Multisystemic Therapy

Program description:

Multisystemic Therapy (MST) is an intensive in-home program, which promotes the parent's ability to monitor and discipline their children and replace deviant peer relationships with pro-social friendships. In the juvenile justice setting, MST is designed for violent and chronic offenders. In our analysis, we only include effect sizes from programs that were delivered competently and with fidelity to the program model.

Typical age of primary program participant: 15

Typical age of secondary program participant: N/A

Meta-Analysis of Program Effects

Outcomes Measured	Primary or Second-ary Partici-pant	No. of Effect Sizes	Unadjusted Effect Sizes (Random Effects Model)			Adjusted Effect Sizes and Standard Errors Used in the Benefit-Cost Analysis					
						First time ES is estimated			Second time ES is estimated		
			ES	SE	p-value	ES	SE	Age	ES	SE	Age
Crime	P	11	-0.43	0.11	0.00	-0.20	0.11	16	-0.20	0.11	26

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
	$2,676	$7,138	$18,808	$3,499	$32,121	-$7,370	$4.36	38%	$24,751	98%

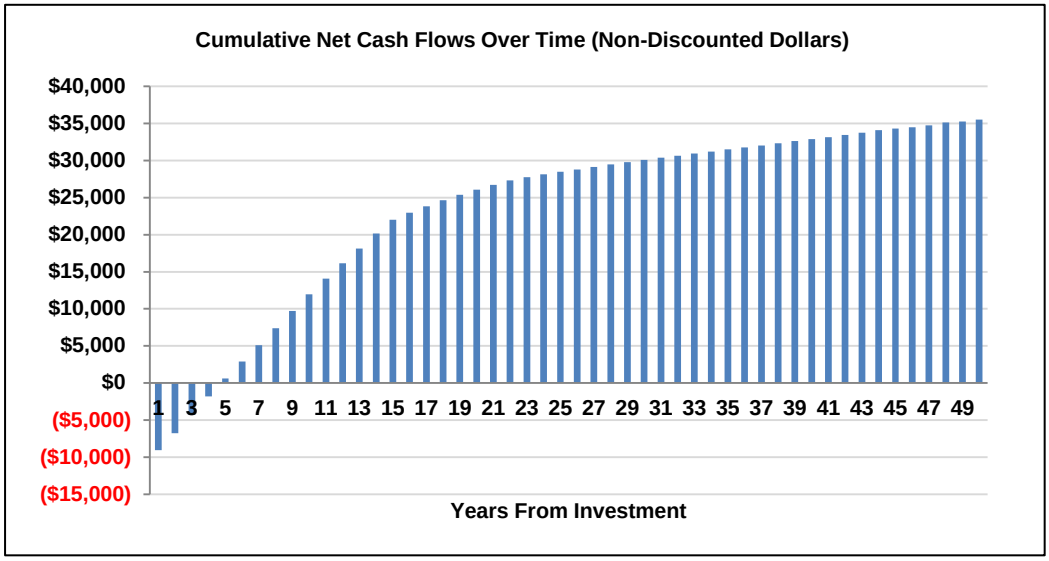
Detailed Monetary Benefit Estimates

Source of Benefits	Benefits to: Partici-pants	Tax-payers	Other	Other In-direct	Total Benefits
Crime	$0	$5,764	$19,087	$2,823	$27,674
Earnings via high school graduation	$2,724	$1,002	$0	$492	$4,218
Health care costs via education	-$48	$372	-$279	$183	$228

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 – %)
	$7,076	1	2008	$0	1	2008	$7,368	10%

Source: Barnoski, R. (2009, December). Providing evidence-based programs with fidelity in Washington State juvenile courts: Cost analysis (Document No. 09-12-1201). Olympia: Washington State Institute for Public Policy.



