

THERAPIST RATINGS OF THERAPEUTIC ALLIANCE AND
THEIR CONNECTIONS TO PSYCHOTHERAPY OUTCOME

A DISSERTATION

SUBMITTED TO THE FACULTY

OF

THE GRADUATE SCHOOL OF APPLIED AND PROFESSIONAL PSYCHOLOGY

OF

RUTGERS

THE STATE UNIVERSITY OF NEW JERSEY

BY

KEVIN F. GILLETTE

IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE

OF

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ABSTRACT

The present study was designed to build upon extant research in the area of the working alliance in psychotherapy and its relationship to treatment outcome. Utilizing a detailed archival data set and following upon a previous study that drew from this same set, the present study searched for significant interaction between treatment outcome and aspects of the working alliance as seen and rated by psychotherapists treating individual members of an actual clinical population, for a time-limited (30 session) treatment, in one of three different treatment conditions (varying by theoretical orientation, clinical emphasis, and/or technical approach). Therapy outcome was signified by the use of residual gains scores calculated from client responses to multiple assessment instruments, with the scores representing measures of the subject's post-treatment (1) symptom picture and (2) level of interpersonal problems. The study was designed to detect significant associations between these outcome measures and: the strength of the therapeutic alliance; the "shape"

of the alliance as represented by plotting shifts in alliance scores over the course of 30 therapy sessions; and the presence/absence, severity and quantity of alliance ruptures and related phenomena (e.g., alliance ruptures either repaired or unrepaired). Analysis of the data yielded findings consistent with those generally seen in the research literature - i.e., stronger therapeutic alliance was associated with better treatment outcome - as well as findings indicating a differential impact on therapy outcome of alliance ruptures and related phenomena. In addition, therapy treatment condition was found to be associated with whether certain rupture-related phenomena were correlated with therapy outcome. The implications of these findings are discussed, as well as the utility of these findings for the practitioner, the import of using therapists' ratings of therapeutic alliance, the limitations of the present study, and directions for further research.

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again, I thank him first and foremost, and dedicate this work to Paul.

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CHAPTER I

INTRODUCTION

Recent decades have seen the arrival of numerous empirical studies on the therapeutic alliance as an ingredient in psychotherapy. The interest in this area of research has evolved over time. An early source of the fuel for this interest was the conclusion drawn from comparison studies of the effectiveness of different models of psychotherapy, the much discussed and debated "Dodo bird" interpretation of the findings: "All have won and all must have their prize," i.e., different psychotherapies appeared to have equivalent efficacy in spite of the manifest differences among them (Luborsky, Singer & Luborsky, 1975; etc.). Given that the differences among therapies did not appear to be responsible for differential efficacy, an interest arose in investigating those factors common to the various therapies that might account for their general efficacy. The relationship existing between a psychotherapist and a client - undeniably a factor common

to most all psychotherapies - quickly became a major focus of attention among theorists and researchers in the field. Many of these became curious in particular about if and how *quality* of the alliance between the members of the therapy dyad might influence the efficacy of therapy.

Many individual studies and meta-analyses over the last several years (Horvath and Symonds, 1991; Martin, Garske & Davis, 2000; Horvath & Bedi, 2002) have established that a connection exists between the therapeutic alliance and psychotherapy efficacy. In general, study after study has indicated that a strong alliance is associated with positive therapy outcome. Over the course of time, as this association has proved to be a robust research finding, studies on the therapeutic alliance have transformed as researchers have tried to illuminate the nuances of the connection between alliance and outcome. Literature addressing the various ways of defining the therapeutic alliance - as well as the working definition of alliance used in this study - will be discussed in the next chapter.

The body of research on therapeutic alliance and treatment outcome has focused primarily (and most fruitfully) on the alliance as experienced and rated by psychotherapy patients. The present study hopes to

contribute to this body of research by examining the less frequently explored area of therapists' experience of alliance and the relationship of this variable to treatment outcome. In addition, this study will attempt to go beyond basic correlative examinations of overall alliance ratings and treatment outcome; it seeks also to provide a more nuanced understanding of the inter-relationship between these variables by exploring the impact on treatment outcome of the evolution of the alliance during the course of treatment.

A previous study (Stevens, C., Muran, J., Safran, J., Gorman, B. & Winston, A., 2007) utilized the same general pool of archival data as the present study, as well as comparable methods and comparable hypotheses. However, it examined the relationship between patients' alliance ratings (rather than therapists' ratings) and treatment outcome. That study will be discussed in detail in the next chapter. The present study presents a unique opportunity to perform a complementary investigation working with data similarly collected, organized, measured and construed, but focusing on them from a different vantage point.

CHAPTER II

REVIEW OF THE LITERATURE

Definition and Significance of the Therapeutic Alliance

The construct under investigation here is named variously in the literature as "therapeutic alliance", "working alliance", "treatment alliance", "helping alliance" and sometimes simply "the alliance". The history of the concept can be traced back to Freud's discussions of the collaboration between analyst and analysand (as distinct from the transference dimension of the relationship). The psychodynamic tradition continued to employ this concept, notably elaborated by Greenson (1967) who began to discuss distinctions between the personal bond between the client and the therapist ("therapeutic alliance") and the level of alignment of the client with therapy tasks ("working alliance"). Later, Luborsky (1976) discussed phases of alliance development between the therapist and client as involving an earlier phase (in

which the therapist is seen as the provider of help and the warm, supportive aspects of the relationship are cultivated) and a later phase (in which the client makes a commitment to and investment in the therapy undertaking). Bordin (1979, 1994) discussed the treatment relationship and therapeutic alliance from a pan-theoretical perspective; his preferred term has been the "working alliance". His discussions of the working alliance have been highly influential in shaping subsequent discussions of, research on, and measurement of the alliance. Among the ideas he proposed were that 1) the strength of the working alliance is variable - not just from dyad to dyad, but over time within the same dyad; and 2) that this variability can provide a source of therapeutic power. As ruptures in the working alliance occur - as some posit they inevitably must (Safran & Muran, 2000) - they must then be repaired, and from this activity much therapeutic benefit may be derived (Bordin, 1980). Certain theorists and researchers (e.g., Safran & Muran, 2000) have developed models of psychotherapy around the idea that this work of repairing ruptures in the therapeutic relationship is a primary source - if not the primary source - of therapeutic benefit.

Measuring the Therapeutic Alliance

As theorists and researchers have tried to understand and measure the therapeutic alliance as it manifests itself in clinical work, they have had to break the concept down into component parts. Various measurement instruments in use reflect their developer's ideas about those components. Once such instrument used to gather data on the alliance is the Working Alliance Inventory (WAI) (Horvath & Greenberg, 1989). This tool was developed based on Bordin's conceptualization of the alliance as involving three key components: 1) agreement between therapist and client on the goals of therapy, 2) agreement on the tasks that constitute therapy, and 3) the bond that exists between therapist and client. Other measurement instruments - e.g., the Penn Helping Alliance Scales (Alexander & Luborsky, 1986), the Vanderbilt Therapeutic Alliance Scale (Hartley & Strupp, 1983), and the California Psychotherapy Alliance Scale (Marmar, Weiss, & Gaston, 1989) - are designed so as to capture other posited components of the alliance, or they place different emphases on similar components. A meta analysis of studies of treatment alliance, representing a large range of measurement instruments, found that all of those instruments used in

the studies examined had adequate and comparable reliability, and most appeared to be related to outcome (Martin, Garske, & Davis, 2000). As this situation indicates, however, there is no one universally accepted definition of the therapeutic alliance, no complete consensus on the list of component parts.

Therapeutic Alliance in this Investigation

For the purposes of this study I have adopted the working definition articulated by Horvath & Bedi (2002) which "attempts to capture both Bordin's theoretical work and the emerging clinical consensus in the field":

The alliance refers to the quality and strength of the collaborative relationship between client and therapist in therapy. This concept is inclusive of... mutual trust, liking, respect, and caring. Alliance also encompasses... consensus about, and active commitment to, the goals of therapy and to the means by which these goals can be reached. Alliance involves a sense of partnership... in which each partner is actively committed to their specific and appropriate responsibilities in therapy, and believes that the other is likewise enthusiastically engaged.... The alliance is a conscious and purposeful aspect of the relation between therapist and client... conscious in the sense that the quality of the alliance is within ready grasp of the participants... purposeful in that it is specific to a context in which there is a therapist or helper who accepts some

responsibility for providing psychological assistance to a client or clients (p. 41).

Evolution of Studies

As noted in the Introduction, research studies in recent years have built upon the general finding of a strong association between strength of therapeutic alliance and therapy outcome (Horvath & Symonds, 1991; Horvath & Luborsky, 1993; Martin, et al., 2000). These studies have attempted to elucidate in detail the ways in which the therapeutic alliance and outcome are linked. This is of interest, of course, because of the hope that a more nuanced understanding of the connection between alliance and treatment outcome will enrich the work that clinicians do with their clients. To this end, studies have begun to examine factors such as the client's relationship history and general style of relating, the corresponding information about the therapist, client diagnosis, and pattern of therapeutic alliance (i.e., how the strength of the alliance varies over the course of treatment). Researchers have also examined the connection between treatment outcome and alliance as it is reported by different sources - e.g., alliance as seen by client, by therapist, or by outside observer.

Recent Key Studies

Three recent studies have been particularly relevant to the material discussed herein; have researched phenomena similar to those under investigation in this study; and have, as a consequence, been influential in shaping the present study, both conceptually and methodologically. For these reasons, said studies will be described in at this point in some detail.

