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Specific, Common, and Unintended Factors in Psychotherapy: Descriptive and Correlational Approaches to What Creates Change

Abstract

From the psychotherapy outcome literature, many have inferred that either theory-specific techniques or interventions common to all therapies are what produce symptom change. However, such conclusions are premature because (a) too few direct tests have been conducted of how variation in the levels of either specific or common factor interventions relate to outcome, (b) those prior investigations of specific and common factors and outcome have often been limited to examining linear relations between intervention use and outcome when curvilinear functions might better model their association, and (c) most studies of psychotherapy and outcome have failed to consider how interventions specific to theoretical orientations other than that being studied (i.e., interventions not intended to be in the specific treatment under investigation nor common to all therapies) might also contribute to outcome. In this thesis, I present two studies investigating the relation of interventions from a number of different therapy systems to subsequent symptom improvement in behavioral therapy for Obsessive-Compulsive Disorder (OCD) and psychodynamic therapy for Major Depressive Disorder (MDD). Theory-specific techniques were prominent in both therapies (e.g., behavioral techniques in behavioral therapy, psychodynamic techniques in dynamic therapy), and moderate levels of specific factors were related to better outcome than were higher or lower levels in each treatment. Common factor techniques were among the highest reported interventions in both treatments, but were not predictive of symptom improvement in either therapy. Interventions from other theoretical orientations were present in both therapies, but in such a way that individual techniques appeared to be selected for use based on their congruence with the theoretical orientation of the treatment. In behavioral therapy, no other types of interventions contributed to outcome more than behavioral interventions. In psychodynamic therapy, moderate levels of process-experiential techniques were associated with better outcome than were higher or lower levels. Further research needs to document how specific, common, and unintended factors occur in different psychotherapies and how such interventions might relate to outcome in complex ways before conclusions can be made about the mechanisms of therapy.

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ABSTRACT

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Kevin S. McCarthy

Jacques P. Barber

From the psychotherapy outcome literature, many have inferred that either theory-specific techniques or interventions common to all therapies are what produce symptom change. However, such conclusions are premature because (a) too few direct tests have been conducted of how variation in the levels of either specific or common factor interventions relate to outcome, (b) those prior investigations of specific and common factors and outcome have often been limited to examining linear relations between intervention use and outcome when curvilinear functions might better model their association, and (c) most studies of psychotherapy and outcome have failed to consider how interventions specific to theoretical orientations other than that being studied (i.e., interventions not intended to be in the specific treatment under investigation nor common to all therapies) might also contribute to outcome. In this thesis, I present two studies investigating the relation of interventions from a number of different therapy systems to subsequent symptom improvement in behavioral therapy for Obsessive-Compulsive Disorder (OCD) and psychodynamic therapy for Major Depressive Disorder (MDD). Theory-specific techniques were prominent in both therapies (e.g., behavioral techniques in behavioral therapy, psychodynamic techniques in dynamic therapy), and moderate

levels of specific factors were related to better outcome than were higher or lower levels in each treatment. Common factor techniques were among the highest reported interventions in both treatments, but were not predictive of symptom improvement in either therapy. Interventions from other theoretical orientations were present in both therapies, but in such a way that individual techniques appeared to be selected for use based on their congruence with the theoretical orientation of the treatment. In behavioral therapy, no other types of interventions contributed to outcome more than behavioral interventions. In psychodynamic therapy, moderate levels of process-experiential techniques were associated with better outcome than were higher or lower levels. Further research needs to document how specific, common, and unintended factors occur in different psychotherapies and how such interventions might relate to outcome in complex ways before conclusions can be made about the mechanisms of therapy.

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Specific, Common, and Unintended Factors in Psychotherapy: Descriptive and Correlational Approaches to What Creates Change

Psychotherapy works. Thousands of treatment outcome studies have been published documenting that many different forms of therapy are helpful for patients with a variety of different problems. Beginning with Smith and Glass (1977), dozens of meta-analyses have distilled these studies into a more manageable set of findings.

Psychotherapy in general has been shown to be more efficacious compared to nominal treatment (attention- or pill-placebo) for a number of different problems (Cuijpers, van Straten, Andersson, & van Oppen, 2008; Grissom, 1996; Stevens, Hynan, & Allen, 2000; for a review, see Lambert & Ogles, 2004). Psychotherapy has also been found at least as efficacious as many medications for psychological disorders (Imel, Malterer, McKay, & Wampold, 2008; Pinquart, Duberstein, & Lyness, 2006; Williams, Hadjistavropoulos, & Sharpe, 2006; for a review, see Lambert & Ogles, 2004). Finally, for many problems, different psychotherapies tend to produce approximately equivalent effect sizes (e.g., Ahn & Wampold, 2001; Grissom, 1996; Wampold et al., 1997; for a review, see Lambert & Ogles, 2004). Many more (if not an infinite number of) treatment outcome studies are required to map all the potential combinations of forms of psychotherapy and client populations (Barber, 2009; Krause & Howard, 1999; Wampold et al., 1997). However, several experts reviewing the treatment outcome literature have been optimistic in their assessment. Some have concluded that on average for most types of disorder, individuals are likely to find significant relief with most any type of psychotherapy (Lambert & Barley, 2001; Lambert & Ogles, 2004), whereas others have found that the majority of

clients with a psychological diagnosis have applicable to them at least one treatment documented as efficacious (Stirman, DeRubeis, Crits-Christoph, & Brody, 2003).

Many researchers, theorists, and clinicians believe that the mechanisms by which psychotherapies work can be inferred from these treatment outcome studies and meta-analyses. From the observation that different forms of psychotherapy each lead to greater improvement compared to nominal treatment conditions, some (e.g., Barlow, 1996; Chambless & Hollon, 1998; DeRubeis, Brotman, & Gibbons, 2005) have suggested that psychotherapies work through the interventions delivered by the therapist that are specific to the theoretical orientation of the therapy being studied. From the broad finding that no one psychotherapy confers better outcomes compared to other forms of therapy, others have argued that psychotherapies work through the interventions shared by all theoretical orientations, like a supportive relationship and an expectation of improvement (e.g., Cuijpers, 1998; Frank & Frank, 1991; Garfield, 1996; Henry, 1998; Klein, 1996; Wampold, 1997, 2001; Wampold et al., 1997). These two interpretations of the data, the specific and common factors hypotheses, are seemingly at variance with one another. Each has attracted supporters who promote differing agendas for practice, research, and policy. However, the conclusions drawn about the mechanisms of psychotherapy by both sides of this debate are likely to be premature. The treatment outcome comparisons and meta-analyses from which they base their arguments rely on assumptions about the process of psychotherapy that may not accurately represent psychotherapy as it is practiced and researched. These studies also do not directly test whether levels of specific and common factors are related to changes in outcome (Kazdin, 2005). Additionally,

other explanations of the mechanisms of therapy might be plausible. Namely, outcome in these treatment comparisons might be due not to interventions from the treatment being studied or to interventions common to all psychotherapies, but instead to unintended factors, or techniques from therapy systems other than the treatment under investigation (e.g., cognitive therapy interventions in interpersonal psychotherapy sessions, Ablon & Jones, 2002).

In this thesis, each of the arguments for how specific, common, and unintended factors explain the treatment comparison data will be presented. The claims of each position will be evaluated based on the limitations of the present treatment outcome literature. Potential remedies will be suggested, namely, fuller descriptions of different types of interventions occurring in a treatment and more sophisticated correlational approaches to outcome. The present studies will demonstrate how these methods might be employed in two commonly practiced forms of psychotherapy (psychodynamic therapy for Major Depressive Disorder [MDD] and behavioral therapy for Obsessive-Compulsive Disorder [OCD]) and will provide a preliminary attempt to disentangle the contributions of specific, common, and unintended factors to outcome in these treatments.

Specific Factors Hypothesis

Proponents of the specific factors hypothesis suggest that interventions specific to each theoretical orientation are what lead to change in psychotherapy of that orientation. They base their argument on the findings that different forms of psychotherapy are each more efficacious compared to nominal treatment conditions. Different psychotherapies

are easily distinguishable in their interventions as both specified by theory (e.g., Corsini & Wedding, 2008; Gurman & Messer, 2003) and observed in practice (e.g., Barber, Foltz, Crits-Christoph, & Chittams, 2004; Hill, O'Grady, & Elkin, 1992; McCarthy & Barber, 2009; Trijsburg et al., 2002; Trijsburg et al., 2004; for a review, see Clarkin & Levy, 2004). Control conditions in these treatment outcome studies are presumably designed to lack the specific techniques used in the psychotherapies to which they are compared (Borkovec & Castonguay, 1998; Stevens et al., 2000). For instance, some control treatments in these studies use pill-placebo to instill expectancy in clients (e.g., Elkin et al., 1989) or call for therapists to provide support and encouragement to clients (e.g., Foa, Rothbaum, Riggs, & Murdock, 1991). Any differences in outcome between the different therapies and their control conditions presumably should be due to theory-specific interventions rather than to factors common to all therapies (Borkovec & Castonguay, 1998).

An example of the logic behind the specific factors hypothesis can be found in a recent meta-analysis of psychotherapy for depression in adults. Both behavioral and psychodynamic therapy outperform supportive nondirective control conditions in alleviating depressive symptoms (Cuijpers et al., 2008). Behavioral theory suggests that depression is due to decreased positive reinforcement and increased aversive control from a person's environment, leading to avoidance and withdrawal behaviors (Ferster, 1973; Lewinsohn & Graf, 1973; Jacobson, Martell, & Dimidjian, 2001). Accordingly, behavioral therapists teach clients to monitor their activity levels and the consequences of their behaviors and encourage clients to participate in activities that are likely to result in

the experience of mastery and pleasure. On the other hand, some psychodynamic theorists postulate that depression can be due to factors such as the repetition of an internal conflict stemming from early trauma, namely, the abandonment or loss of an early caregiver or the experience of a critical and withholding caregiver (Blatt, 1998). Psychodynamic therapists working from this framework attempt to point out times when clients repeat their mental conflicts in their relationships, help clients to understand the origin of these conflicts, and encourage clients to have new, more adaptive experiences in their relationships. Control conditions included in this meta-analysis were “any unstructured therapy without specific psychological techniques other than those common to all approaches” (Cuijpers et al., 2008, p. 911). Specific factors advocates might conclude from this meta-analysis that the superior performance of behavioral and psychodynamic therapies relative to these controls is due to the theory-specific interventions that behavioral and psychodynamic therapists perform in treatment.

The finding that all psychotherapies are roughly equivalent in their efficacy is explained by supporters of the specific factors hypothesis in two ways. First, they argue that it is possible for different psychotherapies to have distinct pathways to the same outcome. They use comparisons of psychological and psychopharmacological treatments to illustrate that both psychotherapy and medications are shown to be equally efficacious (see Lambert & Ogles, 2004), but very few would suggest that they work by the same agents (one is clearly a talking treatment, the other a chemical compound; DeRubeis et al., 2005). Second, specific factor proponents argue that not every psychotherapy has been tested against every disorder, especially for serious mental illnesses for which not

all psychotherapies might not be as effective (Chambless & Ollendick, 2001; DeRubeis et al., 2005). They point to evidence that suggests certain client populations respond better to different types of psychotherapy (e.g., Barber & Muenz, 1996; Siev & Chambless, 2007) as examples of what might emerge as more treatment outcome studies are completed.

Adopting this interpretation of the treatment outcome data, Divisions 12 (Clinical Psychology) and 17 (Counseling Psychology) of the American Psychological Association chartered work groups to establish recommendations for classification of psychotherapies based on their levels of empirical support (Chambless et al., 1996; Chambless et al., 1998; Task Force, 1995; Wampold, Lichtenberg, & Waehler, 2002). The longer-term goals for these groups are to identify the best procedures for treating specific disorders or populations, institute requirements for graduate and postgraduate clinical training programs, and educate the mental health service consumers and third-party payers to the evidence base collected for different treatments to make services more comparable to pharmacological agents.

Critique of the specific factors hypothesis.

How do we know what is in the treatment package? The treatment outcome studies on which the proponents of the specific factors hypothesis base their argument have the fundamental assumption that therapists are delivering a treatment package to clients, that is, a group of theoretically-linked interventions that make up a psychotherapy. For example, in a study comparing process-experiential therapy versus a client-centered control treatment for depression,¹ clients in the client-centered condition

were to receive a psychotherapy providing “the relational conditions of empathy, positive regard, and congruence... [communicated] primarily by the use of empathic responses and reflections of clients’ internal phenomenological experience to help them symbolize and accept their internal experience” (Greenberg & Watson, 1998, p. 211). Clients in the process-experiential condition were to receive the same relational conditions, and, in addition, “two-chair dialogues are used to resolve self-criticism, empty-chair dialogues to resolve unfinished business and dependence problems, and systematic evocative unfolding is used to help clients to identify and better understand their shifts into depression and other puzzling reactions” (Greenberg & Watson, 1998, p. 211). Thus, in this study, both treatment packages included similar common factor interventions, but in one condition therapists were permitted to use three other interventions specific to process-experiential therapy. Clients in such treatment outcome comparisons are generally randomly assigned to receive one treatment package or the other, reducing the likelihood that the performance of any one treatment package is due to the characteristics of the clients or to the preferential biases of the experimenters (Kazdin, 2002). Outcome is assessed after a set interval, and differences in outcome (if any) between treatment packages are assumed to be a function of the differences in elements included in each treatment package. This study design also holds other confounding factors constant (e.g., change in symptoms due to passage of time, pretreatment client characteristics), thereby reducing the viability of alternative explanations for any differences in outcome between treatment packages. In the study given as an example above, clients in process-experiential therapy showed fewer overall symptoms and interpersonal problems but not

fewer depressive symptoms at termination than did clients in client-centered therapy. The study authors interpreted these results to suggest that client-centered and process-experiential therapies were equally efficacious at alleviating depression but the additional provision of process-experiential techniques resulted in improvements in other areas of clients' lives (Greenberg & Watson, 1998).

The use of treatment manuals. The interventions in a treatment package must be known in order to draw any inferences about how a therapy might work. Before 1980 very few treatment outcome studies documented the interventions that therapists had actually used (Moncher & Prinz, 1991). The types of interventions delivered and tested in many treatment outcome studies are not known beyond the generic therapy label offered by the investigators, and conclusions about the efficacy of these treatment packages are bound to be extremely weak (Chambless & Hollon, 1998). The advent of treatment manuals, or comprehensive descriptions of the theory and techniques that therapists should follow in treating clients of a specific population, marked the beginning of standardization of psychotherapy approaches (DeRubeis & Luborsky, 1984). Treatment manuals present a theoretical conceptualization of the problem(s) to be treated, the interventions and mechanisms by which therapy is supposed to work, and the conditions under which interventions are supposed to produce their effect. Some manuals provide session-by-session descriptions of the interventions to be delivered (e.g., Craske & Barlow, 2004; Foa, Roth, Huppert, & Franklin, 1998) whereas others provide more general principles and examples to guide intervention use (e.g., Luborsky, 1984). Some

treatment manuals expressly forbid the use of certain technique, but most implicitly inform providers on which techniques should not be used by excluding reference to them.

The use of treatment manuals increases the internal validity of a treatment outcome study by providing somewhat greater assurance that the treatment package is being delivered in a uniform way and that others may be able to replicate the treatment package for later experimentation (Kazdin, 2002). In turn, greater internal validity increases the confidence that differences in outcome between treatment packages can be attributed to the relative interventions purported to be delivered within each package. For example, Greenberg and Watson (1998) described the prototypical interventions in both of the therapies they investigated and referred readers to treatment manuals for further elaboration (Greenberg, Rice, & Elliot, 1993; Greenberg, Rice, & Watson, 1994). A recent survey of the top journals in clinical and counseling psychology and psychiatry revealed that 86% of treatment outcome studies now at least mention the treatment manual used to guide the treatment package implementation (Perepletchikova, Treat, & Kazdin, 2007), whereas earlier only 32% reported using a treatment manual (Moncher & Prinz, 1991). However, whereas treatment manuals represent an improvement in experimental design in that they standardize which interventions should be administered in a treatment package and reduce individual differences in therapists' efficacy (Crits-Christoph et al., 1998), their inclusion alone in a treatment outcome study cannot provide assurance of whether specific interventions are responsible for symptom changes. There is still a need to guarantee that the specific interventions are indeed present in the

treatment package as the manual prescribes and that the specific interventions show a relation to change in outcome.

The degree to which the therapist implements the interventions in a treatment manual is often termed treatment adherence (Waltz, Addis, Koerner, & Jacobson, 1993). To be adherent to a treatment manual, therapists are often required to perform not just one intervention but an exceedingly complex series of behaviors (Miranda & Borkovec, 1999). An example might be therapists performing behavioral therapy for OCD using the manual by Foa and colleagues (1998). A therapist with a high degree of adherence to this particular manual will introduce the treatment rationale to the client, construct a hierarchy of feared stimuli with the client, encourage the client to expose him- or herself to the feared stimuli (in imagination and in vivo) and to resist anxiety-reducing rituals, monitor anxiety associated with confronting the feared thoughts, and assign and review exposure exercises in between sessions. A therapist with a lower degree of adherence might introduce the emotional processing model and assign homework but not require the client to perform exposure exercises. Adherence to a treatment manual also often assumes the therapist performs different interventions depending on the stage of therapy (Barber, Triffleman, & Marmar, 2007; Waltz et al., 1993). For instance, in behavioral therapy for OCD (Foa et al., 1998), the first two sessions are given over to introducing the emotional processing model, building a therapeutic relationship, and answering clients' questions about treatment. The next four sessions are to practice exposure and response prevention to gradually more fear-inducing items on the clients' hierarchies. As clients become more able to conduct expose exercises on their own, Sessions 7-15 are for reviewing

homework, monitoring symptoms, and repeating exposures to problematic or new stimuli. The final two sessions are to review progress and plan for relapse prevention.² Adherence then is an especially complex construct and cannot be assumed simply by the use of a treatment manual.

Therapist training and supervision. One way adherence to the treatment manual is established is through therapist training and supervision (Waltz et al., 1993). The rigor of training varies across studies. For some studies, therapists read and discuss the treatment manual with the experimenters or other study therapists. They are then trusted to perform the interventions as outlined in the manual (e.g., Sloane, 1975). In the most rigorous studies, therapists receive supervision for pilot cases before they can enter the study and ongoing supervision for study cases from experts in the therapy being studied (e.g., Elkin et al., 1989; Crits-Christoph et al., 1998). Reviews of the treatment outcome literature have found 21-61% of studies have reported supervision of therapists (Moncher & Prinz, 1991; Sass, Twohig, & Davies, 2004). For instance, in Greenberg and Watson's (1998) study of client-centered versus process-experiential therapy for depression, therapists received 24 weeks of training before beginning the study (eight weeks in client-centered therapy, ten in process-experiential, the remainder to finish supervised case work). Therapists were supervised in client-centered therapy on one pilot client with whom they started after the client-centered training. They switched over to use process-experiential techniques after eight weeks and were supervised by a process-experiential expert. Finally, the therapists in this study received weekly supervision in both treatment modalities for the duration of the project. The combination of training and supervision

using a treatment manual has been shown to produce increases in interventions congruent with the treatment manual (e.g., Henry, Strupp, Butler, & Schacht, 1993; Crits-Christoph et al., 1998). Whereas training and supervision represent an advance over simply selecting therapists for their expert status or identified orientation, they still are not a guarantee that the therapists are following the manual consistently nor do they provide a way to quantify adherence in a way that is comparable across studies.

Intervention assessment. A more comprehensive way in which adherence has been established is through direct assessment. There has been a proliferation of adherence measures or methods that correspond to different treatment manuals (Waltz et al., 1993). Some treatment outcome studies have used clients' or therapists' self-report of the interventions (e.g., Freeston et al., 1997; Ogrodniczuk, Piper, Joyce, & McCallum, 2000; Rounsaville, Chevron, & Weissman, 1984; Stanton et al., 1984) or session descriptions that therapists record in their process notes (e.g., Rounsaville et al., 1984). The most popular method is for independent judges to review the audio or visual tapes or transcripts of sessions and use measures to rate the session for the therapist's adherence (e.g., Elkin et al., 1989; Greenberg & Watson, 1998). Scores are calculated to represent the overall adherence of that case, sometimes by a single score (e.g., Luborsky et al., 1985), an average of scores for interventions in a session (e.g., Feeley, DeRubeis, & Gelfand, 1999), or a percentage of sessions or percentage of time in a session that contains certain interventions (e.g., Chard, 2005; Foa et al., 2005).

Scores from these different methods are often used as a manipulation check after the completion of the study to establish that the treatment was delivered as intended. A

cutoff score is established by the investigators (often arbitrarily) to represent whether the therapist's work is to be considered representative of the therapy as manualized. For instance, Greenberg and Watson (1998) required that four randomly sampled sessions from each case exhibit at least a "level 4" on observer- and client-rated empathy and that the average score for these sessions exceed at least a "level 5" on those scales for the case to be adherent to client-centered therapy. In order to be adherent to process-experiential therapy, therapists were required to respond to client problems in session with either two-chair dialogue, empty-chair dialogue, or systematic evocative unfolding at least 25% of the time in three randomly sampled sessions. Data from therapists deemed nonadherent to the treatment manual are sometimes removed from analysis, or redlined (Barber et al., 2007). Optimally, investigators have monitored adherence during the trials and have given feedback to therapists on how to make their therapy more like intended in the manual, although these efforts are extremely costly (Barber et al., 2007). With a manipulation check to see if the treatment package contained a certain criterion (level or percentage) of interventions (and that the comparison condition did not), conclusions about the efficacy of the treatment package are more likely to be valid. However, a recent review of the top journals suggested only 9% of treatment outcome studies assessed and reported treatment adherence "adequately" (Perepletchikova, Treat, & Kazdin, 2007), suggesting more work needs to be done in order to draw conclusions about the treatment packages evaluated in such outcome studies.

Resolution: Provide a detailed description of the specific interventions in the sample. To have greater certainty of how a treatment package might work relative to a

nominal treatment, efforts must first be made to document the interventions that the therapist should be delivering to the patient and the ways the administration of those interventions are insured. The use of therapy manuals and the training and supervision of therapists are indirect ways to record what interventions are in the treatment being studied. However, direct assessment of therapist intervention use provides the best assurance that the particular treatment indeed delivers the specific techniques as conceptualized in the manual and thought to be related to outcome. The present studies therefore will include a description of the treatment manuals and therapist preparation in both treatments being investigated. More importantly, they will demonstrate the special attention required in documenting the specific factors in a treatment so that stronger conclusions about the relation of these interventions to outcome can begin to be drawn.

What Is the Meaning of Adherence? Even if adherence to the treatment manual is observed or measured and found to be sufficient by some criterion, it still remains unclear what the meaning of any particular adherence score might be. The criteria by which treatment integrity is judged are often arbitrarily set by the supervisors or investigators (Barber et al., 2007). Although there may be some justification based on the literature or on clinical experience, it is rarely stated why these values were chosen and how these values accurately depict the treatment package interventions as described by the treatment manuals. For instance, in Greenberg and Watson's (1998) study, the percentage of process-experiential responses by therapists practicing process-experiential therapy was on average 89%, well above the 25% cutoff set by the authors. Indeed, the cutoff appeared to be much nearer to the percentage of process-experiential interventions

observed in client-centered sessions (10%). The values of adherence, whatever they might be, must be established in some way as meaningful for greater confidence in the manipulation check.

Given that psychotherapy is a complex endeavor of therapist behaviors (Barber, 2009; Miranda & Borkovec, 1999), adherence conceivably needs to represent the complexity of the treatment. Sometimes researchers choose to define adherence as only the key interventions of the therapy, like interpretations in psychodynamic therapy (Piper, Azim, Joyce, & McCallum, 1991), or empathy in client-centered therapy (e.g., Greenberg & Watson, 1998). However, many more interventions are possible, if not required, within a given treatment package. Adherence measures that do not collect other types of interventions might not accurately represent the treatment package as it is planned to be administered. Conclusions from treatment outcome studies whose treatment packages have been verified to have a certain amount of the essential interventions still may not answer the question of whether the treatment package of interventions being delivered is congruent to the description in the treatment manual.

Resolution: Document the levels of adherence in the sample. Standards of what constitutes adherence to a treatment have yet to be developed, inhibiting the ability to make any conclusions about why a particular treatment package might outperform a nominal treatment condition. Cutoffs based on theory or clinical expertise are rarely employed in treatment outcome studies but can provide an initial basis for evaluating whether a session includes a sufficient amount of theoretically specified interventions. However, empirical work is still needed to validate the meaning of adherence scores, as

clinical judgments might represent ideals about what interventions a therapy should contain rather than the interventions that occur in actual practice. The first step in the development of adherence standards is to describe what happens in a given treatment. Both the primary and auxiliary interventions specified in the manual need to be assessed and reported in order to comprehensively depict the treatment as practiced. From such data, meanings might begin to be assigned to different levels of adherence based on the covariance with other factors, like clinical judgments, outcome, or important process variables (e.g., patient difficulty).

