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The cost-effectiveness of short-term dynamic psychotherapy

Allan A Abbass

Short-term dynamic psychotherapy is a group of well-researched brief treatments with over 50 published controlled trials testing its effectiveness against a range of treatment and nontreatment controls. Studied samples are often high users of medical services, hospital services, mental health services and disability insurance. If short-term dynamic psychotherapy is effective, it should translate into demonstrable reductions in medical and social system costs. This review examines whether or not short-term dynamic psychotherapy is a cost-effective treatment.

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Short-term dynamic psychotherapy (STDP) formats have been developed since the 1950s to address long waits for psychotherapy in public clinics and the questionable efficacy of expensive, long-term psychoanalytic treatment. Qualitative research initially showed that STDP was effective and benefits persisted in follow-up [1]. Quantitative research since the 1970s has focused on the specific diagnostic groups who could benefit and on the efficacy of these treatments relative to control groups. Meta-analyses and systematic reviews of the literature have demonstrated that these treatments have positive treatment effects with a very broad range of patient problems [2]. This review is focused on a more recent research trend: the cost-benefit analysis of these treatments. In this review, existing published studies of STDP in which cost-effectiveness is measured are highlighted, the data are summarized and a perspective on the future of research in this field is provided.

What is short-term dynamic psychotherapy?

Short-term dynamic psychotherapies are talking treatments that help a patient to solve problems on how they deal with unconscious emotions or conflicts. These emotions and conflicts are by-products of losses and other trauma in life. When these emotions are activated by a current stressful event, anxiety and defenses are mobilized. The end result is a combination of anxiety, somatization, depression, avoidance,

self-defeating patterns and interpersonal problems. Hence, patients with this type of problem can present with a broad range of symptom and personality disorders, as well as many medical conditions, such as dyspepsia and irritable bowel syndrome.

The various formats of STDP share common features including face-to-face interviews, a collaborative process, patient selection process, time restrictions, increased therapist activity and special attention to termination. These therapies help patients to overcome anxiety, defensiveness and emotional avoidance. In the process, the patient learns to tolerate emotions and is thus able to experience a healing of past emotional wounds to some extent. The result of this is reduced symptoms and defensive behaviors.

STDP efficacy literature

The most recent meta-analysis of STDP reviewed studies of depression, anxiety, personality disorders, somatoform disorders, substance use disorders and eating disorders [2]. They found the treatment to be superior to waitlist controls with a large effect size, superior to minimal treatment controls with a moderate effect size and equally effective to other standard treatments, such as cognitive behavior therapy.

The author's ongoing Cochrane Library review has found 60 controlled trials and 40 randomized controlled trials (RCT) for conditions including depression, anxiety, personality disorders, somatoform disorders, substance

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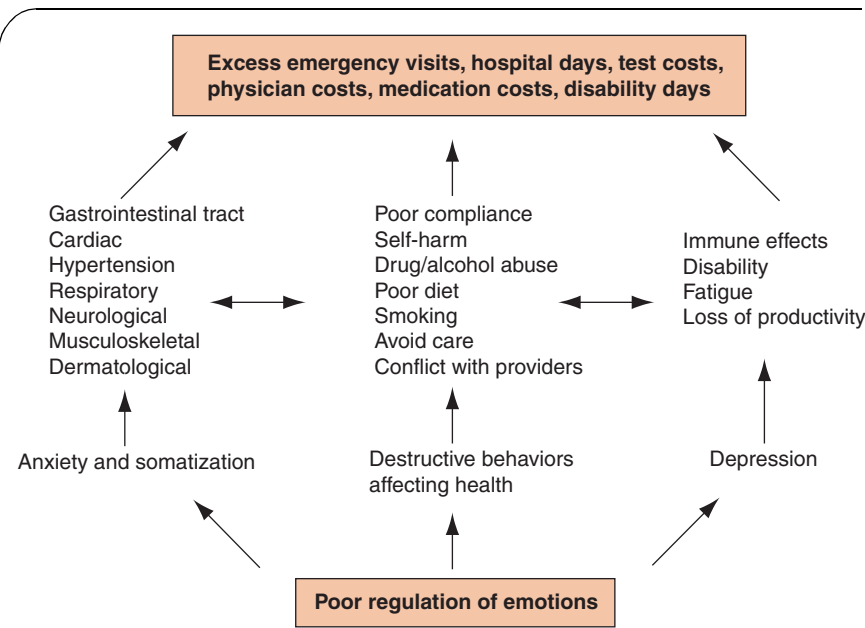