Study I: Stevens, et al., 2007

The study by Stevens, Muran, Safran, Gorman, & Winston (2007) on therapeutic alliance and treatment outcome will be discussed in particular detail due to its relationship with the present study - it has served as a conceptual launching pad and, to a certain extent, has provided a partial blueprint for this study.

Background:

Stevens examined archival data from a research program on brief psychotherapy, looking specifically at Working Alliance Inventory (WAI) scores generated by clients over

the course of time-limited (30 session) treatments. He designed his study to examine the shape or pattern of the treatment alliance over the course of time within a given therapy dyad, and to detect whether an interaction could be found between this shape and the outcome of the treatment for the patient. Patterns were identified by statistical analysis, and alliance "shapes" could be seen by plotting each of the patient's WAI ratings on a chart and observing the patterns formed over the course of 30 sessions. Stevens examined this data in response to work done by earlier researchers such as Kivlighan and Shaughnessy (1995, 2000), who had found particular patterns of alliance development in therapy dyads of time-limited treatments. Kivlighan and Shaughnessy found that their results (2000) supported the idea of different patterns of alliance being differentially associated with treatment outcome, and that a quadratic pattern (i.e., high alliance ratings, followed later in treatment by a drop in ratings, followed still later by a return to the original levels toward the end of treatment) was particularly associated with improved treatment outcome. This high-low-high pattern was first posited by Mann (1973) in regard to his short-term (i.e., 12 session) psychotherapy model. He believed that alliance development through the course of the therapy that would be

characterized by a period of strong alliance in the initial stages of treatment, followed by a weaker alliance during the middle phase of treatment (resulting from client resistance and disillusionment), followed by a stronger alliance once again manifesting itself during the final stage of treatment. In spite of the fact that Mann only conceived of this high-low-high alliance rating pattern as an expected phenomenon in the brief psychotherapy model, later theorists such as Gelso and Carter (1985, 1994) suggested that this pattern would be seen in general in therapeutic relationships, "especially in treatments that abbreviate duration" (Gelso & Carter, 1994, p. 301). Stevens intended to test whether the predicted high-low-high alliance pattern discussed by Gelso and Carter and found by Kivlighan and Shaughnessy would be seen when the research was conducted using a much more robust data set (limitations of the Kivlighan and Shaughnessy 2000 study included the use of novice therapists and an extremely brief period of treatment, i.e., four sessions).

Taking his cue from writers in the field (e.g., Safran & Muran, 2000), Stevens hypothesized that the middle phase of treatment may encompass a more complex evolution of therapeutic alliance than that suggested above, i.e., that a globally strong alliance is followed by a global drop in

alliance strength, which in turn gives way to a global return to the earlier high levels. Instead, he offered the idea that the alliance might be strained and experience ruptures at various points during the course of treatment, and that addressing these ruptures as they occur results in a different shape to the alliance pattern than those previously discussed (jagged or spiky as opposed to curvilinear). In addition, following on suggestions in the literature that the sort of negotiation between therapist and patient that is needed to address and repair alliance ruptures may be beneficial to the working alliance, therapeutic in-and-of-itself, and have a positive influence on treatment outcome in general (e.g., Safran & Muran, 2000), Stevens also saw the possibility that courses of treatment characterized by such ruptures and repairs to the alliances might show better treatment outcome than courses of treatment without such rupture-repair activity.

Hypotheses:

Stevens' hypotheses, then, were that: (1) consistent with the extant literature, higher treatment alliance ratings would correlate with improved treatment outcome; (2) instead of an overall high-low-high pattern to the treatment alliance, the data would show either a linear

increase in alliance or a pattern characterized by valleys and peaks as the alliance experienced strain/rupture, dropped, and then was repaired within a few (three to five) sessions; (3) treatments showing either a linear increase in alliance strength or an alliance pattern marked by alliance rupture-and-repair episodes would show an improved treatment outcome compared to other treatments with different alliance shapes.

Attributes of the Study:

Stevens' research drew upon data from the Brief Psychotherapy Research Program at Beth Israel Medical Center in New York City (this Program will be described in greater detail in the following chapter as it is also the source for the data used in the present study). Stevens looked at 44 patient-therapist dyads that had met for 30 sessions each in one of three treatment conditions (Brief Relational Therapy, Cognitive Behavioral Therapy or Brief Adaptive Therapy - each of these treatments will be discussed in greater detail in the next chapter). Patients were drawn from a clinical population (unlike in some important previous studies, e.g., Kivlighan & Shaughnessy, 2000) and therapists were either experienced practitioners in the field or at an advanced level of training and

receiving intensive supervision on cases seen in the program. Patients seen in the program completed several pre- and post-treatment measures of adjustment and functioning. During treatment patients completed Post-Session Questionnaires at the end of each session; these assessed patients' views of multiple aspects of the treatment process, including treatment alliance, which was measured via the Working Alliance Inventory (Tracey & Kokotovic, 1989). Stevens used multiple statistical methods for assessing the data, including cluster analysis, analysis of variance, and coders trained to examine charts of alliance evolution plotted over time and identify particular patterns. Treatment outcome was operationalized via reference to two scores that were factor-analyzed from the post-treatment measures used for patients in the Brief Psychotherapy Research Program, one representing symptomology, and the other representing interpersonal functioning.

Results:

In his study, Stevens found that the general finding described in several meta-analyses (e.g., Horvath & Symonds, 1991; Martin, et al., 2000) was borne out - in general, higher alliance ratings were associated with

improved treatment outcome. In addition, Stevens found support for his second hypothesis: a majority of cases demonstrated patterns of alliance development over time that were either linear increasing (i.e., growing generally stronger over time) or jagged (i.e., punctuated by episodes of alliance rupture followed by alliance repair). The high-low-high pattern proposed by Gelso & Carter (1994) and seen by Kivlighan & Shaughnessy (2000) was not found here. Stevens' third hypothesis was not fully supported - although one statistically identified group of cases categorized as having a stable-linear alliance pattern (i.e., neither increasing nor decreasing significantly over the course of treatment) did show statistically significant improvement in one measure of treatment outcome, in general no relationship was found between the presence of rupture-and-repair and outcome, or between significant linear trend and outcome.

Study II: Stiles, et al., 2004

Stiles and colleagues, also influenced by the study discussed above by Kivlighan & Shaughnessy (2000), attempted to investigate whether they might achieve similar findings using an actual clinical population of subjects -

treated by experienced professionals - drawn from a data pool available through the Second Sheffield Psychotherapy Project, a research program providing time-limited psychotherapy for depression (Stiles, W.B., et al., 2004). Subjects were seen in one of two treatment conditions (i.e., two different psychotherapy models were used), for either 8 or 16 sessions. Screening of subjects was linked to these clients meeting diagnostic criteria for admission to the Psychotherapy Project, i.e., certain indications of depressive symptomology. Assessments of subjects were done using multiple standardized instruments of known and acceptable validity and reliability. Working alliance, in particular, was measured through use of subjects' alliance ratings on the Agnew Relationship Measure (ARM; Agnew-Davies, Stiles, Hardy, Barkham, & Shapiro, 1998).

Stiles, et al. examined their data in several ways, finding (among other things) four distinct clusters of alliance shape/pattern. Although two of these clusters were similar in ways to alliance patterns identified by Kivlighan & Shaughnessy, Stiles, et al., did not find evidence to support a positive correlation between treatment outcome and any of the identified patterns. Attempting to examine their data in new ways, the researchers began to look for subjects with what they

described as “V-shaped profiles”, as opposed to “U-shaped profiles” - i.e., the latter term indicating a quadratic pattern or curved shape when alliance ratings were plotted across time for the 8 or 16 sessions of therapy received; and the former term indicating alliance patterns containing sharp drops in alliance ratings followed by increased ratings within a few sessions. The V-shaped profiles described by Stiles, et al., appeared to be analogous to the cases characterized by rupture-and-repair events that were investigated by Stevens, et al. Those cases identified as having V-shaped segments (i.e., rupture-and-repair episodes) also showed evidence of better treatment outcomes.

Study III: Strauss, et al., 2006

Yet another study examining treatment alliance, ruptures in alliance, and impact on symptoms of alliance and alliance ruptures, was conducted by Strauss, J., et al. (2006). In this instance, influenced by the findings of Stiles, et al. (2004) (see the preceding section), Strauss and colleagues made their own attempt to examine the interaction of therapeutic alliance and treatment outcome, focusing in particular on (A) evaluating ratings of early

treatment alliance levels as predictors of treatment retention and later symptom change, and (B) investigating the role of alliance ruptures and rupture-and-repair events in treatment outcome and as predictors of patient characteristics, therapy events, etc. As Stiles, et al. had found that only V-shaped alliance patterns were predictive of outcome (and that U-shaped patterns were not), the search for such patterns was incorporated into the study conducted by Strauss, et al. from the start.

Of additional relevance to the present study is the fact that Strauss and colleagues aimed at enhancing their understanding of the role of therapeutic alliance in working with a clinical population with (as it is designated in the Diagnostic and Statistical Manual) Axis II psychopathology: subjects seen in her study were diagnosed with either Avoidant Personality Disorder or Obsessive-Compulsive Personality Disorder (besides some comorbid Axis I disorders). The relevance of this aspect of Strauss' study to the present study is in the similarity of the subject pool; as will be described at greater length in the following chapter, the data used for this research was drawn from a research program focusing on treatment with a clinical population suffering from personality disorders included in the DSM's Cluster C grouping of personality

disorders (e.g., Avoidant Personality Disorder). For both of these study's subject populations then, given the nature of the psychopathology constituting the inclusion criteria for entering the research projects and receiving the offered treatment (i.e., clinically significant relational difficulties), a full understanding of the role of the therapeutic alliance in the treatment is of great importance.

