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Sustained reduction in health care costs after adjunctive treatment of graded intensive short-term dynamic psychotherapy in patients with psychotic disorders

Allan Abbass [a,*], Denise Bernier [a], Steve Kisely [b], Joel Town [a], Robert Johansson [a,c]

[a] Department of Psychiatry, Dalhousie University, Halifax, Nova Scotia, Canada
[b] School of Medicine, The University of Queensland, Australia
[c] Department of Behavioural Sciences and Learning, Linköping University, Sweden

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ABSTRACT

The aim of this pilot study was to evaluate the changes in symptom severity and long-term health care cost after intensive short-term dynamic psychotherapy (ISTDP) individually tailored and administered to patients with psychotic disorders undergoing standard psychiatric care. Eleven therapists with different levels of expertise delivered an average of 13 one-hour sessions of graded ISTDP to 38 patients with psychotic disorders. Costs for health care services were compiled for a one-year period prior to the start of ISTDP (baseline) along with four one-year periods after termination. Two validated self-report scales, the Brief Symptom Inventory and the Inventory of Interpersonal Problems, were administered at intake and termination of ISTDP. Results revealed that health care cost reductions were significant for the one-year post-treatment period relative to baseline year, for both physician costs and hospital costs, and the reductions were sustained for the follow-up period of four post-treatment years. Furthermore, at treatment termination self-reported symptoms and interpersonal problems were significantly reduced. These preliminary findings suggest that this brief adjunctive psychotherapy may be beneficial and reduce costs in selected patients with psychotic disorders, and that gains are sustained in long-term follow-up. Future research directions are discussed.

1. Introduction

Despite advances in the pharmacological treatment of psychotic disorders (Kane and Correll, 2010) for reducing psychotic symptoms, around 80% of patients will relapse in the first 5 years following treatment (Nadeem et al., 2004). As a result, excess hospital and physician use relative to matched controls are reported over long-term follow-up (Wu et al., 2005; Rockland, 2010). For example, total excess societal costs for patients with schizophrenia in the United States were $62.7 billion. In fact, one study roughly estimated $32.4 billion in total excess costs of productivity loss and $22.7 billion in direct health care costs (Wu et al., 2005).

Recurrence is strongly influenced by social adversity and stress. A range of adjunctive psychotherapies have therefore been developed for people with schizophrenia and other psychotic disorders to target important psychosocial factors that impact the quality of long-term outcomes. These psychotherapies include training in social skills, family therapy and cognitive behavior therapy (CBT) (Pfammatter et al., 2006). Early research on the use of talking therapy for psychosis did not support the use of traditional psychodynamic talking therapy when used as the primary treatment approach for hospitalized patients requiring acute care (Malmberg and Fenton, 2001; Amos, 2012) as a result, the current evidence-based guidelines for schizophrenia mainly suggest CBT (NICE, 2014).

More recently however, modified forms of psychodynamic psychotherapy have been studied as adjunctive or maintenance treatments. Manualized supportive psychodynamic psychotherapy (Rosenbaum and Harder, 2007) was used in a Danish study (Rosenbaum et al., 2012) involving 269 patients with first episode psychosis consecutively assigned to either weekly individual sessions of psychodynamic psychotherapy in addition to standard treatment as usual (TAU) for a period of one to three years, or to TAU. At two years of follow-up, supportive psychodynamic therapy plus TAU had a significant advantage over TAU alone on levels of social function (GAF function) and general symptom severity (GAF symptom). Psychodynamic psychotherapy also showed significant improvement on measures of positive and negative symptoms (PANSS) over treatment.

* Corresponding author.: Tel.: +1 902 473 2514; fax: +1 902 473 4545.
E-mail address: allan.abbass@dal.ca (A. Abbass).

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Personal Therapy, developed by Hogarty (2002), is a treatment method built to improve affect tolerance in patients with schizophrenia. It has been shown effective in producing long-term reduced rates of relapse in patients with schizophrenia who live with their families but showed a negative effect on those not living with families. The method also helped improve social and occupational function (Hogarty et al., 1997).

Another contemporary psychodynamic model, intensive short-term dynamic psychotherapy (ISTDP), can be modified for psychosis (Abbass, 2001; Abbass, 2002; Abbass and Bechard, 2007). It is a supportive, emotion-focused format of talking therapy that is graded and adapted to the capacity of each patient. It targets the residual symptoms of anxiety and depression as well as some residual psychotic symptoms that can persist after the patient is stabilized with medications. This model of psychotherapy has a specific format, called graded ISTDP, that was developed to help patients improve anxiety tolerance, and awareness of emotional processes that impact on symptoms, perception and social interaction (Abbass and Town, 2013).

Relatively few studies have examined the cost-effectiveness of psychotherapies for psychotic disorders (The Committee on Psychotherapy Group for the Advancement of Psychiatry, 2010). Family therapy and related interventions for psychotic disorders have been shown to be cost-effective (Rockland, 2010). There is also some evidence that social skills training may reduce overall costs (Benton and Schroeder, 1990). A recent study of combined family therapy, assertive community treatment and skills training found evidence for cost-effectiveness (Hastrup et al., 2013). To our knowledge, no studies have yet investigated the long-term impact on health care costs of adjunctive psychodynamic psychotherapy or any other form of individual psychotherapy for psychotic disorders. Such research is important because Lazar reported that treatment effects tend to be short-lived in existing studies (The Committee on Psychotherapy Group for the Advancement of Psychiatry, 2010).

