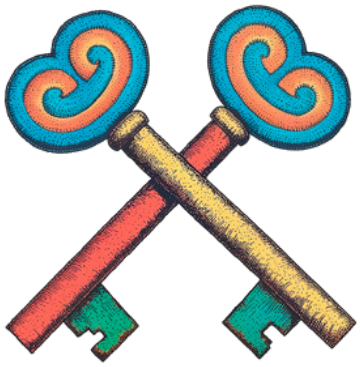
RESEARCH

ISTDP for depression Treatment effectiveness and effects of unlocking the unconscious



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Abstract

Intensive Short-Term Dynamic Psychotherapy (ISTDP) has an increasing amount of evidence regarding its efficacy across various psychiatric conditions and specifically with depression. The aim of this study is to replicate the findings of controlled research by examining the effects of ISTDP in the treatment of depression in a large naturalistic sample, and also to explore the mediating role of unlocking the unconscious in this treatment. Healthcare costs were also explored. Data were collected from a naturalistic study conducted at the Centre for Emotions and Health, Halifax, Nova Scotia, Canada, between 1999 and 2007. A sample of 195 patients' self-reported levels of depression, measured by the depression subscale of the Brief Symptom Inventory (BSI), and interpersonal problems, measured by the Inventory of Interpersonal Problems-32 (IIP-32), were analyzed using mixed-effects models. The analysis revealed a significant and large effect of ISTDP on both depression (within-group Cohen's d = 1.02, 95% CI [0.75, 1.26]) and interpersonal problems (within-group Cohen's d = 1.17, 95% CI [0.89, 1.46]). The process of unlocking the unconscious emerged as a significant mediator of treatment outcomes for both depression (between-group Cohen's d = 0.60, 95% CI [0.16, 1.07]) and interpersonal problems (between-group Cohen's d = 0.47, 95% CI [-0.05, 0.95]). Reductions in costs regarding physician (p = 0.07) and hospital costs (p < 0.05) were observed. These findings support the efficacy of ISTDP in treating depression and highlight the importance of unlocking the unconscious among patients with depression.

Keywords: Intensive short-term dynamic psychotherapy, psychodynamic psychotherapy, depression, interpersonal problems, unlocking the unconscious

CONFLICT OF INTEREST STATEMENT
No conflicts to declare.

AUTHOR CONTRIBUTION STATEMENT
Conceptualization: RJ, JT, AA, Methodology: RJ, KE, KÅ, JT, AA, Formal Analysis: RJ, KE, KÅ, JT, AA, Writing - Original Draft: RJ, KE, KÅ, JT, AA, Writing - Review & Editing: RJ, KE, KÅ, JT, AA, Visualization: KE, Supervision: RJ, AA, Project Administration: RJ, JT, AA, Funding Acquisition: AA

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Intensive Short-Term Dynamic Psychotherapy for depression: Treatment effectiveness and effects of unlocking the unconscious

Depression is one of the most common mental illnesses worldwide, with an estimated 264 million individuals affected in 2017 (Monroe & Harkness, 2022). The etiology of depression is not fully understood, but modern models suggest it results from a complex interaction of biological, psychological, and social factors. The risk of depression and other mental and physical illnesses increases if the individual has experienced adverse childhood events such as loss, neglect, abuse, or other trauma (Felitti et al., 1998; WHO, 2021). Interpersonal difficulties often present in depression can be both a cause and a consequence of the disorder, as dysfunctional interpersonal styles can elicit negative reactions from others, reinforcing negative self-perceptions (Luyten et al., 2005).

Depression from an ISTDP perspective

In ISTDP, depression, like other forms of psychopathology, is thought to arise from unprocessed attachment trauma. The regressive defenses characterizing depression, such as self-criticism, self-destructiveness, resignation, and agonizing, serve to distance the person from conflicting painful feelings that have arisen in relation to a frustrating other (Frederickson, 2013). Unconscious, unprocessed rage, guilt, and grief are believed to lie at the root of the problem, with the avoidance of these feelings driving the depression forward (Abbass, 2015). Frederickson (2013) describes how identification with a judgmental, intolerant, or threatening parent may underlie the destructive self-hatred or self-loathing often expressed by depressed patients. The process can be summarized as follows: Attachment trauma causes reactive anger in the child towards the attachment figure, and guilt about this anger. In some cases, the attachment figure, such as a parent, reacts to the child's anger with contempt or criticism. Since it is safer for a child to depend on a friendly parent rather than a judgmental one, the child internalizes the parent's negative traits through identification. One defense is to direct the anger inward and punish oneself for this anger in the same manner as the critical parent did. Other defenses against anger include criticizing or judging others or being vigilant and fearing that others will judge them, as the parent did. Temporary defenses against a threatening or critical other become habitual in a context of neglect, leading the child to internalize these negative attributes as their own (Frederickson, 2013).

In ISTDP, the treatment follows the same principles as described above and is always adapted to the individual's level of resistance and anxiety tolerance (Abbass, 2015). However, specific points emerge from the literature regarding depressed patients. Many depressed patients confuse the corners of the triangle of conflict: emotion, anxiety, and defense. In these cases, the therapist uses the graded format to clarify the differences and connections between emotion, anxiety, and defense, and to strengthen the patient's anxiety tolerance before further challenging the defenses (Della Selva, 2004). Furthermore, depressed patients are thought to have a particular vulnerability to loss and separation. Abbass (2015) argues that it is common for depressed patients to have difficulties with intimacy and closeness, which often become apparent in the therapeutic relationship through transference or tactical defenses that serve to keep the therapist at a distance.

The technique for treating depression thus involves addressing the patient's desire to feel better while challenging the patient's defenses and resistance to closeness. The aim of the treatment is to access and make conscious the unconscious complex emotions associated with past attachment trauma, thereby revealing the internal dynamics that maintain the depression (Abbass, 2015; Della Selva, 2004).

