

Residency Training in Intensive Short-Term Dynamic Psychotherapy: Methods and Cost-Effectiveness

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CME EDUCATIONAL OBJECTIVES

1. Understand the role of training in psychodynamic psychotherapy in psychiatry residency training programs.
2. Learn a potential model for training residents in a short-term model of psychodynamic psychotherapy.
3. Review the efficacy and cost-savings data in a study training residents in this model.

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the importance of psychodynamic assessment and intervention. This is reflected in the current Royal College of Physicians and Surgeons of Canada¹ and American College of Graduate Medical Education (ACGME) guidelines in psychiatry,² requiring the demonstration of competency in psychodynamic psychotherapy. This has been further underscored through the roll out of the Next Accreditation System,³ requiring faculty in psychiatry training programs to delineate the achievement of resident milestones in the area of psychodynamic psychotherapy.

Although training programs vary widely, a common training scenario exposes the resident to inpatient psychiatry in the first year or two of study for anywhere from

6 to 14 months. This experience generally focuses on treatment guidelines for patients with various diagnoses, and residents most often experience a growing sense of competence after spending sufficient time under ongoing daily supervision from their faculty supervisors on the unit. Following this experience, residents are assigned outpatient psychotherapy cases, some for short-term psychotherapy and others for long-term psychodynamic psychotherapy, as both are training experiences required by educational accrediting bodies. Prior to this clinical experience, the resident may have had extensive or minimal didactic learning regarding psychodynamic theory, language and paradigms. They generally have a supervisor, who might request pro-

Whereas psychiatry grows as a field through contributions from neuroscience, genetics, psychopharmacology, and diagnostic specificity, psychiatrists continue to value

cess notes or simply listen to a summary of the case. Contrary to their experience on the inpatient unit, residents are often left on their own, with little idea of how to help their psychotherapy patient in any systematic fashion. They struggle to understand how didactic information about various paradigms and suggestions from their supervisors translate to specific patient interventions.

INTENSIVE SHORT-TERM DYNAMIC PSYCHOTHERAPY

Intensive short-term dynamic psychotherapy (ISTDP) is a method of treatment that involves direct observation and assessment of somatic anxiety and emotional patterns, allowing the clinician to identify the relationship between repressed emotion and psychological and physical dysfunction. It is grounded in principles derived from both psychodynamic psychotherapy and attachment. Within a trusting and supportive therapeutic relationship, the ISTDP therapist helps facilitate the direct experience of intense mixed feelings toward others while regulating anxiety and blocking defensive avoidance. Through this experience, emotional healing can be promoted, often leading to the experience of enhanced self-esteem and a desire for connection with others.⁴

By providing clear guidelines and interventions, ISTDP provides a specific treatment model that can be used to help psychiatry residents learn psychodynamic psychotherapy. ISTDP outlines specific procedures for the rapid assessment of channels of anxiety and provides clear indications for which interventions work best given the level of resistance observed. ISTDP involves tracking and making use of non-verbal communication, keeping an eye on body language while interviewing patients. This form of therapy provides a schematic for the creation and maintenance of an internal focus, helping patients identify feelings toward individuals in their current lives, their past, and in their therapeutic relationship. Furthermore, this methodology provides a framework for conceptualizing ways in which defenses

against these feelings relate to a patient's symptoms and presenting complaints, along with guidelines for determining when it might be appropriate to challenge these defenses. Finally, the extensive use of videotaped sessions provides supervisors with the material required to work directly with trainees in mind to observe phenomenology in both patient and therapist trainee.⁵

Although psychiatry residency training programs continue to underscore the importance of psychodynamic psychotherapy as a paradigm, faculty members are often

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unaware of the outcome data to support this.⁶ ISTDP, in particular, is accumulating increased empirical support for the treatment of a wide array of diagnoses.^{7,8} We are not aware of any studies in the literature that assess outcome measures and cost-effectiveness of psychodynamic psychotherapy delivered exclusively by psychiatry residents.

In the following study, we examined effectiveness and cost-effectiveness of ISTDP as it was employed in an entire sample of patients ($n = 140$) treated by residents on an ISTDP-based psychotherapy service over a 9-year period.

