

Individual Cognitive Behavioral Therapy (CBT) for Anxious Children

Program description:

Treatments usually include multiple components, such as somatic management, cognitive restructuring and self-talk, exposure to feared stimuli, and positive reinforcement. This brief therapy can be administered in individual, group, or family format; well-known examples include the Coping Cat and Coping Koala programs. The results below are those from individual formats.

Typical age of primary program participant: 11

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
Anxiety disorder	P	9	-0.73	0.18	0.00	-0.28	0.18	11	-0.12	0.08	16

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				Total Benefits	Costs	Summary Statistics			
	Partici-pants	Tax-payers	Other	Other Indirect			Benefit to Cost Ratio	Return on Investment	Benefits Minus Costs	Probability of a positive net present value
		\$2,839	\$2,170	\$1,261	\$1,066	\$7,337	-\$734	\$10.00	16%	\$6,603

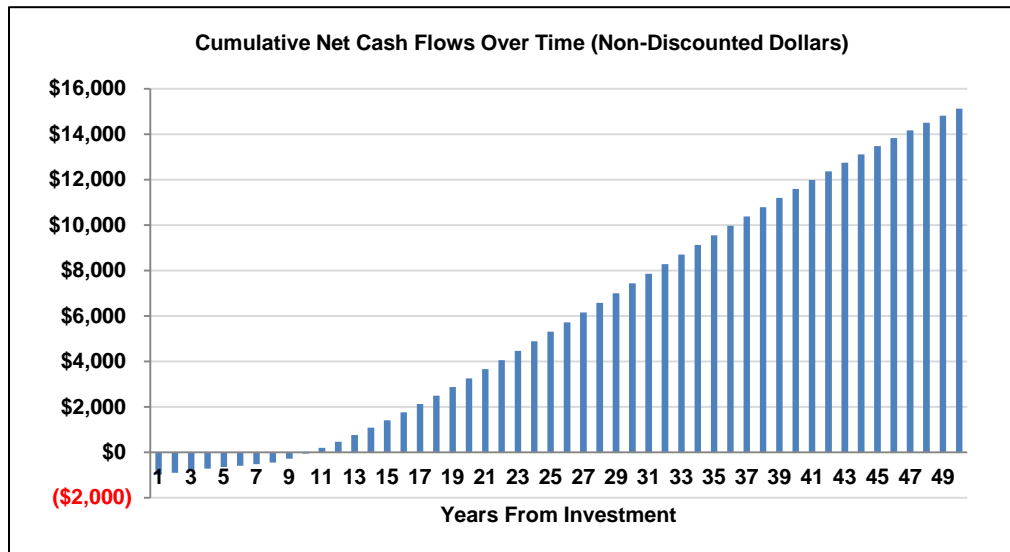
Detailed Monetary Benefit Estimates

Source of Benefits	Benefits to:					Total Benefits
	Partici-pants	Tax-payers	Other	In-direct	Other	
Earnings via anxiety disorder		\$2,415	\$889	\$0	\$435	\$3,739
Health care costs for anxiety disorder		\$424	\$1,282	\$1,261	\$631	\$3,598

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 - %)
		\$1,661	1	2010	\$943	1	2010	\$734

Source: Based on therapist time, as reported in the treatment studies, as well as training costs and a flat fee for materials (e.g., manuals). Hourly therapist cost is based on the latest actuarial estimates of reimbursement by modality in WA State (DSHS).



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., IV, regression discontinuity).	1.00
4- Random assignment, with some RA implementation issues.	1.00
5- Well-done random assignment study.	1.00
Program developer = researcher	0.42
Unusual (not "real world") setting	1.00
Weak measurement used	1.00

Adjustment factors were generated by examining studies for the treatment of children or adolescents with internalizing problems. Because weak measurement and unusual setting designations were extremely rare among these studies, no discounts were assigned. Meta-regressions were conducted to test for the impact of different methodological factors on unadjusted effect size. Dummy variables for research design were not significant, indicating that this factor did not impact effect sizes. However, the involvement of program developers in the research was a significant predictor of effect size ($B = -.482, p = .077$), suggesting that such studies have more negative (i.e., larger) effect sizes than studies in which the developer is not involved in the evaluation. The regression coefficient was used to generate the 0.42 multiplier.

Additional Notes

Some studies included in this analysis compared the program (CBT) to control conditions that did not consist of an active treatment. Because policymakers in Washington are interested in the impact of this program above and beyond currently implemented treatments (i.e., treatment as usual), we reduced the effect size of studies utilizing a no treatment or waitlist control group in half to reflect a smaller impact that would be expected if these studies compared CBT to treatment as usual.

We conducted a meta-regression to test for differences among various formats of CBT for anxious children (remote, individual, group, and parent CBT). The results showed that there were no statistically significant differences in the effect of various formats of CBT on anxiety. These treatments are presented separately, however, because each format is associated with a different program cost.

Head-to-head studies comparing one format of CBT to another were meta-analyzed. There were no differences between individual and group CBT, family and child CBT, and child versus child plus parent CBT. This suggests that all formats are equally efficacious in alleviating anxiety.

Studies Used in the Meta-Analysis

Barrett, P. M., Dadds, M. R., & Rapee, R. M. (1996). Family treatment of childhood anxiety: A controlled trial. *Journal of Consulting and Clinical Psychology, 64*(2), 333-342.

Flannery-Schroeder, E. D., & Kendall, P. C. (2000). Group and individual cognitive-behavioral treatments for youth with anxiety disorders: A randomized

Studies Used in the Meta-Analysis

- clinical trial. *Cognitive Therapy and Research*, 24(3), 251-278.
- Kendall, P. C., Flannery-Schroeder, E., Panichelli-Mindel, S. M., Southam-Gerow, H., Henin, A., & Warman, M. (1997). Therapy for youths with anxiety disorders: A second randomized clinical trial. *Journal of Consulting and Clinical Psychology*, 65(3), 366-380.
- Kendall, P. C., Hudson, J. L., Gosch, E., Flannery-Schroeder, E., & Suveg, C. (2008). Cognitive-behavioral therapy for anxiety disordered youth: A randomized clinical trial evaluating child and family modalities. *Journal of Consulting and Clinical Psychology*, 76(2), 282-297.
- Kendall, P. C. (1994). Treating anxiety disorders in children: Results of a randomized clinical trial. *Journal of Consulting and Clinical Psychology*, 62(1), 100-110.
- Nauta, M. H., Scholing, A., Emmelkamp, P. M. G., & Minderaa, R. B. (2003). Cognitive-behavioral therapy for children with anxiety disorders in a clinical setting: No additional effect of a cognitive parent training. *Journal of the American Academy of Child & Adolescent Psychiatry*, 42(11), 1270-1278.
- Southam-Gerow, M. A., McLeod, B. D., Weisz, J. R., Chu, B. C., Gordis, E. B., & Connor-Smith, J. K. (2010). Does cognitive behavioral therapy for youth anxiety outperform usual care in community clinics? An initial effectiveness test. *Journal of the American Academy of Child & Adolescent Psychiatry*, 49(10), 1043-1052.
- Walkup, J. T., Albano, A. M., Piacentini, J., Birmaher, B., Compton, S. N., Sherrill, J. T., . . . Kendall, P. C. (2008). Cognitive behavioral therapy, sertraline, or a combination in childhood anxiety. *The New England Journal of Medicine*, 359(26), 2753-2766.