Early Childhood Stimulation

State of the Evidence

Description of the Evidence

Simple activities such as playing, reading, and singing with children are core components of early childhood stimulation (ECS). Some of the most common ECS programs focus on encouraging caregivers to play with children: volunteers or community health workers visit caregivers at their homes or deliver group sessions in health clinics, homes, or other community spaces. Programs that teach and encourage caregivers to play and interact with children ages 0 to 3 in a way that encourages cognitive development have improved developmental outcomes. See examples in Antigua (Chang et al. 2015), Bangladesh (Hamadani et al. 2019), Colombia (Attanasio et al. 2021), China (Sylvia et al. 2021), Ethiopia (Worku et al. 2018), India (Andrew et al. 2019), Jamaica (Grantham-McGregor et al. 1991), Mexico (Fernald et al. 2017), St. Lucia (Chang et al. 2015), and Uganda (Singla et al. 2015). Effect sizes ranged from 0.15 to 1.3 standard deviations, depending on the study and the outcome measured, although most effect sizes were between 0.15 and 0.55 standard deviations.

Programs promoting ECS changed the way parents interacted with their young children at home and improved children's home environments. Whether the effects persist beyond the intervention period varies, however—effects persisted 20 years later in Jamaica (Gertler et al. 2014) (leading to improved outcomes in school, employment, and earnings) but faded two years after a program ended in Colombia (Andrew et al. 2018), for example.

Notes on Context

Open questions remain on how to effectively deliver these programs at scale. Additionally, programs to encourage ECS at home may have larger impacts in contexts where children may already have developmental disadvantages due to malnutrition or lower socioeconomic status. Contextual factors affect delivery models: home-based delivery could be more accessible than group meetings, which are often delivered in a

community center or health clinic, but home-based delivery is also expensive and could be more difficult to scale. Meanwhile, group models could make mothers feel more comfortable or build more social support but require reliable attendance from participants. Given tradeoffs in accessibility, group delivery may be best suited for contexts in which attendance at health centers is already high.

Equity Considerations

ECS programs may have the greatest impacts for the most disadvantaged children at baseline, such as those who are experiencing malnutrition, have lower cognitive outcomes, or come from a low socioeconomic status before an intervention. These children may benefit most from increased stimulation at home. In this way, ECS programs may increase equity among children before they arrive at school, decreasing the likelihood that they will fall behind early on in primary school and be unable to catch up later on. It is therefore important to ensure that targeting an ECS program allows program implementers to find the parents who will benefit most from more information on how to increase stimulation at home for their children.

unicef for every child
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Operationalization

Generalizability

Drawing on J-PAL's Generalizability Framework, below are questions that will help you determine if ECS programs might increase learning outcomes in your context. The below questions are not meant to be an exhaustive list of questions you will need to answer to determine if this type of program is appropriate for your context. They can, however, provide a starting point for applying the global evidence on this type of program to your specific context.

Local Conditions

- What early childhood development/stimulation programs currently exist in your area?

  > Do any of these programs target children ages 0-2?
  >
  > How many people participate in them? Is there an estimated coverage gap?
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  > What is the fee structure—are these programs too expensive for some people to participate in?
  >
  > Have there been any evaluations to determine if any existing programs have positive effects on children?

- What baseline knowledge do parents have about the importance of early childhood development and stimulation?

  > Particularly, is there a lack of awareness/emphasis on stimulation for young children?
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  > This can be ascertained through surveys if it is not already known. However, administrative data may exist that has already measured this information.

- What barriers might parents be facing to providing adequate stimulation for their children? Examples might include low parental literacy rates, both parents working, high rates of single-parent homes, a gap in the knowledge of how to stimulate young children, a gap in the knowledge of the importance of stimulating young children, etc.

- Is there available data that records developmental gaps between lower and higher income children?

Generalized Lessons on Behavior

- Cognitive skills are important for success in later life and are not fixed at birth; young children's high levels of brain plasticity and neurogenesis make them especially receptive to external stimuli.

- Providing psychosocial stimulation (playing, reading, singing, etc.) to young children can increase cognitive development and, in some instances, later life outcomes including schooling, earnings and employment.

Local Implementation

- There must be well-trained (or trainable) community agents who can conduct home visits to mothers and young children. Who would these agents be, and what is the appropriate coordinating/training organization/agency? Would these agents be trained and supervised by the Ministry of Health or Education, or by an NGO?

- Are there existing home-visit programs that this type of program could be tacked onto?

  > Relatedly, would there be resistance from the community to home visits from agents?
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  > Will perceptions of the agents change if they are male or female, or if they come from other discernible backgrounds or ethnic groups?

- Will rural areas be less accessible, therefore disadvantaging these communities? How can you ensure access to the program for harder-to-reach populations?

- Are there populations who speak different languages who might be harder to reach with the program? Can you ensure some agents speak most languages commonly spoken in the area?

Successful Example

- The Impact of Early Childhood Psychosocial Stimulation on Child Development Outcomes in Odisha, India (Attanasio et al. 2019)

Further Action

For approaches with mixed evidence or high variation of effectiveness in the literature, more evidence generation is recommended to close evidence gaps. Based on the evidence for this category, potential next steps might include:

- Connecting with implementers to learn more about evidence-based programs in this category;
- Connecting with researchers to identify relevant open questions that would benefit from further research;
- Other activities to think through the policy implications and/or research needs of this evidence in your context

If you are interested in exploring these or other options, please contact the J-PAL Education team at, JPAL_Education@povertyactionlab.org, to set up an initial exploratory meeting. The team will be happy to brainstorm potential next steps.