

Effects of a School-Based Early Childhood Intervention on Adult Health and Well-Being: A 20-Year Follow Up of Low-Income Children and Families

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Major Questions

- Is Participation in the Child-Parent Center (CPC) Program Associated with Greater Adult Well-Being for Children and Parents?
- Do the Estimated Effects Vary by Timing and Duration of Intervention?

Title I of ESEA Act of 1965:

“Employ imaginative thinking and new approaches to meet the educational needs of poor children.”

Two Major Foci

Basic skills: Language, Numeracy, Listening

Structured Learning Activities

Field Trips: Zoos, Museums, Libraries

Parent Involvement

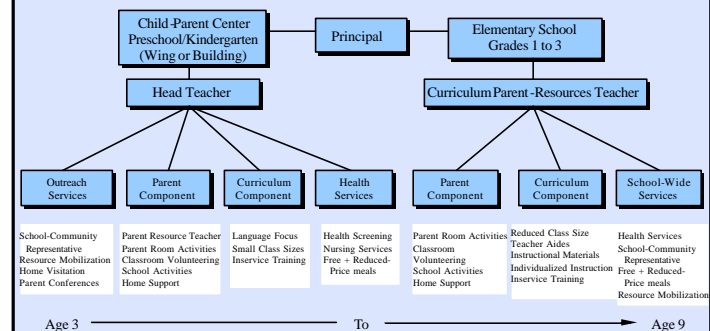
Classroom volunteering

Parent room activities

Educational workshops and training

Home visits and activities

Child-Parent Centers



| | | | | | | |
|---|--|---|--|---|--|---|
| School-Community Representative Resource Mobilization Home Visitation Parent Conferences | Parent Resource Teacher Parent Room Activities Classroom Volunteering School Activities Home Support | Language Focus Small Class Sizes Inservice Training | Health Screening Nursing Services Free + Reduced-Price meals | Parent Room Activities Classroom Volunteering School Activities Home Support | Reduced Class Size Teacher Aides Instructional Materials Individualized Instruction Inservice Training | Health Services School-Community Representative Free + Reduced-Price meals Resource Mobilization |
|---|--|---|--|---|--|---|

Johnson Child-Parent Center



Parent Resource Room



Design Strengths

- Comparison group enrolled in full-day kindergarten, the usual program for at-risk young children at the time
- Most of comparison group from randomly selected schools with full-day kindergarten.
- CPCs were in most disadvantaged areas.
- High rates of CPC enrollment across communities given outreach, low availability of programs, and low-SES status of families.
- Robustness testing over a decade shows consistency of measured impacts.

Sample Sizes and Recovery Rates for the Adult Follow-Up

| Outcome measure assessed at ages 22-24 | Number of cases | Program recovery rate (%) | Comparison recovery rate (%) |
|---|-----------------|---------------------------|------------------------------|
| Educational attainment | 1,368 | 89.2 | 88.5 |
| Employment status | 1,249 | 81.5 | 79.1 |
| Arrest status/Incarceration history | 1,418 | 92.8 | 91.6 |
| Substance use/Daily tobacco use (self report) | 1,142 | 78 | 75.1 |
| Health insurance (self report/admin records) | 1,277 | 86.1 | 85.3 |
| Public aid history | 1,315 | 88.5 | 87.8 |
| Parental ed attainment/employment | 1,438 | 94.4 | 93.6 |
| Parental public aid participation | 1,440 | 94.4 | 93.7 |

Equivalence of Groups at the Age 24 Follow Up (N = 1,389)

| Characteristic | CPC Preschool (N=902) | No-preschool Comparison (N=487) | p-value | Original sample p-value |
|---|-----------------------|---------------------------------|---------|-------------------------|
| Percent sample recovery | 91.2 | 88.6 | -- | -- |
| Percent African American | 93.7 | 92.6 | .500 | 1.00 |
| Percent Girls | 53.0 | 47.0 | .049 | .509 |
| Percent from neighborhood with > 60% low income | 77.3 | 71.7 | .023 | .040 |
| Percent of child welfare case histories by child's age 4 | 3.2 | 5.3 | .077 | .069 |
| Percent of teen parent at child's birth | 9.7 | 10.3 | .761 | .695 |
| Percent of mothers who did not complete HS by child's age 3 | 51.0 | 59.4 | .003 | .001 |
| Mean years of mothers' education by child's age 3 | 11.21 | 10.90 | .001 | .001 |
| Percent of single parent by child's age 3 | 76.4 | 75.3 | .688 | .613 |
| Percent of mothers not employed by child's age 3 | 64.9 | 59.9 | .087 | .123 |
| Percent eligible for free lunch by child's age 3 | 83.3 | 82.3 | .652 | .384 |
| Percent participation at TANF by age 8 | 62.8 | 60.9 | .483 | .609 |
| Percent have 4 or more children by child's age 3 | 16.7 | 19.2 | .259 | .281 |
| Mean number of family risks by child's age 3 (8 risks) | 4.5 | 4.5 | .912 | .802 |
| Percent 4 or more family risks by child's age 3 | 72.8 | 71.3 | .531 | .633 |