ISTDP for depression

Research on ISTDP for depression suggests that the treatment has a moderate to large effect on symptom levels compared to a control group receiving usual care (Abbass et al., 2012; Abbass et al., 2013; Abbass, 2006; Heshmati et al., 2023; Town et al., 2017). When comparing ISTDP treatment with a waiting list, a large effect size has been observed for depression, affective (depression and anxiety), and interpersonal difficulties (Ajilchi et al., 2016; Heshmati et al., 2023; Solbakken & Abbass, 2015). In these studies, the effect was maintained from the end of treatment to follow-ups in the range of 3 to 12 months. Research indicates that this was also the case for treatment-resistant depression, with the effect sustained at 18 months of follow-up (Town et al., 2017; Town et al., 2020). In summary, there is strong evidence for the efficacy of ISTDP for depression, and hence a replication in a naturalistic design is warranted.

Processes of change in ISTDP and the role of Unlocking the Unconscious

Research indicates that specific mediators or mechanisms during ISTDP may significantly influence treatment outcomes, although the precise processes leading to these improvements are not yet fully understood as with psychotherapy more broadly (Hardy & Llewellyn, 2015; Kazdin, 2007, Philips & Falkenström, 2021). A key area of process research in ISTDP is the role of unlocking the unconscious. Unlocking the unconscious is a process where patients access and express previously repressed unconscious emotions, leading to significant therapeutic break-

throughs and gains (Abbass, 2015). Existing published research has shown that this process is associated with reduced general symptom levels and fewer interpersonal problems (Johansson et al., 2014; Town et al., 2013; Abbass et al., 2017).

In a pilot study to examine mechanisms of change in ISTDP for depression (Town et al., 2017), using an N = 4 case series design, Town and colleagues concluded that in-session affect experiencing is an important variable associated with changes in depression symptoms during treatment. In a follow-up study, Town et al. (2022) further examined the role of patient in-session affect experiencing as a key process of change underlying treatment for depression in ISTDP in a process-outcome analysis of RCT data. It showed that experiencing anger during an ISTDP session can lead to a reduction in rated depression symptoms in the following week but only when patient characteristics and mediating variables also are taken into account. For patients with lower levels of personality pathology, experiencing anger was associated with fewer depressive symptoms in the following week. Conversely, patients with higher levels of personality pathology reported more depressive symptoms after experiencing anger. This outcome was mediated by the therapeutic alliance and insight, with greater insight leading to better outcomes for patients with low levels of personality pathology. For those with higher levels, a strong therapeutic alliance was crucial for achieving positive outcomes (Town et al., 2022).

These findings underscore the importance of the therapeutic process, particularly the role of unlocking the unconscious, in achieving effective treatment outcomes in ISTDP. The presence of unlocking during therapy sessions appears to enhance the treatment's effectiveness, particularly in reducing depressive symptoms and improving interpersonal problems. This highlights the need for a strong therapeutic alliance and tailored interventions based on the patient's level of personality pathology to maximize the benefits of ISTDP.

Objective

This paper aims to investigate the effect of ISTDP and the unlocking of the unconscious on interpersonal problems and depressive symptoms in patients with depression in a naturalistic setting. Based on previous controlled research, our hypothesis is that ISTDP is an effective treatment for both depression and interpersonal problems and that the presence of unlocking the unconscious may enhance the treatment's effectiveness. Our research questions are thus:

- What effects does ISTDP treatment have on depression and interpersonal problems?
- How does the presence of unlocking the unconscious during treatment affect the impact on depression and interpersonal problems?
- Are there healthcare cost reductions after ISTDP?

Methodology

Sample and recruitment

This paper is based on data collected from a naturalistic study conducted at the Centre for Emotions and Health clinic in Halifax, Nova Scotia, Canada, between March 30, 1999, and March 30, 2007. The Centre is a specialist psychiatric clinic affiliated with Dalhousie University in the Queen Elizabeth II Health Centre in Halifax, providing research, teaching, and clinical care for individuals with anxiety, depression, and medically unexplained symptoms. During this period, a total of 1010 patients were referred to the clinic.

All patients were referred by healthcare professionals and placed on a waiting list for an assessment therapy session. Patients who attended the assessment session (n=500), attended at least one subsequent therapy session, and completed at least one self-assessment of their symptoms were included in the study, totaling 412 individuals. Since self-assessment of symptoms was only introduced midway through the 8-year study period (in 2003), the sample was somewhat limited. Exclusion criteria included substance abuse, organic mental disorders, psychosis, or severe personality disorder with psychosocial instability expected to affect treatment. The sessions were video-recorded with the patient's written consent.

Our sample consists of 195 patients who, in addition to meeting the above inclusion criteria, were diagnosed with depression according to DSM-IV criteria during the evaluation session and supervised observation. The diagnosis was made by the treating therapist in consultation with a supervisor. Of the 195 patients included in our sample, 71.4% were women, with gender data missing for three individuals. The age of the patients ranged from 19 to 81 years, with a mean age of 41.6 years (SD: 11.9). However, age data are missing for 28.8% of the participants. The most common comorbid conditions in the sample group were some form of anxiety diagnosis (57.9%), some form of body-related syndrome (57.4%), some form of personality syndrome (44.1%), and dysthymia (27.2%).

Therapists

A total of 33 therapists treated the patients in the sample. All therapists were licensed health professionals with varying

degrees of experience, currently undergoing training in ISTDP at the time of therapy. They attended weekly supervision sessions under the guidance of an experienced ISTDP therapist and supervisor, who was also among the treating therapists. Supervision involved reviewing video recordings of therapy sessions. Additionally, the therapists received weekly training and regularly engaged with literature on the method.

Treatment

All patients received individual treatment with Intensive Short-Term Dynamic Psychotherapy (ISTDP), (Davanloo, 2001; Abbass, 2015).

ISTDP aims to help the patient give up defenses and resistance, and facilitate the therapeutic alliance, enabling the patient to more quickly become aware of and express complex emotions associated with painful childhood experiences. The treatment is tailored to the patient's individual anxiety tolerance and use of defenses (Abbass, 2015). For a more detailed introduction to the therapy method, please see Abbass (2015). In the original treatment study, the duration of therapy was jointly determined by the therapist and the patient. All participants in the study attended a trial therapy session (3 hours) and at least one additional ISTDP therapy session. The duration of treatment ranged from 1 to 100 sessions, with an average of 11.1 sessions, a median of 5 sessions, and a standard deviation of 14.1.

