



Children and Poverty

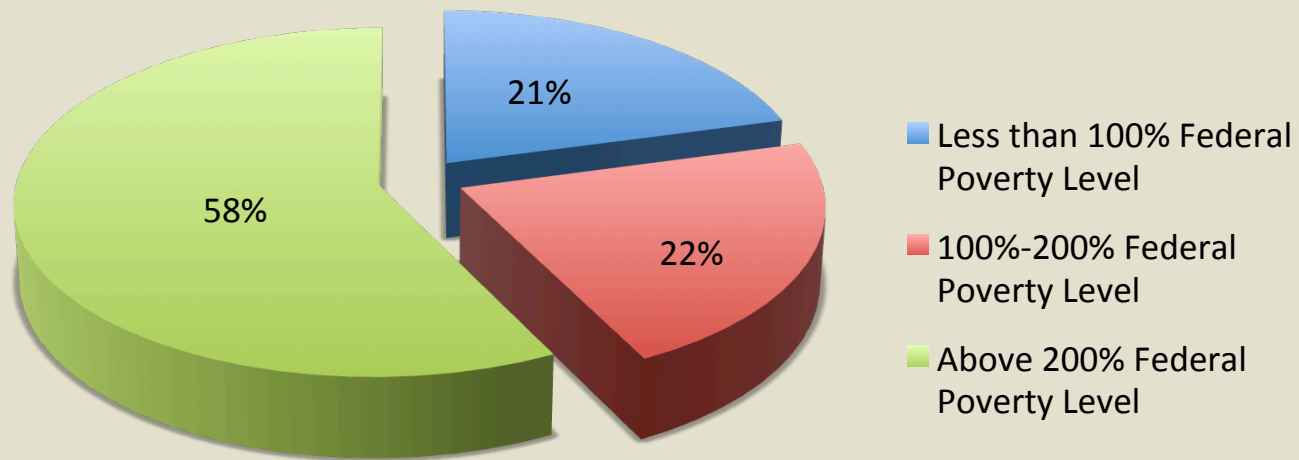
New Research and its Implications

UC DAVIS
CENTER FOR POVERTY RESEARCH

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THE SOCIAL AND EMOTIONAL
DEVELOPMENT LAB

Children by Family Income in the United States



Current Population Survey, 2010

There is special concern for **young children** in poverty because of its prevalence and long-term consequences . . .

- more than 40% of all births in the U.S. are Medicaid supported
- a child who is born in poverty is less likely to finish high school, more likely to be poor as a young adult, less likely to be working between the ages of 25 and 29, and more likely to report health problems compared with other children who are not in poverty
- the longer that children are poor during the early years, the worse are adult outcomes
- compared to children who experience poverty at later ages, young children living in poverty (prenatal to age 5) are likely to complete less school, work less as adults, earn less, and depend more on food stamps

Why can account for these consequences?

Consequences of Poverty for Children

Economic stresses

- housing instability
- lower school quality
- poor health care
- risky neighborhoods

