. Girls in those schools were 2.4 percentage points less likely to drop out of primary school by 2005, and 4.5 percentage points more likely to have graduated from primary school by 2007. These effects correspond to changes of -13

percent and +9 percent, respectively. By the end of 2005, girls who received uniforms were 1.7 percentage points less likely to be married .

- Duflo, Esther, Pascaline Dupas, and Michael Kremer. 2010. "Education and Fertility: Experimental Evidence from Kenya." Unpublished Manuscript, J-PAL at MIT.

Scholarships can keep girls in school and delay marriage—a program in Ghana is providing scholarships for secondary school for both boys and girls. Preliminary results show that marriage rates are lower among scholarship recipients.

- Duflo, Esther, Pascaline Dupas, and Michael Kremer. 2010. "Report to the Ghana Ministry of Education on Innovations for Poverty Action's Secondary School Education Project."

Scholarships to private schools in Colombia also encouraged girls to stay in school and reduced adolescent cohabitation.

- Angrist, Joshua, Eric Bettinger, Erik Bloom, Elizabeth King, and Michael Kremer. 2002. "Vouchers for Private Schooling in Colombia: Evidence from a Randomized Natural Experiment." *American Economic Review* 92(5): 1535–1558.

- **Bringing girls back to school can delay marriage**

CCTs can bring girls back to school and reduce marriage rates—a program in rural Malawi provided cash transfers for girls: monthly transfers of varying size to the girl and to the household, conditional on school attendance. The size of the transfer to the girl randomly varied between \$1 and \$5; transfers to households randomly varied between \$4 and \$10; the minimum transfer was \$5 per month, the maximum was \$15, and the average was \$10. The program also paid school fees in full directly to the secondary school.

An ongoing evaluation is looking at effects on health, including age at first marriage, childbearing, and reported sexual behaviors. Preliminary results show that the intervention reduced marriage rate among girls who were out-of-school at baseline. There was no effect on propensity to get married for in-school girls. There was reduced childbearing among baseline out-of-school girls; no effect on childbearing of in-school girls; reduced onset of sexual activity for both in- and out-of-school girls; reduced risky behavior (i.e. increased condom use, reduced frequency of activity, and reduced sex with older partners).

- Baird, Sarah, Ephraim Chirwa, Craig McIntosh, and Berk Ozler. 2009. "The Short-term Impact of a Schooling Conditional Cash Transfer Program on the Sexual Behavior of Young Women." *Health Economics*.

- **Ongoing evaluations—using incentives to delay marriage**

A conditional in-kind transfer program in Bangladesh is using incentives to delay marriage—the program provides goods (food and cooking oil) of equivalent value disbursed monthly to all unmarried girls, aged 12 to 17, in selected communities. This allows the experimental evaluation of delaying marriage, which cannot be randomly assigned, by mimicking the random assignment of delayed marriage to a subset of girls as closely as possible by providing financial incentives to families of unmarried adolescent girls in a randomly chosen subset of villages.

6.3 Preventing child labor

Here is a summary of what we now know:

- Education CCTs increase participation in school and reduce child participation in the labor market

Below we provide fuller summaries of the programs and evaluations that generated this evidence.

- **CCTs have a negative effect on child labor**

PROGRESA reduced labor participation in Mexico—the CCT increased school attendance for boys and girls, and participation of boys in the labor market declined between 15 to 25 percent, relative to the probability of participating prior to the program.

- Skoufias, Emmanuel. 2005. “PROGRESA and its Impact on the Welfare of Rural Households in Mexico,” Research Report No. 39, International Food Policy Research Institute Washington, D.C.

A CCT in Ecuador also had a negative effective on child labor—a randomized evaluation in Ecuador showed that CCTs had large, positive effects on school enrollment, and large, negative effects on child labor. The effects are larger than for PROGRESA, come from a smaller transfer than that made in PROGRESA, and also in a country poorer than Mexico, which has lower enrollment rates. An interesting aspect of the program is that the enrollment requirement was never explicitly enforced or monitored in Ecuador. The larger impact may come from the lower baseline enrollment. There is no difference by gender, which may be due to the fact that, according to the authors, there is no gender disparity in educational attainment in Ecuador—enrollment rates are marginally higher for girls than for boys. Mean years of schooling of the adult population (ages 15 and older) is 6.5 years.