Coding the unlocking of the unconscious

The unlocking of the unconscious was coded by an experienced therapist and supervisor in consultation with therapists during supervision sessions. This coding process was not blinded, as the coding therapist had treated some of the patients being evaluated for unlocking the unconscious. However, the therapist did not know any of the participants' baseline or follow-up post-evaluation session scores on the self-reports (BSI and IIP-32). Each assessment session and a variable number of subsequent treatment sessions were coded, with coding applied to the session as a whole.

The coding was based on Davanloo's (2001; 2005) description of the process, in which the gradual activation of the unconscious therapeutic alliance brings unconscious complex emotions to the surface, enabling links between current symptoms and past attachment trauma. For a detailed description of the process, refer to the introduction of this text. In the original study, the entire preceding course of increasing levels of complex transference feelings and high levels of defense and resistance were also coded in accordance with the theoretical conceptualization of the process (Johansson et al., 2014). However, we will only report on the sequence coded as a "major" unlocking of the unconscious, as these form the basis of our statistical analysis.

Briefly, the occurrence of unlocking of the unconscious was coded during therapy when the following behaviors were observed: a) the patient's defenses decreased, and they expressed strong complex transference feelings, such as homicidal anger followed by guilt towards the therapist; b) the patient linked these feelings towards the therapist to former significant persons through explicitly expressed visual associations (e.g., the patient expressed that the therapist resembled a former significant person or that they saw the former person in front of them), and; c) the patient expressed strong feelings of guilt, sadness, and also positive feelings towards former significant persons.

The data used a quantitative coding system for unlocking the unconscious, where 1 = unlocking of the unconscious one or more times during treatment, and 0 = no unlocking of the unconscious during treatment (Johansson et al., 2014). Our analysis employed the same binary coding system. In the following, we will use the terms "unlocking" or "unlocking of the unconscious" interchangeably when describing the phenomenon.

Outcome measures

In the original study, each patient was asked to rate their symptoms on three occasions: before treatment, after the assessment session, and after treatment. The ratings were collected using the Brief Symptom Inventory 53 (BSI) (Derogatis & Melisaratos, 1983) and the Inventory of Interpersonal Problems (IIP-32) (Horowitz et al., 1988), which were also used as outcome measures in our analysis.

The Brief Symptom Inventory 53 (BSI) measures the patient's subjective experience of their symptoms over the past week and includes 53 items rated on a five-point Likert scale from 0 (not at all) to 4 (extremely), distributed across nine dimensions: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The outcome measure used in our analysis is the mean of the total score from the six items in the BSI corresponding to the depression dimension, which has an internal consistency of $\alpha = 0.85$ and a high test-retest reliability of $r = 0.84$ (Derogatis & Melisaratos, 1983). The BSI-53 also demonstrates good convergent validity, with moderate to high correlations with other corresponding scales (Derogatis & Melisaratos, 1983).

The Inventory of Interpersonal Problems (IIP-32) is a shorter version of the Inventory of Interpersonal Problems 127, specifically measuring the degree of interpersonal problems, such as self-sacrifice and lack of self-confidence (Barkham et al., 1996; Horowitz et al., 1988). The questionnaire includes 32 items rated on a five-point Likert scale from 0 (not at all) to 4 (extremely) across eight dimensions: sociable, assertive, aggressive, open, caring, supportive, involved, and dependent. In our analysis, the mean of the total score from the IIP-32 is used as an outcome measure. Evaluations of the short version have shown it to be psychometrically equivalent to the original, making it a suitable alternative in clinical settings (Barkham et al., 1996). Given that interpersonal problems often occur in

depression but are not captured by standard depression scales, this outcome measure was particularly relevant to our study (McFarquhar et al., 2018).

Statistical analysis

Mixed-effects models were used to determine the effectiveness of treatment on depression and interpersonal problems, as well as the effect of unlocking during depression treatment. These models, also known as hierarchical models, multilevel models, and empirical Bayesian models, offer a flexible form of regression analysis (Field & Wright, 2011; Gueorguieva & Krystal, 2004). Mixed-effects models are particularly suitable for analyzing hierarchically structured data with repeated measurements, making them ideal for clinical contexts. They can handle systematic patterns in the data, such as patients attending the same therapist or clinic, which is a limitation of other statistical regression analyses like repeated measures ANOVA (rANOVA) (Field & Wright, 2011).

In the present study, a mixed-effects model regression analysis was conducted using the R statistical software to estimate the effect of ISTDP treatment duration on depressive symptoms (BSI) and interpersonal problems (IIP-32). The model included random effect intercepts and time as a fixed effect. Given the large variation in treatment duration, time was treated as a continuous variable with values of 0 (pre-treatment), 0.25 (post-assessment session), and 1 (end of treatment) to provide an estimate of the relative time periods between each measurement point. The significance level for the analyses was set at $p = 0.05$.

The presence of unlocking at any time during treatment was coded as 0 (no unlocking) or 1 (unlocking). Effect sizes for the treatment effect over time and for the relationship between unlocking and BSI and IIP-32 scores were calculated using R and interpreted according to the general guidelines for Cohen's *d*, where 0.2 represents a small effect size, 0.5 a moderate effect size, and 0.8 a large effect size (American Psychological Association, 2023). To ensure no significant difference between the group that experienced unlocking during treatment and the group that did not, baseline comparisons were made using an independent t-test.

The Population Health Research Unit (PHRU) provided data of health care costs for several time periods: one prior to ISTDP treatment (baseline), and then three consecutive one-year periods after termination. To assess changes in costs over time, we performed pre-versus-post comparative analyses (paired *t*-tests) for physician billings and hospital costs, contrasting the baseline year to the one-year period after treatment termination. These statistical analyses had to be computed by an external party (PHRU). As such, there were only pair-wise investigations of cost changes between the one-year period before and the one-year period after treatment. No statistical analyses were computed for costs changes between baseline year and two, and three years after termination of treatment.

...These findings underscore the importance of the therapeutic process, particularly the role of unlocking the unconscious, in achieving effective treatment outcomes in ISTDP.