Emotional stresses

- social isolation
- parental stress
- substance abuse risk
- legal problems

Family Stress

- marital difficulty
- maternal depression

Parenting Quality

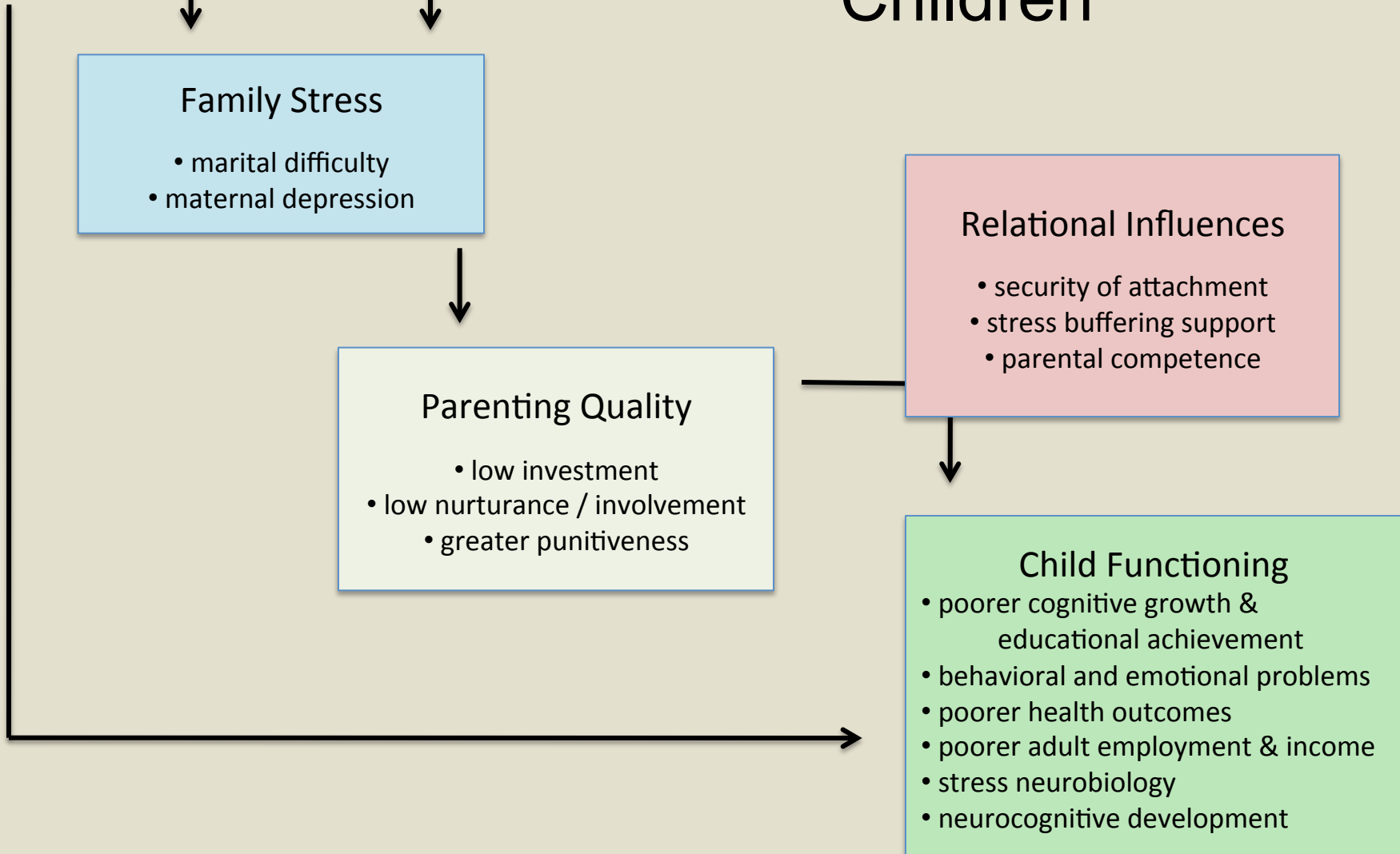
