

Parent-Child Home Program

Program description:

The Parent-Child Home Program (<http://www.parent-child.org/>) is targeted at two- and three- year olds whose parents have a limited education or who have other obstacles to educational success. The program involves twice weekly, half-hour visits from trained paraprofessionals over a period of two years. Each week, the visitor brings a new toy or book which she uses to demonstrate verbal interaction techniques and encourage learning through play.

Typical age of primary program participant: 2

Typical age of secondary program participant: N/A

Meta-Analysis of Program Effects

Outcomes Measured	Primary or Secondary Participant	No. of Effect Sizes	Unadjusted Effect Sizes (Random Effects Model)			Adjusted Effect Sizes and Standard Errors Used in the Benefit-Cost Analysis					
			ES	SE	p-value	First time ES is estimated			Second time ES is estimated		
						ES	SE	Age	ES	SE	Age
Test scores	P	4	0.21	0.16	0.19	0.08	0.16	4	0.04	0.08	17
K-12 grade repetition	P	1	-0.29	0.35	0.42	-0.06	0.35	8	-0.06	0.35	17
K-12 special education	P	1	-0.63	0.27	0.02	-0.13	0.27	8	0.02	0.05	17

Benefit-Cost Summary

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2011). The economic discount rates and other relevant parameters are described in Technical Appendix 2.	Program Benefits					Costs	Summary Statistics			
	Partici-pants	Tax-payers	Other	Other Indirect	Total Benefits		Benefit to Cost Ratio	Return on Invest-ment	Benefits Minus Costs	Probability of a positive net present value
	\$2,319	\$1,082	\$0	\$519	\$3,920	-\$5,496	\$0.71	n/e	-\$1,576	38%

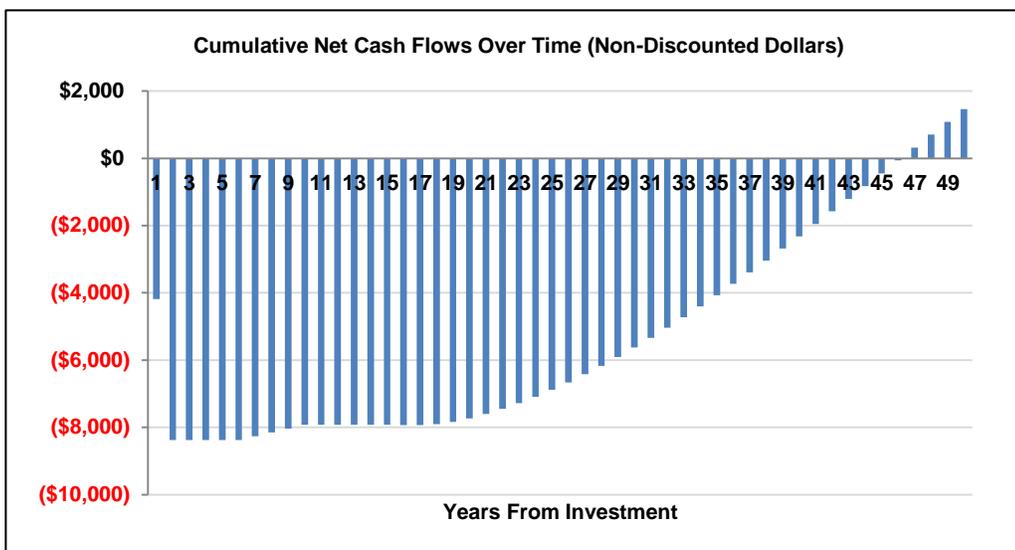
Detailed Monetary Benefit Estimates

Source of Benefits	Benefits to:					
	Partici-pants	Tax-payers	Other	Other In-direct	Total Benefits	
Earnings via test scores	\$2,319	\$853	\$0	\$399	\$3,572	
K-12 grade repetition	\$0	-\$1	\$0	-\$1	-\$2	
K-12 special education	\$0	\$229	\$0	\$121	\$350	
From Secondary Participant						

Detailed Cost Estimates

The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The uncertainty range is used in Monte Carlo risk analysis, described in Technical Appendix 2.	Program Costs			Comparison Costs			Summary Statistics	
	Annual Cost	Program Duration	Year Dollars	Annual Cost	Program Duration	Year Dollars	Present Value of Net Program Costs (in 2011 dollars)	Uncertainty (+ or - %)
	\$2,800	2	2011	\$0	1	2011	\$5,505	10%

Source: Average annual cost per family provided by The Parent-Child Home Program's National Center, June, 2011.



Multiplicative Adjustments Applied to the Meta-Analysis

Type of Adjustment	Multiplier
1- Less well-implemented comparison group or observational study, with some covariates.	0.5
2- Well-implemented comparison group design, often with many statistical controls.	0.5
3- Well-done observational study with many statistical controls (e.g., IV, regression discontinuity).	0.81
4- Random assignment, with some RA implementation issues.	0.81
5- Well-done random assignment study.	1.00
Program developer = researcher	0.25
Unusual (not "real world") setting	0.5
Weak measurement used	0.54

The adjustment factors for these studies are based on a multivariate regression analysis of 106 effect sizes from evaluations of home visiting programs within child welfare or at-risk populations. The analysis examined the relative magnitude of effect sizes for studies rated a 1, 2, 3, or 4 research design quality, in comparison with a 5 (see Technical Appendix II for a description of these ratings). We weighted the model using the random effects inverse variance weights for each effect size. The results indicated that research designs 1 and 2 have effect sizes about twice the size of studies rated as a 5, and research designs 3 and 4 have effect sizes about 24 percent higher than a 5.

The analysis also found that effect sizes were statistically significantly higher when the program developer was involved in the research evaluation, or when a weak outcome measure was used.

Studies Used in the Meta-Analysis

Levenstein, P., O'Hara, J., & Madden, J. (1983). The Mother-Child Home Program of the Verbal Interaction Project. In The Consortium for Longitudinal Studies (Contributors), *As the twig is bent . . . : Lasting effects of preschool programs* (pp. 237-263). Hillsdale, NJ: Lawrence Erlbaum Associates.

Levenstein, P., Levenstein, S., Shiminski, J. A., & Stolzberg, J. E. (1998). Long-term impact of a verbal interaction program for at-risk toddlers: An exploratory study of high school outcomes in a replication of the Mother-Child Home Program. *Journal of Applied Developmental Psychology, 19*(2), 267-285.

Madden, J., O'Hara, J., & Levenstein, P. (1984). Home again: Effects of the Mother-Child Home Program on mother and child. *Child Development, 55*(2), 636-647.

Scarr, S., & McCartney, K. (1988). Far from home: An experimental evaluation of the mother-child home program in Bermuda. *Child Development, 59*(3), 531-543.