The Role of Theory-Specific Techniques and Therapeutic Alliance in Promoting Positive Outcomes

Integrative Psychotherapy for World Trade Center Responders

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Abstract: World Trade Center responders demonstrate high symptom burden, underscoring the importance of refining treatment approaches for this cohort. One method is examining the impact of therapy techniques on outcomes, and the interactions between technique and alliance on outcomes. This study a) examined the interaction of early treatment techniques on integrative psychotherapy outcomes and b) explored whether associations differed at varying levels of alliance. Twenty-nine adult responders diagnosed with partial or full posttraumatic stress disorder received outpatient psychotherapy and completed weekly measures of alliance, technique, and symptom distress. Analyses indicated significant interactions between 1) alliance and psychodynamic interventions on outcomes and 2) alliance and cognitive behavioral (CB) interventions on outcomes. Clients with high alliance had better outcomes when their therapist used fewer CB techniques. No meaningful differences were found between technique and outcomes for clients with lower alliance. These findings reiterate the critical roles technique and responsiveness to the alliance play in engendering successful outcomes.

Key Words: First responders, psychotherapy, technique, alliance, PTSD

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Researchers have long been interested in the means by which psychotherapy achieves positive outcomes, with the ultimate goal of improving the efficacy of treatment. Both "common factors," therapeutic elements shared across most treatment modalities (*e.g.*, therapeutic alliance), and theory-specific techniques, interventions specific to a particular treatment approach (*e.g.*, therapist's interpretations in psychodynamic treatments), are likely involved in treatment gains (Høglend et al., 2007; Levy et al., 2015). The robust association between the therapeutic alliance and the outcome is one of the most well-documented relationships in psychotherapy research (Horvath et al., 2011; Martin et al., 2000), but the role of specific techniques in relation to outcomes has produced variable results (see Webb et al., 2010).

Some have theorized that first responders with posttraumatic stress disorder (PTSD) may find the more directive, active stance that characterizes typical cognitive behavioral therapy (CBT) interventions more congruent with characteristics such as independence and a high sense of self-efficacy (*e.g.*, Difede et al., 2006) when compared with a less directive psychodynamic approach, leading to improved treatment engagement and outcomes. Empirically, although the evidence base for the treatment of PTSD in first responders is sparse (Haugen et al., 2012), existing randomized control trials support the effectiveness of cognitive behavioral (CB) (prolonged exposure; Difede et al., 2007) and brief integrative (brief eclectic psychotherapy for PTSD; Gersons et al., 2000) treatment approaches, the latter including both psychodynamic interpersonal (PI) and CB techniques. Assessing the relative contribution of theory-specific techniques to outcomes in this potentially challenging population would help further refine existing treatments.

There is also considerable debate about how alliance and psychotherapy technique interact to influence treatment outcomes (Hatcher and Barends, 2006), and even less is known about how these interactions differ across varying treatment approaches. Studies in this domain have generally supported the efficacy of PI techniques in psychodynamic treatments in the context of good therapeutic alliance (Gaston et al., 1998; Levy et al., 2015; Owen and Hilsenroth, 2011). In behavioral and CB treatments, evidence suggests that providing more PI interventions in the context of poor alliance leads to better symptom outcomes (Gaston et al., 1998). To our knowledge, the association between the interaction of CB techniques and the alliance with treatment outcomes has not been examined. Owen et al. (2013) reported on the relationship between CB techniques, alliance and postsession change (versus treatment outcomes) and CB techniques, and alliance in a naturalistic, eclectic treatment via a cross-sectional design. They found that CB techniques were not significantly associated with postsession change in high or low alliance conditions. Goldman et al. (2016) examined treatment outcomes and the integration of PI and CB techniques (versus CB technique alone) with aspects of the therapeutic alliance in a psychodynamic treatment. Their results showed that the alliance moderated the relationship between psychotherapy integration and client symptom improvement.

We sought to extend the work of Goldman et al. (2016) and Owen et al. (2013) to a highly burdened sample of adult World Trade Center (WTC) responders who received explicitly integrative psychotherapy. The purpose of the current study is to a) examine the interaction of clients' perspectives on PI and CB techniques on therapy outcomes and b) explore whether the associations differed at high and low levels of therapeutic alliance.