- low investment
- low nurturance / involvement
- greater punitiveness

Relational Influences

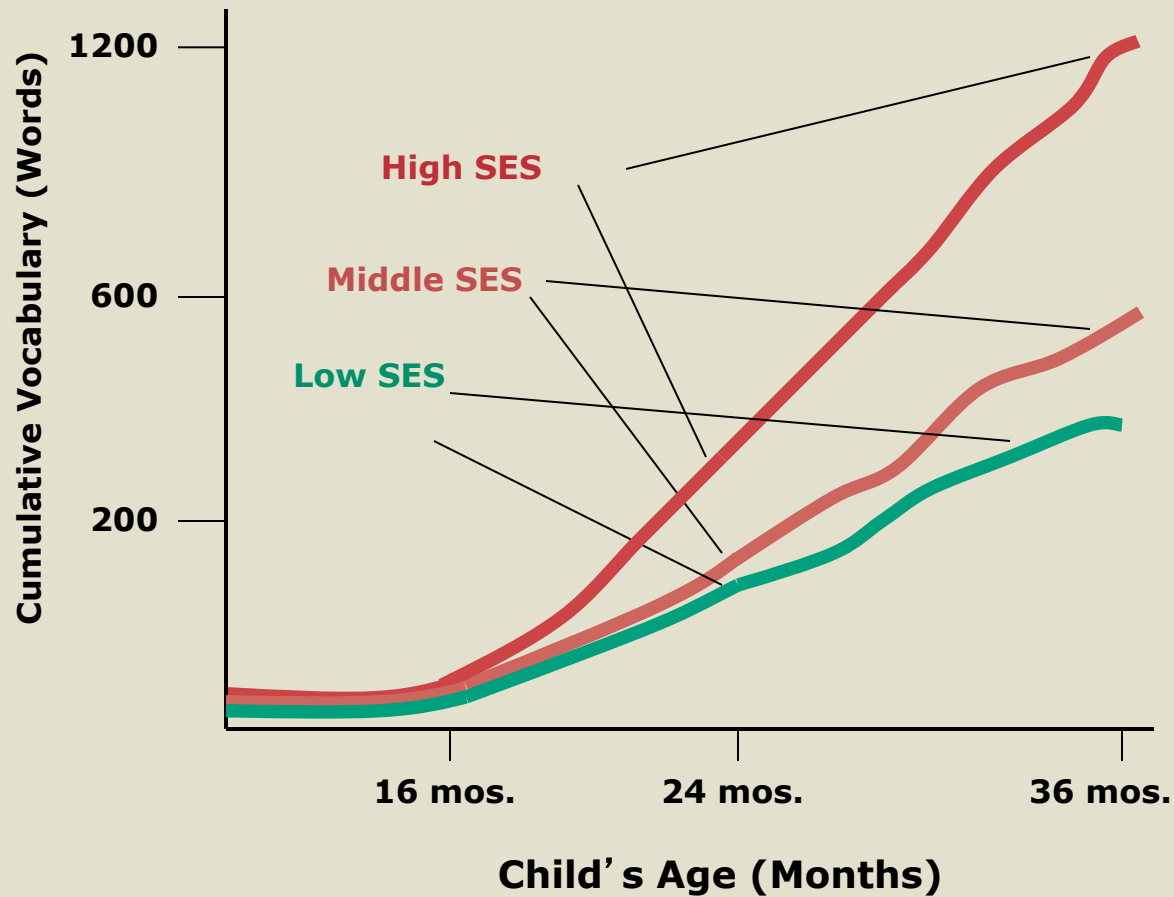
- security of attachment
- stress buffering support
- parental competence

