Incredible Years: Parent training

Children's Mental Health: Disruptive Behavior

Benefit-cost estimates updated December 2016. Literature review updated April 2012.

Current estimates replace old estimates. Numbers will change over time as a result of model inputs and monetization methods.

The WSIPP benefit-cost analysis examines, on an apples-to-apples basis, the monetary value of programs or policies to determine whether the benefits from the program exceed its costs. WSIPP's research approach to identifying evidence-based programs and policies has three main steps. First, we determine "what works" (and what does not work) to improve outcomes using a statistical technique called meta-analysis. Second, we calculate whether the benefits of a program exceed its costs. Third, we estimate the risk of investing in a program by testing the sensitivity of our results. For more detail on our methods, see our Technical Documentation.

Program Description: Incredible Years Parent Training (www.incredibleyears.com) is a group, skills-based behavioral intervention for parents of children with behavior problems. The curriculum focuses on strengthening parenting skills (monitoring, positive discipline, confidence) and fostering parents' involvement in children's school experiences in order to promote children's academic, social, and emotional competencies and reduce conduct problems. Training classes include child care, a family meal, and transportation.

Benefit-Cost Summary Statistics Per Participant

Benefits to:

Taxpayers	$849	Benefit to cost ratio	$1.65
Participants	$1,296	Benefits minus costs	$847
Others	$459	Chance the program will produce benefits greater than the costs	54 %
Indirect	($451)		
Total benefits	$2,153		
Net program cost	($1,305)		
Benefits minus cost	$847		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2015). The chance the benefits exceed the costs are derived from a Monte Carlo risk analysis. The details on this, as well as the economic discount rates and other relevant parameters are described in our Technical Documentation.

Detailed Monetary Benefit Estimates Per Participant

Benefits from changes to:[1]	Benefits to:				
	Participants	Taxpayers	Others[2]	Indirect[3]	Total
Crime	$0	$12	$27	$6	$45
Labor market earnings associated with high school graduation	$392	$178	$179	$59	$807
K-12 grade repetition	$0	$4	$0	$2	$5
K-12 special education	$0	$71	$0	$36	$106
Health care associated with disruptive behavior disorder	$34	$104	$128	$52	$318
Costs of higher education	($27)	($18)	($8)	($9)	($62)
Subtotals	$399	$350	$325	$145	$1,219
From secondary participant					
Labor market earnings associated with major depression	$862	$392	$0	$7	$1,261
Health care associated with major depression	$35	$108	$133	$53	$330
Subtotals	$897	$499	$133	$61	$1,591
Adjustment for deadweight cost of program	$0	$0	$0	($657)	($657)
Totals	$1,296	$849	$459	($451)	$2,153

[1]In addition to the outcomes measured in the meta-analysis table, WSIPP measures benefits and costs estimated from other outcomes associated with those reported in the evaluation literature. For example, empirical research demonstrates that high school graduation leads to reduced crime. These associated measures provide a more complete picture of the detailed costs and benefits of the program.

[2]"Others" includes benefits to people other than taxpayers and participants. Depending on the program, it could include reductions in crime victimization, the economic benefits from a more educated workforce, and the benefits from employer-paid health insurance.

[3]"Indirect benefits" includes estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

Detailed Annual Cost Estimates Per Participant

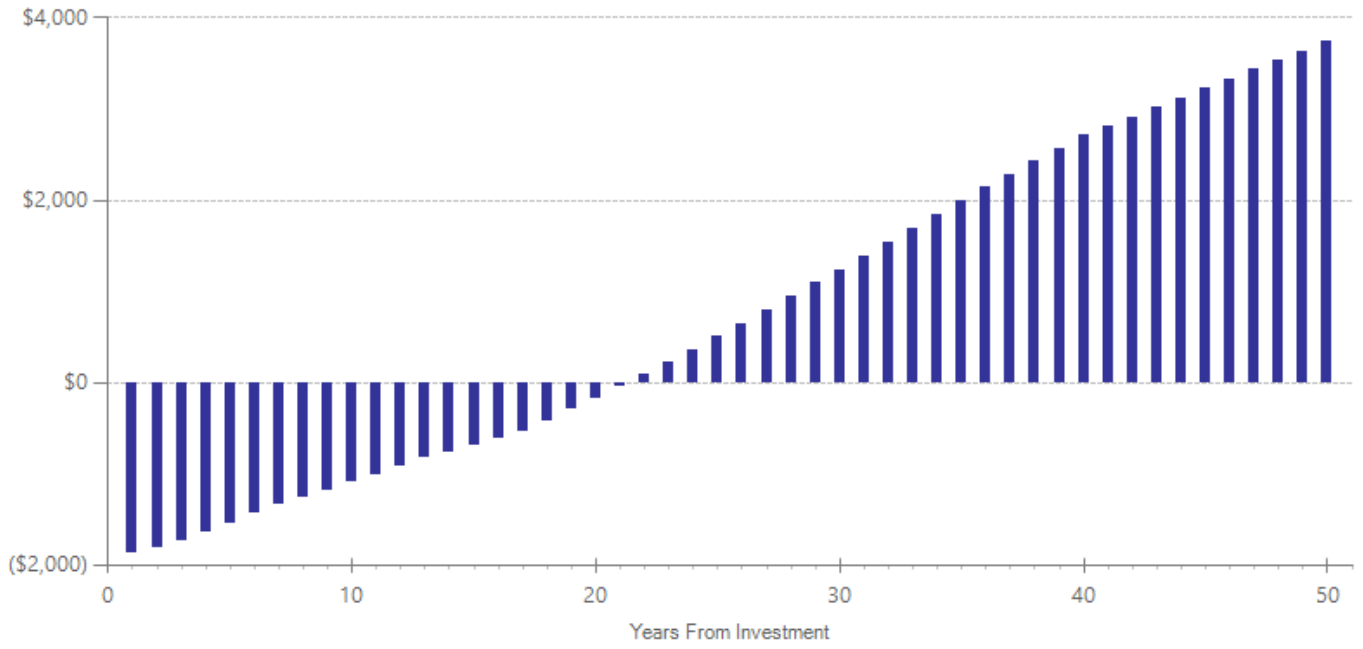
	Annual cost	Year dollars	Summary	
Program costs	$2,215	2013	Present value of net program costs (in 2015 dollars)	($1,305)
Comparison costs	$881	2010	Cost range (+ or -)	10 %

