



EVIDENCE FILE

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Lessons from Parenting Programs in Early Childhood

Parenting programs are early childhood interventions focused on engaging parents to provide in-home stimulation to infants and toddlers with the hope of improving young children's cognitive and motor development, social emotional skills, and overall wellness as they grow. These programs teach parents techniques to stimulate their children's brain and body development through talk, play, and frequent high-quality interactions. Parenting programs are often combined with other public health programs, specifically programs focused on providing nutritional supplementation. There is evidence that parenting programs, when implemented at a small scale by researchers and non-government organizations, can have a significant impact on children's cognitive and social-emotional development outcomes, as well as on their future education and earnings. This brief reviews evidence from the SIEF portfolio to assess whether these successes be replicated at scale in low- and middle-income countries.

What is a parenting program?

- Types of parenting programs
- Components of parenting programs

Parenting programs focus on engaging parents to provide in-home stimulation to infants and toddlers to improve their cognitive and motor development, social emotional skills, and overall wellness as they grow. Parenting programs include either parent counselling or more hands-on demonstrations of early stimulation activities or both types of interventions.



What is a parenting program?

Types of parenting programs

■ **Parent counseling interventions** are implemented by community trainers or health workers who provide information to parents about the importance of cognitively stimulating their young children or ensuring young children receive proper nutrition. This happens either through community or one-on-one meetings.

For example, in a SIEF-supported evaluation of a parenting counseling intervention in Nepal, trained local health workers distributed information about maternal health and infant nutrition to parents during monthly community meetings.

■ **Early stimulation interventions** involve providing in-home activities for parents and children more directly. These interventions include training, usually at home, in which a local health worker or volunteer visits a family's home and demonstrates how to engage their children in cognitive learning activities.

For instance in a program in Jamaica, community health workers and researchers taught parents how to stimulate their young by engaging them in educational games and teaching mothers how to converse with and praise their young children. In addition, homemade toys were exchanged each week for other toys. In Kenya, community workers taught parents and caregivers with limited literacy skills how to engage young children in reading illustrated storybooks.

Counseling and early stimulation interventions are sometimes paired with additional interventions such as cash transfers or national nutrition programs to assess the impact of adding parenting programs to other types of interventions.

Components of parenting programs

■ **SIEF has supported evaluations of many parenting program interventions over the last eight years (Table 1).** For instance, some programs also include direct nutritional supplementation, such as fortified powder to sprinkle on food or to mix with beverages; some are linked to conditional cash transfer programs; and some provide additional materials such as storybooks (Kenya and Bangladesh) or a UNICEF learning kit including items such as books, displays, balls, paint, chalk, blocks, puzzles, first aid kit, and kitchen utensils (Malawi).

Most of the SIEF-supported evaluations were of programs that made use of existing government policies and infrastructure. These interventions were delivered by trained community workers, local health workers, or education specialists.

The size and scale of the programs vary from a small pilot in Jamaica that covered 129











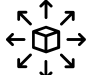


children to larger programs such as Nepal and Bangladesh that covered communities with over 2000 young children (Table 1).

Program beneficiaries included young children between the ages of six months and six years of age, mothers, and caregivers. These programs typically lasted between 18 months and three years. In some countries, such as Madagascar, the programs have been sustained. In other countries, these were pilot programs that ended after a specified period.

WHAT IS A PARENTING PROGRAM?


Table 1. SIEF-supported evaluations of parenting programs

 COUNTRY	 INTERVENTION	 SCALE	 TARGET GROUP	 IMPLEMENTER	 GOVERNMENT PROGRAM?	 PARENT COUNSELING	 STIMULATION DURING VISIT	 NUTRITIONAL SUPPLEMENTS	 CASH TRANSFER	 DISTRIBUTION OF MATERIALS
Bangladesh	<ul style="list-style-type: none"> • Early stimulation and nutrition counselling in clinics • Home visits • Distribution of materials to clinics and households 	2,574 households	Young children and pregnant women in the National Nutritional Services Program	Trained local health workers	X	X	X			X
Colombia	<ul style="list-style-type: none"> • Home visits focused on early stimulation • Micronutrient supplementation 	1,429 children	Households benefitting from a national cash transfer program	Mentors and mother leaders ¹	X	X	X	X	X	
India	<ul style="list-style-type: none"> • Home-based nutritional education • Early stimulation home visits + nutritional education • Early stimulation group sessions + nutritional education 	192 villages, 1449 children	Mothers with children aged 7 to 16 months	Pratham Education Foundation		X	X			X
Jamaica	<ul style="list-style-type: none"> • Home visits and stimulation • Nutritional Supplementation 	129 children	Stunted toddlers	Trained community workers and researchers			X	X		X
Kenya	<ul style="list-style-type: none"> • Training parents in reading strategies • Free children's books 	73 communities	Parents and children between the ages of 36 and 83 months	Community trainers		X	X			X
Madagascar	<ul style="list-style-type: none"> • Intensive nutrition counseling • Nutritional supplements for pregnant/lactating women and children • Counselling on early childhood stimulation 	125 poor communities 738 mothers 1,248 pregnant women 2,490 children	Pregnant women and infants—first 1000 days from conception to age two	Community health worker	X	X		X		
Malawi	<ul style="list-style-type: none"> • Teacher training and mentoring • Teacher stipends • Parent training by teachers • UNICEF Play and Learn 	199 childcare centers 310 teachers 2,009 primary caregivers 2,120 children	Teachers in functional child-care centers and the families that attend them.	Community center teachers		X				X
Nepal	<ul style="list-style-type: none"> • Counselling on maternal health and infant nutrition during community meetings • Limited duration cash payments 	2,338 women 1,953 children	Pregnant women and young children participating the cash transfer program	Trained local health workers	X	X			X	
Niger	<ul style="list-style-type: none"> • Group and home visits focused on nutrition, early stimulation, and positive discipline • Cash transfers 	839 Households (Dosso and Maradi)	Households benefitting from a national cash transfer program	Community educator	X	X	X		X	
Rwanda	<ul style="list-style-type: none"> • Home visits focused on early stimulation, responsive caregiving, nutrition, and domestic violence 	284 geographical clusters in 3 districts 541 families	Mothers and fathers with children aged 6 to 36 months	Trained, locally recruited coaches	X	X	X			X

¹Local women who were already volunteering in the conditional cash transfer program

In these interventions trained workers regularly met with parents. Table 2 shows the frequency of meetings, ranging from twice weekly in Malawi to monthly interventions. In Bangladesh the frequency of contact was tied to routine well and sick child visits with local health workers, which took place less than once per month. •

Table 2. Intended frequency of contact for parenting interventions

 COUNTRY	WEEKLY	MONTHLY	LESS OFTEN	PROGRAM DURATION (MONTHS)
Bangladesh			X	24
Colombia	X			18
India	X			24
Jamaica	X			24
Kenya			X	1
Madagascar		X		24
Malawi	X			1.5
Nepal		X		9 ²
Niger		X		24
Rwanda	X			3 months, with booster visits after 3 and 6 months

² The cash transfer portion of the intervention lasted 5 months, but the community meetings providing parent information lasted for 9 months.

Why implement a parenting program?

To grow and help their minds and bodies develop, children need nutritious food and stimulation through activities that promote learning, language, and social emotional development. However, many children in low-income countries are particularly disadvantaged and lack this basic nourishment and stimulation. The premise of most parenting programs is that parents might lack information on what practices can best promote their children's development.

Why implement a parenting program?

