Psychodynamic Techniques Related to Outcome for Anxiety Disorder Patients at Different Points in Treatment

Seth Pitman, MA,* Jenelle Slavin-Mulford, PhD,† and Mark Hilsenroth, PhD*

Abstract: Although psychodynamic therapy has a well-articulated model of therapeutic change for anxiety, few empirical studies have examined specific treatment interventions related to symptom improvement. We examined the degree of adherence to a psychodynamic model of therapy (Blagys and Hilsenroth [*Clin Psychol* 7:167–188, 2000) related to changes in anxiety symptoms across early treatment process. Secondary analyses also examined the use of specific psychodynamic techniques across early treatment process in relation to symptom change. The current study sought to extend the findings of Slavin-Mulford et al. (2011), who found a relationship between the use of psychodynamic techniques in the third session (independent clinical ratings) and reduction in anxiety symptoms at posttreatment ($r = 0.46$, $p = 0.04$). Using the same sample of anxiety disorder patients ($N = 20$), we found a significant relationship between psychodynamic technique and posttreatment change in anxiety symptoms at the ninth session ($r = 0.49$, $p = 0.03$) and the mean levels of psychodynamic technique across both third and ninth sessions ($r = 0.53$, $p = 0.02$). In addition, specific psychodynamic techniques demonstrated significant relationships or moderate to large effects with posttreatment changes in anxiety symptoms at the third and ninth sessions as well as mean ratings across early treatment (third and ninth sessions). These findings indicate that therapist focus on cyclical intrapersonal patterns in patient actions, feelings, or experience as well as suggestions of alternative ways to understand these experiences or events not previously recognized by the patient (*i.e.*, interpretation) in the early treatment process were particularly helpful in reducing posttreatment anxiety symptoms. Clinical implications and areas for future research will be discussed.

Key Words: Psychodynamic psychotherapy, anxiety, technique, STPP, CPPS

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To date, few empirical studies have examined the relationship between specific treatment factors of psychodynamic therapy and change in anxiety symptoms for patients seeking treatment of anxiety disorders. This is despite the fact that psychodynamic therapy has a well-articulated model of psychotherapeutic change for anxiety and has been found to be both effective and efficacious (*e.g.*, Abbass et al., 2006; Bressi et al., 2010; Crits-Christoph et al., 1996; Ferrero et al., 2007; Milrod et al., 2001, 2007; Wiborg and Dahl, 1996). Although the need for examining which techniques account for the effects of treatment has been recognized (Connolly Gibbons et al., 2009), the few previous studies into the mechanisms of change have found mixed and sometimes contradictory results (Borkovec and Costello, 1993; Connolly Gibbons et al., 2009; Stangier et al., 2010). For example, improvements in self-understanding of interpersonal patterns have been found to predict decreases in anxiety in psychodynamic therapy but not in cognitive-behavioral therapy (CBT; Connolly Gibbons et al., 2009). Borkovec and Costello (1993) found the frequency of relaxation practice in CBT and the level of anxiety to be negatively correlated with

improvement on some anxiety scales, which is counter to what would be expected. Finally, in a meta-analytic review of adherence-outcome and competence-outcome relationships conducted by Webb et al. (2010), neither adherence nor competence was found to be significantly related to outcome. However, given the significant heterogeneity across the effect sizes (*e.g.*, r, d, g, h) of both adherence and competence, that study's results must be interpreted with caution.