- Norbert Schady and Maria Araujo. “Cash transfers, conditions, school enrollment, and child work: Evidence from a randomized experiment in Ecuador.” World Bank Policy Research Working Paper 3930, 2006.

- **Some ongoing evaluations on child labor**

An evaluation by Leigh Linden and Erica Edmonds is comparing a number of interventions targeting children working in the carpet industry of India, Nepal, and Pakistan.

6.4 Preventing gender-based violence

Here is a summary of what we now know:

- The HIV education program Stepping Stones in South Africa reduced intimate partner violence

Below we provide fuller summaries of the programs and evaluations that generated this evidence.

Reducing GBV for women

Programs have focused on potential victims, the would-perpetrators, and the community at large.

Programs for women (potential victims and survivors)—these include programs that focus on women’s life skills, social services such as safe houses and other places of refuge, and health services. Other programs are more indirect and general, focusing on improving women’s outside options; this class of programs is based on the belief that reduced economic and social opportunities increase the likelihood that women will remain in abusive relationships.

For potential perpetrators—these programs usually target men. They include attitude change programs, treatment for substance abuse, and so on.

For the community at-large—these programs are based on the belief that if a community is permissive towards violence against women in its laws, institutions and attitudes, then gender-based violence is more likely to happen. Programs aim to change attitudes, improving laws and policies, and increasing access to justices (via improved laws and policies).

What do we know about reducing GBV?

○ Prevalence of GBV is very high in developing countries

Recent surveys by the World Health Organization (WHO) and by ORC Macro Demographic Health Surveys provides estimates of the prevalence of violence by intimate partners (a subset of gender-based violence).

According to the WHO survey across 15 sites in 11 countries—in urban areas, between 12.9 percent (Japan) and 48.6 percent (Peru) of women have suffered physical violence at some point in their lives. In rural areas, the lifetime prevalence rates for physical violence range from 33.8 percent (Brazil and Thailand) to 61 percent (Peru). And for sexual violence by an intimate partner, the rates range from a low of 6.1 percent in urban Japan to a high of 58.6 percent in rural Ethiopia.

According to the ORC Macro through the demographic across nine countries—Lifetime prevalence rates for physical violence by an intimate partner range from a low of 17.5 percent in Cambodia to a high of 48.4 percent in Zambia.

Cited in:

- Morrison, Andrew, Mary Ellsberg, and Sarah Bott. 2007. "Addressing Gender-based Violence: A Critical Review of Interventions." *The World Bank Research Observer* 22(1):25-51.

○ Impact of GBV programs in developing countries

Few of the GBV efforts are rigorously evaluated for impact. This may be partly because the programs are only being taken up now in developing countries, and the research at this early stage is focused more on documenting the extent and forms of GBV in developing countries. This background research is important for more incisive programs; it tells us what special needs exist and what interventions to try, and how to adapt (if we should adapt) programs from richer countries for developing countries.

Thus we know little about the causal effects of programs aimed at reducing GBV and the effects of reducing GBV on the outcomes of women and their families.

The Stepping Stones program in South Africa reduced violence against women in the short-term—A randomized evaluation of the Stepping Stones program in South Africa found that there was some evidence of reduced intimate partner violence (IPV) at 12 months. There was also evidence of a reduction in rape/attempted rape at 12 months.

- Jewkes R, Nduna M, Levin J, et al. "A cluster randomized-controlled trial to determine the effectiveness of Stepping Stones in preventing HIV infections and promoting safer sexual behaviour amongst youth in the rural Eastern Cape, South Africa: trial design, methods and baseline findings." *Tropical Medicine & International Health*. Jan 2006;11(1):3-16.
- Jewkes R, Nduna M, Levin J, et al. Impact of stepping stones on incidence of HIV and HSV-2 and sexual behaviour in rural South Africa: cluster randomised controlled trial.[see comment]. *BMJ*. 2008;337:a506.

