



Center on the Developing Child
HARVARD UNIVERSITY

Driving Science-Based Innovation to Achieve Breakthrough Outcomes For Children Facing Adversity

JACK P. SHONKOFF, M.D.

Julius B. Richmond FAMRI Professor of Child Health and Development,
Harvard School of Public Health and Harvard Graduate School of Education.
Professor of Pediatrics, Harvard Medical School and Boston Children's Hospital.
Director, Center on the Developing Child at Harvard University

Purpose Built Communities Network Members Conference
Charlotte, NC | September 30, 2014

The Foundation of a Successful Society is Built in Early Childhood

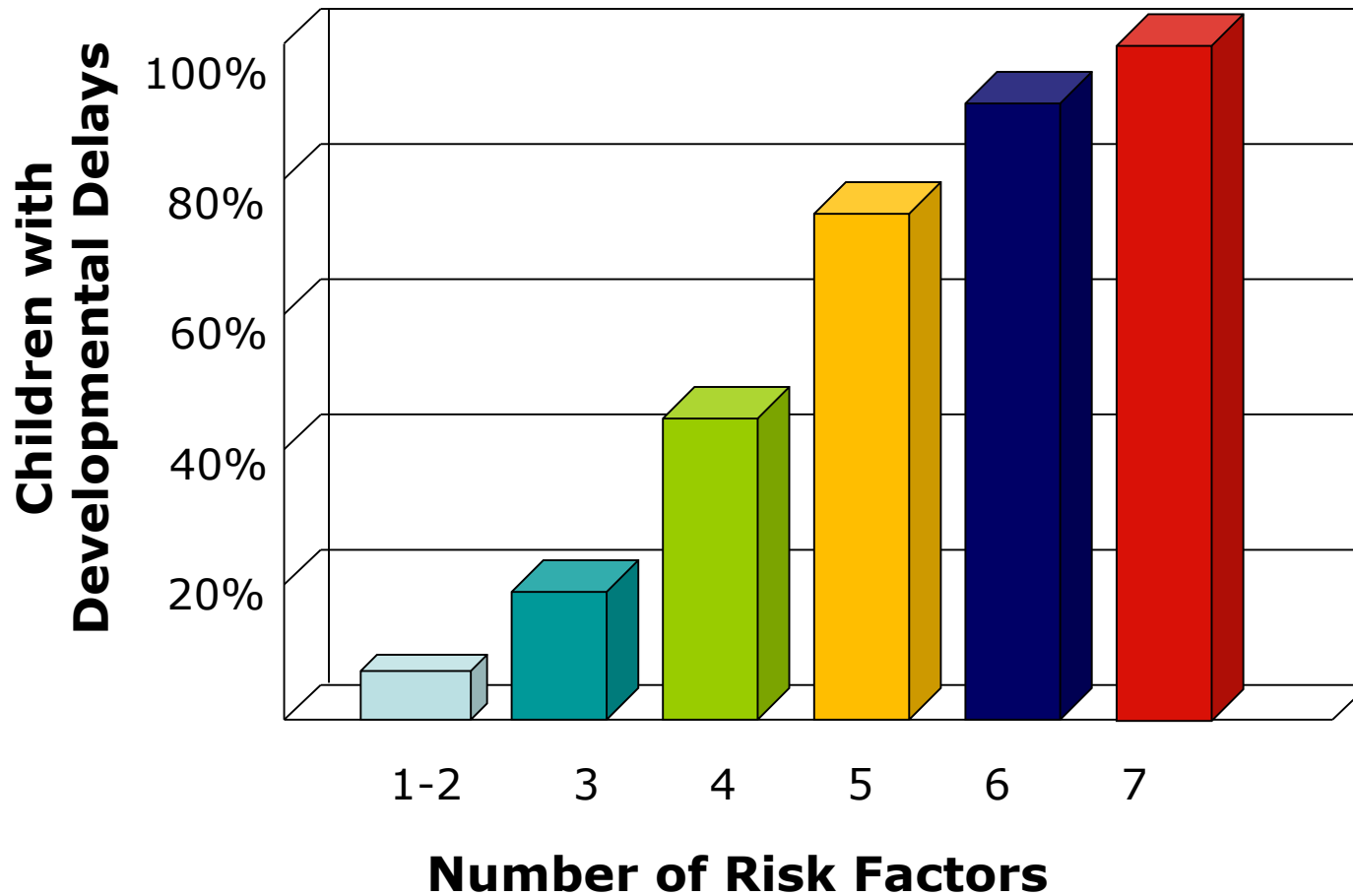
Healthy development in the early years provides the building blocks for educational achievement, economic productivity, responsible citizenship, lifelong health, strong communities, and successful parenting of the next generation.

