

Cognitive Behavioral Therapy (CBT) for Adult Depression

Program description:

Cognitive-behavioral therapies include various components, such as cognitive restructuring, behavioral activation, emotion regulation, communication skills, and problem-solving. Treatment is goal-oriented and generally of limited duration. Most commonly, studies offering this treatment provided 10-20 therapeutic hours per client in individual or group modality.

Typical age of primary program participant: 35

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
Major depressive disorder	P	44	-0.66	0.08	0.00	-0.44	0.08	37	-0.15	0.03	39

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
	\$5,992	\$4,619	\$2,705	\$2,316	\$15,632	-\$227	\$68.90	n/e	\$15,405	100%

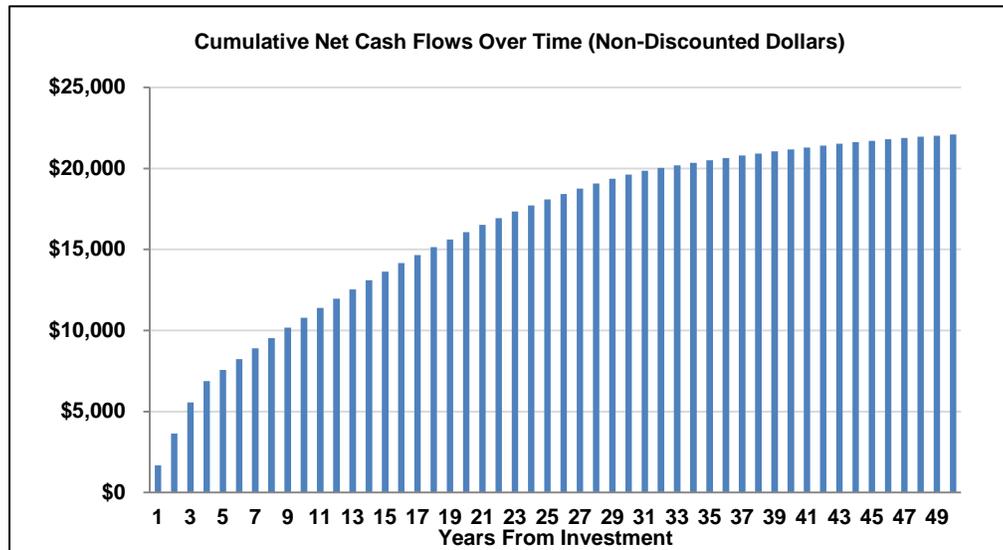
Detailed Monetary Benefit Estimates

Source of Benefits	Benefits to:					Total Benefits
	Partici-pants	Tax-payers	Other	Other In-direct		
From Primary Participant						
Earnings via depressive disorder		\$5,082	\$1,870	\$0	\$958	\$7,911
Health care costs via depressive disorder		\$910	\$2,749	\$2,704	\$1,357	\$7,721

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 - %)
	\$890	1	2008	\$672	1	2008	\$227	10%

Source: Based on therapist time as reported in the studies, multiplied by reported DSHS reimbursement rates.



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	0.74
Unusual (not "real world") setting	0.50
Weak measurement used	0.50

The multiplicative adjustments for these studies are based on our empirical knowledge of the research in a topic area. We performed a multivariate meta-regression analysis of 74 effect sizes from evaluations of cognitive-behavioral therapy for depression or anxiety. 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 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, 2, and 3 should have a multiplier of approximately 1 and research design 4 should have a multiplier of greater than 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 authors were also the program developer or were also the therapists. Based on regression results, we set the multiplier at 0.74. Regression results also indicated that among studies of CBT for depression and anxiety, effect sizes were significantly greater when the comparison group was a wait-list, rather than attention or active treatment. We applied a multiplier of 0.40 to studies with wait-list comparison groups.

Studies Used in the Meta-Analysis

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