■ **To grow and help their minds and bodies develop, children need nutritious food and stimulation through activities that cognitively engage children and promote learning, language, and social emotional development.** However, many children in low-income countries are particularly disadvantaged and lack this basic nourishment and stimulation. An estimated 250 million children under age five in low- and middle-income countries are failing to reach their developmental potential.¹

■ **There is global evidence that children in poorer families differ quite dramatically from children in wealthier families.**² This is particularly true for children’s performance on cognitive assessments and in their measured non-cognitive skills, which refer to traits like perseverance, focus, and the ability to work with others that are important for student achievement in school but are rarely part of the formal curriculum.^{3,4}

Evidence shows that while children in poorer and richer households receive similar levels of social-emotional support, the amount of cog-

nitive stimulation that parents provide varies greatly.³ Across countries, cognitive caregiving activities are substantially greater in countries with high values of the Human Development Index. (Figure 1).⁴

In recent years a number of early childhood interventions have sought to address these inequities in the kinds of stimulation provided to young children by focusing activities that engage parents and that provide in-home stimulation to infants and toddlers with the hope of improving young children’s cognitive development, social emotional skills, and overall wellness as they grow. These programs seek to improve young children’s development by teaching parents techniques to stimulate their children’s brain and body development through talk, play, and frequent high-quality interactions.

Figure 1: Cognitive and socioemotional caregiving activities

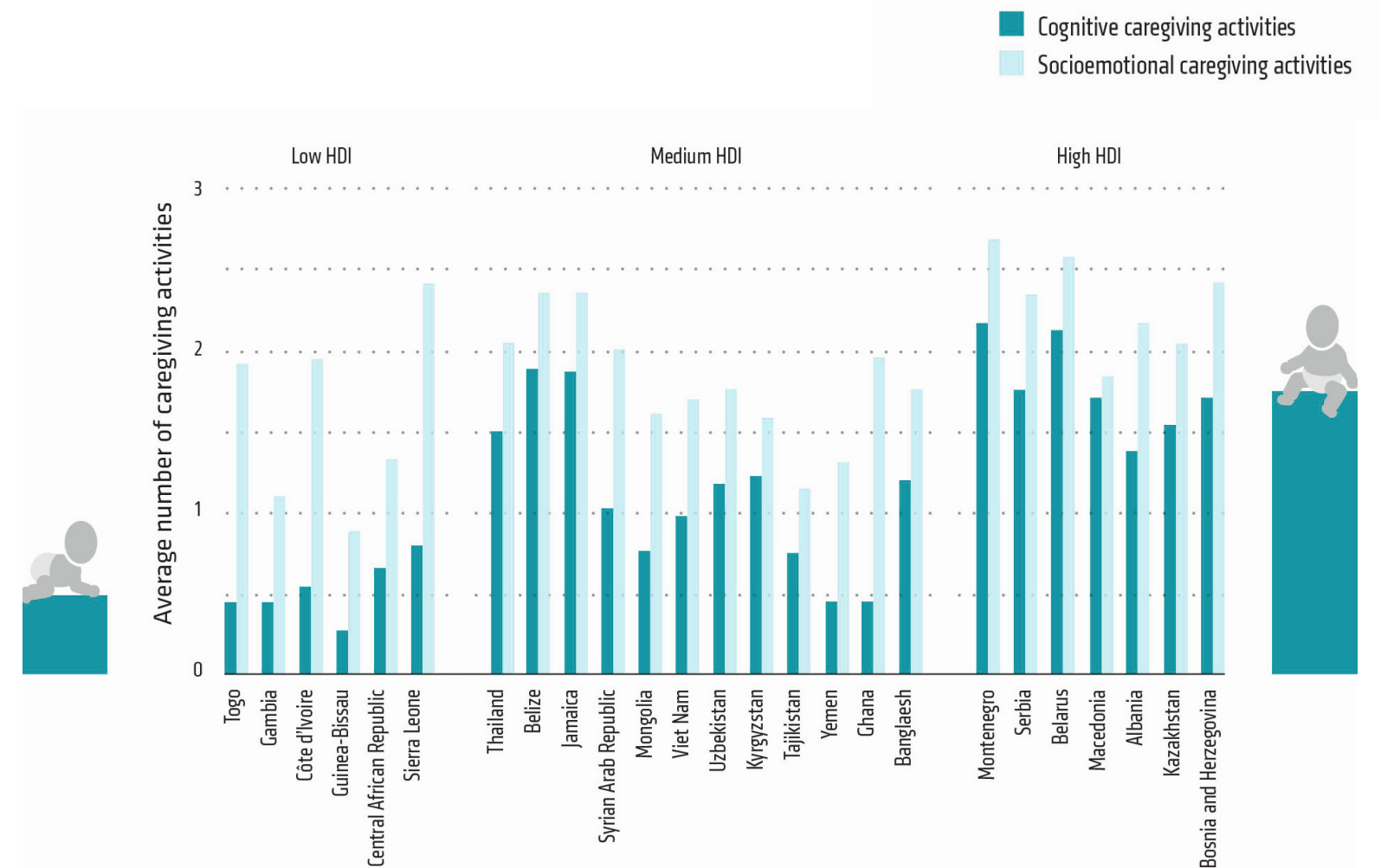


Figure from *World Development Report 2015: Mind, Society, and Behavior*; data from Bornstein and Putnick (2012), “Cognitive and socioemotional caregiving in developing countries,” *Child Development*, 83(1), 46–61.

The real challenge for parenting programs is how to make such programs affordable and available at a larger scale.

When implemented at a small scale by researchers and non-government organizations, such programs have had a significant impact on children's cognitive and social-emotional development outcomes, as well as on their future education and earnings.

The real challenge for parenting programs is how to make such programs affordable and available at a larger scale. ●



Results of SIEF-supported evaluations

- Targeted populations
- Bangladesh
- Colombia
- India
- Jamaica
- Kenya
- Madagascar
- Malawi
- Nepal
- Niger
- Rwanda

SIEF has supported evaluations over the last eight years, where interventions have ranged from a small, pilot program implemented by researchers in Jamaica to larger programs in resource-constrained environments like Niger that have sought to make use of existing government programs and infrastructure to provide parenting program interventions to larger populations. This evidence file highlights evidence learned from SIEF-supported impact evaluations of programs implemented in ten countries: Bangladesh, Colombia, India, Jamaica, Kenya, Madagascar, Malawi, Nepal, Niger and Rwanda.

Targeted populations | Bangladesh | Colombia | India | Jamaica | Kenya | Madagascar | Malawi | Nepal | Niger | Rwanda

Results of SIEF-supported evaluations


Targeted populations

SIEF-supported evaluations of parenting programs are all randomized controlled trials implemented in low- and middle-income countries where a substantial portion of the population is economically disadvantaged.

■ **The targeted populations share two commonalities: high levels of malnutrition and low levels of household income.** For instance, an estimated 36.4 percent of children under the age of five were stunted in Bangladesh according to 2014 World Bank figures.⁵ More than three-quarters of the population in Madagascar were living in extreme poverty (on less than \$1.90 a day) in 2012.

■ **There are few options for learning among toddlers and young children in many low and middle-income countries.** In many countries children under the age of five have very little access to learning materials and families may lack the ability to engage their children in

Table 3. Country contexts of SIEF-supported evaluations

 COUNTRY	% OF KIDS AGE 3-5 RECEIVING EARLY STIMULATION OR RESPONSE CARE AT HOME	% OF KIDS UNDER 5 WITH AT LEAST 3 CHILDREN'S BOOKS AT HOME	% OF KIDS UNDER 5 WHO WITH AT LEAST TWO TYPES OF TOYS AT HOME	% OF KIDS UNDER 5 LEFT ALONE OR UNDER SUPERVISION OF ANOTHER CHILD YOUNGER THAN 10	% OF ADULTS WHO THINK PHYSICAL PUNISHMENT IS NECESSARY TO RAISE/ EDUCATE CHILDREN	% OF POPULATION LIVING BELOW \$1.90/DAY	YEAR OF POVERTY ESTIMATE
Bangladesh	78	8.8	60.3	11.6	33.3	14.8	2016
Colombia						4.1	2018
India						13.9	2011
Jamaica	87.6	54.7	60.7	1.8	27	1.7	2004
Kenya						36.8	2015
Madagascar						77.6	2012
Malawi	29.3	1.2	45.2	37.1	5.5	70.3	2016
Nepal	67.2	4.8	59.2	20.6	35.2	15	2010
Niger					45.2	44.5	2014
Rwanda						56.5%	2016

ways that cognitively stimulate them. In a nationally representative survey in Malawi, only 1.2 percent of children had three or more children's books in their homes and only 29.3

percent of parents in households reported engaging in activities to provide early stimulation and responsive care to their children.² ●

MICs Data: UNICEF (2020). Multiple Indicator Cluster Surveys. <https://mics.unicef.org/> MICs data for India were last collected in 2000 and these indicators are not available in the MICS report from that time. Note: MICs data for Rwanda were last collected in 2000 and these indicators are not available in the MICS report from that time. Data are not available on MICs site.

