



## SEMINAR BRIEF | EARLY CHILDHOOD DEVELOPMENT: GUIDING INVESTMENTS IN LONG-TERM HUMAN CAPITAL DEVELOPMENT IN EGYPT

Prepared for: Global Evidence for Egypt Spotlight Seminar Series: A collaboration between UNICEF Egypt and The Abdul Latif Jameel Poverty Action Lab Middle East and North Africa (J-PAL MENA) at The American University in Cairo (AUC)

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## ABOUT THE GLOBAL EVIDENCE FOR EGYPT SPOTLIGHT SEMINAR SERIES

UNICEF Egypt and The Abdul Latif Jameel Poverty Action Lab Middle East and North Africa (J-PAL MENA) at The American University in Cairo have partnered to launch a Global Evidence for Egypt Spotlight Seminar Series in Cairo, Egypt. As part of this partnership, UNICEF Egypt and J-PAL MENA at AUC bring together Egyptian policymakers and J-PAL affiliated professors in a discussion on priority policy issues in Egypt. During each seminar, policymakers highlight a particular development priority in Egypt. J-PAL affiliates frame the policy issue from a global perspective and offer evidence-informed insights for improving policy and program design from the database of Randomized Control Trials (RCTs) conducted by J-PAL globally. In dialogue, the panel of policymakers and J-PAL affiliates ground the evidence in the Egyptian context and together explore possible policy solutions.

The sixth Global Evidence for Egypt Spotlight seminar will take place on Thursday May 19, 2022 and will focus on how evidence from randomized evaluations conducted globally can inform efforts to promote early childhood development in Egypt. It will feature Karen Macours, Professor at Paris School of Economics and Co-Chair of the Health sector at J-PAL Global as well as representatives from the Ministry of Social Solidarity, the Ministry of Health and Population, and UNICEF Egypt. The panel discussion will foster a conversation between Egypt's policy priorities and the relevant rigorous global evidence, ultimately providing insights into how we can encourage investments that can help lead to long-term human capital development in Egypt.

## ABOUT THE ABDUL LATIF JAMEEL POVERTY ACTION LAB MIDDLE EAST AND NORTH AFRICA AT THE AMERICAN UNIVERSITY IN CAIRO (J-PAL MENA AT AUC)

The Abdul Latif Jameel Poverty Action Lab (J-PAL) is a global research center working to reduce poverty by ensuring that policy is informed by scientific evidence. Anchored by a network of more than 260 affiliated professors at universities around the world, J-PAL draws on results from randomized impact evaluations to answer critical questions in the fight against poverty. We build partnerships with governments, NGOs, donors, and others to share this knowledge, scale up effective programs, and advance evidence-informed decision-making. J-PAL was launched at the Massachusetts Institute of Technology in 2003 and has regional centers in Africa, Europe, Latin America & the Caribbean, North America, South Asia, and Southeast Asia.

J-PAL MENA at AUC is J-PAL's seventh regional office and leads J-PAL's work in the MENA region. J-PAL MENA conducts randomized evaluations, builds partnerships for evidence-informed policymaking, and helps partners scale up effective programs.

Our research team evaluates the impact of social programs and policies in MENA, covering a wide range of sectors including social protection, employment, education, and gender. Through online and in-person courses, we train implementers, policymakers, donors, and advocates on how to generate and use rigorous evidence. Our policy team works to institutionalize learning from evidence and disseminate research results to governments and other partners.

## ABOUT UNICEF IN EGYPT

UNICEF Egypt is focused on promoting sustainable development with multidimensional equity for children, embodying the fair chance for every child. UNICEF's program in Egypt contributes to strengthening the knowledge base for more child-sensitive social protection, and improving three fundamental elements of the early childhood years (health, nutrition and development). UNICEF's work on learning and protection covers children of all ages, focusing on the most vulnerable children, children with disabilities and adolescent girls.

UNICEF's work in Egypt contributes to national efforts and priorities and the 2030 National Sustainable Development Strategy, as well as to the United Nations Partnership for Development Framework.

## EARLY CHILDHOOD DEVELOPMENT: GUIDING INVESTMENTS IN LONG-TERM HUMAN CAPITAL DEVELOPMENT IN EGYPT

### THE CONTEXT: EARLY CHILDHOOD DEVELOPMENT IN EGYPT

Early childhood development (ECD) is essential to achieving children's developmental potential and promoting long-term socio-economic growth in Egypt. ECD plays an important role in improving child health and cognitive outcomes, facilitating human capital development and paving a pathway out of extreme poverty.<sup>1</sup> Barriers to ECD include poor health and hygiene, malnutrition, absence of early childhood stimulation and education, and lack of adequate security and care from caregivers and communities.<sup>2</sup> The first 1000 days of life present an opportunity to support brain development and lay the foundations for long-term wellbeing.<sup>3</sup> Encouraging cross-sectoral investments in ECD is therefore vital to enabling children to reach their full potential, addressing multidimensional poverty, and promoting sustainable development in Egypt.