Are Interventions Related to Outcome? When treatment integrity is assured in a treatment outcome study through therapist training, supervision, and monitoring, it may be reasonably concluded that any differences in outcome between the active and control conditions are due to the delivery of the treatment package at some threshold level of adherence or greater. For instance, clients in the process-experiential condition of Greenberg and Watson (1998) demonstrated greater overall symptom improvement compared with clients in the control condition. Treatment adherence in both conditions of this study was carefully ensured with therapist training and supervision and with direct adherence measurements. Therefore, it can be concluded that the use of process-experiential interventions in response to *at least* one in four problems a client presents in therapy (the criterion of adherence for the process-experiential condition) resulted in better improvement than using client-centered techniques alone.

However, our ability to say from such studies how *differing* levels of adherence to the same treatment might be related to outcome remains limited. Even with an established

threshold of adherence for a study, therapists are likely to vary in their adherence to the treatment manual with different clients (Barber, 2009). Generally adherence in an active treatment is reported as an average across clients, and the outcome for the condition is also given on average. We do not know from such studies how variation in adherence might produce variation in symptom improvement (e.g., very high adherence leading to better [or worse] outcomes than adherence just meeting the threshold). For instance, in the active condition in Greenberg and Watson (1998), therapists responded to client problems with process-experiential interventions on average 89% of the time, and clients on average in this condition improved 17 points on the Beck Depression Inventory. We are not certain whether 100% adherence is likely to lead to better (or worse) than average outcome than might 25% adherence in this treatment. Furthermore, for studies in which a minimum standard of adherence is set, nothing at all may be concluded about a therapy with levels of adherence lower than the criterion because such therapies were not included in the trial. For instance, we cannot conclude from Greenberg and Watson (1998) if responding to clients' problems with process-experiential techniques 100% of the time results in better (or worse) outcomes than does 25%, the minimum acceptable level of adherence in this study. We are also unable to say anything about how 24% or lower adherence might relate to symptom change in process-experiential therapy.

Looking across studies of the same type of therapy is often also not very informative of how different levels of adherence relate to outcome as they often use different measures. As an example, two studies of process-experiential therapy for depressive symptoms (Greenberg, Warwar, & Malcom, 2008; Greenberg & Watson,

1998) both demonstrated superiority for process-experiential therapy in overall symptom reduction compared to a control treatment. Greenberg and colleagues (2008) assessed adherence by therapist and supervisor ratings of sessions on a five-point scale and by therapist-reported frequency of specific process-experiential interventions. In contrast, Greenberg and Watson (1998) measured adherence as the percentage of client problems for which outside observers reported that a process-experiential intervention was delivered. The levels of adherence observed for the active treatment were not comparable (e.g., average of 89% response with process-experiential interventions to client problems in Greenberg and Watson [1998]; average supervisor rating of 4.14, a mean of 5.13 therapist-reported two-chair dialogues per treatment in Greenberg et al. [2008]). It is difficult to know then from these studies (a) whether adherence to process-experiential treatment differed across the two studies and (b) whether the levels of adherence in each were differentially associated with outcome.

Without the knowledge of how varying levels of intervention use relate to outcome, we may be requiring more or less adherence to a treatment package than might be necessary to result in good outcome or than might be best related to outcome. It is often assumed that specific intervention use is linearly related to outcome. Very low adherence might not provide clients with a sufficient dose of interventions for them to improve (e.g., not enough cognitive techniques to learn to skills to challenge their automatic thoughts). Higher levels of specific interventions might serve to activate the theory-specific change mechanism within the client (e.g., emotional processing in behavioral therapy, insight in psychodynamic therapy), leading to symptom change.

However, other more complex relations between adherence and outcome are plausible.

Several researchers have speculated that the relation might be curvilinear. Too high a level of adherence might lead to poorer outcomes than more moderate levels of adherence (Barber et al. 2006; Miller & Binder, 2002; Ogrodniczuk & Piper, 1999).

Therapists using a high level of specific interventions might be rigid in their application of the treatment manual and ignore the needs of the client for support or listening (e.g., insisting on focusing on the client's original complaint whereas the client wishes to discuss a distressing event from his or her daily life). Therapists exhibiting greater levels of adherence also might be trying to resolve a difficult problem in the clients' life or in the therapeutic relationship (Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996).

Finally, greater use of interventions may be toxic in that they might raise psychological reactivity and reduce clients' motivation to change. Without observing at least three levels of adherence, a study could not uncover any complex relation or could provide misleading evidence about the consequence of intervention use.

Parametric designs. Studies in which clients are randomly assigned to varied conditions of treatment package strength, or parametric studies (Borkovec & Miranda, 1999), are one way experimentally to establish how different levels of specific intervention use might relate to outcome. When three levels of adherence to the same treatment are compared in a parametric study, it is also possible for a curvilinear relation between intervention use and outcome to be observed.

By experimentally manipulating the levels of adherence delivered to clients, parametric studies rule out alternative explanations for why differences in adherence

might be related to differences in outcomes (e.g., clients that are more likely to improve on their own might also more likely to permit their therapists to adhere to the treatment manual being followed). In this way, these studies can provide strong evidence for a causal relation between variation in levels of adherence resulting in variation in symptom change. However, parametric studies are scarce. They are likely to be difficult to implement due to the need for training and adherence monitoring in multiple conditions, and the number of adherence levels represented by different conditions is likely to be limited. Selection of which levels of adherence to use in each condition may be arbitrary and may not reflect optimal or meaningful levels of adherence, as we do not have accepted standards of adherence. Parametric designs are also most easily applied to single or simple intervention systems. They may not be appropriate for many of the complex treatment packages delivered in treatment outcome studies and in practice because such treatment packages may not easily lend themselves to separation (e.g., it is difficult to imagine comparisons of 0%, 50%, and 100% interpretation or empathy).

Correlational designs. In the absence of parametric studies, perhaps the next best way to measure the relation of varying levels of adherence to outcome would be with a correlational approach. Unlike in parametric studies that experimentally manipulate adherence, we would not be able to determine the directionality of any relation observed between intervention use and outcome in correlational studies. However, correlational studies are more easily implemented and capitalize on the natural variation in adherence that occurs in a treatment. A handful of correlational studies have been conducted, and

many of these have been secondary analyses of data from treatment outcome comparisons.

The few correlational studies of adherence and outcome have generally produced equivocal results. Some have found greater adherence is related to better outcome on the primary study measures (e.g., for cognitive techniques, see Ablon & Jones, 2002; DeRubeis & Feeley, 1990; Feeley, DeRubeis, & Gelfand, 1999; for interpersonal techniques, see Ablon & Jones, 2002; Frank et al., 1991; for psychodynamic techniques, see Ablon & Jones, 1998; Luborsky, McLellan, Woody, O'Brien, & Auerbach, 1985; Hilsenroth, Blagys, Ackerman, Bonge, & Blais, 2005). Others have found no relation between greater adherence and primary outcome (for behavioral techniques, see Pantalon, Chawarski, Falcioni, Pakes, & Schottenfeld, 2004; for drug counseling, see Barber et al., 2006; Luborsky et al., 1985; for cognitive therapy techniques, see Ablon & Jones, 1998; Luborsky et al., 1985; Shaw et al., 1999; for interpersonal techniques, see Gaston, Thompson, Gallagher, Cournoyer, & Gagnon, 1998; for process-experiential techniques, see Paivio, Holowoty, & Hall, 2004; for psychodynamic techniques, see Barber, Crits-Christoph, & Luborsky, 1996; DeFife, Hilsenroth, & Gold, 2008; Ogrodniczuk & Piper, 1999; Ogrodniczuk et al., 2000). Still others have found a negative relation between adherence and outcome (for cognitive therapy techniques, see Castonguay et al., 1996; for interpersonal psychotherapy techniques, see Rounsaville, Weissman, & Prusoff, 1981; for psychodynamic techniques, see Barber et al., 2008).

Two reasons might account for the equivocal findings of correlational studies of adherence and outcome. The first is that curvilinear relations of adherence to outcome

have only been considered in a handful of such studies, even though correlational methods are attractive in their flexibility to test different types of relations between variables. For instance, Ogrodniczuk and Piper (1999) hypothesized that low or moderate levels of dynamic technique use would be related to better outcome but that high levels of dynamic intervention would be detrimental to outcome (a positively accelerating curve), but failed to find any statistical relation (linear or curvilinear) in a sample of 144 clients primarily with mood and adjustment disorders receiving psychodynamic or supportive therapies. In the NIDA Collaborative Cocaine Treatment Study, Barber and colleagues (2006) found that moderate levels of drug counseling techniques (but not higher and lower levels) predicted greater abstinence and less depression in 95 clients receiving individual drug counseling. In the psychodynamic therapy arm of that same study, Barber and colleagues (2008) found that high and low levels of psychodynamic interventions, but not moderate levels, were related to greater abstinence. Finally, in a study of 62 young adults in individual cognitive-behavioral therapy for substance use problems, Hogue and others (2008) found that more moderate cognitive-behavioral technique use, as opposed to higher or lower use, was associated with greater improvement in internalizing symptoms but not improvement in drug use or externalizing symptoms.

Second, correlational studies are subject to differences in study design, or the “model misspecifications” that have caused many supporters of the specific factors hypothesis to eschew correlational methods in favor of treatment outcome comparisons (Chambless & Hollon, 1998). In correlational studies, adherence is measured at some point during the treatment (e.g., Session 3 of a 16-session treatment, Barber et al., 1996;

one session sampled from the first 24 of a 48-session biweekly treatment, Pantalon et al., 2004) and is correlated with change in symptoms over some period of the treatment (e.g., depression scores from Session 3 to termination, Barber et al., 1996; number of consecutive weeks of cocaine-abstinent urine drug screens over the entire 48-session treatment, Pantalon et al., 2004). Not only are there an infinite number of possible ways to combine these various different study designs, but because the predictor in these studies (adherence) occurs during the treatment the outcome of which it is supposed to predict, it creates the unique problem that adherence is potentially influenced by as well as influences the process and outcome of that same treatment. For instance, many investigations have assessed adherence during the treatment and correlated it to changes in outcome measured before and after treatment. The change in symptoms that occurs prior to the measurement of adherence is grouped with the total change over treatment that adherence is being used to predict. Any mechanistic interpretations of the relation of adherence to outcome are unworkable because it is logically impossible for one thing (e.g., adherence) to give rise to another factor (e.g., early symptom change) temporally preceding it. Additionally, most symptom improvement occurs in early sessions (Lambert & Ogles, 2004), so including symptom change prior to the adherence measurement, which is likely to be very large, with subsequent change, might give the independent variable greater predictive power than it is due. Finally, prior symptom improvement is a predictor of subsequent symptom improvement as well as of therapists' ability or decision to use more interventions (e.g., Barber et al., 1996). A more consistent approach to analyzing adherence-outcome data that attends to the temporal sequence of the data

and the intercorrelation of process and outcome variables might result in more interpretable findings.

Resolution: Adherence-outcome studies using a correlational design addressing the methodological limitations of prior studies. Treatment outcome comparisons do not often directly test how different levels of intervention use might relate to outcome because they rarely use more than one threshold for adherence to a treatment package per study and are not generally comparable across studies in how they assess adherence to the same treatment. Parametric designs can experimentally test the relation of varying levels of adherence to outcome but are difficult to conduct and are rare in the literature. Correlational studies might represent a more practical alternative, even with their limitations in the ability to draw causal conclusions about any relations between adherence and outcome. Previous correlational studies of adherence and outcome have been equivocal, possibly due to a failure to model a curvilinear relation between adherence and outcome and to account for the temporal sequence of the observations in the model. Both of the present studies will then examine a range of specific interventions that occur in each treatment, predict only symptom change subsequent to the measurement of specific factors, statistically account for prior symptom improvement on later outcome, and test for both linear and curvilinear relations of intervention use to outcome.

Summary of specific factors hypothesis. More empirical work is necessary before any inferences can be made that specific factors are responsible for the difference in outcome between a treatment package and a nominal treatment control. Adherence to

the treatment manual needs to be assessed and reported. The full range of possible specific interventions in a treatment manual, and not simply the essential interventions, needs to be assessed to best represent the therapy as both conceptualized and practiced. Most importantly, more direct tests between the variation in levels of intervention use and outcome need to be conducted. Continued investigation of the covariance of intervention use with particular attention to curvilinear associations may be a better method to identify whether specific factors are indeed related to outcome. The present studies will (a) provide a detailed description of the specific interventions included in the treatment package, including a full range of possible specific interventions and without restriction of range, (b) include a description of the treatment manual, therapist training, and supervision, (c) properly model the effect of prior symptom change in the relation of intervention use to outcome, and (d) directly test the linear and curvilinear relation of specific intervention use to outcome.

Common Factors Hypothesis

Supporters of the common factors hypothesis suggest that interventions common to all psychotherapies, and not theory-specific interventions, are what lead to better outcomes in psychotherapy (Cuijpers, 1998; Frank & Frank, 1991; Garfield, 1996; Henry, 1998; Klein, 1996; Wampold, 1997, 2001; Wampold et al., 1997). They base their hypothesis on the frequent observation that different psychotherapies all show similar effect sizes relative to one another. In the absence of evidence suggesting more complex processes, the most parsimonious explanation should be the most compelling (Kazdin, 2002). Common factors hypothesis supporters view the equivocality of the current

adherence-outcome literature as evidence of the absence of data demonstrating the specific mechanisms of different psychotherapy. They suggest the most parsimonious explanation for the equivalence in outcome would be that these therapies, although readily distinguishable from one another in theory and practice, all work by the same mechanism. Interventions shared by therapists of all orientations, or the common factors, include acting warmly and with acceptance toward the patient, expressing the belief that the therapist can help, and providing a rationale and activities for the patient to get better (Wampold, 2001; Frank & Frank, 1991). These interventions serve to establish and maintain the working alliance, which supporters of the common factors perspective believe is the theoretical mechanism through which change in therapy occurs. As further evidence of their viewpoint, supporters of a common factors model often call attention to the research that alliance is a robust predictor of outcome across all types of therapy (Horvath & Symonds, 1991; Martin, Garske, & Davis, 2000; but also see Barber, 2009).

As an example of the common factors explanation of treatment outcome study data, one meta-analysis showed that behavioral, cognitive, interpersonal, and psychodynamic therapies were approximately equal in their efficacy for treating depression (Cuijpers et al., 2008 [although interpersonal psychotherapy had a small but significant advantage at termination but not at follow-up]). For inclusion in this meta-analysis, the 53 treatment outcome studies were required to compare treatment packages that two experts agreed met one of seven distinct definitional categories for theoretical orientation, thus insuring the theoretical and operational differences among treatments. Although the psychotherapies were distinguishable, the outcomes each achieved were

not. It is possible that mechanisms specific to each psychotherapy resulted in similar efficacy. However, common factors proponents suggest the simplest interpretation would be that elements shared by each treatment, and not the interventions specific to each theoretical orientation, might produce the equivalence in outcome.

The findings that different psychotherapies have greater efficacy compared to nominal treatment conditions are explained by supporters of the common factors in much the same way. The treatment packages being compared have the common factors present, hence their efficacy, whereas the nominal treatment packages do not. Advocates of the specific factors hypothesis would argue that in the case of supportive or placebo treatment conditions, the common factors are present (a supportive relationship, belief that the treatment will work, an activity to do to help the client improve) and so differences between such conditions and the treatment package could not be due to the common factors. The reply that common factors supporters often have is that the supportive and placebo conditions are not *bona fide* treatments, that is, they lack one or more of the principal elements of the common factors and so should not be expected to perform as well as treatment packages that do include all of the common factors (Messer & Wampold, 2002; Wampold, 1997). As an explanation of the differences in theory and practice of psychotherapy, proponents of the common factors hypothesis believe the technical diversity in psychotherapy arises not from the discovery of different pathways to treat a disorder but from clients' (and therapists') needs for convincing ways to explain clients' symptoms. They do not discount that specific techniques are necessary to psychotherapy, but believe that technical diversity is necessary only as a medium by

which to deliver the common factors. They often cite different faith and cultural healing practices that occur in the anthropological literature as examples of people's needs to have the common factors delivered in a package acceptable to both the client and therapist (Frank & Frank, 1991).

Goals for policy and training for proponents of the common factors hypothesis stem from this logic. They are skeptical of efforts to identify empirically supported treatments because they believe it would reduce the technical diversity of psychotherapies, reduce the number of media in which the common factors can be delivered, and thereby reduce the number of individuals that can be helped (Garfield, 1996). They suggest a reorientation in graduate and postgraduate training programs toward the promotion of facilitative conditions and the selection of therapists for interpersonal qualities. Common factors supporters are careful not to suggest that interventions and techniques should not continue to be taught. They believe that training in specific factors should be more about exposing therapists to techniques they might find palatable and giving them a repertoire of techniques to try out on their clients to see which best fit clients' explanation of their problems and ways they believe they can feel better. Finally, proponents of the common factor hypothesis have as a goal a greater emphasis by the psychotherapy research community and funding sources on the process of psychotherapy as opposed to establishing outcome (Orford, 2008; Persons & Silberschatz, 1998; Wampold, 1997).

Critique of the Common Factors Hypothesis.

Are all forms of therapy represented in the treatment outcome comparison

literature? Several arguments exist against the common factors hypothesis. The first is that not enough treatment outcome studies have been conducted to show the true differences in outcomes among different psychotherapies (Chambless & Ollendick, 2001; DeRubeis et al., 2005). The entire matrix of psychotherapy versus client population comparisons is unlikely to be performed due to its near infinite size (Krause & Howard, 1999; Wampold et al., 1997) and to recent trends in the reduction of funding for psychotherapy research. Nevertheless, there is a significant paucity of treatment outcome comparisons for clients with serious mental illnesses (Chambless & Ollendick, 2001). Clients with certain problems, like depression or adjustment disorders, might respond equally well to any psychotherapy (Chambless, 1996). Individuals with serious mental disorders, like schizophrenia or OCD, might be less responsive to psychotherapies with less structure and greater reliance in the therapeutic relationship, like humanistic or psychodynamic therapies. It is these types of therapies that often lack treatment outcome support more generally, possibly due to differences in the value of empirical evidence of the providers and theoreticians of these therapies have (Bohart, 1998), but possibly obscuring the differential efficacy of different types of psychotherapy.

Resolution: Describe the common factors found in different therapies.

Conclusions about the lack of differences between psychotherapies in their efficacy cannot be drawn for all psychotherapies, only those included in the comparison outcome studies. Whereas comparisons between all types of therapies for all different client populations is perhaps an infeasible goal, investigation of the most commonly practiced

therapies in comparative outcome studies, as well as outreach to and inclusion of therapies that are not as well-researched, should be a focus of future psychotherapy research. A better goal might be to investigate the common factors directly in different psychotherapies (Kazdin, 2005). There is consensus that these common factors exist and that they are important to outcome in all different therapies, although their exact role is debated (e.g., different levels of expectancy). The nature of the common factors in each of the therapies is yet unknown, as each therapy might emphasize different aspects of the common factors. However, if therapies are equally efficacious due to the provision of the common factors, the levels of common factors should be approximately the same in all therapies. Documentation of the common factors in different therapies is essential then. Second, many therapies are underrepresented in the treatment outcome literature not because their proponents disdain research entirely, but because they place greater emphasis on process research. Conversely, psychotherapies that are traditionally more focused on outcome research often lack a sizeable empirical literature about what happens in these therapies. The study of common factors then might be a way to cultivate greater research across all different psychotherapies. In the present studies I will investigate the common factors in two commonly practiced therapies (psychodynamic therapy for MDD, behavioral therapy for OCD) by taking a descriptive approach. I will attempt to document not only the levels of common factors in each therapy, but also the types of common factor interventions and alliance.

Can any interpretation be made of null results from treatment outcome comparisons? The second problem with the common factors explanation is that it has

generally been reasoned from null findings, or the findings that few differences in efficacy have been discovered among different psychotherapies. The common factors hypothesis has the advantage of parsimony in explaining these null results relative to the specific factors hypothesis, but this advantage is due to the fact that the common factors hypothesis *is* the null hypothesis (Wampold, 2005). As the null hypothesis, there is no direct way to falsify the common factors hypothesis. Advocates of a common factor interpretation can only hope to show that no differences among therapies have been found yet, but not that no differences truly exist. Moreover, the recommendation on the part of some common factors supporters to discontinue comparative outcome studies is unscientific (Messer & Wampold, 2002; Wampold, 1997). As the null hypothesis is unfalsifiable, calling off the search for disqualifying findings prematurely ends the scientific debate in favor of these individuals' preferred hypothesis (Popper, 1959). The common factors argument must therefore rely on other forms of scientific methods to demonstrate its validity.

Two methods can provide some verification to the common factor hypothesis: equivalence testing and correlational studies of common factor intervention use and outcome. No difference among psychotherapies in their efficacy is not the same as equivalence in efficacy. If common factors proponents could demonstrate that the differences among therapies in their outcomes were trivial or irrelevant by some standard, they would have a better case for suggesting that the therapies were similar in outcome and therefore mechanism. Equivalence testing is a method of assessing whether the differences among treatments are trivial or irrelevant (Rogers, Howard, & Vessey, 1993;

Seaman & Serlin, 1998; Wellek, 2003). A range of outcomes would need to be determined that would represent outcomes that might be expected were psychotherapies indeed equivalent, or a zone of indifference. This zone of indifference would need to be established based on clinical (e.g., judgments of what constitutes recovery) and scientific (e.g., reliability of the outcome measure) consensus. The confidence interval estimates for the outcomes of different treatments would need to fall completely within the established zone of indifference in order to be considered equivalent. However, as of yet, no such study has been completed. Additional comparative studies of multiple therapy systems and funding for such comparative studies are quite limited, reducing any opportunity to conduct an equivalence test fully inclusive of the most commonly practiced psychotherapies. More problematic to the possibility of an equivalence outcome comparison is the hotly contested debate over what represents outcome (Hill & Lambert, 2004) and improbability of finding a consensus among experts as to what a zone of indifference might be.

Supporters of the common factors hypothesis need to demonstrate a positive relation between common factor interventions (e.g., warmth, acceptance, belief in the effectiveness of the therapy, and a rationale and activities for the therapy), and outcome in each of the different psychotherapies presumed to have equivalent efficacy. Not enough efforts have taken place to show that the common factors are even present in different psychotherapies (Barber, Stratt, Halperin, & Connolly, 2001), let alone that the common factors relate to beneficial outcomes. Many of those studies measuring facilitative conditions and supportive interventions actually find that greater use to the

common factors has not been related to greater outcome (Barber et al., 1996; Barber et al., 2008; Feeley et al., 1999; Markowitz, Spielman, Scarvalone, & Perry, 2000; Ogrodniczuk & Piper, 2000; Pantaloni et al., 2004; Shaw et al., 1999).

Resolution: Directly test the relation between common factor interventions and outcome. Common factors advocates base their claims about the mechanisms of psychotherapy on findings supporting the null hypothesis that psychotherapies differ in their efficacy. Additional effort needs to be made in order to provide positive evidence for the relation of common factor interventions and outcome, including possibly more correlational studies. The present studies then will provide another test of common factors in relation to outcome in two psychotherapies, one in which common factors have been studied intensively (i.e., psychodynamic therapy), the other in which common factors have largely been unattended (i.e., behavioral therapy).

Is the relation of alliance to outcome evidence for the efficacy of common factors? Common factors advocates often cite as evidence for their hypothesis investigations of the association of therapeutic alliance to outcome. However, although alliance is often grouped with the common factor interventions (e.g., Wampold, 1997, 2001, 2005), it is not itself an intervention. Alliance is presumably created and maintained by therapist interventions like acceptance and the belief that the therapist can be helpful. For instance, alliance is built and modified from the therapist's tone of voice on the initial phone contact, from the way the therapist greets the patient in the waiting room, from the enthusiasm the therapist has for his or her work with the client, and from the handshake or hug offered at termination. Alliance therefore is better considered an

intermediary theoretical product of the common factor interventions, as insight is to psychodynamic interpretations and alternative rational responses are to cognitive reframing exercises. Alliance as an intermediary outcome is not always related to common factor interventions (Gaston et al., 1998; Ogrodniczuk et al., 2000). Greater alliance has been shown to be related to both prior symptomatic improvement (Barber et al., 1996; DeRubeis & Feeley, 1990; Feeley et al., 1999) and the provision of specific interventions (Ogrodniczuk et al., 2000; Pantaloni et al., 2004), findings that would not support the idea that common factors lead to alliance that leads to outcome.