Advances in neuroscience, molecular biology, and the behavioral and social sciences could be leveraged to catalyze more effective policies and practices across multiple sectors at the neighborhood level.

Genes and Experiences Interact to Build Brain Architecture

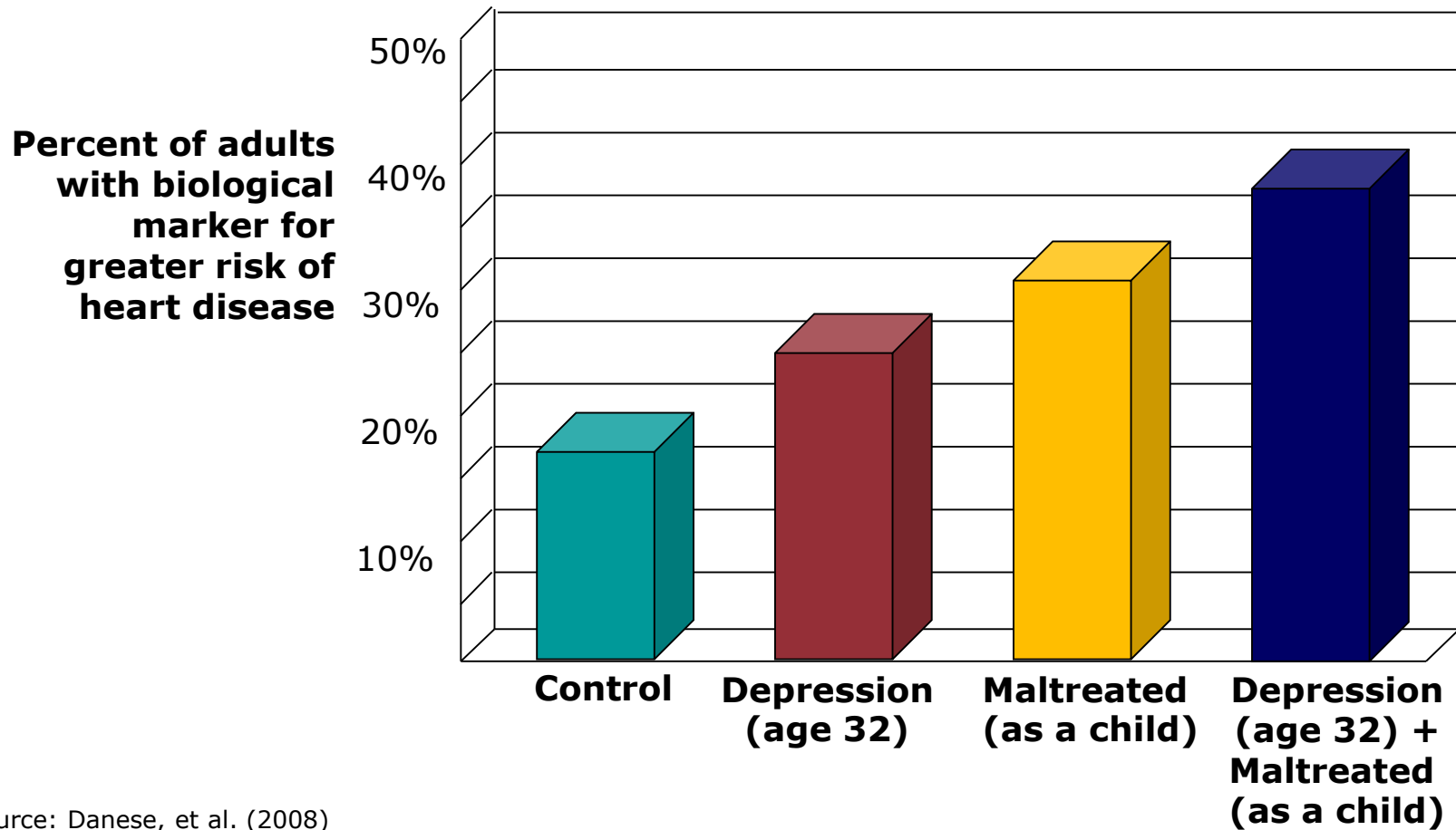


The Cumulative Pile Up of Adversity Impairs Development in the First Three Years



Source: Barth, et al. (2008)