Ethics

The project from which we obtained our data has been reviewed and approved by the Capital District Health Authority Research Ethics Board in Halifax, Nova Scotia (approval number 2007-050, registered in Clinicaltrials.gov, NCT01924715). All data from the original study are anonymized and cannot be traced back to individuals.

Results

This paper examined the effect of ISTDP on depression, as measured by the BSI (depression subscale) and the IIP-32, and whether the presence of unlocking influenced these outcomes. We used anonymized data from 195 patients with depression treated with ISTDP at the Centre for Emotions and Health in Halifax, Canada, between 2003 and 2007. The treatment duration averaged 11.1 sessions, with a median of 5.0 sessions, ranging from 1 to 100 sessions (SD = 14.1).

The effect of the treatment over time

Prior to treatment, 194 out of 195 patients rated their symptoms on the BSI, with a mean score of 2.2 on the BSI depression subscale (SD = 1.0). Additionally, 185 out of 195 patients rated their interpersonal problems on the IIP-32, with a mean score of 1.7 (SD = 0.6). Table 1 presents the mean, standard deviation, and missing data for the BSI and IIP-32 at all three measurement occasions.The results of the mixed-effects model analysis showed significant main effects for ISTDP treatment on both self-rated depressive symptoms ($p < .001$) and interpersonal problems ($p < .001$), with F(1, 216) = 89.7 for the BSI and F(1, 185) = 99.8 for the IIP-32. These results are presented in Table 3. The effect of the treatment was estimated to be large, with Cohen's d = -1.02 (95% CI [-1.27, -0.77]) for the BSI and Cohen's d = -1.17 (95% CI [-1.46, -0.90]) for the IIP-32.

The impact of unlocking the unconscious

A total of 79 out of 195 patients (40.5%) experienced an unlocking of the unconscious at some point during treatment. No significant differences were found between the baseline scores of the respective groups on the BSI ($t(191) = 0.07, p = 0.942$) and the IIP-32 ($t(182) = 0.19, p = 0.849$). Table 2 presents the mean, standard deviation, and missing data for the BSI and IIP-32 estimates at all three measurement occasions.

The results of the mixed-effects model analysis indicated that unlocking is very likely to be a mediator for the outcomes on both the BSI ($F(1, 211) = 93.05, p < .001$) and the IIP-32 ($F(1, 183) = 104.23, p < .001$) during ISTDP treatment. Baseline values and mean reductions in depressive symptoms and interpersonal problems for the entire patient group are presented in Table 3.

Additionally, the results showed a further reduction in symptoms on both outcome measures over time for patients who experienced unlocking compared to those who did not. The results are detailed in Table 3. ISTDP treatment had a large effect on both the BSI (Cohen's d = -1.32, 95% CI [-1.64, -0.99]) and IIP-32 (Cohen's d = -1.43, 95% CI [-1.79, -1.03]) for the unlocking group, whereas the non-unlocking group had a moderate treatment effect on BSI (Cohen's d = -0.72, 95% CI [-1.06, -0.36]) and a large effect on IIP-32 (Cohen's d = -0.96, 95% CI [-1.35, -0.60]). The difference in effect between the groups with and without unlocking was estimated to be moderate on the BSI (Cohen's d = -0.60, 95% CI [-1.07, -0.14]) and small on the IIP-32 (Cohen's d = -0.47, 95% CI [-0.96, 0.03]). The strength of these effects is illustrated in Figure 1.

Healthcare costs

Descriptive parameters for health care costs (physician and hospital) over time are presented in Table 4. A significant cost reduction was observed during the one-year post-treatment period, relative to pretreatment baseline year, for hospital costs ($p < 0.05$) and a trend regarding physician costs ($p = 0.07$).

TABLE 1: SELF-REPORT RATINGS ON THE BSI DEPRESSION AND THE IIP-32 ACROSS THREE TIME POINTS

		PRE	POST-TRIAL	POST	WITHIN-GROUP EFFECT SIZE COHEN'S D (CI)
BSI depression	N (missing)	194 (1)	99 (96)	74 (121)	1.02 (0.75; 1.26)
	M	2.2	1.6	1.2	
	SD	1.0	1.1	1.0	
IIP-32	N (missing)	185 (10)	87 (108)	59 (136)	1.17 (0.89; 1.46)
	M	1.7	1.5	1.1	
	SD	0.6	0.7	0.6	

Comment: Number of patients who rated their symptoms before treatment, post evaluation session and after treatment. Means (M) and standard deviations (SD). Confidence interval (CI).

TABLE 2: SELF-REPORT RATINGS ON THE BSI DEPRESSION AND THE IIP-32 ACROSS THREE TIME POINTS, SEPARATED BY UNLOCKING / NO UNLOCKING

		PRE	POST-TRIAL	POST	WITHIN-GROUP EFFECT SIZE COHEN'S D (CI)	BETWEEN-GROUP EFFECT SIZE COHEN'S D (CI)
BSI depression						
Unlocking	N (missing)	78 (1)	47 (32)	37 (42)	1.32 (0.99; 1.64)	0.60 (0.16; 1.07)
	M	2.2	1.6	1.0		
	SD	1.0	1.0	1.0		
No unlocking	N (missing)	115 (0)	51 (64)	37 (78)	0.72 (0.14; 1.06)	
	M	2.2	1.6	1.5		
	SD	1.0	1.1	1.0		
IIP-32						
Unlocking	N (missing)	77 (2)	42 (37)	27 (52)	1.43 (1.03; 1.79)	0.47 (-0.05; 0.95)
	M	1.7	1.5	0.9		
	SD	0.6	0.7	0.6		
No unlocking	N (missing)	107 (8)	45 (70)	32 (83)	0.96 (0.60; 1.35)	
	M	1.7	1.5	1.2		
	SD	0.5	0.7	0.6		

Comment: Number of patients who rated their symptoms before treatment, post trial therapy and post treatment. Means (M) and standard deviations (SD).