Child Functioning

- poorer cognitive growth & educational achievement
- behavioral and emotional problems
- poorer health outcomes
- poorer adult employment & income
- stress neurobiology
- neurocognitive development

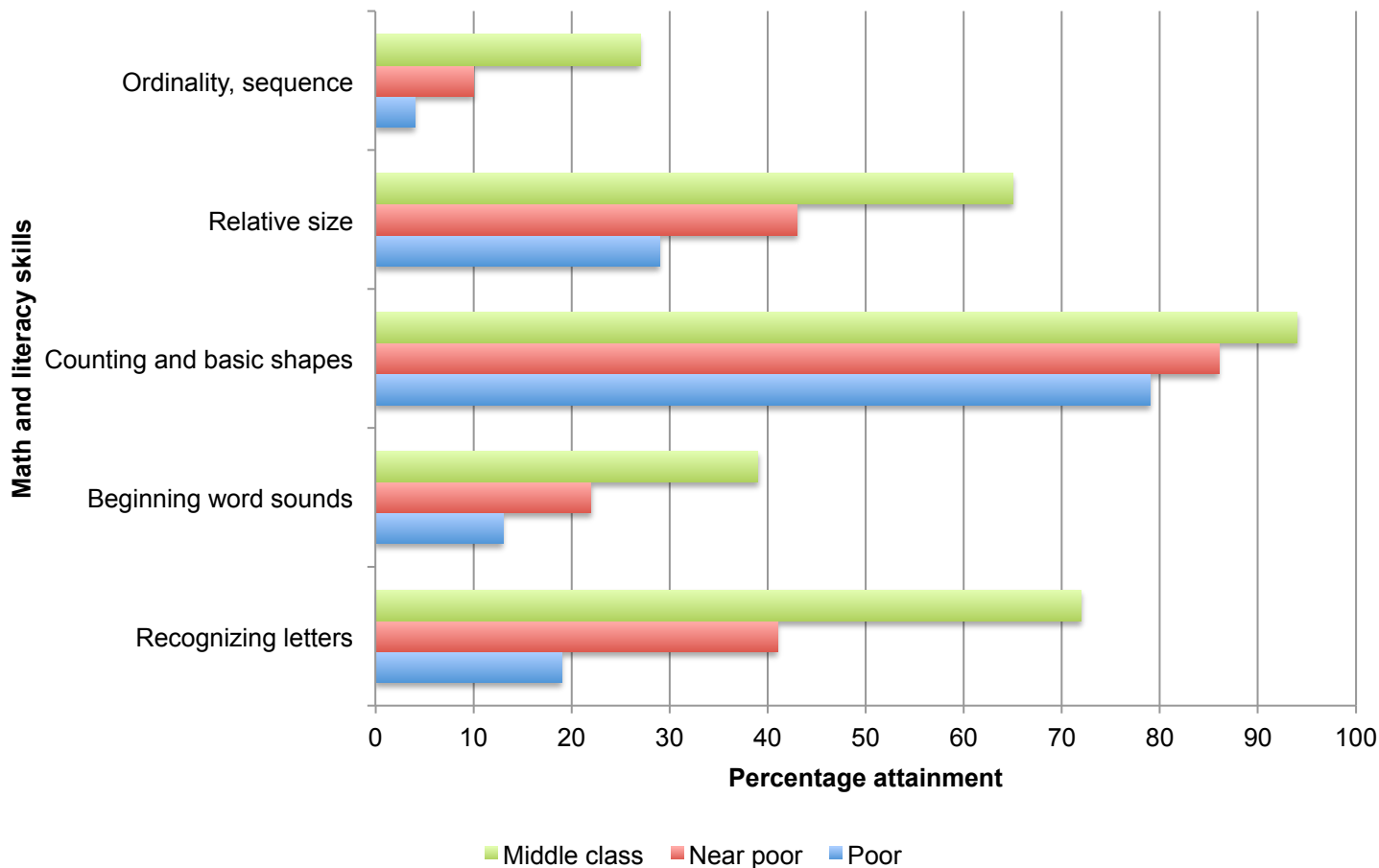


Early Impact on Cognitive and Learning Skills



Source: Hart & Risley (1995)

Rates of academic proficiencies in kindergarten for poor, near poor, and middle class children



Three Levels of Stress

Positive

Brief increases in heart rate,
mild elevations in stress hormone levels.

Tolerable

Serious, temporary stress responses,
buffered by supportive relationships.

Toxic

Prolonged activation of stress response systems
in the absence of protective relationships.



POLICY STATEMENT

Early Childhood Adversity, Toxic Stress, and the Role of the Pediatrician: Translating Developmental Science Into Lifelong Health

abstract

FREE

Advances in a wide range of biological, behavioral, and social sciences are expanding our understanding of how early environmental influences (the ecology) and genetic predispositions (the biologic program) affect learning capacities, adaptive behaviors, lifelong physical and mental health, and adult productivity. A supporting technical report from the American Academy of Pediatrics (AAP) presents an integrated ecobiodevelopmental framework to assist in translating these dramatic advances in developmental science into improved health across the life span. Pediatricians are now armed with new information about the adverse effects of toxic stress on brain development, as well as a deeper understanding of the early life origins of many adult diseases. As trusted authorities in child health and development, pediatric providers must now complement the early identification of developmental concerns with a greater focus on those interventions and community investments that reduce external threats to healthy brain growth. To this end, AAP endorses a developing leadership role for the entire pediatric community—one that mobilizes the scientific expertise of both basic and clinical researchers, the family-centered care of the pediatric medical home, and the public influence of AAP and its state chapters—to catalyze fundamental change in early childhood policy and services. AAP is committed to leveraging science to inform the development of innovative strategies to reduce the precipitants of toxic stress in young children and to mitigate their negative effects on the course of development and health across the life span. *Pediatrics* 2012;129:e224–e231

COMMITTEE ON PSYCHOSOCIAL ASPECTS OF CHILD AND FAMILY HEALTH, COMMITTEE ON EARLY CHILDHOOD, ADOPTION, AND DEPENDENT CARE, AND SECTION ON DEVELOPMENTAL AND BEHAVIORAL PEDIATRICS

KEY WORDS

advocacy, brain development, ecobiodevelopmental framework, family pediatrics, health promotion, human capital investments, new morbidity, toxic stress, resilience

ABBREVIATIONS

AAP—American Academy of Pediatrics
EBD—ecobiodevelopmental

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Mother's depressive symptoms
2 ½ years