More recently, Slavin-Mulford et al. (2011) conducted one of the first studies to examine treatment fidelity, credibility, and satisfaction within a naturalistic/effectiveness model of short-term psychodynamic psychotherapy (STPP) for anxiety. Using the Comparative Psychotherapy Process Scale (CPPS; Hilsenroth et al., 2005) to assess therapist activity and psychotherapy techniques early in treatment, the authors found a direct relationship between the use of global psychodynamic interventions in the third session and reduction in anxiety symptoms at posttreatment ($r = 0.46$, $p = 0.04$; Slavin-Mulford et al., 2011). In addition, several individual psychodynamic intervention techniques were found to be meaningfully related to outcome as follows: a) focusing on wishes, fantasies, dreams, and early memories; b) linking current feelings or perceptions to the past; c) highlighting patients' typical patterns; and d) helping patients to understand their experiences in new ways. The authors regarded these findings to be in line with psychodynamic theories for anxiety and two empirically supported treatments derived from them including supportive expressive (SE) therapy for generalized anxiety disorder (GAD; Crits-Christoph et al., 1996) and panic-focused psychodynamic psychotherapy (PFPP; Milrod et al., 2001).

The current study sought to extend the findings of Slavin-Mulford et al. by examining whether the psychodynamic technique outcome correlations that were significant at the third session continue to be so at the ninth session, as well as across the mean of these two early treatment sessions (third and ninth), for the same sample of anxiety disorder patients ($N = 20$). As in that previous work, this study continues to use the reliable change index as a conservative measure of outcome (Jacobson and Truax, 1991; Jacobson et al., 1999) and examine psychodynamic and cognitive-behavioral interventions in relation to improvement in anxiety. We hypothesize that psychodynamic technique will be consistently related to changes in anxiety symptoms at both of these points in treatment.

METHODS

Participants

Participants were the same sample used in a previous study by Slavin-Mulford et al. (2011) and drawn from patients who were consecutively admitted for individual psychotherapy to the Psychodynamic Psychotherapy Treatment Team (see Hilsenroth, 2007) at a community outpatient psychological clinic. Of the 100 patients who began treatment in the larger study during this period, 25 were diagnosed with an anxiety disorder, 4 withdrew from treatment, and 21 completed treatment (84%). The patients who withdrew unilaterally terminated treatment and indicated explicitly (either orally or in writing) that they no longer wished to continue treatment (against the recommendation of their therapist). Importantly, all patients were

*Derner Institute of Advanced Psychological Studies, Adelphi University, Garden City, NY; and †Georgia Regents University, Augusta, GA.
Send reprint requests to Seth Pitman, MA, 1374 Dean St, Apt. 1, Brooklyn, NY 11216. E-mail: seth.pitman@gmail.com.

accepted into treatment regardless of disorder or comorbidity. One patient did not have a session videotape available for the independent ratings of therapist technique.

Of the 20 patients who completed treatment and had session videotape available, 3 were men and 17 were women. Fourteen were single, five were married, and one was divorced. The mean age for the current sample was 27.5 years, with an SD of 10.25 years. The range of *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV), axis I anxiety spectrum disorders in the patient sample included GAD ($n = 12$), posttraumatic stress disorder ($n = 4$), anxiety not otherwise specified ($n = 3$), and panic disorder ($n = 1$). Thirteen of these individuals were also diagnosed with a *DSM-IV* personality disorder, and four others had (subclinical) personality disorder features or traits. Six patients entered treatment having used anxiolytic and/or antidepressant medication continuously for at least 3 months before beginning psychotherapy and then subsequently through their course of treatment.

Treatment

Treatment consisted of once- or twice-weekly sessions of STPP. The decision about frequency of sessions was decided collaboratively between patient and therapist through a consideration of the patient's needs. Sessions were 50 to 60 minutes in length. Treatment was organized, aided, and informed (but not prescribed) by the technical guidelines delineated in four treatment manuals (Book, 1998; Luborsky, 1984; McCullough et al., 2003; Strupp and Binder, 1984; Wachtel, 1993). Additional technical material specific to the STPP treatment of anxiety (Crits-Christoph et al., 1995) was actively integrated into the treatment of these patients. Key features of the STPP model include the following (Blagys and Hilsenroth, 2000): a) focus on affect and the expression of emotion; b) the identification of patterns in actions, thoughts, feelings, and experiences and relationships with these patterns being explored/formulated using the Core Conflictual Relationship Theme (CCRT) format (Luborsky and Crits-Christoph, 1997); c) emphasis on past experiences; d) focus on interpersonal experiences; e) emphasis on the therapeutic relationship/alliance; f) exploration of wishes, dreams, or fantasies; and g) exploration of attempts to avoid topics or engage in activities that may hinder the progress of therapy. In addition to these areas of treatment focus, case presentations and symptoms are conceptualized in the context of interpersonal/intrapsychic conflict (Luborsky and Crits-Christoph, 1997). Finally, when a termination date is set, this becomes a frequent area of intervention. Issues related to the termination are also often linked to key interpersonal, affective, and thought patterns prominent in that patient's treatment.