Biological “Memories” Link Maltreatment in Childhood to Greater Risk of Adult Heart Disease



Source: Danese, et al. (2008)

Toxic Stress Derails Healthy Development



Using 21st Century Science to Change the Narrative for Policy and Practice Across Sectors

Early experiences affect **both** lifelong health **and** learning
Healthy development requires **both** protection **and** enrichment



Generating Hypotheses to Guide the Design and Testing of New Intervention Strategies

Early experiences affect lifelong health *and* learning

Healthy development requires protection *and* enrichment



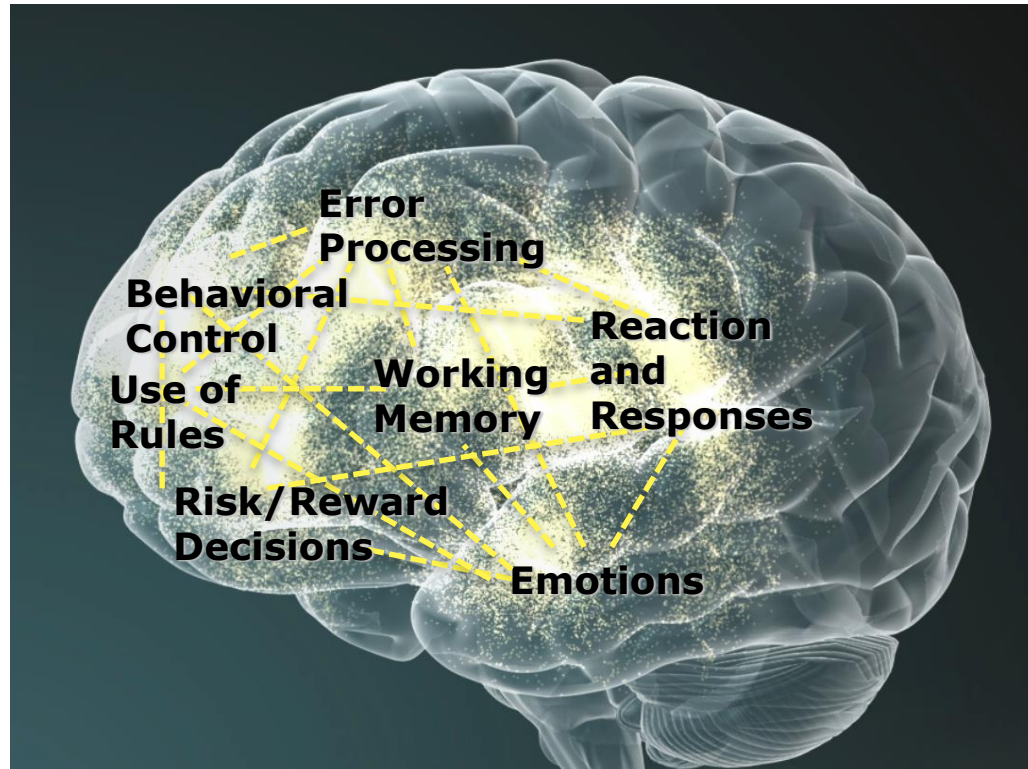
1 Protection and enrichment for young children require capacity-building for their caregivers