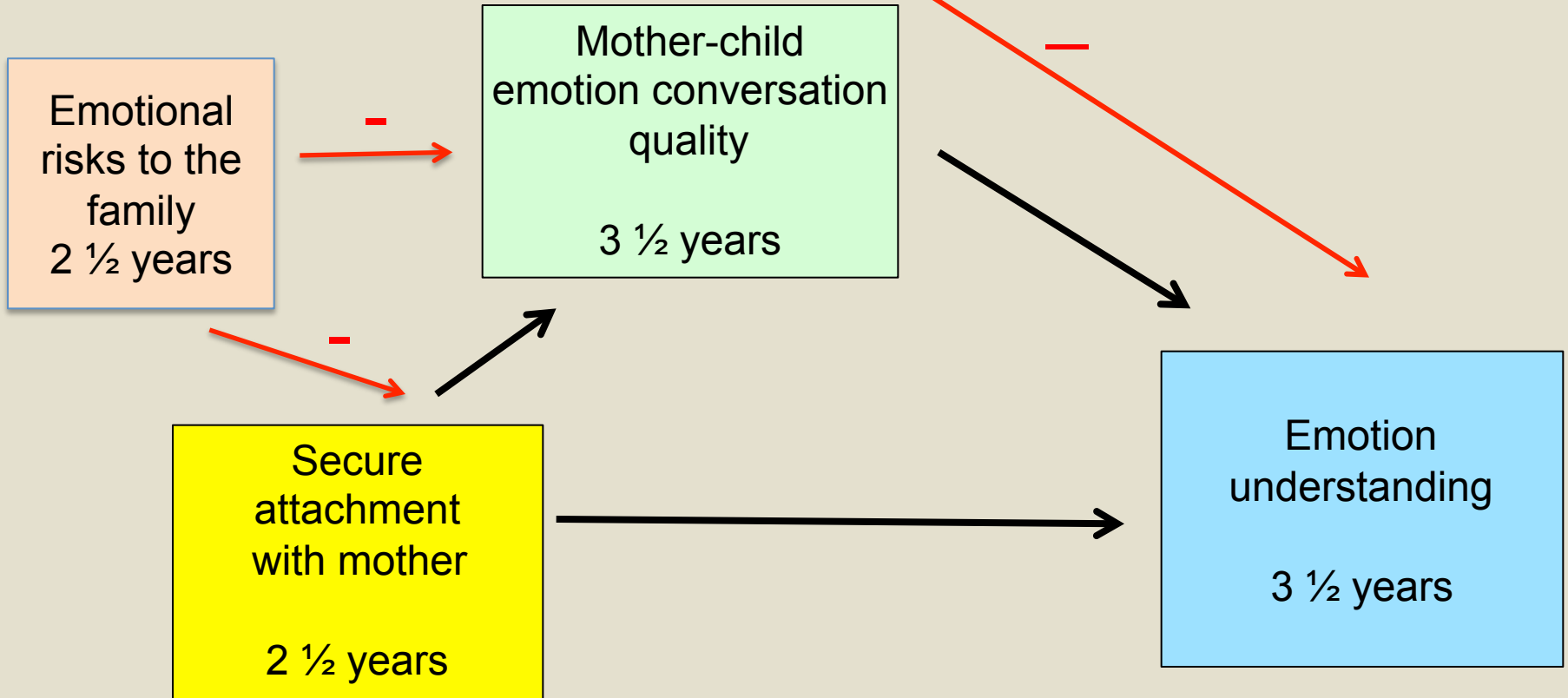
Emotional risks to the family
2 ½ years

Mother-child emotion conversation quality
3 ½ years

Secure attachment with mother
2 ½ years

Social-emotional correlates of child poverty

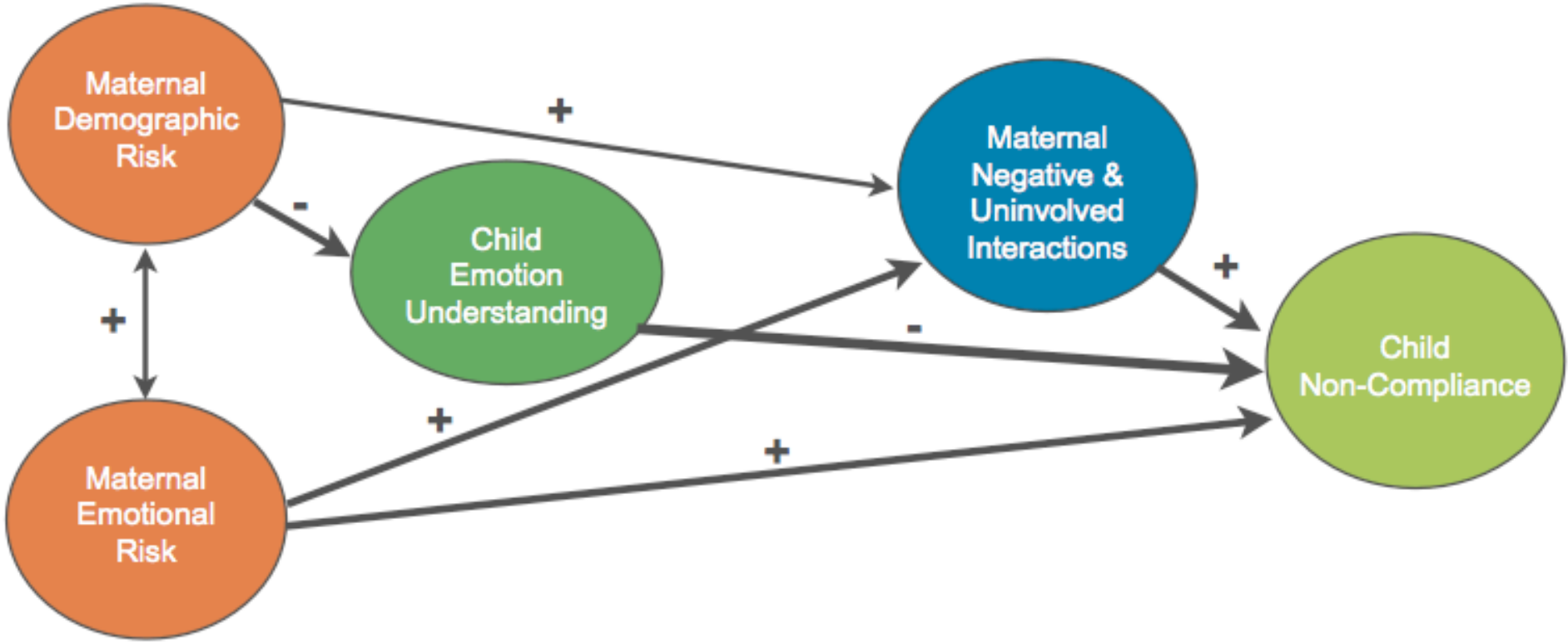
Emotion understanding
3 ½ years



From Raikes, H. A., & Thompson, R. A. (2006). Family emotional climate, attachment security, and young children's emotion understanding in a high-risk sample. *British Journal of Developmental Psychology*, 24(1), 89-104, and Raikes, H. A., & Thompson, R. A. (2008). Conversations about emotion in high-risk dyads. *Attachment & Human Development*, 10(4), 359-377.

Preschool

School-Entry





POVERTY & THE LONG TERM EFFECTS OF EARLY LIFE EXPERIENCES

Friday, May 31– Saturday, June 1, 2013
Memorial Union II, UC Davis

The Long Term Impact of Welfare: Evidence from the Mother's Pension Program, 1913-1930, *Anna Aizer, Brown University*

Stress, Poverty, & Self-Regulation: Evidence for the Experiential Canalization of Development, *Clancy Blair, New York University*

Prenatal Programming of Child Health & Development, *Elysia Davis, University of Denver*

Early Life Stress Sets the Stage: Socioemotional & Neurobiological Pathways to Health Problems from Childhood through Adolescence, *Marilyn Essex, University of Wisconsin-Madison*

The Effect of Poor Neonatal Health on Cognitive Development: Evidence from a Large New Population of Twins, *Jonathan Guryan, Northwestern University*

School Quality & the Long-Run Effects of Head Start, *Rucker Johnson, University of California, Berkeley*

Early Life Stress & Epigenetic Development, *Erin Kinnally, University of California, Davis*

Do the Effects of Early Childhood Education Programs Differ by Gender: A Meta-Analysis, *Katherine Magnuson, University of Wisconsin-Madison*

A New Generation of Two-Generation Programs for Children in Poverty, *Hiro Yoshikawa, Harvard University*

Discussants:

Jay Belsky, University of California, Davis
Hilary Hoynes, University of California, Davis
Ariel Kalil, University of Chicago

