From Neurons to Neighborhoods: The Science of Early Childhood Development

Committee on Integrating the Science of Early Childhood Development

Board on Children, Youth, and Families
Institute of Medicine
National Research Council
Committee Members

- **Jack Shonkoff** (*Chair*), Brandeis University
- **Deborah Coates**, The City University of New York
- **Greg Duncan**, Northwestern University
- **Felton Earls**, Harvard Medical School
- **Robert Emde**, University of Colorado Health Sciences Center
- **Yolanda Garcia**, Santa Clara County Office of Education
- **Susan Gelman**, University of Michigan
- **Susan Goldin-Meadow**, University of Chicago
- **William Greenough**, University of Illinois at Champaign-Urbana
- **Ruth Gross**, Stanford University Medical School
- **Megan Gunnar**, University of Minnesota
- **Michael Guralnick**, University of Washington
- **Alicia Lieberman**, University of California at San Francisco
- **Betsy Lozoff**, University of Michigan
- **Ruth Massinga**, The Casey Family Program
- **Stephen Raudenbush**, University of Michigan
- **Ross Thompson**, University of Nebraska
- **Charles Nelson** (*liaison*), University of Minnesota
- **Deborah Phillips** (*Study Director*), Georgetown University
Sponsors

U.S. Department of Health and Human Services (HHS)
- Administration for Children and Families (ACF)
- Administration on Children, Youth, and Families (ACYF)
- Office of the Assistant Secretary for Planning and Evaluation (ASPE)
- Centers for Disease Control and Prevention (CDC)
- Maternal and Child Health Bureau (MCHB), Health Resources and Services Administration (HRSA)
- National Institute of Child Health and Human Development (NICHD)

National Institute of Mental Health (NIMH)
- National Institute of Nursing Research (NINR)
- Office of Public Health and Science (OPHS)
- Substance Abuse and Mental Health Services Administration (SAMHSA)

U.S. Department of Education (DoE)
- Office of Special Education Programs

The Commonwealth Fund
The Ewing Marion Kauffman Foundation
Heinz Endowments
The Irving B. Harris Foundation
Putting the Study in Context

- **Explosion of knowledge** in neurobiology and the behavioral and social sciences

- **Marked transformations** in the **social and economic circumstances** under which families are raising young children

- At a time when scientific advances could be used to strengthen early childhood policies and practices, **knowledge is frequently dismissed or ignored and children are paying the price**
CONCLUSIONS
Take-Home Messages

- The traditional **nature versus nurture** debate is **simplistic and scientifically obsolete**

- **Early experiences** clearly influence **brain development**, but a disproportionate focus on birth to three begins **too late and ends too soon**

- **Early intervention programs** can improve the odds for vulnerable children, but **those that work are rarely simple, inexpensive, or easy to implement**
Take-Home Messages

- How young children feel is as important as how they think, particularly with regard to school readiness.

- Healthy early development depends on nurturing and dependable relationships.

- Culture influences all aspects of early development through child-rearing beliefs and practices.
Take-Home Messages

- There is little scientific evidence that special “stimulation” activities above and beyond normal growth-promoting experiences lead to “advanced” brain development in early childhood.

- Substantial scientific evidence indicates that poor nutrition, specific infections, environmental neurotoxins, drug exposures, and chronic stress can harm the developing brain.

- Significant parent mental health problems, substance abuse, and family violence impose heavy developmental burdens on young children.
RECOMMENDATIONS FOR POLICY AND PRACTICE
Need for Greater Attention to Social-Emotional Development and Mental Health Needs

- Early childhood programs must balance the focus on cognition and literacy skills with comparable attention to the emotional and social development of all children, including those with special needs.

- Greater commitments must be made to address significant mental health problems in young children by establishing clear policy and practice linkages among child protective services, welfare reform, mental health agencies, early intervention programs, and primary health care.

- Major investments in professional development are essential to address unmet needs.
Need to Recognize the Significance of Early Childhood Caregivers and Educators

- The early childhood years lay a foundation that influences the effectiveness of all subsequent education efforts.

- Public expenditures for early care and education must be invested in high quality programs that promote sustained relationships with qualified personnel.

- Major investments must be made to enhance the skills and compensation of providers of early care and education.
Need to Enhance Supports for Working Families

- **Tax, wage, and income-support policies** should be reassessed to assure that no child supported by a working adult lives in poverty.

- **Family and medical leave** should be expanded to cover all working parents, and strategies should be explored to provide income replacement.

- The exemption period should be lengthened before states require parents of infants to work as part of **welfare reform**.
Interactions Among Knowledge, Policy, and Practice Demand Dramatic Rethinking

- Need to **reduce long-standing fragmentation** of policies and services
- Need to reconcile **traditional early childhood program strategies** with the **increasing cultural diversity** and the **economic and social realities of current family life**
- Need to change the **politicized context of program evaluation** which results in a **high stakes environment** that undermines honest attempts to **improve quality**
CONCLUDING THOUGHTS
Urgent Need for a New Public Dialogue

Moving beyond blaming parents, communities, business, or government

Rethinking the balance between individual and shared responsibility for children
Commitment to Two Complementary Agendas

A Question for the Future

How can society use knowledge about early childhood development to maximize the nation’s human capital and ensure the ongoing vitality of our democratic institutions?

A Question for the Present

How can the nation use knowledge to nurture, protect, and ensure the health and well-being of all young children as an important objective in its own right, regardless of whether measurable returns can be documented in the future?