

Early childhood programs yield long-term gains for children in developing nations

June 13 2014, by Wen Huang



The toddlers selected from the economically disadvantaged neighborhoods of Kingston, Jamaica recieved social stimulation and nutritional supplements.

A new report has found that early childhood programs, shown to give

significant, long-term cognitive and economic benefits to children in the United States, also can greatly benefit children in developing nations.

The new study was conducted by University of Chicago economist James Heckman, Prof. Paul Gertler of the Haas School of Business at the University of California-Berkeley, and researchers at four institutions across the globe. The authors examined a high-quality [early childhood](#) program in Jamaica and concluded that the intervention improved children's cognitive development and substantially increased their future earning power.

The results of the study were published in the May 30 issue of the journal *Science*.

Heckman and Gertler's current analysis is based on a follow-up interview of the sample from the original Jamaican study, which was carried out between 1986 and 1987.

Researchers enrolled 129 toddlers, between 9 to 24 months, that were living in economically disadvantaged neighborhoods of Kingston, Jamaica. The children were diagnosed with stunted growth and poor cognitive development, which are strongly associated with malnutrition. These stunted children were assigned to control and treatment groups to receive nutritional and educational intervention. The study also recruited a comparison group consisting of an additional 84 non-stunted children in the same age group and from the same neighborhoods in Kingston, Jamaica.

Treated participants received stimulation by way of weekly, one-hour sessions with community health workers who taught child-rearing skills to the children's parents and encouraged mothers and children to interact in ways that would develop cognitive and socio-emotional skills. Children were also given access to free healthcare and weekly

supplements (formula) over a period of 18 months to compensate for the nutritional deficiencies that might have stunted their growth.

At the end of the study, researchers found that the developmental level of children who had received stimulation was significantly above that of the children who did not benefit from the program, and approached level of the external, non-malnourished group. Participants were subsequently resurveyed at ages 7, 11 and 17. Results indicated that the stimulation and the combined stimulation-nutrition arms of the Jamaica Study proved to have large, long-term impacts on [cognitive development](#) for boys.

In 2007 and 2008, when the participants were approximately 22 years old, Heckman and his co-authors attempted to find all of the participants, regardless of their current locations, and even followed migrants to the U.S., Canada and the United Kingdom. They interviewed 105 out of the 129 enrollees in the stunted category, and 65 out of 84 in the non-stunted category. Their focus was to determine the labor market returns for early stimulation intervention.

The analysis shows that the early psychosocial and nutritional interventions increased the participants' earnings as adults by 25 percent—enough for them to catch up to the earnings of the comparison group that was not stunted. The interventions also had a positive long-term impact on participants' psychosocial skills and schooling attainment, and were linked with reduced participation in violent crimes.

"These findings help us understand the mechanism to effectively shape public policy," Heckman said. "It shows once again that investing in the early years of disadvantaged children is more than a social justice imperative—it is an economic imperative that has far-reaching implications for developing nations."

More information: "Labor Market Returns To An Early Childhood Stimulation Intervention In Jamaica." *Science* 30 May 2014: Vol. 344 no. 6187 pp. 998-1001. [DOI: 10.1126/science.1251178](https://doi.org/10.1126/science.1251178)

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