For more information & to RSVP, visit:
poverty.ucdavis.edu

CENTER FOR
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UNIVERSITY OF CALIFORNIA, DAVIS

Killing Me Softly: The Fetal Origins Hypothesis

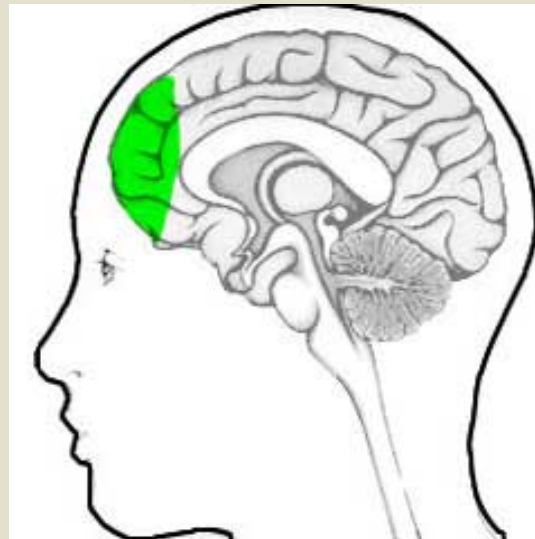
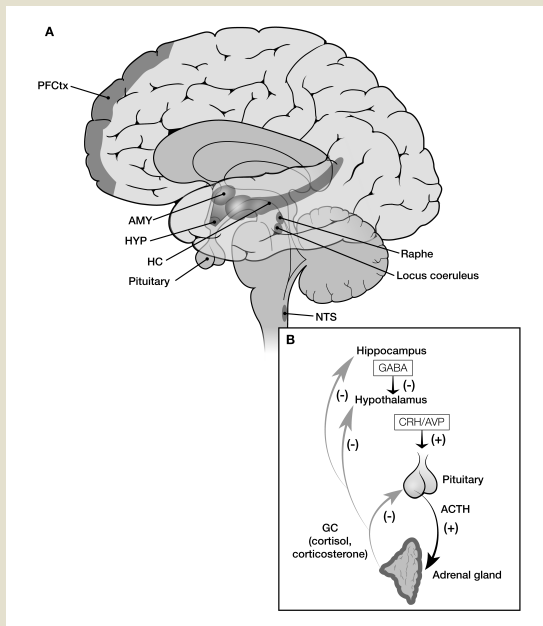
Douglas Almond and Janet Currie

In the late 1950s, epidemiologists believed that a fetus was a “perfect parasite” that was “afforded protection from nutritional damage that might be inflicted on the mother” (Susser and Stein, 1994). The placenta was regarded as a “perfect filter, protecting the fetus from harmful substances in the mother’s body and letting through helpful ones” (Landro, 2010). Nonchalance existed with regard to prenatal nutrition. During the 1950s and 1960s, women were strongly advised against gaining too much weight during pregnancy (Paul, 2010). During the baby boom, “pregnant women were told it was fine to light up a cigarette and knock back a few drinks” (Landro, 2010). Roughly half of U.S. mothers reported smoking in pregnancy in 1960 (Aizer, Stroud, and Buka, 2009).

But what if the nine months *in utero* are one of the most critical periods in

Neurobiological correlates of child poverty

- infants and young children experiencing chronic stress develop altered systems of **stress neurobiology** (L-HPA axis) that can make them hyperreactive to cues of threat and less capable of adaptive coping



- children age 7-12 from families with income ~150% FPL score lower on measures of **prefrontal functioning**, especially with respect to working memory, visual attention, and language, compared to children from middle-income homes

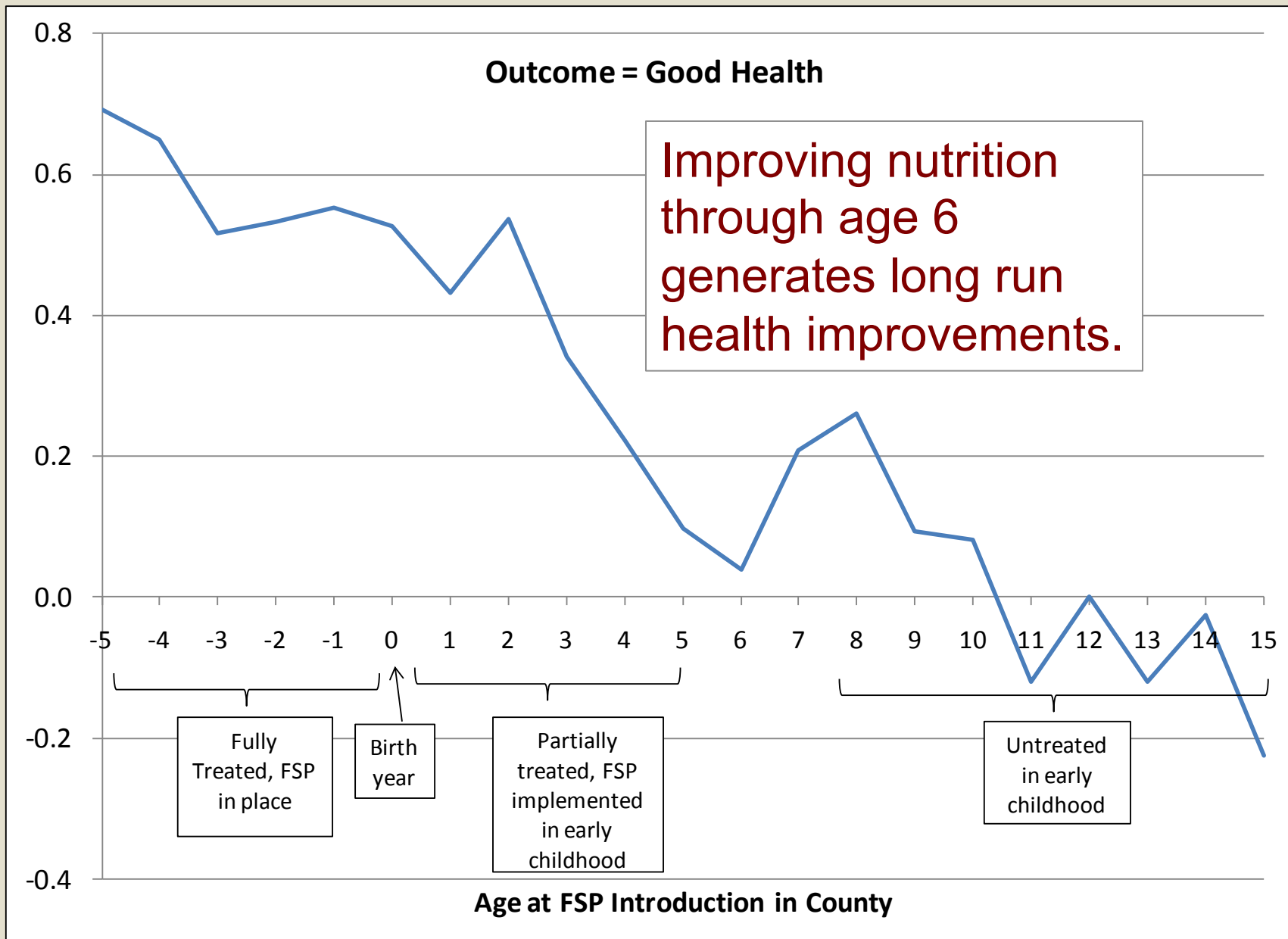
Other biological consequences . . .

