

# How to Change Behavior

## A Menu of Practical Options

September 26, 2019

IEG in collaboration with Mind, Behavior, and Development  
(eMBeD)



# Contents

Abbreviations .....	iii
Acknowledgments .....	iv
Behavior Change Matters.....	1
Behavioral Insights Can Complement Standard Solutions.....	1
Using Behavioral Insights to Improve Problem Diagnosis, Design, and Evaluation.....	1
Frameworks for Diagnosis, Design, and Evaluation .....	3
Guide for Conducting Problem Diagnosis .....	5
Step 1: Understand the Problem .....	6
Step 2: Diagnose Behavioral Bottlenecks .....	7
Step 3: Use Data to Confirm or Reject Hypotheses .....	8
Menu of Options for Supporting Behavior Change in Education, Health, and Social Protection Projects .....	10
Education: Menu of Options .....	11
Encourage parents to send their children to school .....	11
Increase teacher attendance and effort in schools .....	14
Intrinsically motivate teachers through social recognition and motivational messaging .....	15
Increase students' motivation and effort to learn.....	18
Health: Menu of Options .....	26
Improve quality of care provided by health professionals .....	27
Encourage preventive healthcare seeking behavior, such as early diagnosis of diseases .....	28
Encourage better sanitation habits, such as use of toilets and handwashing practices ..	32
Increase uptake of contraceptives by women .....	33
Social Protection: Menu of Options.....	40
Reduce gender stereotyping of women by hiring managers.....	40
Increase bargaining power and psychological agency (self-efficacy and aspirations) of women .....	41
Encourage inactive youth to sign up for labor market opportunities .....	42
Encourage government agencies to improve uptake rate of social programs by targeted populations .....	44

References .....	52
------------------	----

## **Boxes**

Box 1. Four Promising Behavioral Interventions.....	2
Box 2. CrI2SP Framework for Evaluating Behavior Change in International Development Operations.....	4
Box 3. Sample List of Interview Questions.....	7
Box 4. Growth Mindset Project in Peru and Indonesia.....	20
Box 5. Improving Parental Engagement in Early Development of Their Child.....	35
Box 6. Behavioral Nudges for Cash Transfer Programs in Madagascar .....	46

## **Figures**

Figure 1. Behavioral Mapping of a Youth Unemployment Journey.....	9
Figure 2. Example of Desired Behaviors in Education .....	11
Figure 3. Example of Desired Behaviors in Health .....	26
Figure 4. Example of Desired Behaviors in Social Protection.....	40

## **Tables**

Table 1. Stages of Development for PRACTICE Skills.....	20
Table 2. Summary of Behavioral Options and Examples in Education.....	21
Table 3. Summary of Behavioral Options and Examples in Health.....	36
Table 4. Summary of Behavioral Options and Examples in Social Protection .....	47

## **Appendixes**

Appendix A. Key Desired Behaviors in World Bank Projects.....	50
---	----

## Abbreviations

CBT	Cognitive behavioral therapy
CCT	Conditional cash transfers
CLTS	Community-Led Total Sanitation
EAST	Easy, Attractive, Social, and Timely
FAFSA	Free Application for Federal Student Aid
GPA	Grade point average
IAT	Implicit association test
ICU	Intensive care unit
IEG	Independent Evaluation Group
LARC	Long-acting reversible contraceptives

## **Acknowledgments**

This paper was written by Sana Rafiq under the guidance of Soniya Carvalho (Task Team Leader), Abigail Goodnow Dalton, Ann Elizabeth Flanagan, Varun Gauri, and Renos Vakis. Gaby Loibl assisted in preparing the paper. Overall direction was provided by Emanuela Di Gropello (former Manager, IEGHC) and Galina Sotirova (Manager, IEGHC).

The paper was part of an IEG Learning Engagement with eMBED as the operational cosponsor. The aim of the Learning Engagement was to build on evidence from IEG, the Poverty & Equity Global Practice (POV), Development Economics (DEC), other parts of the World Bank, and external sources to present a menu of practical options that World Bank Task Teams can use to change key behaviors of stakeholders in projects in the education, health, and social protection sectors. Comments on the concept from several World Bank staff, especially staff from DEC, and several Global Practices—Poverty, Education, Health, and Social Protection—are gratefully acknowledged. In particular, we thank Omar Arias, Anush Bezhanyan, Michele Gragnolati, and Victoria Levin.

---

## Behavior Change Matters

---

The success of World Bank projects depends in part on how people and institutions behave. Understanding what motivates particular behaviors, which behaviors are most conducive to project success, and how behaviors can be influenced is often crucial for achieving effective and sustainable development outcomes (Datta and Mullainathan 2014).

Behavioral science provides development professionals with tools to better understand behavior. It provides insights and design principles that can be incorporated into existing programs, often at low cost, to increase program reach, effectiveness, and sustainability (Datta and Mullainathan 2014). This can include sending text reminders, changing defaults, simplifying messaging, and using social networks.

Traditionally, development interventions have focused on the supply side and neglected the demand side. (For a discussion of the problem as it manifests in the education sector, see Nielsen 2006.) However, both supply and demand factors are important drivers of behavior. For instance, the construction of a school will be ineffective in achieving learning outcomes if children either do not attend school or do not pay attention when in class (demand-side factors), or teachers do not put the necessary effort into their teaching (supply-side factor). Behavioral insights can help address factors on both the demand and supply sides.

---

## Behavioral Insights Can Complement Standard Solutions

---

Development problems can be addressed through standard economic solutions or through behavioral solutions depending on the context. Thus, while behavioral solutions such as cognitive aids (text reminders, for example) can be inexpensive and effective for addressing behavioral bottlenecks in some contexts, other contexts may require traditional solutions, such as taxes, subsidies, and financial incentives. Furthermore, combining behavioral insights and standard economic solutions sometimes makes sense. For example, if the underlying barrier is low returns to education once children enter the job market, a structural solution such as providing better employment opportunities could be complemented with behavioral insights to change parents' mental models about non-financial returns to education.

### **Using Behavioral Insights to Improve Problem Diagnosis, Design, and Evaluation**

Behavioral insights can help implement better interventions in three ways. First, they can help to better diagnose the problem. Second, they can help to improve the design of the intervention itself. Third, they can provide insights for the evaluation of the intervention. The next section goes into the details of diagnosis (Behavioral Insights and Problem Diagnosis) followed by a section on design and evaluation (Menu of Practical Options for Supporting Behavior Change). The paragraphs below provide an overview of what diagnosis, design, and evaluation entail.

**Diagnosis:** Behavioral insights provide a more comprehensive set of tools to diagnose the problem by helping to uncover potential “behavioral biases” (a systematic error in thinking that can lead an individual to make a less desirable choice); pre-existing mental models (someone's thought process about how something works in the real world); and social norms that are driving individual behavior. A standard economic explanation for low adoption of a social program could be that the costs of the program exceed its benefits for beneficiaries, thereby making it unlikely they will sign up for the program. Behavioral insights can help expand the problem diagnostic toolkit by encouraging consideration of potential behavioral biases, mental models, and social norms that may lead to low attendance. For instance, beneficiaries may perceive the benefits to be low compared to the cost because of present bias—the benefits are accrued in the future (a cash transfer next month) but the costs are upfront (fill the long forms now and submit at the local office). Similarly, mental models and social norms (such as stigma attached to being a beneficiary) can make it less likely people will sign up for the program.

**Design:** Knowledge of behavioral insights can enable efficient and effective project design. For instance, if low adoption of a program is discovered to be partially because the upfront costs are weighed more highly than benefits in the future, then the program could be designed to reduce its upfront costs. This could include reducing the total number of pages that need to be filled out, decreasing the need for additional documentation, and minimizing travel cost and time. Therefore, by identifying the underlying behavioral bottleneck and addressing it directly, the efficiency of an intervention can be increased.

**Evaluation:** Behavioral insights can improve the evaluation of programs by helping to identify behavioral dimensions that are associated with project success. Four programs assessed by IEG in its evaluation of the World Bank’s early childhood development support demonstrate the value of behavioral insights in deepening understanding about what works (Box 1).

---

---

### **Box 1. Four Promising Behavioral Interventions**

---

#### **Jamaica Education—Stimulation for Preschoolers**

In Jamaica, a stimulation program supported by the World Bank consisted of weekly visits by health workers who facilitated interactions between mother and child, reinforced positive messaging, engaged with toys, and promoted active play. The program supported the parents of children who were six months old at the outset until they were three years old. Recent analysis of the long-term effects of early childhood development interventions by the Independent Evaluation Group (IEG) found that stimulation is associated with improvements in general intelligence and cognition, and it is more likely to improve post-early childhood language outcomes than are supplementation or micronutrient programs. Early stimulation programs also proved effective in producing sustained improvements in school performance and employment outcomes.

#### **Mexico Education—Training for Parents**

The World Bank’s early childhood development projects have often included in their components or subcomponents behavior change activities for parents, caretakers, or service providers in the form of training, home visits, and support programs for parents and caregivers, including parents’ participation in school management (preschool) and or awareness campaigns. Training of parents in the preschool component of the Mexico Basic Education II project was reported to produce important modifications in practices of rural families benefiting young children.

---

## Nicaragua Health—Volunteer Brigades for Outreach

In Nicaragua, *Programa Amor para los más Chiquitos* uses existing programs or services implemented by the ministries of health, family, and education as well as volunteer brigades of women and youth in every community to provide information about the program; deliver messages to the family so that parents stimulate, care for, and protect their children; and develop a registry of pregnant women and young children. Families are provided additional support from the municipal cabinet, social workers, healthcare workers, or teachers, depending on the particular needs of the family. The goal of the program is to raise early childhood enrollments and improve health, nutrition, and development of the child through the provision of information to change parental behavior to ensure that children get regular health checkups, attend school, and get appropriate parental care and nurturing. The use of community volunteers is part of the Nicaraguan culture and history, as similar efforts were successfully deployed in the 1980s for literacy campaigns. The program capitalizes on volunteer efforts to change parental behavior and raise community consciousness about childhood development. This has permitted multiple entry points to deliver messages to parents, not just healthcare workers, as well as provide additional support to pregnant women and children.

## Peru Health—Awareness of Mothers and Caregivers

In Peru, the inclusion of behavior change activities in project design was based on World Bank analytical work in the Andean region that showed lack of awareness among many mothers about their children's nutritional failures—the lack of easily understood standards was an important obstacle to changing outcomes. Behavior change activities were targeted to mothers and other caregivers with respect to child health, hygiene, care, and feeding practices through campaigns and parent support programs that helped change families' knowledge and practices. This contributed to a reduction in chronic malnutrition overall. However, chronic malnutrition persisted in rural areas and among indigenous communities.

Source: IEG 2015a: 2, 131, 108, and 133.

---

## Frameworks for Diagnosis, Design, and Evaluation

Many frameworks are available for applying behavioral insights to problem diagnosis, design, and evaluation. Among them are the Behavioural Insight Team's Easy, Attractive, Social, and Timely (EAST) framework, the World Development Report 2015, the Mind, Behavior, and Development Unit's (eMBeD) iterative framework, the framework presented in ideas42's practitioners playbook, the SaniFOAM framework applied in World Bank water and sanitation projects, and IEG's CrI2SP framework for evaluating behavior change in international development operations. The first and last of these are described below.

**EAST Framework.** The Behavioural Insights Team in the United Kingdom developed the EAST (Easy, Attractive, Social, and Timely) framework to help influence behavior. The first principle implies that to encourage a certain behavior, it should be easy for the individual to do the right thing. The second principle posits that by making something more attractive, it is easier to gain an individual's attention. The third principle acknowledges that human beings are social animals and are heavily influenced by their peers. Hence, a useful tool for illustrating certain behaviors could be to show that most people are performing the desired behavior. Finally, getting the timing right—for example, prompting people when they are likely to be most receptive—can be a highly effective strategy for stimulating individual action.

The EAST principles provide pointers on how several World Bank processes may be improved. The IEG report *Learning and Results in World Bank Operations: Toward a New Learning Strategy* (IEG 2015b) lists some of these. For example, with regard to the World Bank's peer review process, one way to make it easier for the peer reviewer and more useful for the Task Team Leader would be for the project Task Team Leader to flag, as early as possible, areas of concern where the peer reviewers' feedback is deemed most useful. Furthermore, harnessing the power of social recognition in the peer review process might mean, for example, including the reviewer's name and comments in publicly disclosed project documents, thus providing a greater incentive to peer reviewers to give their all and to weigh their words carefully.

**IEG's Cri2SP Framework for Evaluating Behavior Change in International Development Operations.** In 2016, IEG developed a new evaluative framework to assess the role and effectiveness of behavior change activities in attaining service delivery outcomes. That framework is based on neoclassical economic theory, psychological and sociological theories of behavior change, and behavioral insights. It is designed to help evaluators assess the prevalence and extent to which behavior change interventions are integrated in development projects. The framework enables evaluators to assess whether projects identify beneficiaries and their current behaviors; diagnose barriers that would inhibit the adoption of the targeted behavior; design and implement behavioral interventions; and monitor and evaluate behavior change.

Although the framework was specifically designed for evaluation, the same questions used ex post to evaluation projects should be asked ex ante at the beneficiary identification, diagnosis, and project design stages to achieve effective projects. The framework provides a checklist of sorts for diagnosis and design. The answers to the questions are the foundation for a theory of change that includes behavior change activities on both the demand and supply sides and a more robust narrative and set of assumptions about how interventions will lead to desired development impacts and outcomes. Box 2 provides more detail on the framework.

---

### **Box 2. Cri2SP Framework for Evaluating Behavior Change in International Development Operations**

---

IEG developed a new evaluative framework with the objective of enabling an assessment of the prevalence and integration of behavior change concepts into the lifecycle of an intervention from the diagnostic phase through its close.

The framework is designed to help evaluators systematically assess the degree to which projects identify beneficiaries and their current behaviors; diagnose barriers to adopting a desired behavior; design and implement a behavior change intervention; monitor and evaluate behavior change to ensure midcourse corrections are made; and provide evidence on how to improve project design. The framework evaluates identification and diagnosis, design and implementation, and monitoring and evaluation of behavioral interventions by asking questions related to each category.

#### **Identification and diagnosis**

- Was a beneficiary group identified?
  - Was there diagnostic work done to identify current behaviors?
  - Was there diagnostic work done to identify barriers to changing individuals' behaviors?
-

### **Design and implementation**

- Was there a clear statement of a behavior change objective and was the link between activities and behavior change outcome plausible?
- Did the project include things that it should not have?
- Were interventions to address the barriers identified in the diagnostic work included in project design?
- How was information communicated to beneficiaries?
- Were resources provided?
- What incentives or information was provided to beneficiaries?
- How were societal dynamics used to shape peoples' behaviors?
- Were simple psychology-based methods used to influence individuals' decision-making?

### **Monitoring and evaluation**

- What indicators were collected to measure behavior change interventions?
- Is there evidence that outputs were achieved?
- Is there evidence that outcomes were achieved?
- Is there evidence that outcomes were higher given the presence of behavior change activities?

The Cri2SP framework has five categories for characterizing the barriers and interventions to motivate behavior change: (i) communication; (ii) resources; (iii) incentives and information; (iv) social factors; and (v) psychological factors. While not all components are behavioral, they are all important elements in evaluating a behaviorally oriented project.

**Communication:** A well-designed communication strategy can reduce informational frictions and encourage behaviors. Evaluating communication entails understanding whether the intervention effectively communicated the desired behaviors, and if so, how.

**Resource:** The lack of sufficient resources, regulations, and capabilities that can contribute to behavior change. Understanding the resource landscape can provide information about other behavioral bottlenecks.

**Incentives and information:** Were sufficient incentives and information put into place to support the desired behavior change, and if so, how?

**Social factors:** How were social factors and activities incorporated to lead to the targeted individual behavior outcomes?

**Psychological factors:** These are the behavioral bottlenecks that may serve as a barrier. Both mental models and cognitive biases can be potential roadblocks.

Source: Flanagan and Tanner 2016.

---

## **Guide for Conducting Problem Diagnosis**

Based on a synthesis of the key elements from existing frameworks, this section outlines the steps that can help to improve problem diagnosis. Subsequently, a section each on education, health, and social protection provides sector-specific examples of projects whose design relied on behaviorally informed diagnosis.

The following three steps can help to improve problem diagnosis.

