The Cost-Effectiveness of Intensive Short-Term Dynamic Psychotherapy

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CME EDUCATIONAL OBJECTIVES

1. Expose the reader to various sources of health care costs and diagnoses responsible for these.
2. Review the evidence for multiple categories of cost reduction for intensive short-term dynamic psychotherapy (ISTDP).
3. Review the return-to-work rates for patients receiving ISTDP treatment.

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The health care burden of chronic disability, with mental illness and somatic symptom disorders leading the way, is crippling to global economies.[1] In the recent JAMA report by the U.S. Burden of Disease Collaborators, the top diseases with the largest number of years lived with disability in 2010 were low back pain, major depressive disorder, other musculoskeletal disorders, neck pain, and anxiety disorders. Migraine, drug use, alcohol use and dysthymia were also in the top 20. The authors noted that half of the health system cost is due to disability and morbidity.[1]

Based on extensive research during the past 20 years, psychotherapy is now acknowledged to be an effective and cost-effective treatment for a broad range of conditions.[2] Given evidence that psychotherapy is beneficial, the relative cost of treatment has become an important consideration in clinical decision making.[3] With this in mind, the shorter and less expensive a psychotherapy model can be while retaining effectiveness, the greater the effect it can have on widespread health system costs.

Based on long wait lists and wait times for long-term psychotherapy in public clinics, **Habib Davanloo, MD,** of McGill University developed his method of intensive short-term dynamic psychotherapy (ISTDP) between the 1970s and 2000s.[4] Thus, two major reasons for this development were to improve service access and to reduce service cost per patient in publically funded Canadian medicine.

ISTDP is a brief treatment designed to achieve broad-based gains across symptoms and personality difficulties. At its core, the objective of ISTDP is to help patients overcome emotional blocks that lead to occupational disability, somatic symptoms, depression, anxiety, and self-defeating behaviors. The method includes a specialized series of interventions designed to overcome high levels of resistance, low levels of emotional tolerance (depression, somatization, conversion), and dissociation (fragile character structure). ISTDP has been

TABLE 1.

Study Description and Reported Cost Reductions After ISTDP Treatment

Sample	*n*	Number of Sessions	Control	Reference Time Period	Cost Domains Included	Total Cost Reduction Per ISTDP-Treated Patient
Panic disorder[13]	40	15	Clomipramine alone. Randomized.	18-month follow-up after stopping clomipramine	Medication use rates only	–
Mixed sample[8]	166	16.9	Wait list. Non-randomized.	Before vs. 1.75-year passive follow-up	Medication use, disability rates	–
Mixed sample[6*]	89	14.9	–	1-2 years post vs. 1 year pre	Hospital costs, physician costs, medication costs, disability costs	$6,202
Personality disorders[9]	93	Up to 6 months	–	2 years post vs. 1 year pre	Hospital costs, physician costs, health professionals cost. Utilization rates only	–
Mixed sample[11†]	88	14.9	–	3 years follow-up vs. projections	Hospital costs, physician costs	$1,827
Treatment-resistant depression[14]	10	13.6	–	6 months post vs. 6 months pre	Hospital costs, medication costs, disability costs	$5,688
Chronic headache[7*]	29	19.7	–	1 year post vs. 1 year pre	Medication costs, disability costs	$7,009
Personality disorder[15]	27	27.7	Randomized wait list	2 years post vs. 1 year pre	Medication costs, disability costs	$10,148
Mixed sample. Trial therapy[16]	30	1	–	Pre vs 1 month post	Employment rate, medication use only	–
Medically unexplained symptoms[17,18]	50	3.8	Non-randomized. Patients referred but not seen	1 year post vs. 1 year pre	Medical (emergency) visits and costs	$910
Personality disorder[10§]	155	Up to 6 months	–	10 years post vs. 1 year pre	Employment rates only	–
Psychiatry inpatients[12]	33	9.0	Other psychiatric ward. Non-randomized.	1 year post vs. 1 year pre	Electroconvulsive therapy costs	$1,400[‡]
Mixed sample[19]	140	9.9	–	3 years post vs. 1 year pre	Physician costs, hospital costs	$3,773

**Subsample of Abbass.[6]*

†Extension of Abbass.[6]

‡Based on estimated cost of $1,000 per electroconvulsive therapy service.

§Sample partially overlaps with Cornelissen,[9] counted as 26 sessions.

ISTDP = intensive short-term dynamic psychotherapy.

studied empirically with evidence supporting its effectiveness across the range of conditions described above, including anxiety, depression, back pain, headache, and chronic pain, as well as other conditions such as personality disorders.[5]

Because it is a brief model of therapy, averaging fewer than 20 sessions in published studies, one would expect it to be more cost-effective when compared to longer treatments. Since it addresses characterological problems and treatment resistance as well as symptoms, ISTDP may also prove cost-effective relative to treatments that focus on only one component of the patient's problem.

In this article, available published studies that evaluate ISTDP's effects on

TABLE 2.

