



NATIONAL CENTER *for* CHILDREN & FAMILIES
ADVANCING POLICY, EDUCATION, & DEVELOPMENT

TEACHERS COLLEGE COLUMBIA UNIVERSITY

Summary of the Infant Health and Development Program (IHDP)

The Infant Health and Development Program (IHDP) was a clinical trial of an early intervention program for premature, low birth weight infants (≤ 37 weeks; < 2500 grams). Eight sites across the country recruited infants who were being discharged from neonatal hospitalization. The sample was composed of 985 infants who were geographically and demographically diverse. One-third of the sample was randomly assigned to the intervention (treatment) group, and the rest were assigned to the follow-up only (control) group.

Children in both the intervention and follow-up only groups received three years of pediatric care with referrals to specialists as needed. The intervention group also received weekly home visits in the child's first year of life and biweekly home visits for the next two years. It also received high-quality, full-day child care in the child's second and third years of life. All services were free of charge.

Before randomization, infants were stratified according to birth weight. The *lighter low birth weight stratum* weighed 2000 grams or less at birth, and the *heavier low birth weight stratum* weighed 2001 to 2500 grams at birth.

The children and their mothers were assessed at 40 weeks conceptual age and at 4, 8, 12, 18, 24, 30, and 36 months corrected age. Longitudinal follow-up continued at age 5, 8, and 18 years.

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Participants in IHDP

University of Arkansas for Medical Sciences (Little Rock, AR)
Albert Einstein College of Medicine (New York, NY)
Harvard Medical School (Boston, MA)
University of Miami School of Medicine (Miami, FL)
University of Pennsylvania School of Medicine (Philadelphia, PA)
University of Texas Health Sciences Center at Dallas (Dallas, TX)
University of Washington School of Medicine (Seattle, WA)
Yale University School of Medicine (New Haven, CT)

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Long-term effects of IHDP were evident in the heavier low birth weight stratum.

IHDP's Impacts on Children

Age 3

Heavier Low Birth Weight Stratum

- The intervention group scored 13.2 points higher on IQ than the follow-up only group.

Lighter Low Birth Weight Stratum

- The intervention group scored 6.6 points higher on IQ than the follow-up only group.

Age 5

Heavier Low Birth Weight Stratum

- The intervention group scored 3.7 points higher on full-scale IQ than the follow-up only group.
- The intervention group scored 4.2 points higher on verbal IQ.

Lighter Low Birth Weight Stratum

- Intervention effects were not sustained.

Age 8

Heavier Low Birth Weight Stratum

- The intervention group scored 4.4 points higher on full-scale IQ than the follow-up only group.
- The intervention group scored 4.2 points higher on verbal IQ.
- The intervention group scored 4.9 points higher on mathematics.
- The intervention group scored 6.7 points higher on receptive vocabulary.

Lighter Low Birth Weight Stratum

- Intervention effects were not sustained.

Age 18

Heavier Low Birth Weight Stratum

- The intervention group scored 5.1 points higher on mathematics than the follow-up only group.
- The intervention group scored 3.8 points higher on receptive vocabulary.
- The intervention group scored lower on an index of risky behaviors.

Lighter Low Birth Weight Stratum

- Intervention effects were not sustained.

Which children benefited most from IHDP?

When propensity score matching was used to compare intervention and follow-up only group members who were similar at baseline, children who attended child care for 400+ days had especially strong effects. At child age 8, the intervention group from the heavier low birth weight stratum scored 14 points higher than the follow-up only group on full-scale and verbal IQ. The intervention group from the lighter low birth weight stratum scored approximately 8 points higher than the follow-up only group. Similar significant but smaller positive effects were demonstrated for children who attended child care for more than 350 days.

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IHDP affected mothers as well as children.

What were the effects of IHDP on mothers?

At child age 3, there were program effects on mothers within the domains of mental health, the home environment, parenting quality, and employment.

- Mothers in the intervention group experienced less emotional distress than mothers in the follow-up only group.
- Home environment quality was higher for mothers in the intervention group.
- Mothers in the intervention group used less harsh discipline with their sons.
- Mothers in the intervention group demonstrated greater supportiveness and quality of help with problem solving tasks with their children.
- Mothers in the intervention group in the lighter low birth weight stratum were employed for longer periods of time.

At child ages 5, 8, and 18, intervention group mothers with lighter low birth weight children were more likely to be employed. Of all outcomes measured, only employment effects were sustained over time.



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Housed at Teachers College, Columbia University, The National Center for Children and Families (NCCF) advances the development and education of children and families through the production of scholarship that informs practice and policy.

The Center

The National Center for Children and Families (NCCF) advances the development and education of children and their families through the production of scholarship that informs practice and policy. Housed at Teachers College, Columbia University, our efforts challenge the status quo that perpetuates inequalities among children and families. NCCF's work is built on a commitment to eliminate educational, economic, and employment disparities through the production of the highest quality scholarship to the most intransigent social problems. The premise of all of our work is simple: to improve materially the learning and living conditions of young children, regardless of income, race, ethnicity, or country of origin.

NCCF's extensive research programs benefit multiple constituents, including researchers, policy makers, early childhood educators, Head Start teachers and directors, practitioners, families, and the general public. From inner-city neighborhoods to rural preschools and public schools, from state capitals throughout the U.S. to ministries of education in developing nations, our work has three primary goals:

- Goal One: To Produce the Highest Quality Policy-Relevant Research
- Goal Two: To Prepare Next-Generation Leaders through Practice, Training, and Research Opportunities
- Goal Three: To Implement Effective Practice and Policy

To accomplish these goals, NCCF maintains an intellectually exciting environment that unites scholars from the disciplines of psychology, education, law, public health, family studies, economics, sociology, and political science. Working with NCCF's two co-directors, **Jeanne Brooks-Gunn**, Ph.D., and **Sharon Lynn Kagan**, Ed.D., the organization is made up research scientists, graduate fellows, doctoral and master's candidates, research assistants, a communications director, a finance director, and support staff.

NCCF's research projects span a broad spectrum of activities allowing for the comprehensive training of researchers within the context of six related research themes: Early Care and Education; Families; International; Neighborhood/Community; Social Context of Education; and Systems/Governance.

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