Poverty Data: <http://povertydata.worldbank.org/poverty/home>

World Bank Extreme Poverty Measures: World Development Indicators 2020

BANGLADESH*Inserting early stimulation messages into a national nutrition program*

■ **In Bangladesh, community workers in the National Nutrition Services program received additional training to deliver messages and materials related to early stimulation in clinics and via home visits.**

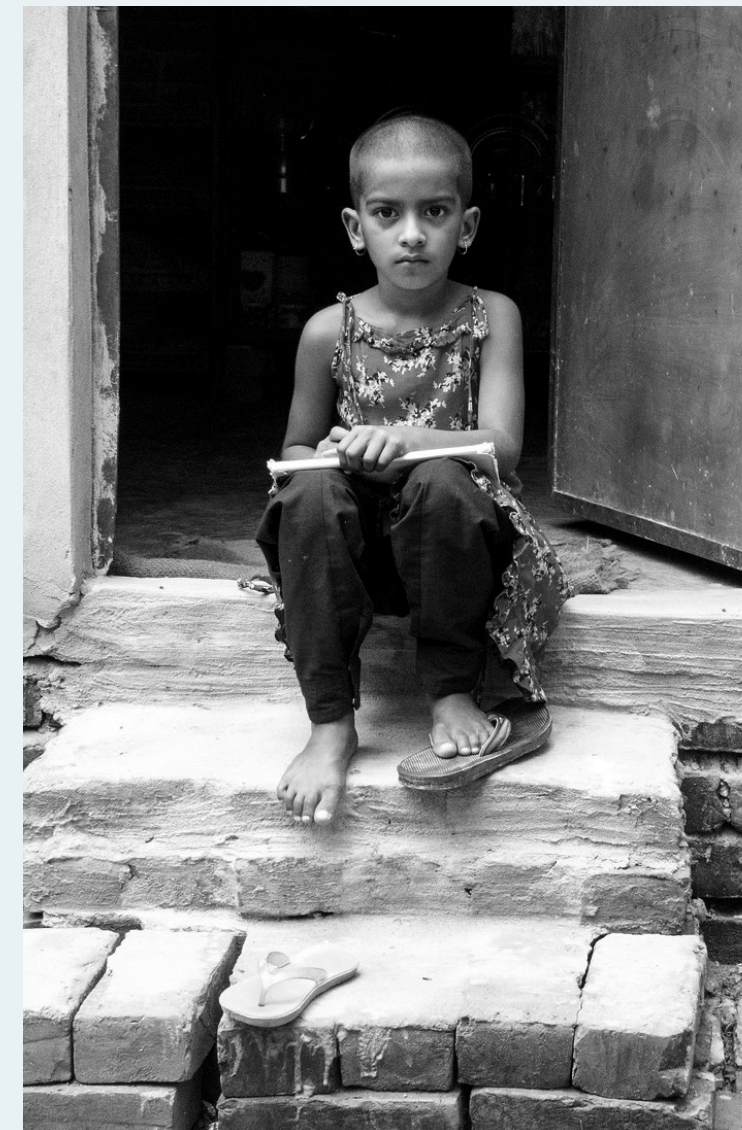
The National Nutritional Services Program, distributes nutritional supplements. To provide information to pregnant and lactating women, young mothers, and caregivers about how to stimulate their children, community workers learned how to insert these messages into their routine counselling and distribute two picture books for children and information to caregivers when they came to clinics for routine wellness visits or for sick visits. These community health workers were also supposed to conduct home visits to provide the same information and distribute the books.

■ **This add-on program was evaluated in a randomized control trial with two experimental groups.**

Community health workers of the National

Nutrition Services program who worked out of the health centers in the treatment group received the early stimulation training and received the materials for distribution. The health centers in the control group just continued to implement the National Nutritional Services Program.

■ **Children in the treatment group experienced modest gains in their cognitive, linguistic, social emotional, and physical development.** Children's cognitive scores went up by 0.08 standard deviations while their language improved by 0.14 standard deviations.⁶ The prevalence of children being severely underweight dropped by nearly 40 percent and the program nearly eliminated the prevalence of severe wasting. Training the community workers in early stimulation increased households' take-up of the National Nutrition Program. These improvements occurred despite numerous implementation challenges. Researchers also estimated that only 18 per-



cent of households received the key materials of the early stimulation program, and over the course of the program, community workers made only 1.8 household visits for counselling on average instead of the expected 6 visits. The impact of the program is estimated to have been twice as high among families who received all the materials and messages as compared to families with children in the control group.●

COLOMBIA*Embedding stimulation and micronutrient supplementation in a conditional cash transfer program*

■ **In Colombia, researchers designed a home-based early childhood stimulation program modeled after the Jamaica program, which sought to improve nutrition and development in the first two years of life using psychosocial stimulation sessions and micronutrient supplements at a larger scale.** This home-visit program was added on to the national nutrition program, which allowed the evaluators to implement the program at scale in 96 towns. In addition, all families included in the program were part of a national cash transfer program, the *Familias en Acción* program, which entitled families to receive monthly cash transfers between \$8 and \$16 per child, conditional on children under age 7 going for health checkups and children ages 6-17 attending school. The program cost was estimated at \$500 per child per year, which was considerably less than the \$1300 per child per year that the Colombian government had budgeted for some of its flagship programs.

■ **The study involved four experimental groups.** In the first group caregivers and chil-

dren received weekly psychosocial stimulation from trained mother leaders (different from the Jamaica program that relied on trained professionals). The mother leaders were tasked with visiting mothers with young children weekly, delivering messages about the importance of early learning, and demonstrating play activities using low-cost materials and books. In the second group, caregivers and children received nutritional supplementation in the form of micronutrient sprinkles, and the third group received both the stimulation intervention and nutritional supplements. A fourth group that received neither intervention served as the control group.

The evaluators sought to estimate effects of the program 18 months after it started when children were 2.5 to 3.5 years old, and again two years later when they were 4.5 to 5.5 years old.

■ **The initial follow-up at the end of the intervention showed a significant impact on cognitive and language development and on the amount of time and effort parents put**



into interacting with their children. Notably, children in the treatment receiving psychosocial stimulation experienced a significant improvement in cognitive scores and language

scores of 0.26 and 0.22 standard deviations, respectively.⁷ This amounts to almost a third of the gap in cognition between children living in the 25% poorest and the 25% richest households in a sample of low and low-middle income families in Bogota.

■ **The second follow-up evaluation, however, found that these gains in parental engagement and child development could not be sustained.** When researchers measured children two years later, the treatment and comparison groups were indistinguishable.⁸ There were no statistically significant differences in children's cognitive development or receptive language, executive function skills such as impulse control and working memory, or behavioral development such as getting along with other children. Compared to the control group, the amount of play materials in homes of children in the group that received the program was no longer higher. Children whose mothers received the home visits also weren't any more likely to have engaged in play with their caregivers, according to parents' own reports.●

INDIA*Comparing home visits and group sessions*

■ **In Odisha, India, the same weekly early stimulation program was delivered for two years via two different modalities to families with children between the ages of 7 and 16 months: home visiting sessions and group sessions in which a facilitator went over the same material and demonstrated activities with mothers and children.** A national NGO (Pratham) adapted and delivered the Reach Up and Learn curriculum (first implemented in Jamaica and later adapted to Colombia) in three districts in the state to around 1,400 children.

