



Supporting Educational Equity and Workforce Development: The Abecedarian Approach

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Jackson, MS

A foundational premise is that

...the health, education, and well-being of children forecast the future of communities, countries, and cultures:

economically

socially

ethically

Major thesis

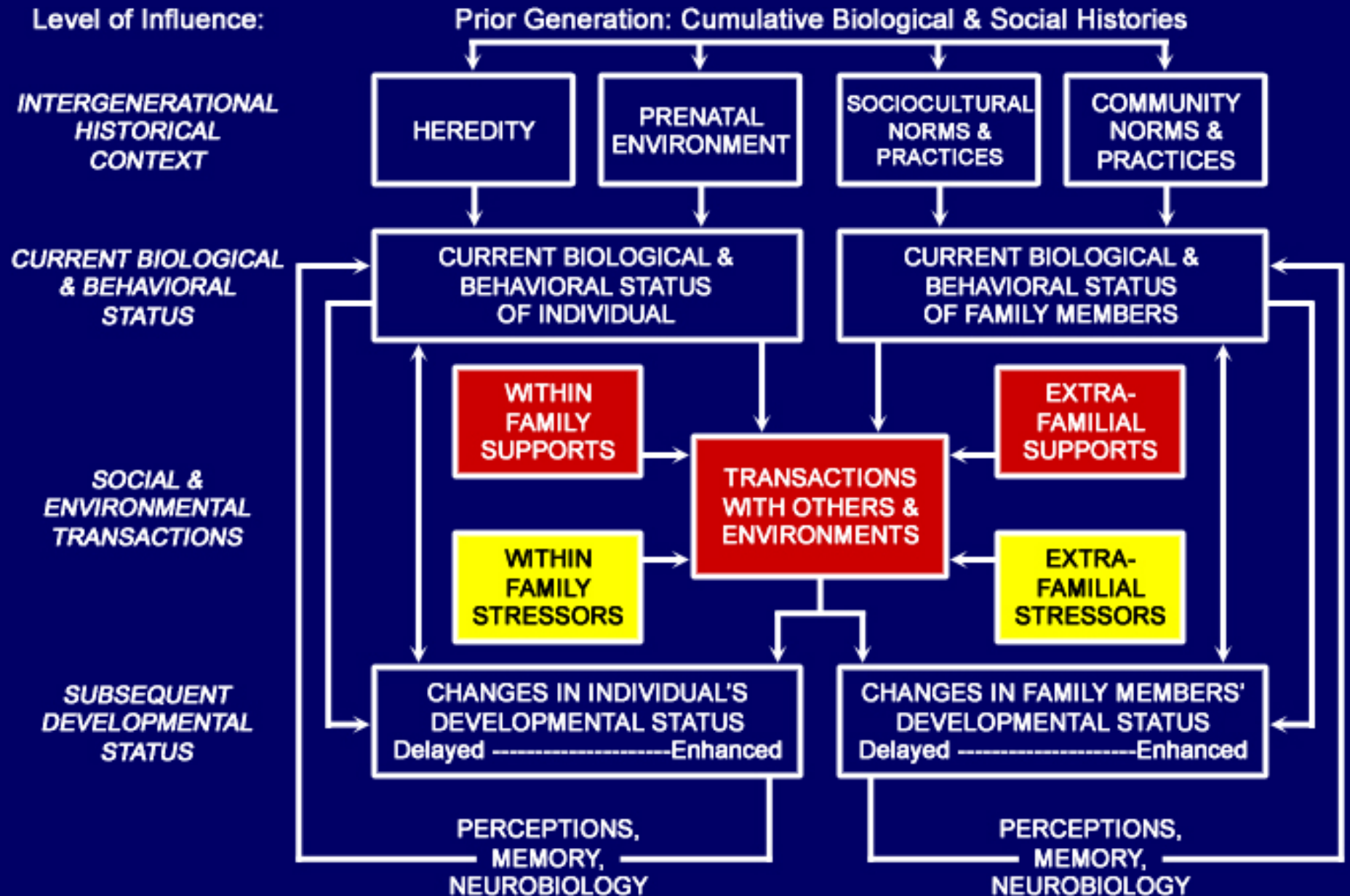
Children thrive to the extent that their families and society understand, value, and provide effective and timely supports for their health, education and, later, productive employment.

Biological and social risk factors are not randomly distributed in the U.S. population. Children from low SES families are at highly elevated risk for poor health, educational, and workforce outcomes

Our RCTs that support our thesis (what children need to thrive) include:

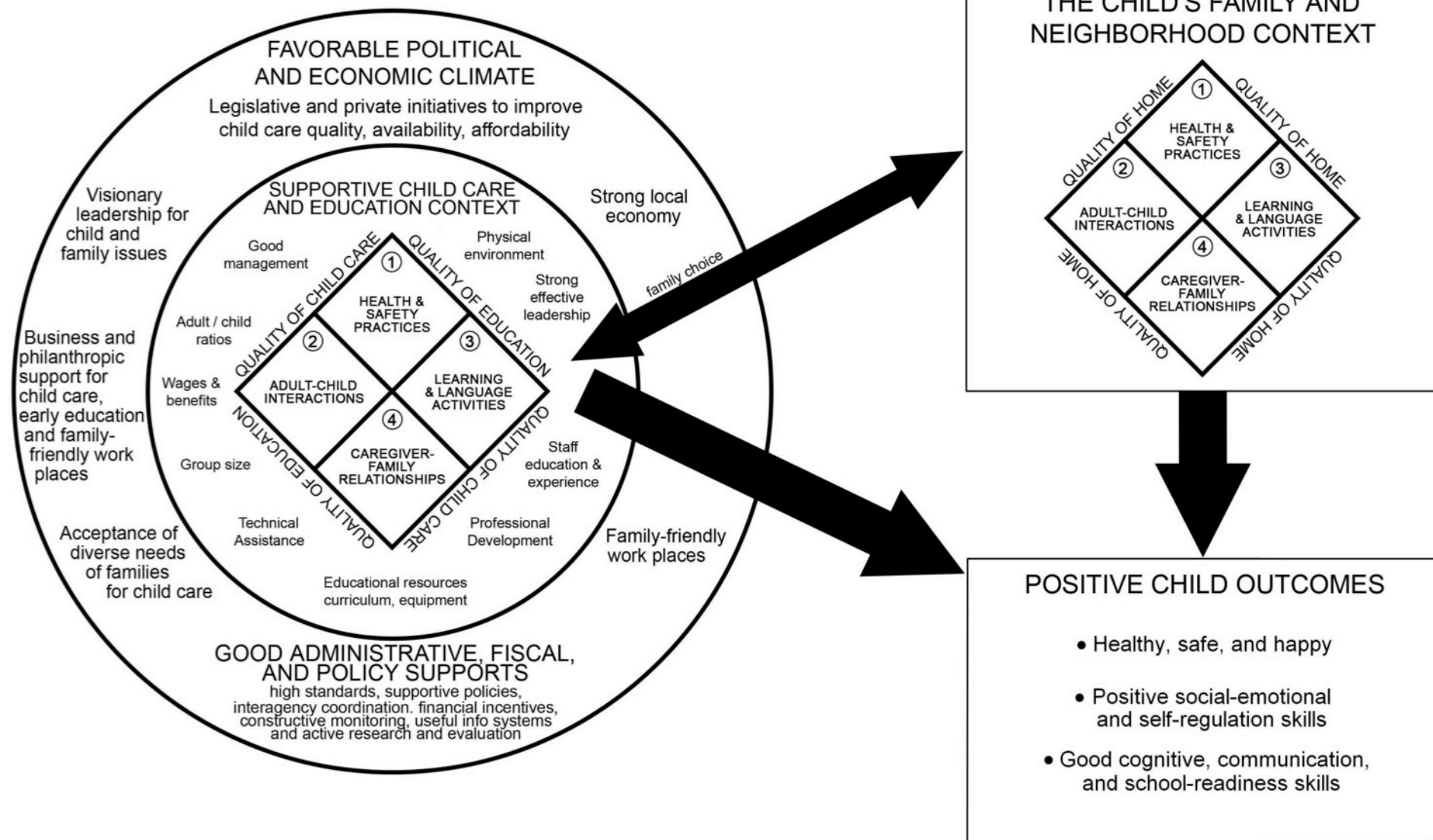
1. The Abecedarian Project (1971 - 2017) N=111
2. Project CARE (1977 - 2016) N=83
3. Infant Health and Development Program (8 sites) (1985 - 2006) N=985
4. Head Start Transition to School Study (31 sites) (1991 - 1998) N=8700
5. Romanian Orphanages (1991 - 1996) N=102
6. State pre-K scale-up (2001 - 2016) N=98,379
7. Intensive therapies (CP) (2001 – 2017) N=105+