Figure 1. The healthcare and social system costs of emotional disorders. Reproduced with permission, The Center for Emotions and Health, Halifax, Canada.

use disorders and eating disorders. These studies are both heterogeneous and of variable quality, rendering complexity in performing meta-analysis. A preliminary examination of 32 of these papers has yielded a large effect size of 0.61 versus wait list controls ($p < 0.01$) and 0.18 versus medication controls ($p = 0.08$). There were no differences versus other treatment controls including those using cognitive-behavioral therapy. A formal analysis of select RCTs under stringent Cochrane conditions has been submitted [3].

Economic burden of conditions treated by STDP

The related patient problems produce a heavy financial burden to social and medical systems. For example, irritable

bowel syndrome, which STDP treats, costs an estimated US\$8 billion per year [4]. In a Canadian study, the presence of an anxiety disorder more than doubled the healthcare utilization [5]. Similar striking figures have been found for personality disorders, depression, substance use disorders, somatoform disorders and other behaviors including self-harm.

Each bodily system may be affected by conscious and unconscious components of anxiety. Moreover, anxiety and somatization lead to behavioral patterns that can increase healthcare utilization and decrease health outcomes. Finally, depression causes a major financial burden through increased disability among other costs (FIGURE 1). When taken as a group and considering whether they are more biological or psychological processes, each may be clinically treated with one or the other format of STDP. Given

the cost burden of these conditions and a candidate brief treatment, a critical question is whether there is any direct evidence for cost-savings in the system when these therapies are employed.

STDP cost-effectiveness

In reviewing the literature for the author's Cochrane study, seven studies of STDP included some cost and/or healthcare utilization measures as an outcome (TABLE 1). Since 1999, six RTCs were published. The studies comprise of 411 troubled patients treated with STDP: 143 had chronic and severe gastrointestinal problems, 58 had self-induced poisoning and 55 were high utilizers of psychiatric services. The remainder had

Table 1. Description of published short-term dynamic psychotherapy studies with cost measures.

| Number treated with STDP | Sample | Control for cost-effect analysis | Outcome on main measures | Ref. |
|--------------------------|------------------------------------|---|--------------------------------------|------|
| 40 | Mixed axis I and II diagnoses | 1) Pre vs. post 2) Dynamic group therapy | Post > pre STDP = group therapy | [6] |
| 55 | High utilizing mixed axis I and II | Treatment as usual | STDP > TAU | [7] |
| 37 | Chronic functional dyspepsia | 1) Pre vs. post 2) Supportive therapy | STDP > TAU | [8] |
| 58 | Deliberate self-poisoning | Treatment as usual | STDP > TAU | [9] |
| 89 | Mixed Axis I and II | Pre vs. post | Post > pre | [10] |
| 47 | Major depression | Clompiramine with vs. without STDP | STDP + Clo > TAU plus Clo | [11] |
| 85 | Irritable bowel syndrome | 1) Paroxetine 2) Treatment as usual | STDP > Paroxetine > TAU [§] | [4] |

[§]STDP was superior to paroxetine at end of study but not at 1-year follow-up. Clo: Clompiramine; STDP: Short-term dynamic psychotherapy; TAU: Treatment as usual.

symptom and personality disorders. Thus, the samples included patients who are complex, challenging and difficult to engage with supportive medical management.

These studies report on heterogeneous patient samples and express cost-utilization outcomes in heterogeneous ways, so each must be considered separately and taken on their own merits. To allow collective examination of specific areas of cost, the results are tabulated by area of utilization cost (TABLE 2).

Budman and colleagues compared STDP with group psychotherapy [6]. They found that during therapy there were no significant differences in medical visits, mental health visits or laboratory use. However, in the 6-month period after therapy,

there was a 92% reduction of mental health service use in the STDP group versus a 27% increase in service use by controls. Both groups had nonsignificant reductions in laboratory use. In the 9-month follow-up period, the STDP group continued to have 13-times fewer mental health service visits versus controls.