Treatment was not of a fixed duration but was determined by the clinician's judgment, patient's decision, progress toward goals, and life changes. Treatment goals were first explored during the assessment period, and a formal treatment plan was reviewed with each patient in the third psychotherapy session. This treatment plan was then subsequently reviewed in the 10th, 24th, 40th, 60th, and 80th session for changes, additions, or deletions. Reassessment of patient functioning on a standard battery of outcome measures, as well as process ratings, was completed by the patients and the therapists immediately after selected sessions before these review points. At the end of treatment, all patients completed an exit evaluation. In addition, all sessions in these treatments were videotaped, not just the coded sessions of this study's participants. Finally, all patients included in the present analyses had attended a minimum of nine sessions and had completed, at least, a ninth-session reassessment battery. The mean number of sessions attended by these 20 patients was 28 (SD, 15), and the median was 23. The maximum number of sessions attended by a patient was 64.

Therapists

Fourteen advanced graduate students (six men and eight women), enrolled in an American Psychological Association–approved clinical psychology PhD program, were trained in the use of STPP using the texts described earlier. Two of these therapists treated 3 study patients, 2 of these therapists treated 2 study patients, and 10 of these therapists treated 1 study patient. Each therapist received a minimum of 3.5 hours of supervision per week (*i.e.*, 1.5 hours individually, 2 hours in a group treatment team meeting) on the therapeutic model, conceptualization, process, interpretation, and clinical interventions from a PhD licensed psychologist with extensive training in STPP. Individual and group supervision focused heavily on the review of videotaped case material and technical interventions (for a more detailed description of this training process, see Hilsenroth et al., 2006).

Brief Symptom Inventory

The Brief Symptom Inventory (BSI) is a 53-item self-report inventory that assesses symptom distress in a number of different domains/problem areas using a Likert scale of 0 (not at all) to 4 (extremely). The psychometric properties, reliability and validity of this measure, specific symptom subscale scores as well as a summary score, and the Global Severity Index are provided in the manual (Derogatis, 1994). Given the specific aims of this investigation, we chose to use the anxiety subscale (ANX). The mean ANX score for a healthy population ($n = 719$ nonpatients) was found to be 0.35 (SD, 0.45), and test-retest reliability for a 1-week period using an outpatient sample was 0.79 (Derogatis, 1994). The BSI was assessed at pretreatment and posttreatment; a more thorough description of the assessment procedures (semistructured clinical interview and assessment measures) and process used with this sample are provided in greater detail elsewhere (Slavin-Mulford et al., 2011).

The ANX subscale was examined at the individual patient level for clinical significance. Before the calculation of clinical significance information, to address concerns of pretreatment score regression to the mean, each of the pretest scores used in this stage of data analysis was adjusted according to standard psychometric procedures (Speer, 1992). In this formula, evaluation scores were "true score adjusted" to attenuate any regression effects. Reliable Change Index (RCI; Jacobson and Truax, 1991) scores were then calculated for the ANX variable (using the adjusted pretest scores). All calculations of clinical significance for the ANX subscale used the normative mean, standard deviation, and test-retest reliability data reported above. More than three quarters (76%) of the patients who completed treatment had final BSI-ANX scores in the normal, functional distribution. A third of the patients (33%) also made reliable and clinically significant change on ANX symptoms. Moreover, none of the patients deteriorated during psychotherapy on the BSI-ANX subscale. Finally, we examined the distribution of BSI-ANX in relation to Curran et al. (1996) criteria for normality (*i.e.*, skew <2.0, kurtosis <7.0) and found that our sample's ANX-Evaluation, ANX-Final, ANX–Raw Change, and ANX-RCI scores were all well within these limits (all variables, skew <1.61, kurtosis <2.24).