2 Improved parenting skills also enhance employability and economic stability

3 Strong communities reduce sources of toxic stress

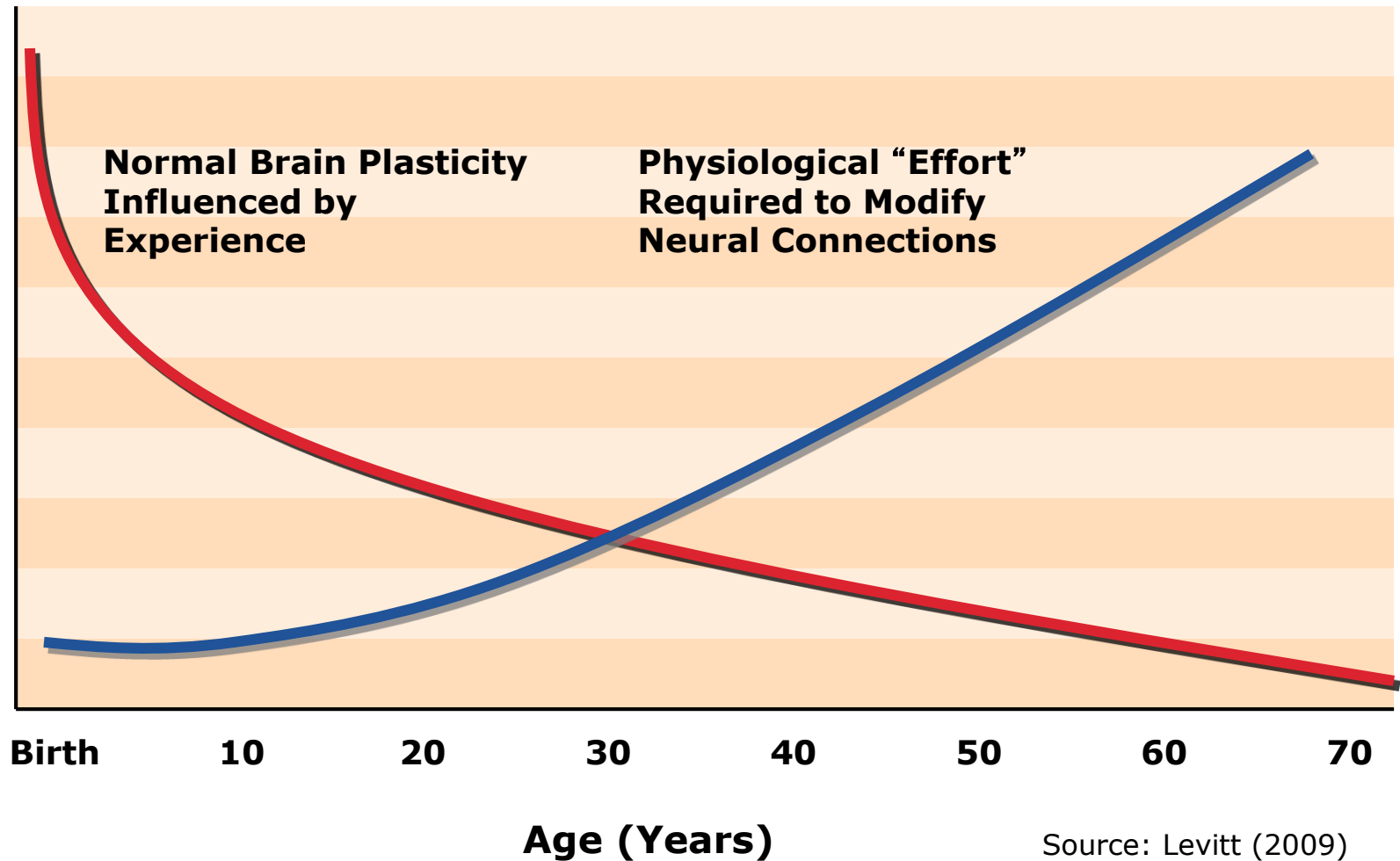


Skill Building for Parenting and Economic Self-Sufficiency Points to the Foundational Role of Executive Function and Self-Regulation Skills