FIGURE 1:THE EFFECT OF ISTDP ON BSI DEPRESSION AND IIP-32 MEDIATED BY UNLOCKING

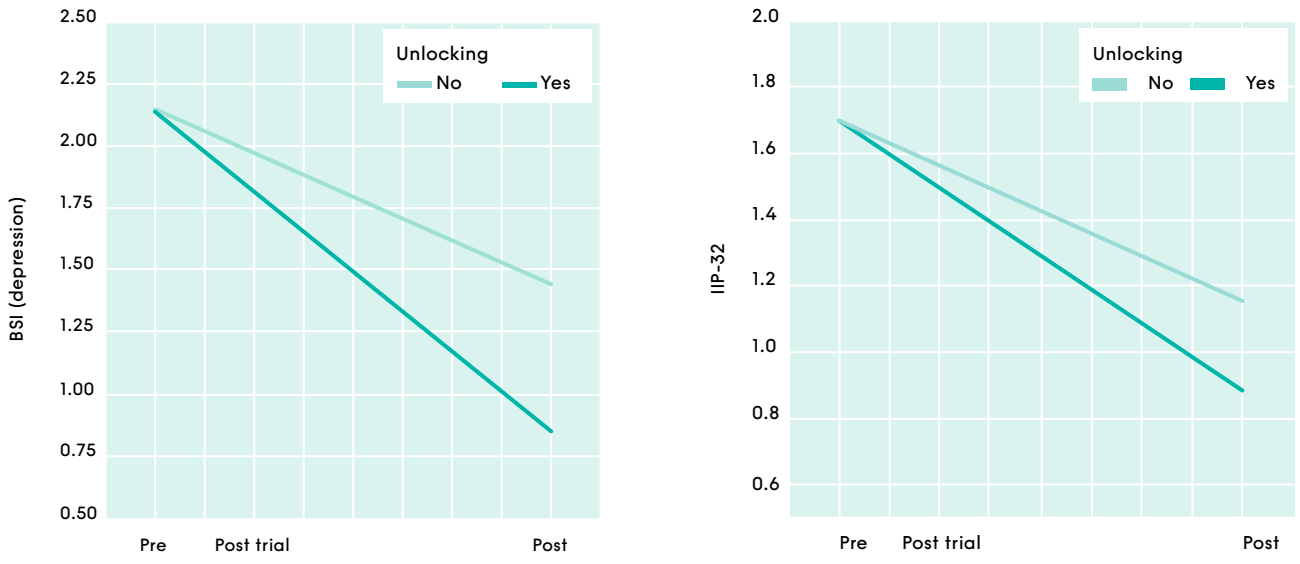

TABLE 3: MIXED-EFFECTS MODEL INVESTIGATING CHANGE IN BSI DEPRESSION AND THE IIP-32 OVER TIME, MEDIATED BY UNLOCKING

		EFFECT OF TIME	EFFECT OF UNLOCKING
BSI depression			
Start	All	2.13*** [1.99, 2.27]	2.13*** [1.99, 2.27]
	Unlocking		-0.12
Change	All	-0.99*** [-1.20, -0.79]	-1.00*** [-1.20, -0.79]
	Unlocking		-0.58** [-0.99, -0.18]
IIP-32			
Start	All	1.70*** [1.61, 1.78]	1.70*** [1.61, 1.79]
	Unlocking		-0.00
Change	All	-0.67*** [-0.8, -0.54]	-0.68*** [-0.81, -0.55]
	Unlocking		-0.27** [-0.53, -0.00]

Comment: Baseline and mean change in symptom levels for all participants, and for participants with an unlocking during treatment compared to participants without an unlocking during treatment.

TABLE 4: MEANS (STANDARD DEVIATION) FOR HEALTH CARE COSTS, IN CANADIAN DOLLARS AND IN 2007-EQUIVALENT

		N	PHYSICIAN COSTS (SD)	HOSPITAL COSTS (SD)
Prior to ISTDP	Year -1	231	1021.71 (1592.92)	6649.41 (33760.80)
After ISTDP termination	Year 1	231	913.20tr (1649.04)	2228.78* (7229.18)
	Year 2	192	687.43 (818.94)	1626.30 (5522.30)
	Year 3	146	558.90 (537.06)	713.74 (2989.68)

Comment: tr: Statistical trend, within-group change from baseline year is p = 0.07; *: Within-group change from baseline year is p < 0.05

Discussion

This paper had a dual purpose. First, we aimed to investigate the effectiveness of ISTDP for treating depression and interpersonal difficulties in a naturalistic sample. Second, we sought to determine whether the process of unlocking the unconscious during treatment impacts the efficacy of ISTDP. Based on modern psychodynamic theory and treatment research, we hypothesized that ISTDP would be effective for both depression and interpersonal problems, and that the presence of unlocking during treatment could enhance its effectiveness.

To our knowledge, no previous study has investigated the effectiveness of ISTDP for depressive symptoms in a large sample or examined the effect of unlocking during ISTDP for depression. To address our research questions, we conducted a statistical analysis of data from 195 patients with depression. We employed mixed-effects models for this analysis, using the R software.

Discussion of results

The impact of ISTDP on depression and interpersonal problems

The results of the analysis suggest that ISTDP has a strong effect on both depressive symptoms and interpersonal difficulties, which aligns with the theoretical framework of the method. These results validate the findings of existing published controlled research including three randomized controlled trials. Studies by Abbass et al. (2006, 2012, 2013) and Town et al. (2017) have demonstrated that ISTDP has a moderate to large effect on

depressive symptoms compared to standard treatment. Additionally, the findings support the results of McFarquhar et al. (2018), Ajilchi et al. (2016), and Solbakken & Abbass (2015), where ISTDP was found to have a large effect on both depression symptoms and interpersonal problems. Furthermore, the results align with the beneficial effects of psychodynamic psychotherapy shown in previous meta-analyses by Wienicke et al. (2023), Driessen et al. (2015), and Town et al. (2012).

The impact of unlocking on depressive symptoms

Our analysis suggests that patients who experienced an unlocking during therapy had a greater reduction in depressive symptoms compared to those who did not. This finding aligns with existing research by Johansson et al. (2014) and Town et al. (2013), which indicates that unlocking mediates the outcome of ISTDP in terms of general symptom levels. Since our results also show that unlocking is beneficial specifically for depression, this could suggest unlocking is a pandiagnostic mechanism of change within ISTDP. Since unlocking involves the experience of complex emotions during therapy, our findings may also support the results of the meta-analysis of dynamic therapies by Diener, Hilsenroth, and Weinberger (2007), which showed a moderate positive association between affect focus during therapy and better treatment outcomes.