METHODS

Participants

Participants were 29 adult WTC responders, with a mean (SD) age of 48.55 years (9.68 years). Most were identified as European American (48.3%), and a majority were married (58.6%). At enrollment, 58.6% of participants were employed and 17.2% were retired, whereas a minority of the sample was unemployed/laid off (17.2%) or on extended leave/has disability (6.9%). The largest occupational group was law enforcement personnel (20.7%). Each of the remaining occupations represented no more than 6.9% of the total sample. See Table 1 for complete demographic information. Nearly half of the sample had at least one WTC-related medical condition (52%). Participants spent an average of 33 days working at or near the site of the WTC collapse (n = 25; M = 797.18 hours, SD = 943.95). Detailed data regarding WTC occupational exposure were available for 22 of 29 clients: the majority witnessed or experienced severe injury/death during the 9/11 attacks (48.3%) and/or encountered body parts (75.8%);

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TABLE 1. Demographic Information of Sample ($N = 29$)

Variable	Category	Frequency (%)
Sex	Male	24 (82.8%)
	Female	5 (17.5%)
Mean age (SD)	48.55 years (9.68 years)	
Ethnicity	European American	14 (48.3%)
	African American	8 (27.6%)
	Latino/Hispanic	3 (10.3%)
	"Other"	3 (10.3%)
	Multiracial	1 (3.4%)
Marital status	Married	17 (58.6%)
	Divorced	6 (20.7%)
	Single	4 (13.8%)
	Separated	2 (6.9%)
Employment status	Employed	17 (58.6%)
	Unemployed	5 (17.2%)
	Retired	5 (17.2%)
	Extended leave or has disability	2 (6.9%)

slightly less than half witnessed body recoveries (37.9%) and/or encountered dead bodies (34.5%).

Procedure

Participants met the criteria for probable partial ($n = 2$) or full PTSD ($n = 27$) related to their direct exposure to the events of 9/11. They were admitted for individual psychotherapy at a WTC responder clinic in New York, NY. Data were obtained from consecutive clients who were admitted after November 2009 and completed treatment before July 2013; no individuals who were offered services between this period refused mental health treatment. Individuals were eligible for inclusion if they a) were a WTC responder who met the WTC Health Program guidelines for a WTC-related psychiatric condition, b) met the *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision*, criteria (*DSM-IV-TR*; American Psychiatric Association, 2000) for a full or partial diagnosis of PTSD with moderate to severe symptoms, as indicated on the PTSD Checklist—Specific Version (PCL-S, completed with 9/11 as a specific event) and an unstructured clinical interview documenting associated functional impairment, c) were 18 years or older, and d) were fluent in English. No clients were excluded based on several criteria (*e.g.*, brain damage and current substance use). All clients completed the PCL-S before their first treatment session and the Outcome Questionnaire-45.2 (OQ-45.2; Lambert and Ogles, 2004) before their first treatment session and each subsequent session. The Combined Alliance Short Form—Patient Version (CASF-P; Hatcher and Barends, 1996) and Comparative Psychotherapy Process Scale—Patient Version (CPPS-P; Hilsenroth et al., 2005) were completed by clients after every session. Consistent with research that has detailed the impact of the early client-therapist relationship on later process interactions (*e.g.*, Hilsenroth, 2007; Rumpold et al., 2005; Sexton et al., 2005), and with studies examining CB techniques (Goldman et al., 2016; Owen et al., 2013), we examined alliance and technique across the first four psychotherapy sessions. Four clients had missing CPPS-P data within the first four sessions and were excluded from analyses; these clients did not significantly differ from the larger sample on any demographic or clinical variables. Posttreatment PCL-S scores were not available for majority of the participants because of premature termination, missing data, or therapist noncompliance with the collection protocol. All procedures in this study were approved by the New York University School of Medicine Institutional Review Board (R#: 11-01413).