Although alliance is not a therapist intervention but rather a product of interventions, it has often been compared head-to-head to specific factors in predicting outcome (e.g., Barber et al., 1996; Castonguay et al., 1996; DeRubeis & Feeley, 1990; Feeley et al., 1999; Gaston et al., 1998). Common factors advocates claim as evidence for their hypothesis instances when alliance captures a larger proportion of the variance in outcome than specific factors or when alliance suppresses the relation of specific factors to outcome. However, these studies do not represent an equal comparison for two reasons. First, they are not comparing the same level of construct: Specific interventions are therapist behaviors, alliance is the product of therapist (and client) behavior. Second, because alliance is a product of behavior during therapy, it necessarily has temporal precedents that occurred before it was measured (i.e., common factor interventions). When specific interventions and alliance are measured contemporaneously, alliance gets a “head start” in the comparison. The interventions that created it (i.e., common factor interventions) had to have occurred sometime prior to the specific interventions being

measured alongside the alliance. Early predictors of change are often better than later predictors because the largest portion of client change occurs early in therapy (Lambert & Ogles, 2004). By measuring the product of common factor interventions, and not common factor intervention themselves, the common factors hypothesis has a distinct advantage in capturing a greater proportion of the variance in outcome when compared simultaneously with specific interventions.

As an example, Castonguay and others (1996) examined the relative contribution of cognitive therapy techniques (therapist focus on intrapersonal consequences) and alliance measured simultaneously. They found that greater alliance scores predicted greater improvement in depression whereas greater cognitive therapy techniques did not. They concluded that their study “provided information regarding the predictive ability of common and unique factors in cognitive therapy” (p. 502), namely, that the common factors were a greater predictor of outcome than were specific cognitive therapy interventions. This conclusion is despite the fact that they did not examine the common factor interventions directly (i.e., they measured alliance instead) and were not comparing the same constructs. The authors did inadvertently give some report of what common factor interventions were occurring at the same time as they were measuring both alliance and cognitive therapy focus. In a descriptive analysis of several unsuccessful cases to uncover what therapist behaviors were driving the relations of common and specific factors to outcome, the authors reported that “some therapists dealt with strains in the alliance by increasing their attempts to persuade the client of the validity of the cognitive therapy rationale, as the client showed more and more disagreement with this rationale

and its related tasks” (Castonguay et al., 1996, p. 502). Convincing the client of the rationale of the treatment and its activities is a common factor intervention (Wampold, 2001; Frank & Frank, 1991), suggesting that some therapists with poor outcomes were actually increasing their use of the common factor interventions.

Resolution: Test the relation of common factor interventions to alliance and outcome. Measurement of both common and specific factor *interventions* is necessary to clarify how the two might explain the variation in outcome relative to one another. Alliance is, at least in part, a product of common factor interventions and so cannot be used as a stand-in when common factor interventions are compared to specific factor interventions. The present studies will provide a test of how these two types of interventions (specific and common factor) covary with outcome in two different psychotherapies. One study will also test for the mediating effect of alliance on the relation of common factor interventions to outcome.

Summary of common factors hypothesis. Most arguments for the common factor hypothesis rely on meta-analyses of investigations of the alliance, a product of the common factor interventions. These meta-analyses cannot falsify the common factors hypothesis, and correlational studies of alliance and outcome cannot verify that the common factor interventions that the therapists might do in different therapies lead to equivalence in outcome. More studies of the direct relation of common factors and outcome need to be performed. The present studies are designed to accomplish several objectives in that vein. In these studies, I will (a) begin to document the common factors in two psychotherapies for different disorders, (b) examine the correlation of specific and

common factors to subsequent outcome in these two psychotherapies, and (c) explore the relation of common factors and alliance in temporal sequence.

Unintended Factors Hypothesis

An additional possibility exists that might explain the mechanism by which psychotherapies work. A wide range of different interventions are present in every type of psychotherapy, not just the interventions specific to the manual being followed or the common factor interventions (Barber, 2009). These might be interventions belonging to a specific theoretical orientation but different than the therapy purportedly being practiced (e.g., process-experiential interventions in a cognitive or psychodynamic therapy session). Therapists of all orientations might deliberately or unintentionally use such interventions, and these interventions might be related to client improvement. It is not unlikely that therapists are at least familiar with techniques from other theoretical orientations. In training, it is often the case that therapists are exposed to interventions from many different theoretical orientations (Norcross, Sayette, & Mayne, 2008) and the majority of therapists describe their practice as eclectic (Norcross, Hedges, & Castle, 2002). As therapists gain experience, they tend to use many different types of interventions (Goldfried, Raue, & Castonguay, 1998). Therapists might purposefully incorporate the techniques into their usual way of practicing, regardless of their own theoretical orientation because they may have discovered through trial-and-error that those interventions work with many of their clients (e.g., a dynamic therapist who finds setting and reviewing homework assignments about interpersonal matters helpful to his or her clients).

Therapists might also not be aware all of the techniques that they are using or they might attempt certain interventions with the result of engaging in some degree of a very different intervention. For example, in psychodynamic psychotherapy, a therapist may offer an interpretation of the transference that the client is enacting with the therapist. The therapist's intent would be to help the client gain more insight by connecting the client's in-session behaviors and emotions to the client's internal conflicts giving rise to those experiences. However, the same intervention the therapist thinks is an interpretation may also challenge the client's automatic thoughts about how others view him or her. The client might review the evidence for these thoughts in his or her mind or aloud, and the client (and therapist) might verbalize an alternative way of understanding the situation. In this way, the therapist might have inadvertently begun a process of cognitive reframing for the client with the transference interpretation. Finally, clients might perceive interventions differently than the techniques were intended by their therapists. Client perspectives of the interventions in therapy are often overlooked in favor of what is thought to be more objective, the opinions of therapists or outside judges. However, it may be the viewpoint of the client as to what is being done in therapy that actually determines the ultimate outcome (Butler & Strupp, 1986).

To be adherent according to many theorists' and researchers' definitions, the therapist must avoid certain interventions forbidden by a treatment manual (Waltz et al., 1993). These proscribed interventions are techniques from other psychotherapies, and their presence in therapies being investigated in treatment outcome studies (or correlational studies of adherence and outcome) is rarely examined. In studies that do

measure both prescribed and proscribed interventions, treatments are easily differentiable from one another both in their higher levels of interventions that therapists should be performing according to the treatment manual for that therapy and lower levels of interventions the treatment manual forbids (e.g., McCarthy & Barber, 2009; Trijsburg et al., 2002; Trijsburg et al., 2004). However, there is evidence in these studies that therapists still do perform proscribed interventions, though at a lesser level than do therapists from the orientation those prohibited interventions come. For example, in the Treatment for Depression Collaborative Research Project (TDCRP), interpersonal and cognitive therapists clearly used more of the interventions from their own theoretical orientation (Hill et al., 1992). However, these therapists still employed interventions from the other orientation. This was in spite of the extensive training and supervision that they received in their own theoretical orientation and the knowledge that their sessions would be evaluated by the research team. These residual interventions, deliberate or unintentional, may have consequences for outcome and might be a potential reason why equivalence in efficacy was observed in this study, as well as in studies comparing many different psychotherapies.

Some investigations of unintended factors have been conducted with equivocal results. Luborsky and colleagues (1985) assessed adherence to psychodynamic, cognitive, and drug counseling techniques in sessions of dynamic, cognitive, and drug counseling for opiate-dependent clients. Regardless of the theoretical orientation, less proportional use of unintended interventions (and hence greater proportional use of specific interventions) was related to better outcomes. Rounsaville and colleagues (1981) found in

36 clients receiving interpersonal psychotherapy that a greater percentage of time spent on proscribed decision-making techniques, and not the prescribed interpersonal techniques of exploration and discussion of problems areas, predicted better outcomes. In three separate studies of psychodynamic and cognitive therapy for a number of different disorders, Ablon and Jones (1998) found that greater correspondence to a psychodynamic prototype predicted outcome on more measures in both psychodynamic and cognitive therapies than did correspondence to a cognitive therapy prototype. Using a similar methodology for the TDCRP dataset comparing interpersonal and cognitive therapy for depression, Ablon and Jones (2002) found that greater correspondence to a cognitive therapy prototype was related to better outcomes on more measures in both therapies compared to correspondence with an interpersonal therapy prototype. In a study of psychodynamic therapy at a university counseling center (Hilsenroth et al., 2005), greater use of prescribed psychodynamic techniques was correlated with better outcomes, whereas the use of proscribed cognitive therapy techniques was not related to outcome. However, greater client report of unintended cognitive therapy techniques, but not intended psychodynamic techniques, was related to more improvement in dynamic therapy at that same university counseling center (DeFife et al., 2008). Finally, in the NIDA Collaborative Cocaine Study, Barber and colleagues (2008) found a complex relation of intended and unintended factors in outcome of psychodynamic therapy for cocaine dependence. Moderate unintended drug counseling intervention levels, combined with either very high or very low dynamic intervention levels, appeared to produce the

most cocaine abstinence, although the authors did not test for a statistically significant interaction.

Critique of the Unintended Factors Hypothesis.

How can we better understand the contribution of unintended factors in therapy? Findings from these few studies are contradictory and confusing, largely on account of several factors. First, comparisons of intended and unintended factors have generally included the prescribed interventions and proscribed interventions from only one other system. Because there are many different theoretical orientations, comparing interventions from only one or two psychotherapies might miss the interventions that are related to outcome that therapists are not intending to perform. Second, very few of these studies have also examined the contribution of the common factor interventions alongside the intended and unintended interventions. The common factor interventions may remove much of the shared variance among interventions of different theoretical orientations, thereby isolating the interventions (prescribed or proscribed) that are related to outcome. Third, the client populations being investigated are varied in these studies. Certain disorders may respond differently to different unintended interventions and so client populations may need to be considered.

Resolution: Assess the contribution of interventions from multiple therapies to outcome. Multiple problems might exist with the unintended factors hypothesis, but no one more important than the lack of research in this area. The use of unintended factors must be documented in psychotherapy. Given the tendency for therapists to receive training in different theoretical systems and the multifaceted complaints with which many

clients present, multiple types of interventions are likely to be employed in any particular session. Interventions from a broad range of theoretical orientations need to be assessed. The common factors need to be included in this assessment as they may explain some of the shared variance among interventions of different theoretical systems. The specific conditions under which the different types of interventions are used, like the disorder or population being treated or the overall therapeutic goals being pursued, need to be defined as they are likely a contributing factor to therapist use of unintended interventions. Finally, some of the unintended factors may work not through actual delivery of an intervention by the therapist, but through the perception of that intervention being delivered. Asking the interventions present in a therapy session from the different participants (client, therapist, and outside judges) may provide a more complex but more meaningful view of what matters to outcome in psychotherapy. The present studies will examine a broad range of unintended factors in two therapies for specific disorders, both to describe their occurrence and to explore for their potential relation to outcome.

Summary of unintended factors hypothesis. Even though sessions from different therapies can often be distinguished based on the levels of specific interventions found in each, techniques that are not intended as part of a treatment manual may in fact still be delivered either deliberately or inadvertently by therapists. Studies investigating how intended and unintended interventions might relate to outcome have produced equivocal results. More comprehensive assessment of interventions from different theoretical systems, including common factors, using more defined client populations is

necessary to determine whether interventions not included in treatment manuals have an influence on therapeutic outcomes. The present studies will provide an initial attempt to (a) document the unintended factors with the same rigor as specific and common factors, (b) explore the relation of unintended factors to outcome, and (c) examine the contribution of perspective to the relation of unintended factors to outcome. To these ends, I will use in these studies a measure of a wide range of interventions from eight different theoretical orientations, the Multitheoretical List of Therapeutic Interventions (MULTI; McCarthy & Barber, 2009). The MULTI also has the ability to capture multiple perspectives on therapy interventions, and so one study will compare how clients and therapists see the same session and how their views predict outcome.

Present Studies

The two studies presented here represent an attempt to demonstrate how detailed descriptions of the interventions in psychotherapy and sophisticated correlational designs might better help us understand how the interventions in therapy bring about change. In two different manualized treatments for different disorders (supportive-expressive psychodynamic therapy for MDD, Luborsky, 1984; exposure/response prevention behavioral therapy for OCD, Foa, Roth, Huppert, & Franklin, 1998), I will use a comprehensive system to assess the specific, common, and unintended techniques in each psychotherapy and model how differing levels of these interventions relate linearly and curvilinearly to subsequent symptom change. These two studies, although focusing on different therapies for different disorders, will have some shared aims and hypotheses.

Aim 1: Therapy process description.

Aim 1.1: Description and predictors of specific, common, and unintended factors. I will aim to provide a comprehensive description of the specific, common, and unintended factor interventions in a psychodynamic therapy for depression and a behavioral therapy for OCD. To this end, I will use the MULTI to assess interventions from eight different theoretical orientations (psychodynamic, behavioral, common factors, cognitive, dialectical-behavioral, interpersonal, person-centered, and process-experiential). The description in the studies will include not only a mean level of intervention use for each of the eight theoretical systems, but also a breakdown of the most and least frequent interventions within each of the systems. I predict that specific interventions will be strongly endorsed in both therapies (psychodynamic interventions in the supportive-expressive treatment of MDD, behavioral therapy interventions in the behavioral treatment of OCD), common factors will be relatively prominent in both therapies, and unintended interventions from other therapy orientations will be present to some lesser degree. I also hypothesize that there will be variation in the amount that individual interventions within each of eight orientations is used. While I will not statistically test for differences in levels of individual intervention use, I will look for trends (a) when the items identified as essential to the specific therapy (e.g., exposure in behavioral therapy, transference interpretations in psychodynamic therapy) being investigated are reported more or less intensely than other items identified as auxiliary to the therapy (e.g., skill teaching in behavioral therapy, dream work in dynamic therapy) and (b) when individual items unintended in the therapy being studied seemed to be systemically used by therapists despite their proscription.

Intervention use occurs in the context of treatment and is likely to be influenced by the process and outcome of the treatment. I will therefore examine how change in symptoms prior to the measurement of intervention use affects the level of interventions reported. In the behavioral therapy sample, I collect client and therapist ratings of the interventions in the same session to permit examination of the concordance of these ratings. In the psychodynamic therapy sample, I will measure intervention use at two time points and will examine whether specific, common, and unintended factor levels change in early treatment.

Aim 1.2: Description and predictors of alliance. Alliance is considered by some to be a common factor. I will report the levels of alliance in both behavioral and dynamic psychotherapies. Alliance is likely to be affected by the therapy process in which it arises. Some have reported that alliance might be strengthened by positive feelings as the client begins to feel better. I will therefore examine whether early symptom change is related to greater alliance development. I will also examine whether alliance correlates with specific, common, and unintended factors measured contemporaneously.

Aim 1.3: Description of outcome across treatment. Because the process measurements in correlational designs occur during treatment, it is important to document not only the change in symptoms over treatment, but the change in symptoms up until the process measurements and the subsequent change these process measurements will be predicting. I will report all of these periods of symptom change in both studies.

Aim 2: Correlations between therapy process and outcome.

Aim 2.1: Correlations of specific factors to subsequent outcome. A second major aim for these studies is to demonstrate how a correlational approach might more directly test whether specific, common, and unintended factors relate to outcome. I predict that interventions prescribed by the treatment manual (psychodynamic in supportive-expressive therapy, behavioral in exposure/response prevention therapy) will be associated with subsequent improvement in the target symptoms, and that this relation will be over and above the contribution of prior symptom improvement. For both treatments, I predict that prior symptom improvement will partially suppress the linear effect of specific interventions.

I will test for a quadratic relation of specific factor interventions to symptom improvement. Specifically, I predict that in exposure/response prevention therapy, moderate levels of behavioral therapy intervention use will be related to greater improvement than will be higher or lower levels. In psychodynamic therapy, moderate levels of psychodynamic interventions will be associated with greater improvement than will be more extreme levels of dynamic interventions. For both treatments, I predict that prior symptom improvement will partially suppress the curvilinear effect of specific interventions.

Aim 2.2: Correlations of common factors to outcome. I will operationalize common factors in two ways. The first will be the techniques the therapist uses (common factor interventions) and the second will be the hypothesized product of these techniques, the therapeutic alliance. I hypothesize that greater common factor interventions (exclusive of therapeutic alliance) will be related to greater subsequent symptom

improvement in both treatments. I also predict that therapeutic alliance (exclusive of common factor interventions) will be highly predictive of outcome in both studies. I predict that prior symptom change will partially suppress the linear relations of both common factor interventions and alliance to outcome.

I will also test for a curvilinear relation of common factors to outcome. I predict that moderate levels of common factor techniques will predict outcome better than higher or lower levels. Likewise, I will test whether moderate levels of alliance will predict outcome better than higher or lower alliance levels. For both common factor interventions and alliance, I predict that early symptom change will partially suppress their curvilinear relations to outcome.

Aim 2.2.1: Mediating effect of alliance on the association of common factors to outcome. In the study of psychodynamic therapy, intervention use and alliance will be measured in two sessions. I hypothesize that in this study, the relation of common factors to symptom change will be mediated by alliance measured at a later session because alliance is the product of common factor interventions.

Aim 2.3: Correlations of unintended factors to outcome. Finally, the last aim is to explore the role of unintended factors to outcome in psychodynamic and behavior therapy. I will measure a number of interventions from a range of therapy systems. I will correlate (linearly and curvilinearly) each of these factors to outcome singly, and then to capture the context of therapy delivering all interventions together, I will conduct a stepwise regression with backward deletion of the process factors together. The remaining model of significant predictors will be presented.

Study 1

Methods

Participants.

Clients. Clients were 30 individuals seeking treatment for OCD at the Center for the Treatment and Study of Anxiety in Philadelphia, PA, a clinic specializing in the behavioral treatment of anxiety disorders. Participants were either enrolled in a fee-for-service clinic or taking part in the behavioral therapy only condition of a randomized controlled trial (RCT) comparing an atypical antipsychotic medication or behavioral therapy for persons with OCD who had previously failed a trial of SSRI medication. In fact, clients from both the clinic and the RCT were likely to have had numerous unsuccessful psychological and pharmacological treatments for OCD, although this information was not formally collected. Demographic information was not collected from clients because the study procedures provided for anonymity.

Therapists. Therapists were six men and four women who worked at the clinic and were specifically trained in the administration of the behavioral therapy protocol. Most therapists (80%) were between the ages of 30 and 40. Most (80%) identified their primary race or ethnicity as European American. Eight therapists (80%) had a doctorate in psychology and two (20%) had a master's degree in psychology or an allied field. Mean experience post-degree was 4.5 years ($SD = 6.14$). Mean number of patients for whom each therapist provided therapy was 3 ($SD = 1.13$, range = 1 to 6).

Treatment. The treatment that both the open clinic and the RCT clients received was a 16-session protocol manualized by Foa et al. (1998). Required therapist behaviors

and the amount of time spent on each intervention were outlined session by session.

Sessions were 120 minutes long, with brief telephone contacts between sessions to insure the client was performing the homework assignments.

The first two sessions were given over to treatment planning, which included gathering a history of symptoms and functioning, introducing the behavioral model of OCD and the rationale for exposure and ritual prevention, teaching the client self-monitoring techniques, and constructing a hierarchy of feared stimuli. Homework for these initial sessions included reading about the treatment rationale and monitoring symptoms. Exposure and ritual prevention began in the third session. The therapist and client practiced imaginal and in vivo exposure in session, culminating in the client attempting self-exposure. In the manual, examples of exposure and ritual prevention for particular types of obsessions and compulsions (e.g., checking, washing) were given, along with ways to anticipate and manage the client's reactions to the exposure exercises. Exposure and ritual prevention to more feared stimuli on the client's hierarchy were continued in all of the subsequent sessions, and by Session 7, the client was expected to be conducting exposure to his or her most feared stimuli. Homework for all later sessions included self-monitoring of symptoms and exposure assignments, and client worksheets and telephone contact with the therapist insured the exposure was carried out correctly.

After the third session, sessions were to consist mostly of exposure and ritual prevention practice and reviewing homework. However, the therapist might also use interventions from the treatment planning stage (e.g., spending extra time reviewing the behavioral model of OCD and the rationale for exposure and ritual prevention,

restructuring the hierarchy of feared stimuli) in order to deal with a lack of symptom response, passive avoidance to exposure exercises, or client resistance to treatment.

Measures.

Multitheoretical List of Therapeutic Interventions (MULTI, McCarthy & Barber, 2009). The MULTI is a 60-item measure of key interventions from a wide range of therapy orientations (behavioral (BT), cognitive (CT), dialectical-behavioral (DBT), interpersonal (IPT), person-centered (PC), psychodynamic (PD), and process-experiential (PE) therapies, plus the common factors (CF) interventions). Items are rated on a 1 (*not at all*) to 5 (*very*) scale of how typical each intervention was of the session. Subscales representing each of the eight therapy orientations included in the MULTI are created by averaging items theoretically belonging to those orientations. The MULTI can capture the perceptions of clients, therapists, and observers of the interventions in the same session. In this study, clients and therapists completed the measure after their fourth session. In separate studies of clients and therapists in many different types of therapies, reliability for each of subscales was shown to be moderate, and sessions of behavioral therapy were distinguished from sessions of other types of therapy by the MULTI subscales representing behavioral therapy (McCarthy & Barber, 2009). Twenty-four MULTI forms were completed by clients and 29 by therapists at Session 4. The majority of MULTI subscales displayed moderate ($\alpha > .70$) internal consistency in client (except CF, $\alpha = .65$) and therapist data (except BT, $\alpha = .65$; DBT, $\alpha = .64$) from this sample.

Working Alliance Inventory-Short Form (WAI; Horvath & Greenberg, 1989; Tracey & Kokotovic, 1989). The WAI is a 12-item measure of the therapeutic

relationship between clients and therapists based on the theoretical model proposed by Bordin (1979). Four items represent the agreement between clients and therapists on the goals of treatment, another four represent the agreement on the tasks or interventions of which the therapy will comprise, and four represent the affective bond between the client and therapist. Client, therapist, and observer versions of the WAI exist, although only the client form was used in this study. Items are rated on a 7-point Likert-scale (1 = *Never*, 7 = *Always*). Items are averaged, and higher scores represent a stronger therapeutic alliance. In numerous studies, the WAI has exhibited good reliability and has been shown to predict therapy outcome (Horvath, 1994). Twenty-four clients provided WAI ratings at the same time point at which interventions were assessed (Session 4). Internal consistency for the total scale in this sample was moderate ($\alpha = .75$).

Obsessive-Compulsive Inventory-Revised (OCI-R; Foa et al., 2002). The OCI-R is an 18-item self-report measure of a broad range of symptoms associated with obsessive-compulsive disorder. Respondents use a 5-point Likert-scale (0 = *Not at All*, 4 = *Extremely*) to rate how much six types of obsessions and compulsions (washing, obsessing, hoarding, ordering, checking, and neutralizing) bothered them in the past month. These six types of symptoms load onto six subscales that have evidenced adequate factor structure and good internal consistency in clinical and nonclinical samples (Foa et al., 2002; Hajcak, Huppert, Simons, & Foa, 2004; Huppert et al., 2007). OCI-R total and subscale scores correlated highly with an observer-rated measure of OCD symptoms (Foa et al., 2002), and also differentiated groups of patients with different primary OCD symptoms (Huppert et al., 2007) and DSM Axis-I diagnoses (Foa

et al., 2002; Huppert et al., 2007). In the present sample, the internal consistency estimate for the total OCI-R scale across sessions (i.e., intake, Session 4, termination) was excellent ($\alpha = .91$). Symptom change prior to the MULTI and WAI measurements (i.e., symptom change from intake to Session 4) was computed as the residuals in a regression of Session 4 OCI-R scores on intake OCI-R scores.

Procedure. Procedures for the present study were largely similar for clinic and RCT clients. Clients first completed a battery of self-report measures standard to the clinical procedures of the clinic before treatment. An OCI-R was included in this battery. They then met with a skilled diagnostician who conducted a semi-structured clinical interview. Clients who met the eligibility criteria for the RCT (e.g., prior failed trial on SSRI medication of adequate dose and duration) were invited to participate in the study at this time. Regardless of whether clients enrolled in the RCT or became clinic clients, they were assigned a therapist from a pool based on mutual availability. Most clients met with their therapists once weekly (83%, $n = 25$), but some (17%, $n = 5$) met at least twice weekly for the entire treatment. Before Session 4, the therapist introduced the current study to their clients. If the client was interested in participating, a research assistant gave a packet of materials to both the client (MULTI, WAI, and OCI-R) and the therapist (MULTI) to complete after their fourth session together. The fourth session was chosen in consultation with the director of the clinic because it was when exposure and ritual prevention interventions, the putative mediator of change, were likely to begin being conducted based on the manual. For some clients (23%, $n = 7$), the therapist introduced the process study later than Session 4 but no later than Session 6 due to researcher error.