Responsive Transactions are Central to Children's Biological and Behavioral Development



adapted from Ramey & Ramey, *American Psychologist*, 1998

The “big picture” for understanding how to promote children's well-being



What Constitutes Increased Learning Opportunities

- A safe and secure environment
- Timely and high-quality healthcare
- A wide variety of everyday successful learning experiences
- Opportunities that are delightfully challenging and individually paced
- Positive interactions with adults and peers that emphasize good conversational and coping skills

The Abecedarian Project (ABC)

Treatment Group

- Prenatal & birth visits
- Good stable nutrition
- Family social services
- Free primary health care
- Child development assessed
- **The Abecedarian Approach to Early Childhood Education:**
 - *Enriched Caregiving*
 - *Individualized, Comprehensive Curriculum*
 - *Language Priority*
 - *Conversational Reading*

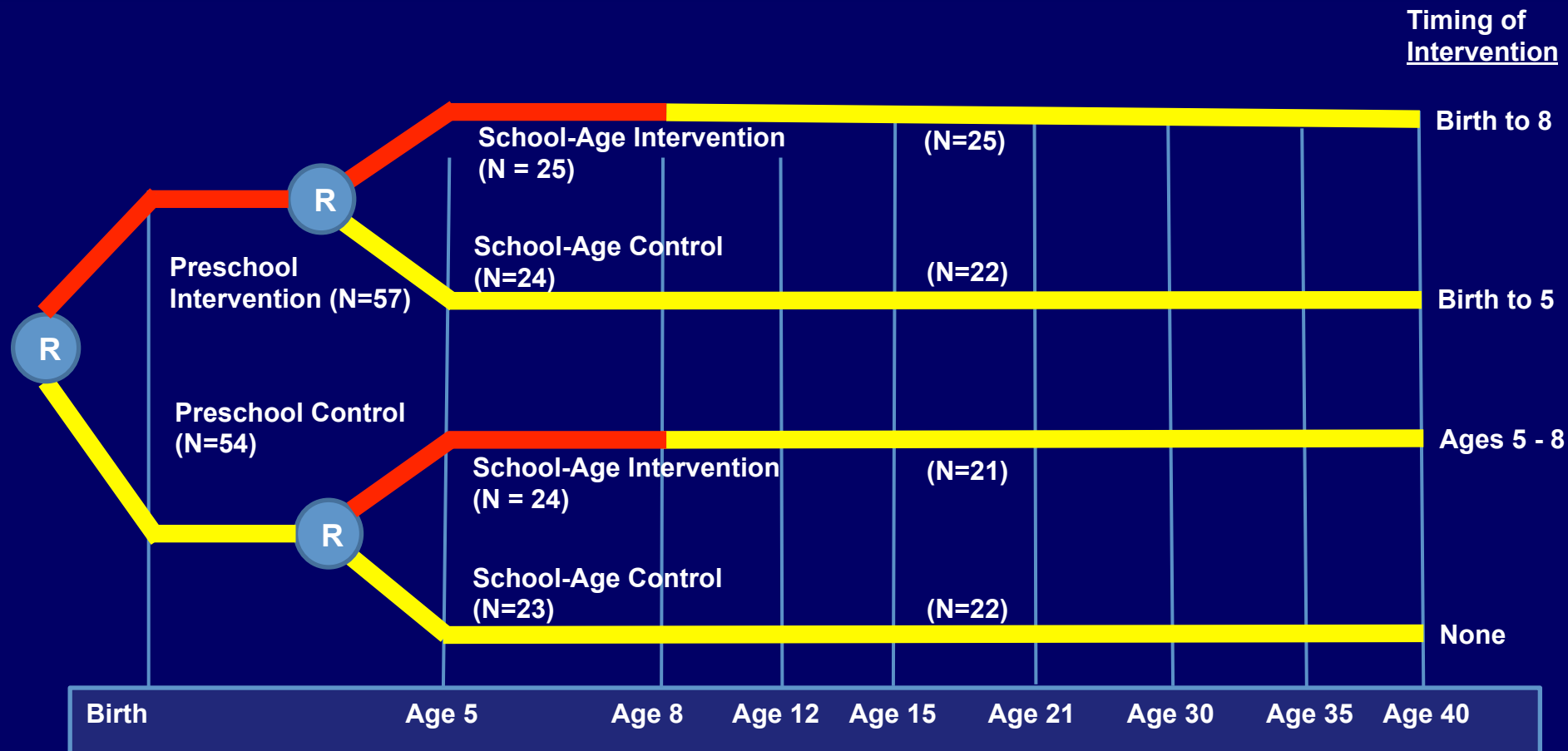
Control Group

- Prenatal and birth visits
- Good stable nutrition
- Family social services
- Free or low-cost health care
- Child development assessed

Characteristics of Abecedarian and Control Group Families at Intake

	Abecedarian	Controls
	N=57	N=54
Mean Maternal IQ	85.4	84.5
Mean Maternal Age at Birth	19.6	20.3
Mean Maternal Education	10.5	10.2
% Below Poverty	100%	100%
% Black	94%	100%
% Female Headed Families	83%	75%

The Abecedarian Project: Two-Phase Randomized Controlled Trial (RCT)