Treatment Fidelity: CPPS

A more thorough description of the development, procedures, reliability, and validity of the CPPS (Hilsenroth et al., 2005) are reported elsewhere (Hilsenroth, 2007; Hilsenroth et al., 2005). The CPPS is a descriptive measure of psychotherapy process designed to assess therapist activity and psychotherapy techniques that are used and occur during the therapeutic hour. The scale is based upon the findings of two reviews of the empirical comparative psychotherapy process literature (Blagys and Hilsenroth, 2000, 2002), which identified significant differences between the techniques used in psychodynamic-interpersonal (defined broadly to include psychodynamic, psychodynamic interpersonal, and interpersonal therapies) and cognitive-behavioral (defined broadly to include cognitive, cognitive-behavioral, and behavioral therapies) treatments. CPPS items were written to reflect the between-treatment differences identified in the empirical literature

reviews to assess the distinctive features of these alternative approaches to therapy. The CPPS was not designed to assess the interventions of a specific treatment manual. Rather, it was developed to be a more general instrument with applicability to different forms of therapy across these two models of treatment. In this respect, the CPPS is particularly suited to examine these treatments as practiced in the real world.

There are two subscales within the CPPS: the psychodynamic-interpersonal subscale (PI; 10 items) and the cognitive-behavioral subscale (CB; 10 items). The PI subscale measures the seven domains of therapist activity previously described as key features of the STPP treatment model (Blagys and Hilsenroth, 2000). One such CPPS-PI item is "The therapist suggests alternative understanding not previously recognized by the patient." A practical example of an interpretation developed in the session process with a depressed patient was "In that moment you described wanting a deeper connection and more support from your mother, but instead experienced her as rejecting and neglectful toward you. This led you to withdraw from her, feeling sad and hopeless that she will ever be concerned about your needs and also … even '*a little angry*' (emphasis on the patient's words)." The CB subscale consists of items that are significantly more characteristic of cognitive-behaviorally oriented therapy (Blagys and Hilsenroth, 2002). Items include a) emphasis on cognitive or logical/illogical thought patterns and belief systems; b) emphasis on teaching skills to patients; c) assigning homework to patients; d) providing information regarding treatment, disorder, or symptoms; e) direction of session activity; and f) emphasis on future functioning. Items are rated on a 7-point Likert scale ranging from 0 ("not at all characteristic"), 2 ("somewhat characteristic"), 4 ("characteristic"), through 6 ("extremely characteristic").

Videotapes of two early points in treatment session (third and ninth) for each patient were arranged in random order, and entire sessions were watched/rated by two judges independently. Immediately after viewing a videotaped session, the judges independently completed the CPPS. In addition, each subscale (PI and CB) was coded in random order. Regular reliability meetings were held during the coding process to prevent rater drift (for a more detailed description of this rater training process, see Stein et al., 2010). The reliability and clinical validity of the CPPS have been well established, and we have recently reported on the excellent interrater reliability and internal consistency of the CPPS, as well as significant results on six separate validity analyses conducted across several different contexts and samples (Hilsenroth, 2007; Hilsenroth et al., 2005). The CPPS data we used in the current study are derived from these recent reports, follow procedures detailed there, and are rated by trained external raters who have demonstrated the ability to rate these individual techniques in the good (intraclass correlation coefficient [ICC], 0.60–0.74; Shrout and Fleiss, 1979) to excellent range (≥0.75; Shrout and Fleiss, 1979). In addition, all Spearman-Brown's corrected mean ICCs for the individual CPPS-PI and CPPS-CB techniques were also in the excellent range (and thus may be examined individually), as were the ICCs for the CPPS-PI and CPPS-CB scale scores. CPPS data used in the correlational analyses in the present study were based on mean CPPS scores averaged across judges. Finally, with regard to the specific subset of sessions used in the current study, the interrater reliability, ICC, was in the excellent range (CPPS-PI, 0.86, and CPPS-CB, 0.78).