The clients were given another OCI-R after 16 sessions of treatment by a research assistant either in person, by postal mail, or over the internet. RCT patients conducted a termination interview with a diagnostician at this time.

Data Analytic Strategy

Aim 1: Therapy process description.

Aim 1.1: Description and predictors of specific, common, and unintended factors. Client and therapist data were analyzed and presented separately for these and all following procedures. To describe the interventions that occurred in the behavioral therapy sessions, I provided the means and standard deviations for ratings of MULTI subscales representing different therapy orientations. I also provided descriptive statistics for the individual items comprising the different subscales, as well as the frequency of occurrence of these interventions in the sessions.

I examined whether prior symptom change (i.e., residuals from the regression of Session 4 OCI-R scores on intake OCI-R scores) were correlated with clients' and therapists' perception of intervention use. To detect any patterns in how clients and therapists perceived the interventions in the same session, I used paired-sample *t* tests to compare their mean level of intervention report for each MULTI subscale and intraclass correlation coefficients to assess their level of absolute agreement on the level of each subscale.

Aim 1.2: Description and predictors of alliance. I also provided the mean and standard deviation for clients' responses on the WAI (therapists did not rate the WAI). I correlated prior symptom change with alliance to determine whether alliance was

influenced by symptom improvement. To determine whether alliance was associated with the concurrent use of interventions, I computed correlations between scores on the WAI and each of the MULTI subscales.

Aim 1.3: Description of outcome across treatment. To demonstrate the effect of treatment over time I conducted a hierarchical linear regression on clients' OCI-R scores. Ordinary least squares regression was used to model prior (intake predicting Session 4) and subsequent (Session 4 predicting termination) symptom change. Effect size r s are reported for these analyses, and negative values represent greater declines in OCI-R scores over that period of treatment. I used Cohen's (1988) guidelines to interpret the magnitude of the effect (small, $r > .10$; medium, $r > .30$; large, $r > .50$).

Aim 2: Correlations between therapy process and outcome.

Aim 2.1: Correlations of specific factors to subsequent outcome. To test the hypotheses that greater levels of behavioral therapy interventions were related to greater subsequent symptom change, I used the BT subscale of the MULTI to predict OCI-R scores at termination in a regression. To account for the change in symptoms prior to Session 4, I covaried prior symptom change (residuals of Session 4 OCI-R regressed on intake OCI-R) in the regression model. Client and therapist process data were analyzed separately. Semi-partial r s were reported, and negative values represent that greater symptom improvement is associated with greater levels of the BT subscale. To test whether prior symptom change partially suppressed the linear relation of behavioral interventions to outcome, I predicted termination OCI-R scores from the BT subscale scores controlling only for baseline OCI-R scores. I compared semi-partial r s from these

analyses with those from the analyses controlling for prior symptom change to identify whether prior symptom change decreased the magnitude of the linear relation.

To test the hypothesis that moderate levels of behavioral interventions were related to greater subsequent outcome than were higher or lower levels (i.e., a curvilinear effect), I repeated the regression analysis above (i.e., predicting termination OCI-R scores from a linear term for the BT subscale and prior symptom change) but also included a quadratic term for BT. Again, I report semi-partial r s. Positive values indicate that more moderate levels of behavioral interventions are related to greater subsequent outcome compared to higher or lower levels (U-shape function, in which lower values on the y-axis are better outcomes); negative values indicate that higher or lower behavioral intervention levels are related to greater subsequent outcome compared to more moderate levels (inverted U-shape function). I also predicted termination OCI-R scores from the linear and quadratic terms for BT subscale controlling only for baseline OCI-R scores to test whether controlling for prior symptom change suppressed the magnitude of the curvilinear relation.

Aim 2.2: Correlations of common factors to outcome. For all subsequent analyses, I used a data analytic strategy similar to that which I used to predict subsequent termination outcome from specific factors at Session 4.

Common factor use at Session 4 was operationalized in two ways: common factor interventions (CF subscale scores of the MULTI) and the intermediary outcome of common factor interventions, therapeutic alliance (WAI scores). These two types of scores were analyzed separately. For linear terms, negative semi-partial r s indicated that

greater common factors use (either common factor techniques or alliance) predicted greater subsequent change, controlling for prior symptom change. To test whether prior symptom change partially suppressed the linear relations of common factor interventions and alliance to outcome, I predicted termination OCI-R scores from CF subscale and alliance scores separately, controlling only for baseline OCI-R scores. I compared semi-partial r s from these analyses with the analyses controlling for prior symptom change to determine whether prior symptom change decreased the magnitude of the linear relations.

For analyses testing quadratic terms, positive semi-partial r s suggested that more moderate levels of common factors (either common factor techniques or alliance) were related to better subsequent outcome than were higher or lower levels, controlling for early symptom change; negative semi-partial r s suggested the opposite. I also predicted termination OCI-R scores from the linear and quadratic terms for the CF subscale and alliance separately controlling only for baseline OCI-R scores to test whether controlling for prior symptom change suppressed the magnitude of the curvilinear relations.

Aim 2.3: Correlations of unintended factors to outcome. To compare the effects of all of the process factors (specific, common, and unintended) against one another, I conducted a stepwise regression with backward deletion predicting OCI-R termination scores from those process factors found to be individually associated with OCI-R termination scores. I first identified the linear and quadratic relations that each of the unintended MULTI subscales (CT, DBT, IPT, PC, PD, PE) had to subsequent symptom change, controlling again for prior symptom change. I entered all individual predictors significant at the trend level ($p < .10$) into a regression. If a quadratic term for a process

variable was found to be associated with subsequent outcome, the linear and quadratic terms for that variable were included in the initial stepwise regression model. Predictors were deleted one at a time from the stepwise model if they failed to remain significantly related to termination OCI-R scores, starting with those predictors with the highest p values first. If a quadratic term for a process factor met the criterion for deletion and the linear term had not been individually predictive of outcome, both the quadratic and linear terms were removed from the model. The effect size r s for the remaining predictors in the final model and the multiple R^2 for the model were presented.

Results

Aim 1: Therapy process description.

Aim 1.1: Description and predictors of specific, common, and unintended factors. Table 1 presents the MULTI subscale scores for clients and therapists, as well as the average intervention level for clients and therapists (the average of all MULTI items in the session). Common factor interventions exhibited the highest subscale scores for both clients and therapists, followed by behavioral therapy interventions for both as well.

Table 2 presents the descriptive statistics for individual items on the MULTI for clients, and Table 3 presents the individual item descriptives for therapists. Exposure (item 16), behavior modification strategies (items 9 and 35), and homework (item 17) were the most prominent and frequent behavioral items reported by both clients and therapists. Other important behavioral techniques, like the identification of precedents and consequences of behavior (items 5, 25, and 27), were reported by clients and therapists at slightly lower levels. Skill teaching (item 15) and modeling/role-play (item

44) did not appear to be perceived as representative of the behavioral treatment for OCD by either clients or therapists.

Items from the common factors subscale were generally perceived at a uniformly high level. Items representing techniques from other systems exhibited greater variability in clients' and therapists' ratings. For instance, items from the interpersonal psychotherapy subscale, such as introducing the medical model perspective for the client's problem (item 59), were reported as quite representative of the behavioral therapy sessions but other items connecting the problem to clients' relationships (items 19 and 50) were not. Cognitive therapy items shared with the behavioral therapy subscale were reported as relatively typical (e.g., "agenda setting," item 1; "homework," item 17), but cognitive therapy items focusing more on thought processes were rated as less frequent, like seeking alternative explanations (item 21). For process-experiential therapy, identifying and labeling emotions (items 11 and 12) were prominent, whereas reconciling internal and unfinished conflicts (items 3 and 34) were not. The exception to this general rule was the psychodynamic subscale, the items from which were rated uniformly as low.

Prior symptom change did not predict MULTI subscales representing techniques of different orientations in behavioral treatment for OCD (for clients, all $ps > .34$; for therapists, $ps > .19$). Clients reported significantly greater intervention levels overall and for each of the theoretical orientations represented on the MULTI subscales than did therapists (see Table 1). Agreement between clients and therapists as to the levels of interventions in a given session was poor ($ICC [2, 1]$, all $ps < .05$). To further explore how clients' and therapists' perceptions of the interventions in the session varied, I

computed Pearson's correlation coefficients between clients' and therapists' ratings for each of the MULTI subscales (see Table 1). Although non-significant, there was a trend for client and therapist ratings to be negatively related, such that as clients reported greater levels of certain interventions in a session, therapists tended to report lower levels of those interventions for the same session.

Aim 1.2: Description and predictors of alliance. Therapeutic alliance in this sample was relatively high ($M = 6.30$, $SD = 0.45$). Prior symptom change was not found to be predictive of WAI scores ($r [21] = -.10$, *ns*). WAI scores were not correlated with any of the concurrent MULTI subscales rated by therapists ($ps > .19$). However, greater alliance scores were associated with greater levels of client-rated BT ($r [23] = .39$, $p < .06$), CF ($r [23] = .65$, $p < .0006$), CT ($r [23] = .42$, $p < .04$), PC ($r [23] = .49$, $p < .02$), and PE ($r [23] = .40$, $p < .06$).

Aim 1.3: Description of outcome across treatment. Mean OCI-R score at intake was 29.14 ($SD = 15.66$, $n = 22$), 28.76 at Session 4 ($SD = 13.88$, $n = 25$), and 11.36 at termination ($SD = 10.76$, $n = 22$). The decline in OCD symptoms from intake to termination was large ($r [22] = -.82$, $p < .0001$). There was no significant change prior to Session 4 ($r [20] = -.16$, *ns*), although there was considerable variability in client outcomes up until this point. Most change occurred subsequent to Session 4 ($r [21] = -.78$, $p < .0001$). Symptom change prior to Session 4 (residuals from the regression predicting Session 4 OCI-R scores from intake OCI-R scores) did not predict symptom change subsequent to Session 4 ($r [20] = .20$, *ns*).

Aim 2: Correlations between therapy process and outcome.

Aim 2.1: Correlations of specific factors to subsequent outcome. Greater behavioral therapy interventions as reported by either the client or therapist were not associated with outcome (see the first row of Table 4) after controlling for prior symptom change. There was little difference in these relations when only baseline symptom level, and not prior symptom change, was controlled (for clients, semi-partial $r [17] = .37, ns$; for therapists, semi-partial $r [17] = .32, ns$).

More moderate client-rated, but not therapist-rated BT levels were associated with greater subsequent symptom change than were higher or lower BT levels, controlling for prior symptom change and the linear term (see the first row of Table 5 and Figure 1). Controlling for prior symptom change partially enhanced the curvilinear relations of behavioral interventions on outcome, as the effect sizes were smaller and nonsignificant when only intake OCI-R level, and not prior symptom change, was controlled (for clients, semi-partial $r [17] = .37, ns$; for therapists, semi-partial $r [17] = .32, ns$).

To explore further how varying mean levels of intervention use might have translated into differences in individual intervention use, I divided the clients with complete data into three groups based on their BT subscale score percentile rank. The first quartile ($n = 5$) I designated as the low adherence group, the middle two quartiles ($n = 9$) as moderate, and the top quartile as high ($n = 5$). Table 6 presents the mean BT subscale and individual item descriptive statistics by adherence grouping. In both sessions, clients reported a relatively consistent pattern of individual intervention use across different adherence level groups. In other words, clients' ratings for each

individual intervention tended to increase monotonically as their overall mean adherence ratings increased as well.⁴

Aim 2.2: Correlations of common factors to outcome. Common factor interventions, as perceived by both clients and therapists, were not linearly related to subsequent symptom change, after controlling for prior symptom change (see the second row of Table 4). There was little change in the relation of client-rated (semi-partial r [17] = .32, *ns*) and therapist-rated (semi-partial r [17] = .20, *ns*) common factor interventions to outcome when only baseline symptom level, and not prior symptom change, was controlled. WAI scores also were not linearly related to subsequent symptom change (semi-partial r [15] = .26, *ns*), after partialling out the effect of prior symptom change. However, prior symptom change did appear to partially suppress the relation of alliance and outcome, as the effect approached significance when only intake OCI-R scores, and not prior change scores, were controlled for (semi-partial r [17] = .39, $p < .10$).

Moderate levels of the CF subscale did not predict better outcome than did higher or lower levels of the CF subscale, after controlling for prior symptom change (see second row of Table 5). There was little change in these relations when only intake OCI-R scores were controlled (for clients, semi-partial r [16] = .31, *ns*; for therapists, semi-partial r [16] = -.11, *ns*). There was also no significant quadratic relation between WAI scores and subsequent symptom change (semi-partial r [14] = -.30, *ns* [linear term included in this model but not reported]), after controlling for prior symptom change. There again was little change when only OCI-R baseline scores were controlled (semi-partial r [16] = -.29, *ns*).

Aim 2.3: Correlations of unintended factors to outcome. Table 4 gives the linear semi-partial r effect sizes for each of the unintended MULTI subscales (CT, DBT, IPT, PC, PD, PE) as viewed by clients and therapists individually predicting termination OCI-R, controlling for prior symptom change. Table 5 gives the quadratic effect sizes. I entered all individual predictors significant at the trend level ($p < .10$) into a regression. The starting model for clients had an explanatory R^2 of .55 and seven unique terms (linear and quadratic BT, CT, and DBT; linear PE). After three iterations, the remaining model had an explanatory R^2 of .33 and two predictors. Only the linear (semi-partial r [15] = -.51, $p < .04$) and quadratic (semi-partial r [15] = .52, $p < .05$) terms for BT remained significant. As before, moderate levels of behavioral interventions were more predictive of outcome than were higher or lower levels of behavioral interventions as well as other types of interventions that occurred in behavioral therapy, controlling for prior symptom change.

None of the MULTI subscales measured for therapists were significant predictors of outcome, so a stepwise model was not run.

Discussion

Therapy process description. Being one of the first applications of psychotherapy process methodology to behavioral therapy for OCD, this study cataloged many of the typical features of this highly defined treatment but also revealed some unanticipated complexities in the therapy process. First, as expected, it was clear from both clients' and therapists' report that behavioral interventions were among the most prominent in behavioral therapy for OCD. Even though individual behavioral items were

viewed as occurring in nearly every session rated, there still was considerable variability in the levels of items that were both essential (e.g., item 16, “exposure”) and auxiliary (e.g., item 27, “identifying consequences of behaviors”) to the treatment protocol. While this sample of behavioral therapy sessions was too small to draw any conclusions about the meaning of adherence, the fact that there continued to be such variation in the use of individual behavioral items despite the detailed requirements of the treatment manual, extensive training and monitoring of the therapists, and pervasiveness of behavioral interventions in the sessions suggests that the assumption of uniform intervention use found in many treatment outcome comparisons may not accurately describe how behavioral interventions are delivered in practice, even under such rigorous conditions.

Common factors items were also strongly endorsed by both clients and therapists in the behavioral therapy sessions. The treatment manual used in this study called for many common factor techniques to facilitate the behavioral interventions, like displaying confidence that the treatment will be helpful (item 8). It is especially interesting that common factors were reported at slightly greater levels by both clients and therapists than were behavioral interventions. One possibility is that common factor interventions might be considered socially desirable in a therapy setting (e.g., item 31, “listening”). Even so, common factors are undeniably a significant component in the practice of behavioral therapy for OCD, despite the limited attention given to them in prior theory and research and in treatment manuals.

There was a considerable amount of variability in the levels of individual items from other theoretical systems that clients and therapists perceived. The patterns of

individual item endorsement suggest that interventions from other therapy systems were not perceived as simply residual. Rather, items appeared to be selectively endorsed based on their congruence with a behavioral model of treatment. For example, applying a medical model perspective to the client's problem (item 59) was a frequently reported interpersonal item. Behavioral theory suggests that external cues produce the client's symptoms, and so this intervention fits well within behavioral theory. However, the report was much lower for other interpersonal items that diverged from the behavioral model, like connecting the symptoms to clients' social relationships (items 19 and 50). Identifying and labeling emotions (items 11 and 12) and focusing on present experience (item 47) were process-experiential items that frequently appeared in the behavioral sessions. These interventions are consistent with an emotional processing model (Foa & Kozak, 1986) and might occur as the client expresses and becomes more tolerant of his or her emotional reactions in behavioral therapy. Other process-experiential items, like those focusing on intrapsychic operations ("conflict splits," items 3 and 34), were rated less highly. Items from systems other than behavioral therapy then seem to be administered either as an extension of the behavioral model or as techniques that are generally assumed but not given lengthy consideration in the treatment manual.

Clients tended to view their therapists as providing greater levels of all types of interventions than their therapists described themselves as using in the same sessions. Clients might indeed experience their therapists as performing more interventions inadvertently, that is, interventions that the therapist is not aware he or she is doing. It was interesting that the ordering of the mean levels for each therapy orientation subscale

were similar for clients and therapists (i.e., higher BT, CF, CT, and DBT subscales than IPT, PC, PD, and PE), suggesting that clients and therapists at the group level are describing a similar experience in terms of these subscales.

Agreement between client and therapist was poor as to how typical interventions were of a given session. This lack of agreement did not appear to be due simply to clients' tendency to give greater ratings than therapists, as the covariation of clients' and therapists' ratings was often negative. This finding is not congruent with other studies of intervention measurement (Bogwald, 2001; McCarthy & Barber, 2002; Mintz, Auerbach, Luborsky, & Johnson, 1973; Ogrodniczuk et al., 2000), which found moderate positive relations between client and therapist ratings for the same session. Poor agreement could be due to certain client characteristics. Clients with anxiety, especially those with a history of failed past treatments like many of those clients in this study, may have dependent personality traits and may idealize their therapist. Such clients may report very high levels of interventions because they wish to esteem their therapists or to feel helped by them. Alternatively, some anxious clients may be less willing to tolerate exposure, a central feature of behavioral therapy for OCD, due to the distress it causes. They may experience emotional arousal from this one intervention but attribute it more globally to their therapists pushing them with all different interventions on the MULTI. Their therapists, however, knowing that other clients are willing to tolerate much more, may underreport the interventions they give in sessions with these particular clients because they recall the intervention use with these clients as not as strong as their intervention use with other clients.

Therapeutic alliance from the client's perspective was generally high in behavioral therapy. Strong alliances are not unexpected in this therapy, given the focus on the goals and activities of therapy that is promoted in early sessions by the manual. Additionally, behavioral therapists ask their clients to do things that might feel especially frightening or uncomfortable. Therapists then may work to win clients over with a good therapeutic bond. Behavioral therapists also might not view ruptures in the therapeutic relationship as a meaningful focus of treatment like other types of therapists might. As such, behavioral therapists might avoid or ignore conflicts that other types of therapists would choose to confront because these conflicts might not interfere with the goal of OCD symptom relief through exposure. Alliance was related to greater intervention report in clients, especially for common factor techniques and the more concrete interventions like from cognitive, behavioral, and interpersonal therapies. Perhaps when clients viewed their therapists as being more involved in helping them in the way they initially stated they would, their alliances increased.

Early symptom change did not predict Session 4 intervention levels. It might be expected that as a client's symptoms change (i.e., improve, worsen, or fail to change) that the therapist's intervention strategy might change as well. However, there might be two reasons why intervention levels were not significantly influenced by prior symptom change. First, therapists involved in this study were expert in the treatment of OCD. They may be aware from their clinical experience that clients in this treatment are slower to change. Therefore, they may not be disturbed by clients' early response because they expect change later in treatment once exposure is implemented. Second, these therapists,

regardless of whether they were seeing their clients through the open clinic or through the RCT, were administering a protocol therapy that outlined the interventions to perform in each session and were supervised to monitor their adherence to the protocol. Under these conditions, therapists may feel less free to improvise or change the treatment interventions to match the symptom response of their clients. This more rigid approach to therapy is often criticized by detractors of treatment manuals and the empirically supported treatment movement. However, given the large effect size in symptom decline by the end of therapy, it is clear that the way the therapists did provide treatment helped their clients.

Correlations between therapy process and outcome.

Correlations of specific factors to outcome. Moderate levels of behavioral therapy interventions were more related to subsequent symptom improvement than were higher or lower levels. This curvilinear relation to outcome was present for clients' but not therapists' ratings of behavioral interventions. Therefore, to improve best clients may need to perceive at least a certain amount but not too great a level of behavioral interventions in their sessions. Behavioral therapy interventions might have their effect directly on symptoms. Very low levels of behavioral interventions may not provide a sufficient amount of exposure to bring about change whereas very high levels may lead to discomfort and poor resolution of the client's anxiety. Behavioral interventions could also lead to symptom improvement by facilitating emotion processing, a mechanism of change posited by behavioral theorists (Foa & Kozak, 1986). Emotion processing requires the activation of affect paired with new experiences in the therapy to reorganize

the client's emotion schema, resulting in symptom change. Too few behavioral interventions may not mobilize enough affect or may not provide sufficient new experiences to be effective in reducing symptoms. Too many behavioral interventions may engender too much emotion, overriding the client's ability to assimilate the new experiences and benefit from them.

The levels of behavioral interventions in behavioral therapy might indicate some qualities about the client that are related to subsequent outcome. Low levels of behavioral interventions may suggest ambivalence on the part of the client toward treatment. The client may be hesitant or resistant to engage in the therapy. He or she may require additional support and encouragement or may limit the type or amount of exposures he or she is willing to complete. Over treatment, the client may receive less than an optimum level of behavioral interventions and so may be less likely to improve. High levels of behavioral therapy interventions may indicate clients engaging in additional exposure in order to please the therapist. The reprocessing of the client's emotional schema in this case may not occur. Instead of learning that the feared stimuli are not dangerous, the client might create a separate mental category for stimuli he or she is willing to face with the help of the therapist, leaving the larger representation of feared stimuli unchanged.

Therapists' report of the level of behavioral interventions in the session did not predict outcome. Therapists in this study might have felt compelled to report performing at least a certain standard of behavioral interventions because they were supervised and monitored, even though not by the present researchers. However, this explanation seems unlikely due to the variability in the BT subscale and items for therapists. It could be that

clients' perception of the level of behavioral intervention may be what matters to outcome. As the recipients of the interventions in therapy, clients' subjective experience of what is done to them may determine whether they improve.

Correlations of common factors to outcome. Common factor interventions, despite being prominent in both client and therapist ratings, were surprisingly not predictive of outcome. Common factor interventions might therefore be necessary but not sufficient to symptom improvement in behavioral therapy. Alternatively, according to the treatment manual, common factor interventions are to be employed when the client is resistant to the exposure exercises (e.g., the therapist should review the treatment rationale when the client objects to the distress caused by exposure). Common factor interventions might be therefore associated with some clients who were less likely to improve.

Alliance ratings were also not predictive of outcome in this sample, despite being relatively high. Vogel, Hansen, Stiles, and Gotestam (2005) showed that alliance did correlate with outcome in behavioral therapy for OCD. However, they did not control for the effect of symptom change up until the point when alliance was measured, possibly biasing the likelihood of finding a significant relation between alliance and outcome. Even though on average there was little symptom change before Session 4, there was considerable variability in symptom improvement or worsening. When this variability was not accounted for in the prediction of outcome from alliance, the relation observed was marginally significant. Partialling out the contribution of early symptom change may

be one reason why the relation of alliance to outcome was nonsignificant (see Barber, 2009).

Correlations of unintended factors to outcome. When the MULTI subscales that were significantly predictive of outcome were analyzed simultaneously, the client's perception of the amount of behavioral interventions in the therapy was what mattered most to outcome. Techniques from other types of psychotherapies were clearly present in both the client's and therapist's report of the interventions in the session. Furthermore, techniques from cognitive, dialectical-behavioral, and process-experiential therapies had associations with subsequent outcome when the subscales representing these systems were considered singly. Collinearity with the behavioral therapy subscale most likely reduced the statistical relation observable between these subscales and outcome, especially due to the inherent overlap in the interventions in these theoretical orientations as reflected in MUTLI items (e.g., "homework"). However, that is not to say that a causative link might not still exist between some of the individual interventions in those subscales and outcome in behavioral therapy. Identifying such individual interventions through a reconsideration of behavioral theory or through further exploratory analyses of unintended interventions in behavioral therapy might increase our ability not only to predict outcome but also to promote and train therapists in a more effective and inclusive version of behavioral therapy for OCD.

Study 2

Methods

Participants.

Clients. Clients were 51 individuals assigned to the psychotherapy arm of an RCT comparing psychodynamic therapy versus sertraline/venlafaxine versus pill placebo. To be included in the study clients were required to have a primary diagnosis of MDD based on their response to the Structured Clinical Interview for *DSM-IV* (Axis I) administered by a trained diagnostician. They could not have lifetime history of bipolar or psychotic disorder nor a substance abuse or dependence disorder in the previous six months. More of the full sample and recruitment and screening procedures are given in the Procedures section below and in Barber, Barrett, Gallop, Rynn, and Rickels (2009). Seven clients dropped out of treatment before the first process measurement point and so were not included in this sample.