#### Health and Nutrition

**Children living in low-income households and rural areas face acute challenges to their survival and development.**<sup>4</sup>

Over the past 25 years, Egypt has recorded important achievements in improving child and maternal survival and health. At present, the neonatal mortality rate is 10 deaths per 1000 live births and the infant mortality rate is 17 deaths per 1000 live births, totaling the number of under-5 deaths in 2020 to 49,935 children.<sup>5</sup> Despite progress in children's survival rates, over 40 percent of children under the age of 5 are at risk of not meeting their full development potential.<sup>6</sup> Children living in low-income households are twice as likely to die before reaching the age of 5 relative to children living in higher-income households.<sup>7</sup> Children in rural areas and frontier governorates are 36 percent less likely to receive prenatal care and have a trained or skilled caregiver at birth relative to children in urban areas.<sup>8</sup>

**Progress has been made to address child malnutrition in Egypt, yet children are still at risk of stunting, wasting, and obesity.**<sup>9</sup> Although early initiation of breastfeeding is beneficial to children's health and nourishment,<sup>10</sup> only 27 percent of newborns in Egypt are breastfed within the first hour of birth, and 40 percent are exclusively breastfed within the first 5 months.<sup>11</sup> Child malnutrition affects 1 in every 5 children,<sup>12</sup> with stunting rates estimated at 22.3 percent of children under-5.<sup>13</sup> Obesity and wasting rates are alarmingly high, with 2 million children under-5 classified as obese and 1.1 million children experiencing wasting.<sup>14</sup> Children in rural areas suffer from micronutrient deficiencies, especially iron deficiency, with 27 percent of children 6–59 months of age suffering from anemia.<sup>15</sup> Most recently, because Egypt is a major importer of wheat from the Ukraine, rising inflation rates and other implications from the crisis may have adverse effects on child health and nutrition, putting more children at risk of food insecurity.<sup>16</sup>

#### Education and the Home Environment

**Home environments and early childhood care and education (ECCE) are integral to children's cognitive, emotional, and psychosocial development,** as parental communication with children and stimulating play at a very young age contribute to children's socio-emotional growth. Caregiving is predominantly perceived as the role of mothers given the persistence of traditional gender roles and norms in Egypt. Further work on encouraging fathers' involvement is needed, as fathers' contribution is estimated at 6 times less than mothers' contribution to caregiving responsibilities.<sup>17</sup> 60 percent of men report not spending enough time with their children due to work, and only 30 percent report participating in at least one aspect of childcare.<sup>18</sup> The imbalance of time spent and fathers' limited caregiving role in the household may have negative impacts on children's growth and development.

<sup>9</sup> Unicef.org. 2020. *Early Childhood Development in Egypt*.

<sup>10</sup> UNICEF DATA: Egypt. 2022. *Child & adolescent health and COVID-19*.

<sup>11</sup> "Egypt Demographic and Health Survey." *Ministry of Health and Population*. 2014. <https://dhsprogram.com/pubs/pdf/FR302/FR302.pdf>.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

<sup>14</sup> Unicef.org. 2020. *Early Childhood Development in Egypt*.

<sup>15</sup> WFP. 2021. *Evaluation of The First 1000 Days Programme in Egypt from 2017 to 2021*. [online] Available at: <https://docs.wfp.org/api/documents/WFP-0000135112/download/>

<sup>16</sup> Bay et al. 2022. *The Russia-Ukraine crisis poses a serious food security threat for Egypt*. [online]. Available at: <https://www.ifpri.org/blog/russia-ukraine-crisis-poses-serious-food-security-threat-egypt> [Accessed 29 March 2022].

<sup>17</sup> Unicef Egypt. 2018. *Institutional Consultancy Health, Nutrition And Early Childhood Development Knowledge, Attitudes And Practices In The First 1000 Days*. *Unicef. Org.* Available at: [https://www.unicef.org/egypt/sites/unicef.org.egypt/files/2018-06/external%20%20UNICEF\\_KAP\\_TOR\\_final.pdf](https://www.unicef.org/egypt/sites/unicef.org.egypt/files/2018-06/external%20%20UNICEF_KAP_TOR_final.pdf)

<sup>18</sup> Ibid.

<sup>1</sup> World Bank. 2015. *(ECD) in Egypt*. [online] Available at: <https://www.worldbank.org/en/country/egypt/publication/ecd2015>

<sup>2</sup> Unicef.org. 2020. *(ECD) in Egypt*. [online] Available at: <https://www.unicef.org/egypt/media/5461/file/Early%20Childhood%20Development%20in%20Egypt.pdf>

<sup>3</sup> Black, Maureen M, and Kristen M Hurley. 2014. "Investment In Early Childhood Development". *The Lancet* 384 (9950): 1244-1245. doi:10.1016/s0140-6736(14)60607-3.

<sup>4</sup> Ibid.

<sup>5</sup> UNICEF DATA: Egypt. 2022. *Child & adolescent health and COVID-19*. [online] Available at: <https://data.unicef.org/country/egy/>

<sup>6</sup> Unicef.org. 2020. *Early Childhood Development in Egypt*.

<sup>7</sup> World Bank. 2015. *(ECD) in Egypt*.

<sup>8</sup> Ibid.