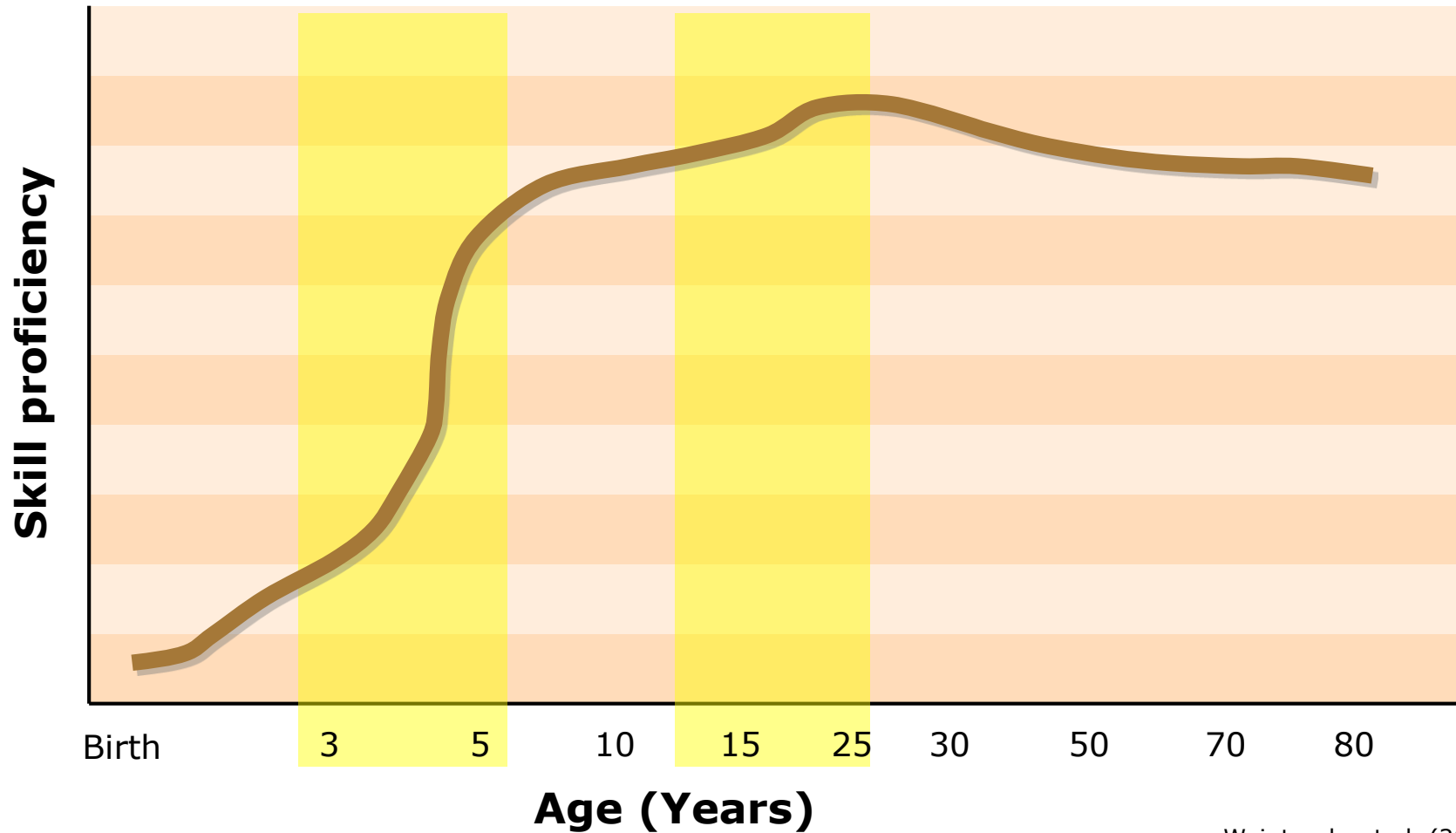


These core dimensions of adult competence include the ability to focus and sustain attention; set goals, make plans, and monitor actions; make decisions and solve problems; follow rules, control impulses, and defer gratification.

The Challenge: The Ability to Change Brains and Behavior Decreases Over Time

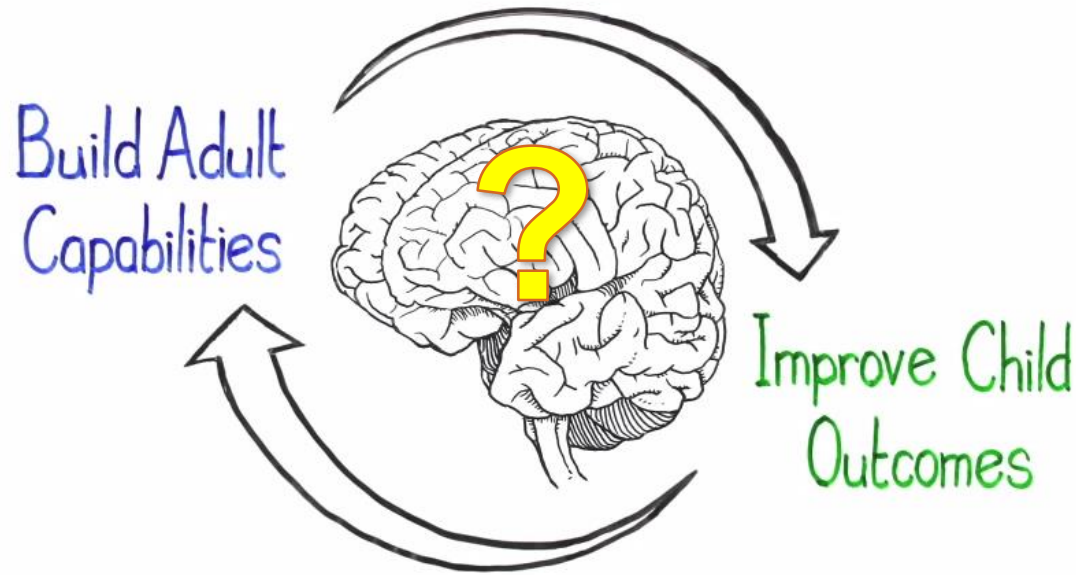


The Opportunity: The Development of Executive Function Skills Begins in Early Childhood and Extends into the Early Adult Years