■ **The study involved four experimental groups.** In the first group, trained facilitators made weekly home visits to mothers of young children and used games, stories, and cooking demonstrations to provide information on optimal diets and hygiene practices. In the second group, trained facilitators also added content focused on psychosocial stimulation, demonstrating play activities, providing books and toys made from locally available materials, and encouraging mothers to use



them with their children. In the third group, the same home visit curriculum and nutrition information were adapted for weekly sessions for groups of 7 to 8 children. The fourth group received no intervention and served as a control group. The evaluators sought to

estimate effects of the program 12 months and 24 months after it started when children were 2.5 to 3.5 years old.

■ **Both home visits and group sessions focused on early stimulation had positive impacts on children's cognition and language skills.** After two years, children who had received home visits focused on early stimulation had cognition scores that were 0.32 standard deviations higher than the control group and language scores that were 0.24 standard deviations higher (with both outcomes measured with the Bayley Scales of Infant and Toddler Development).⁹ Group sessions had impacts that were statistically indistinguishable. Children receiving this intervention had cognition and language scores that were 0.28 and 0.30 standard deviations higher than scores in the control group. Parents also increased the number of play activities they did at home in both groups. Most impacts of the early stimulation interventions were apparent even after one year of implementation.

■ **Group sessions had similar impacts to home visits despite lower attendance, and with their lower unit cost, they were much more cost-effective.** Attendance for group sessions was 51 percent, compared to 75 percent for home visits. Researchers estimated that the group sessions cost \$38 per child per year, while the home visits cost \$135 per child per year. While it is possible that longer term effects of the two interventions may also differ, these two-year effects suggest the potential for using a group modality to make parenting interventions more cost-effective.

■ **The nutritional education content on its own had no impact on children's development.** ●

JAMAICA*Home visits for early stimulation and nutrition supplementation*

■ **Jamaica heralded the first highly successful pilot of a parenting program intervention focused on early stimulation and nutritional supplementation in the 1980s; 30 years later, participants are still seeing the benefits.**

In 1986-87 researchers worked with the government to provide in-home, psychosocial stimulation to growth-stunted children. Over a two-year period, trained community health aides provided weekly one-hour play sessions with growth-stunted toddlers and their parents in their homes.

■ **The intervention included three treatment groups and a control group.** The first treatment group received stimulation through one-hour play sessions with a community health worker and a parent. The second treatment group received nutritional supplementation, which consisted of 1 kilogram of milk-based formula per week, provided weekly. In addition, families were supplied some additional food to reduce sharing of the child's supplement. The third group received both stimulation and nutritional supplementation, and the

control group did not receive any of the interventions. The study further included a comparison group of 84 non-stunted children.

■ **The original study showed immediate positive impacts of the home visits with stimulation on children's psychosocial skills, and schooling attainment and reduced participation in violent crimes as adolescents.¹⁰**

A SIEF-supported follow-up study approximately 20 years later, when the original children were 22 years old, revealed sustained results. The authors found that the children who had received psycho-social stimulation activities in their homes continued to exhibit higher IQs and educational attainment as adults.¹¹ They also earned 25 percent more per month than their peers who had been in the control group and had caught up to the level of the comparison group of children that had never been stunted. Program benefits also persisted in the domains of mental health and involvement in violent behavior. ●



KENYA

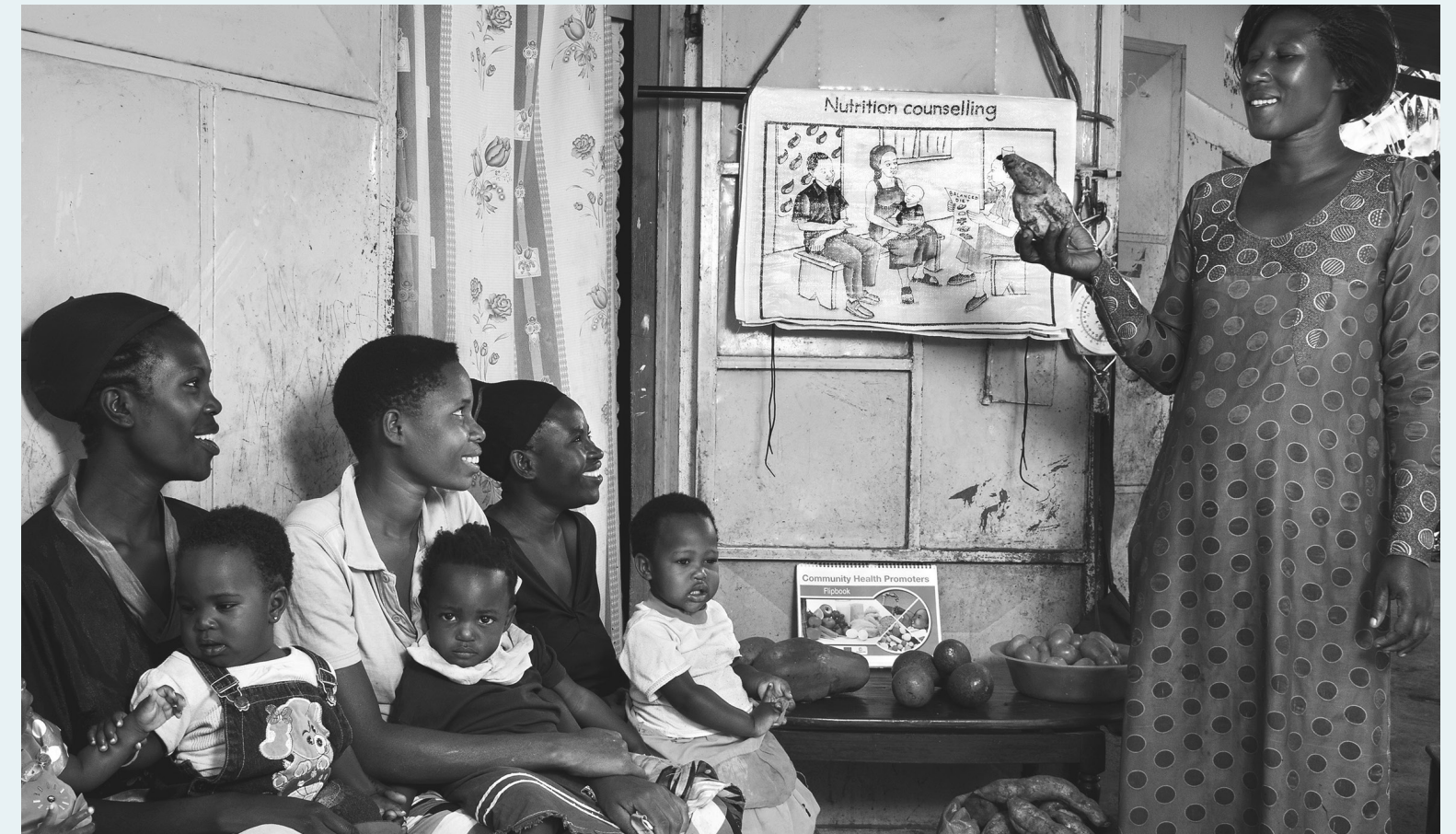
Helping parents read with their children

■ In Kenya, SIEF-supported researchers set up a randomized control trial to test the impacts of a program that showed parents how to provide early stimulation to their children by reading books with them. The Encouraging Multilingual Early Reading as the Groundwork for Education (EMERGE) program delivered two culturally appropriate books to each household and offered parents training on how to engage in dialogic reading with their children, in which they ask children questions about the text and illustrations where the focus is on interpretation and critical comprehension rather than accuracy and fluency of reading. The objective of the program was to get parents to engage in regular early literacy activities with their young children, even if they themselves were not literate.

■ A pilot of a larger randomized control trial included five experimental groups. The first group received only storybooks. The second group received the storybooks, and parents received training on how to interactively read with their children. The training was designed

to be appropriate for both literate and illiterate parents. The third group received story books, the parent training, and a follow-up booster training for parents approximately one week after the initial training. The fourth group received books, parent training, the follow-up booster training for parents, and a home visit. A fifth group received neither books nor any training activities.