## Step 1: Understand the Problem

Development professionals are subject to their own biases, mental models, and implicit assumptions about the underlying problem. To avoid confirmation bias—the tendency to interpret new evidence as confirmation of one's existing beliefs or theories—it is important that the problem statement objectively identify a specific behavior *as observed* among a group of people *without making any assumptions*. For example, a strong problem statement might be: women in a particular district know about the cash transfer program but do not sign up for it—the population (women in a particular district) and the behavior (do not sign up for the cash transfer program) is specific, without assuming “why.”

Next, to identify the “why” and to deepen understanding of the problem, different strategies can be employed. Some of these strategies are discussed below. Using a combination of strategies can enable exploration of the problem from different perspectives. However, not all strategies may be feasible for a particular project.

- **Observe behaviors**

Find opportunities to observe behaviors of stakeholders to establish “what” the problem is and “why” it is occurring. If the problem is low uptake of a social program, do a walkthrough of the process and location where the problem manifests to become familiar with it. If it is a problem of student attendance, watch behaviors of all stakeholders—which students show up? Are teachers present in the classroom? What do the students learn? Sometimes important insights about how people behave will not come from talking to the individuals but through experiencing their activities by being a participant observer, that is, by walking in their shoes.

- **Talk to stakeholders**

Conduct structured and unstructured interviews with stakeholders. The question to discuss with beneficiaries should encompass multiple dimensions including familiarity and perception of the problem and stakeholder needs. When speaking with stakeholders, it is best to avoid asking leading questions such as “how bad is the problem?” or “why is the problem so bad?” as it primes the beneficiary to think that the problem is in fact bad. Instead, ask, for example “what is the problem and how would you rate it on a scale of 1 to 5, where 1 is mild and 5 is serious?” It is also important to follow-up with less structured questions to dig deeper into an issue that was unanticipated or unexpected. A sample list of interview questions is in Box 3.

- **Get different perspectives**

Obtain perspectives from different individuals who may face varying challenges. It is important to gather a sample of diverse stakeholders to ensure comprehensiveness of the problem. Moreover, it is useful to gather diversity both in demographics (age, gender, income levels, race) and type of experience (satisfied, dissatisfied, experienced, new users).

- **Use pre-existing data to uncover behavioral patterns**

Whenever possible, pre-existing data can help complement the problem diagnosis phase. Administrative data are a common source for such data. However, it is important to keep in mind that these data can be biased due to staff or user reporting error, and therefore should be seen as a complement to other data, rather than as a substitute.

---

### **Box 3. Sample List of Interview Questions**

---

#### **Familiarity**

- Could you describe the problem?
- How long have you been dealing with it?
- How often does it become a problem?
- Are others you know facing the problem?

#### **Perceptions**

- What is your personal impression of the problem?
- What do others think of the problem?
- How would you describe the problem to a family member or friend?

#### **Needs**

- What was it like before the problem arose?
- Why do you think the problem is occurring?
- If you could design a solution, what would it look like?
- If there is an existing solution, does it satisfy your needs? If not, why not?

*Source: Adapted from the Ideas42 labor policy brief.*

---

## **Step 2: Diagnose Behavioral Bottlenecks**

It is important to look for behavioral bottlenecks that can influence the behaviors of the target population. A technique called “behavioral mapping” can help pinpoint behavioral barriers that hinder a desired action. First, it is necessary to draw out the process through which beneficiaries engage with the problem. Next, it is important to identify each step or node at which the user must initiate a decision **or** take an action. Finally, for each decision and action node, consider potential behavioral biases, mental models, and social norms that may influence a decision. At this stage, formulate hypotheses about potential behavioral bottlenecks that might be impeding the desired behavior. Figure 1 provides an example of a behavioral map of the youth unemployment problem. The following sections discuss, for each sector—education, health, and social protection—sources of behavioral bottlenecks in achieving the desired behaviors.

Some common behavioral bottlenecks include:

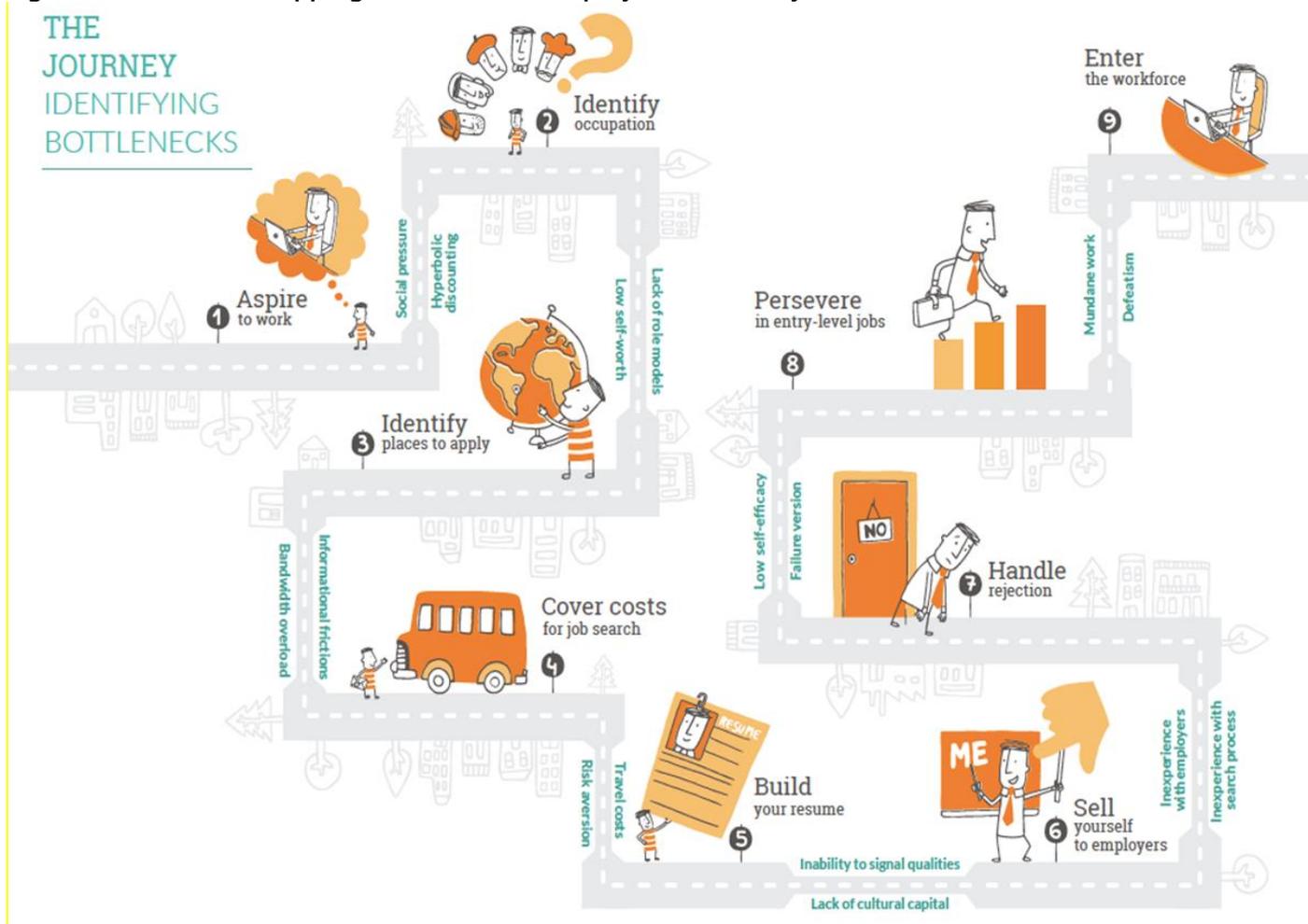
- **Limited attention/mental bandwidth.** Individuals are often spread too thin and their attention is divided over multiple tasks. As a result, they pay less attention to some tasks compared to others. Even small demands on attention can have large impact.

- **Optimism bias.** People sometimes overestimate their own abilities or assume everything will go according to plan.
- **Forgetting.** People plan to take an action in the future, but fail to act when the time comes, even when the stakes are high.
- **Present bias.** Individuals tend to overvalue immediate rewards at the expense of long-term goals.
- **Status quo bias.** Most people are likely to stick with the status quo even if there are big gains to be made from a change that involves a small cost.

### **Step 3: Use Data to Confirm or Reject Hypotheses**

Finally, existing or newly collected data should be used to confirm or reject hypotheses about the behavioral bottlenecks. Data could be quantitative or qualitative and could be as simple as observing interactions or running structured interviews with the beneficiaries. It is important to get feedback on the final behavioral map and to prioritize the hypotheses for testing. Once the testing is completed and key behavioral bottlenecks identified, the project can be designed such that it directly addresses the underlying bottlenecks.

Figure 1. Behavioral Mapping of a Youth Unemployment Journey



Source: eMBEd.

---

## Menu of Options for Supporting Behavior Change in Education, Health, and Social Protection Projects

---

The previous section showed how to undertake effective problem diagnosis. The next step is to design an intervention that effectively addresses the problem. While behavioral insights are applicable to areas such as tax compliance, savings schemes, and electricity consumption, among others, the focus of this paper is on three human development sectors. Hence, the three following sections—one each on education, health, and social protection—identify behavioral bottlenecks and provide examples of behaviorally informed interventions for a sample of desired behaviors. Neither the desired behaviors nor the examples are exhaustive but highlight areas of high potential for applying behavioral insights. First, examples are identified of desired behaviors that World Bank projects seek to instill in the sector’s stakeholders. Second, for each desired behavior, structural and behavioral bottlenecks that may hinder its achievement are identified. Finally, a menu of options is provided that gives examples of behaviorally informed strategies that have been successful in encouraging the desired behaviors in various contexts. Three overarching issues are worth noting.

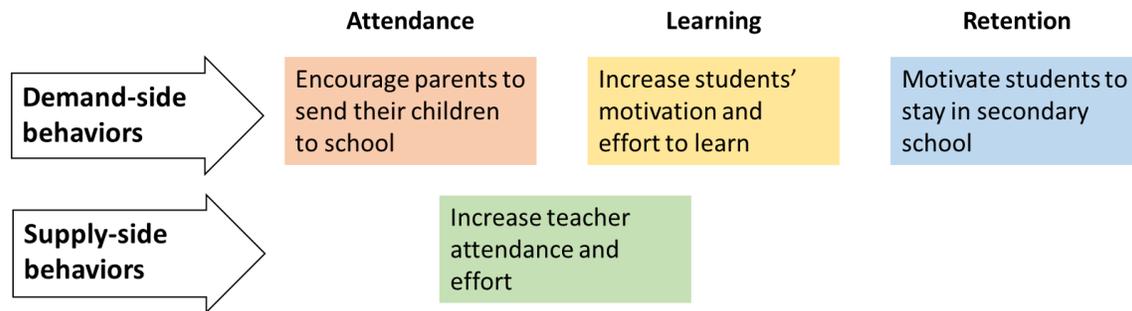
First, the desired behaviors identified are on both the demand and the supply sides. On the demand side, the focus is on the behaviors of *recipients*—receivers of a conditional cash transfer (CCT), such as students and individuals seeking healthcare services. The supply-side behaviors focus on the actions of *providers*—government agencies providing social services, such as teachers and school directors and healthcare providers and workers. The importance of addressing provider behaviors, especially in health and education, has been well documented by IEG and DEC, as well as in other World Bank documents and the external literature. While a long list of desired behaviors was identified for this exercise, the list presented focuses only on that sample of core behaviors for each sector for which robust evidence exists on how to effectively instill them among stakeholders. Additional examples of desired behaviors are presented in Appendix A.

Second, for each behavior, structural barriers and behavioral bottlenecks that may hinder the achievement of a desired behavior are identified. While the barriers identified are not exhaustive and depend heavily on the context, they point to some typical factors that hinder achievement of the desired behaviors. Understanding these barriers and their contexts will help to design interventions in other contexts too that will most effectively address them.

Finally, a menu of options is provided for each behavior by giving examples of interventions that have been successful in encouraging those desired behaviors. These examples are drawn from World Bank projects and the external literature in the relevant sectors. Some barriers will require standard economic solutions and cannot be addressed with behavioral insights. However, in some cases, behavioral insights may complement standard economic solutions, and sometimes, may even stand alone to address some of the barriers. The aim in providing these examples is to demonstrate how development professionals can identify relevant behavioral insights in their local context after conducting a systematic problem diagnosis.

## Education: Menu of Options

Figure 2. Example of Desired Behaviors in Education



These identified behaviors improve student outcomes on the demand side—improving student attendance, learning, and retention—and the supply side—increasing teacher attendance and effort. Each behavior is discussed separately below, together with the respective behavioral barriers and relevant behaviorally informed strategies.

Table 2, at the end of this section, summarizes this information.

## Encourage parents to send their children to school



About 263 million children remain out of school globally. This is equivalent to a quarter of the population of Europe. Sub-Saharan Africa has the highest rates of exclusion. For almost all children of primary school age, the decision to enroll in school is determined by their parents. This decision and other influences on children's attendance in school needs continuous monitoring as it can change over time. IEG found that, in Niger and Uganda, demand constraints were not highlighted in project planning, because there was so much pent-up demand. However, pockets of low demand began appearing later, even in places where new schools were built, which suggested the appearance of new demand constraints and the need for new solutions as the countries begin to reach out to the most disadvantaged (Nielsen 2006).

### Structural barriers and behavioral bottlenecks

1. Parents give stronger weight to the current cost of not attending school (for example, loss of earned income) over the future benefits of going to school (such as higher income potential)—*present bias* (World Bank 2018). (*Behavioral*)
2. Social/cultural norms and safety concerns (such as long distance to school, lack of boundary walls at school, preference to invest in sons' education over daughters' education) may hinder girls' attendance. (*Behavioral and Structural*)
3. Both significant and insignificant costs—formal fees and incidental school-related expenses—prevent children, especially the most vulnerable, from enrolling. Insignificant costs can act as a mental barrier due to loss aversion rather than as a financial barrier. (*Behavioral and Structural*)
4. Parents may have incorrect beliefs about total and relative absences of their children due to factors (such as poverty which imposes pressures) that undermine their mental ability to keep track and remember—*limited mental bandwidth* (Rogers and Feller n.d.). (*Behavioral*)

*Present bias.* If parents perceive the returns to education as low—whether due to poor labor market conditions or marriage market prospects—they may be less willing to send their children to school. This is only applicable in contexts where the perceived return to education is low, and not the actual return to schooling due to poor quality (for example, because of teacher absenteeism).

*Social norms.* For some households, distance to the school can affect attendance. This could especially affect girls where social norms or safety concerns prevent parents from sending their girls to school. In the Republic of Yemen, restrictions on school attendance for girls were related more to safety than to social norms, but they were still a determinant of low school attendance (World Bank 2012).

*Significant and insignificant costs.* For lower secondary education, more than 40 percent of the countries charge fees (World Bank 2018). In Africa, almost half the expenditures that

households incur to send their children to school (school supplies, learning materials, transportation) are in addition to formal fees (World Bank 2018). These costs widen the gaps in school participation separating poorer children from their wealthier peers.

*Limited mental bandwidth.* Limited attention refers to the constraints on the amount of information a person can process at one time. Parents may have limited cognitive bandwidth due to factors such as stress and poverty. As a result, they might not be able to keep an accurate running tally of their children's attendance for an entire school year. This can lead them to have *incorrect beliefs about total and relative absences*. A study in the United States found that parents of high-absence students underestimated their child's absences by a factor of 2–9.6 estimated absences versus 17.8 actual absences (Rogers and Feller n.d.).

#### Behavioral strategies to instill desired behavior

1. *Label cash transfers* with their potential uses to take advantage of people's tendency to mentally commit money for specific purposes—*mental accounting*. Parents experiencing this phenomenon are likely to mentally commit money to their child's education in the absence of any monitoring.
2. *Eliminate all fees* associated with school attendance. Small fees, even though insignificant, can act as a significant mental barrier.
3. *Build parental aspirations* for the educational future of their children and the value of education.
4. *Provide timely information to parents* about their child's attendance, academic abilities, performance, and learning to highlight immediate benefits to education. To ensure ease and timeliness, reminders through text messages—a *cognitive aid*—can be an effective tool.