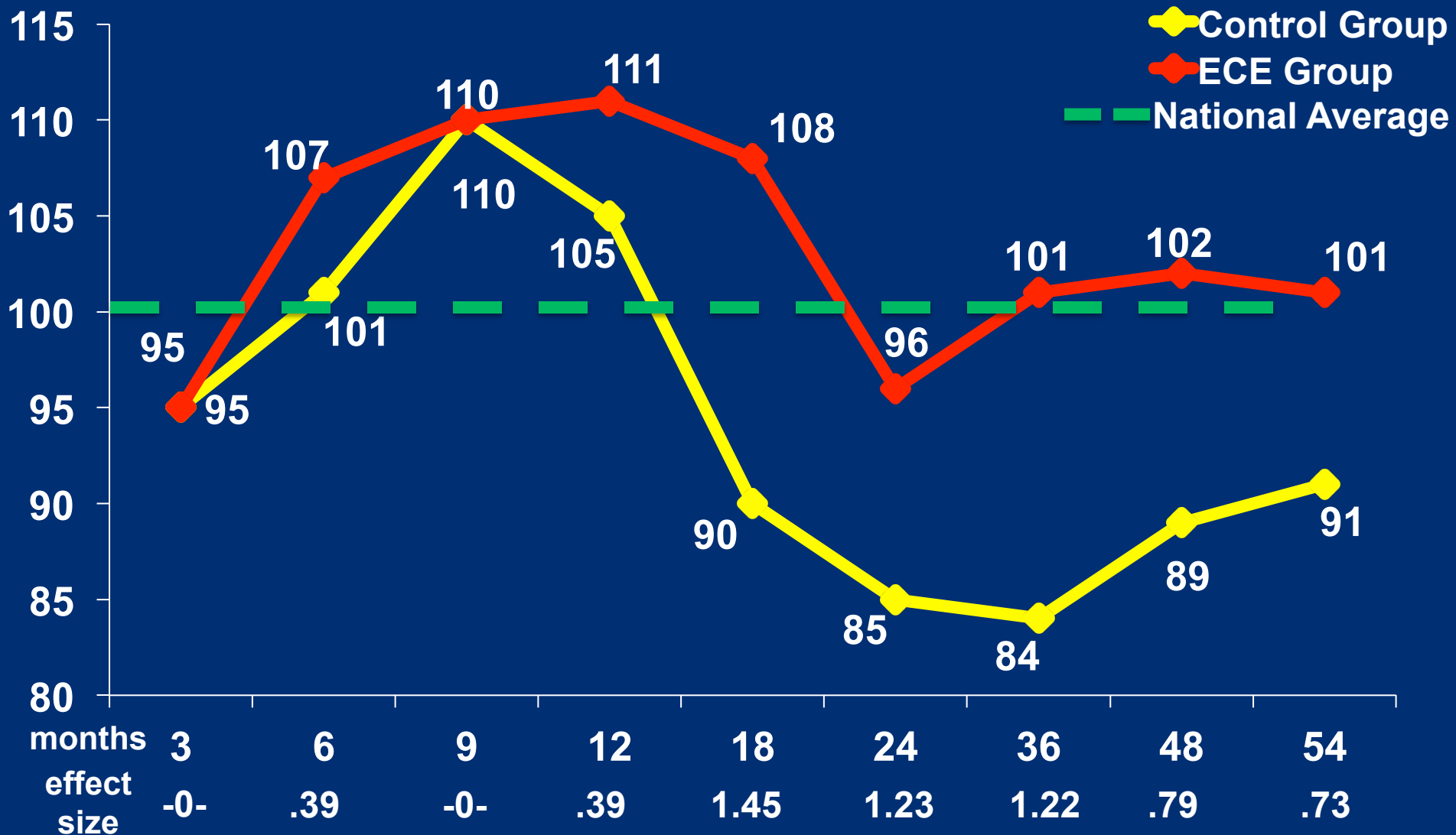


R = RANDOMIZATION

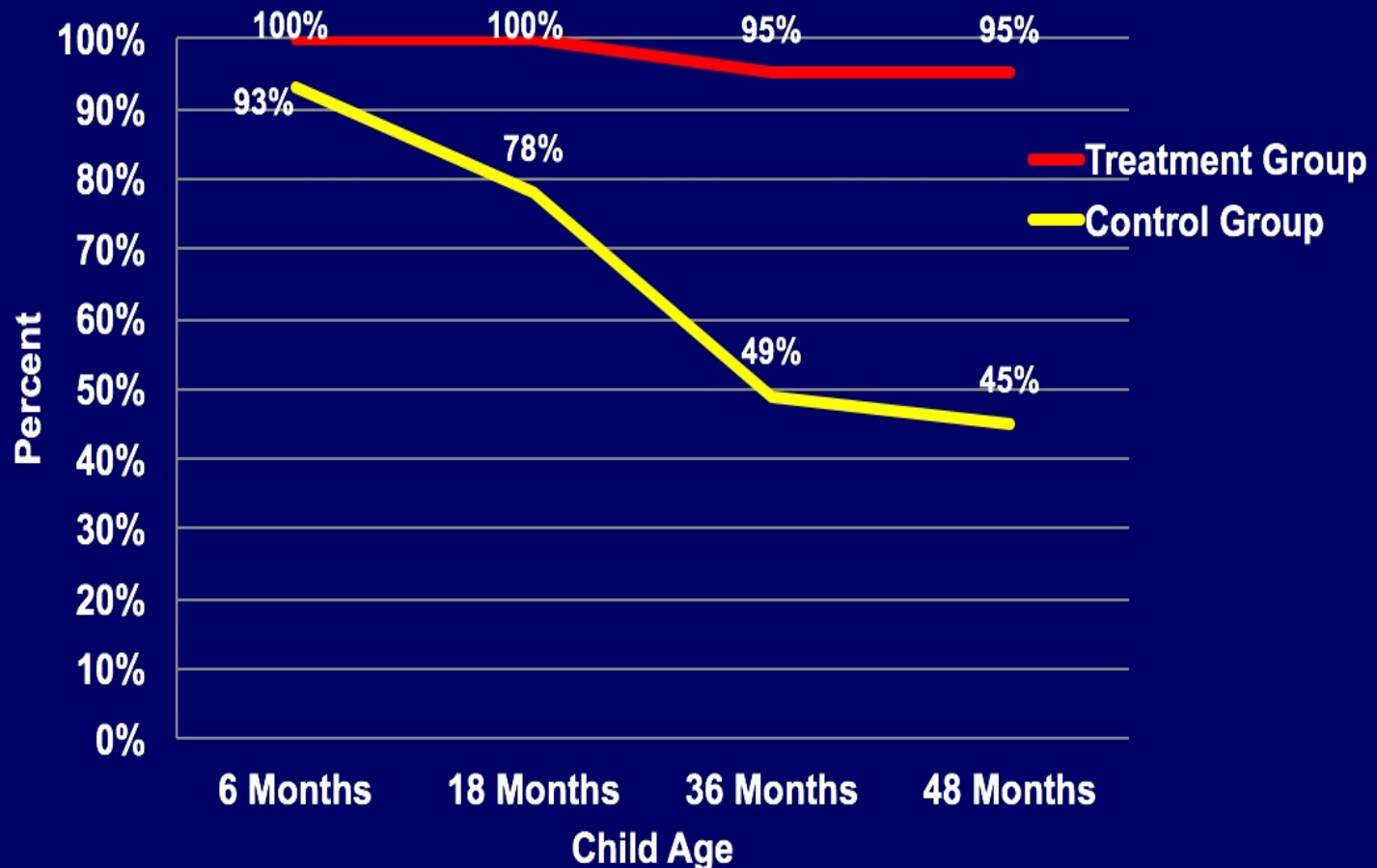
Our Main Insights into Human Development from our R & D

- Socially vulnerable children are positively responsive to increased learning opportunities