Note. Study participants had known educational attainment by August 2003 or employment information from ages 22-24 (Nov. 2004).

Basic Model Specification

CPC participation

- Preschool (1-2 yrs. vs all others)
- School-age (1-3 yrs. vs all others)
- Extended (4-6 vs 0-3 yrs.)

Covariates (age 0 to 3)

- A. Sex of child, race/ethnicity, 8 risk indicators, child maltreatment report, school-age CPC
- B. Risk Index instead of individual indicators
- C. With and without program sites.

Some Previous Findings

School Readiness and Achievement

Higher scores in reading in math on ITBS-K to Age 15
Higher scores in life skills competency

Remedial Services

Lower rates of special education and grade retention

Social and Emotional Development

Higher ratings of social adjust. and perceived competence
Lower rates of delinquency, including for violent offenses

Educational Attainment

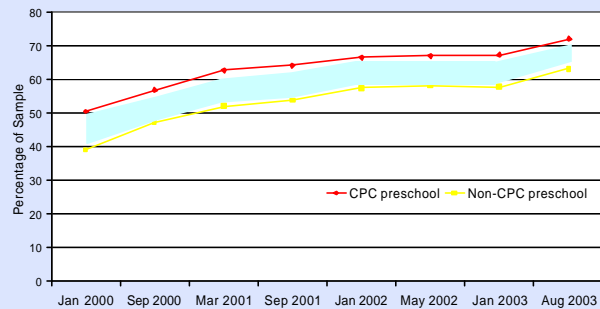
Higher rates of school completion and more yrs of ed

Family Socialization

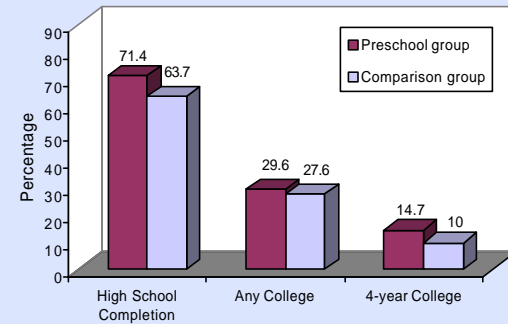
Greater parent involvement in education, higher parent expectations, greater satisfaction with child's schooling
Lower rates of substantiated child maltreatment
Both Timing and Duration of Intervention Matter