*Label cash transfers.* Standard tools, such as CCTs, can be used to increase attendance. In Morocco, the government wanted to ensure more children were enrolled in schools but faced resistance when they made it a requirement. Alternatively, they handed out the funds for children's school fees, and told parents it was "for education." There was no actual regulation on how parents spent the money—the government only made it a point to label the money as school money. The end result was that enrollment rates went up, and it was more successful than forced enrollment.

CCTs can also improve attendance when there is asymmetry of information regarding school attendance between parents and children. In Brazil, CCTs were found effective in increasing attendance because they incentivize parents to monitor their child. A parent who receives a transfer conditional on 80 percent school attendance needs to be reassured that her child has attended school at least 80 percent of the time. In fact, parents in the poor urban Brazilian areas valued the information component of their child's school attendance under the CCT program.

*Eliminate all school fees.* Interventions that reduce costs associated with school have consistently improved access through both enrollment and attendance. This is because small costs in the present can gain salience over greater benefits in the future. Thus, small non-merit scholarships have helped increase enrollment at the primary level in Kenya and at the

secondary level in Ghana. Scholarship winners were 26 percentage points (55 percent) more likely to complete secondary school, obtained 1.26 more years of secondary education, and 2.5 percent of women were more likely to enroll in school.

Additionally, the 2018 *World Development Report* gathered evidence on the elimination of school fees from eight countries and its impact on enrollment. For Cambodia, Cameroon, Kenya, Lesotho, Malawi, Tanzania, Uganda, and Zambia gross enrollments increased significantly after elimination of fees. For instance, Zambia's gross enrollment increased from approximately 70 percent to 120 percent.

*Build aspirations.* To increase female student enrollment, a World Bank project in Bulgaria showed a short video with real-life stories of Roma girls and women who discuss the value of education and their regret for not continuing education. It was followed by a brief guided discussion on how to support girls to stay in and complete school, focusing on returns to education, value of education, and information about school completion of Roma girls.

Similarly, in Ethiopia, randomly selected households were invited to watch an hour of inspirational videos comprising four documentaries of individuals from the region relating how they had improved their socioeconomic position by setting goals and working hard. Six months later, the households that had watched the videos had invested more in their children's education, on average.

*Provide timely information through cognitive aids.* Because attention is a scarce and easily depleted resource, relying on cognitive aids to simplify decision-making can be effective. If the underlying constraint for absence is limited attention, cognitive aids like sending text, email, letter, or phone reminders may work. Reminders can also encourage habit formation, which means after a while the intervention can be stopped, and sustainable results be obtained. Finally, these interventions can often be automated, making them very low cost.

In Malawi, providing parents with information about their child's academic ability encouraged them to make investments in the child's education. Providing parents with clear academic performance information causes them to update their beliefs and adjust their investments accordingly. Thus, providing information increased enrollment of their higher-performing children. However, it decreased the enrollment of their lower-performing children. Thus, providing timely information can have heterogenous effects if parents are unconvinced about the return to education for low-performing children.

In the United States, sending letters to parents about student absences reduced absenteeism. Similarly, text messages sent to parents when their children missed assignments led to improvement in completion and higher test scores. The most effective regime reduced chronic absenteeism by 10 percent across all grade-levels, partly by correcting parents' biased beliefs about their students' total absences.

## Increase teacher attendance and effort in schools



Unannounced visits to primary schools in six countries found that in public schools, only 20 percent of the teachers showed up to school on a typical day (Chaudhury and others 2006). Teacher absenteeism has both economic costs and practical costs in terms of student learning. For instance, in India, excess teacher absenteeism in the public sector is estimated to cost \$1.5 billion a year (World Bank 2018). Teacher effort is another important factor influencing student learning. Thus, to promote effective learning environments for students, teacher attendance and effort needs to be improved.

### Structural barriers and behavioral bottlenecks

1. Teachers may perceive low effort as justified behavior. Teachers in many low to middle income countries think their absence is justified. They also think that they have little influence on poor students' learning. (*Behavioral*)
2. Teachers often have duties outside the classrooms. Teachers are often loaded with administrative duties, such as coordinating parent-teacher associations, running extracurricular activities, and bookkeeping that puts demand on their presence and effort in the classroom. (*Structural*)
3. In countries with high absenteeism, many teachers have few financial or professional incentives for performing well beyond their intrinsic motivation. (*Structural*)
4. Incorrect beliefs based on incorrect information about other teachers' behaviors, both for attendance and effort. (*Behavioral*)

### Behavioral strategies to instill desired behavior

1. *Messaging about social norms can change weak school culture and reduce absenteeism.* A World Bank project in Peru shows that there was a significant impact of the social norm email message on school directors' attendance.
2. *Use financial incentives in a behaviorally informed way*—for example, pay teacher bonuses at the beginning of the year rather than the end.
3. *Intrinsically motivate teachers* through social recognition (for example, trophies for better performing teachers) and motivational messaging.
4. Provide objective feedback to teachers about their attendance and performance relative to their peers.

*Messaging about social norms to change teacher perceptions and weak school culture.* In Peru, random spot checks conducted by the Ministry of Education suggest that on any given day, 7 percent of classrooms did not have a teacher present and 9 percent of school directors were absent. This absenteeism is linked to decreases in pupils' performance in mathematics and reading.

As a response, the World Bank's Mind, Behavior, and Development Unit tested the effect of sending teachers and principals emails highlighting either the current level of attendance—the norm—or the positive effects of attendance on student performance. The norm message increased the presence of directors by 3.7 percentage points, suggesting behavioral emails

could be an effective way to affect directors' performance. However, no effect was found on teachers, potentially due to a low email opening rate.

*Use financial incentives in a behaviorally informed way.* While the literature on the impact of financial incentives on teacher performance is inconclusive, there is evidence on the optimal timing and framing of those incentives. A study finds that by paying bonuses at the beginning of the year and taking it away if student performance is not improved—therefore exploiting people's tendency to prefer avoiding losses to acquiring equivalent gains (loss aversion)—can elicit better learning outcomes. Practically, just announcing and promising a fixed incentive at the beginning of the year can frame the incentive such that it can invoke loss aversion and elicit more effort from teachers. It is important to note that financial incentives are most likely to work when teachers can take straightforward actions to increase their effort. The marginal benefit of financial incentive is higher in environments with high teacher absenteeism where teachers can improve learning by simply showing up to school.

In India, students performed better in schools that provided teachers with financial incentives for improved math and reading scores. However, similar incentives failed in the United States. Moreover, financial incentives can have adverse effects on learning. They can lead to teachers teaching for the test, ignoring broader learning goals. Furthermore, once these incentive programs are removed, learning could revert. Therefore, methods aimed at increasing intrinsic motivation may be more sustainable.

### **Intrinsically motivate teachers through social recognition and motivational messaging**



Nonfinancial incentives such as public recognition and awards can help increase intrinsic motivation. An intervention in Zambia that provided health workers with social recognition saw a significant increase in their intrinsic motivation to sell health products. Motivate students to stay in secondary school

Children from the poorest families are less likely to start school and those who do start school are more likely to drop out early. In developing countries, there is a 32-percentage point gap between the chances of children in the poorest and richest quintiles completing primary school. Similarly, while many girls may start primary school, their likelihood of completing it remains low in some countries.

#### **Structural barriers and behavioral bottlenecks**

1. Students may have low motivation for learning. Remedial students are highly likely to drop out (World Bank 2018). In Kenya, students who drop out of school say their inability to perform well caused them to leave (Zuilkowski, Jukes, and Dubeck 2016). (*Behavioral*)
2. Students may suffer from low self-efficacy and lack of belonging—psychosocial factors. (*Behavioral*)

3. Youth and parents may recognize the value of education but plan to invest in it later—hyperbolic discounting. They may also underestimate the returns to education. (*Behavioral*)
4. Social norms and safety concerns (such as a long distance to school) may hinder girls' completion rates. (*Behavioral*)

#### Behavioral strategies to instill desired behavior

1. *Build student aspirations and self-efficacy* to counteract psychosocial factors that may lead to dropouts.
2. *Provide students with socioemotional support* by engaging multiple stakeholders—parents, teachers, school administrators, role models, and community members.
3. *Increase student motivation* and perceived returns to education through timely interventions. This can be done through more standard financial incentives (such as merit-based scholarships) or nonfinancial incentives (such as trophies) that are delivered immediately.

*Build student aspirations and self-efficacy.* Some students, especially those from financially and ethnically disadvantaged backgrounds may have low educational aspirations. Moreover, student learning and educational aspiration can be affected by the salience of stereotypes. To counteract stereotype threat and feelings of low self-efficacy, interventions that rely on self-affirmation processes can reduce dropouts. For instance, in the United States, having African American students write an essay on the personal importance of a self-defining value at the beginning of seventh grade led to a 0.24 increase in their grade point average (GPA) over two years.

Another way to help develop self-efficacy is by exposing students to narratives of success. When rural villagers in Ethiopia were shown an hour of inspirational videos about individuals from their region improving their socioeconomic positions by setting goals, persevering, and working hard, children in the village were 15 percent more likely to be in school.

Following a pattern similar to many universities in the United States, at San Francisco State University (SFSU) 18 percent of students drop out of school during their freshman year. One reason for dropouts was feelings of self-doubt and social isolation—especially those who were the first in their families to attend college. To defuse this thinking, a program showed a group of incoming freshmen (from low-income and underrepresented families) a video of past freshmen describing their initial struggles. The program followed-up with students throughout the year with text messages containing students' own written reactions to the video, including reminders of their resolve to persist in the face of challenges. The intervention was effective: the treatment group progressed to sophomore year at a rate higher than a control group—91 percent versus 83 percent. Also, the average GPA of the test group was 7 percent higher.

*Provide students with socioemotional support by engaging multiple stakeholders.* Informing parents of their child's performance in school enables them to provide that child with psycho-emotional support and motivation necessary to succeed in school. For low-income families in Chile, a

monthly text message about each child's attendance, behavior, and test performance improved test scores and made students more likely to move on to the next grade.

Moreover, engaging multiple stakeholders in child's success can also help increase student retention. An intervention in the United States that delivered weekly one-sentence individualized messages from teachers to the parents of secondary school students in a remedial program decreased the percentage of students who failed to earn course credit by 41 percent. Another intervention employed similarly aged peer mentors to provide outreach and support to students going on to college. The intervention substantially increased college enrollment among students who had less academic success.

Similarly, across Africa and Asia, the Literacy Boost program has implemented community reading activities through reading buddies and read-a-thons. Children who participate in such activities have better reading outcomes. In Rwanda, the program led to better reading skills and school advancement.

BAM, a program in Chicago, provided at-risk students with mentoring opportunities where socioemotional skills were developed through scheduled activities including cognitive behavioral therapy. It led to a 14 percentage point increase in graduation rates and significantly reduced student absenteeism.

*Increase student motivation and perceived return to education through timely and customized interventions.* A growing area of research shows that nonfinancial rewards can have an impact on motivational power. Nonfinancial rewards operate through a range of mechanisms including status, self-image, and relative performance feedback. The implication of these interventions is that, in contrast to standard models, some students may be willing to exert more effort for a trophy worth \$5 than for \$5 in cash. A study in the United States show that nonfinancial incentives provided immediately after a test increased student test scores and motivation to perform better, thereby making them more likely to stay in school.

Each year in the United States, about \$2.9 billion in free federal grants goes unused because not enough eligible students apply. At Arizona State University, less than a fifth of returning students filed Free Application for Federal Student Aid (FAFSA) submissions by the priority deadline and risked receiving little or no aid. An intervention was designed where a series of emails broke down the submission process into manageable steps for students and their parents. Families receiving behaviorally informed emails were 72 percent more likely to meet the priority filing date and averaged an additional \$236 to \$643 in grants and scholarships. More aid reached those in need, helping reduce student debt over the long term.

### **Increase students' motivation and effort to learn**



The 2018 *World Development Report* uses three broad skills categories: cognitive skills, technical skills, and socioemotional skills.

Cognitive skills refer to the “ability to understand complex ideas, to adapt effectively to the environment, to learn from experience, to engage in various forms of reasoning, to overcome obstacles by taking thought” (Neisser and others 1996).

Technical skills are the acquired knowledge and expertise needed by a worker for competent performance of the duties associated with a specific job.

Socioemotional skills are the values that a person needs to “navigate interpersonal and social situations effectively” (Neisser and others 1996). Self-awareness, leadership, confidence, motivation, teamwork, and self-control are examples of socioemotional skills. These skills are transversal, meaning they are relevant to a broad range of disciplines. Along with cognitive skills, they are important in achieving success in workplace and everyday challenges.

Acquiring a strong base of both of cognitive and socioemotional skills is critical because individuals with early advantages tend to gain more skills over their lifetimes. Thus, it becomes more difficult to close widening gaps over time.

#### Structural barriers and behavioral bottlenecks

1. *There is a lack of recognition and measurement of socioemotional skills in school systems* (Neisser and others 1996). For instance, in the Republic of Korea, many parents prefer to send their children to schools that prepare them for university entrance exams rather than ones that focus on socioemotional skills (Park, Kim, and Yu 2016). *(Behavioral)*
2. *Parents may not have the right skill sets to instill socioemotional skills such as grit and a growth mindset in their children.* Moreover, financial stress can affect parents’ capacity to engage with their children (Mullainathan and Shafir 2013). *(Behavioral)*

#### Behavioral strategies to instill desired behavior

1. *Invest in grit and a growth mindset interventions.* A growth mindset is the belief that through effort and perseverance one can become better at something (Dweck 2016).
2. *Make salient the link between parental behavior and its consequences for socioemotional outcomes for children.*
3. *Use traditional tools (CCTs and school curriculum) to incentivize parental engagement with children and build grit.*
4. *Optimize the timing of socioemotional skill building programs* by aligning them with the age of the child. For instance, skills such as teamwork are best instilled at early and middle childhood level and reinforced at adolescence.

*Invest in grit and growth mindset interventions.* The core principle of a growth mindset is to teach students that certain abilities are malleable rather than fixed and can therefore be fostered. By changing the beliefs of students about how their brain works, these interventions can change studying habits and improve academic performance. For instance, in an experiment on the Khan Academy website, a growth mindset intervention at the top of the screen (“When you learn a new kind of math problem, you grow your math brain!”)

increased by 3–5 percent the rate at which students successfully solved math problems even months after they no longer saw the message.

Make salient the link between parental behavior and its consequences for socioemotional outcomes for their children. In Senegal, the *Reinforcement des Pratiques Parentales* program aimed to help parents understand their role in providing their infants with early verbal engagement. The facilitators share simple techniques to enrich interactions between parents and their young children, such as speaking to them using a rich and complex vocabulary, asking the children questions and helping them respond, playfully copying their children, telling them stories, and describing objects in detail to them. The first few sessions of the group activities with mothers and other caregivers introduce the important link between verbal engagement, the development of the child’s brain, and the future benefits of greater intelligence and other positive outcomes.

*Use traditional tools (CCTs and school curriculum) to incentivize parental engagement with children and build grit.* In Mexico, children in households that were exposed to a sustained CCTs that encouraged parental engagement with children had improved motor skills and higher cognitive development outcomes. A World Bank project in North Macedonia build a semester-long intervention that provided socioemotional skills to middle school (6<sup>th</sup>–9<sup>th</sup> grade) students through lessons on perseverance. Based on results from the initial trial, the government has made plans to include the modules as part of a life skills curriculum that is given to teachers to implement. Teachers select for a set of modules based on what they see as relevant for their students.

*Design socioemotional interventions that are timely and optimized for the age of the child.* The creation of developmentally appropriate skill enhancement programs requires an appreciation of the neurobiological and psychosocial readiness of the child. The World Bank has developed a PRACTICE model that lays out the key skills that will enhance educational and employment success and are the key skills that employers want. For instance, to instill “achievement motivation” it is optimal to introduce it in middle childhood and reinforce it when the child is in adolescence. Skills such as teamwork, by comparison, are best instilled at early and middle childhood level and reinforced at adolescence. The timing of these initiatives with the age appropriateness of the child can be critical for the success of the programs. Table 1 summarizes the stages of development for these PRACTICE skills. For more details on the skills, see

**Table 1. Stages of Development for PRACTICE Skills**

Skills for the labor market	Early childhood	Middle childhood	Adolescence	Emerging adulthood
Problem solving	Foundational	Optimal	Optimal	Reinforce
Resilience	Optimal	Optimal	Reinforce	
Achievement motivation		Optimal	Reinforce	
Control	Optimal	Optimal	Optimal	Reinforce

Teamwork	Optimal	Optimal		
Initiative	Optimal	Optimal	Optimal	Optimal
Confidence	Foundational	Optimal	Optimal	Reinforce
Ethics	Foundational	Optimal	Optimal	

*Source:* Guerrero, Modecki, and Cunningham 2014.