Cognitive Scores (3-54 months) for Abecedarian Treatment Groups

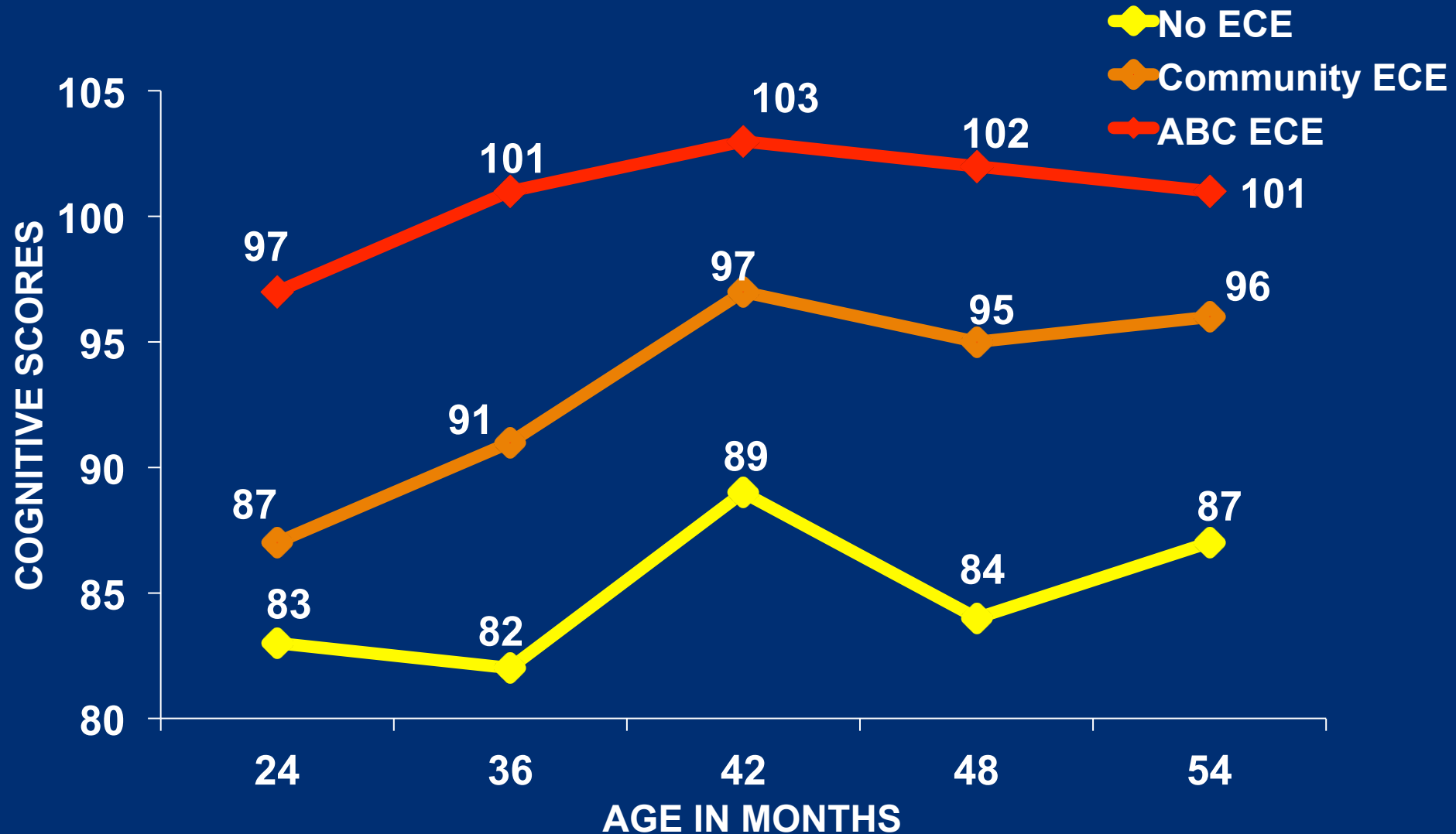


Percent of Abecedarian Sample in Normal IQ Range (>84) by Age 4



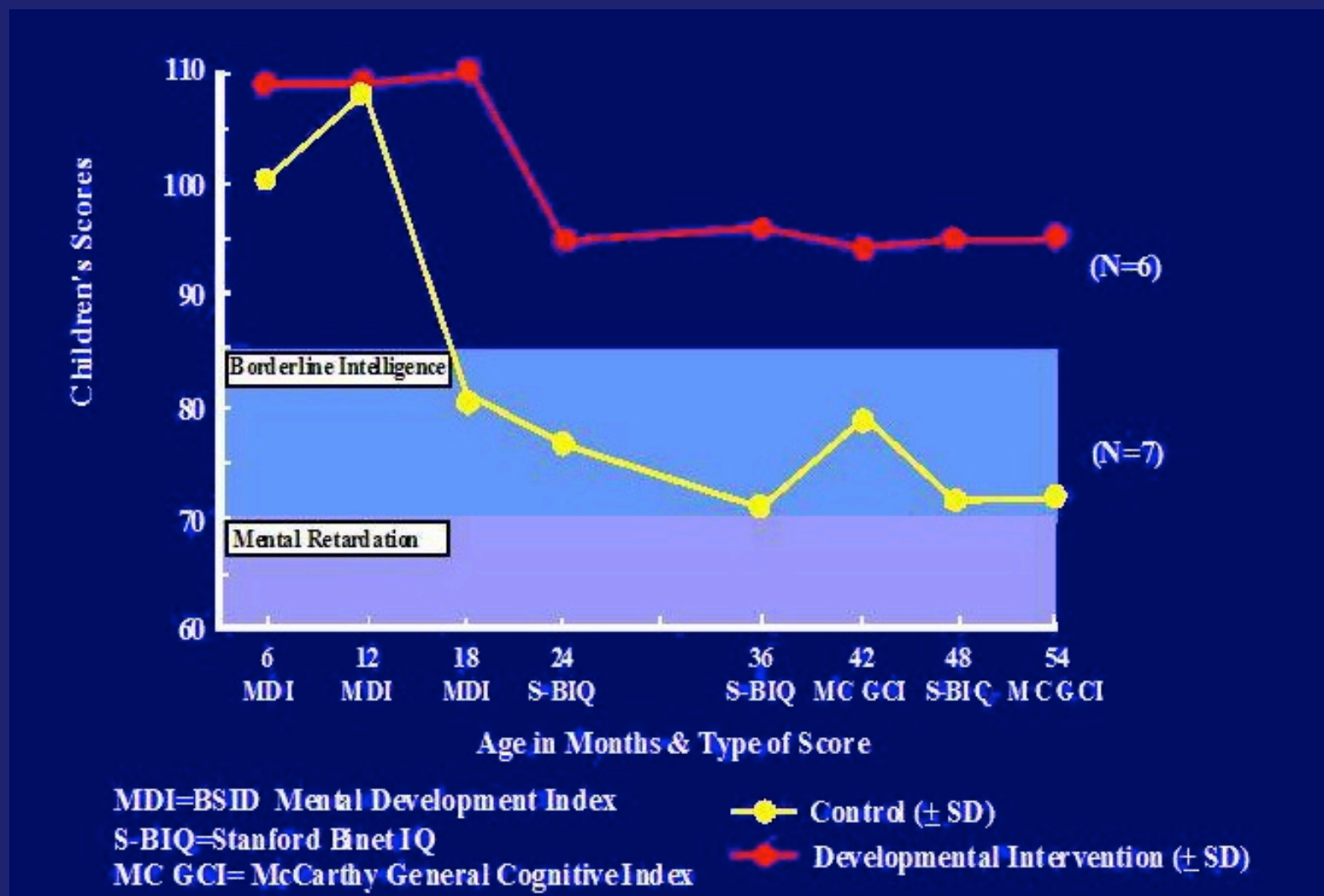
- The timing of exposure to Early Childhood Education needs more systematic attention

Pre-Kindergarten Education Exposure and Cognitive Development



- The more vulnerable the children the more they benefit from intensive high-quality programs – measured in a variety of ways