Because the mean number of sessions for this sample was 28 (SD, 15), including an examination of the mean of the third and ninth sessions, it allowed us to view the relationship between technique and outcome across the beginning phase (first third) of treatment. We conducted this analysis to understand whether the amount of technique aggregated across both sessions would result in similar and consistent findings with the two individual results. This would help determine whether a given technique was important across the entire beginning phase of treatment, rather than at only one particular time point.

RESULTS

Treatment Process and Outcome Relationship

The third-session technique outcome correlations were originally presented in Slavin-Mulford et al. (2011) and are provided here as a point of reference for the current analyses examining ninth-session technique and for the mean across third and ninth sessions. As in that study, this study examined the relationship between therapist activity and technique in treatment with changes in posttreatment anxiety symptoms. Pretreatment scores of anxiety symptoms were adjusted for regression to the mean before these analyses as part of the previously described RCI methodology. The mean CPPS-PI and CPPS-CB subscale scores from the third and ninth sessions and the mean of the third and ninth sessions were evaluated across all patient/therapist dyads. Thus, amount of therapist technique early in treatment was examined in relation to that patient's reliable degree of change in anxiety symptoms (ANX).

As reported in Table 1, the results demonstrated that, for all session analyses, higher levels of psychodynamic-interpersonal techniques early in treatment were significant and positively related to the amount of reliable change in patient self-reported changes in anxiety symptoms (third session: $r = 0.46$, $p = 0.04$; ninth session: $r = 0.49$, $p = 0.03$; mean across third and ninth sessions: $r = 0.53$, $p = 0.02$). Thus, the findings reported in Slavin-Mulford et al. (2011) examining third-session technique were also borne out in relation to ninth-session technique and across the mean of the two early treatment sessions. Similarly, these findings also revealed that cognitive-behavioral interventions early in this psychodynamic treatment were not significantly related to amount of reliable change in patient self-reported changes in anxiety symptoms (third session: $r = 0.03$, $p = 0.91$; ninth session: $r = 0.06$, $p = 0.80$; mean across third and ninth sessions: $r = 0.05$, $p = 0.84$). In addition, point biserial correlations (rpb) between a patient achieving reliable change (no = 0, yes = 1) with amount of third session technique were found to indicate a trend toward significance for CPPS-PI ($rpb = 0.42$, $p = 0.07$) and were nonsignificant for CPPS-CB ($rpb = 0.05$, $p = 0.82$). This was even more pronounced at both ninth session (CPPS-PI: $rpb = 0.45$, $p = 0.04$; CPPS-CB: $rpb = -0.08$, $p = 0.72$) and the mean across third and ninth sessions (CPPS-PI: $rpb = 0.49$, $p = 0.03$; CPPS-CB: $rpb = 0.01$, $p = 0.98$).

To better understand the specific aspects of the psychodynamic techniques that were most related to subsequent changes in anxiety symptoms, we undertook post hoc, exploratory analyses to address this issue. The results of these bivariate pairwise correlations revealed that three CPPS-PI items were significantly related to the criterion variable ANX-RCI when using the mean of sessions 3 and 9 (see Table 2). The first was "The therapist focuses attention on similarities among the patient's relationships repeated over time, settings, or people" (third session: $r = 0.035$, $p = 0.13$; ninth session: $r = 0.54$, $p = 0.01$; third and ninth sessions: $r = 0.53$, $p = 0.02$). The second was "The therapist suggests alternative understanding not previously recognized by the patient" (third session: $r = 0.45$, $p = 0.04$; ninth session:

TABLE 1. Treatment Techniques Related to Change in Anxiety Symptoms ($N = 20$)