Multiplicative Adjustments Applied to the Meta-Analysis

Type of Adjustment	Multiplier
1- Less well-implemented comparison group or observational study, with some covariates.	1.00
2- Well-implemented comparison group design, often with many statistical controls.	1.00
3- Well-done observational study with many statistical controls (e.g., instrumental variables).	1.00
4- Random assignment, with some implementation issues.	1.00
5- Well-done random assignment study.	1.00
Program developer = researcher	0.36
Unusual (not “real-world”) setting	0.50
Weak measurement used	0.80

The adjustment factors for these studies are based on our empirical knowledge of the research in a topic area. We performed a multivariate regression analysis of 96 effect sizes from evaluations of adult and juvenile justice programs. The analysis examined the relative magnitude of effect sizes for studies rated a 1, 2, 3, or 4 for research design quality, in comparison with a 5 (see Technical Appendix B 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, 2, and 3 should have a multiplier greater than 1 and research design 4 should have a multiplier of approximately 1. Using a conservative approach, we set all the multipliers to 1.

In this analysis, we also found that effect sizes were statistically significantly higher when the program developer was involved in the research evaluation. Similar findings, although not statistically significant, indicated that studies using weak outcome measures (such as technical violations) were higher.

Studies Used in the Meta-Analysis

Borduin, C. M., Henggeler, S. W., Blaske, D. M., & Stein, R. (1990). Multisystemic treatment of adolescent sexual offenders. *International Journal of Offender Therapy and Comparative Criminology, 35*(2), 105-113.

Borduin, C. M., Schaeffer, C. M., & Heiblum, N. (2009). A randomized clinical trial of multisystemic therapy with juvenile sexual offenders: Effects on youth social ecology and criminal activity. *Journal of Consulting and Clinical Psychology,* 77(1), 26-37.

Butler, S., Fonagy, P., Baruch, G., & Hickey, N. (2011). A randomized controlled trial of multisystemic therapy and a statutory therapeutic intervention for young offenders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 50, 12, 1220-1235.

Centre for Children and Families in the Justice System. (2006). *Randomized study of MST in Ontario, Canada: Final results*. Retrieved June 23, 2011 from http://www.lfcc.on.ca/mst_final_results.html

Henggeler, S. W., Clingempeel, W. G., Brondino, M. J., & Pickrel, S. G. (2002). Four-year follow-up of multisystemic therapy with substance-abusing and substance-dependent juvenile offenders. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*(7), 868-874.

Henggeler, S. W., Halliday-Boykins, C. A., Cunningham, P. B., Randall, J., Shapiro, S. B, & Chapman, J. E. (2006). Juvenile drug court: Enhancing outcomes by integrating evidence-based treatments. *Journal of Consulting and Clinical Psychology, 74*(1), 42-54.

Henggeler, S. W., Melton, G. B., Brondino, M. J., Scherer, D. G., & Hanley, J. H. (1997). Multisystemic therapy with violent and chronic juvenile offenders and their families: The role of treatment fidelity in successful dissemination. *Journal of Consulting and Clinical Psychology, 65*(5), 821-833.

Henggeler, S. W., Melton, G. B., Smith, L. A., Schoenwald, S. K., & Hanley, J. H. (1993). Family preservation using multisystemic therapy: Long-term follow-up to a clinical trial with serious juvenile offenders. *Journal of Child and Family Studies, 2*(4), 283-293.

Letourneau, E. J., Henggeler, S. W., Borduin, C. M., Schewe, P. A., McCart, M. R., Chapman, J. E., & Saldana, L. (2009). Multisystemic therapy for juvenile sexual offenders: 1-year results from a randomized effectiveness trial. *Journal of Family Psychology, 23*(1), 89-102.

Studies Used in the Meta-Analysis

Schaeffer, C. M., & Borduin, C. M. (2005). Long-term follow-up to a randomized clinical trial of multisystemic therapy with serious and violent juvenile offenders. *Journal of Consulting and Clinical Psychology, 73*(3), 445-453.

Timmons-Mitchell, J., Bender, M. B., Kishna, M. A., & Mitchell, C. C. (2006). An independent effectiveness trial of multisystemic therapy with juvenile justice youth. *Journal of Clinical Child and Adolescent Psychology, 35*(2), 227-236.