■ Pilot results suggest that the provision of culturally appropriate children's books increased reading frequency and improved the quality of parent-child reading interactions among preschool-aged children. Just dropping off the storybooks had little impact, although it is clear that children did engage with the books as their story comprehension scores were higher one month later, compared to children in comparison households.¹² Children whose caregivers received training in dialogic reading also showed gains in expressive vocabulary (words that a child can say) among words in the storybooks. Observations of parent-child interactions during



reading also suggest greater use of dialogic reading techniques and less caregiver distraction in households that received some form of training.

■ More intensive training did not generate higher impact. The children whose parents also received more training or a home visit did not exhibit greater gains than children whose parents received only a single “dose” of training. ●

MADAGASCAR*Implementing stimulation and supplementation in a national nutrition program*

■ **A World Bank team in Madagascar worked with the national public health program to add and evaluate large-scale stimulation and nutritional supplementation interventions.** In Madagascar, one of the world's most malnourished countries, understanding how to best deliver nutritional supplementation and early stimulation is of critical importance. A team of SIEF-supported researchers worked with the national public health program, the Programme National de la Nutrition Communautaire, to design a multi-treatment randomized control trial covering 125 poor communities.

■ **The intervention included five experimental groups.** The first group of communities received intensive nutritional counseling from community health workers. The second group received intensive counseling and nutritional supplements for children between the ages of 6 and 18 months. The third group received the intensive counseling and nutritional supplements for young children but also received nutritional supplements for pregnant and lactating mothers. The fourth group received the intensive counseling and home visits to pro-

mote early stimulation activities, and the fifth group was the comparison group which did not receive any intervention beyond what households normally received as part of the national nutrition program (monthly growth monitoring and basic health and hygiene education).

■ **On average, none of the interventions improved physical growth or development, but supplementation improved child growth and nutrition when children received it early enough.** Children who were young enough when the program started to receive the supplements between the ages of 6 months and 18 months experienced a significant increase in their height (length-for-age), a reduction in stunting, and improvements in weight (weight-for-age).¹³ Compared to the comparison group, the nutritional supplementation interventions increased children's heights for their age and reduced stunting. On average, the supplementation programs also reduced the prevalence of anemia (deficiency of hemoglobin) and iron deficiency. Children who received supplements had a 40 percent lower prevalence of anemia) and 25 percent lower prevalence of

iron deficiency than children who did not receive supplements.

■ **Supplementing mothers yielded no additional benefits.** Given that both supplementation groups experienced the same gains in child health and growth, providing supplementation to mothers does not appear to augment the gains of supplementing children.

■ **Delivering nutritional counseling via home visits had limited impact.** The more intensive nutrition counselling led to increases in reported intake of protein (meat, fish, dairy, and eggs), compared to the comparison group that was already receiving group-based messages through the national nutrition program. However, this did not translate into an overall improvement in dietary diversity, as this increase in protein consumption was offset by a decrease in the consumption vitamin-A rich fruits and vegetables.

■ **The home visits focused on early stimulation did not generate gains in children's development.** Researchers measured skills in communication, gross motor, fine motor, per-

sonal-social, and problem-solving domains. None of these skills, however, improved as a result of the home visits.

■ **This lack of effectiveness of the home visits could stem from low take-up of behavior change messages and difficulties faced by community health workers in delivering the program.** Interviews with child caregivers revealed that more than half of caregivers had a tendency to overestimate their children's abilities, which may further help to explain why they might not have acted on the recommendations offered during monthly stimulation sessions.¹⁵

Communities in rural Madagascar are often distant from each other with low population density, resulting in a logistical challenge for the community health workers. The geography made it difficult to reach families and harder to spend sufficient time with caregivers to deliver the intensive counseling. It is also possible that the community health workers had too much to do, as they had to balance their existing health and nutrition duties with door-to-door counselling. •

MALAWI*Training preschool teachers and parents*

■ **In Malawi, researchers sought to assess the impact of training both teachers and parents on early stimulation in community-based childcare centers.** These childcare centers are the dominant provider of early childhood development services in rural areas, and they are owned and operated by communities. Their facilities can range from private home, churches, old shops, and NGO-sponsored community centers to thatch structures and makeshift shelters. Most do not have play or learning materials, and teachers typically lack basic training and rarely receive compensation.

■ **To test different approaches for improving early childhood development services, a SIEF supported randomized trial included one experimental arm that involved a parenting program for parents of children attending the childcare centers.** In the experiment, teachers in one group of community schools received training and mentoring. In a second group, teachers received training and mentoring in addition to cash incentives to keep them engaged in teaching and to motivate them.

In the third treatment group, teachers in preschools received training and mentoring and they, along with child protection workers and the mentors, delivered education sessions aimed at the parents of children in preschool classes. These sessions covered topics related to child development, such language, literacy, social emotional, mathematical and critical thinking skills; physical growth and nutrition; and children's approaches to learning. The sessions also providing practical tips for implementing stimulation activities at home, along with demonstrations. Schools in each treatment group also received a UNICEF Play and Learn kit with instructional materials to schools, including items such as books, displays, balls, paint, chalk, blocks, puzzles, first aid kit, and kitchen utensils. A control group received this kit as well but did not receive any of the other interventions.

■ **After 18 months, only the group that combined teacher training and mentoring with parent education demonstrated improvements in children's experiences at home.**

The quality of parenting in the home was as-

sessed by asking caregivers to report on activities they did with children to encourage learning, such as reading books to them, telling stories, singing or playing with them, or more direct assistance with learning letters, numbers, colors, or shapes. Parental stress and their strategies for dealing with children's behavioral issues were also measured. In the first follow-up 18 months after the program began, parents in the group assigned to receive both teacher and parent training showed a 0.3 standard deviation improvement in a parent stimulation index compared to the control group. No other treatment group demonstrated any gains over the control group.¹⁴ No intervention was estimated to have helped decrease the stress associated with parenting or increased the frequency of positive discipline practices.

■ **This combination of interventions was also the only program variant that generated gains in child development compared to the control group.** Children's language skills in this group were assessed to be 0.19 standard deviations higher compared to children in the control group. Parents in this group also

reported fewer behavioral problems for their children and more pro-social behaviors.

■ **After 36-months, however, there were no sustained impacts of the program for children, although parents still reported providing stimulation activities at home.** Children whose teachers and parents had both received training were statistically indistinguishable from their counterparts in the control group in their language and math skills as well as a measure of their ability to sustain attention. Their advantage in terms of decreased behavioral problems and increased pro-social behaviors also disappeared. Parents, in this group, however, were more likely to report that they had engaged in stimulation activities in the home. ●

NEPAL*Adding early nutrition education to community meetings*

■ **In Nepal, an evaluation tested the impacts of adding information sessions about nutrition of young children to ongoing monthly community meetings and adding short duration cash payments.** The Poverty Alleviation Fund in Nepal is a government program that aims to improve wellbeing in poor and marginalized communities through community infrastructure projects and income-generating activities. Once a month, social mobilizers hold meetings to bring together members of the community.

■ **Between 2013 and 2016, two program variants were tested through a randomized control trial.** In one experimental group, information on best practices for children's nutrition was integrated into the community meetings of the Poverty Alleviation Fund in the four poorest districts in the country. Because some of these best practices might require additional expenditure on food, in another experimental group, pregnant women and mothers of young children also received five monthly cash payments (valued at approximately 8-20

percent of median monthly income).

A third group served as the control group and did not receive the additional information or cash transfers during the community meetings.

■ **Both variants of the program improved mothers' knowledge of nutrition and feeding best practices, but the variant that also distributed cash generated larger increases in knowledge.**¹⁵ Before the program began, just half of the mothers said that babies should be exclusively breastfed, and only half said that pregnant women should eat more than women who aren't pregnant. Mothers who received the information and cash improved their knowledge about the importance of things such as breastfeeding, taking Vitamin A and health checkups.

■ **This larger gain in knowledge might stem from the fact that the cash variant of the program also increased the likelihood that a mother attended the community meetings.** The cash payments were delivered during the information sessions that had been embed-



ded in the community meetings. In the end-line survey, mothers in the experimental group assigned to receive both the information sessions and cash payments were 11 percentage points (or 31 percent) more likely to report attending a community meeting than mothers in comparison areas, whereas the mothers in

areas receiving only the information sessions were just as likely to report attending these meetings as mothers in comparison areas.