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**Center-based care can complement home-based care and contribute to children's early development.** Children under the age of 5 often lack ECCE due to caregivers' limited access to or awareness about nursery care and early play activities.<sup>19</sup> 8 percent of children between the ages of 0 and 4 are actively enrolled in childcare and ECCE programs.<sup>20</sup> 37 percent of mothers claim that they are unaware of any nurseries in their area, despite having two nurseries available in their direct neighborhood.<sup>21</sup> Children born in higher-income households are four times more likely to be enrolled in an ECCE program than children in lower-income households. In addition, caregivers' lack of trust in the quality of available services often contributes to children's low enrollment rates in ECCE programs. 27 percent of mothers choose not to enroll their children in nurseries due to concerns about their children getting sick, while 20 percent fear their children's injury due to inadequate care and 17 percent have concerns about nurseries' cleanliness.<sup>22</sup> Pre-primary enrollment rates among children aged 3-5 are similarly low, estimated at 30 percent.<sup>23</sup>

**Providing a safe home environment for children is crucial for ECD, yet parent to child violence is high in Egypt,** with close to 1 in every 2 children under the age of 5 having been hit or exposed to a form of violence at home.<sup>24</sup> The Demographic Health Survey estimates that close to 93 percent

of all children (aged 1-14) are subjected to violent parenting practices and psychological aggression.<sup>25</sup> Although violent disciplinary practices are more prevalent in rural than urban areas, 79 percent of children in the lowest-income households and 71 percent of children in the highest-income households are exposed to physical violence, illustrating the widespread prevalence of parent-child violence.<sup>26</sup> Intimate partner violence (IPV) among caregivers in Egypt is also high, with more than 1 in 3 women reporting exposure to domestic violence at home.<sup>27</sup> IPV and instability at home can put children's sense of safety at risk and contribute to mental health issues among children's primary caregivers, with depression levels reaching 25 percent in 2018 among adults in Egypt.<sup>28</sup>

### National efforts to promote early childhood development in Egypt

The Government of Egypt perceives ECD as a fundamental right for all children and incorporates investments in ECD in its strategy to address multidimensional poverty in Egypt. Over the past several years, the government has launched the National Early Childhood Development Program, which includes a Community Nurseries Development component focusing on ECCE; the 1,000 First Days Initiative, which includes pre and postnatal health care to pregnant and breastfeeding women; the 100 Million Lives Initiative, which promotes maternal and child health; and the Hayah Karima initiative, which provides social protection and adequate housing to the most underprivileged

<sup>19</sup> Unicef.org. 2020. *Early Childhood Development in Egypt*.

<sup>20</sup> Motaghi et al., 2021. *Why is Female Labor Force Participation Low and Stagnant in MENA? Experimental Evidence from Egypt*. [online] Cairo: Gender Innovation Lab, World Bank. Available at: <https://documents1.worldbank.org/curated/en/252771619058817635/pdf/Evidence-to-Inform-Policy-What-Works-to-Close-the-Gender-Gaps-in-Middle-East-and-North-Africa.pdf> [Accessed 31 March 2022].

<sup>21</sup> Ibid.

<sup>22</sup> Motaghi et al., *Why is Female Labor Force Participation Low and Stagnant in MENA? Experimental Evidence from Egypt*.

<sup>23</sup> "Egypt Demographic and Health Survey." Ministry of Health and Population. 2014.

<sup>24</sup> Ibid.

<sup>25</sup> Ibid.

<sup>26</sup> Ibid.

<sup>27</sup> Ibid.

<sup>28</sup> EgyptToday. 2018. *25% of Egyptians suffer from mental health issues: survey*. [online] Available at: <https://www.egypttoday.com/Article/1/48156/25-of-Egyptians-suffer-from-mental-health-issues-survey>

areas in Egypt.<sup>29</sup> The government is also launching a national strategy and action plan for ECD in 2022. The goal of the national strategy is to ensure that young children from preconception to age 6 and their families from all social and economic backgrounds have equitable access to high quality health, nutrition, early learning, child protection, and social protection interventions.

Takaful and Karama, a conditional cash transfer program implemented by the Ministry of Social Solidarity, includes a child health component, as women in low-income households receive transfers conditional on allocating time to invest in their children's education and health.<sup>30</sup> The program mandates that mothers and their children under the age of 6 attend nutrition awareness sessions and visit health clinics up to four times per year to maintain and monitor child growth.<sup>31</sup> As part of the Takaful and Karama program, the Ministry of Social Solidarity and the Ministry of Health and Population also rolled out the 1000 First Days Initiative to provide breastfeeding and lactating mothers in Upper Egypt with nutrition vouchers to support the first 1,000 days of a child's life.<sup>32</sup>

Recognizing the importance of encouraging ECD and women's labor force participation, the government launched the Community Nurseries Development Program to increase the number of licensed nurseries with ECD curricula, improve the quality of nurseries, train care workers, and develop different ECD models for scale up.<sup>33</sup> Thus far, the government has targeted 1,000 nurseries and will target 3,000 more in the upcoming year, with a vision of expanding access to ECD services in urban and rural areas.<sup>34</sup> The government plans to further increase the number of nurseries available across Egyptian governorates, with a particular focus on Haya Karima villages in rural areas to facilitate human development and bridge the care gap between rural and urban areas in Egypt.