Therapists and Treatment

Participants were treated by six psychologists with PhDs in clinical psychology or four doctoral-level graduate students. All treatments were supervised by one of two senior clinical psychologists. Thirty-five percent of clients were also in concurrent pharmacotherapy. Clients engaged in integrative psychotherapy on a weekly basis. The mean (SD) treatment length was 18.58 (15.65) sessions. The treatment integrated elements of psychodynamic and CBT approaches, using psychodynamic metapsychology but including a more active therapeutic stance than most psychodynamic therapies (see Haugen et al., 2013). The core techniques include 1) development of a therapeutic bond, 2) psychoeducation about diagnoses, 3) emphasis on making meaning with respect to the trauma, and 4) tolerance for distressing effect in the session. The mean (SD) CASF-P total score for this sample was 5.59 (0.80). To assess early treatment adherence, all clients rated their therapists' activity using the CPPS-P across the first four therapy sessions. For the current sample, the mean (SD) CPPS-PI scale score was 3.81 (1.12), and the CPPS-CB scale score was 3.07 (1.32), indicating moderate amounts of PI and CB activities and adherence to an integrative treatment approach. For most clients, the primary treatment goal was to assist them in making meaning of the events to which they had been exposed. When comorbid disorders were present, additional phases or techniques were added based on heuristics developed by Horowitz (2011).

Measures

Pretreatment Screening

Posttraumatic Stress Disorder Checklist—Specific Version

The PCL-S (Weathers et al., 1993) is a 17-item client-rated measure of PTSD symptoms, largely based on *DSM-IV-TR* criteria (American Psychiatric Association, 2000). Using a Likert scale from 1 (not at all) to 5 (extremely), participants rate how much they have been bothered by the symptom in the past month. The PCL-S was completed for the index event of 9/11. Consistent with the *DSM-IV-TR* (American Psychiatric Association, 2000), partial PTSD was defined as one or more symptoms in each of the three symptom groups (criteria B, C, and D) and having a duration of 1 month or more. Following guidelines developed by Yarvis et al. (2005), a symptom was considered "present" if the client rated it as 2 or higher out of 5. The mean length of time between September 11, 2001, and the administration of the PCL-S was approximately 10 years (mean [SD], 3691.61 days [608.07 days]). In this sample, the α was 0.92.

Psychotherapy Measures

Outcome Questionnaire-45.2

The OQ-45.2 (Lambert and Ogles, 2004) is a client-rated measure of psychological distress. The 45 items are rated on a Likert scale, ranging from 0 to 4, with higher scores indicating more distress. Test-retest coefficients have ranged from 0.66 to 0.86, and Cronbach α values exceed 0.90 in multiple samples (Lambert and Hawkins, 2004; Lambert et al., 1996). In addition, the OQ-45.2 has demonstrated significant associations with a range of other psychological distress and well-being measures (Lambert et al., 1996). In this sample, the α was 0.94. We used the pretherapy score as a control variable and the last session score as treatment outcomes.

Combined Alliance Short Form—Patient Version

Therapeutic alliance was assessed using the CASF-P (Hatcher and Barends, 1996), a 20-item self-report measure that uses a Likert scale ranging from 1 (never) to 7 (always). The CASF-P consists of a total score and four subscales: idealized relationship, confident collaboration, goals and task agreement, and bond, with higher scores indicating stronger therapeutic alliance. The measure has demonstrated high

TABLE 2. Summary of Regression Results

	PI × Alliance Model, OQ-45.2 Postscore		CB × Alliance Model, OQ-45.2 Postscore	
	b (SE)	β	*b* (SE)	β
PI	−7.94 (4.39)	−0.32	−0.48 (4.02)	−0.02
CB	8.98 (4.11)	0.34*	0.62 (3.65)	0.02
Alliance	0.24 (3.07)	0.01	0.54 (2.90)	0.02
OQ-45.2 pretreatment	0.81 (0.10)	0.83***	0.78 (0.09)	0.81***
PI × alliance	12.15 (3.70)	0.35**	—	—
CB × alliance	—	—	11.02 (2.88)	0.38***

*$p < 0.05$.
**$p < 0.01$.
***$p < 0.001$.

reliability and validity, with coefficient α values greater than 0.90. CASF-P items were derived from factor analysis from three widely used measures of alliance (Hatcher and Barends, 1996). Criterion validity has been reported, and the CASF-P has also demonstrated convergent validity with associated psychotherapy process measures (Ackerman et al., 2000; Clemence et al., 2005). We used the average of the first four session alliance scores.