■ **In the families that were offered both the information sessions and the cash payments, children's motor skills improved, but children's physical growth and cognitive and social emotional skills did not benefit from the program.** Children's development was measured with the Ages and Stages Questionnaires, which asks caregivers questions about their children's cognitive, communication, social emotional, and motor skills. Children in the areas offered both the information sessions and cash payments showed improvements in gross motor skills of 0.12 standard deviations and in improvements of 0.13 in fine motor skills, compared to children in areas that received no variant of the program.

No other domain of development - including height, weight, and stunting - showed any gains relative to the control group, despite the nutrition focus of the information shared during community meetings. ●

NIGER*Adding early stimulation and nutrition education to a conditional cash transfer program*

■ **In the SIEF supported evaluation in Niger, researchers tested the impact of adding a parenting program to an unconditional cash transfer program for poor households for two years.** Niger is one of the poorest countries in the world. Half of the population is food-insecure, and approximately 43 percent of children are stunted (or too short for their age according to global standards). An unconditional cash transfer program (valued at approximately \$38.3 million in 2016) is a critical component of country's social protection system. The World Bank team wanted to test whether offering a parenting program to beneficiaries of the cash transfers could help improve children's nutrition and development.

■ **Researchers used a randomized control trial to test whether parenting sessions would make the cash transfer more effective.** In one treatment group, women in rural, poor households received monthly unconditional cash transfers and a parenting package of interventions that included monthly parent training in village assembly meetings, small-

group meetings, and home visits on nutrition, health, child protection, and early stimulation. The comparison group just received the cash transfers.

■ **The parenting program significantly improved parenting practices.** Compared to caregivers in comparison areas, caregivers that received the program reported higher rates of exclusive breastfeeding in children's first six months of life and higher consumption of nutritious food among babies.¹⁶ Mothers in program areas were more likely to report that they had engaged in practices to stimulate their children and less likely to use violence or negative disciplining tactics (like yelling, insulting, slapping, or hitting with an object) with their young children.

■ **The parenting program also improved some domains of children's development.** Researchers used both a direct assessment tool and caregiver reported information to measure children's development. That is, for some domains like cognitive development

an examiner gave pre-specified tasks to children and recorded their responses; for other domains, like social emotional development, researchers asked parents about their children's behavioral strengths and difficulties.

Observed social emotional development of children in the group that receive parenting interventions as part of the cash transfer program slightly improved (scores were 3 percent higher) relative to what was observed in the comparison group that just benefited from the cash transfers.

Although caregiver reports of nutrition improved, the physical development of children in terms of weight for height and other growth measurements, was not any better than outcomes measured for families that only participated in the cash program.

The evaluation also found no impact on children's cognitive development.

■ **The program generated spillovers to households who were not part of the program, perhaps because some of the parenting interventions were group-based and open**

to everyone in a village. Some households in treatment villages did not qualify for the cash transfers (they were slightly less likely to be chronically poor than beneficiaries of the cash transfer program). Even these households benefitted from the parenting programs likely because some of the interventions occurred during village assemblies. These households also reported higher rates of exclusive breastfeeding and better dietary diversity, as well as an increase in stimulation activities in the home and a change in disciplinary practices, compared to non-beneficiary households in areas that just had the cash transfer program. Just as in households that received the cash transfers, children in non-beneficiary households in treatment areas also showed modest improvements in social emotional development but no improvements in physical growth or cognitive development compared to their counterparts in areas without the parenting program.●

RWANDA

Adding home visits and domestic violence prevention to a public works social protection program

■ **In a pilot in Rwanda, families eligible for work in a public works social protection program also received the Sugira Muryango (Strengthen the Family) program—brief a home visiting intervention for families with children between the ages of 6 and 36 months.** Delivered by locally recruited coaches through twelve weekly sessions spread across three months, the one hour visits included a 15 minute play session when caregivers received feedback on their interactions with their children, as well as counselling on responsive caregiving, nutrition, hygiene and nonviolent interactions among household members. The coaches worked with both male and female caregivers and helped them navigate formal resources such as government programs to help improve child health and nutrition and informal sources of support like neighbors and extended family to address issues like family conflict and housing insecurity.

■ **The program was evaluated through a randomized control trial among families eligible for the public works program.** Families in the treatment group received the Su-

gira Muryango program, while families in the control group did not. Researchers measured impacts 12 months after the program on children’s physical, cognitive, and social-emotional development as well as fathers’ engagement in childcare and the prevalence of harsh disciplinary tactics and domestic violence in the household. Child development was measured in two different ways: (i) the Ages and Stages Questionnaires (ASQ-3) designed to screen children for developmental delays through interviews with caregivers and (ii) the Malawi Developmental Assessment Tool (MDAT), an observational task-based tool implemented by trained enumerators.

■ **The home visiting program generated significant improvements in children’s cognitive, language, and social-emotional development, increased fathers’ engagement in childcare, and decreased the use of harsh discipline.** When their development was measured through caregiver reports (ASQ-3), children in families receiving the home visits showed improvements over and above the control group in gross motor skills (0.29 stan-



dard deviations), communication skills (0.14 standard deviations), cognitive skills (0.16 standard deviations), and social-emotional skills (0.15 standard deviations), with no significant differences measured between the two groups in fine motor skills.¹⁷ When their development was measured through observations made by enumerators using a different instrument (MDAT), there were no significant improvements observed over and above the control group in the domains of gross and fine motor skills, language skills, or social emotional skills.

There were also no significant improvements in children’s physical growth (height for age, weight for age, weight for height). Fathers in families that received home visits were more engaged in childcare, and caregivers reported a decrease in the use of harsh discipline. Interestingly, while female caregivers in these households reported a significant decline in being the victims of intimate partner violence, males did not report a significant decrease in their perpetration of violence towards their partners. •

What did we learn?

In low- and middle-income countries, rigorous evaluation evidence from the SIEF portfolio suggests that parenting programs can increase the amount of stimulation that children receive in the home and improve their development. Gains, however, tend to be modest and temporary. Thus, parenting programs may not be the most effective policy instrument for generating sustained improvements in child development at scale.



What did we learn?

Although representing only a small fraction of the evidence on parenting programs in low- and middle-income countries, the experiences from the SIEF portfolio suggest five main lessons that are not inconsistent with what other evaluations have found.

1 Within the SIEF portfolio, results have been mixed, with high impacts on children when parenting interventions are small-scale and when implementation has been organized by research teams.

The intervention in Jamaica generated large improvements in child development, which persisted as children progressed through school and entered the labor market as adults. The evaluated intervention, however, was very small in scale. Only 32 children received the home-based program that had been organized by the evaluation’s researchers. Similarly, the pilot evaluation developed and monitored by researchers in Kenya tested a small-scale intervention — reaching 339 children — that encouraged parents to read with their children and resulted in improvements in children’s pre-literacy skills. The equally effective home visits and group-based parenting sessions in Odisha, India reached around 1,400 children.

Some of this success has been replicated at a larger scale, at least in the short run. When community health workers of a national nutrition program in Bangladesh were trained to incorporate early stimulation messages and distribute materials, children demonstrated modest improvements in their language, cognitive, and social-emotional skills.

2 Within the SIEF portfolio, incorporating parenting programs into existing national nutrition programs or social safety nets has not been a huge success.

Embedding parenting programs into existing government programs could provide a platform for scale and continuity, as smaller-scale pilots tend to be short-lived. The empirical evidence so far, however, does not suggest that we have a successful formula for scale.

When beneficiaries of a cash transfer program in Niger were offered parenting sessions,

reported nutrition and parenting practices improved, as did parents’ reports of children’s social emotional development. These parenting sessions, however, did not affect children’s physical growth or observed cognitive development.

Similarly, in Nepal, when information on best nutrition practices for young children were incorporated into community meetings, mothers’ knowledge of best practices improved as did children’s motor skills, but the messaging had no impact on children’s physical growth or their language, cognitive, or social-emotional skills.

