


How Early Childhood Development Can Inform P-12 Education

Tamara Halle
Research Scientist
Child Trends





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Tamara Halle, Nicole Forry,
Elizabeth Hair & Kate Perper
Child Trends

In collaboration with
Tom Schultz
Council of Chief State School Officers

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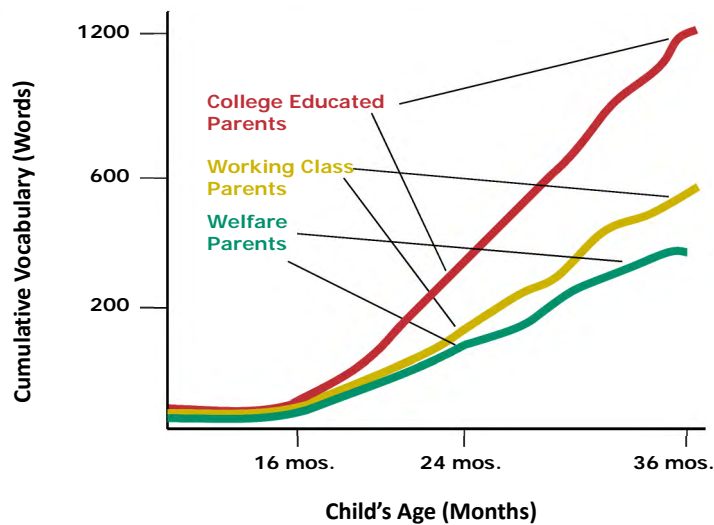


Background

- Dramatic changes in development occur between the ages of 0 and 5.
- Research shows that targeted supports for at-risk children can help them thrive.
- Public investments for at-risk children 0-5 should be evidence-based.
- To date, most research has looked at disparities at kindergarten entry and beyond.

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Disparities in Early Vocabulary Growth



Source: Hart & Risley (1995)

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Research Questions

- Are there disparities for cognitive development, general health, and social-emotional development at 9 and 24 months based on:
 - **Family income**
 - **Race/ethnicity**
 - **Home language**
 - **Maternal educational attainment**
- If disparities exist, what is the magnitude of the developmental gap?
- What proportion of infants and toddlers have multiple risk factors, taking into consideration low family income, racial/ethnic minority status, non-English home language, and low maternal education?
- What effect does cumulative risk have on cognitive, health, and socio-emotional outcomes?

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Overview of the Study

- Nationally-representative sample of approximately 11,000 children born in 2001
 - Data collected at 9 months, 24 months, 48 months, and in Kindergarten
- Current analyses focus on 9 and 24 months
 - Analyses of the 9-month sample were limited to children aged 8-11 months (N = 7,400)
 - Analyses of the 24-month sample were limited to children aged 22-25 months (N = 7,200)
- Analyzed widely used measures of cognitive development, general health, and social-emotional development

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Key Findings

- Disparities in child outcomes are evident at 9 months and grow larger by 24 months of age.
- These disparities exist across cognitive, social, behavioral and health outcomes.
- The most consistent and prominent risk factors are low income and low maternal education.
- The more risk factors a child has, the wider the disparities.

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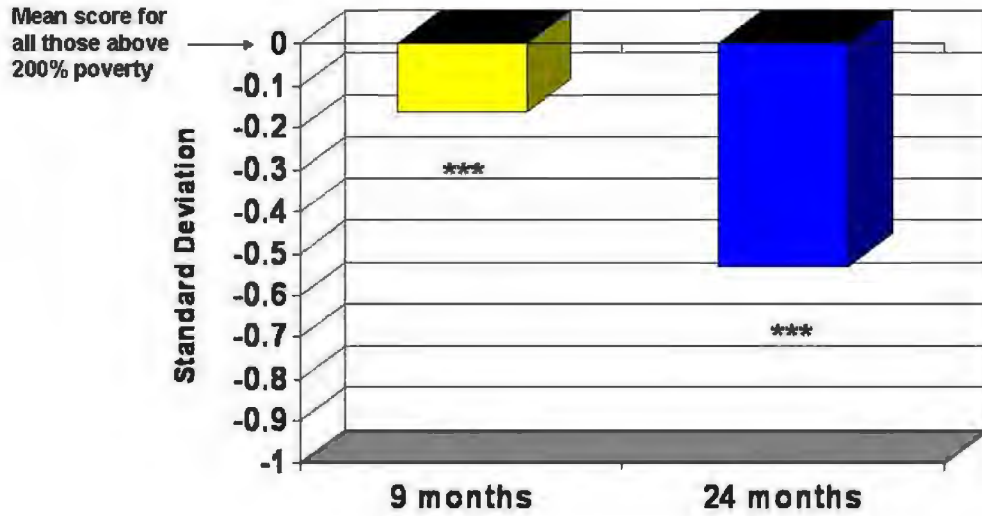
Disparities by Family Income

