Global Sustainable Development Starts With Investment in the Early Brain Development of Children

Benard P. Dreyer, MD

At least 200 million children living in poverty in low- to middle-resource countries <5 years of age fail to reach their cognitive and socioemotional developmental potential. Although nutritional deficiencies play a role, inadequate stimulation in the first 5 years of life is critical. A growing body of evidence from studies in the United States documents the negative effect of poverty on early brain development. The quality of caregiving by the parent is central. Differences in language development based on parent language interactions are present from the time children utter their first words, and these effects impact school readiness and long-term academic achievement. Research on home visiting programs in the United States has shown that they can improve parenting skills and the quality of the home environment, as well as improve intellectual development among children. These factors, as well as the potential impact of home visiting interventions to help at-risk children, are likely to be as or more important in the developing world.

In this issue of Pediatrics, Bann et al present the results of longitudinal analyses of a randomized controlled trial of a home-based early developmental intervention on trajectories of cognitive development among young children from 12 to 36 months of age from higher- and lower-resource countries (India, Pakistan, and Zambia). Parent trainers visited homes every 2 weeks from the child’s birth to 36 months of age, providing a curriculum to parents in the experimental group that targeted cognitive, language, motor, and socioemotional development. Parents were encouraged to use learned activities until the next visit. The authors report impressive outcomes. Children in lower-resource families started out behind in development at 12 months of age, as compared with those in higher-resource families. However, those who received the intervention caught up in cognitive development with their peers in higher-resource families by 3 years of age, becoming indistinguishable from those with more resources in either the intervention or the control group. The lower-resource children in the control group, who did not receive the developmental intervention, improved minimally over time, and a significant gap in cognitive outcomes remained between them and higher-resource children.

The effect of this intervention, if maintained through school entry and the primary grades, may change the lifelong trajectories of these children. Follow-up of these children, or of children in similar studies, will need to be done to document that these important outcomes do not “wash-out” over time. Furthermore, bringing these programs to scale will need an analysis of costs that is not provided as part of this publication, as well as development of funding streams in the countries in which these children live.
or of funding through international resources.

The American Academy of Pediatrics (AAP) has as its most recent strategic priorities "Poverty and Child Health" and "Early Brain and Child Development." These priorities are overlapping, and both are reflected in and deeply resonate with the outcomes reported in this study. Although our efforts are primarily focused on children in the United States, the AAP is dedicated to the health of all children. The AAP and our members are engaged globally to promote optimal child health and development in collaboration with other national pediatric societies and with international organizations like the United Nations, especially UNICEF, and the World Health Organization.

The international community, through the United Nations Millennium Development Goals (MDGs) from 2000 through 2015, has focused on eradicating extreme poverty and hunger globally, achieving universal primary education worldwide, and reducing mortality in children <5 years of age in developing countries.13 Great improvements have been accomplished in all these areas; for example, the global number of deaths of children <5 years has declined by more than half, dropping from 12.7 million deaths in 1990 to 6 million deaths in 2015, and the extreme poverty rate in developing countries dropped from 47% to 14% in the same time period. We clearly still have a long way to go. The new proposed Sustainable Development Goals (SDGs) intend to build on the accomplishments of the MDGs over the next 15 years and further reduce poverty, hunger, and childhood mortality. Education initiatives have been proposed to be expanded up through college and down to early childhood.14 Home visiting programs modeled on the intervention in this study must be considered, funded, and brought to scale if we are going to make a real difference for children in the developing world and give them a chance at productive lives.

The new SDGs are even more ambitious than the previous MDGs that they built on. The focus on health and well-being has expanded from a primary focus on women, children, and infectious diseases to people of all ages and noncommunicable and chronic diseases. This is laudable. However, it is conceivable that early child development could not get the priority it deserves. The AAP stands ready to work with pediatric organizations in the developing world, with SDG working groups in the UN, and with nongovernmental organizations and coalitions to encourage investment in sustainable systems to address the needs of children. Let's remember that, to quote Anthony Lake, the Executive Director of UNICEF, "sustainable development starts with safe, healthy, and well-educated children."

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ABBREVIATIONS

AAP: American Academy of Pediatrics
MDG: Millennium Development Goal
SDG: Sustainable Development Goal

REFERENCES


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