Incorporating home visits for either nutrition counselling or early stimulation into a national community-based nutrition program in Madagascar also yielded no benefits for children’s development.

In Colombia and Malawi, delivering counselling on early stimulation through a cash trans-



fer program or through community-based preschools generated improvements in both parenting practices and children’s language, cognitive, and social-emotional skills. These gains, however, disappeared two years later.

3 At scale, parenting interventions are less intensive; sessions are less frequent and frontline workers may have other tasks that compete for their attention.

The intervention evaluated in Jamaica was the most intensive in terms of the frequency of contact between home visitors and families and the total duration of the program (Table 2). Even for programs that targeted a lower intensity, implementation fidelity was a challenge. In Bangladesh, for example, community health workers made an average of 1.8 home visits rather than their target of 6.

In Madagascar, researchers attributed the lack of effectiveness of early stimulation messages and home visits to low take-up of behavior-change messages and to delivery challenges facing community health workers. Similarly, in Colombia, researchers cited challenges with supervision as a potential explanation for the absence of sustained impact.

Why interventions implemented at scale within government programs fail to replicate the success of smaller programs is an important question to explore in future research. Implementation at scale may require more coordination and supervision as well as greater quantities of scarce inputs, like skilled labor. It is also possible that at scale, it is more difficult

to target parenting interventions to the families likely to benefit the most.

4 Information about best practices may not be the main constraint impeding child development in low- and middle-income countries.

Compared to contexts where home visiting programs have been effective in improving child development (such as Jamaica, Chile, and the United States), the lowest income countries have high rates of extreme poverty, with over half of the population living on less than \$1.90 per day (Table 3). There are large shortfalls in public services and the quality of children’s physical environment that might also play a role in children’s early development.

An intervention that replaced families’ dirt floors with concrete in Mexico, for example, improved language development as effectively as successful parenting programs.¹⁸ Just as water chlorination and filtration and the combination of water treatment and sewerage led to impressive declines infant mortality in the United States in the early 20th century, these interventions may also improve the development of children who survive.^{19,20}

More generally, parents in extremely poor households may be stressed and preoccupied with making ends meet, which can stifle the

attentiveness and engagement required for creating a stimulating home environment. Evidence that addressing the stress associated with poverty can benefit children comes from a natural experiment in the US, where households on a Native American reservation unexpectedly received part of the profits from casinos operating on the reservations. Children’s education attainment increased and their engagement in criminal activities went down.²¹ Both children and parents reported improvements in the quality of their interactions.

5 There are still many unknowns about the optimal design of parenting interventions.

Most evaluations of parenting programs have tested the overall impact of the program on child development. Aside from the SIEF-funded trial in Odisha, India that tested the difference between one-on-one home visits and group sessions, experiments that examine the design of programs are rare.

For example, we do not know the optimal profile of person to deliver parenting programs: someone with advanced training or someone with limited education who undergoes task-specific training? Someone paid as a salaried employee or someone compensated through stipends?

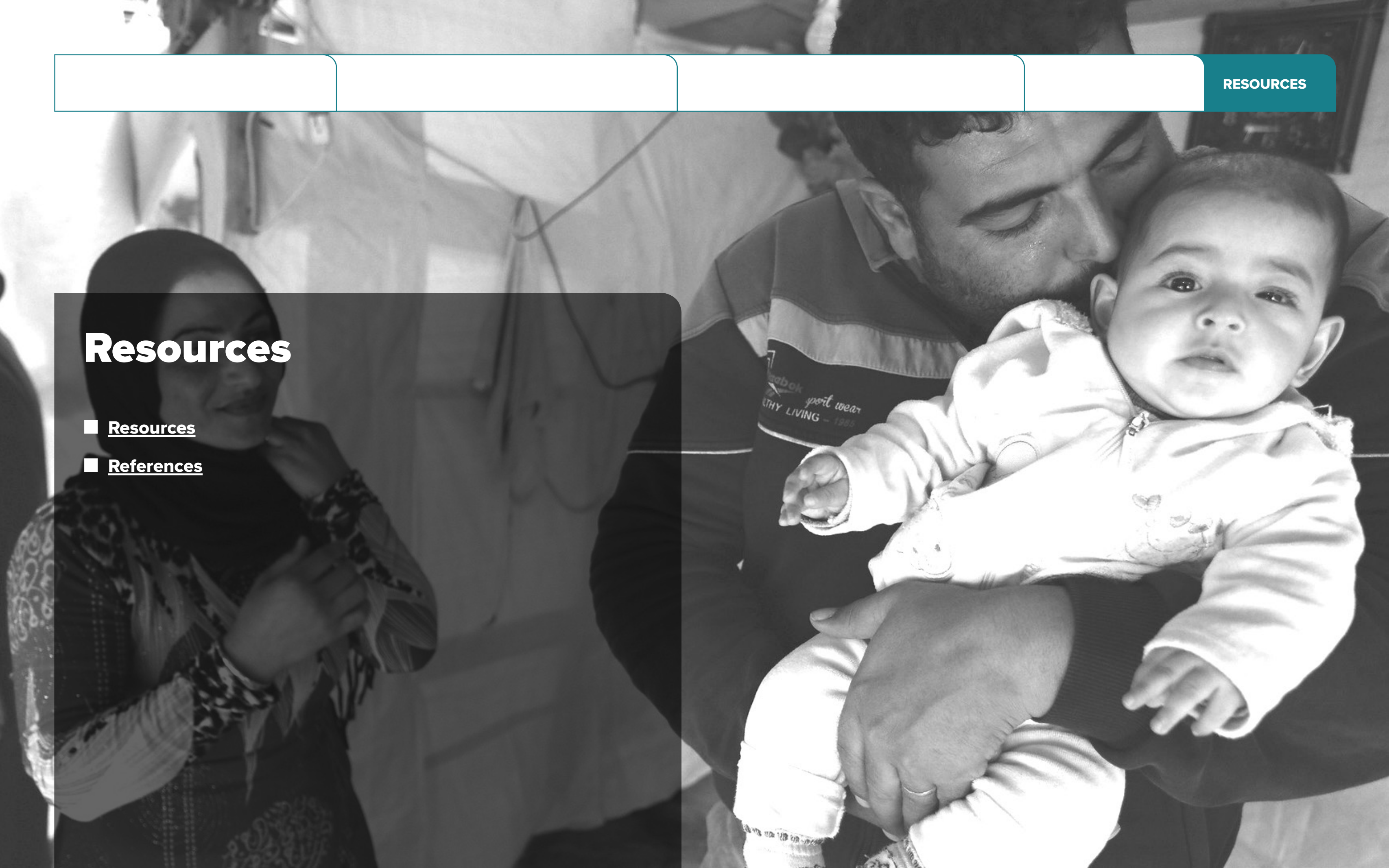
There is also scant evidence on the optimal frequency of parenting sessions. An experimental evaluation in Jamaica found that home visits translated into improvements in child development when they occurred twice a month but not when they occurred once a month.²²

It would also be useful to have experimental evidence on the importance of distributing complementary inputs with early stimulation messages, such as toys and books. Direct provision of these materials could address the budget constraints of poor parents while also serving as reminders to engage in early stimulation activities. The SIEF-supported evaluations in India, Kenya and Bangladesh suggest the possibility of short-run success of pairing parenting programs with the provision of reading materials. Follow-up evaluations in both cases will reveal whether these impacts can be sustained.

Future research on parenting programs would ideally test the effectiveness different implementation approaches. This will provide governments some guidance in designing successful programs once they have committed to improving the development of young children.