- Infants and toddlers from low-income families¹ ...
 - Score lower on cognitive assessment than infants and toddlers from higher-income families at 9 and 24 months (Figure 1).
 - Are less likely than children in higher-income families to be in excellent or very good health at both 9 and 24 months.
 - Are less likely to receive positive behavior ratings at 9 and 24 months than children from higher-income families (Figure 2).

¹ Low-income families are those whose income is at or below 200% of the poverty threshold.

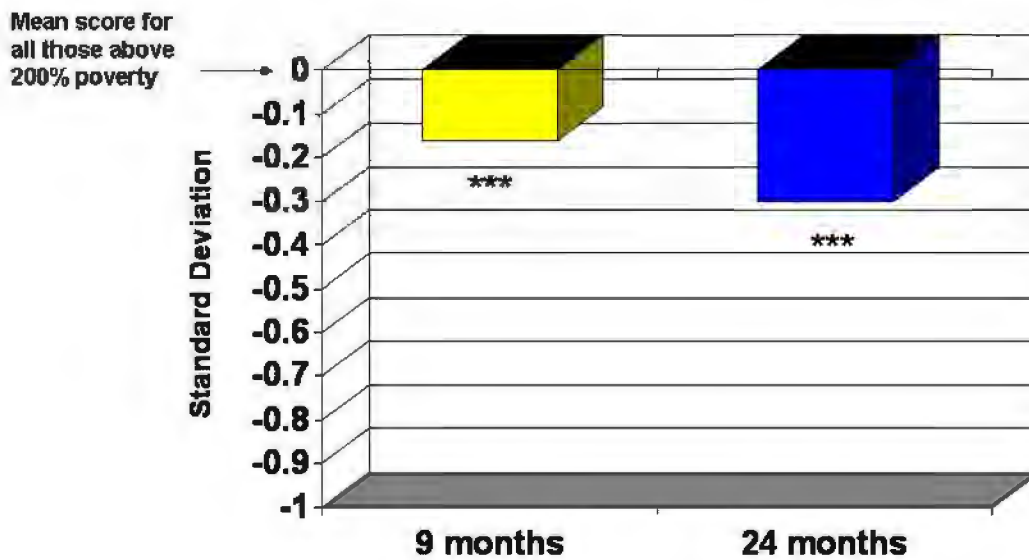
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Figure 1: Disparities on the Bayley Cognitive Assessment between Higher- and Lower-income Infants at 9 and 24 Months



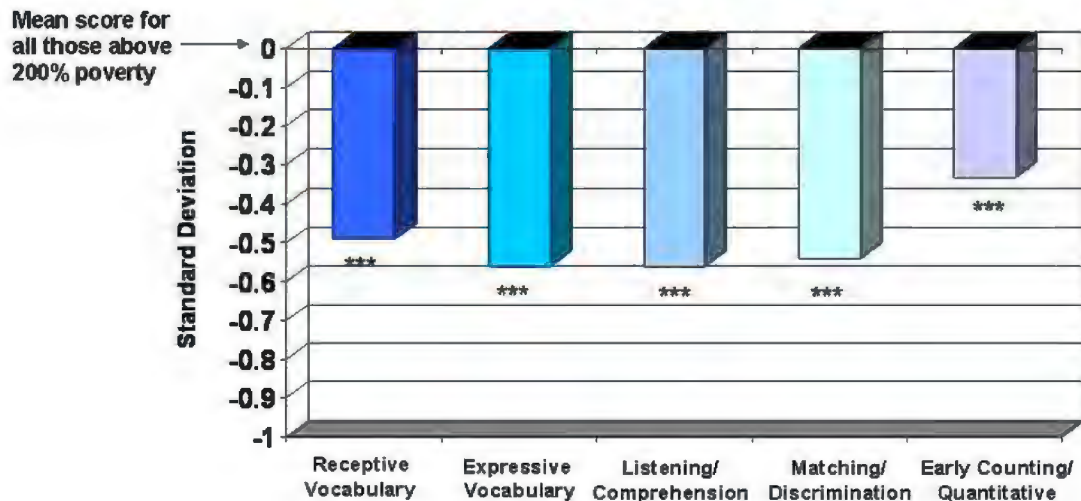
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Figure 2: Disparities on the Positive Behavior Index Scores between Higher- and Lower-Income Infants at 9 and 24 Months