Interpreting the results is challenging because unlocking is theoretically defined as a complex psychological process that includes several different steps or stages that are not clearly delineated from each other (Davanloo, 2001). According to Davanloo (2001), a stage of unlocking is characterized by the patient experiencing mixed feelings towards the therapist in the transference, which are associated with and subsequently expressed towards a previously significant person. Thus, our results which highlight the importance of unlocking could also be understood as pointing to the role of multiple ingredients of changes that vary by patient characteristics, in line with Town et al. (2022).

Understanding the effect of unlocking on depression is further complicated by the fact that depression cannot be viewed as a homogeneous phenomenon. As discussed in the introduction, there is no unified theory or model of the etiology of depression within the psychoanalytic field. Our theoretical perspective is closest to the model of depression arising from reactive anger and guilt following a real or perceived loss, which leads to inwardly directed aggression (Abbass, 2015; Frederickson, 2013). However, it has been questioned whether depression needs to involve elements of aggression and guilt at all. Other theories suggest that narcissism is the driving factor in some types of depression, with shame over one's narcissistic failures being the central emotion rather than guilt. Given these different models, it has been argued that different subtypes of depression exist, suggesting different approaches to treatment (Bleichmar, 1996). The lack of knowledge about the mechanisms underlying depression in our sample limits our ability to draw conclusions about whether ISTDP and unlocking can be generalized across different forms of depression or if it is effective only for those with anger- and guilt-related depression.

Another question arises when examining the results in light of ISTDP theory. Although unlocking refers to the breakthrough of unconscious emotions from attachment trauma and the association with a former significant other, it is theoretically always followed by a consolidation phase (Abbass, 2015; Davanloo, 2001; Frederickson, 2013). Consolidation involves the patient and therapist reviewing the process, linking emotional reactions to previous adverse experiences, and analyzing the transference (Abbass, 2015; Davanloo, 2001; Frederickson, 2013). This provides the patient with a deeper understanding of themselves, their emotions, symptoms, and relational patterns (Della Selva, 2004; Frederickson, 2013). As consolidation always follows unlocking in ISTDP, it is difficult to rule out the possibility that mechanisms during consolidation could explain some of our results. One such mechanism could be insight.

The theory suggests that insight into maladaptive representations of self and others and destructive relational patterns enables gradual change in attitudes, leading to symptom relief in the long term (Abbass, 2015; Frederickson, 2013). Previous research has shown that insight can significantly influence treatment outcomes. For example, Jennissen et al. (2018) identified insight as a mediator in psychotherapy, and Town et al. (2022) found that insight likely mediated the relationship between perceived anger and fewer depressive symptoms in patients with low levels of personality pathology. Our study did not measure insight or outcomes depending on the consolidation phase, making it difficult to comment on this factor. However, this question is relevant for future research in ISTDP.

Impact of unlocking on IIP-32

For interpersonal problems, the effect of treatment was better for those who experienced unlocking ($p = 0.047$). The effect size of unlocking on interpersonal problems is moderate (Cohen's d = -0.47, 95% CI [-0.96, 0.03]), and the confidence interval overlaps zero. This suggests that the actual effect of unlocking on interpersonal problems can range from nonexistent to large, and therefore, the effect size should be interpreted with caution. This result is intriguing given that the treatment as a whole appears effective for addressing interpersonal problems. It also contrasts with the findings of Johansson et al. (2014) and Town et al. (2013), where there was a clear effect of unlocking on interpersonal problems.

Limitations

Certain limitations are inherent with any naturalistic study design. However, the conclusions of this study should be taken alongside the existing body of controlled research raising less

concern about the need for research with high internal validity. Three RCTs have already demonstrated that ISTDP is an efficacious treatment for depression. As such, we will not repeat the limitations of attempting to generalize findings from research lacking a control group, variability in treatment delivery and treatment length, and reliance on self-report measures. All of these methodological points are addressed in controlled research demonstrating the efficacy of ISTDP for depression.

The current study is a secondary analysis of a larger mixed diagnostic sample. A structured interview tool for determining patient diagnoses was not used therefore the study is limited in the reliance on clinician diagnostic impression to offer a reliable diagnosis of Major Depressive Disorder.

A specific methodological limitation in this study relates to the coding of the "unlocking" process. The coding was conducted by a supervisor who was also involved in therapy, which raises the possibility of bias. The lack of blinding in this process and the use of a binary coding system may oversimplify the complex, gradual nature of the unlocking process, reducing the granularity of the observed therapeutic effects. Future research would benefit from employing blinded coders and using more nuanced, continuous measures to capture the unlocking process.

The timing of measurement points in this naturalistic design poses a limitation. Symptom measurements were taken only at three discrete time points: pre-treatment, post-trial therapy, and post-treatment. This limited frequency makes it challenging to capture the dynamic processes and potential nonlinear trajectories of change that may occur throughout the therapy. More frequent assessments would provide a richer understanding of how symptoms evolve during treatment.

Another important limitation is the substantial data attrition, which may affect the robustness of the findings, as missing data can lead to biased estimates. Given the design of this study, it remains unclear to which extent the missing data in this study has influenced the generalizability of the results. Future naturalistic designs should take precautions to prevent substantial levels of missing data. Additionally, the lack of long-term follow-up data limits our understanding of whether the significant reductions in depressive symptoms and interpersonal problems are sustained over time. Long-term follow-up would be necessary to assess and potentially replicate the durability of the observed effects, as seen in controlled trials for ISTDP. This concern is partly offset by the availability of 3 years follow-up cost reduction data showing reduced need for healthcare services.

Addressing these limitations in future research could strengthen the evidence base for ISTDP and clarify the mechanisms through which it exerts its therapeutic effects on depression and interpersonal problems.

Conclusions

Overall, the results of this paper align with much of the previous research on the effects of both ISTDP and unlocking on depression. While there are limitations to the current analysis, our analysis supports the conclusion that ISTDP is an effective treatment for reducing depression levels and interpersonal problems in depressed patients. Given the high proportion of personality disorders in the sample group, the results also suggest that ISTDP may be appropriate for this patient group as well. The results of our second question provide some insight, indicating that unlocking may offer additional reductions in both depressive symptoms and interpersonal problems.