Subjects for Strauss' study were recruited from the general population, screened for inclusion/exclusion criteria, and assessed for pre-treatment psychopathology using multiple instruments recognized for reliability and validity. Treatment alliance was assessed by means of patient ratings on the California Psychotherapy Alliance Scale (CALPAS; Marmar, C.R., Weiss, R., & Galston, L., 1989); alliance assessments were made at given intervals, though number of ratings per subject differed as a function of the number of sessions completed (up to 52 weekly sessions were offered). The treatment - cognitive therapy for personality disorders - was administered by a group of doctoral-level clinicians (augmented by two predoctoral clinicians). Strauss and colleagues developed a working, quantitative definition of rupture-and-repair episodes, based on the properties of the assessment instrument used

(i.e., the CALPAS); the definition / quantification of rupture-and-repair events used in the present research was influenced by the work of Strauss in her study.

Strauss' findings included: strong correlations between early alliance ratings and early change in depression symptoms (but not necessarily in symptoms assessed by instruments focusing on personality disorder pathology); a strong association between high early alliance levels and improvement on all outcome measures; an association between the occurrence of rupture-and-repair event in the treatment and symptom reduction (both depressive and personality symptoms); and an association between the occurrence of rupture-and-repair episodes and low pre-treatment scores on one instrument used to measure personality symptoms.

Rationale for the Present Study

The present study is intended to build upon the Stevens study by using data drawn from the same general pool of subjects that Stevens used. Similar hypotheses will be investigated. However, while Stevens used client ratings of alliance as a variable to be compared with

treatment outcome, this study will use therapists' alliance ratings.

Although studies examining therapeutic alliance as rated by therapist or outside observer are represented in the literature, the preponderance of the studies done on therapeutic alliance and treatment outcome - including in the three recent key studies described above - have focused on therapeutic alliance from the patient/client perspective. There are differences to be seen, and, as Gelso & Carter (1994) point out:

"... some differences in ratings according to source are entirely expectable, given the profoundly different psychological positions or roles of, for example, the therapist and client (to say nothing of the differences in individual dynamics). Such role and individual differences create vastly different intrapsychic and interpersonal reactions in the participants, which, in turn, account for why these participants may differ in their ratings of a common variable (e.g., the working alliance)." (p.304)

The research on therapist ratings of treatment alliance and their associations with treatment outcome has yielded some mixed findings. There are several studies indicating that therapists - even experienced ones - are often unaware of patients' negative feelings about therapists or about problematic interactions in the therapy dyad (Safran, et al 2001). Given this, it is not

surprising that some meta-analyses of research on the treatment alliance have found a weaker correlation between therapist-rated alliance and outcome than between either patient-rated or observer-rated alliance and outcome (Horvath & Symonds, 1991; Horvath & Bedi, 2002). Another meta-analysis (Martin, et al., 2000) found that therapist's alliance ratings tended to be less consistent than those of patients, and the researchers draw the conclusion that "patients tend to view the alliance as stable, whereas therapists... tend to indicate more change over time in their alliance ratings" (p. 447). This is consistent with the fact that one would expect to find that therapists, by virtue of their training and their role in the therapeutic enterprise, would be more sensitive to the presence of ruptures in the therapeutic alliance and, hence, would report these more frequently. What then, to make of the findings in one study that patients tend to hide negative feelings about therapy from their therapists, and even experienced therapists were only able 45% of the time to identify when patients had concealed negative feelings about them (Hill, et al, 1993)? One would expect from this to see ruptures reported more frequently in the ratings of patients than in those of therapists. And again, if we might expect therapists to show greater sensitivity to

changes in the strength or quality of the treatment alliance, we might also reasonably expect that therapists' ratings of treatment alliance would show a stronger correlation with outcome than do the ratings of patients. Instead, some studies have shown the opposite to be true (Horvath & Symonds, 1991). Ultimately, we may not be surprised that Bedi, Davis & Williams (2005) found a "discrepancy between the clients' perspective on the alliance and the understanding of the alliance from the psychotherapist's or investigator's perspective that is predominant in the literature". Clearly the nature of the interactions amongst the variables 1) patient-rated alliance, 2) therapist-rated alliance, and 3) outcome, require clarification through further investigation.

This study will investigate these interactions by comparing therapist alliance ratings with outcome measures, using data collected in the Brief Psychotherapy Research Program at Beth Israel Medical Center. The program and the details of the data used will be described in the next chapter. Three hypotheses will be tested:

- 1) Higher alliance ratings will be associated with more positive patient outcome.
- 2) Alliance as plotted over the course of treatment will represent either a linear form or be characterized by

multiple episodes of alliance rupture followed by alliance repair. The overall high-low-high pattern suggested by some theorists (Mann 1973; Gelso & Carter, 1994) is not expected to appear.

- 3) The plotted shape of the alliance will be reflected in treatment outcome (i.e., those treatments where the alliance is characterized by either a linear increase or by rupture-and-repair episodes will show better outcome than those treatments where the alliance takes some other form).

In addition, as a corollary to this last hypothesis, an initial exploratory question will be considered:

- 3b) Therapist ratings of alliance may vary according to treatment condition. That is, in those conditions where greater emphasis is placed on interpersonal process (e.g., Brief Adaptive Therapy, Brief Relational Therapy) the data may reflect that therapists' alliance ratings show greater variability than in conditions where less emphasis is placed on such processes (e.g., Cognitive-Behavioral Therapy).

CHAPTER III

METHODOLOGY

This study used data gathered as part of the Brief Psychotherapy Research Program at Beth Israel Medical Center. In this section I will describe the Brief Psychotherapy Research Program, its participants, and the treatment conditions within this Program from which subjects for this study were drawn. After describing those measures used for data collection in the Research Program that are relevant to this study, I shall describe the selection criteria for the subset of subjects used in this study.

The Brief Psychotherapy Research Program

The program, which began at Beth Israel Medical Center in the 1980's, initially examined the efficacy of particular time-limited psychotherapy models for use with patients with personality disorders. With time the focus

of the program shifted to include an interest in investigating mechanisms of change in psychotherapy. In the early 1990's a grant from the National Institute for Mental Health helped support the work of Muran and Safran (Muran, 2002) at Beth Israel as they refined the program's research into investigating the role of the therapeutic relationship as an instrument of change in psychotherapy. The Research Program has laid particular emphasis on the examination of impasses and ruptures in the therapeutic alliance. The goals of this emphasis have included the development of methods for identifying and resolving these ruptures when they appear, and the development of supervision and training that will aid therapists in their ability to recognize, resolve and explore these events with their patients. Of the treatment models employed in the Brief Psychotherapy Research Program, the Brief Relational Therapy model (see below) places the greatest emphasis on the exploration of the vicissitudes of the therapeutic alliance, both in supervision and in the therapy itself. However, the Research Program has collected data on the therapeutic alliance in each of its associated treatment conditions.

Participants in the Program:

(I) Patients:

Patients seen in any of the treatment conditions of the program were generally self-referred, having been recruited via advertisements in New York City newspapers inviting adults with long-standing depression, anxiety or interpersonal problems to participate in a research program investigating time-limited psychotherapy. Trained research assistants conducted the intake procedures with potential candidates for the program. These intake procedures included an initial telephone screening followed by three interviews. During these interviews various diagnostic and information-gathering measures were used. These included the Structured Clinical Interview (SCID: First, Spitzer, Gibbon & Williams, 1995) for Axis I of the Diagnostic and Statistical Manual of Mental Disorder, Fourth Edition (DSM-IV: American Psychiatric Association, 1994); the SCID for Axis II of the DSM-IV; the Relationship Scenarios Interview (Muran, Samstag, Segal and Winston, 1998), a measure that examines the interpersonal styles of potential subjects; a battery of questionnaires used to determine pretreatment personality factors that may predict the quality of the therapeutic relationship (Muran, Segal, Samstag & Crawford,

1994); and the Adult Attachment Interview (George, Kaplan & Main, 1996).

The principal inclusion criterion for patient-participants was a diagnosis of a Personality Disorder in either the Cluster C or the Not Otherwise Specified (NOS) categories of the DSM-IV (Axis II). Exclusion criteria included: evidence of psychosis, organic brain dysfunction, mania, severe impulse control problems, severe obsessive-compulsive disorder, serious eating disorder, serious dissociative disorder, active substance use disorder or active suicidal / para-suicidal behavior. In addition, in order to better control for the effects of confounding variables and isolate the effect of psychotherapy, potential patients on psychotropic medication or in another psychosocial treatment were also excluded from the Research Program. See Table 3.1 for demographic information on the subset of patients utilized in this study.

Table 3.1
Patient Demographics

<u>Gender:</u>	<u>Number (%)</u>
Male:	26 (54.2%)
Female:	22 (48.8%)
 <u>Age:</u>	
Range:	25-69
Mean:	41.40
Standard deviation:	10.84
 <u>Employment Status:</u>	<u>Number (%)</u>
Employed:	41 (85.4%)
Unemployed:	7 (14.6%)
 <u>Marital Status:</u>	<u>Number (%)</u>
Single (never married):	26 (54.2%)
Married:	11 (22.9%)
Divorced or separated:	10 (20.8%)
Widowed:	1 (2.1%)
 <u>Education:</u>	<u>Number (%)</u>
Some college:	8 (16.7%)
College degree:	24 (50%)
Some post-graduate:	1 (2.1%)
Graduate degree:	15 (31.3%)
 <u>Race:</u>	<u>Number (%)</u>
Black (Non-Hispanic):	1 (2.1%)
Hispanic:	2 (4.2%)
White (Non-Hispanic):	44 (91.7%)
Asian/Pacific Islander:	1 (2.1%)

(II) Therapists:

The therapists who worked with these patients were drawn from the Department of Psychiatry of Beth Israel Medical Center. They came from a range of clinical backgrounds and levels of experience, and included clinical psychologists, clinical social workers, attending psychiatrists, psychology trainees (interns and externs) and psychiatry residents. Regardless of background or experience, all therapists received a similar training in the therapy model that they employed as part of this research project. This was done to achieve consistency of treatment. Each therapist participated in a weekly, 90 minute case seminar. In addition, licensed clinicians participated in one hour per week of supervision until they met acceptable standards of treatment adherence (usually after 1 to 2 therapy cases). Unlicensed clinicians continued to receive individual supervision for one hour per week for all cases seen. See Table 3.2 for demographic information on the therapists who treated the subset of subjects utilized in this study.

