

Abstract Title Page
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Title: Early Childhood Benefits at Low Cost – Evidence from a Randomized Trail in Mexico

Authors and Affiliations: Sergio Cárdenas (Centro de Investigación y Docencia Económicas), David K. Evans (World Bank), Peter Holland (World Bank)

Abstract Body

Limit 4 pages single-spaced.

Background / Context:

Description of prior research and its intellectual context.

The evidence that investments in early child development can pay high, long-term dividends, is mounting, both in developed and developing countries. However, much of this evidence centers of center-based programs with high capital costs (Heckman et al. 2010), or home-based programs with high recurring costs (Gardner et al. 2003; Gertler et al. 2014). At the same time, there is growing interest but limited evidence from developed countries that parenting programs can deliver similar returns. A recent meta-analysis (Mejia et al. 2012) identified very few studies in developing countries. An early childhood parenting program in rural Bangladesh affected parent knowledge but not behavior or child development outcomes (Aboud 2007).

Parenting programs hold the promise of delivering sustained returns because improved parenting affects children at each stage of the development process and may have spillovers across children. Understanding the effectiveness of these programs and whether they can be delivered in a cost-effective way is a crucial complement to existing research.

Purpose / Objective / Research Question / Focus of Study:

Description of the focus of the research.

The research evaluates the impact of a low-cost, community-based parent training program for early child development (ECD) implemented in four states across Mexico. This study explores the following questions:

1. What is the impact of this low-cost, parent-focused ECD program on the physical, cognitive, and socio-emotional development of children 0-4 years?
2. What is the impact of the program on the knowledge and behaviors of parents of children 0-4?
3. What is the differential impact of the program in communities with other significant ECD initiatives?

Setting:

Description of the research location.

This program was evaluated in rural communities in six states of Mexico (Chiapas, Oaxaca, Querétaro, Puebla, Mexico [the state], and Veracruz). The program is currently under implementation in 31 states altogether, and the model could be easily applied in other rural settings in low- and middle-income environments.

Population / Participants / Subjects:

Description of the participants in the study: who, how many, key features, or characteristics.

The program targets parents and caregivers of children between 0 and 4 years, especially children of rural and indigenous communities. The study includes a sample of 1,300 children in that age range and their caregivers.

Intervention / Program / Practice:

Description of the intervention, program, or practice, including details of administration and duration.

The program, implemented by the government, provides out-of-school training for parents and caregivers of children aged 0-4, to improve their competencies and practices in caring for children and contribute to the children's comprehensive development and school readiness. The program takes advantage of existing community spaces during 4 hours per week, reducing costs over building specific care centers. The program (beyond the evaluated population) reaches approximately 400,000 children and their parents.

The program targets parents and caregivers of children between 0 and 4 years, especially children of rural and indigenous communities. The training is provided by Educational Promoters, individuals from the community trained by the government. The curriculum features a competency-based approach focusing on language and communication, protection and care, inter-personal and social skills, and exploration and knowledge of the environment.

Research Design:

Description of the research design.

The evaluation is a simple randomized-control trial design. In 2010, the government program was introduced in an additional 241 communities (or “localidades”). The government identified 400 vulnerable communities according to the National Index for Marginalization and used a lottery to select 241 of these communities to receive the program. Of these 241, 65 communities were randomly selected to participate in the evaluation. An additional sixty-five communities were chosen among the 259 potential comparison communities to participate as control communities in the evaluation. Twenty-five children were initially sampled per community. These children were distributed across the age eligibility spectrum. Even with modest effect sizes (standardized effect sizes of 0.2) and reasonable intra-community correlations in outcomes (0.12), the study has statistical power of 0.80 for the post-attrition (of up to 20%) sample. Actual attrition was under 20%.

Children ages 3 and 4 in the treatment and comparison communities at the outset of the program have now – two years after implementation – graduated from eligibility for the program at the, so longer-term tracking of impacts on their outcomes will be unaffected by rolling the program out in the control communities.

The children and caregivers were surveyed at baseline, one year into the program, and two years into the program. Analysis consists of simple differences at follow-up data collection, given the balance resulting from randomization, and difference-in-differences analysis.

Data Collection and Analysis:

Description of the methods for collecting and analyzing data.

The study measured child development using the Ages & Stages Questionnaire (ASQ-4). It also gathered anthropometric measures and estimates of child nutrition, episodes of illness, and how those episodes are treated. The ASQ examines five skill areas: communication, gross motor, fine motor, problem-solving, and personal-social. Caregivers were surveyed about attitudes and practices regarding childrearing. Furthermore, enumerators observed and recorded the behavior of caregivers during interviews.

Findings / Results:

Description of the main findings with specific details.

Participating children had higher scores in all five areas of child development, but the difference was significant in only one area (gross motor skills, at 0.16 standard deviations improvement). Although parents did not report differing attitudes as a result of participation in the program, enumerators observed significantly improved parenting practices during the course of the interviews for participating households relative to comparison households. Participating households were more likely to give toys and activities to their children (10 percentage points), to respond when the children asked a question (12 p.p.), and to be sitting together with their children (5 p.p.); and less likely to interfere negatively with their children's actions (-6 p.p.). Other observed behaviors, while not statistically significant, also suggested improved parenting practices as a result of the program. Cost analysis suggests that this program is much less expensive than other ECD programs implemented in Mexico.

Conclusions:

Description of conclusions, recommendations, and limitations based on findings.

A low-cost, community-based parenting program for parents of young children has significant impacts both on child development and on observed parent behavior. Because parent behaviors affect child development throughout the development process, these changes have a particular potential to translate into long-term, sustained gains in child development. The fact that parents' observed behavior changes but not their reported attitudes may suggest that parents are learning more through observation of the promoters who implement the program than through the accompanying verbal instruction.

Appendices

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Appendix A. References

References are to be in APA version 6 format.

- About, F. E. (2007). [Evaluation of an Early Childhood Parenting Programme in Rural Bangladesh](#). *Journal of Health, Population, & Nutrition*, 25, 3-13.
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- 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*, 344, 998-1001.
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Appendix B. Tables and Figures
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