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

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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

Children with Developmental Delays

Number of Risk Factors

Source: Barth, et al. (2008)
Biological “Memories” Link Maltreatment in Childhood to Greater Risk of Adult Heart Disease

Source: Danese, et al. (2008)
Toxic StressDerails 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

Normal Brain Plasticity
Influenced by Experience

Physiological “Effort”
Required to Modify Neural Connections

Source: Levitt (2009)
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.