Overall, the government's efforts to engage stakeholders and improve the availability and quality of childcare services will aim to help children reach their full potential and facilitate sustainable development in Egypt.

## THE GLOBAL EVIDENCE: INSIGHTS ON ENCOURAGING EARLY CHILDHOOD DEVELOPMENT

Investing in early childhood development can help disrupt intergenerational poverty by generating long-term benefits in cognition, schooling, labor market earnings, crime reduction, and mental health, among other factors. Evidence from randomized evaluations conducted globally suggests that interventions to encourage early childhood stimulation, promote a healthy home environment, improve nutrition, scale preventive health interventions for mothers and children, and provide cash transfers conditional on health and nutrition behaviors can have positive impacts on early childhood development and long-term human capital development.

*i. Encouraging early childhood stimulation from parents and caregivers can improve children's cognitive development*

Activities such as playing, reading, and singing with children are core components of early childhood stimulation (ECS).<sup>35</sup> ECS programs that focus on encouraging caregivers to play with young children can improve children's ability to think, communicate, and connect with others.<sup>36</sup> In these interventions, volunteers or community health workers visit caregivers at their homes or deliver group sessions in health clinics, homes, or other community spaces.

**Evidence from 17 randomized evaluations conducted in 11 low- and middle-income countries finds that programs that teach and encourage caregivers to implement ECS with children aged 0–3 can improve the quality and quantity of play in children's homes and can improve children's cognitive development.**<sup>37</sup> In 16 evaluations, programs promoting psychosocial stimulation between caregivers and children, delivered by trained individuals in one-on-one or group settings, improved developmental outcomes for children. In each program, staff encouraged mothers to play and interact with their children in ways that stimulate cognitive development and often promoted responsive parenting. All of the 16 studies that measured developmental outcomes found that these programs significantly improved children's cognitive and/or socio-emotional outcomes in the short-term.

<sup>29</sup> UNDP. 2021. *Egypt Human Development Report 2021 | UNDP in Egypt*. [online] Available at: <https://www.eg.undp.org/content/egypt/en/home/launch-of-egypt-human-development-report-2021.html>

<sup>30</sup> Moss.gov.eg. n.d. *Achievements of the Ministry of Social Solidarity 2014–2021*. [online] Available at: [https://www.moss.gov.eg/\\_layouts/Common/Save.aspx?site=dd9ff3c5-a388-437a-afdc-657a88b92f1e&id=52&list=%d8%a7%d8%a8%d8%ad%d8%a7%d8%ab+%d9%88%d8%aa%d9%82%d8%a7%d8%b1%d9%8a%d8%b1&filePath=ht tps%3a%2f%2fadmin.moss.gov.eg%2far-eg%2fLists%2fList22%2fAttachments%2f52 %2f%d8%a5%d9%86%d8%ac%d8%a7%d8%b2%d8%a7%d8%aa+%d9%88%d8%b 2%d8%a7%89+2014-2021.pdf](https://www.moss.gov.eg/_layouts/Common/Save.aspx?site=dd9ff3c5-a388-437a-afdc-657a88b92f1e&id=52&list=%d8%a7%d8%a8%d8%ad%d8%a7%d8%ab+%d9%88%d8%aa%d9%82%d8%a7%d8%b1%d9%8a%d8%b1&filePath=ht tps%3a%2f%2fadmin.moss.gov.eg%2far-eg%2fLists%2fList22%2fAttachments%2f52 %2f%d8%a5%d9%86%d8%ac%d8%a7%d8%b2%d8%a7%d8%aa+%d9%88%d8%b 2%d8%a7%89+2014-2021.pdf)

<sup>31</sup> Ibid.

<sup>32</sup> WFP.org. 2021. *Evaluation of The First 1000 Days Programme in Egypt from 2017 to 2021*. [online] Available at: <https://docs.wfp.org/api/documents/WFP-0000135112/download/>

<sup>33</sup> Walaa, G., 2022. *عمى إشامتتة كركب المة لوفطال ةمى نة ىف ان ادوهوم: نجابق ال*. [online] Available at: <https://www.dostor.org/3737861>

<sup>34</sup> Egy-map.com. 2022. *كركب المة لوفطال ةمى نة*. [online] Available at: <https://egy-map.com/initiative/%D8%AA%D9%86%D9%85%D9%8A%D8%A9-%D8%A7%D9%84%D8%B7%D9%81%D9%88%D9%84%D8%A9-%D8%A7%D9%84%D9%85%D8%A8%D9%83%D8%B1%D8%A9>

<sup>35</sup> Black, Maureen M, Susan P Walker, Lia C. H. Fernald, Christopher T. Andersen, Ann M DiGirolamo & Sally Grantham-McGregor. 2016. "Early childhood development coming of age: science through the life course." *The Lancet*, 389(10064), 77-90.

<sup>36</sup> Ibid.