Table 3.2
Therapist Demographics

<u>Gender:</u>	<u>Number (%)</u>
Male:	12 (25.0%)
Female:	36 (75.0%)
 <u>Age:</u>	
Range:	27-57
Mean:	36.23
Standard deviation:	6.35
 <u>Therapist Degree:</u>	<u>Number (%)</u>
M.D.:	4 (8.3%)
Ph.D.:	20 (41.7%)
M.S.W.:	3 (6.3%)
M.A.:	21 (43%)
 <u>Therapist Years of Clinical Experience:</u>	<u>Number (%)</u>
0 years:	21 (43.8%)
1-5 years:	13 (27.1%)
6-10 years:	9 (18.7%)
10+ years:	5 (10.4%)
Range:	0-30
Mean:	4.6
Standard Deviation:	6.9

A group of 128 cases (seen in the Brief Psychotherapy Research Program between the years 1992 and 2000) has been systematically analyzed by the principal researchers in the program, such that detailed data are available for this large sample. These data include descriptive elements (e.g., demographic information) and clinical elements (e.g., indices of post-treatment outcome for patients). The present study examined a subset of this large group of 128 cases; selection criteria for this study's sample are described below.

Treatment Conditions:

Although various treatment models have been used and studied in the Brief Psychotherapy Research Program since its inception, the 128 cases which have received extensive analysis (see above) and from which the sample for this study was selected, were all seen in one of three treatment models. These models or - for sake of discussion as part of a research program - treatment conditions, have the following elements in common: all were manualized treatments designed to treat patients with personality disorders; all were designed to meet for 30 sessions in a once-per-week format; and all were subjected to the same

methods of data collection (i.e., videotaping of sessions, and Post-Session Questionnaires completed by both patients and therapists).

Brief Adaptive Psychotherapy (BAP): This is a short-term, psychodynamic model of treatment based on principles of the ego-psychology tradition (Pollack, Flegenheimer & Kaufman, 1988). The early phase of treatment is devoted to case formulation and identifying a major maladaptive pattern in the patient's behavior. Patient and therapist contract to make this identified pattern a focus of attention; therapist activity in BAP consists largely of interpretations of patient behavior, made in reference to the agreed upon focus. The principle of change upon which the treatment is built holds that the reality orientation of the patient's ego will help the patient adapt to the environment more effectively as unconscious, irrational material and conflicts are made conscious. The therapeutic relationship is understood largely in terms of patient transference. Correspondingly, supervision and training in BAP lays emphasis on therapists identifying transference and countertransference manifestations in treatment and their interactions. Supervision and training in this model tend to be didactic in nature.

Cognitive-Behavioral Therapy (CBT): This model of treatment focuses on the notion that behavior and personality are organized and structured into schemas and belief systems about the self (Turner & Muran, 1992). The therapy attempts to bring about change in the structure of the patient's maladaptive schemas. It does this via the construction of learning experiences that challenge the content of those schemas. As with BAP, arriving at a case formulation is a priority in the beginning part of treatment. This formulation includes defining a list of problems or target complaints, and elucidating the patient's core belief systems. The patient's maladaptive and dysfunctional beliefs are then challenged through the application of an array of tasks. Some of these tasks are more cognitive in nature (e.g., keeping thought records), some are more behavioral (e.g., role-playing); some are performed within the therapy session, and some may be assigned as homework for the patient to perform between sessions. During the terminations phase of treatment and emphasis is placed on generalizing what the patient has learned during the course of treatment. The relationship between therapist and patient is seen as one wherein both parties collaborate to test the viability and validity of

the patient's beliefs in an empirical fashion; the patient is encouraged and taught to perform this function independently for him-/herself in the future. Parallel to the didactic element present in the treatment, supervision of this therapy model tends also to be didactic in nature.

Brief Relational Therapy (BRT): This model, developed by Safran and Muran (2000) as part of their NIMH-funded research investigating the role of the therapeutic relationship in patient change, is an integrative treatment informed by the traditions and techniques of interpersonal-relational psychoanalysis and humanistic psychotherapy. It also integrates recent theories on cognition and emotion. This model of therapy works to bring about change through: 1) expanding one's awareness of the processes taking place within and between self and other ("decentering"); and 2) providing relational experiences that are new and challenging to existing maladaptive relational schema ("disconfirmation"). In general, these goals are pursued through the technique of metacommunication, or, communicating about the process of communication in the therapy dyad (Kiesler, 1996). Through focusing attention on an interaction as it unfolds in the therapy situation, both members of the dyad become disembedded from the

(jointly-created) relational matrix and can collaborate on understanding what is occurring in the therapeutic relationship. In this way decentering takes place and, ideally, disconfirmation of the patient's maladaptive relational schema occurs.

Emphasis in the BRT model of treatment is on elucidating and cultivating awareness of relational process issues, rather than content. Because other concerns - e.g., correcting irrational beliefs - receive relatively less direct emphasis, case formulation is not emphasized as an initial treatment task. Identifying and exploring ruptures in relatedness (and associated maladaptive relational schemas) as they occur in the treatment will provide the opportunities for understanding and change that will, ideally, lead to patient growth. This therapy model is also informed by social constructivist ideas, such that knowing what is occurring in the therapeutic relationship is a discovery process on which therapist and patient must collaborate. Therapist and patient acknowledge the co-constructed nature of the events that occur in the relationship and the co-constructed nature of their subsequent understanding of those events as they are explored. Neither holds a privileged position of knowing the reality of the situation more than the other. In

accord with these principles, supervision in this treatment model lays great emphasis on the exploration of therapists' subjective experience. To this end, techniques for increasing mindfulness (Epstein, 1995) and cultivating greater self-awareness are employed. These, in turn, aid the therapist in disembedding from the relational matrixes which they enact with patients and in metacommunicating with their patients.

Measures Used During Treatment:

In addition to those measures described above that were used for gathering diagnostic and base-line data on intake, other measures were used during the course of the treatment to measure change as it occurred in therapy. As a way of capturing changes that occurred from session to session, both patients and therapists completed Post-Session Questionnaires (PSQ) at the end of each session. These exist in slightly different - but parallel - versions for patient (PSQP) and therapist (PSQT). The PSQ is actually a group of independent but related assessment scales clustered together in such a way as to measure multiple dimensions of the completed therapy session. Sections are included to measure the degree to which a session was felt to help or hinder the patient; to detect

the presence of an alliance rupture event; to investigate how alliance ruptures were dealt with (Rupture Resolution Questionnaire or RRQ); to measure contrasting variables of the depth of the session versus the smoothness of the session (Session Evaluation Questionnaire or SEQ: Stiels, 1981); to assess views of the interpersonal behavior and style of the other member of the dyad (Interpersonal Adjective Scale or IAS: Muran, Samstag, Jilton, Batchelder & Winston, 1997; Wiggins, Trapnell & Phillips, 1988); and therapeutic alliance (Working Alliance Inventory or WAI: Horvath, 1981; Horvath & Greenberg, 1989; Tracey & Kokotovic, 1989). As the WAI is the primary source of data used in this study from among the various components of the PSQ, I shall describe it in greater detail.

Horvath developed the WAI, desiring an instrument that would assess therapeutic alliance irrespective of the theoretical orientation of the therapist. In order to do this he built the instrument around the pan-theoretical definition of the therapeutic alliance developed by Bordin (1979). The WAI therefore measures the three areas the Bordin posited as essential components of the therapeutic alliance: agreement on therapy tasks, agreement on therapy goals, and emotional bond between therapist and patient. Questions addressing these areas were screened (in two

elimination rounds) for content validity by experts on the working alliance and practicing psychologists from various theoretical orientations. The 12 items for each area that rated highest for relevance were selected, resulting in a 36 items scale. Each item contains a 7-point Likert scale, and the WAI yields both a total score for all items and three subscale scores (one for each of the task, goal, and bond dimensions). The scale was later refined by Tracey and Kokotovic (1989), who analyzed the factor structure of the instrument and selected the four items from each subscale that best defined the construct investigated by that subscale. The results of this work were used to create a 12 item short form of the scale (i.e., with three subscales of four items each). It is this short form of the WAI that is included in the PSQ and has been used to gather the data on therapist and patient ratings of therapeutic alliance used in the Beth Israel Brief Psychotherapy Research Program and in this study.