Medication Use and Cost Reduction

Study Sample	Number of Medications Stopped per Medicated Patient	Percent of All Medication Stopped	Percent of Cases Stopping all Medications	Medication Cost Reduction per Medicated Patient
Panic disorder[13]	≥ 0.80	80%	80%	–
Mixed sample[8]	–	–	69%	–
Mixed sample[6]	0.83	71%	–	$454/year
Treatment-resistant depression[14]	1.4	56%	30%	$880 / 6 months
Chronic headache[7]	0.83	65.2%	–	$360/year
Personality disorder[15]	1.1	74%		$540 / 2 years
Mixed sample: trial therapy[16]	0.55	–	35%*	–

**Response to single trial therapy session.*

health service costs, disability costs, and medication costs are reviewed.

CURRENT STATE OF COST-EFFECTIVENESS EVIDENCE

In 2012, we published a review of all the available outcome studies of ISTDP retrieved through a broad literature search.[5] This search was repeated in April 2013. Each of these articles was scanned for any notation of cost and service use measurement. All such measures were tabulated.

These data were tabulated and reviewed in terms of total cost-benefits and then again separately by health service use, medication use, and employment/disability costs.

OVERALL COST-EFFECTIVENESS

A total of 13 studies included cost-bearing measures. Treatments ranged from an average of one session to 27.7 sessions and averaged 15.3 (SD 8.2) sessions overall. Two articles[6, 7] included a sub-sample of Abbass, 2002a;[8] one was an extension of Cornelissen et al, 2002,[9] with a larger sample and longer follow-up,[10] and the other involved a follow-up evaluation from an earlier study.[11] Three studies included inpatients in an acute care hospital[12] or residential treatment facility,[9,10] whereas the remainder involved outpatient samples.[13-19] In all, the studies included two randomized, controlled trials[13,15] and three non-randomized, controlled trials.[8,12,17] The remainder were case series.

These publications included five studies of mixed psychiatric samples, three of personality disorders, one of treatment resistant depression, one of panic disorder, one of chronic headache and one of medically unexplained symptoms. A further study published in this volume examined the cost-effectiveness of ISTDP provided by psychiatry residents. The mixed samples included patients with most DSM-IV diagnostic groups, including major depression, anxiety disorders, substance-use disorders, bipolar disorder, dissociative disorders, eating disorders, and psychotic disorders. Thus, the studies combined reflect the broad utility of this method in clinical practice (see Table 1, page 497).

Data reported in the studies included different outcome domains of health care use, medication use, and disability costs. Data were not reported in a uniform fashion between studies and had varying follow-up periods. The cost reductions reported ranged from $910 counting only emergency visit cost reduction over 1 year of follow-up to $10,148 per patient counting disability cost and medication cost reduction over 2 years of follow-up (see Table 1, page 497).

MEDICATION USE AND COST

Seven studies included medication use and cost measures (see Table 2). These included studies of panic disorder, headache, treatment-resistant depression, personality disorder, and mixed disorders. The mean number of medications reduced per medicated patient was 0.92 (SD .29) medications. The mean percent of these patients stopping all medications was 59.7%, including those provided only one session of treatment, and increased to 74.5% when excluding this group. The mean cost reduction in the follow-up intervals was $558.5 (SD 226).

HEALTH SERVICE USE AND COST REDUCTION

Six studies included measures of health service use and costs. Three studies reported reductions in hospital use. Two showed modest reductions in physician use. One reported reductions in combined hospital and physician costs. One showed a 69% reduction in repeat emergency visits in patients with medically unexplained symptoms, whereas another showed a nearly two-thirds reduction in electroconvulsive therapy (ECT) use. These last two studies included naturalistic, non-randomized control patients who did not experience any such service use reduction (see Table 3, page 499).

TABLE 3.

Health Service Use and Cost

Study Sample	Hospital Use Reduction	Hospital Cost Reduction	Physician Service Use Reduction	Physician Costs	Health Service	Health Service Cost Reduction	Total Health Care Cost Reduction Per Treated Case
Mixed sample[6]	85%	$338/ 1 year	33%	$206/ 1 year	–	–	$544/ 1 year
Personality disorder[9]	2% had psychiatric hospitalization vs. 20.9% before	–	18% saw psychiatrist/ psychologist vs. 27.5% before 8% saw general practitioner vs. 4.4% before	–	30% had outpatient psychotherapy vs. 39.6% before	–	–
Mixed sample[11]	–	–	–	–	–	–	$ 1,827/ 3 years
Treatment-resistant depression[14]	–	$1,440/ 6 months	–	–	–	–	$1,440/ 6 months
Medically unexplained symptoms[17, 18]	–	–	–	–	69% reduction in emergency department visits	$910/ 1 year	$910/ 1 year
Psychiatry inpatients[12]	-	–	–	–	65.2% drop in ECT services	$1,400/ 1 year	$1,400/ 1 year
Mixed sample[19]	-	$3,084/ 3 years	–	$393/ 3 years	–	–	$3,733/ 3 years

EMPLOYMENT RATES AND REDUCED COST OF DISABILITY

Seven studies reported changes in employment status and/or disability costs (see Table 4, page 500). Patients in these samples were disabled for a long period of time, averaging 67.2 weeks out of work. Overall, there were large cost reductions owed to high return-to-work rates. Between-study average rates of return to work were 68.4% when including a study of single-session trial therapies and 77.4% when not including this study. Cost reductions ranged from $6,720 per patient during a follow-up period of 6 months to $28,114 per patient during a 1-year follow-up period.