Summary of New Findings to Age 24

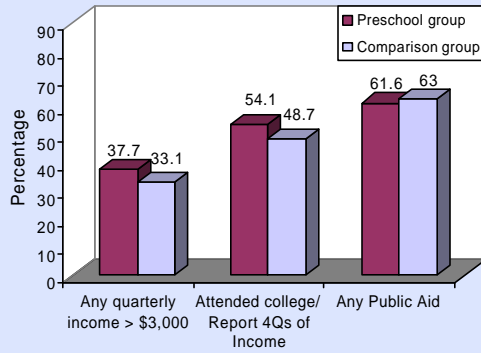
High School Completion Over Time



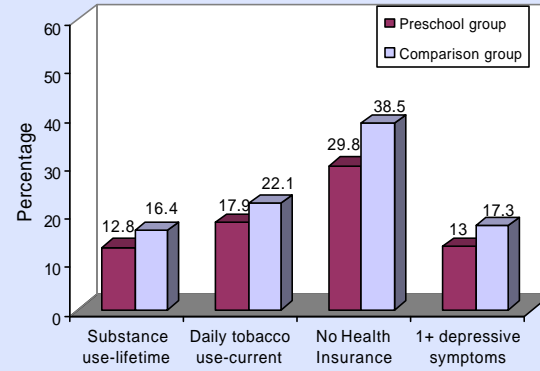
Educational Attainment by Age 23



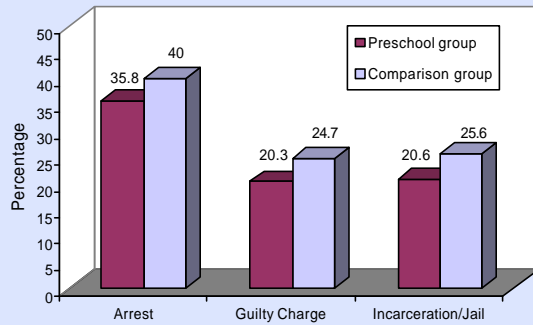
Economic Well-Being



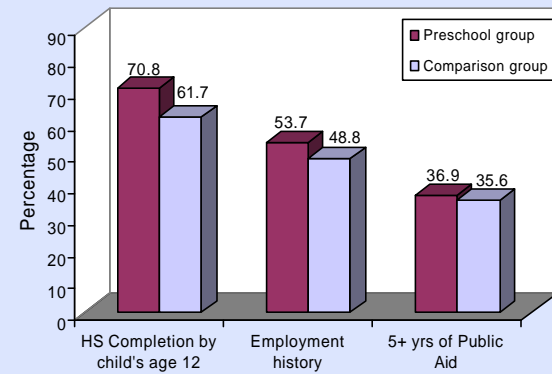
Health-Related Outcomes



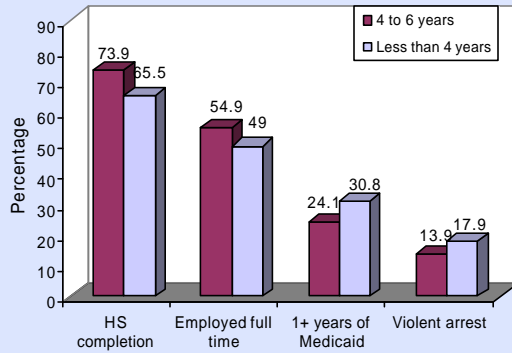
Adult Arrest and Incarceration



Parental Well-Being (Selected)



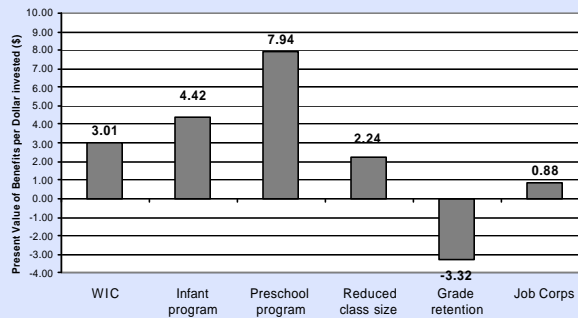
Extended Intervention Comparisons



Summary of Costs and Benefits Per Participant in 2002 Dollars for Three Preschool Programs

| Costs and Benefits | High/Scope Pery Preschool | Chicago Child-Parent Centers | Abecedarian Project |
|--------------------------------------|---------------------------|------------------------------|---------------------|
| Program Costs Per Participant | | | |
| Average program participant | 15,844 | 7,384 | 35,894 |
| For one year of participation | 9,759 | 4,856 | 13,900 |
| Summary of Benefits | | | |
| Total benefits | 138,486 | 74,981 | 135,546 |
| Net benefits (benefits-costs) | 122,642 | 67,595 | 99,682 |
| Total benefit per dollar invested | 8.74 | 10.15 | 3.78 |
| Public benefit per dollar invested | 7.16 | 6.87 | 2.69 |

Benefit-Cost Ratios for Alternative Programs



Conclusions and Implications

1. Established large-scale programs can impact well-being into adulthood and thus generalizability of findings on early intervention is strengthened.
2. Although both timing and length of intervention matter, preschool participation is associated with a wider range of outcomes over longer periods.
3. Early childhood programs are among the most effective and cost-effective interventions. A critical mass of evidence supports the economic returns of high quality programs.

Implications of Chicago Study (cont.)

4. Among key elements of effectiveness are timing and length, organizational structure, teacher background and compensation, the enrichment focus on school readiness, and intensive parent program within a comprehensive service model.

For more information about the Chicago Longitudinal Study, contact:

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