Outcome Measures:

In the Brief Psychotherapy Research Program, treatment outcome is assessed through the use of six measures. (1) The Global Assessment of Functioning (GAS: American Psychiatric Association, 1994) is a 100 point scale on

which therapists rate their patient's social, occupational and psychological functioning. This scale represents a continuum of psychiatric health, with higher scores representing greater levels of health and strong social-occupational functioning, and lower scores representing more impaired health and poorer levels of functioning. This scale is a component of standard psychiatric diagnosis using DSM-IV. (2) The Symptom Checklist 90, Revised Edition (SCL-90-R: Derogatis, 1983) is a self-report measure on which patients rate levels of distress in relation to a series of general psychiatric symptoms. (3) The Inventory of Interpersonal Problems (IIP: Horowitz, Rosenberg, Baer, Ureño & Villaseñor, 1988) is a self-report questionnaire on which patients rate their level of distress in regard to a list of common interpersonal problems. (4) The Wisconsin Personality Disorder Inventory (WISPI: Klein, Benjamin, Treece, Rosenfeld & Greist, 1990) is a self-report measure in which patients rate the frequency with which each of a series of statements applies to them; these statements are descriptive of one's feelings about one's self, one's typical approach to work and responsibilities, and one's interpersonal relationships. (5) The Patient Target Complaints and (6) Therapist Target Complaints are related measures that ask the patient and

the therapist respectively to rate the degree to which the target complaints originally identified by the patient are still problems for the patient and how much the patient has improved in relation to these problems.

The scores from these outcome measures were subjected to statistical procedures (e.g., calculation of residual gains scores, principal-components analysis with varimax rotation - see Muran, 2002 for detailed explication), and from this process two composite outcome factors were found to describe patient post-treatment outcome. The first of these is a factor indicative of level of symptomology and subjective distress. The second represents a patient's level of interpersonal functioning. In this investigation, these two outcome factor scores were used the primary indices of treatment outcome.

Selection Criteria for the Investigation:

From the large group of 128 cases discussed above, a subset was selected as the sample for this study. This study was conceived to run parallel, to a certain extent, to Stevens' (2007) study which investigated the relation between patients' ratings of therapeutic alliance and treatment outcome. In order to meaningfully compare the findings of this study with the Stevens study, some

consistency of methodology was desirable. Therefore, this study used inclusion/exclusion criteria similar to those used in the Stevens study. The criteria were as follows:

- 1) The case was one of the 30-session format treatments from among the above-discussed treatment conditions (i.e., CBT, BAP or BRT). Cases that were seen in a 40-session format (which existed earlier in the history of the Brief Psychotherapy Research Program) were excluded.
- 2) The therapy dyad met for all 30 sessions.
- 3) Outcome data were available to describe change from intake to termination.
- 4) The therapist submitted at least 66% of the PSQ's (i.e., 20 out of 30)
- 5) There were no gaps in the PSQ reporting of more than three consecutive sessions.

Out of the large group of 128 cases, 48 cases fit these criteria and were analyzed for this study. All of the data examined were archival data. Identifying information had been previously removed from the store of data on the participants; therefore, the identities of the subjects in this study were protected even from this researcher.

In cases where some data points were missing (e.g., missing post-session questionnaires, resulting in no Working Alliance Inventory score for a given session), a value was computed using the median of the WAI scores in two places to either side of the missing value, and then interpolated into the place of the missing value.

Data Analysis:

Once again, in order to produce results that might be meaningfully compared with those of Stevens (Stevens, et al., 2007) - whose investigation analyzed therapy dyads from the same large subject pool, but focused on patient ratings of alliance and their relation to treatment outcome - this investigation adapted aspects of Stevens' data analysis methods. These were modified or augmented at times in accord with new trends seen in the work of other researchers in this field (e.g., Strauss, et al., 2006).

Alliance level and outcome: The first step in analyzing the data was to determine what relationship, if any, would be found between level of therapeutic alliance and treatment outcome. Pearson correlation coefficients were calculated for therapists' WAI ratings and each of the treatment outcome factor scores described above (Factor One representing symptom reduction and Factor Two representing

interpersonal functioning) in multiple ways. This was done in order to achieve a more detailed understanding of the relationship between treatment outcome and treatment alliance as it developed over the course of time; the relatively simple correlation of overall WAI average with outcome - although valuable - would, if taken alone, provide an indication of the relationship between treatment alliance and outcome, but one comparatively lacking in nuance.

First, overall mean WAI ratings for entire treatments were compared with the outcome factors. Next, following the example of Stevens' study - and based on the ideas suggested by Gelso & Carter (1994) and by Horvath & Luborsky (1993) - the span of the 30 session treatment was divided into three phases, and mean WAI ratings were calculated for each of these phases: Phase One represented treatment sessions 1 through 5, Phase Two represented sessions 6 through 25, and Phase Three represented sessions 26 through 30. Each of these mean scores was then analyzed with regard to each of the outcome factor scores. Finally - in a similar vein, and again following the lead of Stevens' study - Pearson correlations were calculated for each outcome factor with the WAI scores therapists gave at each of three sessions which were considered to be sounding

points along the course of treatment. These were sessions number three, fifteen and thirty. Pearson correlation analyses significance tests were carried out using SPSS 11.5.

Identification of alliance patterns: Therapeutic alliance data were analyzed for patterns and trends via various statistical methods appropriate for use with time-series data, including cluster analysis (see description below), analysis of variance (ANOVA) and complementary post-hoc statistical tests (e.g., Tukey's HSD; Pillai's Trace; etc.). ANOVA and other post-hoc tests were used principally to examine the statistical significance of results found via other methods, e.g., cluster analysis. Data analyses were carried out using SPSS 11.5.

Cluster analysis is a method by which data are sorted according to various characteristics, in order to find whether certain cases within the data set are sufficiently similar to one another - and sufficiently differentiated from other data - that they may be viewed and described as a cluster (or grouping) of cases, which differs from other cases or clusters to a statistically significant degree.

In this study, the mean session-by-session WAI scores reported by therapists were subjected to a hierarchical cluster analysis using Ward's minimum variance method.

However, due to the problems involved in attempting such an analysis with time-series data sets containing missing values, some cases were excluded from this analysis, bringing the total number examined from 48, down to 43 (although missing values were generally interpolated by calculating estimates based on the median scores of the surrounding sessions, this procedure was not useful here due to the placement of some of the missing values and to the requirements of the general linear model analysis conducted by SPSS 11.5's GLM program).

In addition to searching for possible clusters representing categories of cases, this method was also used to determine whether linear or curvilinear trajectories were present among the alliance ratings recorded over the course of the 30 session treatments. Those trajectories and clusters detected via these methods were then analyzed against the treatment outcome measures (see discussion of outcome factor scores above) to determine whether (a) any of the patterns and/or trends of alliance development detected were significantly correlated with treatment outcome, and (b) whether the detected patterns were differentially associated with the outcome measures.

Identification of Rupture-and-Repair Events: In order to further investigate the hypotheses presented in this

study, it was necessary to examine the cases to detect the presence or absence of any Rupture-and-Repair events - that is, the presence of ruptures in the working alliance, as indicated by a decrease in WAI score, followed by a corresponding repair of that rupture, as indicated by an increase in the WAI score.

Several researchers have begun to investigate the phenomena of rupture-and-repair events in recent years (Stiles et al., 2004; Strauss, J., et al., 2006; Stevens, et al., 2007). In general, researchers have searched for and defined their own means identifying these events; as there exist multiple instruments to measure the therapeutic alliance, so also we are beginning to see multiple ways of specifying, detecting and indicating the phenomenon of interest. There is as of yet no method for determining categorically and definitively that a rupture-and-repair event has occurred, or that such an event is clearly differentiated from other, normal variations in the therapeutic alliance at a statistically significant level. At best, researchers have made judgments as to reasonable indices of rupture-and-repair events, based upon the nature of the alliance measurement instruments used, and the sorts of data available for analysis.

The identification of rupture-and-repair events used in this study was based upon the method used by Stevens (2007), whose research also examined therapeutic alliance data that had been collected via the Working Alliance Inventory (WAI: Horvath & Greenberg, 1989, Tracey & Kokotovic, 1989); other researchers worked with data collected via other instruments (e.g., the Agnew Relationship Measure, or ARM (Agnew-Davies, Stiles, Hardy, Barkham & Shapiro, 1998), and the California Psychotherapy Alliance Scale, or CALPAS (Marmar, Weiss, & Glaston, 1989)), and developed definitions for rupture-and-repair events that were appropriate for their research given the measurement instruments used. The present study has also, however, modified Stevens' approach in light of approaches used in more recent studies (e.g., Strauss, et al., 2006).

Examining the sequences of WAI ratings given by therapists in the selected cases, movement in either a positive or negative direction was noted through the use of session-by-session difference scores - i.e., the value obtained by subtracting the median WAI score for a session from the median WAI score of the previous session (the median WAI score was used, rather than the mean, due to the median's slightly greater sensitivity to sudden shifts in value). The standard deviation of difference scores across

all cases was calculated and used as an indicator of whether shifts in WAI values were within or outside of the range of value changes that might "normally" be expected.

In this study, then, a complete rupture-and-repair event was defined as a drop of the difference score by at least one standard deviation in one session, or more than one standard deviation in one or more consecutive sessions provided that the initial drop was of at least one standard deviation in magnitude; followed then by a return to within 0.25 of a WAI point of the pre-drop WAI level; the entire sequence taking place within a span of three-to-five sessions. A drop in the difference score that was greater-than-or-equal-to one standard deviation of a difference score (i.e., 0.7) was considered a moderate rupture; a drop in score that was greater-than-or-equal-to two standard deviations of a difference score (i.e., 1.4) - whether occurring in one or more than one consecutive sessions - was considered a serious rupture.