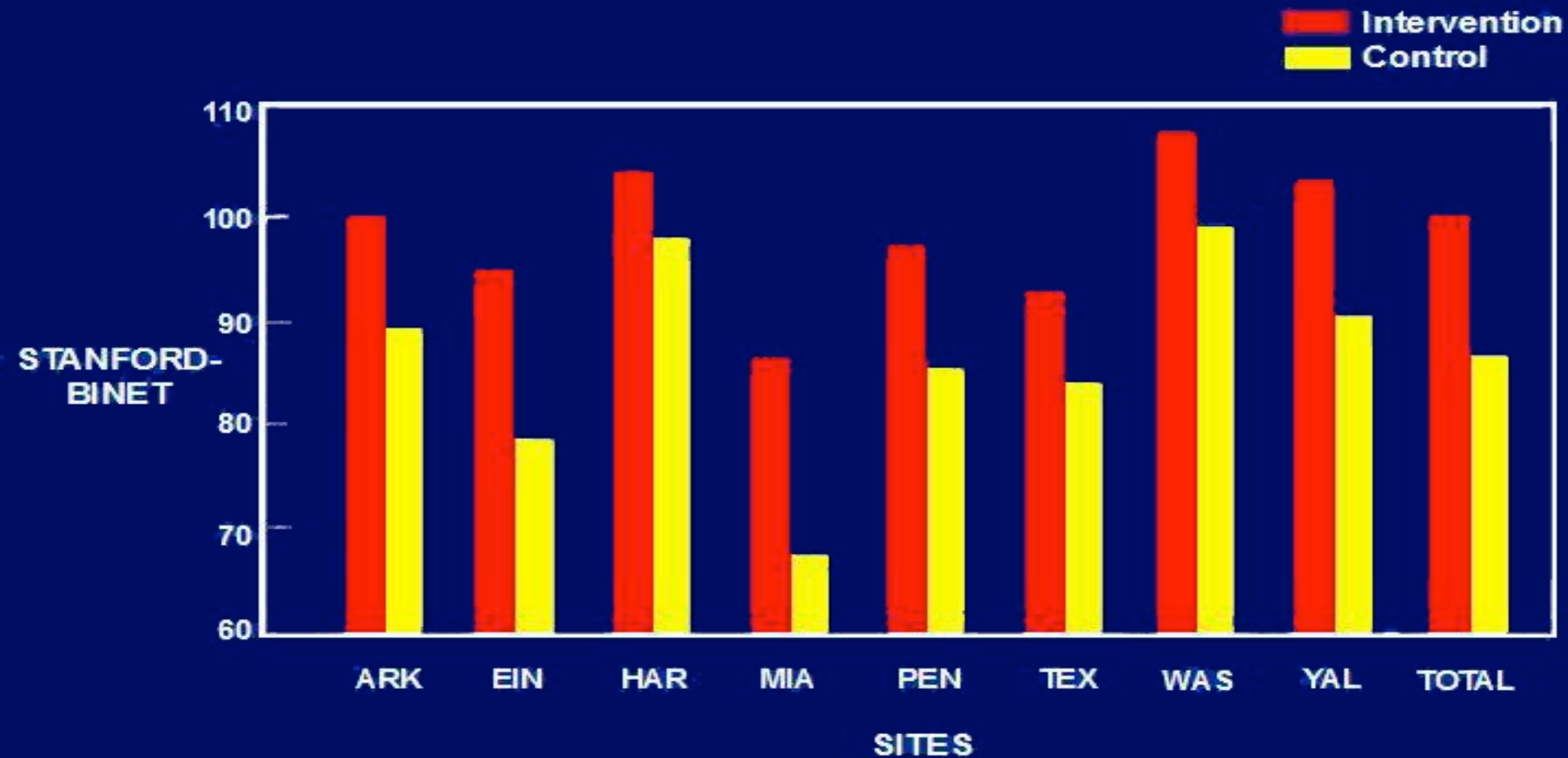
Children of Intellectually Disabled Mothers (<71 IQ) benefit at high rates in IQ outcomes



- High-quality early childhood education (in the first 3 years of life) is replicable in diverse areas with a consistent pattern of cognitive, linguistic, and social benefits

The ABC Intervention improved IQ scores for Premature, Low Birthweight Infants in 8 sites

(Stanford-Binet at 36 mos for 2001-2500 gm LBW Group)

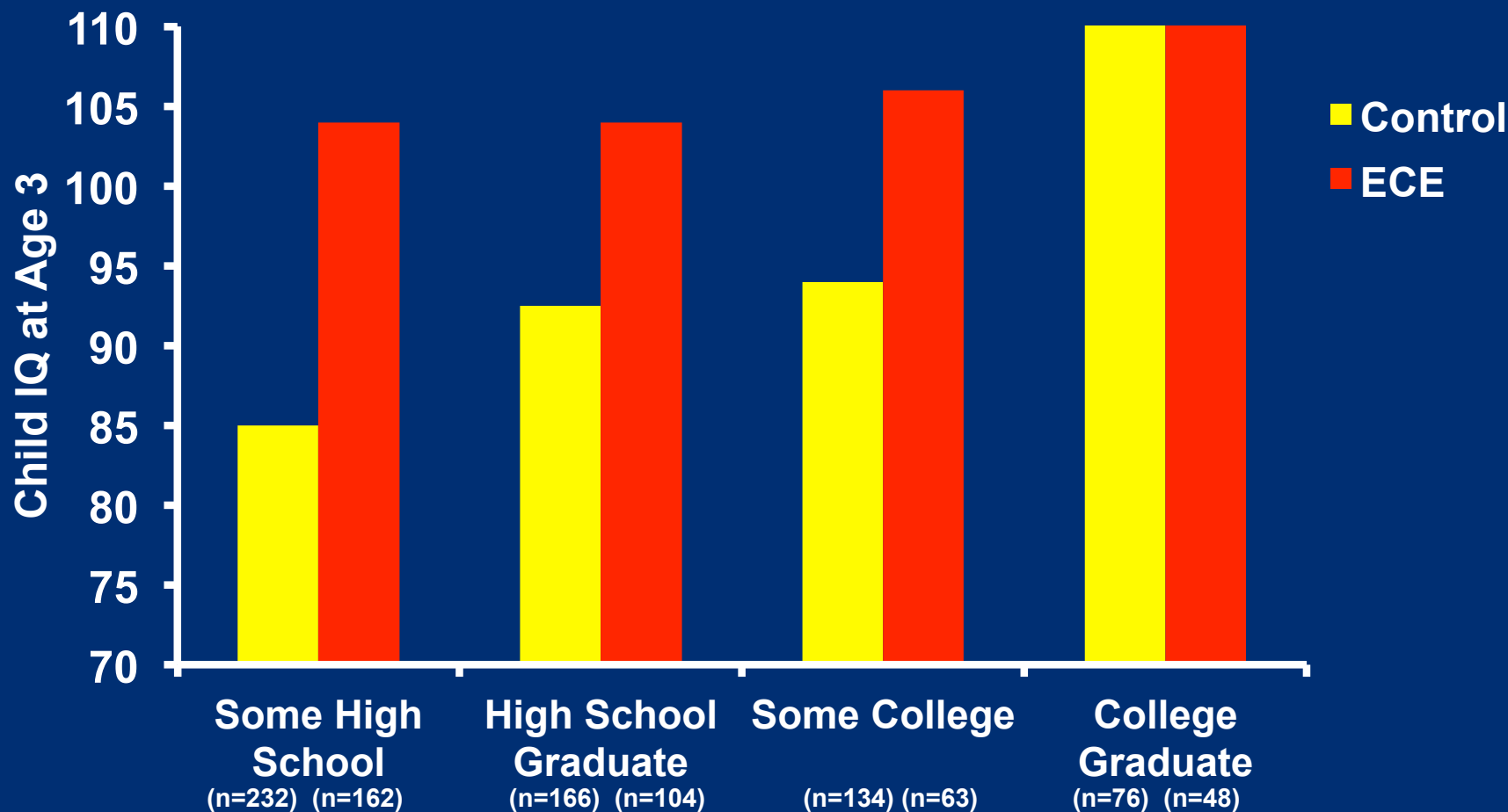


Infant Health and Development, JAMA, 1990

C. T. Ramey, AAAS, 1996

- High-quality early childhood education attenuates the cognitive gradient associated with socioeconomic status