Comparative Psychotherapy Process Scale—Patient Version

Therapist techniques and activities during therapy sessions were assessed using the CPPS-P (Hilsenroth et al., 2005). The CPPS has three versions—patient, therapist, or external rater. The patient version was used to rate how much a participant considered a particular therapist technique or activity to have occurred in the session, based on the items provided within the scale. The measure consists of 20 statements, 10 of which are theoretically central and distinctive features of PI therapy (CPPS-PI) and 10 are features of CB treatments (CPPS-CB). All items are randomly ordered and rated on a 7-point scale ranging from 0 (not at all characteristic) to 6 (extremely characteristic). The reliability and validity of the CPPS-P have been demonstrated (DeFife et al., 2008; Hilsenroth, 2007; Owen et al., 2013), and previous research has found that clients are able to distinguish between PI and CB interventions on the CPPS (DeFife et al., 2008; Hilsenroth et al., 2005). We used the average of the first four session PI and CB scores.

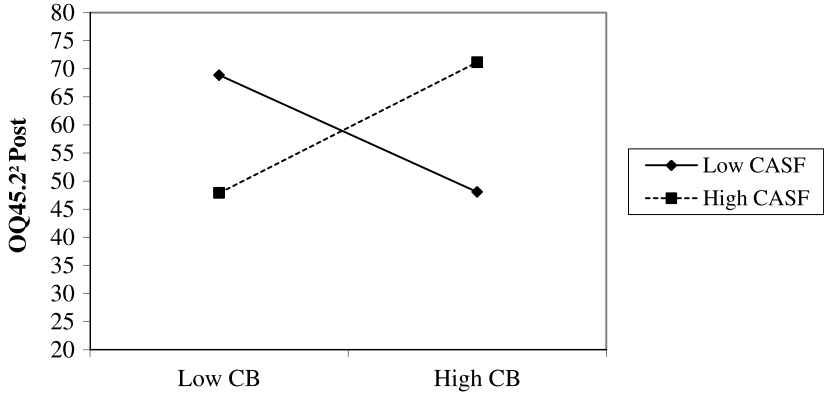
RESULTS

We predicted the OQ-45.2 postscores by PI technique, CB technique, and alliance (controlling for OQ-45.2 prescores); the partial correlation (controlling for pretherapy OQ-45.2) between OQ-45.2 posttreatment and during PI intervention was $r = -0.06$, $p = 0.76$; for CB, $r = 0.10$, $p = 0.60$; and for alliance, $r = -0.22$, $p = 0.27$. We also created two interaction effects, PI × alliance and CB × alliance, and tested these interaction terms separately. Given a ratio of approximately 2 or 3 to 1 per therapist, therapist effects were not examined. As shown in Table 2, the results of linear regression analyses demonstrated a significant interaction effect between alliance and PI interventions on outcomes and, similarly, a significant interaction effect between alliance and CB interventions on outcomes. Examining the simple slopes, clients who had higher alliances tended to have better outcomes when their therapist used fewer CB techniques ($t = 2.82$, $p = 0.01$). However, for clients who reported higher alliance, there was no significant difference in outcomes based on PI ($t = 0.88$, $p = 0.39$). Clients who reported lower alliances reported better outcomes when their therapist used more PI techniques ($t = -3.06$, $p = 0.01$) and/or CB techniques ($t = -2.03$, $p = 0.05$) (Figs. 1 and 2).