	Session 3 ANX-RCI	Session 9 ANX-RCI	Sessions 3 and 9 ANX-RCI
CPPS-PI	$r = 0.46$	$r = 0.49$	$r = 0.53$
	$p = 0.04$	$p = 0.03$	$p = 0.02$
CPPS-CB	$r = 0.03$	$r = 0.06$	$r = 0.05$
	$p = 0.91$	$p = 0.80$	$p = 0.84$

CPPS-PI: psychodynamic-interpersonal subscale of the CPPS; CPPS-CB: cognitive-behavioral subscale of the CPPS; ANX-RCI: reliable change in the BSI-ANX after adjusting pretest scores for regression to the mean and measurement error.

TABLE 2. Individual PI Techniques Related to Change in Anxiety Symptoms ($N = 20$)

Therapist Technique Specific Intervention	Session 3 With ANX-RCI	Session 9 With ANX-RCI	Sessions 3 and 9 With ANX-RCI
Item 1: Encourages exploration of uncomfortable feelings	$r = 0.28$	$r = 0.44$	$r = 0.43$
	$p = 0.22$	$p = 0.05$	$p = 0.06$
Item 4: Links current feelings/perceptions to experiences of the past	$r = 0.46$	$r = 0.31$	$r = 0.43$
	$p = 0.04$	$p = 0.18$	$p = 0.06$
Item 5: Focuses on similarities among relationships repeated over time, settings, people	$r = 0.35$	$r = 0.54$	$r = 0.53$
	$p = 0.13$	$p = 0.01$	$p = 0.02$
Item 7: Focuses on therapist/patient relationship	$r = -0.21$	$r = 0.54$	$r = 0.30$
	$p = 0.37$	$p = 0.01$	$p = 0.21$
Item 8: Encourages patient to experience and express feelings in the session	$r = 0.11$	$r = 0.31$	$r = 0.25$
	$p = 0.64$	$p = 0.19$	$p = 0.28$
Item 10: Addresses the patient's avoidance of important topics and shifts in mood	$r = -0.10$	$r = 0.18$	$r = 0.08$
	$p = 0.68$	$p = 0.46$	$p = 0.73$
Item 13: Suggests alternative understanding not previously recognized by the patient	$r = 0.45$	$r = 0.41$	$r = 0.58$
	$p = 0.04$	$p = 0.07$	$p = 0.01$
Item 14: Identifies recurrent patterns in actions, feelings, or experiences	$r = 0.43$	$r = 0.52$	$r = 0.52$
	$p = 0.06$	$p = 0.02$	$p = 0.02$
Item 16: Allows patient to initiate discussion of significant issues, events, experiences	$r = 0.14$	$r = -0.24$	$r = -0.07$
	$p = 0.54$	$p = 0.31$	$p = 0.78$
Item 19: Focuses on wishes, dreams, and early childhood memories	$r = 0.53$	$r = 0.07$	$r = 0.32$
	$p = 0.02$	$p = 0.78$	$p = 0.17$

Bold r and p are those with significant findings.
ANX-RCI: reliable change in the BSI-ANX after adjusting pretest scores for regression to the mean and measurement error.

$r = 0.41$, $p = 0.07$; third and ninth sessions: $r = 0.58$, $p = 0.01$). The third was "The therapist identifies recurrent patterns in actions, feelings, or experiences" (third session: $r = 0.43$, $p = 0.06$; ninth session: $r = 0.52$, $p = 0.02$; third and ninth sessions: $r = 0.52$, $p = 0.02$). In addition, two items approached significance. Specifically, "The therapist encourages exploration of uncomfortable feelings" (ninth session: $r = 0.44$, $p = 0.05$; third and ninth sessions: $r = 0.43$, $p = 0.06$) and "The therapist links current feelings/perceptions to experiences of the past" (third session: $r = 0.46$, $p = 0.04$; third and ninth sessions: $r = 0.43$, $p = 0.06$) were positively correlated with improvement on the criterion variable ANX-RCI. Consistent with our initial finding that there was no significant correlation between the CB subscale and subsequent change in anxiety symptoms, the results of post-hoc exploratory pairwise correlations revealed that none of the individual CPPS-CB items was significantly related to ANX-RCI ($p > 0.05$). Moreover, the magnitude of effects is especially encouraging despite the power limitations of our sample size. Specifically, according to Cohen's (1988) criteria ($r > 0.3$ = medium; $r > 0.5$ = large), most of the significant findings are considered moderate to large effects.

