Therapist effects and the outcome–alliance correlation in cognitive behavioral therapy for panic disorder with agoraphobia

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ABSTRACT

Although the alliance–outcome correlation is well established, no published studies to date have separated between therapists' and patients' contributions while controlling for early symptom change. In this study, we examined therapist effects in two trials of CBT for panic disorder with agoraphobia (PDA) and the impact of therapists' and patients' contribution to the alliance on outcome and attrition in one trial. Alliance ratings were obtained from patients and therapists early and late in treatment ($n = 133$). Data were analyzed using multi-level modeling controlling for early symptom change. No therapist effects were found. The patients' contribution to the alliance predicted outcome (in both panic severity and anxiety sensitivity) and attrition. The therapists' contribution to the alliance predicted attrition but not outcome. Results suggest that the patient's contribution to the alliance plays an important role in CBT for PDA and that including common factors into research on CBT may help elucidate treatment processes.

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Although the last few decades have seen tremendous advances in psychotherapy research (cf. American Psychological Association Presidential Task Force on Evidence-Based Practice, 2006; Nathan & Gorman, 2007; Roth & Fonagy, 2005), several issues still remain contentious. One controversial issue is that of therapist effects on outcome of psychotherapy, or the importance of differences in outcome among therapists (e.g. Baldwin & Imel, 2013; Garfield, 1997; Hill, 2006; Siev, Huppert, & Chambless, 2009; Wampold, Imel, & Miller, 2009). Another controversial issue is the role of the therapeutic alliance (defined as the combination of agreement on goals and how to achieve the goals, and the personal bond between the patient and therapist; Bordin, 1979) and its relationship with the outcome of therapy (Crits-Christoph, Connolly Gibbons, Hamilton, Ring-Kurtz, & Gallop, 2011; Flückiger, Del Re, Wampold, Symonds, & Horvath, 2012; Horvath, Del Re, Flückiger, & Symonds, 2011; Webb et al., 2011).

These issues have been less explored in CBT for anxiety disorders, and specifically in treatment of panic disorder with agoraphobia (PDA). Studies of CBT for anxiety disorders often utilize structured treatment manuals, which potentially diminish therapist and alliance effects (Baldwin & Imel, 2013; Crits-Christoph & Gallop, 2006). There is only one published study that examined therapist effects (or differences) in outcomes CBT for PDA ($n = 183$; Huppert et al., 2001). Significant effects were found, though they varied greatly depending on the outcome measure (1–18%), with therapists explaining 8% of the variance in the overall severity of panic disorder and 18% of the variance in anxiety sensitivity. Although the alliance was not measured in the trial, Huppert et al. suggested that more therapists' skill in developing a therapeutic alliance could account for some of these therapist effects, a notion raised by other researchers as well (Baldwin & Imel, 2013). One major limitation of the Huppert et al. study is that the data were analyzed using analyses of variance (ANOVAs) and correlations and not multi-level modeling, (e.g. Baldwin & Imel, 2013; Elkin, Falconnier, Martinovich, & Mahoney, 2006). Therefore, the first goal of the current study was to reanalyze the Huppert et al. (2001) data using multi-level modeling. This approach is more suitable for the dataset than previous analyses, because it takes into account both therapist and patient levels of variance, thus avoiding potential type I and II errors. In addition, we were interested in replicating the findings regarding therapist effects in another large

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multi-site CBT for panic disorder trial (The Longitudinal Treatment Study dataset: Aaronson et al., 2008; Allen et al., 2010; White et al., 2013), while also examining whether the therapeutic alliance, on the therapist and the patient levels, can partly explain differences in outcome.

The therapeutic alliance has been suggested as a potential predictor of therapist effects (Baldwin & Imel, 2013; Huppert et al., 2001), and indeed a moderate and consistent correlation exists between the therapeutic alliance and psychotherapy outcome regardless of treatment orientation (including CBT) or type of disorder (including anxiety disorders; see Flückiger et al., 2012; Horvath et al., 2011; Martin, Garske, & Davis, 2000 for recent meta-analyses). However, most studies to date have examined the alliance-outcome correlation at the patient level only (i.e., the patient's alliance correlated with the patient's outcome). To the best of our knowledge, only three studies so far have examined the outcome—alliance correlation at the therapist level (specific "therapist contribution" via the average alliance score per therapist) in addition to the patient level ("patient contribution"), none of which were conducted on samples of CBT treatments. All of these studies found that treatment outcome was predicted by therapist level alliance, but only one of them found that the patient level alliance predicted outcome as well (Baldwin, Wampold, & Imel, 2007; Crits-Christoph et al., 2009; Zuroff, Kelly, Leybman, Blatt, & Wampold, 2010). Therefore, the preliminary and contrasting findings emphasize the importance of conducting more studies that directly examine these issues.

Most studies to date (including the ones that examined therapist and patient level contributions of the alliance on outcome) did not control for symptom change prior to measurement of the alliance when examining the alliance-outcome correlation, and those who did produced mixed results (e.g. Barber, 2009; Webb et al., 2011). Therefore, it is still not clear whether the therapeutic alliance is a consequence or cause of symptom change in therapy (DeRubeis, Brotman, & Gibbons, 2005).