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Figure 3: Disparities in Mastery of Language and Cognitive Skills between Higher- and Lower-Income Toddlers at 24 Months



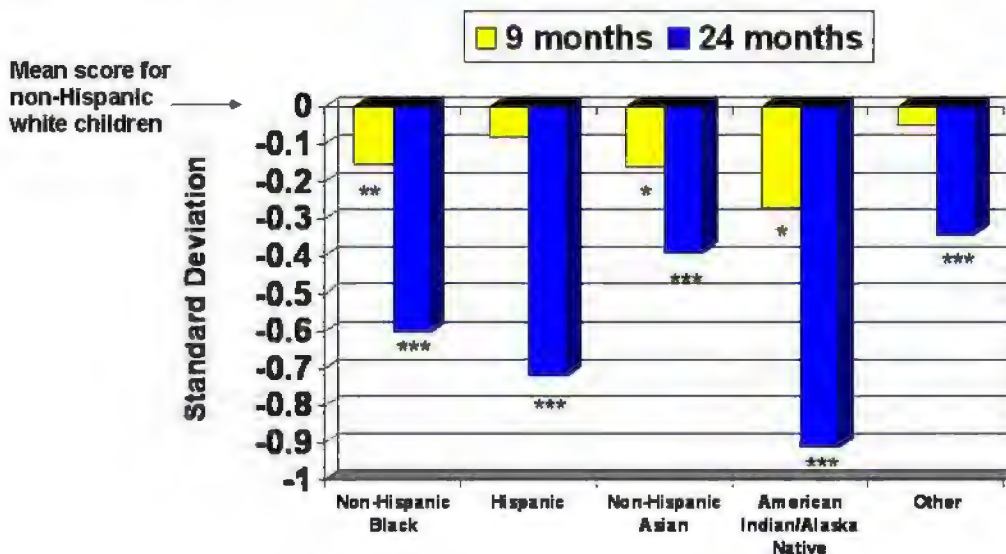
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Disparities by Race/Ethnicity

- Though the effects are small to moderate among 9-month-olds, white infants score higher on measures of cognitive development than non-Hispanic black, Asian, and American Indian/Alaskan Native infants at 9 months
- Disparities by race/ethnicity are more pronounced among 24-month-olds, with toddlers from racial/ethnic minority backgrounds scoring lower than their white peers on the cognitive assessment

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Figure 4: Disparities on the Bayley Cognitive Assessment at 9 and 24 Months by Race/Ethnicity