<sup>37</sup> The Abdul Latif Jameel Poverty Action Lab (J-PAL). 2020. *Encouraging early childhood stimulation from parents and caregivers to improve child development*. The Abdul Latif Jameel Poverty Action Lab. [online] Available at: <https://www.povertyactionlab.org/policy-insight/encouraging-early-childhood-stimulation-parents-and-caregivers-improve-child>

**Programs to promote ECS can have the largest gains for children who are most disadvantaged.** Children with malnutrition and/or low socioeconomic status at the start of an intervention may benefit most from increased stimulation at home. In [Jamaica](#)<sup>38</sup> and [Bangladesh](#),<sup>39</sup> where short-term improvements in children's cognitive, linguistic, and motor development were largest, programs targeted low-income, disadvantaged neighborhoods and focused on stunted and underweight children. In [Columbia](#)<sup>40</sup> and [China](#), short-term impacts were greatest for children in poorer households and among children who had lower development at the start of the intervention.<sup>41</sup> These results suggest that programs to encourage ECS at home may have larger impacts in contexts where children may already have developmental disadvantages.

**One evaluation was able to study impacts of ECS into adulthood. It found that impacts persist in the long-term, leading to improved outcomes in schooling, employment, and earnings.** A 1986-87 evaluation in [Jamaica](#) tracked participants after [20 years](#), and again after 30, and found that increased stimulation at home for stunted children between 9 and 24 months old led to long-term gains in cognition, academic achievement, employment, mental health, and adult earnings.<sup>42</sup> After 20 years, stunted children who received psychosocial stimulation were nearly three times as likely to have had some college-level education relative to stunted children who did not receive stimulation. They also earned, on average, 25 percent more income than children who did not receive stimulation, and they achieved the same average level of earnings as the non-stunted comparison group, indicating that the stimulation intervention helped stunted children fully catch up with their non-stunted peers. After [30 years](#), researchers observed even larger impacts, with the group that received stimulation having 43 percent higher hourly wages and 37 percent higher earnings than the group that did not receive the intervention.<sup>43</sup>

**Programs promoting ECS changed the way parents interacted with their young children at home and improved children's home environments.** A number of the studies showing impacts on cognition and socio-emotional development of ECS interventions also document intermediary outcomes, namely parental knowledge and behavior. Eight studies found that parents who received these programs invested more time and resources in stimulating play activities for their children. In seven evaluations from [Antigua](#), [Bangladesh](#), [China](#), [Jamaica](#), [St. Lucia](#), and [Uganda](#), programs significantly increased parental knowledge and understanding of child development, leading to improvements in the quality of children's home environment as well as improvements in their cognitive development and growth.<sup>44</sup>

ii. *Targeting nutritional practices or supplementation can have positive impacts on ECD outcomes, although the evidence is mixed*

**Reminders and nudges can help shift feeding behavior, but more evidence is needed.** In [Zambia](#), researchers evaluated the impact of an informative, full-sized growth chart to monitor children's height inside the home. They found that reminders around feeding children four to five times per day and the importance of protein intake reduced stunting from 94 percent to 72 percent.<sup>45</sup> The program providing charts was a low cost and easy to implement program, suggesting that it may be a cost-effective intervention to address stunting in areas with high stunting prevalence. In contrast, researchers evaluated the impact of three health education campaigns for parents that aimed to reduce iron-deficiency anemia among primary school students in [rural China](#). None of the campaigns had an effect on hemoglobin levels or anemia.<sup>46</sup> In [Ethiopia](#), researchers found that behavioral nudges improved households' grain storage and cooking practices, and children in those households ate more of the improved maize. However, there were no effects on markers of undernutrition such as height-for-age and weight-for-age.<sup>47</sup>

Interventions narrowly targeting a specific micronutrient deficiency can have limited effects, as there are often multiple drivers of undernutrition. Although deficits in nutrition can have a negative impact on children's motor development, physical growth, and brain development, evidence on cognitive and anthropometric related outcomes of nutritional supplementation interventions is mixed. In [Columbia](#), a

<sup>38</sup> Grantham-McGregor, Sally, Christine Powell, Susan Walker, and John Himes. 1991. "Nutritional Supplementation, Psychosocial Stimulation, and Mental Development of Stunted Children: The Jamaican Study." *The Lancet* 338 (8758): 1–5.

<sup>39</sup> Hamadani, Jena D., Syeda F Mehrin, Fahmida Tofail, Mohammad I Hasan, Syed N Huda, Helen Baker-Henningham, Deborah Ridout, & Sally Grantham-McGregor. 2019. "Integrating an early childhood development programme into Bangladeshi primary health-care services: an open-label, cluster-randomised controlled trial." *The Lancet Global Health*, 7(3), e366-e375. Research Paper

<sup>40</sup> Attanasio, Orazio, Helen Baker-Henningham, Raquel Bernal, Costas Meghir, Diana Pineda, and Marta Rubio-Codina. *Early Stimulation and Nutrition: the impacts of a scalable intervention*. No. w25059. National Bureau of Economic Research, 2018.

<sup>41</sup> Sylvia, Sean, Nele Warrinnier, Renfu Luo, Ai Yue, Orazio Attanasio, Alexis Medina, and Scott Rozelle. "From quantity to quality: Delivering a home-based parenting intervention through China's family planning cadres." *The Economic Journal* 131, no. 635 (2021): 1365-1400.