Guthrie and colleagues found the STDP group had more utilization of mental health services versus treatment as usual (TAU) during the treatment phase, although there was no overall increase in treatment costs [7]. However, during the 6 months after STDP, significant reductions were seen in hospital days, medical visits, medications and nurse contacts. Overall, there were no significant cost differences between the

Table 2. Outcomes per short-term dynamic psychotherapy-treated patient using utilization data, cost estimates and statistical data provided in papers.

| Hospital services | Mental health services | Physician services | Medication costs | Indirect healthcare costs [§] | Diagnostic tests | Disability | Total healthcare costs post therapy vs. control | Total healthcare costs including therapy costs | Reference comparison and time period |
|---------------------------|------------------------|--------------------|---|--|------------------|---------------------------------------|---|--|--------------------------------------|
| | 92% less p < 0.05 | 6% less (ns) | | | 42% less | | | | 6 Pre vs. post 6 months |
| | less p < 0.06 | ns | | | ns | | | | 6 vs. group Rx treatment period |
| Less p < 0.05 | | Less p < 0.01 | Less p < 0.05 | Less p < 0.01 | | | \$589 p < 0.05 | | 7 vs. TAU 6 months |
| 1.8 less visits | | Less p < 0.01 | Less p < 0.01 | | | | | | 8 Pre vs. post 1 year |
| ns | | ns | ns | | | | | | 8 vs. other therapy 1 year |
| 0.15 less visits (ns) | 0.5 more visits (ns) | No difference | | | | | | | 9 vs. TAU 6 months |
| \$225 less | | \$137 less | \$163 less | | | \$3609 less | | \$3015 less | 10 pre vs. post 1 year |
| 30 fewer days p < 0.05 | | | | | | 12 fewer sick days | \$2311 less | | 11 vs. TAU 10 weeks |
| | | | 23% fewer on medications after STDP p < 0.01 | | | Less on disability at end p < 0.05 | \$274 less (ns) | \$176 less (ns) | 4 vs. Paroxetine |
| | | | | | | | \$687 less p < 0.05 | \$559 less (ns) | 4 vs. TAU 1 year |

Note all cost are converted to US\$. Canadian \$ were converted at a value of 1 US\$ = 1.5 Canadian \$. All values are given per patient over the time period specified. Less or more refers to amount of cost or utilization in the short-term dynamic psychotherapy group relative to the controls.

[§]Included travel and child care costs incurred due to illness.

ns: No specimen; Rx: Treatment; STDP: Short-term dynamic psychotherapy.

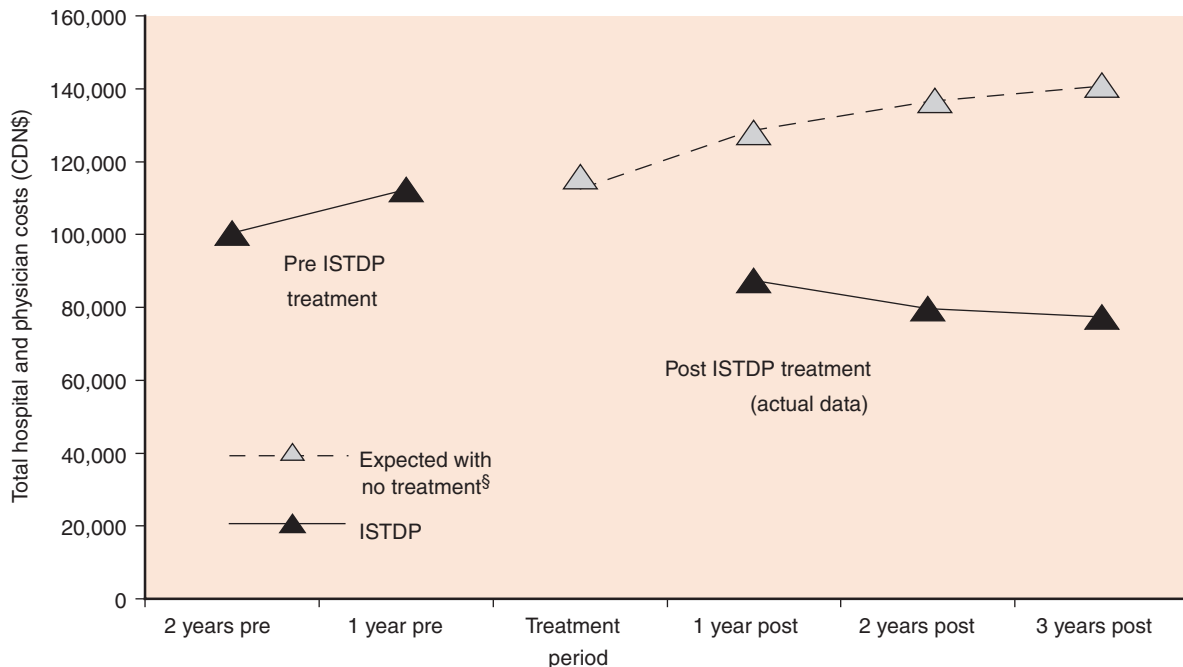


Figure 2. ISTDP vs. expected projections: total physician and hospital costs (n = 88).