DISCUSSION

This is the first study to examine the direct relationship between treatment technique and outcome for anxiety disorder patients at different points during therapy within a study of STPP. The findings suggest that there is a positive relationship between techniques designed to increase understanding in cyclical relational-affective patterns over time early in treatment and subsequent improvement in ANX symptoms. These technique-outcome relationships were observed in a sample demonstrating large ($d > 0.80$) outcome changes across multiple areas of functioning and with most patients (76%) reporting their anxiety symptoms within the normative range at the end of treatment (Slavin-Mulford et al., 2011). In addition, it is important to note that these changes occurred in a sample in which most patients also exhibited axis II comorbidity, a fact that would have led to their exclusion from many prior studies on the treatment of anxiety disorder patients.

Importantly, this is the first study, with acceptable interrater reliability, to find a direct link between psychodynamic interventions and subsequent changes in anxiety symptoms at two points in treatment. In particular, two individual psychodynamic techniques were consistently found to be significant at the two early treatment sessions and across the mean of those two sessions. These included a) suggesting alternative understanding not previously recognized by the patient and b) identifying recurrent patterns in actions, feelings, or experiences. Further, the results showed that several individual psychodynamic techniques were also meaningfully related to outcome when the mean of two early sessions was used. These included a) encouraging exploration of uncomfortable feelings; b) linking current feelings/perceptions to experiences of the past; and c) focusing on similarities among relationships repeated over time, settings, or people.

As in the findings reported by Slavin-Mulford et al. (2011), this compilation of techniques fits well with psychodynamic theories for anxiety and the empirically supported treatments derived from them (Crits-Christoph et al., 1996; Milrod et al., 2001). Specifically, the current findings are highly consistent with SE therapy for GAD, which focuses on the CCRT (Luborsky, 1984). The parallels between the CCRT and the integration of techniques related to anxiety reduction in the current study are striking because the CCRT focuses on helping patients to gain insight into their wishes and relational patterns. The findings are, to a lesser extent, supportive of the PFPP, which emphasizes exploring panic disorder patients' unconscious wishes and fantasies; connecting current stressors for panic with frightening experiences in childhood; and helping patients identify how thematic patterns in their feelings, behaviors, and relationships relate to panic (Milrod et al., 1997). Furthermore, our finding that there is a positive correlation between techniques designed to increase understanding in relational patterns and subsequent improvement in anxiety symptoms is also consistent with prior research. Specifically, past research has demonstrated that improvements in self-understanding of interpersonal

patterns predicted decreases in anxiety during psychodynamic therapy (Connolly Gibbons et al., 2009). In line with this research, Bressi et al. (2010) reported that patients who received STPP for anxiety and depressive disorders showed a significantly superior improvement in interpersonal problems, a finding that our results may also indirectly support.

However, it is not being suggested that this set of techniques used in isolation would constitute a treatment, per se, for anxiety disorder patients. To do so would be a very concrete interpretation of the data presented here and clinically unsophisticated. What these data do suggest is that, within a psychodynamic model of treatment, delivered in an optimally responsive manner and in which patient alliance was found to be high (see Hilsenroth et al., 2007, 2004), using these specific interventions at moderate levels (*i.e.*, CPPS mean scores 2–4) was related to greater degrees of anxiety reduction during the course of therapy. Thus, the current findings provide support for accentuating these therapeutic techniques within a comprehensive approach that is consistent with the psychodynamic theory, research, and practice.