Competing Interests
None.

References

Abbass, A. (2006). *Intensive Short-Term Dynamic Psychotherapy of treatment-resistant depression: A pilot study.* Depression & Anxiety, 23(7), 449-452. https://doi.org/10.1002/da.20203

Abbass, A. (2015). *Reaching through resistance: Advanced psychotherapy techniques (1st ed.).* Kansas City, MO: Seven Leaves Press.

Abbass, A., Kisely, S., Rasic, D., Town, J. M., & Johansson, R. (2015). *Long-term healthcare cost reduction with Intensive Short-Term Dynamic Psychotherapy in a tertiary psychiatric service.* Journal of Psychiatric Research, 64, 114-120. https://doi.org/10.1016/j.jpsychires.2015.03.001

Abbass, A., Town, J., Ogrodniczuk, J., Joffres, M., & Lilliengren, P. (2017). *Intensive Short-Term Dynamic Psychotherapy Trial Therapy: Effectiveness and role of "Unlocking the Unconscious".* The Journal of Nervous and Mental Disease, 205(6), 453-457. https://doi.org/10.1097/NMD.0000000000000684

Abbass, A., Town, J. M., & Driessen, E. (2013). *Intensive Short-Term Dynamic Psychotherapy: A treatment overview and empirical basis.* Research in Psychotherapy: Psychopathology, Process and Outcome, 16(1), 6–15. https://doi.org/10.4081/ripppo.2013.84

Abbass, A., Town, J., & Driessen, E. (2012). *Intensive Short-Term Dynamic Psychotherapy: A systematic review and meta-analysis of outcome research.* Harvard Review of Psychiatry, 20(2), 97-108. https://doi.org/10.3109/10673229.2012.677347

Ajilchi, B., Nejati, V., Town, J. M., Wilson, R., & Abbass, A. (2016). *Effects of Intensive Short-Term Dynamic Psychotherapy on depressive symptoms and executive functioning in major depression.* The Journal of Nervous and Mental Disease, 204(7), 500-505. https://doi.org/10.1097/NMD.0000000000000518

American Psychological Association. (2023). *Cohen's d. In APA Dictionary of Psychology.* Retrieved June 5, 2023, from https://dictionary.apa.org/cohens-d

Barkham, M., Hardy, G. E., & Startup, M. (1996). *The IIP-32: A short version of the Inventory of Interpersonal Problems.* The British Journal of Clinical Psychology, 35(1), 21-35. https://doi.org/10.1111/j.2044-8260.1996.tb01159.x

Blagys, M. D., & Hilsenroth, M. J. (2000). *Distinctive features of short-term psychodynamic-interpersonal psychotherapy: A review of the comparative psychotherapy process literature.* Clinical Psychology: Science and Practice, 7, 167-188. https://doi.org/10.1093/clipsy.7.2.167

Bleichmar, H. B. (1996). *Some subtypes of depression and their implications for psychoanalytic treatment.* The International Journal of Psycho-Analysis, 77(5), 935.

Davanloo, H. (2001). *Intensive short-term dynamic psychotherapy: Extended major direct access to the unconscious.* European Psychotherapy, 2(1), 25-70. Google Scholar link

Davanloo, H. (2005). *Intensive short-term dynamic psychotherapy.* In B. J. Sadock, V. A. Sadock, & H. I. Kaplan (Eds.), Kaplan & Sadock's comprehensive textbook of psychiatry (8th ed., Vol. 2, pp. 2628-2652). Philadelphia, PA: Lippincott Williams & Wilkins.

Della Selva, P. C. (2004). *Intensive Short-Term Dynamic Psychotherapy: Theory and Technique.* London: Karnac Books.

Derogatis, L., & Melisaratos, N. (1983). *The Brief Symptom Inventory: An introductory report.* Psychological Medicine, 13(3), 595-605. https://doi.org/10.1017/S0033291700048017

Diener, M. J., Hilsenroth, M. J., & Weinberger, J. (2007). *Therapist affect focus and patient outcomes in psychodynamic psychotherapy: A meta-analysis.* The American Journal of Psychiatry, 164(6), 936-941. https://doi.org/10.1176/ajp.2007.164.6.936

Driessen, E., Hegelmaier, L. M., Abbass, A. A., Barber, J. P., Dekker, J. J., Van, H. L., & Cuijpers, P. (2015). *The efficacy of short-term psychodynamic psychotherapy for depression: A meta-analysis update.* Clinical Psychology Review, 42, 1-15. https://doi.org/10.1016/j.cpr.2015.07.004

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (2019). *Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study.* American Journal of Preventive Medicine, 56(6), 774-786. https://doi.org/10.1016/j.amepre.2019.04.001

Field, A. P., & Wright, D. B. (2011). *A primer on using multilevel models in clinical and experimental psychopathology research.* Journal of Experimental Psychopathology, 2(2), 271-293. https://doi.org/10.5127/jep.013711

Frederickson, J. (2013). *Co-creating change: Effective dynamic therapy techniques.* Kensington, MD: Seven Leaves Press.

Gómez-Penedo, J. M., Fernández-Álvarez, J., Maristany, M., & Freiberg-Hoffmann, A. (2022). *Inventory of Interpersonal Problems-32 (IIP-32): Psychometric properties and normative data in a clinical sample from Argentina.* Revista Evaluar, 22(2), 64-75. Retrieved from https://revistas.unc.edu.ar/index.php/revaluar

Gueorguieva, R., & Krystal, J. H. (2004). *Move over ANOVA: Progress in analyzing repeated-measures data and its reflection in papers published in the archives of general psychiatry.* Archives of General Psychiatry, 61(3), 310-317. https://doi.org/10.1001/archpsyc.61.3.310

Hardy, G. E., & Llewelyn, S. (2015). *Introduction to psychotherapy process research.* In O. C. G. Gelo, A. Pritz, & B. Rieken (Eds.), Psychotherapy Research (pp. 183-194). Springer. https://doi.org/10.1007/978-3-7091-1382-0_9