COST OUTCOME BY THERAPEUTIC WORK

The therapeutic objective of ISTDP is to facilitate an emotional healing process by allying with an individual's natural drive toward health to confront self-destructive psychological defenses and anxiety. Through this process, complex feelings are mobilized and experienced, overcoming anxiety and defenses against these feelings. This triggering event brings images and linkages to unprocessed pathogenic emotions. All of this is a process Davanloo[4] and several of his patients called "unlocking the unconscious." The degree of unlocking, or dominance of therapeutic forces over defenses, has been studied in relation to cost-effectiveness in two studies. In Town et al,[20] patients with at least one high-level unlocking, called major unlocking, during treatment had significantly greater health care cost reductions. Abbass[8] found those with major unlockings had greater rates of return to work [(100% (14/14) versus 50% (4/8)] and cessation of all medications [(92.6 (25/27) versus 37.5% (6/16)] versus those without major unlockings.

COSTS OF PROVIDING ISTDP

To consider cost-effectiveness, we must consider the costs of providing the treatment. Six studies noted an average therapy cost of $1,471 for treatment averaging 13.1 sessions (see Table 5, page 500).

DISCUSSION

This mixed set of studies with diverse samples provides further data that ISTDP is a cost-effective treatment. Large cost reductions compared favorably with relatively low cost estimates of $1,471 per treated case. It is of further interest to see cost reductions correlating with what is considered the key therapeutic ingredient of ISTDP, emotional experiencing.[8,20] This adds further data to the notion that emotional

TABLE 4.

Employment Rates and Reduced Cost of Disability

Sample	Total Number Unemployed	Duration Off Work Pre-ISTDP (In Weeks)	Rate of Return to Work	Total Cost Reduction Per Treated Unemployed Patient
Mixed sample[8]	31	113.1	80.6	–
Mixed sample[6]	22	53.3	81.2	$21,899 / 1 year
Treatment-resistant depression[14]	5	104	80	$6,720 / 6 months
Chronic headache[7]	7	54	100	$28,114 / 1 year
Personality disorder[15]	10	63.6	90	$25,920 / 2 years
Mixed sample. Trial therapy[16]	14	15	14.3*	–
Personality disorder[10]	97	–	32.7	–

** Response to single session trial therapy interview.*

ISTDP = intensive short-term dynamic psychotherapy.

TABLE 5.

Costs of ISTDP Treatment

Study	Number of Sessions	Setting	Cost Estimate Per Case
Mixed sample[6]	14.9	Private psychiatric office	$ 1,680
Personality disorder[15]	27.7	Public and private offices	$ 3,370
Medically unexplained symptoms[17]	3.8	Hospital clinic	$ 404
Psychiatric inpatients[12]	9.0	Hospital clinic	~ $1,400
Mixed sample[19]	9.9	Hospital clinic	~ $500
Unweighted means	13.1	–	$ 1,471

ISTDP = intensive short-term dynamic psychotherapy.

processing and experiencing is a key variable in psychodynamic psychotherapy,[21,22] if not in psychotherapy overall.

The evidence for cost reduction in disabled workers bears underscoring, as this societal burden is a major drain on global economies where positions must be backfilled at great expense. As noted in Table 4, more than two-thirds of disabled patients were able to make a return to work with a relatively short treatment course after long disabilities. Because of the efficacy of this treatment in resistant and complex populations, it appears to facilitate returns to work even in patients unemployed for years. This is a striking finding considering population return-to-work rates after 6 months disability are otherwise less than 50%, and rates after 1 year of disability are very low to negligible.[23,24] Based on available data showing ISTDP is effective with the most common sources of disability, it represents an inexpensive approach to these major sources of economic burden.[1]

These data from published studies have an array of limitations to consider. First, therapists in most of these studies were trained and experienced, calling into question the generalizability of the findings. The notable exception to this was the case series treated by psychiatry residents.[19] Second, all cost-bearing figures were not available in all studies, and it is unclear in most studies which cost measures were determined a priori. This raises the likelihood of reporting bias; thus, greater weight should be given to those studies with more complete reporting. Third, the majority of these studies were not controlled, so the causes of cost reduction may not relate to treatment factors. Fourth, samples and reporting time frames were highly diverse rendering combined analysis and comparison of the data difficult. Finally, study quality, including verification of treatment adherence, was highly variable,[5] limiting our ability to determine the quality of cost-based outcome evidence.

CONCLUSION

This series of studies provides evidence that this brief treatment is cost-effective when applied to a wide range of patients with benefits noted in studies across several cost domains. Future research in ISTDP should include further controlled trials with clearly defined a priori cost measures and reporting of all possible cost-related outcomes. Further research should examine which of the ingredients, such as emotional experiencing, bring greater costs effects with specific populations. This could inform tailoring of psychotherapy approaches to specific populations in order to enhance cost benefits.

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