DISCUSSION

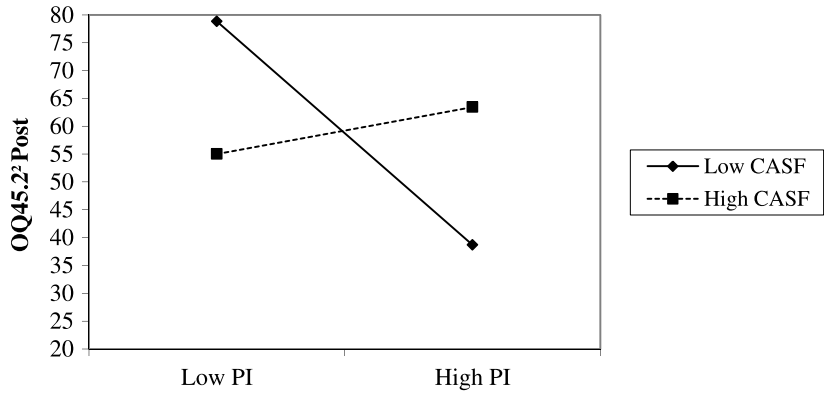
The goal of the present study is to examine the interaction of clients' perspectives on theory-based techniques and working alliance on treatment outcomes in integrative psychotherapy. Clients reported supportive, collaborative relationships with their therapists early in their treatment—as indicated by high levels of therapeutic alliance—in the context of an integrative treatment approach—represented by moderate amounts of PI and CB techniques. PI and CB techniques interacted with alliance to predict treatment outcomes. When we examined the effect of PI and CB techniques on outcomes at different levels of alliance, we found that at high alliance, using more or less PI techniques did not significantly impact outcomes. However, therapists' use of fewer CB techniques when the alliance was high led to better outcomes. It is possible that the focus on CB techniques in the context of a strong therapeutic relationship may overemphasize some treatment components (*e.g.*, psychoeducation or homework review) at the expense of the client's interpersonal needs and preferences.

In the current study, when clients felt less aligned with their therapists early in treatment, the use of both PI and CB techniques remained positively associated with treatment outcomes. These results are broadly consistent with the alliance-focused treatment approach



[1] Low = -1SD and High = +1SD
[2] Higher scores on the OQ-45.2 indicate a larger number of symptoms of distress

FIGURE 1. Interaction between CB techniques and alliance. Low = –1 SD and high = +1 SD. Higher scores on the OQ-45.2 indicate a larger number of symptoms of distress.



[1] Low = -1SD and High = +1SD
[2] Higher scores on the OQ-45.2 indicate a larger number of symptoms of distress

FIGURE 2. Interaction between PI techniques and alliance. Low = –1 SD and high = +1 SD. Higher scores on the OQ-45.2 indicate a larger number of symptoms of distress.

literature in which clients' evaluations of their therapists as active, motivating, or engaged, rather than passive, cold, or defensive (Hilsenroth et al., 2012), are associated with improved outcomes. Therapist activity is also important in the routine outcome monitoring literature, in which therapists' attention and reflection on their performance is thought to be involved in the production of beneficial outcomes (Miller et al., 2013). As such, it may be less important *how* problems within the therapeutic alliance are addressed than making sure that negative feelings *are* discussed within treatment. Overall, our findings reiterate the critical roles that both therapists' techniques and their responsiveness to the alliance play in engendering successful treatment outcomes. Lastly, by examining the contribution of theory-specific techniques to outcomes at different levels of alliance in WTC responders, our findings lend preliminary support to approaches which incorporate both CB and PI techniques in the treatment of first responders with PTSD (*e.g.*, brief eclectic psychotherapy for PTSD). Of note, our results suggest that this population may benefit more from PI techniques in early treatment, specifically in cases in which the client and therapist have established a strong therapeutic alliance.

Limitations

A number of potential limitations should be considered. First, there is limited statistical power associated with our small sample size, which was composed entirely of WTC responders exposed to the rescue and recovery effort after the 9/11 terrorist attacks. Whether these findings can be extended and replicated within other populations of PTSD is unknown. In addition, the underrepresentation of female first responders may influence the generalizability of the study results. Second, the interaction effects found between adherence and outcomes may have been impacted by the nature of the sample and the setting: less stringent client selection criteria and more flexible (*i.e.*, nonmanualized) application of treatment protocols (*i.e.*, single measures of self-report symptom/distress, reduction and psychological distress, variable treatment length, and lack of structured diagnostic interview) may have been the limiting factors. Moreover, other outside factors such as clients' concurrent pharmacological treatment may be a potential unmeasured source of influence contributing to outcomes. Third, we relied on clients' self-report of their therapists' techniques and alliance that may have led to a response bias; however, there is support for using this approach (*e.g.*, DeFife et al., 2008; McCarthy and Barber, 2009; Silove et al., 1990). Fourth, self-reported alliance may be influenced by a variety of factors, including clients' personality, symptoms, and change in symptoms over the course of treatment, making it unclear whether it is the alliance per se that distinguishes clients who respond better to PI than CB interventions or the characteristics of those clients. Fifth, we were not able to measure PTSD symptom change after treatment; thus, the degree to which the association between alliance, PI, and CB techniques affect PTSD symptoms for this sample is unknown. Sixth, we do not have measures of therapists' effectiveness in the delivery of specific techniques (*e.g.*, competency). Variation in therapists' effectiveness in using PI and CB techniques may have impacted the results of the current study (Webb et al., 2010).

