

Making Change Happen
Translating Research into MCH Public Health Practice:
The Role of Evaluation

**Maternal and Child Health
Leadership Conference**

**Translating Research into MCH Public
Health Practice: The Role of Evaluation**

**Plenary III: Early Childhood
Intervention**

May 18, 2004

Prevention and Cost-Effectiveness in
Early Childhood Education: Recent
Evidence and Policy Implications

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University of Illinois at Chicago

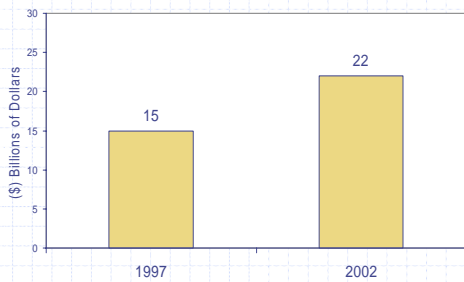
2002 State of the Union

We need to prepare our children to read and
succeed in school with improved Head Start and
early childhood development programs.

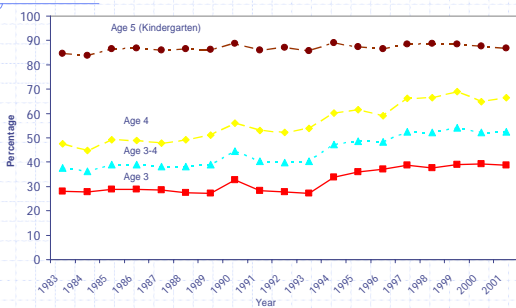
Major Issues

- ◆ How Should an Early Childhood Care and Education System be Organized?
- ◆ What are the Key Elements of Effective Programs?
- ◆ Are the Key Elements the Same for All Children?
- ◆ How can the Timing and Duration of Services be Balanced from Birth to Age 8?
- ◆ What is the Optimal Funding Structure among Federal, State, and Local Agencies?

Public Investments in Early Childhood Programs



U.S. Children in Early Childhood Programs



Source: National Center for Educational Statistics (2003)

Johnson Child-Parent Center



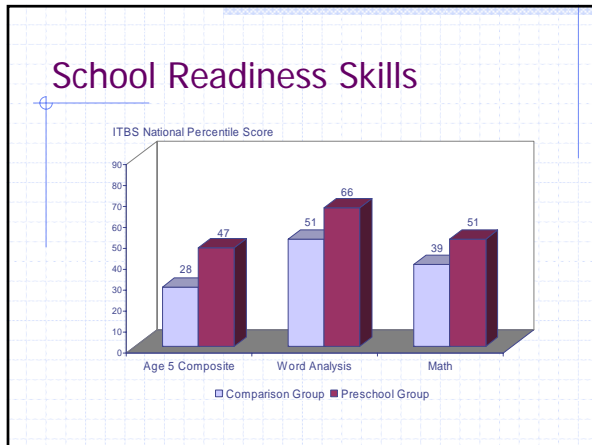
Parent Resource Room

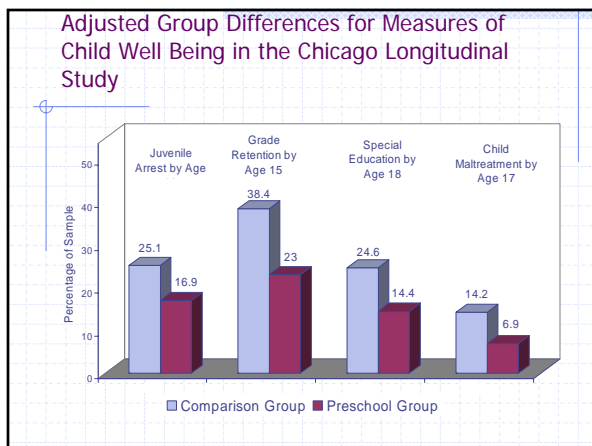




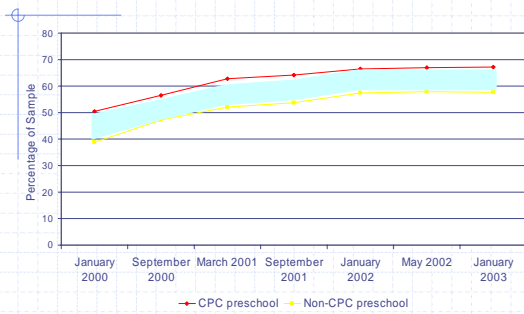
Equivalence of Program and Comparison Groups

Child/family attribute	Preschool group (n = 841)	Comparison group (n = 445)	p-value	Original sample p-value
Female child, %	52.3	46.3	.017	.117
African American, %	94.0	92.6	.315	.945
Risk index (0-6), mean (SD)	3.56 (1.3)	3.62 (1.4)	.406	.095
High school-poverty (>60%)*, %	77.1	71.9	.027	.038
Child eligible for subsidized meals (<130% of family poverty)*, %	92.3	92.8	.772	.787
Parent completed high school*, %	66.1	59.3	.033	.017
Single-parent status*, %	69.6	65.7	.223	.269
Parent not employed full-time by child's age 12*, %	64.9	60.8	.204	.606
Missing parent education or meals	7.0	8.5	.329	.044
Mean number of siblings*	2.6	2.8	.007	.043
Parent was under age 20 at child's birth, %	23.2	19.2	.154	.250
Child abuse or neglect by age 4, (indicated report, %)	1.1	1.3	.662	.951
Census-track poverty, age 4, mean (SD)	46.0 (13.5)	39.9 (11.9)	<.001	<.001





Rates of High School Completion by Groups



Note: Adjusted for gender, race, family risk index, follow-on participation, and CPC sites.