Targeted ECE Works Especially Well for Children from Low Maternal Education Groups



Outcomes Affected Positively (*p<.01) by the Infant Health & Development Program

	12 Months	24 Months	36 Months
Cognitive Development	NS	+	+
Adaptive and Prosocial Behavior			+
Reduction in Behavior Problems		+	+
Vocabulary		+	+
Receptive Language		+	+
Children's Reasoning			+
Positive Home Environment	NS		+
Maternal-Child Interactive Behavior			+
Maternal Problem Solving			+

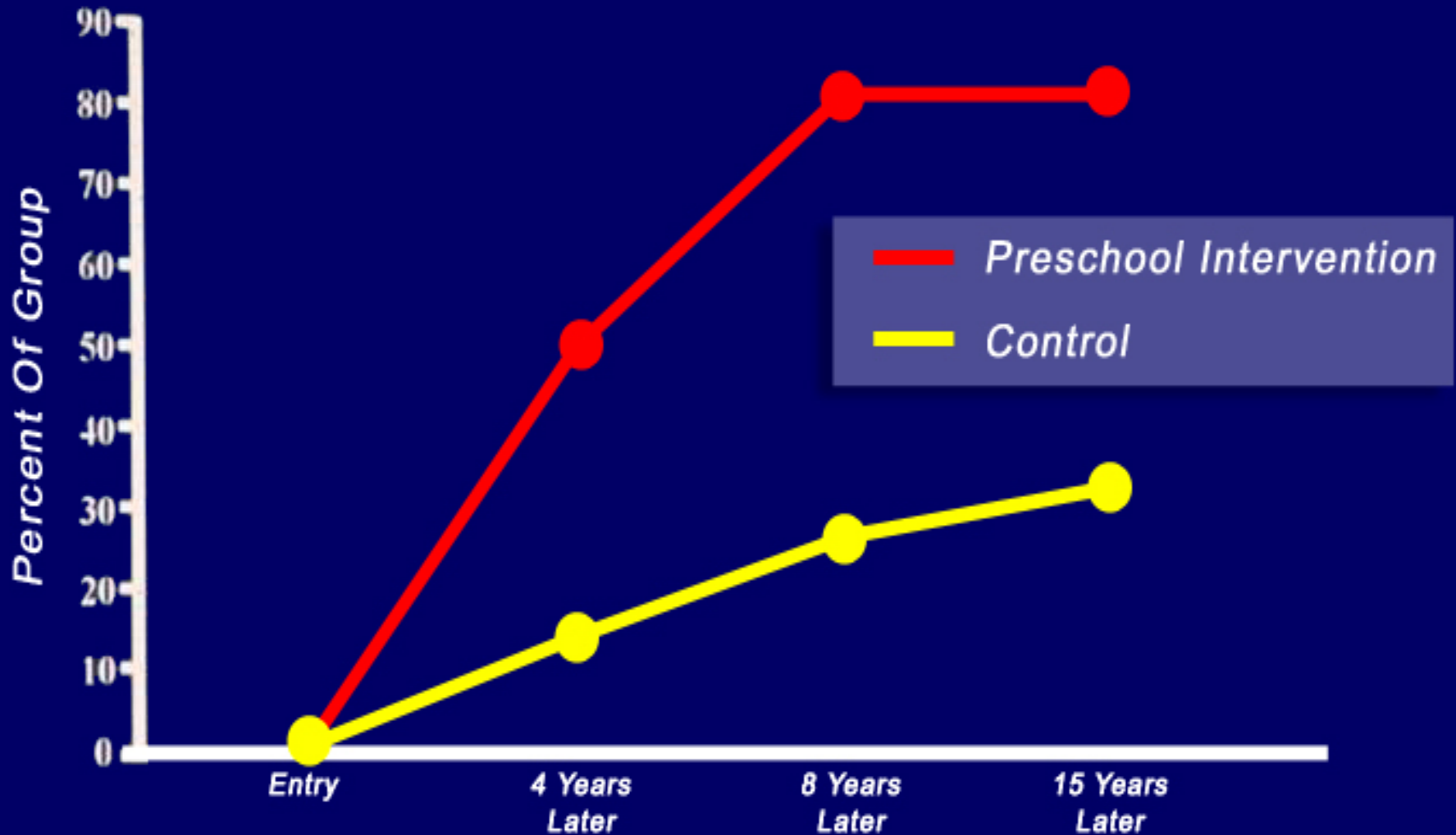
*Ramey 1999, adapted from Gross, Spiker, & Haynes, 1997,
Helping Low Birth Weight, Premature Babies*

Note: No negative effects discovered

- The mothers of vulnerable children experience educational and employment advances even as their children benefit
 - Younger mothers having their first child especially benefit from their children's early care and education

Abecedarian Project

Post-High School Education for Teen Mothers



Ramey et al, Applied Developmental Science, 2000

- The positive effects of high-quality ECE are broader and longer lasting than we imagined when this work began

Abecedarian Age 30 results: Education, Family, and Health Outcomes

	Early Ed	Controls
High School Graduate	83.0%	72.0%
College Graduate	23.0%	6.0%
Full-time Employment	75.0%	53.0%
Use of Public Assistance	3.9%	20.4%
Head of Household	78.9%	65.3%
Unmarried, 2+ Children	26.9%	38.8%
Excellent Health	69.0%	59.0%

Adapted from Campbell et al., *Developmental Psychology*, 2012

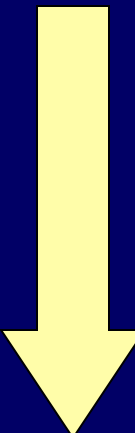
Abecedarian Age 30: Employment, Income, and Parenthood

	Early Ed	Controls	Effect Size
Income to Needs Ratio (1=poverty, 3=middle class)	3.1	2.2	.25
Annual Earned Income	\$33,400	\$20,700	.32
Job Prestige Index	44.9	39.43	.38
Age at Birth of First Child	21.8 yrs	19.9 yrs	.52