Of the remaining 44 clients, 64% percent were female ($n = 28$). Mean age was 35.41 years ($SD = 11.94$, range = 19 to 61). Four and one-half percent identified their primary race or ethnicity as Asian ($n = 2$), 50% as African-American ($n = 22$), 4.5% as Latino/a ($n = 2$), and 41% as Caucasian ($n = 18$). The majority of clients were single ($n = 26$, 59%), with fewer clients separated/divorced ($n = 5$, 11%) or married or cohabiting ($n = 12$, 27%), and 1 (3%) widowed. Two clients (5%) did not complete a high school degree, 14 (32%) received a high school degree, 12 (27%) reported some college experience, 6 (14%) reported a bachelor's degree, 3 (7%) obtained a graduate degree, and 7 (16%) declined to report their highest level of education. Fifty-nine percent worked

either full- ($n = 20$) or part-time ($n = 6$), 27% ($n = 12$) were unemployed/disabled, 9% ($n = 5$) were students, and 5% ($n = 2$) declined to report their occupation. Of the 44 clients with at least one process assessment, 1 (3%) client dropped out of treatment before the second assessment and 8 (18%) clients before the termination assessment.

Therapists. Therapy was provided by four Ph.D.-level psychologists (three were female) with an average of more than 15 years of psychotherapy experience at the beginning of the trial. All therapists were between the ages of 40-50. All had received training in psychodynamic therapy prior to participation in this study and had achieved acceptable levels of adherence and competence in pilot therapy sessions using the Penn Adherence-Competence Scale (Barber et al., 1996). They received group supervision on a periodic or as-needed basis. The mean number of clients that each therapist saw was 11 ($SD = 6.98$, range = 2 to 19).

Treatment. The psychodynamic therapy conducted in this study followed a supportive-expressive treatment model (Book, 1998; Luborsky, 1984) with specific adaptations for depression (Luborsky et al., 1995). Supportive-expressive manuals do not prescribe therapist interventions on a session-by-session basis but rather provide general principles and therapist guidelines for treatment. Each client's interpersonal and intrapersonal conflicts are conceptualized in a unique formulation, or Core Conflictual Relationship Theme (CCRT; Luborsky & Crits-Cristoph, 1998). Therefore, dynamic therapists require flexibility in whether or when they apply particular techniques. The supportive-expressive model assumes that gains in self-understanding about the CCRT (insight) and subsequent change in the CCRT mediate symptom improvement.

The supportive-expressive treatment manual for depression (Luborsky et al., 1995) more specifically emphasizes understanding the depressive symptoms in the context of interpersonal and intrapsychic conflicts. It also includes interventions and case examples related to the treatment of depression such as suicidal risk, helplessness and hopelessness, dealing with loss, anger, or poor capacity to recognize depression. The CCRT is used to address two important dimensions of depression emphasized by psychoanalytic theorists: the anaclitic and introjective forms of depression (Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982). In anaclitic depression, the client wants to be connected and nurtured, but feels abandoned by others and thus feels empty. In introjective depression, the client wishes to be perfect or flawless, and experiences others as punishing and feels guilty or self-critical and wants to take revenge. Thus, in supportive-expressive therapy, the client learns to address the sense of loss, helplessness, and inability to live up to the expectations of self or others. Expressive techniques are those that the therapist uses to help the client uncover (express) his or her CCRT. Therapists will either clarify the wishes the client has and responses the client expects from him- or herself or others or will interpret or point out the repetition of the CCRT in current and past relationships, including in the relationship with the therapist. The conflicts contributing to depressive symptoms are then worked through such that better ways of defending against and coping with feelings, expressing needs, and responding to others are explored. Expressive techniques are used within a supportive environment in which the establishment and maintenance of a positive therapeutic alliance is considered crucial to treatment effectiveness.

Measures.

Multitheoretical List of Therapeutic Interventions (MULTI; McCarthy & Barber, 2009). The MULTI was again used to measure interventions used in session. However, this time, the observer version of the measure was used. Five judges (one Ph.D., one M.D., three advanced graduate students) rated two sessions for each client that coincided with the first two outcome assessments in the second and fourth weeks of treatment. Due to irregularities in scheduling therapy sessions twice a week and to scheduling diagnostic appointments, the sessions at which the first two outcomes were assessed varied for some clients. Additionally, audio or videotapes were not always available for the target session (e.g., due to equipment malfunction, researcher error, or poor recording quality). In these cases, the nearest session with a viable recording was sampled. For outcomes assessed after the first week of treatment, the median session sampled was Session 4, and 90% of sessions sampled were either 3, 4, or 5 (range = 1 to 5). For outcomes assessed after the third week of treatment, the median session sampled was Session 7, and 80% of sessions sampled were either 6, 7, 8, or 9 (range = 3 to 10).

The five raters each initially received 15 hours of training on the MULTI and periodically met to rate and discuss audiotaped sessions in order to prevent rater drift. Raters were allowed to begin rating tapes individually when preliminary reliability analyses including their ratings achieved at least a modest level of reliability for each of the MULTI subscales ($\rho_I > .50$). A random pair of judges were selected to rate each tape. Interrater reliability was computed for the full

sample by variance decomposition strategy (Grove & Hollon, 1987). A random-effects model was calculated predicting the MULTI subscale scores from therapist, client (nested within therapist), session (nested within client), and judge. Variance components were estimated for each of these predictors as well as a variance component for residual error. These estimates were combined in the formula:

$$\frac{\sigma_{\text{therapist}} + \sigma_{\text{client(therapist)}} + \sigma_{\text{session(client)}}}{\sigma_{\text{therapist}} + \sigma_{\text{client(therapist)}} + \sigma_{\text{session(client)}} + \frac{(\sigma_{\text{rater}} + \sigma_{\text{error}})}{2}} \quad (1)$$

to compute an intraclass correlation (*ICC*) representing the reproducibility of the average of any two randomly selected judges ratings on a MULTI subscale for any randomly selected tape.

The first column of Table 7 presents the *ICCs* for each MULTI subscale. The IPT, PD, and PE subscales exhibited moderate ($\rho_I > .70$; Shrout, 1995) interrater reliability, while the BT, CF, CT, and PC subscale were lower but close to criterion. These reliability estimates are similar to ones achieved in other studies in which independent judges rated session tapes (e.g., DeRubeis & Feely, 1990; Barber et al., 1996). The DBT subscale, however, displayed low reliability. Overall, there was a strong significant correlation with total variability in subscale scores (i.e., across therapists, clients, and sessions) and the estimates of interrater reliability (Spearman's $r [7] = .92, p < .001$), such that subscales with lower total variability also exhibited poorer interrater reliability.

Internal consistency estimates of the MULTI subscales were moderate ($\alpha > .70$, Shrout, 1995), with the exception of the DBT subscale, which was low ($\alpha > .50$, Shrout,

1995). The DBT subscale was excluded from further analyses because it evidenced poor interrater and internal reliability in this sample.

Working Alliance Inventory-Short Form (WAI; Horvath & Greenberg, 1989; Tracey & Kokotovic, 1989). As in Study 1, I used the 12-item client version of the WAI to measure the therapeutic relationship. Thirty-three clients provided WAI ratings at Session 4 and at Session 7, and internal consistency for the total scale was excellent at both sessions ($\alpha > .91$).

Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960). The HRSD is a commonly used observer-rated measure of depression severity. Diagnosticians were the same as those who administered the intake interview described in the Participants section. Data reported in this study were from the 17-item version of the HRSD and were collected before randomization, in the second and fourth weeks of treatment, and at termination. The reliability and validity of the HRSD are well documented (Rabkin & Klein, 1987). Interjudge reliability in this sample was excellent ($ICC [2, 1], \rho_I = .92$). Symptom change from intake up until the second week of therapy (Session 4) was computed as the residuals in a regression of Session 4 HRSD scores on intake HRSD scores. In the same way, symptom change from intake up until the fourth week of therapy (Session 7) was estimated as the residuals from Session 7 HRSD scores regressed on intake HRSD scores.

Procedure. Clients contacted study personnel after viewing advertisements posted in the community or being referred by a health-care provider familiar with the study. A research assistant provided clients with a description of the study and screened

them for depressive, manic, psychotic, and substance abuse symptoms and willingness to participate in the study (e.g., agreement to be randomly assigned to a treatment, agreement to abstain from other psychiatric treatments for the duration of the study). Clients that seemed likely to meet the study inclusion/exclusion criteria were scheduled to attend an intake appointment with a skilled diagnostician. Clients deemed ineligible for the study at any point in the assessment process were given referrals to more appropriate treatment providers. In the intake interview, a diagnostician evaluated clients for Axis-I disorders using the SCID-I and for depressive severity using the HRSD. If clients met criteria for MDD and exhibited a depression severity greater than 14 on the 17-item version of HRSD they were scheduled for a second intake interview at least one week later. The HRSD was re-administered in the second interview, and clients needed to exhibit a second score of 14 or greater to participate in the trial. Other Axis-I disorders were assessed, and clients were excluded from the study if their principal problem was another disorder (e.g., the client reported that panic attacks were subjectively worse than their depressive symptoms), they met for a lifetime diagnosis of bipolar or psychotic disorder, or they met for a diagnosis of substance abuse or dependence in the previous six months. HRSD scores from the second intake interview (or the last interview if more than two interviews were necessary to complete all intake procedures) were used as the baseline scores in the present study.

Clients were then randomly assigned to condition (psychotherapy, antidepressant medication, or placebo). Those receiving psychotherapy were matched with a therapist based on mutual availability. Clients were seen for 45-minute sessions twice weekly

during the first four weeks of treatment and then once weekly for the next 12 weeks of treatment. Assessment interviews were scheduled with a diagnostician blind to the clients' condition in the second, fourth, eighth, ninth, thirteenth, and sixteenth weeks of treatment. For this study, I report data from only the assessments in the second and fourth weeks of treatment, corresponding to Sessions 4 and 7. These weeks were chosen because it allowed the client and therapist to develop a relationship and for the therapist to begin to have enough knowledge of the client's CCRT to make the key interventions in supportive-expressive therapy, clarifications and interpretations of interpersonal patterns. Furthermore, the greatest proportion of change occurs early in treatment (e.g., Lambert & Ogles, 2004), and early process measurement will be able to capture the greatest amount of change. After the final therapy session, clients attended a termination interview in which the HRSD was given.

Data Analysis Strategy

Aim 1: Therapy process description.

Aim 1.1: Description and predictors of specific, common, and unintended factors. The data analytic strategy for this study was largely the same as the strategy used in Study 1. To describe the interventions in psychodynamic therapy sessions, I provided the descriptive statistics for the MULTI subscales representing different therapy orientations and for the individual items comprising the different subscales. Sessions 4 and 7 data were analyzed separately in these and all following procedures for which it was appropriate.

Next, I correlated symptom change prior to Session 4 (residuals from the regression predicting Session 4 HRSD scores from intake HRSD scores) with Session 4 MULTI subscale scores to determine whether early symptom change influenced therapists' intervention use. I conducted the same analysis using Session 7 data as well. Lastly, I used paired t tests to compare the mean levels of each MULTI subscale between Sessions 4 and 7 to determine whether intervention use changed over early treatment.

Aim 1.2: Description and prediction of alliance. For a description of the therapeutic alliance in this sample, I provided the means and standard deviations for WAI scores at Sessions 4 and 7. I correlated early symptom change (residuals from the regression of intake HRSD scores predicting Session 4 or Session 7 HRSD scores) with alliance at Sessions 4 and 7, respectively. I then tested whether alliance scores were correlated with the MULTI subscales representing specific, common, and unintended factors at Session 4 and 7.

Aim 1.3: Description of outcome across treatment. To model the effect of treatment over time I conducted a hierarchical linear regression on the HRSD scores from each client (i.e., intake, Sessions 4 and 7, and termination). Four ordinary least squares regression models were used to estimate prior (i.e., intake HRSD predicting Session 4 HRSD, intake HRSD predicting Session 7 HRSD) and subsequent (i.e., Session 4 HRSD predicting termination HRSD, Session 7 HRSD predicting termination HRSD) symptom change. Effect size r s are reported for these analyses, and negative values represent greater declines in HRSD scores over that period of treatment. I used Cohen's (1988)

guidelines to interpret the magnitude of the effect (small, $r > .10$; medium, $r > .30$; large, $r > .50$).

Aim 2: Correlations between therapy process and outcome.

Aim 2.1: Correlations of specific factors to subsequent outcome. To test the hypothesis that greater levels of psychodynamic therapy interventions were related to greater subsequent symptom change, I first used the PD subscale of the MULTI at Session 4 to predict HRSD scores at termination in a regression. To account for the change in symptoms prior to Session 4, I covaried prior symptom change (residuals of Session 4 HRSD regressed on intake HRSD) in the regression model. I repeated the same analysis using Session 7 data. Semi-partial r s were reported, and negative values represented that greater symptom improvement was associated with greater levels of psychodynamic interventions. To test whether prior symptom change partially suppressed the linear relation of behavioral interventions to outcome, I predicted termination HRSD scores from the PD subscale scores controlling only for intake HRSD scores. I compared semi-partial r s from these analyses with the analyses controlling for prior symptom change to determine whether prior symptom change decreased the magnitude of the linear relation.

To test the hypothesis that moderate levels of psychodynamic interventions were related to greater subsequent outcome than were higher or lower levels (i.e., a curvilinear effect), I repeated the regression analyses above and included a quadratic term for PD. Again, Session 4 and 7 data were analyzed separately, and I report semi-partial r s. Positive coefficients indicate that more moderate levels of the process factor are related

to better subsequent outcome compared to higher or lower levels (U-shape function); negative coefficients indicate that higher or lower levels of the process factor are related to better subsequent outcome compared to more moderate levels (inverted U-shape function). I also predicted termination HRSD scores from the linear and quadratic terms for the BT subscale controlling only for intake HRSD scores to test whether prior symptom change suppressed the magnitude of the curvilinear relations.

Aim 2.2: Correlations of common factors to outcome. For all following analyses, I used a data analytic strategy similar to that which I used to predict subsequent termination outcome from specific factors at Sessions 4 and 7. Namely, I used multiple regression to predict HRSD termination scores from the process variables (i.e., MULTI subscales or WAI scores), covarying prior symptom change (i.e., residuals of either Session 4 or Session 7 HRSD scores regressed on intake HRSD scores). Semi-partial r s were again reported.

Common factor use was operationalized in two ways: common factor interventions (CF subscale scores of the MULTI) and therapeutic alliance (WAI scores). These two types of scores were analyzed separately. For linear terms, negative semi-partial r s indicated that greater common factors use (either common factor techniques or alliance) predicted greater subsequent change, controlling for prior symptom change. To test whether prior symptom change partially suppressed the linear relations of common factor interventions and alliance to outcome, I predicted termination HRSD scores from CF subscale and WAI scores separately, controlling only for intake HRSD scores. I compared the semi-partial r s from these analyses with coefficients from the analyses

controlling for prior symptom change to determine whether prior symptom change decreased the magnitude of the linear relations.

For analyses testing quadratic terms, positive semi-partial r s suggested that more moderate levels of common factors (either common factor interventions or alliance) were related to better subsequent outcome than were higher or lower levels, controlling for early symptom change; negative semi-partial r s suggested the opposite. I also predicted termination HRSD scores from the linear and quadratic terms for the CF subscale and alliance scores separately controlling for intake HRSD scores to test whether prior symptom change suppressed the magnitude of the curvilinear relations.

Aim 2.2.1: Mediating effect of alliance on the association of common factors to outcome. Finally, to test whether the therapeutic alliance mediated the effect of common factors on subsequent outcome, I performed a mediation test using multiple regression (Baron & Kenny, 1986). First, I predicted termination HRSD scores from common factor interventions (MULTI CF subscale) at Session 4, controlling for prior symptom improvement up to Session 4 (residuals from the regression of HRSD Session 4 scores on HRSD intake scores). Second, I then predicted alliance at Session 7 (WAI scores) from common factor interventions at Session 7. Third, I predicted termination outcome from common factor techniques at Session 4 and alliance scores at Session 7, controlling for symptom change prior to Session 7 (residuals of HRSD intake scores on HRSD Session 7 scores). Fourth, I used the Sobel test of mediation to determine whether the influence of alliance on the relation of common factors to outcome was statistically significant.

Aim 2.3: Correlations of unintended factors to outcome. To compare the effects of all of the process factors (specific, common, and unintended) against one another, I conducted a stepwise regression with backward deletion predicting HRSD termination scores from those process factors found to be individually associated with HRSD termination scores. Separate analyses were run for Session 4 and Session 7 data. I first identified the linear and quadratic relations that each of the unintended MULTI subscales (BT, CT, IPT, PC, PE) had to subsequent symptom change in single regressions, controlling again for symptom change up until the process measurement (either Session 4 or 7). I entered all individual predictors significant at the trend level ($p < .10$) into a regression model. If a quadratic term for a process variable was found to be associated with subsequent outcome, the linear and quadratic terms for that variable was included in the initial stepwise regression model. Predictors were deleted one at a time from the stepwise model if they failed to remain significantly related to termination HRSD scores, starting with those predictors with the highest p values first. If a quadratic term for a process factor met the criterion for deletion and the linear term had not been individually predictive of outcome, both the quadratic and linear terms were removed from the model. The semi-partial r s for the remaining predictors in the final model and the multiple R^2 for the model were presented.

Results

Aim 1: Therapy process description.

Aim 1.1: Description and predictors of specific, common, and unintended factors. Table 7 presents the MULTI subscale scores and average intervention levels (the

average of all MULTI items in the session) for Sessions 4 and 7. Intervention use in psychodynamic therapy overall was somewhat lower than might be expected (the average intervention was rated between “slightly” and “somewhat” representative of both sessions). Psychodynamic techniques were present above the average intervention levels in both sessions, but common factors and person-centered intervention levels were consistently rated the highest among the different orientations.

Table 8 presents the descriptive statistics by individual items on the MULTI for Session 4, and Table 9 presents the individual item descriptive statistics for Session 7. There was variation in the use of different items within a theoretical orientation, both in the level of intervention use reported and in the frequency with which those interventions were employed. Among the interventions classified as belonging to dynamic therapy, exploration (items 14 and 40) and clarification (items 19 and 45) were used relatively intensely and frequently. Transference interpretations (items 2 and 22), which are the putative mechanism of change in psychodynamic therapy, were reported markedly less in sessions, both compared to other psychodynamic interventions and to other types of interventions on average.

Items from other types of therapy seemed to be selected for their ability to facilitate a discussion of clients’ experiences. For instance, several items from person-centered (item 46, “understanding experience”) and process-experiential (item 11, “identifying emotions;” item 12, “discussing avoided emotions”) subscales that explored clients’ experiences were reported quite extensively, but not with the focus on present, in-session experience as intended in these theoretical orientations (low item 47, “moment-

to-moment focus”). Psychodynamic therapists were seen to avoid most cognitive-behavioral interventions that directly evaluated clients’ thoughts or behaviors (e.g., items 37 and 43) or directly promoted behavior change (e.g., item 15, “skill teaching;” item 17, “homework”) but were seen to use some supportive interventions more related to a supportive approach (e.g., item 36, “coping strategies”). Finally, interpersonal items dealing with relationship assessment and exploration were endorsed highly (items 54 and 60) but not those involving directly changing or modifying behaviors (items 51 and 55).

The less clients improved on the HRSD by Session 4, the more therapists used process-experiential interventions ($r [40] = .35, p < .02$), but not any other type of intervention. Interestingly, by Session 7, the less the client improved, the less therapists administered common factors ($r [37] = -.40, p < .02$), person-centered ($r [37] = -.42, p < .01$), and process-experiential ($r [37] = -.40, p < .01$) techniques. Over early treatment, therapists used less cognitive therapy and interpersonal techniques later in treatment (see Table 7), but means for all subscales declined during this period as well.

Aim 1.2: Description and predictors of alliance. At Session 4, WAI alliance scores were relatively high ($M = 5.73, SD = 0.90$) and increased significantly when measured at Session 7 ($M = 5.92, SD = .81; t [27] = 2.13, p < .04, d = .82$). Session 7 WAI was predicted by prior symptom change up until that point ($r [33] = -.37, p < .04$), but Session 4 WAI was not ($r [32] = -.18, ns$). At Session 4, greater common factor interventions were marginally related to greater alliances ($r [33] = .32, p < .07$). At Session 7, greater common factors ($r [33] = .58, p < .001$) and person-centered ($r [33] = .31, p < .08$) interventions were associated with greater alliance scores.

Aim 1.3: Description of outcome across treatment. The mean HRSD score at intake was 19.27 ($SD = 3.58, n = 44$). By Session 4, the mean HRSD had declined to 17.39 ($SD = 5.20, n = 41$) and by Session 7 was 16.88 ($SD = 5.52, n = 40$). At termination, the mean HRSD score were 13.52 ($SD = 8.18, n = 29$). Across treatment, clients exhibited a large-sized decline in depressive symptoms ($r [43] = -.63, p < .001$). Symptom change before Session 4 was medium-sized ($r [40] = -.37, p < .02$) and large-sized from Session 4 to termination ($r [26] = -.52, p < .005$). Symptom change prior to Session 7 was medium-sized ($r [39] = -.40, p < .01$) and large-sized after Session 7 ($r [27] = -.58, p < .001$).

Aim 2: Correlations between therapy process and outcome.

Aim 2.1: Correlations of specific factors to subsequent outcome. Greater psychodynamic therapy subscale scores were not linearly associated with outcome at either Session 4 or 7, after controlling for prior symptom change (see the first row of Table 10). Controlling for early symptom change had little effect on the linear relation of PD subscales on outcome, as little difference was observed when only intake HRSD scores were controlled (for Session 4, semi-partial $r [24] = .07, ns$; for Session 7, semi-partial $r [24] = .09, ns$).

As predicted, moderate levels of PD at both Sessions 4 and 7 were more related to outcome than were higher and lower levels (see the first row of Table 11 and Figures 2 and 3). Controlling for prior symptom change enhanced the curvilinear relations of PD subscale scores to outcome, as the semi-partial r s for Session 4 and 7 PD subscales were

both modest and negative when only intake HRSD scores were controlled (for Session 4, semi-partial r [23] = -.08, *ns*; for Session 7, semi-partial r [23] = -.31, *ns*).

To explore further how varying mean levels of adherence might have translated into differences in individual intervention use, I divided the clients with complete data into three groups based on their PD subscale score percentile rank. The first quartile ($n = 7$) I designated as the low adherence group, the middle two quartiles ($n = 12$) as moderate, and the top quartile as high ($n = 7$). Table 12 presents the mean PD subscale and individual item descriptive statistics by adherence grouping for Sessions 4 and 7. In both sessions, therapists displayed largely the same pattern of individual intervention use in each adherence group, just with increased intensity as overall adherence increased. In other words, the use of each individual intervention tended to increase monotonically as overall mean adherence increased as well.⁵

Aim 2.2: Correlations of common factors to outcome. Common factor interventions at Sessions 4 and 7 were not linearly related to subsequent symptom change, after controlling for early symptom change (see second row of Table 10). There was little change in the relation of common factor interventions to outcome when only intake HRSD scores, and not prior change in symptoms, was controlled (for Session 4, semi-partial r [24] = .05, *ns*; for Session 7, semi-partial r [24] = -.21, *ns*). WAI scores at both Session 4 (semi-partial r [18] = -.22, *ns*) and Session 7 (semi-partial r [21] = .05, *ns*) were not related to subsequent symptom change, controlling for prior symptom change. There was little change in the relation of Session 4 alliance to outcome when only intake HRSD, and not prior symptom change, was controlled (semi-partial r [24] = -.28, *ns*).

However, prior symptom change did appear to partially suppress the relation of Session 7 alliance and outcome, as the linear effect approached significance when only intake HRSD scores were controlled (semi-partial r [24] = $-.36$, $p < .08$).

Neither the quadratic term for the CF subscale for Session 4 or 7 was significant when prior symptom change was controlled (see the second row of Table 11). There again was little change when only baseline HRSD, and not early symptom change, was controlled (for Session 4, semi-partial r [23] = $-.06$, ns ; for Session 7, semi-partial r [23] = $.33$, ns). Curvilinear relations of WAI scores were also not related to termination HRSD scores after controlling for prior HRSD change (for Session 4, r [17] = $.26$, ns ; for Session 7, r [21] = $.19$, ns [linear terms included in these models but not reported]). Moderate levels of alliance at Session 4 predicted marginally better outcome than did higher or lower levels when early symptom change was not accounted for (semi-partial r [18] = $.38$, $p < .09$), but there was little different in the curvilinear relation of Session 7 alliance when only baseline symptom level, and not early symptom change, was controlled (semi-partial r [21] = $.20$, ns).