The objectives of this pilot study were to evaluate whether a group of patients with psychotic disorders treated with adjunctive graded ISTDP would experience improvement in symptoms and interpersonal problems and reductions in health care costs. A further objective was to examine whether any observed cost reductions would be sustained over a follow-up period up to four years after treatment termination.

2. Methods

2.1. Participants

Patients referred for psychotherapy assessment were referred from the early psychosis program, community mental health teams, psychiatrists or family physicians. Patients who were seen in the initial interview to have active psychotic features or psychosocial disorganization precluding engagement in a psychotherapy trial were excluded: in these cases a standard psychiatric assessment was provided and the patient was referred back to the referral source or elsewhere for treatment. Psychiatrists from the Centre performed all intake assessments. We included all patients who had graded ISTDP provided by professionals at all levels of expertise with this treatment method.

2.2. Setting

The clinical setting was The Centre for Emotions and Health, a tertiary psychotherapeutic service linked to Dalhousie University and located in the Queen Elizabeth II Health Science Centre in Halifax. This service receives referrals from psychiatry specialties, the emergency department, family practice offices, medical–surgical specialties and mental health professionals. It is a teaching and research service specializing in assessing and treating emotional contributors to diverse clinical presentations using ISTDP (Abbass et al., 2012).

2.3. Procedures

This was a substudy of a larger quasi-experimental study reviewed by the local hospital ethics review board and registered in ClinicalTrials.gov as identifier number NCT01924715. That study compared health costs pre and post-treatment both within group and between cases and a control group of non-treated referred patients. The baseline costs of this control group were vastly lower than the baseline costs of the psychosis group: hence, we opted only to report here the within group data in the psychosis group. There were no significant pre-versus-post cost changes in the control group in the overall study (Abbass et al., 2011).

For each participant health card numbers, dates, number of sessions of graded ISTDP treatment and demographic data were recorded. The treating therapist and supervising psychiatrist made DSM-IV diagnostic assessments using referral information, clinical interviewing, and observation during the treatment courses. Medications were monitored by the treating therapist or supervising psychiatrist. Standardized self-reports outcome measures of symptom severity were implemented partway through the years of this study.

For data extraction and analysis, all personal identifiers were removed, and provincial health card numbers were encrypted and sent to the PHRU, These data covered both hospital separations and billing data from all physicians. Health Canada and the Public Health Agency of Canada have both used administrative datasets for chronic disease surveillance (Kisely et al., 2009). Although these data were collected for billing rather than surveillance, studies using these datasets for disease surveillance have shown acceptable accuracy over time and relative to other measures (Williams and Young, 1996; Kisely et al.,. 2009).

All patients were from Nova Scotia with valid provincial health card numbers; hence, all of their health care service use was recorded in the provincial health care registry and accessible by the Population Health Research Unit (PHRU), a population health database with access to provincial inpatient and outpatient health care service use (Department of Community Health and Epidemiology, 2014). Independent professionals at the PHRU extracted mean hospital costs, physician costs and total healthcare costs from government databases for the period of one year duration prior to start of psychotherapy (baseline), and for the post-treatment periods of one, two, three and four years after termination of psychotherapy. This database also yielded age, gender, income, place of residence (urban versus rural) and primary diagnoses made by physicians in the year before referral. To eliminate the effects of cost variations over time, the PHRU provided 2007-equivalent cost values for all physician services and hospital stays regardless of the year they were treated, based on diagnosis and procedure codes. These were compared with mean physician billings per person for the Nova Scotian population (Nova Scotia Department of Health, 2008) and Canadian population average inpatient costs for 2007 (Canadian Institute for Health Information, 2013).

2.4. Measures

To evaluate the effectiveness of graded ISTDP on clinical symptoms, treated cases completed baseline and post-treatment self-report ratings on two different scales. The Brief Symptom Inventory (BSI) (Derogatis, 1993) is a well-validated 53-item self-report measure with nine symptom subscales including paranoid ideation, depression, anxiety and 'psychoticism'. The Inventory of Interpersonal Problems (IIP) (Horowitz et al., 1988) is a validated 32-item self-report scale with eight subscales describing interpersonal difficulties. The BSI has been well studied in schizophrenia (Long et al., 2007) and both global scales and some subscales have been found to correlate with Positive and Negative Syndrome Scales ratings (Preston and Harrison, 2003). Both the global mean item score (BSI-GSI) and BSI subscales are considered valid instruments to measure symptoms in schizophrenia (Long et al., 2007). The IIP has been studied in psychotic disordered populations and been found to relate with treatment engagement and alliance and hence, may reflect important treatment variables (Johansen et al., 2013).

2.5. Psychotherapy intervention and therapists

All treated cases received graded ISTDP, an individual integrated form of psychotherapy emphasizing emotional awareness and augmenting the capacities to self-reflect as well as tolerate and experience emotions. The method begins with an extended therapeutic trial interview with a psycho-diagnostic procedure to help determine the relative contribution of emotional factors to the individual's clinical presenting problems (Abbass et al., 2009). The interview also includes therapeutic elements where emotions related to adverse life events are examined and processed where possible. This interview appears to bring symptomatic relief in diverse populations, with superior effects to standard psychiatric intake interviews (Abbass et al., 2008a; Abbass et al., 2009). Since Nova Scotia is a geographical region of over 55,000 square kilometers, one third of patients travel to the Centre from distance. Many patients only attend an extended trial therapy session, and recommendations are provided to local treating mental health professionals. Likewise, local mental health services often refer patients for a single session trial therapy to assist in designing psychotherapy treatment in a case where treatment