Heshmati, R., Wienicke, F. J., & Driessen, E. (2023). *The effects of intensive short-term dynamic psychotherapy on depressive symptoms, negative affect, and emotional repression in single treatment-resistant depression: A randomized controlled trial.* Psychotherapy, 60(4), 497–511. https://doi.org/10.1037/pst0000500

Horowitz, L. M., Rosenberg, S. E., Baer, B. A., Ureño, G., & Villaseñor, V. S. (1988). *Inventory of interpersonal problems: Psychometric properties and clinical applications.* Journal of Consulting and Clinical Psychology, 56(6), 885-892. https://doi.org/10.1037/0022-006X.56.6.885

Høglend, P., & Hagtvet, K. (2019). *Change mechanisms in psychotherapy: Both improved insight and improved affective awareness are necessary.* Journal of Consulting and Clinical Psychology, 87(4), 332-344. https://doi.org/10.1037/ccp0000381

Jennissen, S., Huber, J., Ehrenthal, J. C., Schauenburg, H., & Dinger, U. (2018). *Association between insight and outcome of psychotherapy: Systematic review and meta-analysis.* The American Journal of Psychiatry, 175(10), 961-969. https://doi.org/10.1176/appi.ajp.2018.17080847

Johansson, P., Høglend, P., Ulberg, R., Amlo, S., Marble, A., & Bøgwald, K. P., et al. (2010). *The mediating role of insight for long-term improvements in psychodynamic therapy.* Journal of Consulting and Clinical Psychology, 78(3), 438-448. https://doi.org/10.1037/a0019245

Johansson, R., Town, J. M., & Abbass, A. (2014). *Davanloo's Intensive Short-Term Dynamic Psychotherapy in a tertiary psychotherapy service: Overall effectiveness and association between unlocking the unconscious and outcome.* PeerJ, 2, e548. https://doi.org/10.7717/peerj.548

Kazdin, A. E. (2007). *Mediators and mechanisms of change in psychotherapy research.* Annual Review of Clinical Psychology, 3, 1-27. https://doi.org/10.1146/annurev.clinpsy.3.022806.091432

Lo Coco, G., Mannino, G., Salerno, L., Oieni, V., Di Fratello, C., Profita, G., & Gullo, S. (2018). *The Italian version of the Inventory of Interpersonal Problems (IIP-32): Psychometric properties and factor structure in clinical and non-clinical groups.* Frontiers in Psychology, 9, 341. https://doi.org/10.3389/fpsyg.2018.00341

Luyten, P., Corveleyn, J., & Blatt, S. J. (2005). *The convergence among psychodynamic and cognitive-behavioral theories of depression: A critical review of empirical research.* In J. Corveleyn, P. Luyten, S. J. Blatt, & H. Lens-Gielis (Eds.), The theory and treatment of depression: Towards a dynamic interactionism model (pp. 95-135). Taylor & Francis Group.

McFarquhar, T., Luyten, P., & Fonagy, P. (2018). *Changes in interpersonal problems in the psychotherapeutic treatment of depression as measured by the Inventory of Interpersonal Problems: A systematic review and meta-analysis.* Journal of Affective Disorders, 226, 108-123. https://doi.org/10.1016/j.jad.2017.09.036

Monroe, S. M., & Harkness, K. L. (2022). *Major depression and its recurrences: Life course matters.* Annual

Review of Clinical Psychology, 18, 329-357. https://doi.org/10.1146/annurev-clinpsy-072220-021440

Philips, B., & Falkenström, F. (2021). *What research evidence is valid for psychotherapy research?* Frontiers in Psychiatry, 11, 625380. https://doi.org/10.3389/fpsyt.2020.625380

Shedler, J. (2006). *That was then, this is now: Psychoanalytic psychotherapy for the rest of us.* Retrieved February 23, 2023, from http://jonathanshedler.com/writings/

Solbakken, O. A., & Abbass, A. (2015). *Intensive short-term dynamic residential treatment program for patients with treatment-resistant disorders.* Journal of Affective Disorders, 181, 67-77. https://doi.org/10.1016/j.jad.2015.04.003

Town, J. M., Abbass, A., & Bernier, D. (2013). *Effectiveness and cost effectiveness of Davanloo's intensive short-term dynamic psychotherapy: Does unlocking the unconscious make a difference?* American Journal of Psychotherapy, 67(1), 89-108. https://doi.org/10.1176/appi.psychotherapy.2013.67.1.89

Town, J. M., Abbass, A., Stride, C., & Bernier, D. (2017). *A randomized controlled trial of intensive short-term dynamic psychotherapy for treatment resistant depression: The Halifax Depression Study.* Journal of Affective Disorders, 214, 15-25. https://doi.org/10.1016/j.jad.2017.02.035

Town, J. M., Abbass, A., Stride, C., Nunes, A., Bernier, D., & Berrigan, P. (2020). *Efficacy and cost-effectiveness of intensive short-term dynamic psychotherapy for treatment resistant depression: 18-Month follow-up of the Halifax Depression Trial.* Journal of Affective Disorders, 273, 194-202. https://doi.org/10.1016/j.jad.2020.04.035

Town, J. M., Diener, M. J., Abbass, A., Leichsenring, F., Driessen, E., & Rabung, S. (2012). *A meta-analysis of psychodynamic psychotherapy outcomes: Evaluating the effects of research-specific procedures.* Psychotherapy, 49(3), 276-290.

Town, J. M., Falkenström, F., Abbass, A., & Stride, C. (2022). *The anger-depression mechanism in dynamic therapy: Experiencing previously avoided anger positively predicts reduction in depression via working alliance and insight.* Journal of Counseling Psychology, 69(3), 326-336. https://doi.org/10.1037/cou0000581

Wienicke, F. J., Beutel, M. E., Zwerenz, R., Brähler, E., Fonagy, P., Luyten, P., et al. (2023). *Efficacy and moderators of short-term psychodynamic psychotherapy for depression: A systematic review and meta-analysis of individual participant data.* Clinical Psychology Review, 101. https://doi.org/10.1016/j.cpr.2023.102269

World Health Organization. (2021, September 13). *Depression.* Retrieved February 6, 2023, from https://www.who.int/news-room/fact-sheets/detail/depression

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