<sup>42</sup> Gertler, Paul, James Heckman, Rodrigo Pinto, Arianna Zanolini, Christel Vermeersch, Susan Walker, Susan Chang-Lopez, and Sally Grantham-McGregor. 2014. "Labor Market Returns to an Early Childhood Stimulation Intervention in Jamaica." *Science* 344(6187): 998-1001.

<sup>43</sup> Gertler, Paul, James J. Heckman, Rodrigo Pinto, Susan M. Chang, Sally Grantham-McGregor, Christel Vermeersch, Susan Walker, and Amika Wright. *Effect of the Jamaica Early Childhood Stimulation Intervention on Labor Market Outcomes at Age 31*. No. w29292. National Bureau of Economic Research, 2021.

<sup>44</sup> The Abdul Latif Jameel Poverty Action Lab, "Encouraging early childhood stimulation from parents and caregivers to improve child development."

<sup>45</sup> Fink, Günther, Rachel Levenson, Sarah Tembo, and Peter C. Rockers. "Home- and community-based growth monitoring to reduce early life growth faltering: an open-label, cluster-randomized controlled trial." *The American journal of clinical nutrition* 106, no. 4 (2017): 1070-1077.

<sup>46</sup> The Abdul Latif Jameel Poverty Action Lab (J-PAL). 2011. *Changing Behavior and Nutrition through Health Education in China: Evidence from Three Randomized Evaluations*. The Abdul Latif Jameel Poverty Action Lab. [online] Available at: <https://www.povertyactionlab.org/evaluation/changing-behavior-and-nutrition-through-health-education-china-evidence-three-randomized>

<sup>47</sup> Donato, Katherine, Margaret McConnell, Dan Han, Nilupa S. Gunaratna, Masresha Tessema, Hugo De Groote, and Jessica Cohen. "Behavioural insights to support increased consumption of quality protein maize by young children: a cluster randomised trial in Ethiopia." *BMJ global health* 5, no. 12 (2020): e002705.



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micronutrient supplement program had no impact on children's height, weight, or hemoglobin levels.<sup>48</sup> In [Bangladesh](#), a macronutrient supplement program had no impact on height or weight while a micronutrient supplement program had positive impacts on weight gain.<sup>49</sup> In [China](#), providing daily multivitamin supplements was effective at increasing blood hemoglobin levels, though it did not improve hemoglobin levels enough to reduce anemia rates.<sup>50</sup> This evidence suggests that because several factors feed into nutritional status, including iron stores at birth, breastfeeding practices, water-borne illnesses, and timing of supplementation, it can be difficult for nutritional supplementation alone to improve developmental outcomes for children.

### *iii. Improving coverage of preventive health services can reduce illnesses that hinder children's development*

Interventions to improve the supply and demand of preventive health can have positive impacts on early childhood development, as communicable diseases, vaccine-preventable illnesses, and poor health can hinder children's growth into their full potential.

**Subsidizing user fees for key preventive health products and eliminating cost-sharing when possible can help increase caregivers' take-up and in turn have positive impacts on ECD.** Barriers to caregivers' take-up of preventive healthcare may include the cost of services, as cost-sharing considerably reduces take-up of healthcare products and services, even among those who need them the most. Evidence from [Kenya](#)<sup>51</sup> and [Malawi](#)<sup>52</sup> suggests that free distribution and self-targeting of chlorine to treat drinking water can be a low-cost means of improving access to clean water and reducing child illnesses, as the programs decreased the prevalence of diarrhea, vomiting and fever among children by 10 percentage points. Another evaluation in [Kenya](#) found that when a program moved from free provision of deworming tablets to charging an average price of US\$0.30 per child, take-up fell from 75 percent to 18 percent.<sup>53</sup> A third evaluation in [Kenya](#) found that take-up of insecticide-treated bednets among pregnant women at antenatal care clinics dropped from 99 percent to 39 percent when the price increased from zero to US\$0.60.<sup>54</sup>

<sup>48</sup> The Abdul Latif Jameel Poverty Action Lab (J-PAL). 2011. The Impact of Cognitive Stimulation and Nutritional Supplements on Early Childhood Development. The Abdul Latif Jameel Poverty Action Lab. [online] Available at: <https://www.povertyactionlab.org/evaluation/impact-cognitive-stimulation-and-nutritional-supplements-early-childhood-development>

<sup>49</sup> Nahar, Baitun, M. I. Hossain, J. D. Hamadani, T. Ahmed, S. N. Huda, S. M. Grantham-McGregor, and L. A. Persson. "Effects of a community-based approach of food and psychosocial stimulation on growth and development of severely malnourished children in Bangladesh: a randomised trial." *European journal of clinical nutrition* 66, no. 6 (2012): 701-709.

<sup>50</sup> The Abdul Latif Jameel Poverty Action Lab (J-PAL). Changing Behavior and Nutrition through Health Education in China: Evidence from Three Randomized Evaluations.