METHODS

All patients referred to a hospital-based, outpatient psychotherapy service who received assessment and treatment by residents using the ISTDP framework between 1999 and 2008 were included in this study. All patients included resided in the Canadian province of Nova Scotia, allowing access to their provincial health care use data. All treatment efforts were included, regardless of the duration of treatment. The study was part of a larger cost-effectiveness

study.⁹ The study was approved by the hospital ethics review board, and patient confidentiality was protected, as all data were anonymous and encrypted prior to extraction and analysis.

SETTING

The specialty, ISTDP-based psychotherapy service included in our study receives referrals from the emergency department, family practice offices, medical-surgical specialties, and mental health professionals. It is a teaching and research service that specializes in assessing and treating emotional contributors to medically unexplained symptoms, anxiety, depression, and personality disorders. Videorecording-based training was provided through annual 4-day videotape immersion courses, weekly case conferences, and semester courses. Supervision was likewise provided in a small group videotape format.⁵ Through detailed case study and feedback, training involved a system of focused feedback, often just beyond the level of competence of trainees — a factor described as “critical to enhance educational outcomes.”¹⁰

PATIENT SCREENING AND SUPERVISION

Patients to be treated by residents were prescreened with a trial therapy interview to assess the nature of psychopathology and likelihood of response to ISTDP.¹¹ All trial therapies were performed by staff and senior trainees, including senior residents. The majority of these were delivered through live, closed-circuit format for teaching purposes.

DATA COLLECTION

Health card numbers, dates of treatment, demographics, diagnoses, self-report outcome measure results, therapist training hours, and adherence ratings were entered into a spreadsheet for each patient treated. All identifiers were removed, and provincial health card numbers were encrypted and sent to the Population Health Research Unit for data extraction, linkage, and analysis.

MEASURES

In this study, hospital costs, physician costs, and total health care costs were examined. Pre- and post-self-report outcome ratings on the Brief Symptom Inventory¹² (BSI) and on the Inventory of Interpersonal Problems¹³ (IIP) were examined. The number of didactic, supervision, and total training hours at the start of the therapy course was recorded. Overall adherence and adherence at the third session of treatment were reported, as this measure was phased in partway through this study period.

DATA ANALYSIS

Within-group (pre versus post) comparative analyses (*t* tests) were performed for physician billings, hospital costs, and total health care costs for 1, 2, and 3 years of follow-up. Pre versus post BSI and IIP scores were compared (*t* tests). We examined correlations (Pearson's *r*) between health care cost changes and didactic training hours, supervision hours, and total training hours.

RESULTS

Treatment and Sample

Thirty-one residents treated a total of 140 patients with an average of 9.9 (SD 11.6) ISTDP treatment sessions. Forty-four patients had one to two treatment sessions (31.4%), 51 (36.4%) had 3 to 10 sessions, and 43 (30.0%) had more than 10 sessions. The trial therapy interviews were conducted by staff for 84 (60.0%) of these cases, whereas residents did their own initial trial therapy in the remaining 40%.

Patients averaged 39.2 (SD 12.2) years of age; 55.0% were female. Among the patients, 83.6% lived in an urban area, and income was evenly distributed across four quartiles. The most common diagnoses of the group were any somatoform disorder ($n = 91$, 65.0%), any anxiety disorder ($n = 81$, 57.9%), personality disorder ($n = 66$, 47.1%), and major depression (45, 32.1%). On the spectrum of psychoneurotic disorders,¹⁴ one patient was low resistant, 34 (24.6%) were moderately resistant, and 70 (50.7%) were highly resistant. Fragile character structure with dissociative features was seen in 31 patients (22.1%), and

TABLE 1
Baseline Service Cost and Resident Training

	Resident-Treated Cases ($n = 140$) Mean (SD)
Physician cost (dollars)	689.23 (786.70)
Hospitalization cost (dollars)	2,633.90 (8,883.17)
Total medical cost (dollars)	3,461.76 (9,445.79)
Didactic training hours	353.6 (385.4)
Supervision hours	126.0 (118.2)
Total training hours	479.6 (491.2)
Adherence at third session ($n = 54$)	3.21 (0.80)
Overall adherence ($n = 60$)	3.39 (0.58)

SD = standard deviation.

two patients (1.4%) had stabilized psychotic disorders.