Cited in:

- Mavedzenge, Sue Napieralal, Aoife Doyle, and David Ross. 2010. "HIV prevention in young people in sub-Saharan Africa: A systematic review." Infectious Disease Epidemiology Unit, Department of Epidemiology and Population Health, London School of Hygiene and Tropical Medicine: <http://www.evidence4action.org/images/stories/documents/srgreview.p>

Treatment programs in the US had mixed effects—Morrison, Ellsberg, and Bott (2007) review the impact of treatment programs for batterers in the US.

“The effectiveness of these programs in developing economies has not been evaluated. What knowledge we do have about their effectiveness comes from developed countries, primarily the United States. Of five randomized trials of court-mandated batterer programs in the United States, three found no effect on the probability of re-offending (Dunford 2000; Feder and Dugan 2002; Labriola and others 2005), one found a lower probability of recidivism (but had a very small sample size; Palmer and others 1992), and one produced ambiguous results (battering was lower among men who went through a program, but since no cognitive changes were produced, it hypothesized that the result was due to court monitoring of offenders; Davis and others 2006). There may be other reasons for funding batterer programs aside from reducing violence, however. Victims may prefer sanctions that do not jeopardize the perpetrator’s ability to earn an income, and judges may prefer an intermediate sanction between no action and jail time (Labriola and others 2005).”

- Morrison, Andrew, Mary Ellsberg, and Sarah Bott. 2007. “Addressing Gender-based Violence: A Critical Review of Interventions.” *The World Bank Research Observer* 22(1):25-51

6.5 What are the gaps in safety?

We know very little about direct programming in this area, in particular as it affects girls. At this stage in our knowledge the main gap is descriptive. What is the nature and extent of these forms of vulnerability in developing countries? Are there more forms of vulnerability? How do they interact with poverty and with the long-standing structural gender inequalities? Knowing this we can start to ask more germane questions and to design more cogent interventions. Questions will range from the use of media to raise awareness, whom to target for maximum effectiveness (e.g. the woman, the family, the community), the target of lobbying and advocacy (for example, would it be better for civic groups to target the government with the aim of increasing enforcement of laws and increase recognition of the crime or would it be better to target the often parallel traditional sanction and resolution structures?)

7. General Takeaways and Gaps

This section concludes that main review. It covers the general takeaways and the cross-cutting gaps.

7.1 General takeaways

Despite the critical nature of adolescence as a transitional period in people's lives when decisions are made that will have profound long-term influences on their future, there is remarkably little research specifically targeted at adolescents—girls or boys. Much of the work presented in this review was not originally designed to address the particular challenges of adolescent girls. Some of it was designed to look at students, many of whom turn out to be adolescents. Some of it was designed to look at women, many of whom turn out to be adolescents.

While the evidence presented here is very relevant to the Nike Foundation in thinking about how to shape programming for adolescent girls, this review draws attention to the need for more evidence that is specifically designed to understand the particular needs of adolescents and how programs should best be designed with their particular needs, desires and ways of thinking..

This need is underlined by the general lesson that comes strongly out of the evidence summarized here. In particular, across sectors we find the same general findings:

Adolescent girls should not be thought of as passive recipients of help, unable to make change happen on their own. Providing adolescent girls with specific information about the decisions they face have led to dramatic changes in behavior by girls in a number of different areas—from health to education to career choice.

Adolescents and their parents respond to economic tradeoffs and incentives. While this is obvious at one level, many of the conventional wisdoms about adolescent girls focus more on cultural barriers. While these are clearly important in some contexts, large changes in outcomes can be achieved by changing economic tradeoffs—for example by reducing costs (e.g. for accessing education or health services) or improving benefits (e.g. by improving work options for girls).

Seemingly entrenched social attitudes can be changed—there a number of powerful cases where exposing communities to a new paradigm has changed attitudes to women and girls. Seeing others take positions of leadership or take on new careers has changed the attitudes of adolescents. It has also changed the way society treats girls and women. While this is very encouraging, not all programs designed to change attitudes have worked--so there is a need for more understanding of what works to promote attitudinal change and what does not.