Weintraub, et al. (2011)

Crafting a New Framework for Intergenerational Investment



If we really want to achieve breakthrough outcomes for children facing significant adversity, then we have to transform the lives of the adults who care for them.



Center on the Developing Child HARVARD UNIVERSITY

BROWSE BY TOPIC
Science of Early Childhood
Understanding Intervention
Innovation
Global Child Development
Foundations of Lifelong Health

ACTIVITIES RESOURCES FACULTY & PARTNERS NEWS & EVENTS ABOUT

RELATED CONTENT
Multimedia
Reports & Working Papers
Affiliated Faculty
Students, Education & Leadership Development

NEWSLETTER
Sign up for our mailing list
View archive of past newsletters

NEW VIDEO
InBrief: Executive Function: Skills for Life and Learning
Being an executive function control the arrivals and departures of dozens of planes on a traffic control mechanism is called executive function. This edition of the InBrief series explains what can disrupt their development, and how support them.

SPOTLIGHTS WEB & EVENTS PUBLICATIONS

WELCOME / LIBRARY / MULTIMEDIA / INBRIEF SERIES / INBRIEF: THE IMPACT OF EARLY ADVERSITY ON CHILDREN...

BROWSE BY TOPIC ABOUT FACULTY & PARTNERS INITIATIVES LIBRARY
Reports & Working Papers
Briefs
Multimedia
Articles & Books

CONTACT US

NEWSLETTER
Sign up for our mailing list
View archive of past newsletters

WELCOME / LIBRARY / REPORTS & WORKING PAPERS

BROWSE BY TOPIC ABOUT FACULTY & PARTNERS INITIATIVES LIBRARY
Reports & Working Papers
Briefs
Multimedia
Articles & Books

CONTACT US

RELATED CONTENT
Science of Early Childhood
Understanding Intervention

NEWSLETTER

MULTIMEDIA

InBrief: The Impact of Early Adversity on Children's Development

Toxic Stress Changes Brain Architecture

Normal
Typical neuron with many connections

Toxic Stress
Neuron damaged by toxic stress — fewer connections

This brief outlines basic concepts from the research on the biology of stress which show that major adversity can weaken developing brain architecture and permanently set the body's stress response system on high alert. Science also shows that providing stable, responsive environments for children in the earliest years of life can prevent or reverse these conditions, with lifelong consequences for learning, behavior, and health.

Download PDF >>
More from the InBrief series >>
Share this page >>

REPORTS & WORKING PAPERS

The Foundations of Lifelong Health Are Built in Early Childhood

A ground-breaking framework for using evidence to improve outcomes in learning, behavior, and health for vulnerable children, co-authored by the members of the *National Forum on Early Childhood Policy and Programs* and the *National Scientific Council on the Developing Child*. Combining knowledge from neuroscience, behavioral and developmental science, economics, and 40 years of early childhood program evaluation, the authors provide an informed, nonpartisan, pragmatic framework to guide policymakers toward science-based policies that improve the lives of young children and benefit society as a whole.

Download PDF >>
Summary of Essential Findings >>
Order printed copies >>
Press Release >>
NCSL PowerPoint Presentation, Aug. 7, 2007 (PDF) >>
Summary of report in NGA Center for Best Practices "Bright Futures" Newsletter >>
Share this page >>

SCIENCE OF EARLY CHILDHOOD

A growing body of scientific evidence shows that early influences—whether positive or negative—are critical to the development of children's brains and their lifelong health. [More >>](#)

National Scientific Council on the Developing Child

INNOVATION

The Center's mission is to leverage science to enhance child well-being through innovations in policy and practice and to translate advances in neuroscience, molecular biology, genomics, and the behavioral and social sciences into creative, new strategies for action. [More >>](#)

Frontiers of Innovation

www.developingchild.harvard.edu



@HarvardCenter