Aim 2.2.1: Mediating effect of alliance on the association of common factors to outcome. Common factors interventions at Session 4 did not predict subsequent symptom change, even when early symptom change was not included in the regression (r [24] = $.05$, ns). The lack of a relation between common factor techniques and outcome precludes any mediating effect of alliance.

Aim 2.3: Correlations of unintended factors to outcome. Table 10 gives the linear semi-partial r s for the unintended MULTI subscales (BT, CT, IPT, PC, PE) at both

sessions predicting subsequent symptom change, controlling for symptom change up until that point. Table 11 gives the quadratic semi-partial r s each of these subscales at Sessions 4 and 7 predicting termination HRSD. I entered all individual predictors significant at the trend level ($p < .10$) into a regression. The starting model for Session 4 had five unique predictors (linear and quadratic PD and PE, and linear IPT) and an explanatory R^2 of .57. After two iterations, the remaining model had an explanatory R^2 of .50 and two predictors. The linear (semi-partial $r [22] = -.46, p < .02$) and quadratic (semi-partial $r [22] = .41, p < .04$) terms for PE remained significant, suggesting that moderate levels of process-experiential interventions were more predictive of outcome than were more higher or lower levels of process-experiential interventions. For Session 7, the starting model had an explanatory R^2 of .72 and all four unique predictors in the model were statistically significant. Moderate levels of psychodynamic (for the linear term, semi-partial $r [20] = -.42, p < .05$; for the quadratic term, semi-partial $r [20] = .42, p < .05$) and process-experiential (for the linear term, semi-partial $r [20] = -.52, p < .01$; for the quadratic term, semi-partial $r [20] = .53, p < .01$) predicted better outcome than did higher or lower levels of these interventions.

Discussion

Therapy process description. As with Study 1, some of the complexities that exist in the process and outcome of a different type of therapy, psychodynamic, and for a different disorder, depression, were uncovered. Psychodynamic interventions were prominent in psychodynamic therapy but their levels were relatively low across two early sessions as assessed by independent observers (i.e., rated as only “somewhat typical” of

the sessions). What these levels of dynamic therapy interventions might mean for the concept of psychodynamic adherence cannot be easily ascertained from this one study. These ratings may be lower than those provided by direct participants in the therapy process (i.e., clients and therapists). Perhaps observers lack the emotional cues available to direct participants in the therapy process that might amplify or make the psychodynamic interventions more salient.

Individual psychodynamic techniques were also not employed uniformly. Transference interpretations, the tools the dynamic therapist uses to putatively bring about change, were used quite sparingly (for reviews, see Crits-Christoph & Gibbons, 2001; Hoglend, 2004). Most of the work in dynamic therapy appeared instead to be collecting information about the client's experiences and interpersonal patterns. The lower levels of transference interpretations relative to exploratory interventions might be for several reasons. First, while early interpretations are encouraged by some dynamic theorists (Gill, 1982; Malan, 2001; Schafer, 1983), actual opportunities to make interpretations might be limited. Dynamic therapists may want to collect a large database about the client's interpersonal and intrapsychic life before offering an interpretation so their intervention is accurate. The accuracy of transference interpretations to the client's CCRT has been shown to be related to better therapeutic outcomes (e.g., Crits-Christoph, Cooper, & Luborsky, 1988). Alternatively, clinical timing may play an important part in the therapist's decision to intervene with an intervention. The therapist might very carefully choose when to give the interpretation based on the client's level of defensiveness.

A second reason for the judicious use of interpretations might be due to therapists' awareness of their "high cost, high yield" association with outcome, either from clinical experience or based on the research literature (e.g., Crits-Christoph & Gibbons, 2001; Hoglend, 2004). Transference interpretations may have the potential to produce significant positive change in the client but may also be disruptive when mishandled. Too many interpretations, even if they are accurate, may be too destabilizing to the client. Dynamic therapists may choose to wait before delivering an interpretation if they recently used another interpretation in the session. Further study of the process of psychodynamic therapy might reveal patterns in the process of therapy that determine the use of interpretative versus explorative techniques.

Common factor interventions were the most highly endorsed of all the intervention types in this sample and obviously play a significant role in psychodynamic therapy, especially in supportive-expressive psychotherapy. Even so, they were still lower than might be expected (rated not quite "typical" of the session on average). Perhaps the lower-than-expected levels of common factor interventions might be due to how the supportive component of supportive-expressive psychotherapy is defined. Dynamic therapists do provide empathy and positive regard for their clients, but they might more specifically work to support ego functioning, or the ways their clients protect themselves from unacceptable wishes or negative feedback (e.g., rationalization of poor performance by suggesting one did not like that activity). These interventions may not be reflected in the definitions proposed by many common factors advocates (Frank & Frank,

1991; Wampold, 2001) and so might not be captured in the MULTI items making up the common factor interventions subscale.

The therapists in this study frequently borrowed interventions from person-centered and process-experiential therapies that explored clients' experiences and the meaning clients ascribed to them. These interventions might indicate that the exploration in psychodynamic therapy is not limited to relationship and interpersonal factors, but may include more of the client's entire phenomenology, including emotions, sensations, and personal inclinations. There is little doubt that many modern dynamic therapists believe that deepening affect is very important (Blagys & Hilsenroth, 2000; Fosha, 2002; McCullough et al., 2003; Summers & Barber 2010; Wachtel, 1993), and perhaps what I observed represents the merging of different techniques to further this goal in dynamic therapy. Bringing person-centered and process-experiential theory to bear on the practice of dynamic therapy might provide a more comprehensive understanding of the exploratory interventions in dynamic therapy and might open up new directions for process research (cf. Diener, Hilsenroth, & Weinberger, 2007).

Psychodynamic therapists avoided interventions that directly instructed or encouraged clients to change their behavior. Most cognitive-behavioral interventions were therefore relatively low in intensity and frequency. Those cognitive-behavioral interventions that were used tended to be supportive in nature (e.g., identifying coping strategies). Directive interventions such as provided in interpersonal psychotherapy, like encouraging the client to join a group in order to make new friends or to consider others' wants before acting, were also similarly eschewed. This trend most likely suggests that

therapists in dynamic therapy do not attempt to change behavior directly but rather choose to help develop their clients' insight into their interpersonal patterns with the hope that clients will begin to change their behaviors with this knowledge.

Correlations between therapy process and outcome.

Correlations of specific factors to outcome. Techniques specific to the psychodynamic treatment manual were related to symptom change in this study of dynamic therapy for depression. However, this association was not simply that greater levels of psychodynamic interventions predicted greater subsequent outcome. Moderate levels of psychodynamic interventions at both Sessions 4 and 7 were more related to subsequent symptom improvement than were higher or lower levels of psychodynamic interventions. A curvilinear relation had been hypothesized (Ogrodinuzuk & Piper, 1999; Barber et al., 2008) and observed (Barber et al., 2008 [albeit in the opposite direction]) in previous investigations of dynamic therapy for substance dependence. The amount of psychodynamic interventions used with a particular client might in some way bring about the client's eventual outcome. Moderate levels of psychodynamic interventions might represent a precise dose of interpretative comments that help the client organize his or her experiences and begin to change his or her interpersonal patterns based on this new understanding. Lower levels of dynamic interventions may not be enough to trigger the development of insight, either because the therapist did not engage the client in thinking about his or her interpersonal and intrapsychic life or did not provide the connections between past experiences and present feelings and behaviors. High levels of dynamic interventions might confuse the client with too many directions for exploration or might

be toxic in high doses by creating too much anxiety or shame for the client, disrupting his or her way of managing painful or unacceptable experiences.

The level of psychodynamic interventions might alternatively indicate some qualities of the client or the therapy process that are related to outcome. Very low levels of psychodynamic interventions could be due to poor fit between the client and the treatment approach (e.g., low ability to introspect, unwillingness to tolerate therapeutic silences and ambiguity, demanding solutions from the therapist). On the other hand, very high levels of dynamic interventions might indicate that the patient is interpersonally difficult and not responding to treatment. Alternatively it may reflect a situation in which a therapist feels pressured to act by the client, perhaps repeating the client's problematic interpersonal patterns rather than providing an opportunity to change them (e.g., a client with a tendency to intellectualize relishing the discussion of his or her interpersonal life, a dependent client who believes accepting whatever the therapist says will sustain the relationship, a passive-aggressive client who rejects the therapist's interventions but accuses the therapist of not being helpful). Moderate levels of dynamic techniques might then be used with more easily manageable clients without such traits or who are likely to improve, perhaps even regardless of the interventions used.

Correlations of common factors to outcome. Surprisingly, none of the common factors that measured in this study (neither interventions nor alliance) were related to outcome (see also Barber et al., 1996). This finding is especially surprising because supportive interventions and the therapeutic relationship are given a high place in psychodynamic therapy (e.g., Greenson, 1967; Luborsky, 1984). The common factors

assessed in this study might not have been the same as the supportive interventions provided by the dynamic therapists or might have been obscured by the therapists' commitment to therapeutic neutrality. Intervention measures that include more ego-supportive techniques in addition to general relationship enhancement techniques might be better able to reveal any relation with outcome, although intervention scales specific to supportive interventions in dynamic psychotherapy have failed to find any such relation (e.g., Barber et al., 1996; Barber et al., 2008).

Therapeutic alliance has been shown to be related to outcome in other studies of dynamic therapy (for a review, see Crits-Christoph & Gibbons, 2003; for exceptions, see Barber, 2009). In this study, however, the effect of alliance on subsequent symptom change might have been overshadowed by prior symptom change (Barber, 2009). For instance, at Session 7, prior symptom change was significantly related to alliance scores, and without controlling for early symptom change the relation of Session 7 alliance and outcome is marginally significant. This statistical relation may make it difficult to detect any relation between alliance and subsequent outcome. Such relations between early symptom change and alliance might also indicate that good alliances are a result of clients feeling better in therapy in this sample. As a product of prior symptom change, alliances might not be as predictive of subsequent outcome as what originated them.

I was not positioned to test for a mediating effect of alliance on the relation of common factor interventions on outcome because in this sample common factors (either common factor interventions or alliance) were not related to subsequent outcome. Other future studies will need to investigate this hypothesis.

Correlations of unintended factors to outcome. Moderate levels of process-experiential interventions predicted better outcome at both Sessions 4 and 7 than did lower or higher levels of process-experiential interventions. This curvilinear relation impacted outcome more than the contribution of other types of interventions, including psychodynamic interventions at Session 4. The most common process-experiential interventions used by the dynamic therapists in this study were ones that explored the client's affect and ambivalence. These interventions may work directly on alleviating clients' symptoms through the expansion and creation of new affects in the therapy setting. They have also been considered a feature of good dynamic therapy as feelings may be the landmarks therapists use to successfully assess or intervene on clients' motivations and interpersonal conflicts (Blagys & Hilsenroth, 2000; Malan, 2001; McWilliams, 1999).

Moderate levels of process-experiential interventions may allow the client to access painful or repetitive feelings and may provide guidance toward new ways of generating more adaptive emotional experiences (e.g., accepting the anger the client feels is unacceptable toward a lost loved one). Low amounts of process-experiential interventions may not activate the client sufficiently for the material to be meaningful to the client. They may also call the client's attention to his or her emotions but not provide any additional guidance for the client to create a new emotional experience, leaving the client stuck in his or her problematic feelings. Low levels of process-experiential interventions might also be used with clients who are alexithymic or avoidant of emotional experience and who are not likely to benefit from a talking therapy. Very high

levels of process-experiential intervention may evoke very strong emotions in the client and be disruptive to his or her ability to regulate emotions or reflect on the information they provide. High levels of process-experiential techniques might also lead clients to view their therapists as stereotypical and to reject their interventions, especially male clients who might feel uncomfortable with an emotion-focused approach.

General Discussion

These two studies used descriptive and correlational approaches to reveal some of the complexities in the process of two different psychotherapies for two different disorders. These complexities, like variation in the levels of interventions from the treatment manual and the use of techniques outside the treatment manual, occurred even though both therapies investigated were manualized and monitored. The studies also showed that these complexities in psychotherapy process affected subsequent client outcome. Treatment outcome comparisons, invaluable for their documentation of the efficacy of psychotherapy, have not directly tested the relation of varying levels of specific and common factors to outcome and have often overlooked the contribution of unintended factors toward symptom change. They are therefore limited in what can be inferred from them about the mechanisms of change. Descriptive and correlational process research might then be better able to inform us how psychotherapy works, both in terms of what specific, common, and unintended factors are in therapy and how they are related to outcome.

Specific Factors

Specific factors, or those interventions consistent with the treatment manual employed, were associated with better outcome in both behavioral and psychodynamic therapy. However, it was not simply that greater levels of specific factors were related to greater symptom improvement. Rather, moderate levels of the specific factors were related to better subsequent outcome compared to higher or lower levels. Most treatment outcome comparisons have not directly examined the relation between differing levels of

technique use and outcome. However, what constitutes an appropriate level of specific technique use for a study to examine is not known from theory or empirical studies, and it is possible that some treatment outcome comparisons are not testing the optimal version of their therapy (i.e., one with a moderate level of specific technique use). Again, there is little theoretical or empirical work that would help choose the levels of interventions for these conditions. Further descriptive analyses of psychotherapy process can establish the range of specific techniques that therapists use in a treatment, and correlational studies can test how outcome is influenced across a full range of technique use.

The descriptive components of these studies have shown that individual specific technique use varies in behavioral and psychodynamic treatment, even if it is also true that interventions from the same theoretical orientation tend to co-occur in the session (i.e., exhibit high Cronbach α coefficients). The primary interventions essential to the theory behind the treatment were not always the most frequently used or typical interventions in practice, and the use of auxiliary interventions ranged widely. For instance, in behavioral therapy, exposure (item 16) was scored highly by clients and therapists, but homework assignment and review (item 17) was even more frequently rated. Skill-building (item 15) was considered to be relatively less representative of the sessions as were those other techniques. In psychodynamic therapy, interpretation (items 2 and 22) was less often used than many other interventions. Exploratory interventions (items 14, 19, and 40) were in fact much more prevalent than these core techniques. Relying then on only a handful of techniques to define adherence does not recognize the

complexity of psychotherapy process, and more descriptive work on which individual interventions compose a treatment is needed.

Even though curvilinear relations between specific factors and symptom change were found for two very different samples in this thesis, it remains unclear how these curvilinear functions might generalize to other samples and contexts. One possibility is that these functions represent absolute relations between scores on the specific MULTI subscales and subsequent outcome. In such case, the same curvilinear function would be expected to generalize across all samples of that particular theoretical orientation. When given a MULTI subscale score for any particular session of that orientation, we would be able to classify the session as having low, moderate, or high adherence and predict the approximate amount of symptom decline the client would experience by the end of therapy. Differences in the range of intervention use in a sample might determine which section of the curvilinear relation with outcome is observed. For example, if the relation between client-rated BT subscale scores and outcome from Study 1 were generalizable across all samples of behavioral therapy for OCD, a sample in which BT subscale scores ranged only from “typical” to “very typical” would exhibit a positive correlation with symptom improvement, whereas a sample with a range from “not at all” to “slightly” would most likely evidence a negative correlation with outcome. Absolute generalizability across samples would provide an easily interpretable meaning for adherence scores based on their expected relation with outcome. It would also provide an explanation for the mixed findings of previous correlational studies of adherence and outcome. However, absolute generalizability of any curvilinear findings is unlikely given

the complexity of the process of psychotherapy and the wide variability in how the same therapy is practiced.

Another possibility is that curvilinear relations between adherence and outcome are relative to site or cohort. Contact among therapy providers or raters might (explicitly or implicitly) lead to a valuing of moderate levels of interventions over more extreme levels of interventions. Therapists at the same clinic, graduating from the same training program, or receiving the same supervision may develop a consensus as to what constitutes good therapy, and this consensus may be for moderate intervention use. Similarly, raters undergoing reliability training may settle on an agreement as to what levels of adherence are moderate and what levels are more extreme, perhaps based on the outcomes they imagine to occur from the sessions they are rating. The consensus reached may vary from by site or cohort, but moderate levels of adherence, however they were defined within that group, may always be associated with greater improvement than more extreme levels. Curvilinear relations between adherence and outcome would then be expected to be present in any sample in which the members have contact. They would not generalize across different samples, limiting any interpretation of what the level of adherence might mean for outcome to that specific sample only.

Lastly, the curvilinear relation of adherence to outcome may be relative to individual therapists. Each therapist may have certain clients for whom they are moderately adherent and other clients for whom they are either excessively adherent or not very adherent at all. Clients receiving moderate intervention levels may be those with whom the therapist feels most comfortable working due to compatibility in personality or

expectations for improvement. Clients receiving lower levels of interventions may be ones to whom the therapist has difficulty relating or who the therapist believes have a poor chance of improvement. Clients receiving excessive adherence may be clients that make the therapist anxious and therefore more reliant on technique use. Additional targeted training could be used to help therapists improve their outcomes with those clients for whom they exhibit excessive intervention use. Another alternative goal might be to identify those clients for whom each therapist is likely to be maximally helpful and encourage therapists to refer out clients for whom they would adhere too little or too much. The two samples investigated here had too few clients per therapist and too few therapists to test whether curvilinear effects generalize only to individual therapists. Overall, to test among different potential ways curvilinear relations might generalize (absolutely, relative to site or cohort, or relative to individual therapists), more correlational studies with larger samples of clients and therapists are needed.

A final notable finding about the specific interventions in these studies is that observer and client, but not therapist, perspectives of these interventions predicted outcome. Of course, all three perspectives were not taken of the same sessions so only speculations can be made from this observation. Clients are the target of the interventions and so are likely to have the most subjective impressions of the interventions in therapy. Observers are the most removed from the therapy and so are likely to be the most objective of the three perspectives. It is surprising then that both the most subjective (client) and most objective (observer) ratings demonstrated a relation to outcome. The therapists in both studies were extensively supervised and monitored. They may have

been motivated to report at least some certain standard level of intervention use in order to conform to what they believed was expected of them. Although an unlikely explanation because the present researchers were not directly judging therapists' adherence, expectancy might have led to a ceiling effect in therapist ratings and diminished any opportunity to observe a relation between intervention use and outcome in their data. Perspective may still play an important role in the relation of process to outcome, and more comprehensive studies with all three perspectives on the specific interventions in therapy need to be conducted.

Common Factors

Common factors in these studies, whether operationalized as therapist techniques or therapeutic alliance, surprisingly did not predict outcome. However, common factors did feature prominently in both behavioral and psychodynamic therapies, being the highest rated among all the different types of interventions at the subscale level. Perhaps common factors are necessary but not sufficient for creating ultimate change in psychotherapy. To test this hypothesis, common factors would have to be withheld from some clients to see if symptom improvement could occur in their absence. Obviously, these studies demonstrate that therapy does not occur in practice without common factors and that such conditions would need to be artificially produced.

One reason why I did not find any relation between common factors and outcome might be the relatively conservative correlational design I used. I predicted symptom level at termination from common factors levels at a point in early treatment and controlled for the change in symptoms up until that point. Common factors use, whether

intervention or alliance, may be potentially related to early symptom improvement (i.e., as the client improves, the therapeutic relationship may be easier to maintain). Evidence for a relation between early symptom change and common factors was mixed across studies, but in the study of dynamic therapy I found that early symptom improvement predicted greater common factor use and alliance scores. When early symptom change was not controlled, the relation of alliance to outcome was marginally significant in both studies. Common factors, being a product of early symptom change, may have had less of an ability to predict subsequent outcome when considered alongside early symptom change.

Part of the lack of findings between common factors and outcome may be due to some properties of the manualized, controlled treatments investigated in both studies. Clients might have viewed their therapists differently than they might have if they were seeing a therapist in private practice, and common factors may not have had as great a role in producing change as they might have in other less controlled settings. For instance, clients may have viewed their therapists as expert due to their therapists' academic affiliation or their participation in a clinical trial. These beliefs may have strengthened clients' relationships to their therapists and expectations for change even prior to their first meeting. These beliefs may have also permitted clients to forgive lower levels of common factor techniques or overlook more ruptures in the therapeutic alliance, although this possibility has never been empirically tested. Alternatively, therapists in these studies may have placed much greater emphasis on the specific techniques relative to the common factor interventions or alliance. The focus that therapists take may

partially determine what produces change in their clients. Under more relaxed treatment conditions, therapists might focus more on the common factors and facilitate more change through them.

I could not test for a mediating effect of alliance on the relation of common factors to subsequent outcome. This remains an important hypothesis for other studies to test. Common factor interventions are often not distinguished from their byproduct, alliance, and the correlation of alliance to outcome is often given as evidence for a causal link between common factor interventions to outcome. One important aspect in testing the mediating effect of alliance on the relation of common factor techniques to outcome is the window of time between the measurement of common factor techniques and alliance. Too short or too long a period may run the risk of missing any effect either by not allowing enough time for the alliance to develop after the delivery of the common factor interventions or by allowing too much time to elapse for the relation between common factor interventions and alliance to be meaningfully predictive. I chose approximately two weeks, although this was mainly because outcome was assessed every two weeks in the early part of the depression trial. Future studies observing a significant association of common factors to outcome will need to test for different windows of effect.

Unintended Factors

Unintended factors were prominent in both behavioral and psychodynamic therapies, despite the extensive supervision and monitoring that therapists in both studies had. Even so, the subscales representing the specific factors of each therapy still tended to

be rated higher than most other subscales representing different types of therapies.

Variation in the use of individual interventions from the unintended factors revealed that therapists might be selecting the techniques for their congruence to the specific therapy being used. For instance, exploratory techniques from process-experiential and interpersonal therapies were used extensively in dynamic therapy, which emphasizes exploration and free association. Process-experiential interventions exploring both conscious and avoided emotions and using a here-and-now strategy were frequently employed in behavioral therapy, which focuses on eliciting and confronting strong emotions.

Treatment manuals might implicitly endorse the use of these theory-congruent interventions from outside therapies. For example, when requesting that a client expose him- or herself to a feared stimulus, it is highly likely that the client would want to discuss the fear he or she experiences. The treatment manual does not, for instance, instruct the therapist to push ahead with the exposure, redirect the client from talking about his or her emotions, or provide psychoeducation about the fear response. By not informing the therapist of what specific action to take, the manual may be implicitly encouraging the therapist to do what comes to them. A natural therapeutic response to the situation described might be to use a process-experiential intervention to explore the client's experience. Another way these theory-congruent but unintended interventions might find their way into a manualized course of therapy is that therapists might know from experience such interventions are related to good outcome, although empirical support for this possibility is scarce. Descriptive studies of the unintended techniques in

therapy can inform us of what therapists are choosing (or are perceived) to do in practice. If there are systematic patterns in the use of certain outside interventions, theory can be used to try to explain why therapists might choose to incorporate such interventions. Such interventions might also be explicitly placed into the treatment manual so therapists can be aware to perform those interventions and can learn to do them well. Correlational studies of individual items to outcome may help identify interventions that were overlooked by a treatment manual but that might potentially augment the power of that therapy.

In the psychodynamic therapy, process-experiential interventions predicted outcome better than psychodynamic interventions at Session 4 and shared a predictive relation with the specific factors at Session 7. Efficacious psychodynamic therapy may enlist process-experiential techniques to bring about change directly or to augment psychodynamic interventions. Knowing the relation of process-experiential interventions to outcome in dynamic therapy might help us think about and test new directions for psychodynamic therapy and training (e.g., Diener et al., 2007). In behavioral therapy, other interventions did not exceed behavioral interventions in the prediction of outcome. However, it is clear that more descriptive and correlational studies of specific, common, and unintended factors are necessary to uncover what happens in the process of these and other therapies and to improve our ability to help clients, perhaps in ways not initially expected.

Conclusion

Psychotherapy works. However, the studies presented here demonstrated that the way in which psychotherapy works is more complex than many supporters of the specific and common factors hypotheses might have considered. The methods used so far to document the efficacy of therapy, namely, treatment outcome comparisons and meta-analyses, often do not directly test the relation of specific, common, and unintended factors to outcome and rely on assumptions that may not fit psychotherapy as it is practiced and researched. Descriptive approaches that consider the interventions across a number of common therapies might be useful in discovering more about the process of therapy and how many different types of interventions are used by therapists. Correlational approaches, when modeled correctly, may be a viable way to test not only the relation of intervention use in a number of different systems to outcome but also curvilinear relation to outcome. Descriptive and correlational methods may then help us understand more about the variety of interventions in therapy and the way they might bring about change.

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Footnotes

¹ I cite Greenberg and Watson's (1998) study here because I wanted to be able to refer consistently to an example of a controlled treatment outcome trial (i.e., the client-centered condition serves as the control to the experimental process-experiential condition) that has many positive qualities (e.g., intervention use monitoring) and illustrative shortcomings (e.g., arbitrary cutoffs for treatment adherence). I understand that this study could also be legitimately labeled as another type of research design, like as an uncontrolled treatment comparison between two active therapies or a dismantling design which varies the intensity of process-experiential therapy (i.e., a full process-experiential therapy versus a reduced client-centered component) (Borkovec & Miranda, 1998). However, I thought the qualities that the Greenberg and Watson study could illustrate and the consistency with which I could refer back to it outweighed the potential confusion over its experimental design.