*Note:* “foundational indicates that skills developed in this period form the basis for the core skill building in a following period. “Reinforce indicates that a skill required during the optimal period needs intense practice in the reinforcement period for the skills to be truly learned. “Optimal” in the table refers to the ideal time to do the intervention.

---

#### **Box 4. Growth Mindset Project in Peru and Indonesia**

---

In Indonesia, Peru, and South Africa the World Bank experimented with classroom activities designed to convince students that their intelligence is fluid and can be improved with effort. The Peru results indicated that improving student mindsets could lead to higher effort, ultimately leading to an increase in the test scores. An impact evaluation of the Peru program showed that, on average, students’ test scores increased by 0.2 standard deviations after being exposed to this intervention, which reached more than 50,000 students with a relatively low implementation cost of \$0.20 per student.

The intervention itself used comics and videos to incorporate simple and attractive messaging. The experiment featured messages about growth mindset, self-belief, and perseverance that students could easily absorb. The videos and comics used several behavioral principles to convince students of the key messages. Some of the success factors for the intervention included:

1. Short, simple messages that were repeated several times in large, bold text, such as “your brain is like a muscle” and “learn by asking others.”
2. Relatable characters that were designed in the style of modern-day cartoons.
3. Storylines that put the characters in classroom situations, thereby ensuring reader familiarity with the context.

*Source:* eMBED.

---

**Table 2. Summary of Behavioral Options and Examples in Education**

Desired behavior	Menu of options	Examples from World Bank projects and external literature
Encourage parents to send their children to school	<p><i>Label cash transfers by their use can take advantage of people’s tendency to mentally commit money for specific purposes—mental accounting— and incentivizes parents to create positive habits, in the absence of monitoring and conditionality.</i></p> <p><i>Public awareness campaigns emphasizing the value of primary education to individuals and communities, and lengthening the hours of early childhood education centers so that older girls—generally called on to mind younger siblings—could attend a full school day.</i></p>	<p>In Morocco, the government wanted to ensure more children were enrolled in schools but faced resistance when they made it a requirement. Alternatively, they handed out the funds for children’s school fees, and told parents it was “for education.” There was no actual regulation on how parents spent the money—the government only made it a point to label the money as school money. The end result was that enrollment rates went up, and it was more successful than forced enrollment.</p> <p>In Brazil, CCTs were shown to be effective in increasing attendance because they incentivize parents to monitor their child. A parent who receives a transfer conditional on 80 percent school attendance needs to be reassured that her child has attended school at least 80 percent of the time. In fact, parents in the poor urban Brazilian areas valued the information component of their child’s school attendance under the CCT program</p>
	<p><i>Eliminate school fees. This is because small insignificant costs in the present can gain salience over greater benefits in the future.</i></p>	<p>In Ghana, small non-merit scholarships increased enrollment. Scholarship winners were 26 percentage points (55 percent) more likely to complete secondary school and obtained 1.26 more years of secondary education. Girls were 2.5 percentage points more likely to be enrolled in secondary school.</p> <p>The 2018 World Development Report (WDR) <i>Learning to Realize Education’s Promise</i> provides evidence from eight countries on the significant impact of eliminating small fees on enrollment rates. For instance, Zambia’s gross enrollment increased from approximately 70 percent to 120 percent after elimination of fees.</p> <p>In India, to increase demand for primary education among girls, low-caste children, and tribal populations, the World Bank-supported District Primary Education Programs adopted two public awareness campaigns emphasizing the value of primary education to individuals and communities and lengthening the hours of early childhood education centers so that older girls—generally called on to mind younger siblings—could attend a full school day. The former was associated with large increases in primary school enrollments during the first two years of project implementation (and then diminishing returns), the latter with marginal improvements in older girls’ attendance, plus some improvement—of undetermined magnitude—in the school readiness of children who attended these early childhood programs (Nielsen 2006).</p>

Desired behavior	Menu of options	Examples from World Bank projects and external literature
<i>Build parental and student aspirations for obtaining higher levels of education</i>		<p>In Bulgaria, a project showed a short video with real-life stories of Roma girls and women who discuss the value of education and their regret about not continuing education. It was followed by a brief guided discussion on how to support girls to complete and stay in school, focusing on returns to education, value of education, and information about school completion of Roma girls. The project is pending evaluation.</p> <p>In Ethiopia, households were invited to watch an hour of inspirational videos comprising four documentaries of individuals from the region telling their personal stories about how they had improved their socioeconomic position by setting goals and working hard. Six months later, the households that had watched the inspirational videos had invested more in their children's education, on average.</p>
	<i>Provide timely information through cognitive aids. Cognitive aids, such as reminders, can help simplify decision-making</i>	<p>In Malawi, providing parents with information about their child's academic ability increased the school enrollment of their higher-performing children. However, it decreased the enrollment of their lower-performing children.</p> <p>In the United States, sending letters to parents about student absences reduced absenteeism. The most effective regime reduced chronic absenteeism by 10 percent across all grade-levels, partly by correcting parents' biased beliefs about their students' total absences.</p>
<b>Increase teacher attendance and effort in schools</b>	<i>Incorporate social norms messaging</i>	<p>In Peru, sending teachers and principals emails highlighting current level of attendance increased school director's attendance.</p>
	<i>Use financial incentives in a behaviorally informed way</i>	<p>In the United States, paying bonuses at the beginning of the year rather than the end increased teacher effort. Paying bonuses at the beginning of the year, increased math test scores between 0.201 and 0.398 standard deviations. This is equivalent to increasing teacher quality by more than one standard deviation.</p>
	<i>Intrinsically motivate teachers through social recognition</i>	<p>In Zambia, providing health workers with social recognition resulted in a significant increase in their intrinsic motivation</p> <p>In the United States, giving trophies to recognize student effort led to positive impact on their learning as measured by student achievement tests</p>
<b>Motivate students to stay</b>	<i>Build student aspirations and self-efficacy</i>	<p>In the United States, having African American students write an essay on the personal importance of self-defining</p>

Desired behavior	Menu of options	Examples from World Bank projects and external literature
<p><b>in secondary school</b></p>		<p>values led to a 0.24 grade points increase in their GPA over two years.</p> <p>In Ethiopia, when rural villagers were shown an hour of inspirational videos about individuals from their region improving their socioeconomic positions by setting goals, persevering, and working hard, children in the village were 15 percent more likely to be in school.</p> <p>In the United States, a program showed a group of incoming freshmen (from low-income and underrepresented families) a video of past freshmen describing their initial struggles. The program followed-up with students throughout the year with text messages containing students' own written reactions to the video, including reminders of their resolve to persist in the face of challenges. The treatment group progressed to sophomore year at a rate higher than a control group—91 percent versus 83 percent. Also, the average GPA of students in the test group was 7 percent higher.</p>
	<p><i>Provide students with socioemotional support by engaging multiple stakeholders</i></p>	<p>In Chile, a monthly text message about each child's attendance, behavior, and test performance made students more likely to move on to the next grade. After four months, students had significantly higher math grades, improved attendance, a lower prevalence of bad behaviors, and were less likely to fail the grade at the end of the year.</p> <p>In the United States, weekly one-sentence individualized messages (such as "John was an active participant in class all through this week—great job!") from teachers to the parents decreased the percentage of students who failed.</p> <p>In Africa and Asia, the Literacy Boost program provide community reading activities. Children in the community reading groups and teacher training-only groups showed improvements reading and comprehension. When the trainings were combined, it had a larger observable impact than teacher training alone.</p> <p>In Chicago, a program provided students with mentoring opportunities to develop socioemotional skills that reduced absenteeism and crime. The program reduced total arrests during the intervention period by 28–35 percent, reduced violent crime arrests by 45–50 percent, improved school engagement, and increased graduation rates by 12–19 percent.</p>
	<p><i>Take advantage of timely and customized interventions. This can be done through more standard financial incentives (such as merit-based scholarships) or nonfinancial incentives</i></p>	<p>In the United States nonfinancial incentives, such as a trophy, provided to students immediately after an exam increased their test scores and motivation</p>

Desired behavior	Menu of options	Examples from World Bank projects and external literature
	<i>(such as trophies) that are delivered immediately.</i>	In the United States, an intervention was designed where a series of emails broke down the submission process of financial aid (FAFSA) into manageable steps for students and their parents. Families receiving behaviorally informed emails were 72 percent more likely to meet the priority filing date and averaged an additional \$236 to \$643 in grants and scholarships.
<b>Increase the socioemotional skills of all school-age children</b>	<i>Design grit and growth mindset interventions</i>	<p>In the United States, a growth mindset message (such as “When you learn a new kind of math problem, you grow your math brain!”) on the Khan Academy website increased the rate at which students successfully solved math problems.</p> <p>In Indonesia, Peru, and South Africa, the World Bank experimented with classroom activities designed to convince students that their intelligence is fluid and can be improved through effort. In Peru, there was 0.2 standard deviation increase in test scores, which is equivalent to having a parent with 2–3 more years of education.</p>
	<i>Make salient the link between parental behavior and socioemotional outcomes of their children</i>	In Senegal, the <i>Renforcement des Pratiques Parentales</i> program aimed to help parents understand their role in providing their infants with early verbal engagement. The facilitators share simple techniques to enrich interactions between parents and their young children, such as speaking to them using a rich and complex vocabulary, asking the children questions and helping them respond, playfully copying their children, telling them stories, and describing objects in detail to them. The first few sessions of the group activities with mothers and other caregivers introduce the important link between verbal engagement, the development of the child’s brain, and the future benefits of greater intelligence and other positive outcomes
	<i>Use traditional tools (CCTs and school curriculum) to incentivize parental engagement with children and build grit</i>	<p>In Mexico, children in households that were exposed to a sustained CCTs that encouraged parental engagement with children had improved motor skills and higher cognitive development outcomes.</p> <p>A World Bank project in North Macedonia build a semester-long intervention that provided socioemotional skills to middle school (6<sup>th</sup>–9<sup>th</sup> grade) students through lessons on perseverance. Based on results from the initial trial, the government has made plans to include the modules as part of a life skills curriculum that is given to teachers to implement. Teachers select from a set of modules based on what they consider relevant for their students.</p>

Desired behavior	Menu of options	Examples from World Bank projects and external literature
<p><i>Optimize the timing of socioemotional skill building programs by aligning them with the age of the child. For instance, skills such as teamwork are best instilled at early and middle childhood and reinforced at adolescence.</i></p>	<p>The World Bank PRACTICE model lays out the key skills that will enhance educational and employment success.</p> <p>For example, to instill “achievement motivation” it is optimal to introduce it in middle childhood and reinforce it when the child is in adolescence. The timing of these initiatives with the age of the child can be critical for the success of the programs.</p>	

## Health: Menu of Options

Figure 3. Example of Desired Behaviors in Health



These identified behaviors improve health outcomes on the demand side and the supply side. Each behavior is discussed separately below, together with the respective behavioral barriers and relevant behaviorally informed strategies. Table 3, at the end of this section, summarizes the information.

Behavior change approaches occur in many health sector projects. An IEG review of 70 World Bank–supported health projects found evidence of targeted behavior change in nearly two-thirds—44 projects employed behavior change in components or subcomponents, and 20 projects highlighted it in project development objectives. About one-third of the projects mentioned social issues as constraints and interventions, but very few addressed psychological issues, with just five identifying them as barriers and three as interventions.

In the health sector, IEG found that activities to overcome behavioral or demand-side constraints have focused on information or education campaigns and financial incentives. Examples of financial incentives include CCTs and Performance-Based Financing; subsidies to insurance premiums to encourage enrollment; the provision of support for transport costs from remote areas to district or state health facilities; gratuity of certain drugs and products, such as contraceptives and insecticide-treated bed nets; and the provision of a free package of maternal and child health services. World Bank–financed projects have also provided vouchers to poor women to access free maternal and infant health services as well as family planning services.

IEG also found evidence of weak behavioral diagnostics. Although most projects identify the desired behavioral changes and one-third specify information and communication delivery mechanisms, such as radio, TV, posters, films, workshops, and mosque announcements), many others do not. In addition, half of projects with behavioral interventions did not provide information on the specific target audiences for behavior change activities (for example, pregnant women and mothers, smallholder poultry farmers, sex workers, drug

users, people with disabilities) within the project's target area, nor did they provide details on the messages to be delivered.

## Improve quality of care provided by health professionals



Healthcare systems consist of many different relationships, including the direct patient-practitioner relationship. Understanding what drives and influences the way healthcare professionals interact with their patients and improve their quality of care could result in better outcomes. While most improvement would likely be structural—improvement in the qualification and experience of health professionals—some improvements might also be made by using behavioral insights.

### Structural barriers and behavioral bottlenecks

1. Healthcare professionals may be unqualified or have little experience. (*Structural*)
2. Clinicians working in high-pressure environments also experience distractions and cognitive load, which increases the likelihood that they commit errors. (*Behavioral*)

### Behavioral strategies to instill desired behavior

1. *Simplify and standardize procedures* for healthcare professionals can reduce cognitive tax and chances of human error.
2. *Introduce well-timed interventions* that encourage adoption of behaviors at the time individuals are most receptive and likely to adopt them.
3. *Use nonmonetary incentives* such as trophies and awards can help increase intrinsic motivation.

*Simplify and standardize procedures.* Healthcare providers can also benefit if their limited attention is effectively drawn to the most important information. For example, it can be difficult to notice and treat a change in a patient's condition if it happens gradually. Australia's Between the Flags initiative addressed this problem by including colored bands in observation charts where a patient's vital signs are recorded. These colors help healthcare practitioners easily see when patients are deteriorating. Observations that are recorded in the yellow zone trigger a clinical review of the patient. Observations in the red zone trigger a rapid response. The program is associated with a 25 percent reduction in unexpected cardiac arrests and is popular among staff.

Similarly, the Allillanchu project in South America makes it easy for primary care providers to assess the emotional well-being of any person who comes for treatment. The providers are given an electronic tablet to carry out a simple screening questionnaire and make a referral. People who were referred were then automatically sent motivational text messages to remind them to seek mental healthcare.

In the United States, a research project changed the default setting of the ventilators in intensive care units to provide lower volumes of air into patient's lungs. With the new setting, the mortality rate was 25 percent lower.

*Introduce well-timed interventions.* Timing is crucial when considering the behavior of healthcare professionals. People and healthcare professionals tend to be overconfident about personal immunity, especially when it comes to hand washing. In fact, evidence shows that healthcare professionals' compliance with hand washing hygiene reduces over the course of the day with small peaks in compliance after breaks. Thus, a demanding shift may make professionals inattentive to washing their hands. One simple intervention is to use timely messages to remind healthcare professional to wash their hands right after a demanding shift. Another creative nudge used was to create "clean" smells as triggers to encourage hand washing. In fact, just a mere exposure to the scent of an all-purpose cleaner people significantly more likely to keep their table cleaner while eating in a canteen.

Similarly, smokers given consultations before medical procedures (including smoking cessation brochures), referral to a quit helpline, and access to six weeks of nicotine replacement were 2.7 times more likely to achieve long-term smoking cessation.

*Use nonmonetary incentives.* A growing area of research shows that nonfinancial rewards can have an impact on motivational power. Nonfinancial rewards operate through a range of mechanisms including status, self-image, and relative performance feedback.

When health workers are given small gifts like a book or a pen, they responded by improving the quality of care they provide, in some cases, for significant periods of time. Similarly, an intervention in Zambia that provided health workers with social recognition saw a significant increase in their intrinsic motivation to sell health products.

## **Encourage preventive healthcare seeking behavior, such as early diagnosis of diseases**



Each year, 7.6 million children under the age of five die from avoidable causes (UNICEF 2018). In countries that suffer the greatest share of these deaths, the most effective interventions are almost all preventive or therapeutic measures that should be within the reach of most households and communities, including breastfeeding, vaccinations, assisted deliveries, oral rehydration therapy, and water sanitation measures that do not require major investments in infrastructure (Jones and others 2003).