This intervention typically takes place over 12 to 16 weekly sessions. The costs to administer parent training classes per family were provided by Washington State DSHS Children's Administration, 2012. WSIPP also added costs for practitioner training and curriculum for the parent classes, based on the findings of Foster et al., 2007 (training and curricula costs are low on a per-family basis, as curricula are shared between practitioners and distributed across many families who receive the intervention). Based on personal communication with Lisa St. George from Incredible Years (June 2014), we assumed that a practitioner team might use their purchased training and curricula to serve 24 families per year on average, for about five years (120 families served per team).

Foster, E.M., Olchowski, A.E., & Webster-Stratton, C.H. (2007). Is stacking intervention components cost-effective? An analysis of the Incredible Years program. *Journal of the American Academy of Child and Adolescent Psychiatry, 46*(11).

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 cost range reported above reflects potential variation or uncertainty in the cost estimate; more detail can be found in our Technical Documentation.

Detailed Annual Cost Estimates Per Participant



The graph above illustrates the estimated cumulative net benefits per-participant for the first fifty years beyond the initial investment in the program. We present these cash flows in non-discounted dollars to simplify the "break-even" point from a budgeting perspective. If the dollars are negative (bars below $0 line), the cumulative benefits do not outweigh the cost of the program up to that point in time. The program breaks even when the dollars reach $0. At this point, the total benefits to participants, taxpayers, and others, are equal to the cost of the program. If the dollars are above $0, the benefits of the program exceed the initial investment.

Meta-Analysis of Program Effects

Outcomes measured	Primary or secondary participant	No. of effect sizes	Treatment N	Adjusted effect sizes and standard errors used in the benefit-cost analysis						Unadjusted effect size (random effects model)	
				First time ES is estimated			Second time ES is estimated				
				ES	SE	Age	ES	SE	Age	ES	p-value
Disruptive behavior disorder symptoms	Primary	17	1280	-0.126	0.047	6	-0.060	0.035	9	-0.452	0.001
Major depressive disorder	Secondary	4	210	-0.094	0.160	26	-0.049	0.195	27	-0.094	0.557
Attention deficit hyperactivity disorder symptoms	Primary	1	50	-0.220	0.234	6	-0.001	0.015	7	-0.595	0.013
Internalizing symptoms	Primary	3	187	-0.103	0.116	6	-0.075	0.095	8	-0.348	0.003
Parental stress	Secondary	4	202	-0.407	0.168	26	-0.212	0.206	27	-0.605	0.016

Meta-analysis is a statistical method to combine the results from separate studies on a program, policy, or topic in order to estimate its effect on an outcome. WSIPP systematically evaluates all credible evaluations we can locate on each topic. The outcomes measured are the types of program impacts that were measured in the research literature (for example, crime or educational attainment). Treatment N represents the total number of individuals or units in the treatment group across the included studies.

An effect size (ES) is a standard metric that summarizes the degree to which a program or policy affects a measured outcome. If the effect size is positive, the outcome increases. If the effect size is negative, the outcome decreases.

Adjusted effect sizes are used to calculate the benefits from our benefit cost model. WSIPP may adjust effect sizes based on methodological characteristics of the study. For example, we may adjust effect sizes when a study has a weak research design or when the program developer is involved in the research. The magnitude of these adjustments varies depending on the topic area.

WSIPP may also adjust the second ES measurement. Research shows the magnitude of some effect sizes decrease over time. For those effect sizes, we estimate outcome-based adjustments which we apply between the first time ES is estimated and the second time ES is estimated. We also report the unadjusted effect size to show the effect sizes before any adjustments have been made. More details about these adjustments can be found in our Technical Documentation.

Citations Used in the Meta-Analysis

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