² Whereas the types of interventions change depending on the stage of the therapy, the level of adherence to the manual a therapist exhibits often remains consistent throughout the treatment (e.g., Greenberg & Watson, 1998). In light of this observation and to make the complex process of treatment and adherence simpler, I refer only to adherence to treatment measured at a single time point for the purposes of this paper.

³ Another notable feature of this study was that Barber and colleagues (1996) partialled out the effect of symptom severity (proxy for client difficulty) from analyses.

⁴ This analysis of individual intervention use was intended to be only exploratory because the division of clients into low, moderate, and high adherence groups was

arbitrary (by percentile rank) and the sample size and within-sample variability were both small. However, for the sake of completeness I performed a 3 (adherence group) by 15 (individual item) repeated-measures ANOVA on the individual item scores specifically to test the interaction of group by item. The interaction term was not significant ($F [28, 223] = 1.26, ns$), suggesting that as overall adherence to behavioral therapy increased, the use of each individual psychodynamic intervention increased monotonically.

⁵ As with Study 1, this analysis of individual intervention use was intended to be only exploratory because the division of clients into low, moderate, and high adherence groups was arbitrary (by percentile rank). However, for the sake of completeness I performed a 3 (adherence group) by 12 (individual item) repeated-measures ANOVA on the individual item scores specifically to test the interaction of group by item. If this term was not significant it would suggest that as overall adherence to psychodynamic therapy increased, the use of individual psychodynamic interventions increased monotonically. The interaction term for Session 7 was not significant ($F [22, 253] = 0.86, ns$), whereas it was significant for Session 4 ($F [22, 253] = 1.88, p < .01$). At Session 4, items 12, 22, and 41 did not significantly differ by adherence groups in univariate ANOVAs ($ps < .30$) but all other items were significantly different by groups.

Table 1

Study 1: Descriptive Statistics for Client- and Therapist-Ratings of MULTI Subscales

MULTI Subscale	Clients (<i>N</i> = 24)			Therapists (<i>N</i> = 29)			<i>t</i>	<i>r</i>
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	Range		
Behavioral	4.03	0.45	3.13-4.80	3.77	0.42	2.93-4.40	2.00*	-.21
Common Factors	4.59	0.46	3.29-5.00	4.18	0.51	3.14-5.00	2.70**	-.32
Cognitive	4.07	0.59	2.56-4.88	3.40	0.53	2.38-4.38	3.94***	.14
Dialectical-Behavioral	3.81	0.73	2.50-5.00	3.39	0.57	2.50-4.50	2.06*	-.27
Interpersonal	2.57	0.89	1.29-4.00	1.64	0.50	1.00-3.00	5.01***	.15
Person-Centered	3.72	0.73	2.29-5.00	2.40	0.67	1.29-3.71	6.73***	-.03
Psychodynamic	2.86	0.86	1.58-4.50	1.54	0.48	1.00-2.75	6.14***	-.14
Process-Experiential	3.31	0.85	1.56-4.78	2.07	0.61	1.22-3.56	5.93***	-.10
Overall	3.59	0.58	2.59-4.64	2.78	0.43	1.98-3.54	5.25***	-.12

Note. MULTI = Multitheoretical List of Therapeutic Interventions. Overall = mean of all MULTI items. *t* values represent the test of the differences between client and therapist ratings paired by session with *df* = 22. *r* coefficients are the correlation of client and therapist ratings with *df* = 22.

† *p* < .10. **p* < .05. ***p* < .01. ****p* < .001.

Table 2

Study 1: MULTI Item Means, Standard Deviations, and Percent Occurrence for Client

Ratings of Sessions

Item	<i>M</i>	<i>SD</i>	%
Behavioral			
17. My therapist reviewed or assigned homework exercises.	4.92	0.28	100
35. My therapist encouraged me to change specific behaviors.	4.68	0.63	100
1. My therapist set an agenda or established specific goals for the therapy session.	4.54	0.59	100
16. My therapist encouraged me to think about, view, or touch things that I am afraid of.	4.44	1.19	92
9. My therapist and I discussed a plan for me to try to control (increase or decrease) specific behaviors.	4.33	1.13	100
6. My therapist often focused on my recent experiences.	4.29	0.95	100
27. My therapist tried to help me identify the consequences (positive or negative) of my behavior.	4.24	1.16	92
36. My therapist focused on the ways I cope with my problems.	4.24	1.30	92
29. My therapist gave me advice or suggested practical solutions for my problem.	4.08	1.10	96
25. My therapist encouraged me to consider the positive and negative consequences of acting in a new way.	4.04	1.30	92
5. My therapist encouraged me to identify specific situations or events that tended to precede my problematic behavior.	3.96	1.20	96
4. My therapist asked me to visualize specific scenes or situations in detail.	3.63	1.28	92
33. My therapist led the discussion most of the time.	3.24	1.16	92
15. My therapist taught me specific new skills or behaviors.	2.75	1.45	71
44. My therapist had me role-play (act out or rehearse) certain scenes or situations.	2.36	1.41	56
Common Factors			
18. My therapist was warm, sympathetic, and accepting.	4.84	0.37	100
31. My therapist listened carefully to what I was saying.	4.84	0.37	100
8. My therapist seemed convinced of the effectiveness of the methods he/she is using to help me.	4.75	0.53	100
7. My therapist worked to give me hope or encouragement.	4.63	0.71	100
26. My therapist made the session a place where I could get better or solve my problems.	4.44	1.00	96
28. My therapist and I worked together as a team.	4.44	1.08	96
42. My therapist focused on improving my ability to solve my own problems.	4.20	1.12	96
Cognitive			
17. My therapist reviewed or assigned homework exercises.	4.92	0.28	100
35. My therapist encouraged me to change specific behaviors.	4.68	0.63	100
1. My therapist set an agenda or established specific goals for the therapy session.	4.54	0.59	100
6. My therapist often focused on my recent experiences.	4.29	0.95	100
49. My therapist encouraged me to question my beliefs or to discover flaws in my reasoning.	4.28	1.10	96
27. My therapist tried to help me identify the consequences (positive or negative) of my behavior.	4.24	1.16	92
36. My therapist focused on the ways I cope with my problems.	4.24	1.30	92
48. My therapist tried to help me better understand how my problem was due to certain beliefs or rules that I follow.	4.20	1.15	96
39. My therapist encouraged me to view my problem from a different perspective.	4.12	1.05	96
25. My therapist encouraged me to consider the positive and negative consequences of acting	4.04	1.30	92

in a new way.			
5. My therapist encouraged me to identify specific situations or events that tended to precede my problematic behavior.	3.96	1.20	96
37. My therapist encouraged me to look for evidence in support of or against one of my beliefs or assumptions.	3.83	1.52	83
21. My therapist encouraged me to explore explanations for events or behaviors other than those that first came to my mind.	3.38	1.41	83
33. My therapist led the discussion most of the time.	3.24	1.16	92
43. My therapist encouraged me to list the advantages and disadvantages of a belief or general rule that I follow.	3.17	1.66	71
40. My therapist encouraged me to explore the personal meaning of an event or a feeling.	3.04	1.57	72
Dialectical-Behavioral			
35. My therapist encouraged me to change specific behaviors.	4.68	0.63	100
56. My therapist both accepted me for who I am and encouraged me to change.	4.44	1.04	96
9. My therapist and I discussed a plan for me to try to control (increase or decrease) specific behaviors.	4.33	1.13	100
36. My therapist focused on the ways I cope with my problems.	4.24	1.30	92
5. My therapist encouraged me to identify specific situations or events that tended to precede my problematic behavior.	3.96	1.20	96
57. My therapist encouraged me to identify situations in which my feelings were invalidated.	3.08	1.75	68
15. My therapist taught me specific new skills or behaviors.	2.75	1.45	71
58. My therapist encouraged me to think about or be aware of things in my life without judging them.	2.68	1.52	68
Interpersonal			
59. My therapist made it clear that my problem was a treatable medical condition.	4.56	1.04	96
19. My therapist pointed out recurring themes or problems in my relationships.	2.72	1.62	60
54. My therapist encouraged me to examine my relationships with others.	2.44	1.36	64
55. My therapist encouraged me to think about ways in which I might prepare for major upcoming changes in my relationships.	2.16	1.25	56
51. My therapist encouraged me to explore ways in which I could make changes in my relationships.	2.08	1.35	48
50. My therapist focused on a specific concern in my relationships.	2.04	1.34	48
60. My therapist tried to help me better understand how my problems were due to difficulties in my social relationships.	1.72	1.21	32
Person-Centered			
46. My therapist seemed interested in trying to understand what I was experiencing.	4.52	0.71	100
47. My therapist encouraged me to focus on my moment-to-moment experience.	3.92	0.95	100
14. My therapist encouraged me to talk about whatever came to my mind.	3.88	1.33	92
23. My therapist encouraged me to see the choices I have in my life.	3.68	1.38	88
10. My therapist repeated back to me (paraphrased) the meaning of what I was saying.	3.42	1.21	96
12. My therapist encouraged me to talk about feelings I had previously avoided or never expressed.	3.29	1.46	83
40. My therapist encouraged me to explore the personal meaning of an event or a feeling.	3.04	1.57	72
Psychodynamic			
14. My therapist encouraged me to talk about whatever came to my mind.	3.88	1.33	92
2. My therapist made connections between my current situation and my past.	3.71	1.04	100
12. My therapist encouraged me to talk about feelings I had previously avoided or never expressed.	3.29	1.46	83
20. My therapist talked about the function or purpose that my problem might have.	3.24	1.51	80
40. My therapist encouraged me to explore the personal meaning of an event or a feeling.	3.04	1.57	72

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38. My therapist explored my feelings about therapy.	2.88	1.36	80
19. My therapist pointed out recurring themes or problems in my relationships.	2.72	1.62	60
24. My therapist and I discussed my dreams, fantasies, or wishes.	2.72	1.57	64
13. My therapist pointed out times when my behavior seemed inconsistent with what I was saying.	2.63	1.47	71
45. My therapist tried to help me better understand how I relate to others, how this style of relating developed, and how it causes my problems.	2.40	1.35	64
22. My therapist made connections between the way I act or feel towards my therapist and the way that I act or feel in my other relationships.	1.79	1.25	38
41. My therapist often focused on my childhood experiences.	1.60	0.87	40
Process-Experiential			
39. My therapist encouraged me to view my problem from a different perspective.	4.12	1.05	96
47. My therapist encouraged me to focus on my moment-to-moment experience.	3.92	0.95	100
11. My therapist encouraged me to identify or label feelings that I had in or outside of the session.	3.71	1.27	96
23. My therapist encouraged me to see the choices I have in my life.	3.68	1.38	88
12. My therapist encouraged me to talk about feelings I had previously avoided or never expressed.	3.29	1.46	83
3. My therapist focused on identifying parts of my personality that were in conflict.	3.25	1.59	79
13. My therapist pointed out times when my behavior seemed inconsistent with what I was saying.	2.63	1.47	71
34. My therapist focused on how disagreements between certain parts of my personality have caused my problems.	2.52	1.56	60
44. My therapist had me role-play (act out or rehearse) certain scenes or situations.	2.36	1.41	56

Note. Values in the final column represent the percentage of sessions for which ratings at least above 1 (Not at All Typical) were given.

Table 3

Study 1: MULTI Item Means, Standard Deviations, and Percent Occurrence for

Therapist Ratings of Sessions

Item	<i>M</i>	<i>SD</i>	%
Behavioral			
17. I reviewed or assigned homework exercises.	4.86	0.45	100
9. My client and I discussed a plan for him/her to try to control (increase or decrease) specific behaviors.	4.83	0.38	100
35. I encouraged my client to change specific behaviors.	4.72	0.45	100
16. I encouraged my client to think about, view, or touch things that he/she is afraid of.	4.71	0.85	96
6. I often focused on my client's recent experiences.	4.59	0.57	100
1. I set an agenda or established specific goals for the therapy session.	4.31	0.89	100
29. I gave my client advice or suggested practical solutions for his/her problem.	4.21	0.83	100
5. I encouraged my client to identify specific situations or events that tended to precede his/her problematic behavior.	3.86	1.19	93
33. I led the discussion most of the time.	3.61	0.63	100
27. I tried to help my client identify the consequences (positive or negative) of his/her behavior.	3.46	1.32	89
25. I encouraged my client to consider the positive and negative consequences of acting in a new way.	3.36	1.19	93
36. I focused on the ways my client copes with his/her problems.	3.14	1.19	90
15. I taught my client specific new skills or behaviors.	2.93	1.54	75
4. I asked my client to visualize specific scenes or situations in detail.	2.66	1.61	59
44. I had my client role-play (act out or rehearse) certain scenes or situations.	1.48	1.02	24
Common Factors			
8. I conveyed my belief in the effectiveness of the methods I am using to help my client.	4.62	0.56	100
31. I listened carefully to what my client was saying.	4.43	0.69	100
28. My client and I worked together as a team.	4.29	0.66	100
7. I worked to give my client hope or encouragement.	4.28	0.75	100
26. I made the session a place where my client could get better or solve his/her problems.	4.25	0.84	100
18. I was warm, sympathetic, and accepting.	3.96	0.64	100
42. I focused on improving my client's ability to solve his/her own problems.	3.32	1.25	89
Cognitive			
17. I reviewed or assigned homework exercises.	4.86	0.45	100
35. I encouraged my client to change specific behaviors.	4.72	0.45	100
6. I often focused on my client's recent experiences.	4.59	0.57	100
1. I set an agenda or established specific goals for the therapy session.	4.31	0.89	100
5. I encouraged my client to identify specific situations or events that tended to precede his/her problematic behavior.	3.86	1.19	93
48. I tried to help my client better understand how his/her problem was due to certain beliefs or rules that he/she follows.	3.69	1.11	93
33. I led the discussion most of the time.	3.61	0.63	100
27. I tried to help my client identify the consequences (positive or negative) of his/her behavior.	3.46	1.32	89
25. I encouraged my client to consider the positive and negative consequences of acting in a new way.	3.36	1.19	93

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37. I encouraged my client to look for evidence in support of or against one of his/her beliefs or assumptions.	3.31	1.47	79
36. I focused on the ways my client copes with his/her problems.	3.14	1.19	90
49. I encouraged my client to question his/her beliefs or to discover flaws in his/her reasoning.	3.14	1.41	76
39. I encouraged my client to view his/her problem from a different perspective.	2.86	1.27	79
21. I encouraged my client to explore explanations for events or behaviors other than those that first came to his/her mind.	2.04	1.26	50
43. I encouraged my client to list the advantages and disadvantages of a belief or general rule that he/she follows.	1.97	1.02	55
40. I encouraged my client to explore the personal meaning of an event or a feeling.	1.41	0.68	31
Dialectical Behavioral			
9. My client and I discussed a plan for him/her to try to control (increase or decrease) specific behaviors.	4.83	0.38	100
35. I encouraged my client to change specific behaviors.	4.72	0.45	100
56. I both accepted my client for who he/she is and encouraged him/her to change.	4.00	1.00	100
5. I encouraged my client to identify specific situations or events that tended to precede his/her problematic behavior.	3.86	1.19	93
36. I focused on the ways my client copes with his/her problems.	3.14	1.19	90
15. I taught my client specific new skills or behaviors.	2.93	1.54	75
58. I encouraged my client to think about or be aware of things in his/her life without judging them.	2.17	1.39	48
57. I encouraged my client to identify situations in which his/her feelings were invalidated.	1.41	0.91	21
Interpersonal			
59. I made it clear that my client's problem was a treatable medical condition.	3.69	1.07	93
55. I encouraged my client to think about ways in which he/she might prepare for major upcoming changes in his/her relationships.	1.41	0.98	17
50. I focused on a specific concern in my client's relationships.	1.38	0.90	21
54. I encouraged my client to examine his/her relationships with others.	1.34	0.67	24
19. I pointed out recurring themes or problems in my client's relationships.	1.22	0.51	19
51. I encouraged my client to explore ways in which he/she could make changes in his/her relationships.	1.21	0.49	17
Person-Centered			
46. I conveyed my interest in trying to understand what my client was experiencing.	3.66	1.20	93
47. I encouraged my client to focus on his/her moment-to-moment experience.	3.00	1.51	72
23. I encouraged my client to see the choices he/she has in his/her life.	2.79	1.23	86
10. I repeated back to my client (paraphrased) the meaning of what he/she was saying.	2.52	1.12	72
12. I encouraged my client to talk about feelings he/she had previously avoided or never expressed.	2.17	1.28	59
40. I encouraged my client to explore the personal meaning of an event or a feeling.	1.41	0.68	31
14. I encouraged my client to talk about whatever came to his/her mind.	1.21	0.50	18
Psychodynamic			
12. I encouraged my client to talk about feelings he/she had previously avoided or never expressed.	2.17	1.28	59
2. I made connections between my client's current situation and his/her past.	2.07	1.00	66
38. I explored my client's feelings about therapy.	2.07	1.10	62
20. I talked about the function or purpose that my client's problem might have.	1.86	1.24	39
13. I pointed out times when my client's behavior seemed inconsistent with what he/she was saying.	1.41	0.82	24
40. I encouraged my client to explore the personal meaning of an event or a feeling.	1.41	0.68	31

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24. My client and I discussed his/her dreams, fantasies, or wishes.	1.29	0.60	21
19. I pointed out recurring themes or problems in my client's relationships.	1.22	0.51	19
14. I encouraged my client to talk about whatever came to his/her mind.	1.21	0.50	18
45. I tried to help my client better understand how he/she relates to others, how this style of relating developed, and how it causes his/her problems.	1.21	0.49	17
41. I often focused on my client's childhood experiences.	1.17	0.38	17
22. I made connections between the way my client acts or feels toward me and the way that he/she acts or feels in his/her other relationships.	1.14	0.59	7
Process-Experiential			
47. I encouraged my client to focus on his/her moment-to-moment experience.	3.00	1.51	72
39. I encouraged my client to view his/her problem from a different perspective.	2.86	1.27	79
23. I encouraged my client to see the choices he/she has in his/her life.	2.79	1.23	86
11. I encouraged my client to identify or label feelings that he/she had in or outside of the session.	2.48	1.18	76
12. I encouraged my client to talk about feelings he/she had previously avoided or never expressed.	2.17	1.28	59
44. I had my client role-play (act out or rehearse) certain scenes or situations.	1.48	1.02	24
3. I focused on identifying parts of my client's personality that were in conflict.	1.41	0.63	34
13. I pointed out times when my client's behavior seemed inconsistent with what he/she was saying.	1.41	0.82	24
34. I focused on how disagreements between certain parts of my client's personality have caused my client's problems.	1.07	0.26	7

Note. Values in the final column represent the percentage of sessions for which ratings at

least above 1 (Not at All Typical) were given.

Table 4

Study 1: Linear Relations of MULTI Subscale Scores to OCI-R Termination Scores, Controlling for Prior Symptom Change

MULTI Subscale	OCI-R	
	Client	Therapist
Behavioral	.26	.17
Common Factors	.35	.28
Cognitive	.21	.09
Dialectical-Behavioral	.28	.24
Interpersonal	-.35	.14
Person-Centered	.13	.11
Psychodynamic	.26	-.11
Process-Experiential	.39 [†]	-.04

Note. MULTI = Multitheoretical List of Therapeutic Interventions. OCI-R = Obsessions and Compulsions Inventory-Revised. All values are semi-partial r s with $df = 16$ controlling for prior symptom change. Negative values represent greater symptom improvement with greater levels of that MULTI subscale.

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5

Study 1: Curvilinear Relations of MULTI Subscale Scores to OCI-R Termination Scores, Controlling for Prior Symptom Change

MULTI Subscale	OCI-R	
	Client	Therapist
Behavioral	.52*	-.29
Common Factors	.19	.06
Cognitive	.51*	.21
Dialectical-Behavioral	.43 [†]	-.18
Interpersonal	-.11	-.21
Person-Centered	.09	.15
Psychodynamic	-.29	.36
Process-Experiential	.07	.18

Note. MULTI = Multitheoretical List of Therapeutic Interventions. OCI-R = Obsessions and Compulsions Inventory-Revised. All values are semi-partial r s with $df = 15$ controlling for prior symptom change and the linear term for that subscale (not displayed).

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 6

Study 1: Descriptive Statistics for Sessions of Low, Medium, and High Client-Rated BT Adherence

Scale	Low (<i>n</i> = 5)		Moderate (<i>n</i> = 9)		High (<i>n</i> = 5)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
BT Subscale	3.59	0.16	4.02	0.17	4.72	0.11
1. Agenda setting	4.20	0.84	4.67	0.50	4.80	0.45
4. Imagery	3.40	0.55	3.67	1.32	4.60	0.55
5. Identifying behavioral antecedents	4.00	0.71	3.33	1.50	5.00	-
6. Recent event focus	3.40	0.89	4.22	1.09	4.80	0.45
9. Behavioral control planning	2.80	1.10	4.56	1.01	5.00	-
15. Skill teaching	2.00	1.41	3.00	1.22	4.40	0.55
16. Exposure	4.60	0.55	4.78	0.67	5.00	-
17. Homework	4.80	0.45	4.89	0.33	5.00	-
25. Consequences of new behaviors	3.80	1.10	4.00	1.07	4.80	0.45
27. Consequences of current behaviors	4.00	-	4.33	0.87	5.00	-
29. Practical advice	3.60	1.14	3.78	1.30	4.80	0.45
33. Leading discussion	3.60	1.34	3.00	1.50	3.80	0.45
35. Encouraging behavior change	4.00	0.71	4.89	0.33	5.00	-
36. Coping strategies	3.40	1.34	4.67	0.50	5.00	-
44. Role-playing	2.20	1.30	2.56	1.42	3.80	0.84
OCI-R	10.48	3.59	6.59	3.51	11.68	3.76

Note. MULTI = Multitheoretical List of Therapeutic Interventions. BT = behavioral therapy. OCI-R = Obsessions and Compulsions Inventory-Revised. OCI-R scores are termination OCI-R scores adjusted for prior change in OCI-R.

Table 7

Study 2: Descriptive Statistics for MULTI Subscales by Session

MULTI Subscale	ρ_I	Session 4 ($N = 42$)			Session 7 ($N = 39$)			t
		M	SD	Range	M	SD	Range	
Psychodynamic	.76	2.80	0.54	1.79-3.92	2.66	0.61	1.63-3.71	1.34
Common Factors	.62	3.82	0.48	2.71-4.71	3.75	0.44	2.93-4.71	0.68
Behavioral	.64	1.95	0.41	1.33-2.80	1.89	0.40	1.27-3.00	1.37
Cognitive	.64	2.12	0.42	1.56-3.13	2.02	0.33	1.50-2.78	2.16*
Dialectical-Behavioral	.48	2.27	0.36	1.63-3.00	2.25	0.33	1.63-3.06	1.02
Interpersonal	.81	2.84	0.70	1.07-4.14	2.58	0.71	1.14-3.79	2.34*
Person-Centered	.67	3.26	0.44	2.57-4.14	3.25	0.54	2.29-4.57	0.49
Process-Experiential	.72	2.49	0.55	1.50-3.44	2.46	0.52	1.50-3.89	0.66
Overall	.68	2.61	0.35	1.78-3.27	2.52	0.32	2.00-3.16	1.92 [†]

Note. MULTI = Multitheoretical List of Therapeutic Interventions. Overall = overall

activity level in the session, represented as the mean of all MULTI items. ρ_I values represent the interrater reliability for that subscale using two randomly-selected judges for any randomly selected session. t values represent the test of difference between the subscale levels for Session 4 and Session 7.