Despite these limitations, this study complements previous research that supported clients' perception of PI techniques in the context of stronger alliances, which were beneficial to treatment outcomes (Owen et al., 2013). Future studies would benefit from including additional methods of collecting information about the process (*e.g.*, external rater or therapist self-ratings) to provide a more accurate depiction of techniques used in the session. Furthermore, this work should be replicated within larger populations and varied psychotherapy modalities to further generalize the findings. These relationships should also be examined across treatment, because current findings may highlight a significant interaction early in treatment rather than a generalized finding regarding psychotherapy process. Lastly, future research exploring characteristics associated with first responders (*e.g.*, hardiness, independence, and increased stigma) may be beneficial to further developing targeted psychotherapeutic interventions for this population.

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DISCLOSURE

The contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control.

The authors declare no conflict of interest.

REFERENCES

Ackerman SJ, Hilsenroth MJ, Baity MR, Blagys MD (2000) Interaction of therapeutic process and alliance during psychological assessment. *J Pers Assess*. 75:82–109.

American Psychiatric Association (2000) *Diagnostic and statistical manual of mental disorders, 4th edition, text revision*. Washington, DC: American Psychiatric Association.

Clemence AJ, Hilsenroth MJ, Ackerman SJ, Strassle CG, Handler L (2005) Facets of the therapeutic alliance and perceived progress in psychotherapy: Relationship between patient and therapist perspectives. *Clin Psychol Psychother*. 12:443–454.

DeFife JA, Hilsenroth MJ, Gold JR (2008) Patient ratings of psychodynamic psychotherapy session activities and their relation to outcome. *J Nerv Ment Dis*. 196: 538–547.

Difede J, Malta LS, Best S, Henn-Haase C, Metzler T, Bryant R, Marmar C (2007) A randomized controlled clinical treatment trial for World Trade Center attack-related PTSD in disaster workers. *J Nerv Ment Dis*. 195:861–865.

Difede J, Roberts J, Jayasinghe N, Leck P (2006) Evaluation and treatment of firefighters and utility workers following the World Trade Center attacks. In Neria Y, Gross R, Susser ES (Eds), *9/11: Mental Health in the Wake of Terrorist Attacks*. (pp 333–354). Cambridge, UK: Cambridge University Press.

Gaston L, Thompson L, Gallagher D, Cournoyer L, Gagnon R (1998) Alliance, technique, and their interactions in predicting outcome of behavioral, cognitive, and brief dynamic therapy. *Psychother Res*. 8:190–209.

Gersons BP, Carlier IV, Lamberts RD, van der Kolk BA (2000) Randomized clinical trial of brief eclectic psychotherapy for police officers with posttraumatic stress disorder. *J Trauma Stress*. 13:333–347.

Goldman RE, Hilsenroth MJ, Gold JR, Owen JJ, Levy SR (2016) Psychotherapy integration and alliance: An examination across treatment outcomes. *J Psychother Integr*. Advance online publication. Available at: http://dx.doi.org/10.1037/int0000060.

Hatcher RL, Barends AW (1996) Patients' view of the alliance of psychotherapy: Exploratory factor analysis of three alliance measures. *J Consult Clin Psychol*. 64: 1326–1336.

Hatcher RL, Barends AW (2006) How a return to theory could help alliance research. *Psychotherapy (Chic)*. 43:292–9.

Haugen PT, Evces M, Weiss DS (2012) Treating posttraumatic stress disorder in first responders: A systematic review. *Clin Psychol Rev*. 32:370–380.

Haugen PT, Splaun AK, Evces MR, Weiss DS (2013) Integrative approach for the treatment of posttraumatic stress disorder in 9/11 first responders: Three core techniques. *Psychotherapy (Chic)*. 50:336–340.

Hilsenroth M, Blagys M, Ackerman S, Bonge D, Blais M (2005) Measuring psychodynamic-interpersonal and cognitive- behavioral techniques: Development of the Comparative Psychotherapy Process Scale. *Psychotherapy*. 42:340–356.