Some Facts about the Evaluating Early Education Programs

- ◆ Cost effectiveness rarely applied to child development programs
- ◆ Effect sizes as economic "returns"

Benefit-Cost Analysis Benefit Categories

- ◆ School Remedial Services
 - Reduced Costs of Special Education Services
 - Reduced Expenditures for Extra Schooling for Retained Students
- ◆ Child Welfare System
 - Reduced Treatment and Administrative Costs
 - Cost savings to Victims
- ◆ Juvenile Court and Treatment Costs
 - Reduced Administrative Costs
 - Reduced Costs of Juvenile Treatment
 - Savings to Crime Victims

Benefit Categories (cont.)

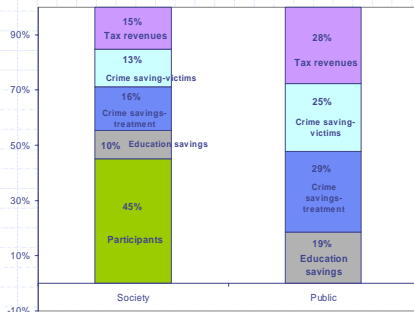
- ◆ Adult Courts and Treatments
 - *Reduced Administrative Costs*
 - *Reduced Costs of Treatment*
 - *Savings to Crime Victims*
- ◆ Life Time Earnings Capacity (Projected from HS Completion)
 - *Increased Earnings Through Age 65*
 - *Increased Tax Revenues to Governments*

Summary of CBA Findings Per Participant

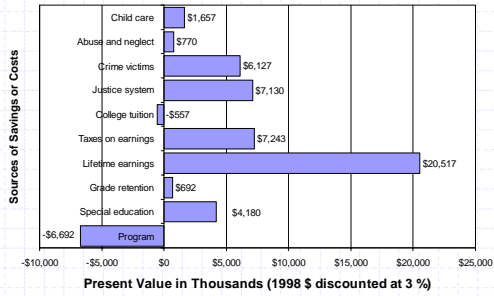
CPC component	Cost	Societal Benefit	Public Benefit
Preschool	\$6,692	\$47,759	\$25,771
School-Age	\$2,981	\$4,944	\$4,219
Extended	\$4,057	\$24,772	\$14,594

Note. Present value in 1998 dollars discounted at 3%

Benefits of CPC Preschool by Category

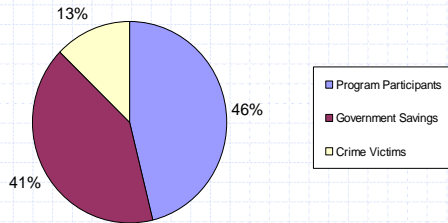


Estimated Benefits and Costs: Preschool

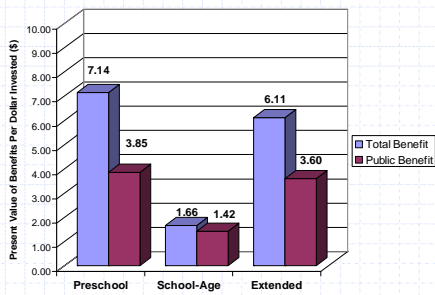


Government and Participants Savings

Sources of Societal Savings for the CPC Preschool Program



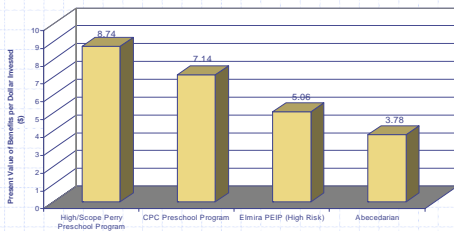
Benefit to Cost Ratios for 3 Measures of Participation



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

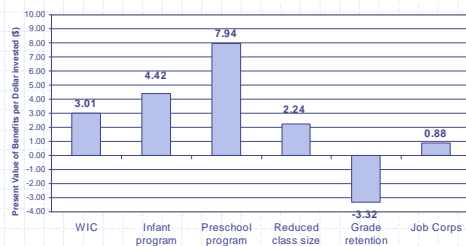
Costs and Benefits	High/Scope Perry Preschool	Chicago Child-Parent Centers	Abecedarian Project
Program Costs Per Participant			
Average program participant	15,844	7,384	35,894
For one year of participation	9,759	4,856	13,900
Summary of Benefits			
Total benefits	138,486	74,981	135,546
Net benefits (benefits-costs)	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 Total Benefit of 4 Programs



Notes: 1) High/Scope Perry Preschool cost benefit amounts are in 1992 dollars; discounted at 3%. Benefits include averted intangible crime victim costs. 2) Chicago Child Parent Center (CPC) cost benefit amounts are in 1998 dollars; discounted at 3%. 3) Elmira PEIP cost benefit amounts are in 1996 dollars; discounted at 4%.

Benefit-Cost Ratios for Alternative Programs



Implications of Chicago Study

- ◆ Early childhood programs are among the most effective preventive interventions. Evidence of benefit-cost analysis suggests the long-term payoff of such approaches.
- ◆ Length of program participation can matter as much as timing. Services should better reflect this principle.
- ◆ Implement intensive parent programs through staffed parent-resource rooms and emphasis on personal development and school participation.

Implications of Chicago Study (cont.)

- ◆ Focus enrichment on school readiness, especially language and literacy skills through relatively structured, activity-based approaches.
- ◆ Focus school-age programs on school organization and instructional resources.
- ◆ The success of universal access to preschool will depend on:
 - A. Coordinating services
 - B. Recruiting and keeping well-trained staff
 - C. Tailoring services to the needs of families.

For more information about the Chicago Longitudinal Study, contact:

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