<sup>51</sup> The Abdul Latif Jameel Poverty Action Lab (J-PAL). 2008. Improving the targeting of preventive health subsidies through vouchers in Western Kenya. The Abdul Latif Jameel Poverty Action Lab. [online] Available at: <https://www.povertyactionlab.org/evaluation/improving-targeting-preventive-health-subsidies-through-vouchers-western-kenya>

<sup>52</sup> The Abdul Latif Jameel Poverty Action Lab (J-PAL). 2019. The roles of water treatment subsidies and community health workers in improving child health and chlorine usage in Malawi. The Abdul Latif Jameel Poverty Action Lab. [online] Available at: <https://www.povertyactionlab.org/evaluation/roles-water-treatment-subsidies-and-community-health-workers-improving-child-health-and>

<sup>53</sup> Arrow, Kenneth J., Partha Dasgupta, Lawrence H. Goulder, Kevin J. Mumford, and Kirsten Oleson. "Sustainability and the measurement of wealth: further reflections" *Environment and Development Economics* 18, no. 4 (2013): 504-516.

<sup>54</sup> Cohen, Jessica, and Pascaline Dupas. "Free distribution or cost-sharing? Evidence from a randomized malaria prevention experiment." *The Quarterly Journal of Economics* (2010): 1-45.

**Incentives and nudges to promote health behaviors can increase caregivers' take-up of preventive healthcare services and have positive impacts on children.** In [India](#), researchers found that providing incentives alongside reliable immunization camps increased the likelihood of full childhood immunization by more than six times, whereas households not offered incentives were only 2.7 times more likely to immunize their children. The addition of the incentives also made the program more cost-effective because immunization facilities were more fully utilized.<sup>55</sup>

**On the supply side, health worker capacity, incentives, and lack of supplies can contribute to low coverage.** Strengthening health worker performance via training, recruitment, and incentives can improve the quality of health care services children receive in their early years. In [India](#), researchers found that motivating workers via incentive-based pay can increase their attendance and productivity as well as the accuracy of their reporting of patient data.<sup>56</sup> In [Zambia](#), researchers found that highlighting opportunities for career advancement helped recruit health workers who were more qualified, had similar community service motivation, performed better on the job, and significantly improved health practices and outcomes in their communities.<sup>57</sup>

*iv. Conditional cash transfers (CCTs) can cut across multiple domains to increase healthy behaviors for children in the short-run and improve their health and education outcomes in the long-run*

**Evidence from 13 low- and middle-income countries shows that cash transfer programs conditional on the use of health products and services generally increase uptake of targeted health behaviors and improve child health outcomes in the short term and can improve cognition and educational outcomes in the longer term.**<sup>58</sup> Safety nets provided through CCT programs often target and encourage improvements in multiple risk factors, including nutrition, health, and the home environment. A multifaceted program targeting investment in early life in [Nigeria](#) finds that cash transfers improve economic outcomes for women and increase their investments in livestock, leading to improvements in

children's diets and anthropometric and health outcomes.<sup>59</sup> In [Indonesia](#), researchers found that a conditional cash transfer program for children led to a 23 percent decrease in stunting after six years. In [Tanzania](#), cash transfers increased the number of clinic visits and take-up of health related products in the first 1.5 years and led to improvements in reported child health after 2.5 years. In [Honduras](#), non-indigenous children whose mothers received cash transfers during their first years of life were more likely to be enrolled in school 13 years later than children whose mothers did not receive transfers.

Similarly in [Mexico](#), researchers found that children experienced fewer illnesses, a reduction in anemia, and an increase in height due to a national CCT program named Progresa which required school attendance and preventive medical care visits. A decade after its launch, researchers found that larger cumulative cash transfers resulted in significantly better outcomes in many aspects of children's physical, cognitive, and language development. A [20 year follow-up](#) illustrates that investments in very early years increased educational attainment and income expectations of 18-20 year olds who were exposed to Progresa during their first years of life.<sup>60</sup> Similarly in [Nicaragua](#), researchers found that a CCT program had substantial and lasting improvements on early childhood health and cognitive development, with information, targeting transfers to women, and changes in parental investment possibly contributing to these effects.<sup>61</sup>

**Evidence also suggests that the timing of transfers can matter.** In [Nicaragua](#), researchers found that CCTs to poor rural households were more effective at improving cognition 7 years after the transfers stopped for boys who received transfers starting in utero relative to boys who received the transfer starting at age 2-5.

Overall, evidence from randomized evaluations in low- and middle-income countries suggests that interventions targeting ECS, nutrition, preventive health take up, and CCTs conditional on health behaviors can have positive impacts on ECD as well as longer-term cognition, schooling, and labor market outcomes. While results to date are overall promising, many open questions remain about the cost effectiveness of different programs and about how to deliver ECD programs at scale to sustain long-term human capital development.

<sup>55</sup> The Abdul Latif Jameel Poverty Action Lab (J-PAL). 2020. Improving immunization rates through regular camps and incentives in India. The Abdul Latif Jameel Poverty Action Lab. [online] Available at: <https://www.povertyactionlab.org/evaluation/improving-immunization-rates-through-regular-camps-and-incentives-india>

<sup>56</sup> The Abdul Latif Jameel Poverty Action Lab (J-PAL). 2020. On Track: Health care, patient data, and provider performance. The Abdul Latif Jameel Poverty Action Lab. [online] Available at: [https://www.povertyactionlab.org/sites/default/files/publication/briefcase\\_on-track-healthcare-patient-data-and-provider-performance.pdf](https://www.povertyactionlab.org/sites/default/files/publication/briefcase_on-track-healthcare-patient-data-and-provider-performance.pdf)

