Parenting with Love and Limits (PLL) for court-involved/post-release youth

Juvenile Justice

Benefit-cost estimates updated December 2019. Literature review updated July 2019.

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: Parenting with Love and Limits (PLL) is a therapeutic community intervention for families of children with serious emotional or behavioral problems including aggression, conduct disorders, chronic truancy, drug or alcohol abuse, trauma, or anxiety and depression. PLL is designed for youth ages 10 to 18 in the juvenile justice, child welfare, or mental health systems who are at risk of being placed outside the home (e.g., detention, foster care). PLL includes individual therapy for the youth, parent training sessions, and family therapy. Unlike other family therapies, PLL relies on a multiple family group approach with four to six families in a group setting and two co-facilitators for six to eight weeks of parenting training. In addition to group therapy, the youth and parent participate in 4 to 12 family therapy sessions approximately two hours each.

In this review of PLL delivered within the juvenile justice setting, most studies examined court-involved youth who received PLL as an alternative placement from confinement, and one study examined PLL as reentry into the community. Youth were assessed as moderate to high risk for recidivism. Youth received services over 6.5 months on average. Court-involved youth received four treatment sessions per month over 2.5 months of service on average, while post-release youth received services over an average of 12 months on supervision. Among included studies that report demographics, 65% of participants were youth of color and 21% were female. PLL youth were compared to youth who received probation as usual and mental health services as usual.

Benefit-Cost Summary Statistics Per Participant

Benefits to:

Taxpayers	$7,519
Participants	$1,442
Others	$17,288
Indirect	$4,767
Total benefits	$31,016
Net program cost	$2,732
Benefits minus cost	$33,748

Benefit to cost ratio	n/a
Benefits minus costs	$33,748
Chance the program will produce benefits greater than the costs	100 %

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2018). 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	$6,962	$16,429	$3,481	$26,872
Labor market earnings associated with high school graduation	$1,684	$717	$932	$0	$3,333
Costs of higher education	($242)	($160)	($73)	($80)	($555)
Adjustment for deadweight cost of program	$0	$0	$0	$1,366	$1,366
Totals	$1,442	$7,519	$17,288	$4,767	$31,016

[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.

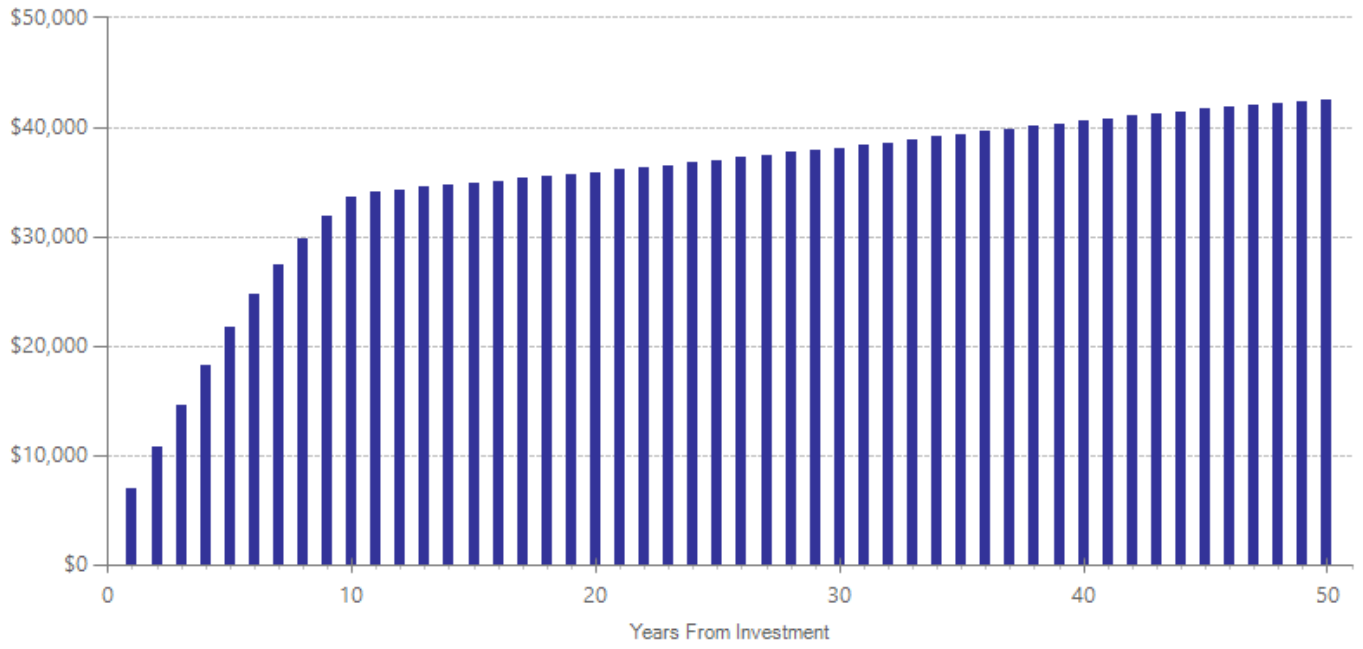
Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$2,769	2015	Present value of net program costs (in 2018 dollars)	$2,732
Comparison costs	$5,372	2015	Cost range (+ or -)	20 %

To estimate treatment group costs, the per-participant cost for Parenting with Love and Limits (PLL) is based on the cost of PLL in Idaho, as described in Sterrett-Hong, E.M., Karam, E., & Kiaer, L. (2017). Statewide implementation of Parenting with Love and Limits among youth with co-existing internalizing and externalizing functional impairments reduces return to service rates and treatment costs. Administration and Policy in Mental Health and Mental Health Services Research, 44(5), 792-809. To estimate comparison group cost, the per-participant cost of treatment as usual is based on the average cost of clinic-based therapy and intensive community-based therapy reported in Sterrett-Hong et al. (2017). The comparison group also incurs a cost of confinement since youth are placed outside the home in detention (in lieu of PLL). The cost of confinement was estimated by applying the average length of stay in detention (9.8 days) for Washington's detention population to the marginal operating cost for detention using WSIPP estimates from Washington State Institute for Public Policy. (December 2018). Benefit-cost technical documentation. Olympia, WA: Author. The cost of confinement was proportionately applied to reflect the meta-analysis wherein approximately half the total sample was confined.

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	Treatment age	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
Crime	16	3	327	-0.326	0.123	17	-0.326	0.123	25	-0.326	0.008
Externalizing behavior symptoms^^	16	1	19	-0.721	0.360	16	n/a	n/a	n/a	-0.721	0.045
Internalizing symptoms^^	16	1	19	-0.772	0.361	16	n/a	n/a	n/a	-0.772	0.032

^^WSIPP does not include this outcome when conducting benefit-cost analysis for this program.

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

Early, K.W., Chapman, S.F., & Hand, G.A. (2013). Family-focused juvenile reentry services: A quasi-experimental design evaluation of recidivism outcomes. *OJJDP Journal of Juvenile Justice, 2*(2), 1-22.

Karam, E.A., Sterrett, E.M., & Kiaer, L. (2015). The integration of family and group therapy as an alternative to juvenile incarceration: A quasi-experimental evaluation using Parenting with Love and Limits. *Family Process,56*(2), 331-347.

Sells, S.P., Early, K.W., & Smith, T.E. (2011). Reducing adolescent oppositional and conduct disorders: An experimental design using the Parenting with Love and Limits model. *Professional Issues in Criminal Justice, 6*(3-4), 9-30.

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