### **Structural barriers and behavioral bottlenecks**

1. Cost of engaging in preventive behavior is more salient than the benefits of being healthy in the future—*present bias*. (*Behavioral*)
2. Amount of time and mental energy needed to plan and deal with the administrative tasks (such as filling out medical forms, bringing insurance and ID, paying small fees) may act as impediments and discourage individuals from visiting a doctor unless necessary—*limited mental bandwidth*. (*Behavioral*)
3. *Low fees deter individuals from accessing preventive health services*. Uptake of health products drops precipitously in response to very small fees. People are willing to adopt many health goods at a price of zero but unwilling to adopt it at prices just slightly above zero. (*Structural*)

*Cost of engaging in preventive behavior is more salient than the benefits of being healthy in the future.* People tend to underestimate the severity of disease and their own susceptibility to it (Carpenter 2010). As a result, they tend to forgo preventive medicine as the immediate barriers seem to outweigh the future benefit. This is due to present bias—our tendency to overvalue the present and discount the future. As a result, people frequently make choices that contradict what their future selves would want. Thus, a person might be aware of the importance of getting a diagnosis of tuberculosis but the benefit of the test in the present seems low, while the cost in the present seems high. Therefore, he may forgo the testing even if his future self would prefer him to get diagnosed.

*Limited mental bandwidth.* Those seeking preventive healthcare procedures may have to take many small steps (such as visiting the office, standing in line, filling out forms, taking painful shots, paying fees, filing insurance claims, coming back to pick up medicine) before obtaining the treatment. Minor transaction costs such as these can be daunting and time-consuming. Activities with many small transaction costs can lead to procrastination and inaction, thereby leading individuals to not seek these services.

*Low fees deter individuals from accessing preventive health services.* A series of evaluations finds that even small price increases above zero lead to large drops in the number of people who choose to buy health products (Kremer and Miguel 2007; Ashraf, Berry, and Shapiro 2010; and Cohen and Dupas 2010).

Behavioral strategies to instill desired behavior

1. *Use cognitive aids*, such as reminders and commitment devices can reduce the gap between an individual's intentions to obtain health care and actions.
2. Wherever possible, *automatically sign in individuals for preventive services* and allowing them to opt out of them, rather than opt in.
3. *Frame benefits* of preventive health procedures to be more salient and attractive.
4. *Eliminate small barriers*—such as small costs, excessive paperwork, scheduling—to obtaining services.
5. *Time interventions* such that the ease of obtaining those services is increased.
6. *Use social networks* to spread health-seeking, preventive behaviors.
7. Engage in *behavioral communication* techniques to correct false beliefs.

*Use cognitive aids.* Reminders, such as cellphone text messages, can be effective in ensuring that people attend health appointments. Weekly text messages to remind patients to take their HIV drugs in Kenya improved the rate of adherence to the drug protocol to 53 percent from a baseline of 40 percent.

Similarly, commitment devices can help people follow through on intentions and change their behavior. In the Philippines, people voluntarily deposited their money in accounts that would forfeit their deposit if they did not quit smoking. The product (CARES) offered smokers a savings account in which they deposit funds for six months, after which they take a urine test for nicotine and cotinine. If they pass, their money is returned; otherwise, their money is forfeited to charity. Of smokers offered this program, those randomly offered

CARES were three percentage points more likely to pass the six-month test than the control group. More importantly, this effect persisted in surprise tests at 12 months, indicating that CARES produced lasting smoking cessation.

However, depending on the context, some cognitive aids are more successful than others. For instance, mobile messages are likely to be effective when there is follow-up, and the message is personalized, and the content is relevant to the patient.

Similarly, in the United States, individuals deposited money into an account that was returned to them if they met weight loss targets. The use of economic incentives produced significant weight loss during the 16 weeks of the intervention. However, the longer-term impact of such interventions need to be explored more, depending on the context.

*Make preventive services “opt-out.”* When a health procedure is believed to make most people better off, it is better to present preventive services on an opt-out basis—make the default to be the behavior that would make most people better off. In a study in Sub-Saharan Africa, voluntary counselling and testing for HIV uptake among young people was extremely high when offered an opt-out strategy. This opt-out strategy is called provider-initiated testing and counselling (as opposed to client-initiated testing) and requires individuals to be informed that they will receive an HIV test as part of general medical screening or clinical management unless they opt out.

During the 2015–2016 flu season, only 21 percent of New York City’s workforce received flu vaccination shots. To improve uptake, an initiative launched by the city’s Office of Labor Relations designed an opt-out email campaign encouraging employees to visit worksite clinics and get their flu shots. Registrations increased by 12 percent and flu vaccine uptake at worksite clinics increased by 5 percent. Based on these outcomes, a similar email campaign was sent to all city employees in the 2017 flu season, resulting in a 10 percent increase in worksite vaccinations.

*Frame benefits of preventive health procedures to be more salient and attractive.* If present bias is at the heart of the problem, then making immediate benefits salient would counteract the discounting of future benefits. Framing messages positively can help draw attention to their benefits. In the United States, gain-framed messages such as “if you get the flu vaccine, you will be less likely to get the flu” consistently improve adoption of preventive behaviors and follow-through (particularly for skin cancer prevention, smoking cessation, and physical activity) when compared to loss-framed messages, such as “if you do not get the flu vaccine, you are more likely to get the flu.”

An intervention in the United States showed that loss-framed messages (emphasizing the risks of not obtaining mammography) are more successful than gain-framed messages (emphasizing the benefits of obtaining mammography) to induce people to undertake mammographic screening.

Another intervention in the United States where a line of yellow tape with a sign was placed across a shopping trolley to prompt shoppers to buy more fruit and vegetables. The tape and

sign designated one part of the trolley for fruit and vegetables and the other for all other purchases. Visually prompting people in this way resulted in a large increase in the amount of fruit and vegetables purchased, without a decrease in profitability for the retailer.

*Eliminate small barriers.* Making services salient and easy-to-use can increase adoption. In Kenya, free chlorine was provided in a concentrated liquid through prominently displayed dispensers at local water sources. The dispensers provided a visual reminder at the moment of collection and made it easy to add the right dose of chlorine. This, along with promotion by community members and other messaging, increased chlorine use by 53 percent.

In India, an initiative incentivized parents to immunize their children by distributing one kilogram of raw lentils and metal plates at every administered immunization. This measure increased full immunization rate six fold and was highly cost-effective.

In the United States, for diabetics, an inexpensive class of drugs called statins can lower blood cholesterol and reduce the risk of heart disease and stroke. But not all eligible diabetics use statins, despite their affordability. An intervention sent diabetic individuals a letter outlining health risks, along with personalized reminders about booking checkups. After 60 days, these patients were 75 percent more likely to have filled a statin prescription, compared with those who received small financial incentives to visit their doctors.

*Timing interventions.* People are more receptive to changes at certain times than others. Some moments are more effective for intervention than others—this could include religious or cultural holidays, the start of the year or significant life events. A successful diabetes screening program in Qatar timed the intervention (which required fasting) to coincide with Ramadan when many people were fasting anyway. In the State Grand Mosque of Qatar, 20 diabetes screening stations were set up, each staffed by two nurses. Worshippers at Friday prayers, who had been fasting since sunrise, were invited to diabetes testing. Imams, the leaders of the religious community, encouraged worshippers to take the opportunity for testing. From the timely testing, 5.3 percent were found to have undiagnosed diabetes, and 26.6 percent were identified as prediabetic.

*Use social networks.* Social connections can influence health rapidly. A study analyzed decades of health behaviors across social networks in the United States and found that when a person's spouse quits smoking, their chances of smoking decrease by 67 percent. Similarly, friends quitting decreases the likelihood that another member of a group will smoke by 36 percent. For co-workers, the number is 34 percent and for siblings it is 25 percent.

The Health Buddy scheme, in Canada involved older students receiving healthy living lessons from their schoolteachers. The older students then acted as peer teachers to deliver that lesson to younger "buddies." Compared with control students, both older and younger "buddies" enrolled in this scheme showed an increase in healthy living knowledge and had beneficial effects on weight.

In indigenous communities in Peru, parents were not aware that their children were not growing normally (Marini, Rokx, and Gallagher 2017). Parents would compare the stature of

their children with other stunted children and assume their height was normal. The World Bank, in addition to lending financial and technical support to Peru in its fight against stunting, produced and presented a seminal video in December 2007 that popularized simple-to-understand standards of what it means for a child to grow at a healthy rate: approximately 24 centimeters in the first year of life and 12 more in the second year. Evidence from the field suggests the mothers' knowledge and awareness regarding nutrition and its effect on development played a role in increasing the demand for nutrition services.

## Encourage better sanitation habits, such as use of toilets and handwashing practices



Globally, 2.5 billion people have inadequate sanitation and 1.2 billion defecate in the open. Lack of sanitation contributes tremendously to the disease burden among the poor, especially infants and young children. The traditional approach to ending open defecation was to provide information to communities about the transmission of disease and to subsidize the construction of toilets.

### Structural barriers and behavioral bottlenecks

1. False beliefs about sanitation practices can lead to faulty mental models. (*Behavioral*)
2. Mental models affect what individuals perceive and how they interpret what they perceive. These mental models can affect an individual's decision to use toilets or wash their hands. For example, over a third of poor women in India believe that increasing fluid intake for children with diarrhea makes them sicker. They follow a model in which diarrhea is interpreted as leaking; since more fluid means more leaking, it must be bad (Datta and Mullainathan 2014). (*Behavioral*)
3. Social norms around poor sanitation practices can reinforce bad habits. (*Behavioral*)

### Behavioral strategies to instill desired behavior

1. *Engage social norms and provide social recognition.* For instance, Community-Led Total Sanitation aims to target good sanitation behaviors by raising collective awareness and recognizing communities that are free of open defecation.
2. Make interventions visual.
3. *Use social networks* and engage communities.

*Engage social norms and provide social recognition.* An approach to creating new community norms called Community-Led Total Sanitation (CLTS) targets good sanitation behaviors by raising collective awareness about the problem. The CLTS leaders work with community members to map dwellings and the locations where individuals defecate in the open. Then they engage the community in correcting those behaviors. The CLTS programs were found to decrease open defecation by 7–11 percent. Moreover, CLTS communities that became free of open defecation received local government recognition. This public acknowledgment increased their social visibility.

Messaging about social norms has been shown effective in influencing household decisions. In the United States, a large-scale program sent letters to households that provided social comparisons between a household's energy use and that of its neighbors. The letters emphasizing social norms reduced energy consumption by 2 percent relative to the baseline. The effects of the intervention decayed over the months between letters and increased again upon receipt of the next letter. Thus, if a norm is not immediately apparent to people, repeated efforts may be required for its effects to become self-sustaining.

*Make interventions visual.* One Ebola prevention technique showed a man with clean hands shaking hands with another man who had blue powder on his hands representing the Ebola virus. After the handshaking, the color blue appeared in the palm of the first man, implying he had come into contact with the virus. Without washing his hands, the man picked up a loaf of bread and immediately the color appeared on the bread. This demonstration significantly increased knowledge and improved hygiene techniques to prevent Ebola transmission, compared with traditional teaching. An intervention campaign in Ghana focused on provoking disgust for not using soap. Individuals were shown a television commercial with a clear message that toilet use prompts worry of contamination and disgust and requires soap. This led to a 13 percent increase in the use of soap after the toilet and 41 percent increase in reported soap use before eating.

*Use social networks and engage communities.* Social norms are powerful in influencing behavior. In the United States, when a hotel room contained a sign that asked people to recycle their towels to save the environment, 35 percent of people did it. However, when the sign used social norms and said that most guests at the hotel recycled their towels at least once during their stay, 44 percent complied. And when the sign said that most previous occupants of the room had reused towels at some point during their stay, 49 percent of guests also recycled.

In Ethiopia, a community mobilization initiative increased the installation of latrines in households from 4 percent to 57 percent in urban areas that allowed for some more social connections. The latrine promotion program dramatically increased latrine access and use at very low cost.

## Increase uptake of contraceptives by women



In most countries, access to contraceptives is a less significant constraint than lack of knowledge and opposition to contraception (World Bank 2012). Availability of family planning services is still limited in parts of the world and women's control over their fertility is still restricted.

### Structural barriers and behavioral bottlenecks

1. *Social norms around use of contraception.* Fertility is regulated by social norms and women tend to choose the same, socially approved reproductive practices as their closest peers. (*Behavioral*)
2. Within a household, *women have limited decision-making authority* concerning the use of contraception. (*Structural*)

## Behavioral strategies to instill desired behavior

1. *Influence social norms through entertainment education.* Entertainment education refers to entertainment media that incorporate an educational message.
2. *Motivate health workers* to increase effort for contraception adoption.
3. *Use existing social networks* to influence the norms around contraceptive use.
4. *Correct misconceptions and false beliefs* through behavioral games that engage in interactive learning (for example, “HIV risk games”).

*Influence social norms through entertainment education.* The term “entertainment education” refers to entertainment media that incorporate an educational message or information of value to the audience to increase audience members’ knowledge about an issue, create favorable attitudes, and change overt behavior. For instance, a radio program in Tanzania was linked to a significant increase in condom use and a reduction in the number of sexual partners.

In rural India, cable television affected gender attitudes, resulting in decreased fertility (primarily through increased birth spacing) and bringing gender attitudes in rural areas much closer to those in urban areas.

In Brazil, women in areas where telenovelas featuring women with much smaller families than the median Brazilian family had a negative 0.6 probability of giving birth compared to similar women in non-covered areas.

In the United States, a reality TV show about teen pregnancy was linked to a significant drop in teen pregnancy.

*Motivate health workers to increase effort for contraception adoption.* The success of contraceptive distribution and adoption often depends on the quality of health workers spreading awareness about them. Growing evidence suggests that health workers respond well to social cues such as recognition and gifts. Health workers also respond to the recognition that comes from awards and token prizes to display in the workplace. For instance, in Zambia, hairstylists and barbers recruited by a public health organization to sell female condoms performed best (selling twice as many condoms as others) when they were given “stars” based on their sales to display in their workplace.

In Nepal, many women seeking abortions want better control over their reproductive lives, but in 2014 only 22 percent of patients were leaving abortion appointments with long-acting reversible contraceptives (LARCs). Many did not offer family planning counseling because staff members who were focused on providing excellent abortion care did not always think beyond the procedure. A program where posters were developed to show each clinic’s LARC uptake rate compared to similar facilities. Updated monthly, the posters celebrated strong performers and encouraged others. Harnessing the power of positive social comparison, this program led to a 7.2 percent improvement in LARC use among post-abortion clients at clinics that received the intervention.

*Use existing social networks to influence the norms around contraceptive use.* The rate of adoption of family planning methods in Korean villages was determined by the strength of the connections to other people who were knowledgeable about contraception and other health matters.

*Correct misconceptions and false beliefs.* In South Africa, one cause of teenage pregnancy and the contracting of HIV is that teenage girls get involved with older men. There is a misperception among some that older men are safer sexual partners, rather than the riskier choice they actually represent. A simple, computer-based “HIV risk game” was designed to correct this misperception, drawing on the behavioral insights that people are more likely to learn something new if they have repeated exposure to the information and are more likely to remember concepts that they teach themselves. The girls in the treatment group were significantly more likely to correctly identify which of two hypothetical individuals of different ages is more likely to have HIV after playing the game, answering twice as many questions correctly as those in the control group.

---

### **Box 5. Improving Parental Engagement in Early Development of Their Child**

---

Children in poor families can differ dramatically from children in richer families in their cognitive and noncognitive abilities. A contributing factor is the lack of parental engagement with infants and young children. This can stem from lack of knowledge and awareness about child development, parental mental models based on traditional beliefs, or fear of violating social norms. To encourage parental investment in early childhood development, the 2015 World Development Report recommends a few strategies summarized here.

#### **Complement direct antipoverty programs with behavioral components**

There is evidence that participation in CCTs may enhance children’s cognitive skills. For instance, in Mexico, children in households exposed to sizable and sustained CCTs had improved motor skills and higher cognitive development. Similarly, experimental evidence from Nicaragua on the impact of CCTs shows modest improvements in language and socioemotional outcomes. Similarly, CCTs can help alleviate maternal depression, which interferes with mothers’ capacity to provide good care. For instance, *Oportunidades*, a CCT program in Mexico, has been associated with reductions in symptoms of maternal depression.