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 8

Study 2: MULTI Item Means, Standard Deviations, and Percent Occurrence for Session 4

Ratings

Item	<i>M</i>	<i>SD</i>	%
Psychodynamic			
19. The therapist pointed out recurring themes or problems in the client's relationships.	3.45	0.98	100
14. The therapist encouraged the client to talk about whatever came to my mind.	3.44	0.85	100
45. The therapist tried to help the client better understand how he/she relates to others, how this style of relating developed, and how it causes the clients problems.	3.30	1.08	98
12. The therapist encouraged the client to talk about feelings he/she had previously avoided or never expressed.	3.29	1.25	98
2. The therapist made connections between the client's current situation and his/her past.	2.95	1.01	98
24. The therapist and the client discussed the client's dreams, fantasies, or wishes.	2.73	1.08	88
20. The therapist talked about the function or purpose that the client's problem might have.	2.44	1.12	81
38. The therapist explored the client's feelings about therapy.	2.26	1.07	79
41. The therapist often focused on the client's childhood experiences.	2.20	1.15	67
13. The therapist pointed out times when the client's behavior seemed inconsistent with what the client was saying.	2.08	1.08	67
22. The therapist made connections between the way the client acts or feels towards the therapist and the way that the client acts or feels in his/her other relationships.	1.70	1.03	40
Common Factors			
18. The therapist was warm, sympathetic, and accepting.	4.29	0.55	100
31. The therapist listened carefully to what the client was saying.	4.26	0.66	100
8. The therapist seemed convinced of the effectiveness of the methods he/she is using to help the client.	4.05	0.77	98
7. The therapist worked to give the client hope or encouragement.	3.96	0.69	100
26. The therapist made the session a place where the client could get better or solve his/her problems.	3.88	0.60	100
28. The therapist and the client worked together as a team.	3.54	0.79	100
42. The therapist focused on improving the client's ability to solve his/her own problems.	2.74	0.89	100
Behavioral			
6. The therapist often focused on the client's recent experiences.	3.61	0.69	100
36. The therapist focused on the ways the client copes with his/her problems.	2.80	0.74	100
33. The therapist led the discussion most of the time.	2.79	0.80	98
29. The therapist gave the client advice or suggested practical solutions for the client's problem.	2.17	0.93	74
5. The therapist encouraged the client to identify specific situations or events that tended to precede the client's problematic behavior.	2.04	0.77	81
27. The therapist tried to help the client identify the consequences of his/her behavior.	1.99	0.98	64
16. The therapist encouraged the client to think about, view, or touch things that the client is afraid of.	1.89	0.79	67
1. The therapist set an agenda or established specific goals for the therapy session.	1.83	0.88	67
35. The therapist encouraged the client to change specific behaviors.	1.77	0.82	64
25. The therapist encouraged the client to consider the positive and negative consequences of acting in a new way.	1.70	0.85	52
9. The therapist and the client discussed a plan for the client to try to control specific behaviors.	1.70	0.87	51

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4. The therapist asked the client to visualize specific scenes or situations in detail.	1.43	0.56	45
17. The therapist reviewed or assigned homework exercises.	1.30	0.72	29
15. The therapist taught the client specific new skills or behaviors.	1.21	0.54	24
44. The therapist had the client role-play certain scenes or situations.	1.01	0.08	2

Cognitive

40. The therapist encouraged the client to explore the personal meaning of an event or a feeling.	3.68	0.76	100
6. The therapist often focused on the client's recent experiences.	3.61	0.69	100
36. The therapist focused on the ways the client copes with his/her problems.	2.80	0.74	100
33. The therapist led the discussion most of the time.	2.79	0.80	98
21. The therapist encouraged the client to explore explanations for events or behaviors other than those that first came to the client's mind.	2.32	0.83	90
39. The therapist encouraged the client to view his/her problem from a different perspective.	2.23	0.79	90
5. The therapist encouraged the client to identify specific situations or events that tended to precede the client's problematic behavior.	2.04	0.77	81
27. The therapist tried to help the client identify the consequences of his/her behavior.	1.99	0.98	64
1. The therapist set an agenda or established specific goals for the therapy session.	1.83	0.88	67
35. The therapist encouraged the client to change specific behaviors.	1.77	0.82	64
48. The therapist tried to help the client better understand how his/her problem was due to certain beliefs or rules that he/she follows.	1.74	0.73	67
25. The therapist encouraged the client to consider the positive and negative consequences of acting in a new way.	1.70	0.85	52
49. The therapist encouraged the client to question his/her beliefs or to discover flaws in his/her reasoning.	1.60	0.59	60
37. The therapist encouraged the client to look for evidence in support of or against one of the client's beliefs or assumptions.	1.36	0.60	38
17. The therapist reviewed or assigned homework exercises.	1.30	0.72	29
43. The therapist encouraged the client to list the advantages and disadvantages of a belief or general rule that he/she follows.	1.14	0.50	14

Dialectical-Behavioral

56. The therapist both accepted the client for who he/she is and encouraged him/her to change.	3.70	0.68	100
36. The therapist focused on the ways the client copes with his/her problems.	2.80	0.74	100
58. The therapist encouraged the client to think about or be aware of things in his/her life without judging them.	2.55	0.85	93
57. The therapist encouraged the client to identify situations in which the client's feelings were invalidated.	2.39	0.93	90
5. The therapist encouraged the client to identify specific situations or events that tended to precede the client's problematic behavior.	2.04	0.77	81
35. The therapist encouraged the client to change specific behaviors.	1.77	0.82	64
9. The therapist and the client discussed a plan for the client to try to control specific behaviors.	1.70	0.87	51
15. The therapist taught the client specific new skills or behaviors.	1.21	0.54	24

Interpersonal

60. The therapist tried to help the client better understand how the client's problems were due to difficulties in his/her social relationships.	3.56	1.06	95
54. The therapist encouraged the client to examine his or her relationships with others.	3.49	1.14	98
19. The therapist pointed out recurring themes or problems in the client's relationships.	3.45	0.98	100
50. The therapist focused on a specific concern in the client's relationships.	3.38	1.05	98
51. The therapist encouraged the client to explore ways in which the client could make changes in his/her relationships.	2.65	1.13	88
55. The therapist encouraged the client to think about ways in which he/she might prepare for	2.10	0.99	69

major changes in his/her relationships.			
59. The therapist made it clear that the client's problem was a treatable medical condition.	1.27	0.54	31
Person-Centered			
46. The therapist seemed interested in trying to understand what the client was experiencing.	4.29	0.60	100
40. The therapist encouraged the client to explore the personal meaning of an event or a feeling.	3.68	0.76	100
14. The therapist encouraged the client to talk about whatever came to my mind.	3.44	0.85	100
12. The therapist encouraged the client to talk about feelings he/she had previously avoided or never expressed.	3.29	1.25	98
10. The therapist repeated back to the client (paraphrased) the meaning of what the client was saying.	3.15	0.61	100
23. The therapist encouraged the client to see the choices he/she has in his/her life.	2.80	0.88	98
47. The therapist encouraged the client to focus on his/her moment-to-moment experience.	2.20	0.88	90
40. The therapist encouraged the client to explore the personal meaning of an event or a feeling.	3.68	0.76	100
Process-Experiential			
11. The therapist encouraged the client to identify or label feelings that he/she had in or outside of the session.	3.57	0.87	100
12. The therapist encouraged the client to talk about feelings he/she had previously avoided or never expressed.	3.29	1.25	98
3. The therapist focused on identifying parts of the client's personality that were in conflict.	2.82	1.11	90
23. The therapist encouraged the client to see the choices he/she has in his/her life.	2.80	0.88	98
34. The therapist focused on how disagreements between certain parts of the client's personality have caused the client's problems.	2.42	0.99	86
39. The therapist encouraged the client to view his/her problem from a different perspective.	2.23	0.79	90
47. The therapist encouraged the client to focus on his/her moment-to-moment experience.	2.20	0.88	90
13. The therapist pointed out times when the client's behavior seemed inconsistent with what the client was saying.	2.08	1.08	67
44. The therapist had the client role-play certain scenes or situations.	1.01	0.08	2

Note. Values in the final column represent the percentage of sessions for which ratings at

least above 1 (Not at All Typical) were given.

Table 9

Study 2: MULTI Item Means, Standard Deviations, and Percent Occurrence for Session 7

Ratings

Item	<i>M</i>	<i>SD</i>	%
Psychodynamic			
14. The therapist encouraged the client to talk about whatever came to the client's mind.	3.78	0.79	100
40. The therapist encouraged the client to explore the personal meaning of an event or a feeling.	3.45	0.80	100
19. The therapist pointed out recurring themes or problems in the client's relationships.	3.33	1.19	92
45. The therapist tried to help the client better understand how he/she relates to others, how this style of relating developed, and how it causes the clients problems.	3.23	1.06	97
2. The therapist made connections between the client's current situation and his/her past.	2.91	0.94	95
12. The therapist encouraged the client to talk about feelings he/she had previously avoided or never expressed.	2.87	1.09	95
20. The therapist talked about the function or purpose that the client's problem might have.	2.49	1.22	74
24. The therapist and the client discussed the client's dreams, fantasies, or wishes.	2.18	1.10	74
38. The therapist explored the client's feelings about therapy.	2.18	1.12	74
41. The therapist often focused on the client's childhood experiences.	2.08	1.14	59
13. The therapist pointed out times when the client's behavior seemed inconsistent with what the client was saying.	1.91	0.80	74
22. The therapist made connections between the way the client acts or feels towards the therapist and the way that the client acts or feels in his/her other relationships.	1.51	0.94	33
Common Factors			
31. The therapist listened carefully to what the client was saying.	4.19	0.59	100
18. The therapist was warm, sympathetic, and accepting.	4.15	0.50	100
7. The therapist worked to give the client hope or encouragement.	3.91	0.65	100
8. The therapist seemed convinced of the effectiveness of the methods he/she is using to help the client.	3.73	0.71	100
26. The therapist made the session a place where the client could get better or solve his/her problems.	3.68	0.58	100
28. The therapist and the client worked together as a team.	3.59	0.68	100
42. The therapist focused on improving the client's ability to solve his/her own problems.	3.00	0.69	100
Behavioral			
6. The therapist often focused on the client's recent experiences.	3.55	0.63	100
36. The therapist focused on the ways the client copes with his/her problems.	2.76	0.82	100
33. The therapist led the discussion most of the time.	2.54	0.73	97
29. The therapist gave the client advice or suggested practical solutions for the client's problem.	2.26	1.11	74
27. The therapist tried to help the client identify the consequences of his/her behavior.	1.99	0.78	79
5. The therapist encouraged the client to identify specific situations or events that tended to precede the client's problematic behavior.	1.95	0.73	79
9. The therapist and the client discussed a plan for the client to try to control specific behaviors.	1.78	0.93	56
25. The therapist encouraged the client to consider the positive and negative consequences of acting in a new way.	1.76	0.83	62
35. The therapist encouraged the client to change specific behaviors.	1.73	0.76	62

16. The therapist encouraged the client to think about, view, or touch things that the client is afraid of.	1.54	0.65	54
1. The therapist set an agenda or established specific goals for the therapy session.	1.53	0.73	51
4. The therapist asked the client to visualize specific scenes or situations in detail.	1.42	0.77	36
17. The therapist reviewed or assigned homework exercises.	1.33	0.69	31
15. The therapist taught the client specific new skills or behaviors.	1.12	0.40	8
44. The therapist had the client role-play certain scenes or situations.	1.10	0.50	5
Cognitive			
6. The therapist often focused on the client's recent experiences.	3.55	0.63	100
40. The therapist encouraged the client to explore the personal meaning of an event or a feeling.	3.45	0.80	100
36. The therapist focused on the ways the client copes with his/her problems.	2.76	0.82	100
33. The therapist led the discussion most of the time.	2.54	0.73	97
39. The therapist encouraged the client to view his/her problem from a different perspective.	2.23	0.72	90
21. The therapist encouraged the client to explore explanations for events or behaviors other than those that first came to the client's mind.	2.22	0.86	79
27. The therapist tried to help the client identify the consequences of his/her behavior.	1.99	0.78	79
5. The therapist encouraged the client to identify specific situations or events that tended to precede the client's problematic behavior.	1.95	0.73	79
25. The therapist encouraged the client to consider the positive and negative consequences of acting in a new way.	1.76	0.83	62
35. The therapist encouraged the client to change specific behaviors.	1.73	0.76	62
1. The therapist set an agenda or established specific goals for the therapy session.	1.53	0.73	51
48. The therapist tried to help the client better understand how his/her problem was due to certain beliefs or rules that he/she follows.	1.51	0.66	44
49. The therapist encouraged the client to question his/her beliefs or to discover flaws in his/her reasoning.	1.45	0.60	41
17. The therapist reviewed or assigned homework exercises.	1.33	0.69	31
37. The therapist encouraged the client to look for evidence in support of or against one of the client's beliefs or assumptions.	1.23	0.44	26
43. The therapist encouraged the client to list the advantages and disadvantages of a belief or general rule that he/she follows.	1.08	0.29	8
Dialectical-Behavioral			
56. The therapist both accepted the client for who he/she is and encouraged him/her to change.	3.68	0.57	100
36. The therapist focused on the ways the client copes with his/her problems.	2.76	0.82	100
58. The therapist encouraged the client to think about or be aware of things in his/her life without judging them.	2.49	0.68	95
57. The therapist encouraged the client to identify situations in which the client's feelings were invalidated.	2.47	1.14	79
5. The therapist encouraged the client to identify specific situations or events that tended to precede the client's problematic behavior.	1.95	0.73	79
9. The therapist and the client discussed a plan for the client to try to control specific behaviors.	1.78	0.93	56
35. The therapist encouraged the client to change specific behaviors.	1.73	0.76	62
15. The therapist taught the client specific new skills or behaviors.	1.12	0.40	8
Interpersonal			
19. The therapist pointed out recurring themes or problems in the client's relationships.	3.33	1.19	92
54. The therapist encouraged the client to examine his or her relationships with others.	3.05	1.08	92
50. The therapist focused on a specific concern in the client's relationships.	3.04	1.06	92
60. The therapist tried to help the client better understand how the client's problems were	2.88	1.03	92

due to difficulties in his/her social relationships.			
51. The therapist encouraged the client to explore ways in which the client could make changes in his/her relationships.	2.50	1.06	87
55. The therapist encouraged the client to think about ways in which he/she might prepare for major changes in his/her relationships.	1.87	0.91	69
59. The therapist made it clear that the client's problem was a treatable medical condition.	1.36	0.62	33
Person-Centered			
46. The therapist seemed interested in trying to understand what the client was experiencing.	4.09	0.74	100
14. The therapist encouraged the client to talk about whatever came to the client's mind.	3.78	0.79	100
40. The therapist encouraged the client to explore the personal meaning of an event or a feeling.	3.45	0.80	100
10. The therapist repeated back to the client (paraphrased) the meaning of what the client was saying.	3.24	0.62	100
23. The therapist encouraged the client to see the choices he/she has in his/her life.	2.94	0.85	97
12. The therapist encouraged the client to talk about feelings he/she had previously avoided or never expressed.	2.87	1.09	95
47. The therapist encouraged the client to focus on his/her moment-to-moment experience.	2.40	0.97	90
Process-Experiential			
11. The therapist encouraged the client to identify or label feelings that he/she had in or outside of the session.	3.55	0.69	100
23. The therapist encouraged the client to see the choices he/she has in his/her life.	2.94	0.85	97
12. The therapist encouraged the client to talk about feelings he/she had previously avoided or never expressed.	2.87	1.09	95
3. The therapist focused on identifying parts of the client's personality that were in conflict.	2.71	0.98	92
34. The therapist focused on how disagreements between certain parts of the client's personality have caused the client's problems.	2.41	0.99	85
47. The therapist encouraged the client to focus on his/her moment-to-moment experience.	2.40	0.97	90
39. The therapist encouraged the client to view his/her problem from a different perspective.	2.23	0.72	90
13. The therapist pointed out times when the client's behavior seemed inconsistent with what the client was saying.	1.91	0.80	74
44. The therapist had the client role-play certain scenes or situations.	1.10	0.50	5

Note. Values in the final column represent the percentage of sessions for which ratings at

least above 1 (Not at All Typical) were given.

Table 10

Study 2: Linear Relations of MULTI Subscales to Termination HRSD Scores, Controlling for Prior Symptom Change

MULTI Subscale	Session 4	Session 7
Psychodynamic	-.31	.08
Common Factors	-.08	.21
Behavioral	.10	.17
Cognitive	-.07	.15
Interpersonal	-.52**	-.02
Person-Centered	-.33	.23
Process-Experiential	-.51**	.08

Note. MULTI = Multitheoretical List of Therapeutic Interventions. HRSD = Hamilton Rating Scale for Depression. All values are semi-partial r s with $df = 23$ controlling for prior symptom change. Negative values represent greater symptom improvement with greater levels of that process subscale.

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 11

Study 2: Curvilinear Relations of MULTI Subscales to Termination HRSD Scores, Controlling for Prior Symptom Change

MULTI Subscale	Session 4	Session 7
Psychodynamic	.53**	.43*
Common Factors	.02	.31
Behavioral	.09	-.17
Cognitive	.31	-.08
Interpersonal	.21	.06
Person-Centered	.24	.31
Process-Experiential	.41*	.54**

Note. MULTI = Multitheoretical List of Therapeutic Interventions. HRSD = Hamilton Rating Scale for Depression. All values are effect size r s with $df = 22$ controlling for prior symptom change and the linear term for that subscale (not displayed).

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 12.

Study 2: Descriptive Statistics for Sessions of Low, Medium, and High PD Adherence.

Scale	Session 4						Session 7					
	Low		Moderate		High		Low		Moderate		High	
	(n = 7)		(n = 12)		(n = 7)		(n = 7)		(n = 12)		(n = 7)	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
MULTI PD Subscale	2.10	0.27	2.81	0.20	3.52	0.26	1.85	0.17	2.63	0.35	3.45	0.16
2. Extratransference interpretation	2.21	0.70	3.25	0.97	3.57	1.10	2.07	0.67	2.92	0.67	4.00	0.65
12. Exploring avoided emotions	2.36	1.03	2.96	1.20	4.71	0.39	1.86	0.75	2.71	0.84	3.50	0.87
13. Identifying defenses	1.21	0.39	2.00	0.90	2.36	0.99	1.36	0.63	1.83	0.65	2.14	0.48
14. Free association	3.43	0.73	3.58	0.93	3.71	0.95	3.07	0.79	3.75	0.54	4.21	0.70
19. Identifying relationship patterns	2.36	1.03	3.96	0.50	4.21	0.64	2.00	0.96	3.54	0.75	4.50	0.50
20. Symptom function	1.29	0.39	2.38	0.83	3.50	1.41	1.36	0.75	2.29	1.01	3.21	1.15
22. Transference interpretation	1.29	0.76	1.54	1.12	2.07	0.89	1.21	0.39	1.63	0.98	2.36	1.49
24. Exploring fantasies	2.21	0.86	2.50	0.77	4.07	1.02	1.71	0.70	1.96	0.62	2.71	1.73
38. Exploring feelings about therapy	1.93	0.79	1.67	0.54	3.00	0.76	1.71	1.07	2.33	1.30	3.07	1.02
40. Exploring meaning	3.14	0.38	3.96	0.58	4.36	0.48	2.57	0.45	3.33	0.54	4.43	0.53

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41. Childhood focus	1.57	0.93	2.21	1.10	2.50	1.35	1.36	0.63	2.13	1.26	2.86	0.75
45. Origin of relationship patterns	2.21	0.86	3.75	0.66	4.21	0.70	1.93	0.67	3.17	0.49	4.43	0.53
HRSD	20.77	6.42	8.90	5.69	14.27	5.72	14.74	6.78	11.87	4.04	15.21	6.76

Note. PD = Psychodynamic therapy. HRSD = Hamilton Rating Scale for Depression. HRSD scores are termination scores adjusted for prior HRSD change.

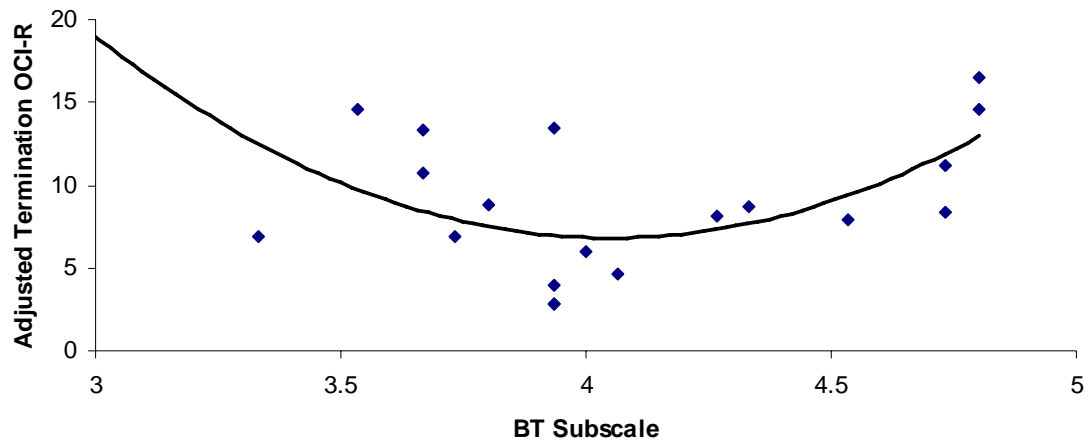


Figure 1. Study 1: Curvilinear relation of client-rated behavioral therapy (BT) subscale scores to adjusted termination Obsessions and Compulsions Inventory-Revised (OCI-R) scores. Plotted values are estimated OCI-R scores for each client at termination adjusted for the residualized change of prior OCI-R scores (Session 4 OCI-R predicted from intake OCI-R). The regression line represents the curvilinear relation between BT subscale scores and subsequent outcome.

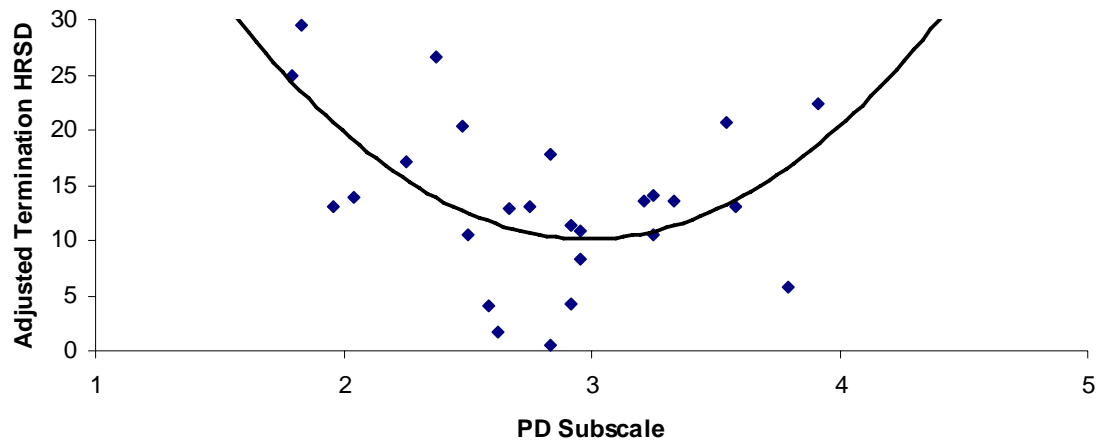


Figure 2. Study 2: Curvilinear relation of Session 4 psychodynamic therapy (PD) subscale scores to adjusted termination Hamilton Rating Scale for Depression (HRSD) scores. Plotted values are estimated HRSD scores for each client at termination adjusted for the residualized change of prior HRSD scores (Session 4 HRSD predicted from intake HRSD). The regression line represents the curvilinear relation between PD subscale scores and subsequent outcome.

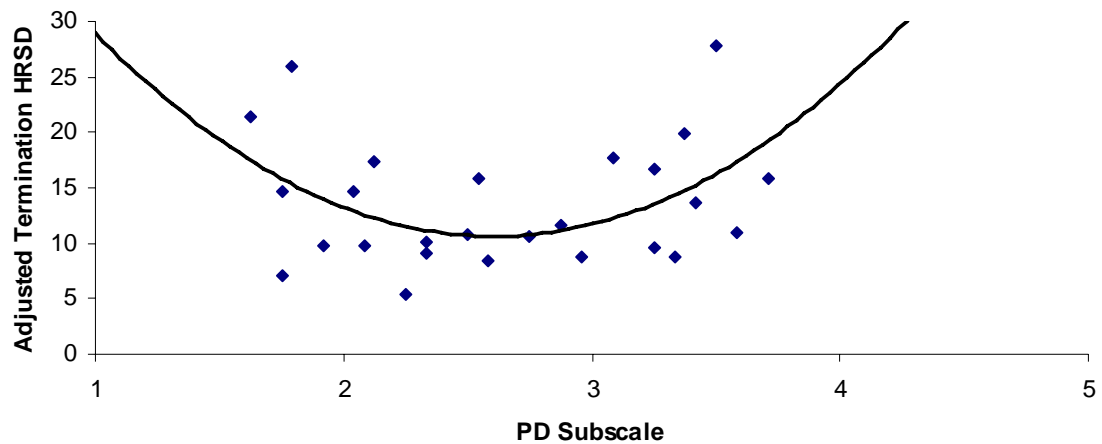


Figure 3. Study 2: Curvilinear relation of Session 7 psychodynamic therapy (PD) subscale scores to adjusted termination Hamilton Rating Scale for Depression (HRSD) scores. Plotted values are estimated HRSD scores for each client at termination adjusted for the residualized change of prior HRSD scores (Session 7 HRSD predicted from intake HRSD). The regression line represents the curvilinear relation between PD subscale scores and subsequent outcome.