<sup>57</sup> The Abdul Latif Jameel Poverty Action Lab (J-PAL). 2017. Recruiting and Motivating Community Health Workers in Zambia. The Abdul Latif Jameel Poverty Action Lab. [online] Available at: <https://www.povertyactionlab.org/evaluation/recruiting-and-motivating-community-health-workers-zambia>

<sup>58</sup> The Abdul Latif Jameel Poverty Action Lab (J-PAL). 2020. Using cash transfers to improve child health in low- and middle-income countries. The Abdul Latif Jameel Poverty Action Lab. [online] Available at: <https://www.povertyactionlab.org/policy-insight/using-cash-transfers-improve-child-health-low-and-middle-income-countries>

<sup>59</sup> Carneiro, Pedro, Lucy Kraftman, Giacomo Mason, Lucie Moore, Imran Rasul, and Molly Scott. "The impacts of a multifaceted prenatal intervention on human capital accumulation in early life." *American Economic Review* 111, no. 8 (2021): 2506-49.

<sup>60</sup> Araujo, Maria Caridad, and Karen Macours. "Education, Income and Mobility: Experimental Impacts of Childhood Exposure to Progresa after 20 Years." (2021): np.

<sup>61</sup> Macours, Karen, Norbert Schady, and Renos Vakis. "Cash transfers, behavioral changes, and cognitive development in early childhood: evidence from a randomized experiment." *American Economic Journal: Applied Economics* 4, no. 2 (2012): 247-73

## THE CASE FOR EVIDENCE: Why Evaluate? What are Evaluations? What are Randomized Evaluations?

### Why Evaluate?

The purpose of evaluation is not always clear, particularly for those who have watched surveys conducted, data entered, and then the ensuing reports filed away only to collect dust. This is most common when evaluations are imposed by others. If, on the other hand, those responsible for the day-to-day operations of a program have critical questions, evaluations can help find answers. As an example, the NGO responsible for distributing chlorine pills may speak with their local field staff and hear stories of households diligently using the pills, and occasionally see improvements in their health. But each time it rains heavily, the clinics fill up with people suffering from diarrheal diseases. The NGO might wonder, “If people are using chlorine to treat their water, why are they getting sick when it rains? Even if the water is more contaminated, the chlorine should kill all the bacteria.” The NGO may wonder whether the chlorine pills are indeed effective at killing bacteria. Are people using it in the right proportion? Maybe our field staff is not telling us the truth. Perhaps the intended beneficiaries are not using the pills. Perhaps they aren’t even receiving them. And then when confronted with this fact, the field staff claims that during the rains, it is difficult to reach households and distribute pills. Households, on the other hand, will reply that they most diligently use pills during the rains, and that the pills have helped them substantially. Speaking to individuals at different levels of the organization, as well as to stakeholders, can uncover many stories of what is going on. These stories can be the basis for theories. But plausible explanations are not the same as answers. Evaluations involve developing hypotheses of what’s going on, and then testing those hypotheses.

### What are Evaluations?

The word “evaluation” can be interpreted quite broadly and have varying meanings to different people and organizations. Engineers, for example, might evaluate or test the quality of a product design, the durability of a material, the efficiency of a production process, or the safety of a bridge. Critics evaluate or review the quality of a restaurant, movie, or book. A child psychologist may evaluate or assess the decision-making process of toddlers. The researchers at J-PAL evaluate social programs and policies designed to improve the well-being of the world’s poor. This is known as program evaluation. Put simply, a program evaluation is meant to answer the question, “How is our program or policy doing?” This can have different implications depending on who is asking the question, and to whom they are speaking. For example, if a donor asks the NGO director “How is our program doing?” she may imply, “Have you been wasting our money?” This can feel interrogatory. Alternatively, if a politician asks her constituents, “How is our program doing?” she could imply, “Is our program meeting your needs? How can we make it better for you?” Program evaluation, therefore, can be associated with positive or negative sentiments, depending on whether it is motivated by a demand for accountability versus a desire to learn.



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J-PAL works with governments, NGOs, donors, and other partners who are more interested in learning the answer to the question: How effective is our program? This question can be answered through an impact evaluation. There are many methods of conducting impact evaluations; J-PAL focuses on randomized evaluations.

### What are Randomized Evaluations?

A randomized evaluation is a type of impact evaluation that uses random assignment to allocate resources, run programs, or apply policies as part of the study design. Like all impact evaluations, the main purpose of randomized evaluations is to determine whether a program has an impact, and more specifically, to quantify how large that impact is. Impact evaluations measure program effectiveness typically by comparing outcomes of those (individuals, communities, schools, etc.) who received the program against those who did not. There are many methods of doing this, but randomized evaluations are generally considered the most rigorous and, all else equal, produce the most accurate (i.e. unbiased) results.

At a very basic level, a randomized evaluation can answer the question: Was the program effective? But if thoughtfully designed and implemented, it can also answer the questions, “How effective was it? Were there unintended side-effects? Who benefited most? Who was harmed? Why did it work or not work? What lessons can be applied to other contexts, or if the program was scaled up? How cost-effective was the program? How does it compare to other programs designed to accomplish similar goals?”

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