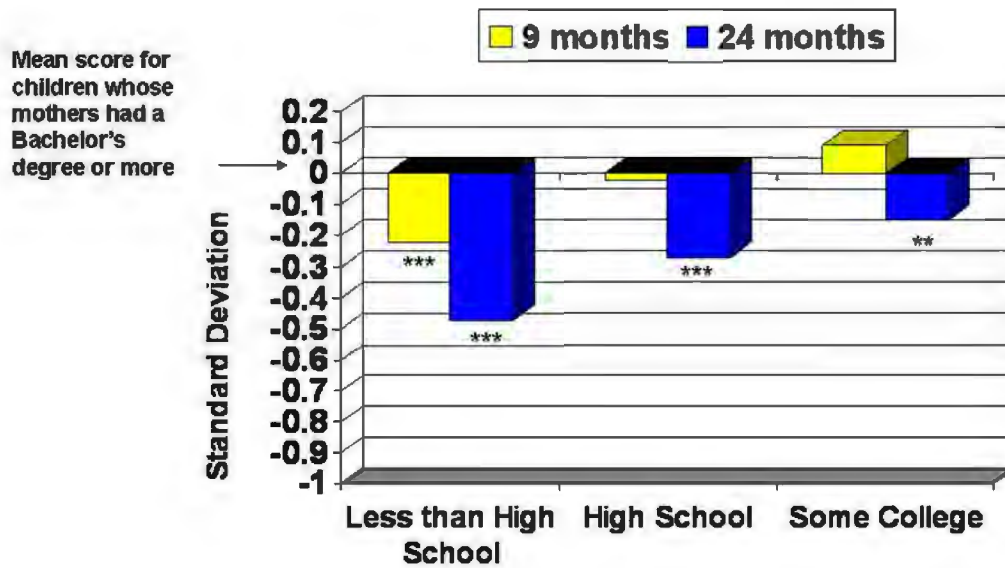
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Disparities by Maternal Education

- Infants and toddlers whose mothers have less than a high school degree:
 - **Score lower on the cognitive assessment than infants and toddlers whose mothers have a Bachelor's degree or higher**
 - **Score lower on the positive behavior index than infants whose mothers have a Bachelor's degree or higher. This disparity becomes more pronounced at 24 months**
 - **Are less likely to be in excellent or very good health compared to infants and toddlers whose mothers have a Bachelor's degree or higher**
- **Toddlers whose mothers have a Bachelor's degree or higher are more likely to have a secure attachment to their primary caregiver compared to toddlers whose mothers have less education**

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Figure 5. Disparities in Positive Behavior Index Scores at 9 and 24 Months, by Mother's Education



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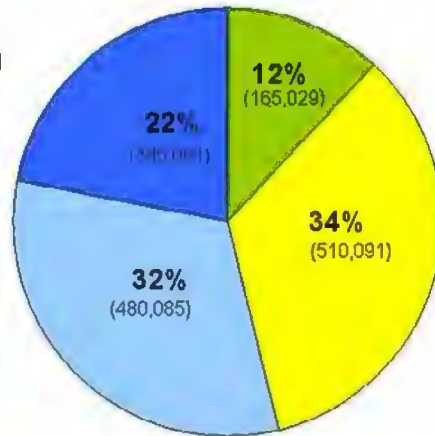
Multiple Risk Factors

- The most prominent risk factors are low-income and low maternal education at both 9 and 24 months
- The more risk factors a child has, the more profound the disparities

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Figure 6. Percentage of Infants Living At or Below 200% Poverty with Cumulative Risk Factors

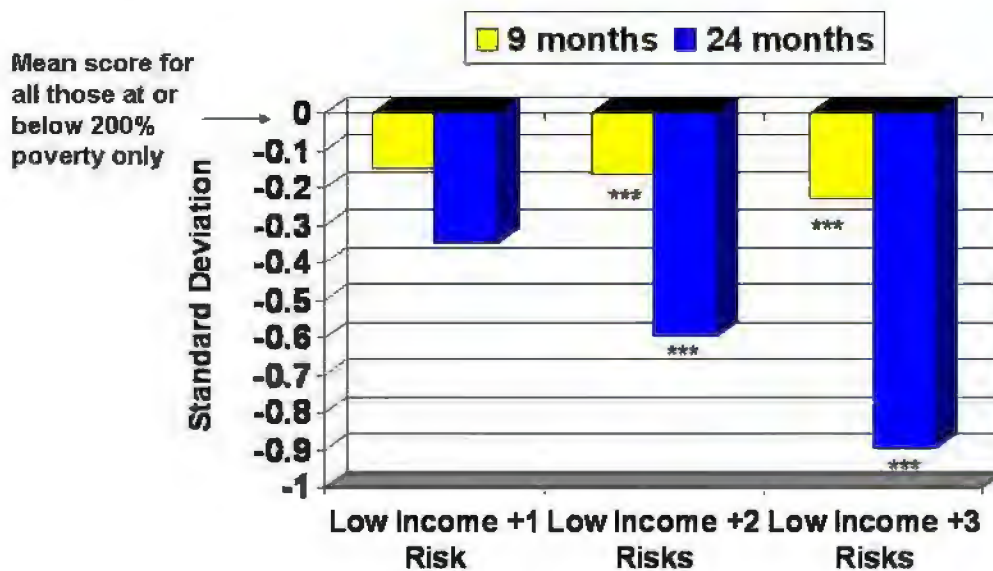
This represents 51% of 8-11 month olds in the ECLS-B analytic sample Weighted Population Estimate is 1,500,267