Resources

- [Resources](#)
- [References](#)



Resources

SIEF Evaluation Pages

[Bangladesh: Early Childhood Stimulation and Its Impacts](#)

[Colombia: The Impacts of a Home-based Early Childhood Development Intervention in Colombia](#)

[Jamaica: 30 Years Later, Does an Early Childhood Program Still Have Impact?](#)

[Kenya: EMERGE Reading](#)

[Madagascar: Addressing Chronic Malnutrition in Madagascar](#)

[Madagascar: Evaluation of a Behavioral Approach to Improve Outcomes in Early Childhood](#)

[Malawi: Effects of Quality Improvement Strategies on Early Childhood Development in Community-Based Childcare Centers in Malawi: A Randomized Trial](#)

[Nepal: Can Information and Cash Make a Difference in Children's Development?](#)

[Niger: Using Behavioral Change Activities to Improve Early Childhood Development](#)

SIEF Evidence to Policy Notes

[Bangladesh: Can child stimulation messages be added to an existing platform for delivering health and nutrition information?](#)

[Colombia: Can a successful parenting program be implemented at scale?](#)

[Jamaica: helping children develop into healthy, productive adults](#)

[Madagascar: what's the most effective way to tackle chronic malnutrition and poor child development?](#)

[Malawi: can steps to improve child centers help boost child development?](#)

[Nepal: Can information and cash improve children's development?](#)

[Niger: Can cash and behavioral change programs improve child development?](#)

Other resources

[Advancing Early Childhood Development: from Science to Scale](#)

[A Snapshot on the Quality of Seven Home Visit Parenting Programs in Latin America and the Caribbean](#)

[A Toolkit for Measuring Early Childhood Development in Low and Middle-Income Countries](#)

[Early Childhood Interventions Proven Results, Future Promise](#)

[The Early Years: Child Well-being and the Role of Public Policy](#)

[World Bank's Early Childhood Development website](#)

[World Bank's Early Years](#)

References

- Black, M. M., Walker, S. P., Fernald, L., Andersen, C. T., DiGirolamo, A. M., Lu, C., McCoy, D. C., Fink, G., Shawar, Y. R., Shiffman, J., Devercelli, A. E., Wodon, Q. T., Vargas-Barón, E., Grantham-McGregor, S., & Lancet Early Childhood Development Series Steering Committee (2017). Early childhood development coming of age: science through the life course. *Lancet (London, England)*, 389(10064), 77–90. [https://doi.org/10.1016/S0140-6736\(16\)31389-7](https://doi.org/10.1016/S0140-6736(16)31389-7)
- UNICEF (2020). Multiple Indicator Cluster Surveys. <https://mics.unicef.org/>
- Bornstein, M. H., & Putnick, D. L. (2012). Cognitive and socioemotional caregiving in developing countries. *Child development*, 83(1), 46–61. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3270892/>
- World Bank (2015). *World Development Report 2015: Mind, Society, and Behavior*. Washington, DC: World Bank
- World Bank (2020). *World Development Indicators*. Washington, DC: World Bank. <https://datacatalog.worldbank.org/dataset/world-development-indicators>
- Chinen, M. & Bos, J.M. (2016). Impact Evaluation of the Save the Children early childhood stimulation program in Bangladesh: Final report. Washington, DC: American Institute for Research. <https://pubdocs.worldbank.org/en/163331484753270396/SIEF-Bangladesh-Endline-Report-Nov-2016FINAL.pdf>
- Attanasio O., Fernández, C., Fitzsimons E., Grantham-McGregor, S., Meghir, C., Rubio-Codina, M. (2014). Using the infrastructure of a conditional cash transfer program to deliver a scalable integrated early child development program in Colombia: cluster randomized controlled trial. *BMJ* 3349(5785). <https://doi.org/10.1136/bmj.g5785>
- Andrew A., Attanasio O., Fitzsimons E., Grantham-McGregor S., Meghir C., Rubio-Codina M. (2018). Impacts 2 years after a scalable early childhood development intervention to increase psychosocial stimulation in the home: A follow-up of a cluster randomised controlled trial in Colombia. *PLoS Med* 15(4): e1002556. <https://doi.org/10.1371/journal.pmed.1002556>
- Grantham-McGregor, S. M., Adya A., Attanasio O., et al. (2020). Group Sessions or Home Visits for Early Childhood Development in India: A Cluster RCT. *Pediatrics*. 146(6). <https://doi.org/10.1542/peds.2020-002725>
- Grantham-McGregor, S. M., Powell, C. A., Walker, S. P., & Himes, J. H. (1991). Nutritional supplementation, psychosocial stimulation, and mental development of stunted children: the Jamaican Study. *Lancet (London, England)*, 338(8758), 1–5. [https://doi.org/10.1016/0140-6736\(91\)90001-6](https://doi.org/10.1016/0140-6736(91)90001-6)
- Gertler, P., Heckman, J., Pinto, R., Zanolini, A., Vermeersch, C., Walker, S., Chang, S. M., & Grantham-McGregor, S. (2014). Labor market returns to an early childhood stimulation intervention in Jamaica. *Science (New York, N.Y.)*, 344(6187), 998–1001. <https://doi.org/10.1126/science.1251178>
- Knauer, H.A., Jakiela, P., Ozier, O., Aboud, F., Fernald, L. (2020). Enhancing young children’s language acquisition through parent-child-book-sharing: A randomized trial in rural Kenya. *Early Childhood Research Quarterly* 50 (1), 179-190. <https://doi.org/10.1016/j.ecresq.2019.01.002>
- Weber, A.M., Galasso, E., Fernald, LCH. (2019). Perils of scaling up: Effects of expanding a nutrition programme in Madagascar. *Maternal Child Nutrition* 15(S1):e12715. <https://doi.org/10.1111/mcn.12715>

14. Özler, B., Fernald, L.C.H., Kariger, P., McConnell, C., Neuman, M., Fraga, E. (2018). Combining pre-school teacher training with parenting education: A cluster-randomized controlled trial. *Journal of Development Economics* 133(C), 448-467. <https://doi.org/10.1016/j.jdeveco.2018.04.004>
15. Levere, M., Acharya, A., & Bharadwaj, P. (2016). The role of information and cash transfers on early childhood development: Evidence from Nepal. Policy Research Working Paper 7931, Washington, DC: World Bank. <http://hdl.handle.net/10986/25834>
16. Premand, P., Barry, O. (2020). Behavioral Change Promotion, Cash Transfers and Early Childhood Development Experimental Evidence from a Government Program in a Low-Income Setting. Policy Research Working Paper 9368, Washington, DC: World Bank. <http://documents1.worldbank.org/curated/en/756191598464680389/pdf/Behavioral-Change-Promotion-Cash-Transfers-and-Early-Childhood-Development-Experimental-Evidence-from-a-Government-Program-in-a-Low-Income-Setting.pdf>
17. Jensen S.K., Placencio-Castro M., Murray S.M., et al (2021). Effect of a home-visiting parenting program to promote early childhood development and prevent violence: a cluster-randomized trial in Rwanda. *BMJ Global Health* 6:e003508. <http://dx.doi.org/10.1136/bmjgh-2020-003508>
18. Cattaneo, Matias D., Sebastian Galiani, Paul J. Gertler, Sebastian Martinez, and Rocio Titiunik. 2009. "Housing, Health, and Happiness." *American Economic Journal: Economic Policy*, 1 (1): 75-105. <https://www.aeaweb.org/articles?id=10.1257/pol.1.1.75>
19. Cutler, D., Miller, G. The role of public health improvements in health advances: The twentieth-century United States. *Demography* 42, 1–22 (2005). <https://doi.org/10.1353/dem.2005.0002>
20. Alsan, M. and Goldin, C., (2019). Watersheds in Child Mortality: The Role of Effective Water and Sewerage Infrastructure, 1880–1920," *Journal of Political Economy*, 127:2. <https://doi.org/10.1086/700766>.
21. Akee, R.K.Q., Copeland, W.E., Keeler, G., Angold, A., and Costello, E.J. (2010). Parents' incomes and children's outcomes: A quasi-experiment using transfer payments from casino profits. *American Economic Journal: Applied Economics* 2(1), 86-115. <http://www.aeaweb.org/articles.php?doi=10.1257/app.2.1.86>
22. Powell, C. & Grantham-McGregor, S. (1989). Home visiting of varying frequency and child development. *Pediatrics* 84(1), 157-164. <https://pediatrics.aappublications.org/content/84/1/157>