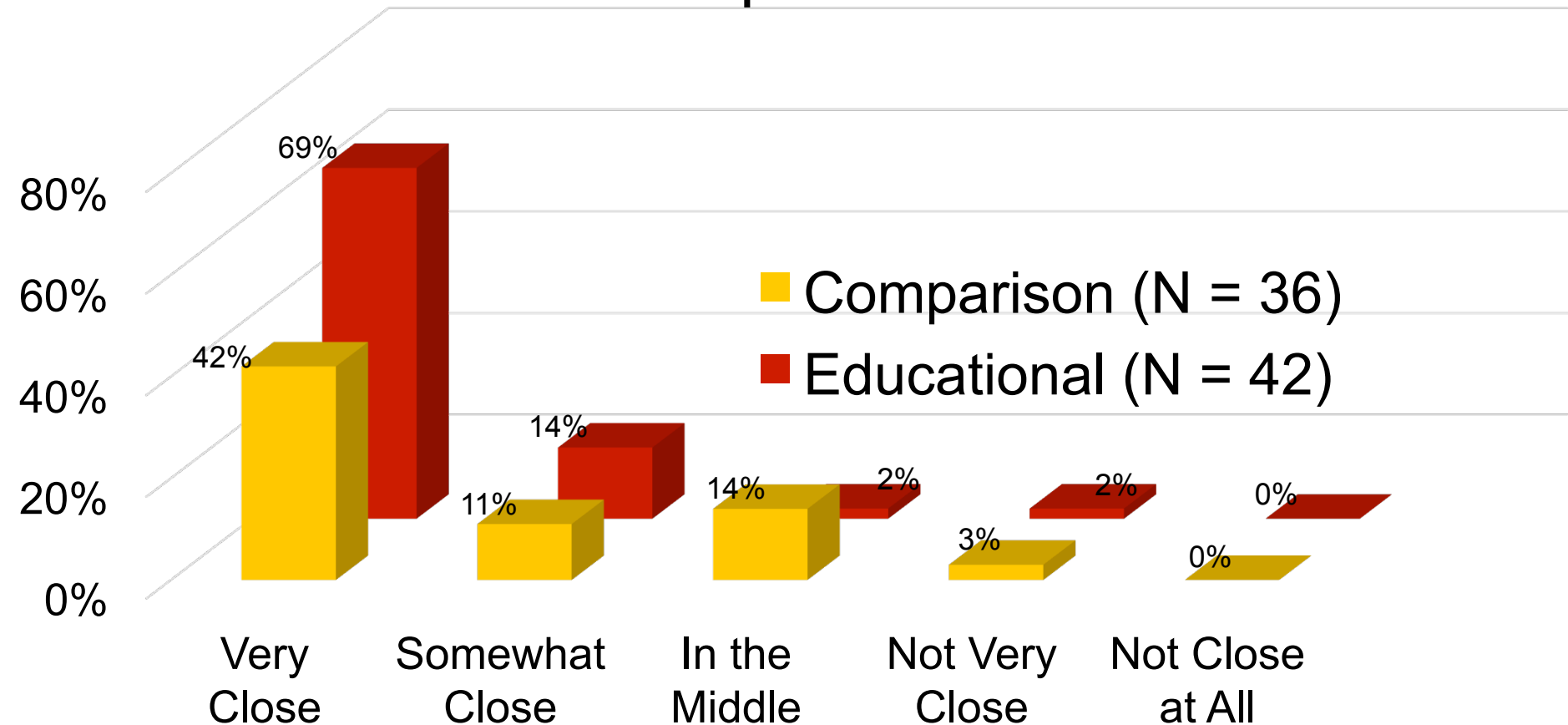
Adapted from Campbell et al., *Developmental Psychology*, 2012

Significant Long-Term Health, Social, and Education Benefits for Abecedarian Approach (15 Months to 40+ Years Old)

- 
- Intelligence (IQ)
 - Reading and math skills
 - Academic locus-of-control
 - Social Competence
 - Years in school
 - College attendance
 - Earned 4 yr college degree
 - Full-time employment
 - Cardiometabolic health
 - Return on Investment
 - Mothers' education
 - Mothers' employment
 - Cortical grey matter
 - Prosocial behavior
 - Maternal and paternal closeness
 - Civic engagement
 - Middle class neighborhoods
 - Geographical mobility

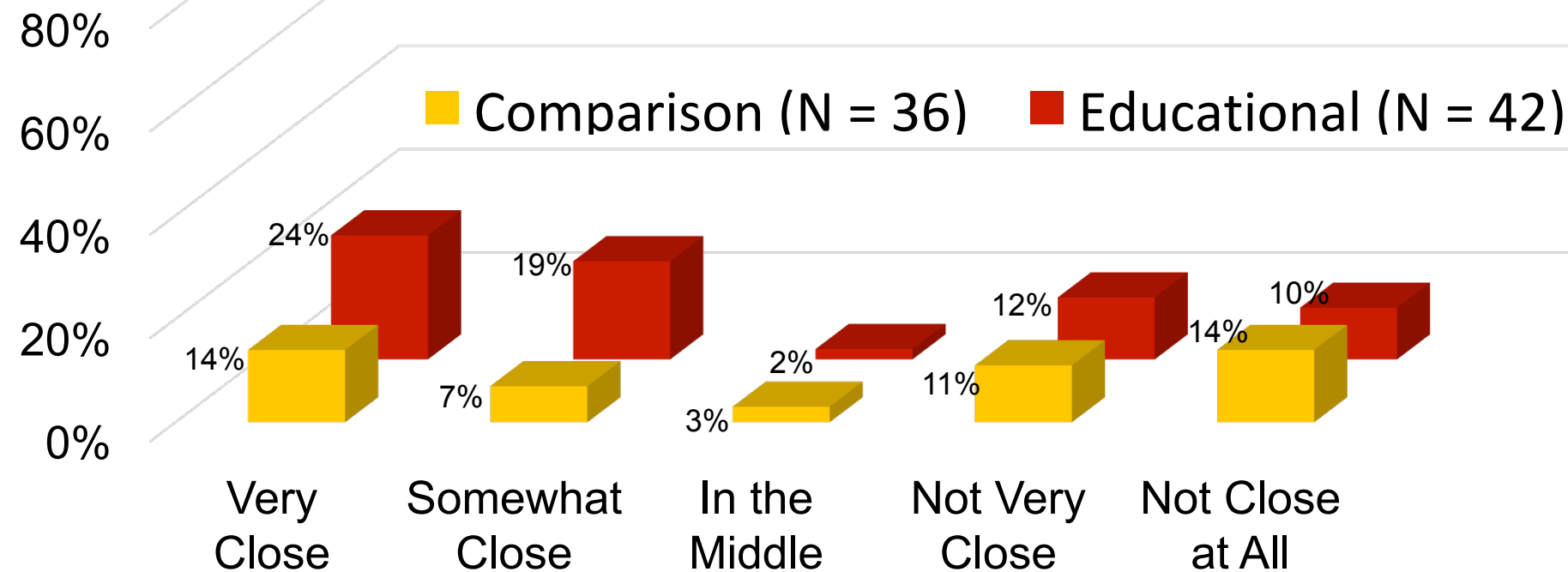
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- Grade Repetition
 - Special Education placement
 - Teen Pregnancies
 - Smoking and drug use
 - Teen depression
 - Welfare use
 - Overweight/BMI
 - High blood pressure
 - Lack of insurance
 - Poor health
 - Maternal deaths