(Population estimates are in parentheses above.)

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Figure 7. Disparities on the Bayley Cognitive Assessment Among Those At or Below 200% Poverty at 9 and 24 Months, by Cumulative Risk



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Key Findings

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Implications

Start Early

- Interventions should be high-quality, comprehensive and continuous for children ages 0 to 3 as well as ages 3 to 5.

Target Low-income Children

- As income is the most prevalent risk factor at 9 and 24 months, children in low-income households should be the main targets of early interventions aimed at improving children's health and well-being.

Promising Approaches:

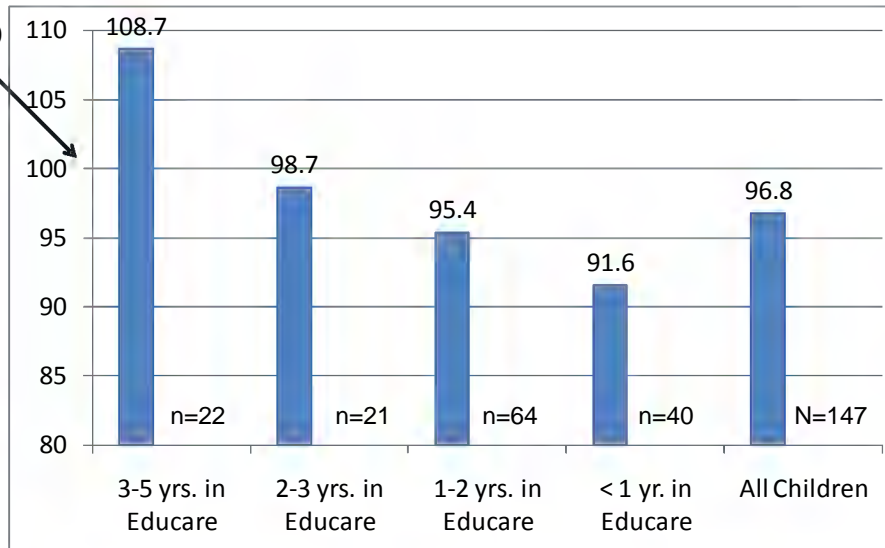
- Early Head Start/Head Start
- Educare

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Children who spend more years in Educare emerge better prepared for kindergarten

National Average Score = 100

2008 School Readiness Score (Bracken Basic Concepts Scale)



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Implications (cont'd)

Engage and Support Parents

- Promotion of parent education is suggested, especially around issues of early childhood development for parents of infants and toddlers. Interventions that support parents in their own educational attainment and/or income self-sufficiency are also pertinent.

Improve the Quality of Early Care Settings

- Research indicates that:
 - most infants and toddlers, especially those who are from low-income households, are cared for in home-based settings.
 - high-quality early care and education has the potential to moderate the effects of demographic risk factors for young children.

Promising Approaches:

- Curriculum development and professional development within both home-based and center-based settings that serve infants and toddlers.
 - Quality Rating Systems such as Indiana's Paths to QUALITY
- Indiana Family Impact Seminars – November 2009

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Indiana's Paths to QUALITY

- A set of quality standards that apply to home-based and center-based child care
- A process of objectively assessing child care quality and maintaining accountability
- A system of training and technical assistance to help child care providers improve quality
- Incentives to encourage providers to reach higher levels of quality
- Public information to inform parents about what PTQ is and how to use it when they make child care decisions

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This presentation is based on a research brief by researchers at Child Trends for Thomas Schultz, Council of Chief State School Officers. Please contact Tamara Halle for more information.

thalle@childtrends.org



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