#### **Provide parents with the opportunity to learn and practice new skills**

In addition to providing information about the benefits of positive parenting strategies, it is critical to provide parents with the opportunity to learn and practice new skills for effective interaction. Programs that conduct home visits and help mothers build skills through a structured curriculum that promotes cognitive, language, and socioemotional development of their children. A study in Jamaica provided home stimulation intervention to stunted children aged 9–24 months in low-income communities for two years. The curriculum included detailed structured activities that promoted high-quality interactions between mother and child through role playing and homemade toys.

#### **Targeting parents’ own mental well-being**

Given the central role of that parents’ psychosocial well-being plays in their interactions with children, programs that directly support parents’ own regulation of affect, stress, and cognition are likely to be useful complements to programs that target only children.

Source: World Bank 2015.

---

**Table 3. Summary of Behavioral Options and Examples in Health**

Desired behavior	Menu of options	Examples from World Bank projects and external literature
Improve quality of care provided by health professionals	<i>Simplify and standardize procedures for healthcare professionals</i>	<p>Australia’s Between the Flags initiative made information salient by including colored bands in observation charts. The program is associated with a 25 percent reduction in unexpected cardiac arrests and is popular among staff.</p> <p>The Allillanchu project in South America makes it easy for primary care providers to assess the emotional well-being of any person who comes for treatment. The providers are given an electronic tablet to carry out a simple screening questionnaire and make a referral. People who were referred were then automatically sent motivational text messages to remind them to seek mental healthcare. The results of this project are pending.</p> <p>In the United States, a research project changed the default setting of the ventilators in intensive care units to provide lower volumes of air into patient’s lungs. This change reduced the mortality rate by 25 percent.</p>
	<i>Introduce well-timed interventions</i>	<p>In the United Kingdom, timely messages were used to remind healthcare professional to wash their hands right after a demanding shift. Another creative nudge used was to create “clean” smells as triggers to encourage hand washing. In fact, with just mere exposure to the scent of an all-purpose cleaner people were significantly more likely to keep their table cleaner while eating in a canteen.</p> <p>In the United Kingdom, smokers given consultations before medical procedures (including smoking cessation brochures), referral to a quit helpline, and access to six weeks of nicotine replacement were 2.7 times more likely to achieve long-term smoking cessation.</p>
	<i>Use nonmonetary incentives such as trophies and awards to increase intrinsic motivation</i>	<p>In China, when health workers are given small gifts like a book or a pen, they respond by improving the quality of care they provide.</p> <p>In Zambia, health workers who were given social recognition saw a significant increase in their intrinsic motivation.</p>
Encourage preventive healthcare seeking behavior (for example, early diagnosis of diseases) among individuals	<i>Use cognitive aids such as reminders and commitment devices</i>	<p>In Kenya, weekly text messages to remind patients to take their HIV drugs improved the rate of drug adherence to 53 percent from a baseline of 40 percent.</p> <p>In the Philippines, people voluntarily deposited their money in accounts that would forfeit the deposit if they did not quit smoking.</p> <p>In the United States, individuals deposited money into an account that was returned to them if they met weight loss</p>

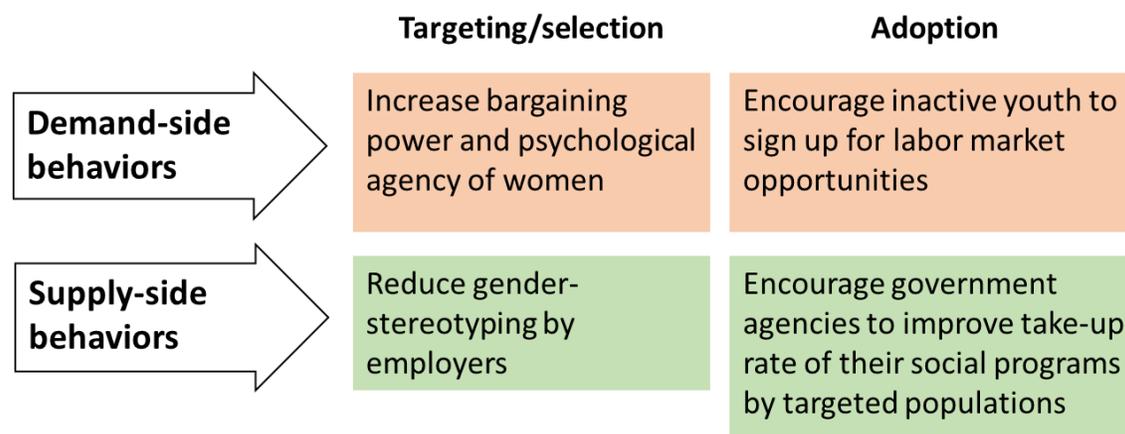
Desired behavior	Menu of options	Examples from World Bank projects and external literature
	<i>Automatically sign in individuals for preventive services and allowing them to opt out of them</i>	<p>targets. The use of economic incentives produced significant weight loss during the 16 weeks of the intervention.</p> <p>In Sub-Saharan Africa, voluntary counselling and testing for HIV uptake was higher when offered as an opt-out strategy.</p> <p>In the United States, to improve uptake of flu vaccines, an initiative launched by the city’s Office of Labor Relations designed an opt-out email campaign encouraging employees to visit worksite clinics and get their flu shots. Registrations increased by 12 percent and flu vaccine uptake at worksite clinics increased by 5 percent.</p>
<i>Frame benefits of preventive health procedures to be more salient and attractive</i>	<i>Frame benefits of preventive health procedures to be more salient and attractive</i>	<p>In the United States, gain-framed messages such as “if you get the flu vaccine, you will be less likely to get the flu” consistently improve adoption of preventive behaviors and follow-through (particularly for skin cancer prevention, smoking cessation, and physical activity) when compared to loss-framed messages, such as “if you do not get the flu vaccine, you are more likely to get the flu.”</p> <p>An intervention in the United States showed that messages emphasizing the risks of not obtaining mammography are more successful than messages emphasizing the benefits of obtaining mammography to induce people to undertake mammographic screening.</p> <p>In the United States, an intervention designated one part of a grocery cart for fruit and vegetables and the other for all other purchases. Visually prompting people in this way resulted in a large increase in the amount of fruit and vegetables purchased.</p>
<i>Eliminate small barriers to action</i>	<i>Eliminate small barriers to action</i>	<p>In Kenya, free chlorine was provided as a concentrated liquid through prominently displayed dispensers at local water sources. The dispensers provided a visual reminder at the moment of water collection and made it easy to add the right dose of chlorine. This, along with promotion by community members and other messaging, increased chlorine use by 53 percent.</p> <p>In India, an initiative incentivized parents to immunize their children by distributing one kilogram of raw lentils and metal plates at every administered immunization. This measure increased the full immunization rate six fold and was highly cost-effective.</p> <p>In the United States, an intervention sent diabetic individuals a letter outlining health risks, along with personalized reminders about booking checkups. After 60 days, these patients were 75 percent more likely to have filled a statin (a diabetic drug) prescription, compared with</p>

Desired behavior	Menu of options	Examples from World Bank projects and external literature
		those who received small financial incentives to visit their doctors.
	<i>Time interventions to increase ease of obtaining services</i>	In Qatar, a diabetes screening program was implemented during Ramadan to make it easier to fulfill the diabetic's testing requirement. From the timely testing, 5.3 percent were found to have undiagnosed diabetes, and 26.6 percent were identified as being prediabetic.
	<i>Use social networks to spread health-seeking, preventive behaviors</i>	In Canada, a "Health Buddy" program involved older students receiving healthy living lessons from their schoolteachers. The older students then acted as peer teachers to deliver that lesson to younger "buddies." Compared with control students, both older and younger "buddies" enrolled in this scheme showed an increase in healthy living knowledge and had beneficial effects on weight.
Encourage better sanitation habits, such as use of toilets and hand washing practices	<i>Engage social norms and provide social recognition</i>	<p>In Indonesia, Community-Led Total Sanitation programs encourage good sanitation behaviors by raising collective awareness. The CLTS leaders work with community members to map dwellings and the locations where individuals defecate in the open. Then they engage the community in correcting those behaviors. The CLTS programs decreased open defecation by 7–11 percent.</p> <p>In the United States, a large-scale program sent letters to households that provided social comparisons between a household's energy use and that of its neighbors. The letters emphasizing social norms reduced energy consumption by 2 percent relative to the baseline.</p>
	<i>Make interventions visual</i>	<p>In Nigeria, one Ebola prevention technique showed a man with clean hands shaking hands with another man who had blue powder on his hands representing the Ebola virus. After the handshaking, the color blue appeared in the palm of the first man, implying he had come into contact with the virus. Without washing his hands, the man picked up a loaf of bread and immediately the color appeared on the bread. This demonstration significantly increased knowledge and improved hygiene techniques to prevent Ebola transmission, compared with traditional teaching.</p> <p>An intervention campaign in Ghana focused on provoking disgust for not using soap. Individuals were shown a television commercial with a clear message that toilet use prompts worry of contamination and disgust and requires soap. This led to a 13 percent increase in the use of soap after the toilet and 41 percent increase in reported soap use before eating.</p>

Desired behavior	Menu of options	Examples from World Bank projects and external literature
	<i>Use social networks and engage communities</i>	<p>In the United States, when a hotel room contained a sign that asked people to recycle their towels to save the environment, 35 percent of people did it. However, when the sign used social norms and said that most guests at the hotel recycled their towels at least once during their stay, 44 percent complied. And when the sign said that most previous occupants of the room had reused towels at some point during their stay, 49 percent of guests also recycled.</p> <p>In Ethiopia, a community mobilization initiative increased the installation of latrines in households from 4 percent to 57 percent in urban areas that allowed for some more social connections. The latrine promotion program dramatically increased latrine access and use at very low cost.</p>
Increase uptake of contraceptives by women	<i>Influence social norms through entertainment education</i>	<p>In Tanzania, a radio program was linked to a significant increase in condom use.</p> <p>In rural India, cable television affected gender attitudes, resulting in decreased fertility (primarily through increased birth spacing) and bringing gender attitudes in rural areas much closer to those in urban areas.</p> <p>In Brazil, women in areas where telenovelas featuring women with much smaller families than the median Brazilian family had a negative 0.6 probability of giving birth compared to similar women in non-covered areas.</p>
	<i>Motivate health workers to increase effort for contraception adoption</i>	<p>In Zambia, hairstylists recruited given social recognition through star stickers sold most condoms.</p> <p>In Nepal, a program where posters were developed to show each clinic's LARC uptake rate compared to similar facilities. Updated monthly, the posters celebrated strong performers and encouraged others. Harnessing the power of positive social comparison, this program led to 7.2 percent improvement in LARC use among post-abortion clients at clinics that received the intervention.</p>
	<i>Correct misconceptions and false beliefs through behavioral games that engage in interactive learning (such as "HIV risk games")</i>	<p>In South Africa, one cause of teenage pregnancy and the contracting of HIV is that teenage girls get involved with older men. There is a misperception among some that older men are safer sexual partners, rather than the riskier choice they actually represent. A simple, computer-based "HIV risk game" was designed to correct this misperception, drawing on the behavioral insights that people are more likely to learn something new if they have repeated exposure to the information and are more likely to remember concepts that they teach themselves. The girls in the treatment group were twice as likely to correctly identify which of two hypothetical individuals of different ages is more likely to have HIV after playing the game.</p>

## Social Protection: Menu of Options

Figure 4. Example of Desired Behaviors in Social Protection



The identified behaviors improve social protection outcomes on both the demand and supply sides. On both sides, many behaviors stem from behavioral biases—such as getting families to delay consumption of cash transfers despite hyperbolic discounting or ensuring that people remain enrolled in social programs despite competing cognitive priorities. In this section, each behavior is discussed together with the respective behavioral barriers and relevant behaviorally informed strategies. Table 4, at the end of this section, summarizes this information.

### Reduce gender stereotyping of women by hiring managers



Histories of social differences can create stereotypes—widely held beliefs that members of one group are inherently different than those in another group. Stereotypes affect performance in ways that perpetuate differences, particularly in labor markets. This can discourage women from participating in the labor force and reduce future investment in education.

#### Structural barriers and behavioral bottlenecks

1. Recruitment and evaluation practices are *gender biased*. (*Behavioral*)
2. Inequalities in endowments and assets contribute to gaps in the world of work. For example, young women and men often follow different educational streams and develop differences in aspirations and skills that underlie occupational segregations later in life (World Bank 2012). (*Structural*)

#### Behavioral strategies to instill desired behavior

1. Improve hiring practices of firms and organizations by including *non-gendered language* in their job advertisements.
2. *Conduct blind evaluations* where all gendered information is removed from the application during initial screening phases.

3. Make human resource managers and recruiters *aware of their implicit biases* by conducting an implicit association test (IAT).

*Use non-gendered language in job advertisements.* Women are more likely to apply for jobs that use more feminine stereotypical language, whereas men are more likely to apply for jobs that use more masculine stereotypical language (Bohnet 2015). Thus, employers could reduce typically masculine words when describing male-stereotyped roles to encourage female participation.

*Conduct gender-blind evaluations.* Blind evaluation procedures offer an effective way to reduce biased, male-favoring, hiring decisions. When combined with a commitment to a hiring criterion (such as a minimum of four years of experience), blind evaluations can increase quality of hiring and reduce gender bias Uhlmann and Cohen 2005). In settings where blind evaluations are difficult to execute, joint evaluations—where male and female candidates are evaluated side by side—can lead to better hiring outcomes for women compared to separate evaluation. However, the effectiveness of joint evaluation in more complex organizational settings has yet to be demonstrated (Bohnet and others 2012).

*Make human resource managers and recruiters aware of their implicit biases.* IATs measure automatic associations between concepts, such as success or a career, and attributes, such as male and female (Greenwald, McGhee, and Schwartz 1998; Beaman and others 2009; and Banaji and Greenwald 2013). They help uncover implicit biases that an individual may have. The tests are easy to administer and can be adapted for nonliterate populations. A World Bank study sought to reduce gender stereotyping in the Turkish labor market using, in part, a set of discrete choice experiments with students aspiring to be hiring managers and an IAT with human resources managers (eMBeD 2018). The results show that women experience a penalty for unsolicited socioemotional skill signaling while men do not.

### **Increase bargaining power and psychological agency (self-efficacy and aspirations) of women**



Social norms influence expectations, values, and behaviors. As such, they could restrict agency, regardless of what laws, better services, and higher incomes provide (World Bank 2012). Social norms can affect household bargaining and psychological agency of women by setting limits on what can be negotiated and how those negotiations are conducted. Women’s agency matters because of its intrinsic relevance for a woman’s individual well-being and that of her family. Moreover, it is required if women are to play an active role in shaping institutions, social norms, and the well-being of their communities (World Bank 2012).

#### **Structural barriers and behavioral bottlenecks**

1. Deeply entrenched gender roles and social norms help perpetuate gender differences. (*Behavioral*)
2. Lack of self-efficacy and self-confidence further solidifies gender norms. (*Behavioral*)

Behavioral strategies to instill desired behavior

1. Use media and other communication platforms to change social norms.
2. Create opportunities for the provision of strong role models.

*Use media and other communication platforms to change social norms.* Changing social norms is particularly relevant where they injuriously restrict female mobility. In Rwanda, a mass media radio campaign was used to change norms and behaviors around reducing intergroup prejudice, violence, and trauma (Paluck and Green 2009). While the radio program had little effect on beliefs, it did have a substantial impact on listeners' willingness to express dissent and the ways they resolved communal problems.

*Create opportunities for the provision of strong role models.* In India, villagers who had never had a female leader preferred male leaders and perceived hypothetical female leaders to be less effective than their male counterparts. While exposure to a female leader did not alter villagers' preference for male leaders, it did weaken stereotypes about gender roles in the public and domestic spheres, and it eliminated the negative perception among male villagers about female leaders' effectiveness (Beaman and others 2012).

Similarly, in Jordan, a focus groups was presented two short stories—vignettes—about fictional female characters in Jordanian society. The purpose of these short stories was to help understand the extent of the participants acceptance of these changes and what changing factors lead them to accept or decline the concept of a working woman (eMBeD 2018).