[§]Projected figures based on British Columbia per capita health expenditure increases from 1993–2000. Statistics Canada.

ISTDP: Intensive short-term dynamic psychotherapy.

two groups, although the STDP groups derived superior symptom and social adjustment improvements. STDP therapy costs were recovered by 6 months after therapy.

Studying patients with chronic dyspepsia, Hamilton and colleagues found STDP and supportive therapy both brought significant reductions in hospital visits, admissions, surgeries and medications in the 1-year period after versus before therapy [8]. They noted average reductions of 1.8 and 1.5 hospital admissions per patient per year. Patients and blinded gastroenterologists both reported superior improvements in the STDP group versus the control treatment at the end of the study though this difference did not persist in the 1-year follow-up.

Guthrie and colleagues compared STDP with TAU in patients with self-induced poisoning [9]. They found the STDP group had significantly less suicidal ideation, as well as a lower rate of self-harm (9 vs. 27%) in follow-up while adding no additional healthcare costs.

In a naturalistic effectiveness study, Abbass found a cost difference of CDN\$4522 per patient in 1 year of follow-up due to reduced disability physician hospital and medication costs [10]. This difference was realized despite the cost of therapy provided by a psychiatrist of CDN\$1679 per patient. Of patients on medications, 86% were able to stop (71%) or reduce (15%) these medications during the course of intensive short-term dynamic psychotherapy (ISTDP). Hospital costs were 85% lower while physician costs were 33% lower. Disability costs were CDN\$5413 less per patient since 18 out of 22 disabled patients returned to work.

Burnand and colleagues compared STDP plus clomipramine (Anafranil[®], Novartis Pharmaceuticals Corp., NJ, USA) with

TAU plus clomipramine in patients with depression [11]. They found the STDP group had CDN\$465 less in healthcare costs and CDN\$1846 less costs for sick leave over the 10-week study than the clomipramine/TAU group. This total included 2–3 fewer hospital days in the STDP group. The total cost difference more than paid for the therapy costs by the end of 10 weeks.

Finally, Creed and colleagues compared STDP with both paroxetine and TAU for patients with severe irritable bowel syndrome [4]. During the study, the STDP group cost CDN\$11 per patient more per week versus paroxetine and TAU. They found the STDP group but not the paroxetine group, had significant healthcare cost reductions compared with TAU in a 1-year follow-up. The difference of CDN\$687 per patient more than offset the therapy costs. Of interest is the ten patients in the STDP group who stopped claiming disability payments during the study, while nine in the paroxetine group and three in the TAU group commenced disability payments during the same period. Moreover, significantly fewer patients in the STDP group needed to stay on medications.

Do cost benefits continue in long-term follow-up?

The longest follow-up provided in these studies is 1 year. If gains were maintained in follow-up, there would be multiple savings relative to treatment costs.

To assess this possibility, data from 1 and 2 years before, and 1, 2 and 3 years after a course of ISTDP was sought from the provincial databases in British Columbia, Canada [10]. FIGURE 2 shows both treatment group data and the projected costs if this sample continued in the same high-use pattern over successive years. Physician and hospital costs were even less in the second and

third year follow-up. By the end of the third year, the cost of therapy, provided by a psychiatrist, was recovered from within the medical system itself through reduced hospital days and physician costs. The ISTDP group experienced a cost reduction of over three-times what the treatment had cost. These figures are in line with Lazar and Gabbard's review of psychotherapy cost-effectiveness [12].

Summary & expert opinion

These data suggest STDP is cost-effective compared with before treatment, other treatments and TAU. In each cell in TABLE 2 STDP either resulted in reduced cost or the same costs while providing a beneficial therapy procedure. By averaging the data from three studies giving cost savings after treatment costs, US\$1537 would be recovered per patient by 1 year after treatment. This sum would allow the hiring of more therapists to provide services to those who are waiting in queues. At a minimum, there is no data to suggest that the therapy adds expense to the system: hence, an effective treatment is provided without increasing the system's financial burden.