A rupture-and-repair event was thus defined in order to indicate shifts in therapeutic alliance ratings that could suggest the presence of the sort of discrete, focal episodes that are the phenomena of interest in this study (as opposed to broader changes in therapeutic alliance that might be seen if, for example, the window within which

these shifts occurred were larger than five sessions). In a similar vein, it was decided that if a difference score dropped into the negative by one or more standard deviations, following a session in which the difference score dropped by less than one standard deviation, it was considered a rupture and a separate event from the drop which occurred in the proceeding session (i.e., a "noteworthy" event following an event that was within the range of alliance rating changes one might normally see). If such a drop followed a session in which the difference score had fallen by one or more standard deviations, the drop was considered a continuation of a rupture event that had previously begun, and was not considered separately (e.g., for purposes of determining repair of a rupture, the WAI score had to return to within 0.25 points of the score of the session proceeding the first drop in difference score of one or more standard deviations).

The cases in this study's sample were examined to detect the presence or absence of ruptures, completed rupture-and-repair events, and/or ruptures left unresolved as per the "repair" criteria described above, as well as for the quantity and the highest detected severity level (i.e., moderate vs. serious) of such events. The resulting data were analyzed using SPSS Version 11.5 to determine the

presence of significant relationships between the occurrence of such phenomena and the treatment outcome indices for those cases marked by them - said indices consisting of the residual gains scores drawn from treatment outcome measures, and which served as scores describing post-treatment levels of symptomology (Factor 1) and interpersonal problems (Factor 2). Data analyses included point by serial correlation (yielding Pearson r scores), and analysis of variance (yielding F ratio scores), both for the entire sample set and for each of the three treatment condition subsets.

Alliance ratings and treatment condition: In order to explore whether significant differences were observable among the treatment conditions with regard to the variability of WAI scores assigned by the therapists working in each of those three therapy models (i.e., BRT, CBT, and BAP), mean WAI scores were compared using SPSS Version 16's Generalized Estimating Equations Procedure, which computes Analyses of Variance and regressions while correcting for within-subject clustering.

CHAPTER IV

RESULTS

This chapter will present the results of the study. The results pertaining to each of the hypotheses presented in Chapter II will be described in turn.

Hypothesis #1: The first hypothesis stated that higher alliance ratings would be associated with more positive treatment outcome. This hypothesis was supported in part by the data. As described in the previous chapter, several Pearson correlation coefficients were calculated using each of the treatment outcome factor scores and multiple configurations of the therapists' WAI ratings (see Table 4.1). The results of these correlation analyses (along with associated Spearman two-tailed tests of significance) are summarized in Table 4.2.

Table 4.1
WAI Mean Scores and Standard Deviations

WAI	Phase			Session			Overall
	One	Two	Three	Three	Fifteen	Thirty	
Mean:	4.74	5.13	5.47	4.77	5.23	5.69	5.13
SD:	0.65	0.56	0.65	0.71	0.65	0.64	0.55

Table 4.2
Correlation of WAI Scores with Treatment Outcome

		Phase			Session			Overall
		One	Two	Three	Three	Fifteen	Thirty	
Factor 1	r	-.441 (*)	-.537 (*)	-.379 (*)	-.412 (*)	-.440 (*)	-.468 (*)	-.532 (*)
	Sig.	.002	.000	.008	.004	.002	.001	.000
Factor 2	r	-.133	-.193	-.103	-.074	-.184	-.197	-.183
	Sig.	.366	.189	.488	.616	.225	.189	.212

* Correlation is significant at the 0.01 level.

Lower outcome factor scores represent patient improvement; higher WAI scores represent stronger therapeutic alliance. Therefore, negative correlation coefficients represent the interaction between low outcome scores and high WAI scores. The negative values of these coefficients demonstrate that higher WAI scores are

associated with patient improvement in symptoms (Factor One) and interpersonal functioning (Factor Two). However, it is worth noting the differences between the correlation coefficients for the different factor scores, as well as attending to the strength of said correlations. Although all the Pearson correlation coefficients are negative, indicating some likely positive effect of therapeutic alliance on treatment outcome, the interaction between alliance scores and improvement of client symptomology (Factor One) is much stronger than that between alliance scores and improved interpersonal functioning (Factor Two) for the client. The correlation coefficients for Factor One are highly statistically significant (to the .05 level), as well as being moderate-to-strong in magnitude. In contrast, correlation coefficients for alliance scores and Factor Two are relatively weak, and of limited statistical significance. Though gleaned from an examination of therapists' alliance ratings, these results are similar in general trend to those found by Stevens (2007) when looking at clients' ratings of working alliance - i.e., the strong correlations were generally more robust indicators of reduced symptomology; they were less robust as indicators or predictors of improved interpersonal functioning. An additional similarity between the current

findings and Stevens' findings is the effect he notes (Stevens, 2007, pp. 9-10) when looking at the correlation coefficients over the course of time, as indicated through the breakdown of the treatment into phases (with alliance readings taken at particular sessions placed at spaced-out intervals): correlations in his study tended to be stronger toward the mid-phase of treatment, challenging the suggestion in the literature (e.g., Gelso & Carter, 1994) that therapeutic alliance would follow a high-low-high pattern over the course of treatment. The findings reported here reflect that: when examined by phase of treatment, the strongest correlations were those found between the mid-phase alliance ratings and treatment outcome; when one observes the correlations calculated between outcome and alliance ratings from specific points spaced across the breadth of the treatment, the strength of the correlations increases over time. Although only one of these trends echoes Stevens' findings, they both support the challenge to the pattern predicted in the literature, i.e., they refute the idea of a high-low-high pattern of alliance ratings over the course of time in a treatment.

Hypothesis #2: The second hypothesis stated that the working alliance ratings of the therapists, when plotted over the course of treatment, would reflect a linear form or be characterized by episodes of alliance rupture-and-repair. The high-low-high pattern suggested by some theorists - and found in one study (i.e., Kivlighan & Shaughnessy, 2000) was not expected to appear.

This hypothesis appears also to have been supported by the results. Cluster analysis results indicated the presence of two distinct groups within the overall sample. These two groups did not have markedly different shapes - each conformed to a shape best described as linearly increasing (i.e., WAI ratings tending to rise over the course of the 30 session treatment). The primary attribute differentiating the two clusters was a statistically significant difference in overall mean: Cluster One showed a lower overall mean score (Mean = 4.6; standard deviation = 0.8) than did Cluster Two (Mean = 5.5; standard deviation = 0.7) (see Figure 4.1). No significant evidence was found for other patterns of therapeutic alliance development (e.g., quadratic / curving trajectories, decreasing trajectories, high-low-high pattern, etc.).

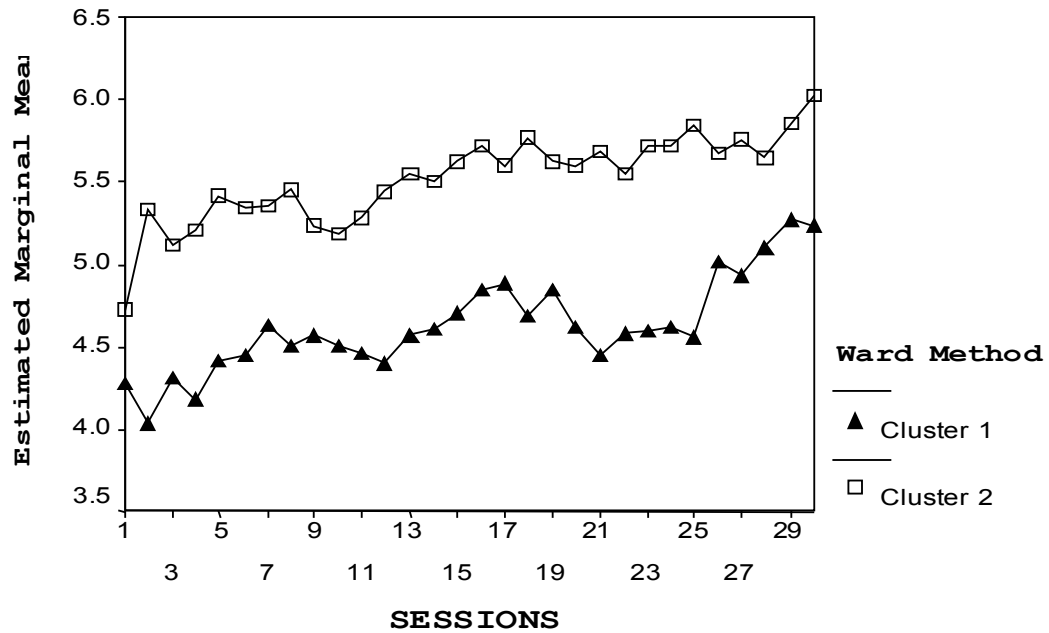


Figure 4.1. Cluster Analysis Groupings for Sample

A majority of the cases examined - 37 out of 48, or 77.1% - contained one or more shifts in alliance rating that met the definition of a rupture-and-repair event. This result, together with that reported above (the linear-increasing shape of the plotted therapeutic alliance scores), confirms the expectations laid out in the second hypothesis.

In addition to investigating simply whether such shifts were present or absent, cases were also evaluated to determine the presence of any rupture at all - whether repaired or left "unresolved" (i.e., the definition of a

rupture was met, but that of a complete rupture-and-repair sequence was not) - as well as the quantity and relative magnitude of such events. Descriptive information on these findings may be seen in Tables 4.3 through 4.11.

