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A Variety of Early Childhood Interventions Have Generated Favorable Economic Returns

Economic analyses of early childhood interventions have shown that effective programs can repay the investments through government savings, social benefits, and individual benefits. Such favorable economic returns have been demonstrated for programs that use various approaches to early intervention, including those that focus on home visiting or parent education, as well as those that combine home visiting or parent education services with early childhood education.

The programs named in the table below have been subjected to rigorous benefit-cost analyses. In addition to analyses of individual programs, the table also reports results from two separate benefit-cost analyses based on effects derived from (1) a meta-analysis of multiple home visiting programs serving at-risk children and (2) a meta-analysis of multiple early childhood education programs serving low-income 3- and 4-year-olds.

The results appear in panels based on the age of participants as of the last follow-up: elementary school years, secondary school years, early adulthood, or middle adulthood. One program, the Comprehensive Child Development Program, was not shown to be effective. A second program, the Infant Health and Development Program, showed favorable outcomes as of the last follow-up at age 8, but the outcomes could not be translated into dollar savings.

For the other programs, the estimates of net benefits range from about \$1,400 per child to nearly \$240,000 per child. The returns to society for each dollar invested range from \$1.26 to \$17.07.

The largest benefit-cost ratios are associated with programs with longer-term follow-ups (moving further down the table). The later follow-ups allow for the measurement of adulthood outcomes — such as educational attainment, delinquency and crime, and earnings — that translate readily into dollar benefits. The studies with long-term follow-ups show that the benefits from early childhood interventions can be long lasting and that the associated dollar savings can be substantial. If all of the programs followed their participants into middle adulthood, then even larger savings might ultimately be demonstrated for these programs.

Because not all benefits could be translated into dollar values, the benefit-cost estimates are likely to be conservative. The estimates account for declines in the amount of special education provided, decreases in grade repetitions, reductions in youth and adult crime, and increases in workforce productivity among participants. However, the estimates do not account for increases in workforce productivity among the parents of participants or for the potential economy-wide advantages from higher educational attainment among the future workforce. ■

Program	Type	Age at Last Follow-up	Cost Per Child	Total Benefit to Society Per Child	Net Benefits to Society Per Child	Benefit-Cost Ratio
PROGRAMS WITH FOLLOW-UP DURING ELEMENTARY SCHOOL YEARS						
Comprehensive Child Development Program	Combination (home visiting / parent education combined with early	5	\$37,388	-\$9	-\$37,397	—

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	childhood education)						
HIPPY (Home Instruction Programs for Preschool Youngsters) USA	Home visiting / parent education	6	\$1,681	\$3,032	\$1,351	\$1.80:\$1	
Infant Health and Development Program	Home visiting / parent education	8	\$49,021	\$0	-\$49,021	—	
PROGRAMS WITH FOLLOW-UP DURING SECONDARY SCHOOL YEARS							
Nurse-Family Partnership Program	Higher-Risk Sample	Home visiting / parent education	15	\$7,271	\$41,419	\$34,148	\$5.70:\$1
	Lower-Risk Sample	Home visiting / parent education	15	\$7,271	\$9,151	\$1,880	\$1.26:\$1
	Full Sample	Home visiting / parent education	15	\$9,118	\$26,298	\$17,180	\$2.88:\$1
Home visiting for at-risk mothers and children (meta-analysis)	Home visiting / parent education	Varies	\$4,892	\$10,969	\$6,077	\$2.24:\$1	
PROGRAMS WITH FOLLOW-UP TO EARLY ADULTHOOD							
Carolina Abecedarian Project	Combination	21	\$42,871	\$138,635	\$95,764	\$3.23:\$1	
Chicago Child-Parent Centers	Combination	21	\$6,913	\$49,337	\$42,424	\$7.14:\$1	
High/Scope Perry Preschool Project (including only the "tangible" crime costs of property loss, lost work time, and medical care, for example)	Combination	27	\$14,830	\$76,426	\$61,595	\$5.15:\$1	
High/Scope Perry Preschool Project (including both the tangible and "intangible" crime costs, such as pain and suffering)	Combination	27	\$14,830	\$129,622	\$114,792	\$8.74:\$1	
Early childhood education for low-income 3- and 4-year-olds (meta-analysis)	Combination	Varies	\$6,681	\$15,742	\$9,061	\$2.36:\$1	
PROGRAMS WITH FOLLOW-UP TO MIDDLE ADULTHOOD							
High/Scope Perry Preschool Project	Combination	40	\$14,830	\$253,154	\$238,324	\$17.07:\$1	
<p>SOURCE: <i>Early Childhood Interventions: Proven Results, Future Promise</i>, Lynn A. Karoly, M. Rebecca Kilburn, Jill S. Cannon, RAND/MG-341-PNC, 2005, 160 pp., ISBN 0-8330-3836-2, (Full Document).</p> <p>NOTES: All dollar values are 2003 U.S. dollars per child and are the net present value of amounts over time. Future values are discounted to age 0 of the participating child, using a 3-percent annual discount rate. Numbers may not sum due to rounding.</p>							