Hilsenroth MJ (2007) A programmatic study of short-term psychodynamic therapy: Assessment, process, outcome, and training. *Psychother Res*. 17:31–45.

Hilsenroth MJ, Cromer TD, Ackerman SJ (2012) How to make practical use of therapeutic alliance research in your clinical work. In *Psychodynamic psychotherapy research* (pp 361–380). Valley Stream, NY: Humana Press.

Høglend P, Johansson P, Marble A, Bøgwald KP, Amlo S (2007) Moderators of the effects of transference interpretations in brief dynamic psychotherapy. *Psychother Res*. 17:162–174.

Horowitz M (2011) *Assessment-based treatment of post-traumatic stress disorders*. Create Space Independent Publishing Platform.

Horvath AO, Del Re AC, Flückiger C, Symonds D (2011) Alliance in individual psychotherapy. *Psychotherapy (Chic)*. 48:9–16.

Lambert MJ, Burlingame GL, Umphress VJ, Hansen NB, Vermeersch D, Clouse G (1996) The reliability and validity of a new psychotherapy outcome questionnaire. *Clin Psychol Psychother*. 3:249–258.

Lambert MJ, Hawkins EJ (2004) Measuring outcome: Implementing, monitoring and evaluating outcome in clinical practice. *Prof Psychol Res Prac*. 35:492–498.

Lambert MJ, Ogles BM (2004) The efficacy and effectiveness of psychotherapy. In Lambert MJ (Ed), *Bergin and Garfield's handbook of psychotherapy and behavior change* (5th ed). New York: Wiley.

Levy SR, Hilsenroth MJ, Owen JJ (2015) Relationship between interpretation, alliance, and outcome in psychodynamic psychotherapy: Control of therapist effects and assessment of moderator variable impact. *J Nerv Ment Dis*. 203:418–424.

Martin DJ, Garske JP, Davis MK (2000) Relation of the therapeutic alliance with outcome and other variables: A meta-analytic review. *J Consult Clin Psychol*. 68:438–450.

McCarthy KS, Barber JP (2009) The multitheoretical list of therapeutic interventions (MULTI): Initial report. *Psychother Res*. 19:96–113.

Miller SD, Hubble MA, Chow DL, Seidel JA (2013) The outcome of psychotherapy: Yesterday, today, and tomorrow. *Psychotherapy (Chic)*. 50:88–97.

Owen J, Hilsenroth MJ (2011) Interaction between alliance and technique in predicting patient outcome during psychodynamic psychotherapy. *J Nerv Ment Dis*. 199: 384–389.

Owen J, Hilsenroth MJ, Rodolfa E (2013) Interaction among alliance, psychodynamic-interpersonal and cognitive-behavioural techniques in the prediction of post-session change. *Clin Psychol Psychother*. 20:513–522.

Rumpold G, Doering S, Smrekar U, Schubert C, Koza R, Schatz DS, Bertl-Schuessler A, Janecke N, Lampe A, Schuessler G (2005) Changes in motivation and therapeutic alliance during a pretherapy diagnostic and motivation-enhancing phase among psychotherapy outpatients. *Psychother Res*. 15:117–128.

Sexton H, Littauer H, Sexton A, Tommeras E (2005) Building an alliance: Early therapy process and the client-therapist connection. *Psychother Res*. 15:103–116.

Silove D, Parker G, Manicavasagar V, Psychol M (1990) Perceptions of general and specific therapist behaviors. *J Nerv Ment Dis*. 178:292–299.

Weathers FW, Litz BT, Herman DS, Huska JA, Keane TM (1993) The PTSD checklist (PCL): Reliability, validity, and diagnostic utility. In *Paper presented at the Annual Convention of the International Society for Traumatic Stress Studies*. San Antonio, TX.

Webb CA, DeRubeis RJ, Barber JP (2010) Therapist adherence/competence and treatment outcome: A meta-analytic review. *J Consult Clin Psychol*. 78:200–211.

Yarvis JS, Bordnick PS, Spivey CA, Pedlar D (2005) Subthreshold PTSD: A comparison of alcohol, depression, and health problems in Canadian peacekeepers with different levels of traumatic stress. *Stress Trauma Crisis Int J*. 8:195–213.