Adherence was fair, with a mean of 3.38 (SD 0.57) on a 4-point scale. The cut-off score was 3 to be considered adherent. Fifteen of the 60 cases with adherence ratings, 49 (81.7%) of these were above this adherence cutoff. Table 1 describes baseline cost, adherence, and education hours.

Self-Report Outcomes

Comparing before to immediately after treatment, the global BSI score went from 1.62 (SD 0.77) to 1.15 (SD 0.81; $P < 0.001$, effect size $d = 0.59$), whereas the global IIP score went from 1.52 (SD 0.66) to 1.16 (SD 0.76, $P < 0.001$; effect size $d = 0.51$).

Cost Data

There were no statistically significant differences in physician, hospital, or total health care costs in the first and second year after treatment compared to the year before treatment. In the third follow-up year, all costs were significantly reduced compared to the year before treatment (see Table 2, page 511). The total mean annual cost reduction for the 3 follow-up years, including all patients remaining in the cohort, was \$1,257.73 per year. The total cost difference was \$3,773 per patient over

the 3 years combined. This compares to the treatment cost of approximately \$500 (approximately \$50 / hour x 9.9 sessions), considering resident salary of approximately \$30 / hour and administrative costs of approximately \$20.¹⁶

Supervision hours correlated significantly with the magnitude of cost reduction in the first year for all three cost measures, as well as in the second year for reductions in physician costs (see Table 3, page 512). All three cost measurement categories showed statistically non-significant trends ($P < 0.10$) toward correlation with didactic teaching hours and total training hours in the first year of follow-up only. Thus, the amount of supervision correlated significantly with the levels of cost reduction observed.

DISCUSSION

This set of naturalistic data, obtained from a large group of residents trained to provide ISTDP provides evidence of moderate, significant treatment effects with a wide range of screened patients.⁹ Moreover, although cost reductions were not demonstrated in the first 2 years of follow-up, cost reductions accrued in relation to increasing amounts of videotape supervision. Within the limitations described below, these findings may reflect learning effects.

Changes in Health Care Cost in Canadian Dollars by Year of Follow-Up*

	<i>n</i> value	Mean	Standard Deviation	<i>t</i> Versus 1 Year Pre-Referral	<i>P</i>
Physician visit costs					
1-Year pre-referral	140	689.23	786.70		
Year 1	132	675.44	1,171.65	-0.20	0.84
Year 2	114	558.74	4,180.14	-0.64	0.52
Year 3	87	440.15	536.88	-3.59	0.0006
Hospitalization costs					
1-Year pre-referral	140	2,633.90	8,883.17		
Year 1	140	2,955.32	13,078.19	0.24	0.80
Year 2	114	1,267.16	4,180.14	-1.35	0.18
Year 3	87	592.60	1,888.95	-2.03	0.046
Total costs					
1-Year pre-referral	140	3,461.76	9,445.79		
Year 1	132	3,753.43	13,725.64	0.19	0.88
Year 2	114	1,825.90	4,468.65	-1.39	0.17
Year 3	87	1,032.75	2,157.58	-2.52	0.014

*Statistical testing performed using paired *t*-tests comparing to service use 1 year pre-referral.

This is one of very few studies examining the outcomes of resident-provided psychodynamic psychotherapy. Gregory et al,¹⁷ studying a form of psychodynamic therapy for alcohol abusing patients with Borderline Personality Disorder (BPD) employed resident therapists along with another therapist and found sustained reductions in parasuicidal behavior, alcohol misuse, institutional care, depression, dissociation, and core symptoms of BPD. Likewise, our study included 72.8% of patients with high resistance or fragile character structure (borderline organization). Together, these two studies suggest that trained psychiatry residents can work with complex patients using a psychodynamic frame and facilitate therapeutic gains.

Treatment courses were relatively short, with a majority of cases receiving fewer than 10 sessions. Data from this study demonstrate significant clinical effectiveness for these patients, even with this relatively brief number of sessions. This mirrors other studies in this field.^{7,8,18} In our clinic, we serve a region spanning 8 hours by car,

so it is great work for many patients to come to receive care. Thus, many treatment courses are brief with an average of approximately seven sessions. It is, however, possible that some patients went on to have other treatments after this brief course of therapy, adding a confounding variable to the follow-up cost data.