Table 4.3
Occurrence of Alliance Ruptures by Treatment Condition

		Any Alliance Rupture Occurred		Total	
		No	Yes		
	N	1	17	18	
	BRT	% within Treatment Condition	5.6%	94.4%	100.0%
		% within Any Rupture occurred Y or N	25.0%	38.6%	37.5%
		% of Total	2.1%	35.4%	37.5%
<u>Treatment:</u>	N	1	18	19	
	CBT	% within Treatment Condition	5.3%	94.7%	100.0%
		% within Any Rupture occurred Y or N	25.0%	40.9%	39.6%
		% of Total	2.1%	37.5%	39.6%
	N	2	9	11	
	BAP	% within Treatment Condition	18.2%	81.8%	100.0%
		% within Any Rupture occurred Y or N	50.0%	20.5%	22.9%
		% of Total	4.2%	18.8%	22.9%
<u>Total:</u>	N	4	44	48	
		% within Treatment Condition	8.3%	91.7%	100.0%
		% within Any Rupture occurred Y or N	100.0%	100.0%	100.0%
		% of Total	8.3%	91.7%	100.0%

Table 4.4
Number of Alliance Ruptures by Treatment Condition

		# of Ruptures			Total
		None	1-2	3+	
<u>Treatment</u> :	N	1	5	12	18
	% within Treatment Condition	5.6%	27.8%	66.7%	100.0%
	% within # of Ruptures	25.0%	26.3%	48.0%	37.5%
	% of Total	2.1%	10.4%	25.0%	37.5%
	N	1	11	7	19
	% within Treatment Condition	5.3%	57.9%	36.8%	100.0%
	% within # of Ruptures	25.0%	57.9%	28.0%	39.6%
	% of Total	2.1%	22.9%	14.6%	39.6%
	N	2	3	6	11
	% within Treatment Condition	18.2%	27.3%	54.5%	100.0%
	% within # of Ruptures	50.0%	15.8%	24.0%	22.9%
	% of Total	4.2%	6.3%	12.5%	22.9%
<u>Total:</u>	N	4	19	25	48
% within Treatment Condition	8.3%	39.6%	52.1%	100.0%	
% within # of Ruptures	100.0%	100.0%	100.0%	100.0%	
% of Total	8.3%	39.6%	52.1%	100.0%	

Table 4.5
Severity of Alliance Ruptures by Treatment Condition *

		Moderate Rupture Only, No Serious	At Least One Serious Rupture	Total
	N	5	12	17
	BRT % within Treatment Condition	29.4%	70.6%	100.0%
	% of Total	11.4%	27.3%	38.6%
<u>Treatment:</u>	N	10	8	18
	CBT % within Treatment Condition	55.6%	44.4%	100.0%
	% of Total	22.7%	18.2%	40.9%
	N	3	6	9
	BAP % within Treatment Condition	33.3%	66.7%	100.0%
	% of Total	6.8%	13.6%	20.5%
<u>Total:</u>	N	18	26	44
	% within Treatment Condition	40.9%	59.1%	100.0%
	% of Total	40.9%	59.1%	100.0%

* Cases in which no rupture whatsoever occurred have been eliminated from this and the following tables in order to present percentage data with greater accuracy.

Table 4.6
Occurrence of Rupture-and-Repair Events by Treatment Condition

		Any R-&-R Event Occurred		Total
		No	Yes	
BRT	N	2	15	17
	% within Treatment Condition	11.8%	88.2%	100.0%
	% within Any R-&-R Event Occurred	28.6%	40.5%	38.6%
	% of Total	4.5%	34.1%	38.6%
<u>Treatment:</u> CBT	N	4	14	18
	% within Treatment Condition	22.2%	77.8%	100.0%
	% within Any R-&-R Event Occurred	57.1%	37.8%	40.9%
	% of Total	9.1%	31.8%	40.9%
BAP	N	1	8	9
	% within Treatment Condition	11.1%	88.9%	100.0%
	% within Any R-&-R Event Occurred	14.3%	21.6%	20.5%
	% of Total	2.3%	18.2%	20.5%
<u>Total:</u>	N	7	37	44
	% within Treatment Condition	15.9%	84.1%	100.0%
	% within Any R-&-R Event Occurred	100.0%	100.0%	100.0%
	% of Total	15.9%	84.1%	100.0%

Table 4.7
Number of Rupture-and-Repair Events by Treatment Condition

		# of R-&-R Events			Total
		None	1-2	3+	
<u>Treatment</u> :	N	2	10	5	17
	% within Treatment Condition	11.8%	58.8%	29.4%	100.0%
	% within # of R-&-R Events	28.6%	41.7%	38.5%	38.6%
	% of Total	4.5%	22.7%	11.4%	38.6%
	N	4	10	4	18
	% within Treatment Condition	22.2%	55.6%	22.2%	100.0%
	% within # of R-&-R Events	57.1%	41.7%	30.8%	40.9%
	% of Total	9.1%	22.7%	9.1%	40.9%
	N	1	4	4	9
	% within Treatment Condition	11.1%	44.4%	44.4%	100.0%
	% within # of R-&-R Events	14.3%	16.7%	30.8%	20.5%
	% of Total	2.3%	9.1%	9.1%	20.5%
<u>Total:</u>	N	7	24	13	44
% within Treatment Condition	15.9%	54.5%	29.5%	100.0%	
% within # of R-&-R Events	100.0%	100.0%	100.0%	100.0%	
% of Total	15.9%	54.5%	29.5%	100.0%	

Table 4.8
Severity of Rupture-and-Repair Events by Treatment
Condition: No More Than MODERATE Level Event

		Moderate R-&-R Only, No Serious		Total	
		No	Yes		
	N	10	7	17	
	BRT	% within Treatment Condition	58.8%	41.2%	100.0%
		% within Moderate R-&-R Only	41.7%	35.0%	38.6%
		% of Total	22.7%	15.9%	38.6%
<u>Treatment:</u>	N	11	7	18	
	CBT	% within Treatment Condition	61.1%	38.9%	100.0%
		% within Moderate R-&-R Only	45.8%	35.0%	40.9%
		% of Total	20.5%	15.9%	40.9%
	N	3	6	9	
	BAP	% within Treatment Condition	33.3%	66.7%	100.0%
		% within Moderate R-&-R Only	12.5%	30.0%	20.5%
		% of Total	6.8%	13.6%	20.5%
<u>Total:</u>	N	24	20	44	
		% within Treatment Condition	54.5%	45.5%	100.0%
		% within Moderate R-&-R Only	100.0%	100.0%	100.0%
		% of Total	54.5%	45.5%	100.0%

Table 4.9
Severity of Rupture-and-Repair Events by Treatment
Condition: At Least One SERIOUS Event

		At least one serious R-&-R		Total	
		No	Yes		
	N	9	8	17	
	BRT	% within Treatment Condition	52.9%	47.1%	100.0%
		% within at least 1 Serious R-&-R	33.3%	47.1%	38.6%
		% of Total	20.5%	18.2%	38.6%
<u>Treatment:</u>	N	11	7	18	
	CBT	% within Treatment Condition	61.1%	38.9%	100.0%
		% within at least 1 Serious R-&-R	40.7%	41.2%	40.9%
		% of Total	25.0%	15.9%	40.9%
	N	7	2	9	
	BAP	% within Treatment Condition	77.8%	22.2%	100.0%
		% within at least 1 Serious R-&-R	25.9%	11.8%	20.5%
		% of Total	15.9%	4.5%	20.5%
<u>Total:</u>	N	27	17	44	
		% within Treatment Condition	61.4%	38.6%	100.0%
		% within at least 1 Serious R-&-R	100.0%	100.0%	100.0%
		% of Total	61.4%	38.6%	100.0%

Table 4.10
Occurrence of Unresolved Alliance Ruptures (URR) by Treatment Condition

		Any URR Occurred		Total	
		No	Yes		
	N	3	14	17	
	BRT	% within Treatment Condition	17.6%	82.4%	100.0%
		% within Any URR Occurred	33.3%	40.0%	38.6%
		% of Total	6.8%	31.8%	38.6%
<u>Treatment:</u> CBT	N	4	14	18	
		% within Treatment Condition	22.2%	77.8%	100.0%
		% within Any URR Occurred	44.4%	40.0%	40.9%
		% of Total	9.1%	31.8%	40.9%
BAP	N	2	7	9	
		% within Treatment Condition	22.2%	77.8%	100.0%
		% within Any URR Occurred	22.2%	20.0%	20.5%
		% of Total	4.5%	15.9%	20.5%
<u>Total:</u>	N	9	35	44	
		% within Treatment Condition	20.5%	79.5%	100.0%
		% within Any URR Occurred	100.0%	100.0%	100.0%
		% of Total	20.5%	79.5%	100.0%

Table 4.11
Number of Unresolved Alliance Ruptures by Treatment Condition

		# of URR			Total
		None	1-2	3+	
<u>Treatment</u> :	N	3	11	3	17
	% within Treatment Condition	17.6%	64.7%	17.6%	100.0%
	% within # of URR	33.3%	39.3%	42.9%	38.6%
	% of Total	6.8%	25.0%	6.8%	38.6%
	N	4	11	3	18
	% within Treatment Condition	22.2%	61.1%	16.7%	100.0%
	% within # of URR	44.4%	39.3%	42.9%	40.9%
	% of Total	9.1%	25.0%	6.8%	40.9%
	N	2	6	1	9
	% within Treatment Condition	22.2%	66.7%	11.1%	100.0%
	% within # of URR	22.2%	21.4%	14.3%	20.5%
	% of Total	4.5%	13.6%	2.3%	20.5%
<u>Total:</u>	N	9	28	7	44
% within Treatment Condition	20.5%	63.6%	15.9%	100.0%	
% within # of URR	100.0%	100.0%	100.0%	100.0%	
% of Total	20.5%	63.6%	15.9%	100.0%	

Hypothesis #3: The third hypothesis proposed that, when plotted, the shape of the sequential alliance scores would show a relationship with treatment outcome - more specifically, that those treatments wherein the sequence of alliance scores yielded either (1) a linear increase shape or (2) the V-shaped segments indicative of rupture-and-repair episodes, such treatments would show improved outcome compared to those wherein the sequence of alliance scores yielded some other form.