Of interest, we found variability in the significance of several individual psychodynamic intervention techniques between the third and ninth sessions. Specifically, item 19, "The therapist encourages discussion of patient's wishes, fantasies, dreams, or early childhood memories," was found to be significant at the third session but not at the ninth session; alternatively, item 1, "The therapist encourages the exploration of feelings regarded by the patient as uncomfortable," and item 7, "The therapist focuses discussion on the relationship between the therapist and patient," were found to be significant at the ninth session but not at the third session. These findings suggest that the therapist's exploration of patient wishes, fantasies, and early childhood precursors to anxiety was likely important with regard to outcome in establishing the initial focus, goals, and tasks at the outset of treatment and perhaps less so as treatment progressed, whereas it seems that a transition to a focus on uncomfortable emotions and the therapeutic relationship by the ninth session became related to eventual changes in anxiety symptoms. With regard to the latter transition, focus on the therapeutic relationship shifted from a negative nonsignificant relationship in session 3 to a large positive effect in session 9, whereas the emphasis on uncomfortable affect demonstrated an increasingly positive relation to outcome. These results may suggest that addressing uncomfortable feelings surrounding the patient's anxiety and the feelings the patient has toward the therapist may be most effective only after initially exploring the fantasies and wishes the patient's anxiety elicits.

It is also very important to understand the nonsignificant relationship between cognitive-behavioral interventions and change in anxiety symptoms within the context of this specific study. These findings indicate that, within a study of STPP for outpatient anxiety, the limited amount of cognitive-behavioral interventions used within this larger psychodynamic treatment did not contribute to outcome. This finding should not be generalized beyond this limited context because several studies have shown that cognitive-behavioral interventions are successful in treating anxiety (*e.g.*, Stewart and Chambless, 2009). However, this result does help to clarify that cognitive-behavioral interventions were not driving the change process in this study. As such, our findings imply that there may be other "paths to the mountain top" and support the rationale for noninferiority trials using STPP in the treatment of anxiety disorder patients.

Despite being the first study to examine the relationship between technique and outcome during the course of psychotherapy for anxiety, there are a few limitations that should be addressed. First, the study has a small sample size. However, although more than 20 participants would clearly have been ideal, it is important to recognize that our sample size is consistent with past studies in psychodynamic therapy (*e.g.*, Milrod et al., 2001; Wiborg and Dahl, 1996) and CBT (Norton and Price, 2007) studies for anxiety. A second potential objection is that the patient population is an outpatient sample and thus only has a mild to moderate level of distress and/or impairment in functioning. However, it should be noted that our sample's pretreatment personality assessment inventory-ANX mean T-score of 71 is in the 98th percentile (Morey, 1991) and our sample's pretreatment BSI-ANX mean T-score of 68 is in the 96th percentile (Derogatis, 1994). Regarding other issues related to generalizability and external validity, some might object to our inclusion of the six patients who entered treatment using anxiolytic and/or antidepressant medication in the analyses. These patients were included because this medication regimen had been stabilized upon entry to treatment (at least 3 months' use) and remained so throughout the course of treatment (*i.e.*, consistent at each assessment point), yet these patients still desired additional treatment beyond medication to address their personal goals. Some may object to our study because there is no control group and the results are correlational. As such, we cannot conclusively rule out potential threats to internal validity, for example, impact of common factors unrelated to our specific treatment, patient history, and maturation. However, despite the study's limitations, we observed significant relationships between technique and outcome that provide clinical focus to both applied practice and future research.

These limitations notwithstanding, this treatment study is the first to examine specific therapeutic interventions related to change in the psychodynamic treatment of anxiety disorder patients at multiple points in treatment. Moreover, although our study does not have a control group, our finding that certain interventions are positively related to a reduction in anxiety symptoms suggests that there are specific techniques in psychodynamic therapy important to that change process. This is important because it not only supports the use of psychodynamic therapy in the treatment of anxiety disorders but also provides some suggestions to clinicians about the specific types of techniques they may want to consider accentuating in their work with this population.

DISCLOSURE

The authors declare no conflict of interest.

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