- stress hormones affect **cortical systems** (including the prefrontal cortex) and **limbic systems** (including the hippocampus and hypothalamus) that are associated with self-regulation, emotion, memory, and cognitive functioning
- chronic stress contributes to **immune suppression**: it increases the sensitivity of the immune system to infectious challenges, increases cytokine response, and embeds “proinflammatory tendencies” into biological functioning
- children in poverty also encounter the biological challenges of poor nutrition and exposure to environmental toxins that can contribute to **chronic health problems** (e.g., asthma)
- ***allostatic load*** – the progressive “wear and tear” on biological systems attributable to the long-term effects of chronic stress
- new evidence for the causal association of chronic stress and **epigenetic changes in gene expression**

Health correlates of child poverty

- children growing up poor are likely to have worse health outcomes and poorer life expectancy
- the US safety net for families in poverty has changed significantly:
 - less assistance through traditional cash welfare
 - more assistance through in-kind support (Medicaid; SCHIP; food stamps) and taxes (Earned Income Tax Credit)
- in 2011, almost 1 in 7 people in the US received food stamps
 - food stamps raise 5.2 million people out of poverty
 - pregnant women with access to food stamps have healthier babies
 - children whose families received food stamps early in life have better adult health outcomes

Adult health outcomes by age when food stamp program (FSP) was first available to the family



the policy context . . .

- evidence-based intervention studies together with experimental welfare reform evaluations provide a significantly **improved understanding of what strategies work** to help children in poverty and their families
- developmental research on **early brain plasticity** provides a scientific justification for focusing on effective early interventions for children at risk
- animal and human research on the **social buffering of early stress reactivity** provides a justification for two-generation interventions to assist at-risk children in poverty
- poverty is absent from the **current political debate**, even though the economy is not absent from this debate
- developmental research shows how **children's growth is cumulative and “cascading”**, underscoring the biological and economic costs of failing to intervene early

Thanks !

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for the future . . .

- To what extent are the biological consequences associated with "fetal programming" reversible?
- Families frequently shift in and out of poverty. Does chronic poverty warrant greatest concern for child outcomes, or do shifts in family income have unique consequences for children?
- Are there buffers and sources of resilience in the face of the "developmental cascade" of developmental challenges owing to family poverty?

Understanding child poverty and its intergenerational consequences requires interdisciplinary collaboration

Human Ecology

Rand Conger
Kathi Conger

Developmental psychology

Paul Hastings
Ross Thompson

Economics

Ann Stevens
Marianne Page
Hillary Hoynes
Colin Cameron
Douglas Miller

Education

Paul Heckman
Michal Kurlander
Heather Rose

Sociology

Erin Hamilton
Ming-Cheng Lo
Kim Shauman

Developmental Neuroscience

Amanda Guyer
Simona Ghetti

Law & Public Policy

Kevin Johnson
Lisa Pruitt

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