## Encourage inactive youth to sign up for labor market opportunities



Young people are over three times more likely to be unemployed than adults (ILO 2017). Rates of idleness among youth differ from country to country but can be as high as 50 percent (World Bank 2013). Many drivers of youth inactivity are structural and require traditional interventions. But unemployment and inactivity interact interdependently with psychosocial well-being and competence (Thern and others 2017). Solutions to structural problems can be improved by integrating behavioral solutions.

Structural barriers and behavioral bottlenecks

1. Leisure gives immediate gratification whereas the cost of searching for a job is immediate and the reward is delayed. This *hyperbolic discounting* leads to procrastination of job search. (*Behavioral*)
2. The stigma of unemployment can deteriorate people's self-worth and self-belief at the beginning of the job search process. Moreover, if young people believe they are incapable of gaining employment, search failures will quickly lead to quitting. (*Behavioral*)
3. The complex task of identifying the right job opportunities can overload people's mental bandwidth. Without timely information about available opportunities, job searches are costly and time-consuming. (*Behavioral*)
4. Lack of role models mean that young people often struggle to imagine themselves in particular roles. (*Behavioral*)

5. If individuals do not have disposable funds to invest in searching for work, they will limit their search parameters and may seek temporary employment to pay for the cost of searching for permanent employment rather than seeking full-time positions. (*Structural*)

Behavioral strategies to instill desired behavior

1. Shift social norms by highlighting role models and trendsetters.
2. *Help young people set concrete goals* to avoid procrastination—hyperbolic discounting.
3. Increase self-worth and self-affirmation of inactive youth.
4. Make the job search simpler and timely to avoid mental capacity overload.
5. Alleviate small financial constraints.

*Shift social norms.* Deviating from social norms is hard and inactive youth might be surrounded by a social network of friends who are also inactive. One way to tackle this is to identify people who can lead the charge in changing a social norm—trendsetters. In the United States, to reduce bullying popular students were enlisted and made to do few activities to tackle harassment. When their behavior changed their peers did too (Paluck and Shepherd 2012).

Without role models, young people often struggle to imagine themselves in particular roles. One way to address this is to expose young people to the experience of successful people from similar backgrounds. In Uganda, women were exposed to short videos of inspiring women telling their success stories. This had a positive effect on women’s entrepreneurship initiative and income from enterprises and crops (Lubega and others 2017).

*Help young people set concrete goals to avoid procrastination.* Not working and enjoying leisure gives immediate gratification whereas entry-level jobs have larger pay offs in the long term. One way to tackle this is to work with youths on goal-setting exercises to make the pathways to achieving their aspirations more concrete. In the United Kingdom, using a goal-setting and planning intervention with job seekers created about a five-percentage-point increase in rate of people leaving benefits (Behavioral Insights Team 2015).

Increase self-worth and self-affirmation of inactive youth. The stigma of unemployment can deteriorate people’s self-worth and self-belief at the beginning of the job search process. One way to tackle this is to encourage them to engage in self-affirmation exercises. In the United Kingdom, job seekers at employment centers were made to engage in expressive writing and self-affirmation exercises. Those who engaged in the exercises, along with other nudges, were 15–20 percent more likely to be off benefits 13 weeks after (Behavioral Insights Team 2015).

Similarly, in the United States, low-achieving African American students were asked to complete writing assignments about values important to them. Two years later, their GPAs were 0.41 points higher and their rate of grade repetition 70 percent lower (Cohen and others 2009).

In the United States, a cognitive behavioral therapy (CBT) program was developed to see how it might benefit youth in the criminal justice system. The program created a package of lessons and activities that leveraged the active ingredients of CBT to help young people realize how

often they act without thinking; recognize high-stakes situations in which their automatic responses can get them into trouble; and be more reflective and develop different responses. The CBT program includes a classroom curriculum and a user manual to help youth regain control of their own decision-making and avoid cycling back into the system (Ideas42 2018).

*Make the job search simpler and timely.* The complex task of identifying the right job opportunities can overload one's mental capacity. Moreover, without timely information available about opportunities, a job search can become costly and time-consuming. One way to tackle this is to identify frictions in the job search process and simplify those procedures to make it less mentally taxing to apply for work. One low-cost way to tackle this problem is to use text messages to provide up-to-date information on job vacancies.

In Peru, job seekers were sent text messages about job opportunities. Compared with job seekers in the traditional programs who received information, they were 17 percent more likely to have found work by the first month (Dammert, Galdo, and Galdo 2015).

*Alleviate small financial constraints.* Reducing small cash constraints by helping job seekers to cover costs might allow individuals to search more intensively, while also mitigating the need to take up undesirable forms of temporary work. In Ethiopia, young people were given transport subsidies to support their job search efforts. Their likelihood of finding permanent employment increased by six percentage points in the short run (Franklin 2015).

## **Encourage government agencies to improve uptake rate of social programs by targeted populations**



A prominent feature of various social benefit programs is that some proportion of the targeted individuals fail to apply for the benefits they are entitled to. This incomplete uptake impairs the effectiveness of benefits programs and limits the ability to reduce poverty and increase well-being. Therefore, knowledge of how to affect the uptake rate is a key issue in implementing such policies.

### Structural barriers and behavioral bottlenecks

1. Some programs and policies impose *cognitive costs* on poor people (Shah, Mullainathan, and Shafir 2012). These direct cognitive costs, such as filling out a form or calling a benefits hotline, can further burden already cognitively constrained low-income individuals making them less likely to sign up for social programs (*Behavioral*)
2. For some programs, *social stigma* could discourage individuals from signing up for them. (*Behavioral*)

*Cognitive costs.* Some programs and policies impose cognitive costs on poor people (Shah, Mullainathan, and Shafir 2012). For instance, in Morocco, a program was introduced that allowed low-income households without piped water to get a connection to water on credit. However, the application process was very cumbersome—the households had to obtain authorization from their local authorities, provide photocopies of identification documents, and make a down payment at a local office. These additional steps added many cognitive

costs and as a result, program uptake was only 10 percent after six months (Devoto, Duflo, and Dupas 2012).

*Stigma.* For some programs, the social stigma around them could discourage individuals from signing up for them. For instance, there is evidence that people feel stigma when accessing certain benefits—such as food stamps in the United States (McConnell and Ohls 2000).

Behavioral strategies to instill desired behavior

1. Favor automatic or default enrollments where possible.
2. *Simplify procedures* for accessing services and benefits.
3. *Improve timing of the intervention* to maximize cognitive attention and salience.
4. Add social context into the design of the programs.

*Favor automatic or default enrollments.* Automatically enrolling individuals in a program can reduce depletion of scarce cognitive resources to make a choice to enroll (Stutzer, Goette, and Zehnder 2011). Thus, if government programs are linked (or if the government has access to a database of eligible candidates), one could automatically opt-in eligible candidates. Moreover, defaults can have endorsement effect as individuals interpret the default as a form of advice coming from a knowledgeable party (Madrian and Shea 2001).

*Simplify procedures for accessing services and benefits.* If defaults are not feasible, then simplifying the process to obtain a service can help improve enrollment. For example, in the United States, provision of assistance for completing a health insurance application improved enrollment among the poor Asian population by 27 percent (Aizer 2006). Similarly, the application rates of low-income students for financial aid or their eventual attendance in college increased by 24 percent when the parents were offered an additional 10 minutes of help along with tax information (Bettinger and others 2009).

*Improve the timing of the intervention to maximize cognitive attention and salience.* Individuals may have varying levels of cognitive resources and attention at different times. Policies should be introduced to optimize on an individual's mental bandwidth. For instance, farmers in Kenya increased their fertilizer adoption when they were given the opportunity to pre-purchase it at the time of harvest (when they had more funds) rather than months later when they would be cash constraint (Duflo, Kremer, and Robinson 2011).

Similarly, promoters of community health insurance in Tanzania took advantage of the disbursements of a CCT program to enroll households in the community health fund. They targeted distribution points of the program to sign people up for the health insurance when they had greater liquidity. This contributed to a nearly 20 percentage point increase in the use of health insurance to finance medical treatment among beneficiaries of the cash transfer program (Evans and others 2014).

*Add social context into the design of the programs.* Social networks can speed up the adoption of programs. In India, microfinance clients were randomly assigned to meet weekly rather than monthly with their repayment groups and as a result have more informal social contact with others in the group. They exhibited a greater willingness to pool risk with group members at

that time and were three times less likely to default on their second loans (Feigenberg, Field, and Pande 2013).

Similarly, increasing social ties can help shift health behaviors. A program in Lebanon is striving to increase breastfeeding by training female friends of new mothers to serve as “support mothers” and soliciting women in the community who have successfully breastfed to also serve in this capacity (Nabulsi and others 2014).

Another randomized experiment in China showed that farmers were more likely to take up weather insurance when they had a friend who had participated in an intensive information session about the nature and benefits of the product first. This “network effect” was equivalent to decreasing the average insurance premium by 13 percent (Cai, De Janvry, and Sadoulet 2015).

Similarly, in Malawi, offering farmers a small performance incentive to communicate to peers the benefits of a new seed technology was a cost-effective means of inducing adoption of new agricultural technologies (BenYishay and Musfhiq Mobarak 2018). Thus, social networks can amplify the effects of a standard information program to increase adoption of new products and services.

---

### **Box 6. Behavioral Nudges for Cash Transfer Programs in Madagascar**

---

In 2015, the World Bank started working with ideas42, a leading research and policy think tank specializing in behavioral studies, to introduce behavioral interventions to cash transfer programs. Two different types of nudges were implemented in Madagascar’s Safety Net Project. The “behavioral nudges” of this program were designed to strengthen women’s plan-making skills and develop their self-affirmation. The plan-making component of the program aims to “enable women to better adopt a longer-term perspective with concrete goals they wish to achieve with the cash. They are supported in drawing out the intermediary steps of achieving their goals and in putting money aside for their goals.” Similarly, “self-affirmation tasks aim to enable women define what they want, make decisions about the well-being of their family, and reinforce their identity as guardians and the influence they have to improve their children’s lives.”

Most interventions are implemented in interactive and pictorial ways for greater impact. These techniques include drawing, playing games with cards and stones, using stickers, image cards, storybooks and playtime with their children. They are done in beneficiary groups, which creates social change through collective action. Finally, the timing of the intervention is important, and is done right before the women receive the payments. At that point, women are primed to think of immediate needs and expenditures and not of longer-term goals. By timing the nudges right before the payments, the goal is to encourage longer-term thinking about expenditures, investments, and savings. Moreover, additional behavioral nudges are implemented to change savings and investment behavior. Some of these interventions include facilitating target setting (such as buying poultry, agricultural tools, and such), putting money aside by earmarking and partitioning, teaching simple accounting, and providing reminders of planned investments and savings at payment sites.

*Source:* “Behavioral Nudges for Cash Transfer Programs in Madagascar” The World Bank  
<http://documents.worldbank.org/curated/en/885331517847021570/pdf/123154-WP-PUBLIC-5p-P149323-BehavioralinterventionsinMadagascar.pdf>.

---

**Table 4. Summary of Behavioral Options and Examples in Social Protection**

Desired behavior	Menu of options	Examples from World Bank projects and external literature
Reduce gender stereotyping by employers	<i>Include non-gendered language in job advertisements</i>	<p>Women are more likely to apply to jobs that use more feminine stereotypical language, whereas men are more likely to apply to jobs that use more masculine stereotypical language.</p> <p>In the United States, employers who reduced masculine words when describing male-stereotyped roles led to encouragement of female participation.</p>
	<i>Conduct blind evaluations where all gendered information is removed</i>	<p>In the United States, a pre-commitment to a hiring criterion (such as a minimum requirement of four years of experience), can increase quality of hiring and reduce gender bias.</p> <p>Joint evaluations—where male and female candidates are evaluated side by side—can lead to better hiring outcomes for women compared to separate evaluation.</p>
Increase bargaining power and psychological agency of women	<i>Make human resource managers and recruiters aware of their implicit biases</i>	<p>In Turkey, an intervention in a World Bank project conducted an IAT with human resources managers. The results show that women experience a penalty for unsolicited socioemotional skill signaling while men do not.</p>
	<i>Use media and other communication platforms to change social norms</i>	<p>In Rwanda, a mass media radio campaign was used to change norms and behaviors around reducing intergroup prejudice, violence, and trauma. While the radio program had little effect on beliefs, it did have a substantial impact on listeners’ willingness to express dissent and the ways they resolved communal problems.</p>
Encourage inactive youth to sign up for labor market opportunities	<i>Create opportunities for provision of strong role models</i>	<p>In India, exposure to female leaders weakened stereotypes about gender roles in the public and domestic spheres.</p> <p>In Jordan, a World Bank project did focus groups where vignettes about fictional female characters in Jordanian society were presented. The purpose of these short stories was to help understand the extent of the participants’ acceptance of these changes and what changing factors lead them to accept or decline the concept of a working woman. The results are pending evaluation.</p>
	<i>Highlight role models and trendsetters</i>	<p>Deviating from social norms is hard and inactive youth might be surrounded by a social network of friend who are also inactive. One way to tackle this is to identify people who can lead the charge in changing a social norm—trendsetters. In the United States, popular students were enlisted to do activities to tackle harassment and bullying. When their behavior changed that of their peers did too.</p> <p>In Uganda, women were exposed to short videos of inspiring women telling their success story. This had a positive effect on women’s entrepreneurship initiative and income from enterprises and crops.</p>

Desired behavior	Menu of options	Examples from World Bank projects and external literature
	<i>Help young people set concrete goals to avoid procrastination</i>	One way to tackle this is to work with youth on goal-setting exercises to make the pathways to achieving their aspirations more concrete. In the United Kingdom, a goal-setting and planning intervention with job seekers led to a five-percentage-point increase in the rate of people leaving benefits.
	<i>Increase self-worth and self-affirmation of inactive youth</i>	In the United Kingdom, job seekers at employment centers were made to engage in expressive writing and self-affirmation exercises. Those who engaged in the exercises, along with other nudges, were 15 to 20 percent more likely to be off benefits 13 weeks later.  In the United States, low-achieving African American students were asked to complete writing assignments about values important to them. Two years later, their GPA went up.
	<i>Make job search simpler and timely to avoid mental capacity overload</i>	In Peru, job seekers were sent text messages about job opportunities. They were 17 percent more likely to have found work by the first month.
	<i>Alleviate small financial constraints</i>	In Ethiopia, young people were given transport subsidies to support their job search efforts.
<b>Encourage government agencies to improve the uptake of their social programs by targeted populations</b>	<i>Favor automatic or default enrollments where possible</i>	In the United States, default enrollments and contribution to retirement plans led to increase in savings.
	<i>Improve timing of the interventions to maximize cognitive attention and salience</i>	In the United States, provision of assistance for completion of health insurance application improved enrollment by 27 percent.  In Tanzania, disbursements from a CCT program were used to enroll households in the community health fund. The targeted distribution points of the cash transfer program were used to sign people up for the health insurance when they had greater liquidity. This contributed to the nearly 20 percentage point increase in the use of health insurance to finance medical treatment among beneficiaries of the program.
	<i>Add social context into the design of the programs</i>	In India, microfinance clients were randomly assigned to meet weekly rather than monthly with their repayment groups and as a result have more informal social contact with others in the group. They exhibited a greater willingness to pool risk with group members at that time and were three times less likely to default on their second loans.  In China, farmers were more likely to take weather insurance when they had a friend who had participated in an intensive information session about the nature and benefits of the product first. This “network effect” was equivalent to decreasing the average insurance premium by 13 percent.

---

Desired behavior	Menu of options	Examples from World Bank projects and external literature
		In Malawi, offering farmers a small performance incentive to communicate to peers the benefits of a new seed technology led to adoption of new agricultural technologies.

---

---

## Appendix A. Key Desired Behaviors in World Bank Projects

---

### EDUCATION

The following sample of behaviors is drawn from interviews with eMBeD team members, 80 World Bank project documents that are listed as collaborative ventures with eMBeD, the World Development Report 2018 *Learning to Realize Education's Promise*, operationalization of the WDR's lines of action, and Education Global Practice strategic directions guideline.

#### Attendance

- Increase teachers' attendance in schools.
- Encourage parents to send their children to school.
- Motivate students to not drop out of secondary school.
- Engage parents in early childhood learning.

#### Learning

- Increase academic aspirations of students, particularly girls.
- Reduce bias in teachers toward poor students.
- Change beliefs and mindsets of students about academic achievement.
- Increase socioemotional skills of secondary school students.
- Increase investment by governments in early childhood education.
- Encourage education ministries to invest in and support the professional development of teachers.