In regard to cost data, physician billings went from above to below population means of \$595 per Nova Scotian¹⁶ when measured from the time up until 2 years post-treatment and 3 years after treatment ended. This suggests that this group of patients were not extremely high physician service users on average before treatment, as they cost only \$698.23 before treatment. Likewise, average hospital costs per patient went from above (\$2,633) to below per capita Canadian annual hospital cost averages of \$1,389 (Canadian Institute for Health Information 2007 cost data).¹⁷ Thus, patient health care costs went from greater than to less than those of the general population (see Table 2).

The correlation data suggest that training in ISTDP resulted in new learning and improved treatment outcomes. In years 1 and 2, significant correlations and trends toward correlation suggest that those with more training achieved greater cost reductions. Thus, the lack of significant cost reduction during these years may be due, at least in part, to relative lack of training for some residents. This concept is supported by the finding of only modest levels of adherence, suggesting the treatment may have been applied suboptimally in many cases. Overall, however, this finding adds further evidence to the literature suggesting there are learning effects when psychodynamic therapy training is provided.^{21,22}

It is noteworthy that supervision hours versus didactic hours correlated with greater cost reductions. This suggests that it is not enough to attend a class in psychodynamic theory. Rather, one must engage in the therapeutic process and gather experience with this technically rich training model by recording sessions, reviewing the recordings, and having them supervised. These preliminary data suggest that this type of direct exposure and desensitization can improve treatment outcomes.^{4,5}

There were several limitations to this study. First, there was no control for the passage of time or the use of other treatments in this patient group during the follow-up years. Thus, we are less confident in the significance of finding cost reductions after treatment. In addition, there were no control subjects, so we cannot exclude the possibility of regression to the mean. Second, there were missing data from adherence and self-report measures, as these were phased in partway through this study interval. It is possible that these measures were completed by patients treated by more highly trained residents. Third, the impact of the initial screening trial therapy provided by the supervisor or trained team members in the majority of cases should not be under-rated, since it appears to have treatment benefits on both the BSI and IIP.¹¹ Consequently, this treatment component may have accounted for some of the ob-

served benefits. Fourth, the use of the measure “training hours” did not control for the effects of other learning that takes place during residency training; thus, the effects of improved cost reductions with training may be a measure of general versus specific skills acquisition. Finally, the heterogeneity of patient types, diagnoses, and treatment lengths could have underestimated or masked correlations with training that may have been present but were not detected.

CONCLUSION

We have described an intensive training model for psychiatry residents that appears to build skills that translate into effective and cost-effective treatment outcomes for their patients. This finding is important, given the fundamental place that psychodynamic psychotherapy holds in training programs. There are relatively few data that our traditional methods of teaching and supervision in psychodynamic psychotherapy result in enhanced therapeutic outcomes for the patients treated by trainees. This study provides preliminary evidence that trainees can learn a model, that it is effective with their patients early in their career, and that it may lead to cost savings for institutions funding psychiatric training positions.

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TABLE 3

Correlations Between Teaching Hours, Adherence, and Changes in Cost From Baseline

Measure	Year	Didactic Hours <i>rho</i> (P value)	Supervision Hours <i>rho</i> (P value)	Total Hours <i>rho</i> (P value)
Physician costs	1	0.14* (0.09)	0.18 [†] (0.04)	0.16* (0.06)
	2	0.11 (0.23)	0.18 [†] (0.05)	0.13 (0.18)
	3	0.15 (0.15)	0.14 (0.20)	0.16 (0.15)
Hospital costs	1	0.14* (0.08)	0.16 [†] (0.05)	0.16* (0.07)
	2	-0.02 (0.82)	0.08 (0.40)	0.02 (0.77)
	3	-0.04 (0.68)	-0.02 (0.84)	-0.04 (0.71)
Physician and hospital costs	1	0.16* (0.08)	0.17 [†] (0.05)	0.17* (0.06)
	2	0.00 (0.94)	0.10 (0.29)	0.04 (0.66)
	3	-0.04 (0.74)	-0.01 (0.94)	-0.03 (0.78)

*Indicates statistically significant at $P < 0.10$.
[†]Indicates statistically significant at $P < 0.05$.

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