Educational Group has more “very close” relationships with mothers



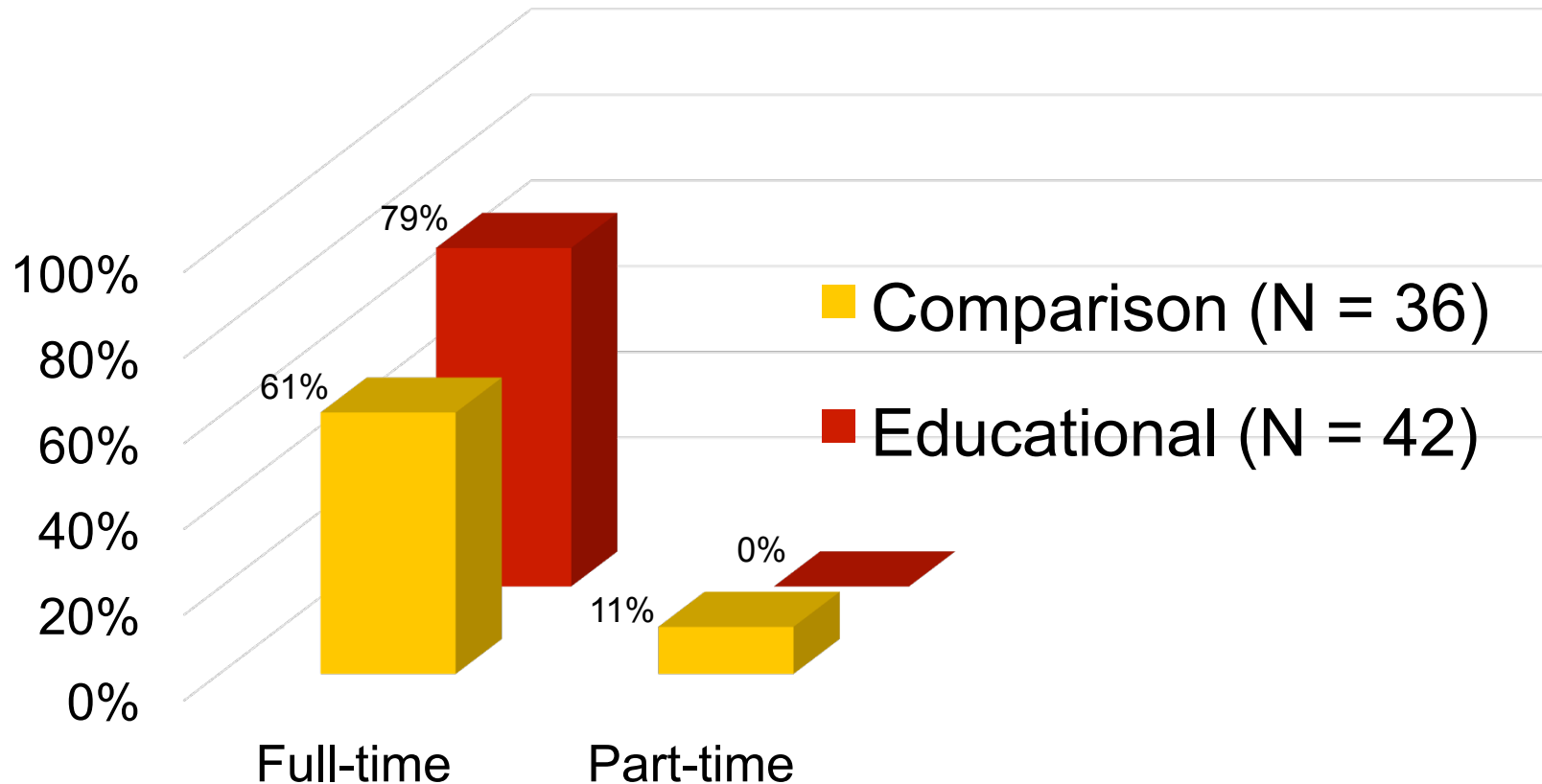
Proportional differences are significant $X^2(1, N = 78) = 8.403, p < 0.01$.

Educational Group has more “very close” relationships with fathers

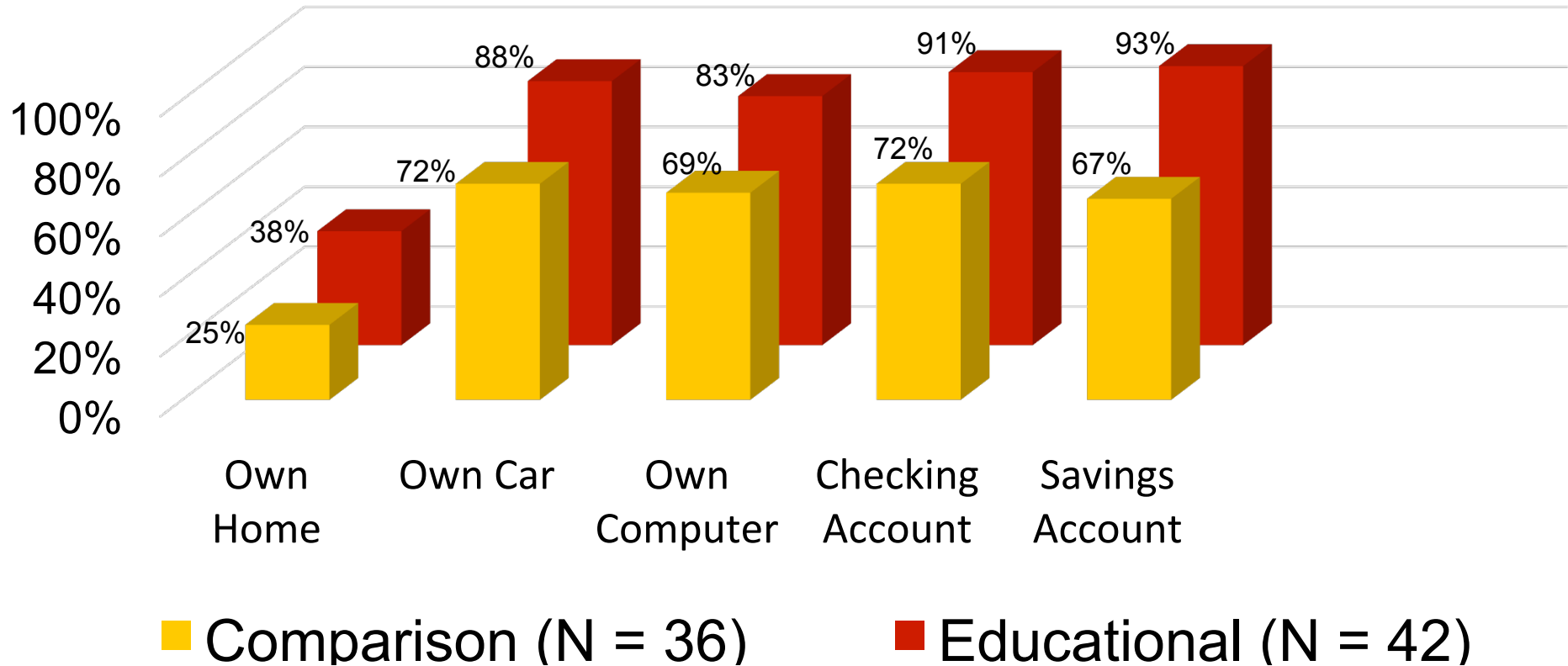


Proportional differences are significant $X^2(1, N = 78) = 4.997, p < 0.05$.

Educational Group employed full-time (79%) more than Comparison Group (61%)



Educational vs Comparison Group has more material assets



- To download a copy of the paper presented today go to:

<http://research.vtc.vt.edu/people/craig-ramey/>

5 Contextual Megatrends

- Educational desegregation and civil rights
- Women's liberation, feminism, and employment
- War on poverty, community action, and Head Start
- IDEA that provides education for all children
- Welfare Reform and emphasis on education and work

****All identified early childhood education as a critical part of a positive strategy**