Given this is a relatively new area of research, this group of studies is a good start in researching the economics of providing a brief psychotherapy to troubled, high-utilizing patients. These challenging patients, should be considered a very good test of this therapy approach since they are comparable with nonpsychotic populations seen in mental health clinics and psychiatrists offices. The implication to administrators and healthcare payers is that if STDP is provided to these populations, it should save money and benefit patients.

Five-year view

Based on this review, discussions with researchers in other centers and our own STDP research in progress, cost-effectiveness analysis will become the norm in this type of outcome research. I expect that 5 years from now several more STDP studies will

be published including these measures. Hopefully, these studies will include currency and statistical values to allow comparisons between research centers, patient groups and therapy formats. Future research should also evaluate the long-term cost-effects of this therapy, since the long-term financial benefits may be massive compared with STDP treatment costs. Until then, we must consider this to be promising data that should inform healthcare providers' decision-making.

Information resources

The Centre for Emotions and Health (Halifax, Canada) website contains links to training and research centers for various short-term dynamic psychotherapy formats in North America and Europe www.psych.dal.ca/centreforemotions/ (Accessed August 2003).

Key issues

- Emotion-based disorders are extremely expensive to the health and social systems.
- Short-term dynamic psychotherapy (STDP), focusing on emotions and how the person manages and mismanages them, treats a broad range of these expensive problems.
- Out of seven published comparative studies of STDP, ten had cost-benefit comparisons.
- A majority of all measurements showed significant cost savings in the STDP groups while no reported data showed a significant increase in costs.
- A single report is provided showing that cost benefits were maintained in a 3-year follow-up.
- Future research should evaluate long-term cost-effects.
- This treatment should be offered to patients with anxiety, depression, somatization and some personality disorders.

References

Papers of special note have been highlighted as:

- of interest
 - of considerable interest
- 1 Davanloo, H. *Short-Term Dynamic Psychotherapy*. Jason Aronson, NY, USA (1980).
 - 2 Anderson E, Lambert M. Short-term dynamically oriented psychotherapy: a review and meta-analysis. *Clin. Psychol. Rev.* 15(6), 503-514 (1995).
 - **Most recent published systematic review of short-term dynamic psychotherapy treatment efficacy.**
 - 3 Abbass AA. Systematic review of short-term psychodynamic psychotherapies. *Proceedings of The 8th International Cochrane Colloquium*. Cape Town, South Africa (2000).
 - 4 Creed F, Lakshmi F, Guthrie E *et al*. The cost effectiveness of psychotherapy and paroxetine for severe irritable bowel syndrome. *Gastroenterology* 124, 303-317 (2003).

- 5 Bland RC, Newman SC, Orn H. Help seeking for psychiatric disorders. *Can. J. Psych.* 42, 935-942 (1999).
- 6 Budman SH, Demby A, Renondo JP *et al*. Comparative outcome in time-limited individual and group psychotherapy. *Int. J. Group Psychother.* 38(1), 63-86 (1988).
- 7 Guthrie EM, Moorey J, Margison F *et al*. Cost-effectiveness of brief psychodynamic interpersonal therapy in high utilizers of psychiatric services. *Arch. Gen. Psych.* 56(6), 519-526 (1999).
- 8 Hamilton J, Guthrie E, Creed F. A randomized controlled trial of psychotherapy in patients with chronic functional dyspepsia. *Gastroenterology* (119), 661-669 (2000).
- 9 Guthrie E, Kapur N, Mackway-Jones K. Randomized controlled trial of brief psychological intervention after deliberate self-poisoning. *Br. Med. J.* 323, 1-5 (2001).
- 10 Abbass AA. Intensive short-term dynamic psychotherapy in a private psychiatric

office: clinical and cost effectiveness. *Am. J. Psychother.* 56(2), 225-232 (2002).

- 11 Burnand Y, Andreoli A, Kolatte E, Venturini A, Rosset N. Psychodynamic psychotherapy and clomipramine in the treatment of major depression. *Psych. Serv.* 53(5), 585-590 (2002).
- 12 Lazar S, Gabbard G. The cost-effectiveness of psychotherapy. *J. Psychother. Prac. Res.* 6, 307-314 (1997).
- **Systemic review of all psychotherapy cost-effectiveness studies up to 1997.**

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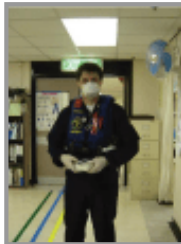
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