7.2 Key gaps

What are the major gaps in the literature? We concluded each of the sections in this review by highlighting the gaps in that area. In this section we address the overall gaps: gaps that cut across more than one sector.

- **Basic data on what adolescents want/need**

In reviewing the literature it became apparent that a lot of programs were poorly designed, and that part of the problem was that they were not very well-versed in the needs and wants of girls within their particular context. It seemed sometimes that the programs were solving a problem for a general developing country girl and not for the particular girls who were participating in their program, and for global rather than local problems. Part of the problem may have been that they did not have enough data on the situation on the ground, the opportunities and constraints that the

girls faced, and how they dealt with the problems they faced. And because they did not have this basic descriptive research, the program implementers may have had trouble adapting commonplace solutions to the context, even when girls did face the particular problem solved by the transplanted program. It is possible that providing more basic descriptive research about the needs and wants of girls--not women but girls--could go a long way in improving the quality of programs that are being implemented and sometimes tested.

- **How different are adolescents? Do they respond to different tradeoffs and to different messages? How important are youth-friendly services?**

Besides knowing their needs and how they achieve them, another important question is how different adolescents are from other age groups? What tradeoffs do they make? How do they deal with risk? These questions modulate what adolescents see as their problems and the approaches that they will take to resolve those problems. Answers to these questions would help to more effectively answer other questions, such as those on framing and messaging to adolescents, as well as on the importance of youth-friendly services.

- **Adolescence and habit setting, peer effects**

As an age of transition, adolescence is a time when many habits and behaviors become established—from smoking, drinking and sexual habits to patterns of study and work. Decisions made during adolescence can therefore have long-term implications. Yet we know relatively little about how these decisions are made by adolescents and what the best way to influence them is. Work in rich countries suggest that peers are particularly important in influencing adolescents—is that true in different parts of the developing world?

- **How central are the interactions among the sectors?**

We see that reducing the cost of education or providing an education CCT affects sexual and reproductive health outcomes, such as pregnancy. What other interactions are there and how central are they to the outcomes in the other sectors? What is the effectiveness of such distal programming relative to more direct/proximal programs? For example, how do education and health compare to economic empowerment programs when it comes to raising the economic well-being of girls and the women that they become?

- **Who else and what else is the proper target of some empowerment programs?**

In addition to having the resources and the competencies they need to impact important life outcomes, empowered women also have an enabling institutional environment: the informal and formal rules and regulations that govern interactions between people. The actions a person can or cannot take in pursuit of their chosen outcomes depend on whether the institutions and the other actors enable it. But institutions are concepts and they become concrete barriers in the actions of other people. It is other people within her context that can either bar or enable the woman. What they will do depends on, among other factors, their attitudes and the threats to their own well-being that they perceive will come about as a result of in female empowerment. Because other people matter, we have to consider them as potential targets for empowerment interventions. Not doing so and targeting girls exclusively may be something like trying to fight malaria without considering the lowly mosquito. Who else should be targeted and how? Should we also target the boys, who could grow up to be the next generation of barriers to women's empowerment? The parents? Which parents: the mother on whom the burden of passing on attitudes falls at the start? The community? And if we do target boys as well, how much more effective is that than concentrating on the girls exclusively? If boys are to be targeted at what age should they be targeted?

Should the institutions also be targeted? If so, which ones, and how?

- **Is it better to do combination packages that reinforce each other versus lower-cost targeted programs that reach more people?**

Combination packages combine multiple modules, each focused on tackling a particular problem. Is it better to do such expansive programs or to do an intensive module focusing on a given problem? Is it that the module only works or works better when they are all implemented, or is it that an intensive module can be very effective in the empowerment dimension it targets and have spillovers in other dimension?

- **Can we get improvements without addressing deep structural gender inequality?**

If the foundation of lack of empowerment is in structural gender inequalities, is it possible to get empowerment without changing these? How can these be changed, i.e. which programs are effective?