### HEALTH

The following list is drawn from interviews with eMBeD team members, 80 World Bank project documents that are listed as collaborative ventures with eMBeD, and the 2017 priority direction document for the Health, Nutrition, and Population Global Practice.

#### Nutrition

- Improve parents' practices on child nutrition.

#### Healthcare

- Increase patients' adherence to medication.
- Increase preventive healthcare seeking behavior (such as early diagnosis of tuberculosis) among individuals.

### Sanitation

- Encourage use of toilets by households.
- Encourage families to wash their hands with soap.

### Reproductive health

- Increase uptake of contraceptives (such as LARC) by adolescent girls.
- Change parents' sex-preference for children at birth.

## **SOCIAL PROTECTION**

The following list is drawn from interviews with eMBeD team members, 80 World Bank project documents that are listed as collaborative ventures with eMBeD, and the World Bank 2012–2022 social protection and labor strategy document.

### Gender

- Reduce gender stereotyping of women by hiring managers.
- Empower women to increase their intrahousehold bargaining.
- Improve female psychological agency (for example, help them develop a growth mindset, greater self-efficacy, and higher aspirations).

### Social Programs

- Increase uptake of social programs (such as CCTs, youth employment programs, and mobile finance) by target populations.

### Jobs

- Encourage inactive youth and women to sign up for labor market opportunities.

## References

- Aizer, A. 2006. *Public Health Insurance, Program Take-Up, and Child Health*. The National Bureau of Economic Research. <https://www.nber.org/papers/w12105>
- Ashraf, N., J. Berry, and J.M. Shapiro. 2010. "Can Higher Prices Stimulate Product Use? Evidence from a Field Experiment in Zambia." *American Economic Review* 100(5). <https://www.aeaweb.org/articles?id=10.1257/aer.100.5.2383>
- Banaji, M.R., and A.G. Greenwald. 2013. *Blindspot: Hidden biases of good people*. New York: Delacorte Press. <https://www.amazon.com/Blindspot-Hidden-Biases-Good-People/dp/0345528433>
- Beaman, L., R. Chattopadhyay, E. Duflo, R. Pande, and P. Topalova. 2009. "Powerful Women: Does Exposure Reduce Bias?" *The Quarterly Journal of Economics* 124(4). <https://doi.org/10.1162/qjec.2009.124.4.1497>
- Beaman, L., E. Duflo, R. Pande, and P. Topalova. 2012. "Female Leadership Raises Aspirations and Educational Attainment for Girls: A Policy Experiment in India." *Science* 335(6068). <https://science.sciencemag.org/content/335/6068/582>
- Behavioral Insights Team. 2015. *Update Report 2013-2015*. [https://38r8om2xjhhl25mw24492dir-wpengine.netdna-ssl.com/wp-content/uploads/2015/08/BIT\\_Update-Report-Final-2013-2015.pdf](https://38r8om2xjhhl25mw24492dir-wpengine.netdna-ssl.com/wp-content/uploads/2015/08/BIT_Update-Report-Final-2013-2015.pdf)
- BenYishay, A., and A. Mushfiq Mobarak. 2018. "Social Learning and Incentives for Experimentation and Communication." *Review of Economic Studies* 86, 976–1009. <http://faculty.som.yale.edu/MushfiqMobarak/papers/MalawiAg.pdf>
- Bettinger, E.P., B.T. Long, P. Oreopoulos, and L. Sandbonmatsu. 2009. *The Role of Simplification and Information in College Decisions: Results from the H&R Block FAFSA Experiment*. NBER Working Paper Series. <https://www.nber.org/papers/w15361.pdf>
- Bohnet, I., A. Van Geen, and M.H. Bazerman. 2012. *When Performance Trumps Gender Bias: Joint Versus Separate Evaluation*. Faculty Research Working Paper Series. Harvard Business School. <https://dash.harvard.edu/bitstream/handle/1/8506867/RWP12-009-Bohnet.pdf?sequence=1>
- Bohnet, I. 2015. *What Works. Gender Equality by Design*. Harvard University Press. <http://www.hup.harvard.edu/catalog.php?isbn=9780674089037>
- Cai, J., A. De Janvry, and E. Sadoulet. 2015. "Social Networks and the Decision to Insure." *American Economic Journal: Applied Economics* 7(2):81–108. [https://www.povertyactionlab.org/sites/default/files/publications/907\\_Social\\_Networks\\_and\\_Insurance\\_in\\_China\\_AEJ.pdf](https://www.povertyactionlab.org/sites/default/files/publications/907_Social_Networks_and_Insurance_in_China_AEJ.pdf)
- Carpenter, C.J. 2010. *A meta-analysis of the effectiveness of health belief model variables in predicting behavior*. US National Library of Medicine. National Institutes of Health. <https://www.ncbi.nlm.nih.gov/pubmed/21153982>

- Chaudhury, N., J. Hammer, M. Kremer, K. Muralidhara, and F.H. Rogers. 2006. "Missing in Action: Teacher and Health Worker Absence in Developing Countries." *Journal of Economic Perspectives* 20(1).  
<https://www.aeaweb.org/articles?id=10.1257/089533006776526058>
- Cohen, J., and P. Dupas. 2010. "Free Distribution or Cost-Sharing? Evidence from a Randomized Malaria Prevention Experiment." *The Quarterly Journal of Economics* 125(1): 1–45.  
<https://academic.oup.com/qje/article/125/1/1/1880305>
- Cohen, G.L., J. Garcia, V. Purdie-Vaughns, N. Apfel, and P. Brzustoski. 2009. *Recursive processes in self-affirmation: intervening to close the minority achievement gap*. US National Library of Medicine. National Institutes of Health. <https://www.ncbi.nlm.nih.gov/pubmed/19372432>
- Dammert, A.C., J. Galdo, and V. Galdo. 2015. *Integrating Mobile Phone Technologies into Labor-Market Intermediation: A Multi-Treatment Experimental Design*. IZA.  
<http://ftp.iza.org/dp9012.pdf>
- Datta, S., and S. Mullainathan. 2014. "Behavioral Design: A New Approach to Development Policy." *Review of Income and Wealth* 60(1): 7–35. <https://onlinelibrary.wiley.com/doi/full/10.1111/roiw.12093>
- Devoto, F., E. Duflo, and P. Dupas. 2012. "Happiness on Tap: Piped Water Adoption in Urban Morocco." *American Economic Journal: Economic Policy* 4(4): 68–99.  
<https://www.aeaweb.org/articles?id=10.1257/pol.4.4.68>
- Duflo, E., M. Kremer, and J. Robinson. 2011. "Nudging Farmers to Use Fertilizer: Theory and Experimental Evidence from Kenya." *American Economic Review* 101(6).  
<https://www.aeaweb.org/articles?id=10.1257/aer.101.6.2350>
- Dweck, C. 2016. *Mindset: The New Psychology of Success*. 2<sup>nd</sup> edition. New York: Random House.  
<http://mindsetonline.com/>
- eMBeD. 2018. *Using the Behavioral Sciences to Fight Global Poverty and Reduce Inequality*. World Bank. Washington DC. <https://www.worldbank.org/en/programs/embed>
- Evans, D.K., S. Hausladen, K. Kosec, and N. Reese. 2014. *Community-Based Conditional Cash Transfers in Tanzania: Results from a Randomized Trial*. Washington, DC: World Bank.  
<https://openknowledge.worldbank.org/handle/10986/17220> License: CC BY 3.0 IGO.
- Feigenberg, B., E. Field, and R. Pande. 2013. "The Economic Returns to Social Interaction: Experimental Evidence from Microfinance." *The Review of Economic Studies* 80(4):1459–1483. <http://economics.mit.edu/files/9207>
- Flanagan, A. E., and J.C. Tanner. 2016. *Evaluating Behavior Change in International Development Operations: A New Framework*. IEG Working Paper 2016; No. 2. Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/25872> License: CC BY 3.0 IGO
- Franklin, S. 2015. *Location, search costs and youth unemployment: A randomized trial of transport subsidies in Ethiopia*. CSAE Working Paper Series 2015-11, Centre for the Study of African Economies, University of Oxford. <https://ideas.repec.org/p/csa/wpaper/2015-11.html>

- Greenwald, A.G., D.E. McGhee, and J.L. Schwartz. 1998. *Measuring individual differences in implicit cognition: the implicit association test*. US National Library of Medicine. National Institutes of Health. <https://www.ncbi.nlm.nih.gov/pubmed/9654756>
- Guerrera, N., K. Modecki, and W. Cunningham. 2014. *Developing Social-Emotional Skills for the Labor Market: The PRACTICE Model*. Research Working Paper 7123. Washington, DC: World Bank.  
<http://documents.worldbank.org/curated/en/970131468326213915/pdf/WPS7123.pdf>
- Ideas42. 2018. *What choice do we have?* Impact Report 2018. [http://www.ideas42.org/wp-content/uploads/2018/04/ideas42\\_ImpactReport2018\\_digital.pdf](http://www.ideas42.org/wp-content/uploads/2018/04/ideas42_ImpactReport2018_digital.pdf)
- IEG (Independent Evaluation Group). 2015a. *Learning and Results in World Bank Operations: Toward a New Learning Strategy*. Washington, DC: World Bank.  
<https://openknowledge.worldbank.org/bitstream/handle/10986/22818/Learning0and0r0egy000evaluation0two.pdf;sequence=1>
- \_\_\_\_\_. 2015b. *World Bank Support to Early Childhood Development – An Independent Evaluation*. Washington, DC: World Bank.  
[https://ieg.worldbankgroup.org/sites/default/files/Data/Evaluation/files/early\\_child\\_dev\\_eval.pdf](https://ieg.worldbankgroup.org/sites/default/files/Data/Evaluation/files/early_child_dev_eval.pdf)
- ILO (International Labor Organization). 2017. *World Employment Social Outlook*. Geneva.  
[http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms\\_541211.pdf](http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_541211.pdf)
- Jones, G., R.W. Steketee, R.E. Black, Z.A. Bhutta, and S.S. Morris. 2003. *How many child deaths can we prevent this year?* US National Library of Medicine. National Institutes of Health.  
<https://www.ncbi.nlm.nih.gov/pubmed/12853204>
- Kremer, M., and E. Miguel. 2007. "The Illusion of Sustainability." *The Quarterly Journal of Economics* 122(3): 1007–1065. <https://academic.oup.com/qje/article/122/3/1007/1879494>
- Lubega, P., F. Nakakawa, G. Narciso, C. Newman, and C. Kityo. 2017. *Inspiring women: Experimental evidence on sharing entrepreneurial skills in Uganda*. TEP Working Paper No. 2017. Department of Economics, Trinity College Dublin.  
<https://www.tcd.ie/Economics/TEP/2017/tep2017.pdf>
- Madrian, B.C., and D.F. Shea. 2001. "The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior." *The Quarterly Journal of Economics* 116(4): 1149–1187.  
[https://www.jstor.org/stable/2696456?seq=1#metadata\\_info\\_tab\\_contents](https://www.jstor.org/stable/2696456?seq=1#metadata_info_tab_contents)
- Marini, A., C. Rokx, and P. Gallagher. 2017. *Standing Tall: Peru's Success in Overcoming its Stunting Crisis*. Washington, DC: World Bank.  
<http://documents.worldbank.org/curated/en/815411500045862444/pdf/FINAL-Peru-Nutrition-Book-in-English-with-Cover-October-12.pdf>
- McConnell, S.M., and J. Ohls. 2000. *Food Stamps in Rural America: Special Issues and Common Themes*. JCPR Working Papers 182, Northwestern University/University of Chicago Joint Center for Poverty Research. <http://www.upjohninst.org/publications/titles/rdwr.html>

- Mullainathan, S., and E. Shafir. 2013. *Scarcity: Why Having Too Little Means So Much*. London: Allen Lane. <https://scholar.harvard.edu/sendhil/scarcity>
- Nabulsi, M., H. Hamadeh, H. Tamim, T. Kabakian, L. Charafeddine, N. Yehya, D. Sinno, and S. Sidani. 2014. *A complex breastfeeding promotion and support intervention in a developing country: study protocol for a randomized clinical trial*. BMC Public Health. <https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-14-36>
- Neisser, U., G. Boodoo, T. Bouchard, A. Boykin, N. Brody, S. Ceci, D. Halpern, J. Loehlin, R. Perloff, R. Sternberg, and S. Urbina. 1996. "Intelligence: Knowns and unknowns." *American Psychologist* 51(2), 77-101. <http://dx.doi.org/10.1037/0003-066X.51.2.77>
- Nielsen, H. Dean. 2006. *From Schooling Access to Learning Outcomes – An Unfinished Agenda: An Evaluation of World Bank Support to Primary Education (English)*. Washington, DC: World Bank. <http://documents.worldbank.org/curated/en/370901468154169343/pdf/372650Schooling0Access01PUBLIC1.pdf>
- Paluck, E.L., and D.P. Green. 2009. *Prejudice reduction: what works? A review and assessment of research and practice*. US National Library of Medicine. National Institutes of Health. <https://www.ncbi.nlm.nih.gov/pubmed/18851685>
- Paluck, E. L., and H. Shepherd. 2012. "The salience of social referents: A field experiment on collective norms and harassment behavior in a school social network." *Journal of Personality and Social Psychology* 103(6), 899–915. <http://dx.doi.org/10.1037/a0030015>
- Park, E., H. Kim, and S. Yu. 2016. "Perceptions and Attitudes of Early Childhood Teachers in Korea about Education for Sustainable Development." *International Journal of Early Childhood* 48(3): 369–385. <https://eric.ed.gov/?id=EJ1121350>
- Rogers, T., and A. Feller. n.d. (last modified January 2017). *Intervening through Influential Third Parties: Reducing Student Absences at Scale via Parents*. [https://scholar.harvard.edu/files/todd\\_rogers/files/influential\\_third\\_parties.pdf](https://scholar.harvard.edu/files/todd_rogers/files/influential_third_parties.pdf)
- Shah, A.K., S. Mullainathan, and E. Shafir. 2012. "Some consequences of Having Too Little." *Science* 338(682). <https://science.sciencemag.org/content/338/6107/682.full>
- Stutzer, A., L. Goette, and M. Zehnder. 2011. "Active Decisions and Prosocial Behaviour: A Field Experiment on Blood Donation." *The Economic Journal* 121(November), F476–F493. <https://www.iame.uni-bonn.de/people/lorenz-goette/paper/Active%20Decisions%20and%20Pro-Social%20Preferences.pdf>
- Thern, E., J. de Munter, T. Hemmingsson, and F. Rasmussen. 2017. "Long-term effects of youth unemployment on mental health: does an economic crisis make a difference?" *Journal of Epidemiology and Community Health* 71(4):344–349. <https://europepmc.org/abstract/med/28087812>

- Uhlmann, E., G.L. Cohen. 2005. *Constructed criteria: redefining merit to justify discrimination*. US National Library of Medicine. National Institutes of Health. <https://www.ncbi.nlm.nih.gov/pubmed/15943674>
- UNICEF. 2018. *On Mother's Day, UNICEF calls for the narrowing of "breastfeeding gaps" between rich and poor worldwide*. Press. Centre. [https://www.unicef.org/media/media\\_102864.html](https://www.unicef.org/media/media_102864.html)
- World Bank. 2012. *World Development Report 2012: Gender Equality and Development*. Washington DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/4391>
- \_\_\_\_\_. 2013. *World Development Report 2013. Jobs*. Washington DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/11843>
- \_\_\_\_\_. 2015. *World Development Report 2015. Mind, Society, and Behavior*. Washington DC: World Bank. <https://www.worldbank.org/en/publication/wdr2015>
- \_\_\_\_\_. 2018. *World Development Report 2018: Learning to Realize Education's Promise*. Washington DC: World Bank. <https://www.worldbank.org/en/publication/wdr2018>
- Zuilkowski, S., M.C.H. Jukes, and M.M. Dubeck. 2016. "I failed, no matter how hard I tried": A mixed-methods study of the role of achievement in primary school dropout in rural Kenya." *International Journal of Educational Development* 50 (2016). <https://www.poverty-action.org/sites/default/files/publications/Zuilkowski%20Jukes%20Dubeck%202016.pdf>