Theoretically, in CBT for the anxiety disorders, a good therapeutic alliance may improve therapy outcome by promoting exposure to feared situations (through greater trust in the therapist) and by preventing patient dropout. However, earlier studies exploring the relationship of outcome with the therapeutic alliance and related therapist behaviors in CBT for PDA produced mixed findings (e.g. Keijsers, Hoogduin, & Schaap, 1994; Williams & Chambless, 1990), while recent studies reported no significant relationship between alliance and panic symptom change in moderate size samples (Casey, Oei, & Newcombe, 2005; Ramnerö & Öst, 2007). Thus, more data are needed on the alliance in CBT using modern statistics and methodology.

Even less research has been done on the topic of therapist effects on attrition rates and on the alliance-attrition correlation. The findings regarding therapist effects on attrition are mixed (Elkin et al., 2006; Huppert et al., 2001; Najavits & Weiss, 1994; Wilson, Wilfley, Agras, & Bryson, 2011), while stronger patient level alliances predicted lower rates of attrition in a recent meta-analysis ($N = 1301$; Sharf, Primavera, & Diener, 2010).

The Longitudinal Treatment Study dataset (LTS; Aaronson et al., 2008; Allen et al., 2010; White et al., 2013) provides excellent opportunity to examine the issues of the therapeutic alliance and therapist effects on outcome and attrition in a large, multi-site trial of CBT for PDA. In the initial study phase of the LTS, all patients were treated with CBT (Aaronson et al., 2008; White et al., 2010). Patients were then triaged into two clinical trials according to response status. Responders were randomized to booster sessions or no booster sessions (White et al., 2013) while non-responders were randomized to either continued CBT or to paroxetine (Payne et al., 2013). In this study, data were analyzed from the initial treatment phase only where all patients ($n = 379$) received CBT from 23 therapists.

In sum, the current study sought to first reanalyze using multilevel modeling Huppert et al.'s (2001) data from the multicenter trial for panic disorder (MCSTPD, Barlow, Gorman, Shear, & Woods, 2000) and then as a next step to examine alliance and therapist effects on outcome and attrition in the LTS. The therapeutic alliance was obtained from two different perspectives (patient and therapist) and at two different time points (early and late in therapy). Analyses were conducted using multilevel modeling with three levels (therapist, patient and time) while controlling for early symptom change. Therefore, we were able to separate the patient and therapist contributions to the alliance (by using multi-level modeling), while also examining differences in patients' and therapists' perspectives on these contributions (by collecting both patients' and therapists' ratings of the alliance). On the basis of Huppert et al. (2001), we expected to find moderate therapist effects on outcome in both samples. In addition, we expected a higher level of therapeutic alliance at the patient and therapist levels to be correlated with greater symptom reduction and lower attrition, even after controlling for symptom change prior to the measurement of the therapeutic alliance, and that alliance would account for a significant portion of the therapist effects. Given the inconsistent findings in the literature, we did not have an a priori hypothesis as to whether the therapist or patient perspective of the alliance would be more predictive of outcome and attrition nor about therapist effects on attrition.

Method

The multicenter collaborative study for the treatment of panic disorder (MCSTPD)

For full details of the trial and the previous therapist effects analysis see Barlow et al. (2000) and Huppert et al. (2001). In the current analyses, all CBT groups (e.g., CBT only and CBT combined with imipramine/placebo pill) were combined and analyzed together.

Participants. Of the 205 patients diagnosed with primary panic disorder with or without agoraphobia that were randomized to CBT, 183 patients (70 men, 113 women) had sufficient data to be included in our analyses.

Therapists. Fourteen doctoral-level therapists were identified for the study. These therapists had data from 4 or more patients. Seven therapists were men and 7 women, 13 of whom were psychologists and 1 of whom was a psychiatrist. The average age of the therapists was 35.7 years, with varied experience conducting general psychotherapy from 2 to 20 years ($M = 8.9$, $SD = 5.6$) and in conducting CBT from 1 to 18 years ($M = 5.9$, $SD = 5.1$ years). Nine therapists described their orientation as primarily CBT, whereas 5 described themselves as other (i.e., eclectic or psychodynamic). All therapists were trained to competency and certified in conducting panic control treatment prior to participating in the active phase of treatment. Supervision continued during biweekly conference calls throughout the study. Trained raters rated high levels of adherence and competency during treatment throughout the study (adherence mean = 5.72, SD = 0.70; competency mean = 5.59, SD = 1.06; scales range from 1 to 7).

Measures. A number of panic-related measures were collected at pretreatment and post-acute-treatment phase (i.e., after 12 weeks of treatment), all of which are described in Huppert et al. (2001). Among other measures, independent evaluators evaluated patients using the Panic Disorder Severity Scale — Independent Evaluator Version (PDSS-IE; Shear et al., 1997). Self-report