The results of the data analyses were mixed with regard to this hypothesis. It was possible to determine whether aspects of the plotted shape of alliance scores - e.g., the presence or absence of V-shaped shifts in alliance ratings during the course of a treatment - had any significant relationship with measures of treatment outcome. The nature of the results, however, precluded drawing meaningful comparisons regarding whether one set of cases or another demonstrated "better" outcome on the basis of patterns of alliance scores. As described above, all the cases examined in this sample conformed to a shape of alliance development that may be generally described as "linear increasing"; the only characteristic that differentiated the cases in a statistically significant

manner was the overall level of alliance score, with one cluster of cases showing generally higher start-points, end-points, and mean than the other cluster (Figure 4.1). In the absence of any significant-yet-contrasting pattern of alliance score, it was not possible to ascertain whether the linear increasing shape showed a better outcome than other possible shapes (e.g., quadratic, linear decreasing, etc.).

In a similar fashion, a meaningful comparison of the outcomes for cases with rupture-and-repair episodes, versus those without such episodes, was rendered problematic by the way in which these groupings were distributed. As reported above, almost four-fifths of the total number of cases indicated the presence of one-or-more rupture-and-repair episodes; the remaining number of cases was inadequate for producing a useful contrast (e.g., in terms of statistical power, etc.).

In addition, the results of statistical analyses indicated that the mere presence of a rupture-and-repair episode, per se, was not significantly associated with improved treatment outcome when considered in the sample as a whole. The picture proved meaningfully different, however, when the same statistical procedures were applied to the data when sorted by treatment condition. Additional

noteworthy findings surfaced when looking beyond alliance rupture-and-repair episodes, i.e., when also considering interactions among the outcome indices and certain of those assorted, rupture-related attributes and phenomena for which the cases had been assessed (as described above and displayed in Tables 4.3 through 4.11).

While these results were not initially predicted, they may shed light on (a) which rupture-related phenomena (b) are associated (c) in what way (d) with which sort of treatment outcome, (e) when occurring in the context of which treatment condition. Despite the specificity of each nexus wherein a significant interaction was located, it is hoped that the findings might direct attention toward areas that would repay the effort of more nuanced investigation. For this reason, the data analyses and their results will be discussed in the pages that follow.

Pearson correlation coefficients were generated (where appropriate) to determine whether significant relationships might exist between (1) any of the various categories of variables seen in Tables 4.3 through 4.11, and (2) each of the residual gain scores used to measure treatment outcome (Factor One indicating level of post-treatment symptomology and Factor Two describing the degree of post-treatment interpersonal problems). For certain attributes and

phenomena (e.g., quantity or frequency of alliance ruptures), different statistical methods (e.g., ANOVA, Univariate Analysis of Variance) were used to detect or confirm the presence of a significant relationship between the variable and the treatment outcome indices. The results of these analyses can be seen in Tables 4.12 through 4.30. The significant findings can be summarized as follows:

i) In the sample as a whole, the presence of an alliance rupture of no-more-than-moderate magnitude was associated with a decrease in client symptoms.

ii) In the sample as a whole, the presence of a serious alliance rupture was associated with an increase in client symptoms.

iii) In the sample as a whole, increased numbers of unresolved alliance ruptures were associated with an increase in client symptoms.

iv) In the subset of the sample where the treatment condition was Brief Relational Therapy (BRT), the presence of a moderate alliance rupture was associated with a decrease in client interpersonal problems.

Table 4.12
Correlation of Rupture Phenomena with Treatment Outcome:
Total Sample

Alliance Ruptures and Related Phenomena		Outcome Indices	
		Factor 1	Factor 2
Any Alliance Rupture occurred?	Pearson Correlation	-.065	-.014
	Sig. (2-tailed)	.660	.927
	N	48	48
Total # of Alliance Ruptures	Pearson Correlation	.209	.008
	Sig. (2-tailed)	.154	.956
	N	48	48
Moderate Rupture occurred?	Pearson Correlation	-.144	-.055
	Sig. (2-tailed)	.330	.711
	N	48	48
# of Moderate Ruptures	Pearson Correlation	.062	-.012
	Sig. (2-tailed)	.676	.935
	N	48	48
MODERATE Rupture ONLY (NO Serious)	Pearson Correlation	-.415 (**)	-.207
	Sig. (2-tailed)	.003	.158
	N	48	48
Serious Rupture occurred?	Pearson Correlation	.367 (*)	.193
	Sig. (2-tailed)	.010	.188
	N	48	48
# of Serious Ruptures	Pearson Correlation	.287 (*)	.039
	Sig. (2-tailed)	.048	.794
	N	48	48
Any complete R-R event occurred?	Pearson Correlation	-.032	.017
	Sig. (2-tailed)	.829	.911
	N	48	48
Total # of R-R events	Pearson Correlation	.032	.039
	Sig. (2-tailed)	.828	.790
	N	48	48
Moderate R-R event occurred?	Pearson Correlation	-.032	.066
	Sig. (2-tailed)	.828	.657
	N	48	48
# of Moderate R-R events	Pearson Correlation	-.032	.101
	Sig. (2-tailed)	.831	.496
	N	48	48

Table 4.12 (Continued)
Correlation of Rupture Phenomena with Treatment Outcome:
Total Sample

Alliance Ruptures and Related Phenomena		Outcome Indices	
		Factor 1	Factor 2
MODERATE R-R ONLY (NO Serious)	Pearson Correlation	-.179	.044
	Sig. (2-tailed)	.224	.767
	N	48	48
Serious R-R event occurred?	Pearson Correlation	.156	-.031
	Sig. (2-tailed)	.289	.836
	N	48	48
# of Serious R-R events	Pearson Correlation	.115	-.083
	Sig. (2-tailed)	.438	.577
	N	48	48
Unresolved Rupture occurred?	Pearson Correlation	.230	.067
	Sig. (2-tailed)	.115	.652
	N	48	48
# of Unresolved Ruptures	Pearson Correlation	.341(*)	-.037
	Sig. (2-tailed)	.018	.804
	N	48	48

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4.13
Analysis of Variance - Number of Alliance Ruptures and
Treatment Outcome:
Total Sample

		Sum of Squares	df	Mean Square	F	Sig.
Factor 1 - Symptomology	Between Groups	2612.857	2	1306.429	2.385	.104
	Within Groups	24652.905	45	547.842		
	Total	27265.762	47			
Factor 2 - Interpersonal Functioning	Between Groups	1449.412	2	724.706	.534	.590
	Within Groups	61117.632	45	1358.170		
	Total	62567.044	47			

Table 4.14
Analysis of Variance - Number of Alliance Rupture-and-
Repair Events and Treatment Outcome:
Total Sample

		Sum of Squares	df	Mean Square	F	Sig.
Factor 1 - Symptomology	Between Groups	87.540	2	43.770	.072	.930
	Within Groups	27178.222	45	603.960		
	Total	27265.762	47			
Factor 2 - Interpersonal Functioning	Between Groups	367.500	2	183.750	.133	.876
	Within Groups	62199.543	45	1382.212		
	Total	62567.044	47			

Table 4.15
Analysis of Variance - Number of Unresolved Alliance
Ruptures and Treatment Outcome:
Total Sample

		Sum of Squares	df	Mean Square	F	Sig.
Factor 1 - Symptomology	Between Groups	2391.422	2	1195.711	2.163	.127
	Within Groups	24874.341	45	552.763		
	Total	27265.762	47			
Factor 2 - Interpersonal Functioning	Between Groups	2030.802	2	1015.401	.755	.476
	Within Groups	60536.242	45	1345.250		
	Total	62567.044	47			

Table 4.16
Correlation of Rupture Phenomena with Treatment Outcome:
BRT Treatment Condition

Alliance Ruptures and Related Phenomena		Outcome Indices	
		Factor 1	Factor 2
Any Alliance Rupture occurred?	Pearson Correlation	-.159	-.326
	Sig. (2-tailed)	.530	.187
	N	18	18
Total # of Alliance Ruptures	Pearson Correlation	.091	-.475(*)
	Sig. (2-tailed)	.719	.046
	N	18	18
Moderate Rupture occurred?	Pearson Correlation	-.162	-.484(*)
	Sig. (2-tailed)	.520	.042
	N	18	18
# of Moderate Ruptures	Pearson Correlation	-.025	-.368
	Sig. (2-tailed)	.921	.133
	N	18	18
MODERATE Rupture ONLY (NO Serious)	Pearson Correlation	-.326	-.068
	Sig. (2-tailed)	.187	.788
	N	18	18
Serious Rupture occurred?	Pearson Correlation	.232	-.094
	Sig. (2-tailed)	.354	.712
	N	18	18
# of Serious Ruptures	Pearson Correlation	.144	-.314
	Sig. (2-tailed)	.568	.204
	N	18	18
Any complete R-R event occurred?	Pearson Correlation	-.215	-.551(*)
	Sig. (2-tailed)	.393	.018
	N	18	18
Total # of R-R events	Pearson Correlation	-.301	-.666(**)
	Sig. (2-tailed)	.225	.003
	N	18	18
Moderate R-R event occurred?	Pearson Correlation	-.488(*)	-.594(**)
	Sig. (2-tailed)	.040	.009
	N	18	18
# of Moderate R-R events	Pearson Correlation	-.397	-.579(*)
	Sig. (2-tailed)	.103	.012
	N	18	18

Table 4.16 (Continued)
Correlation of Rupture Phenomena with Treatment Outcome:
BRT Treatment Condition

Alliance Ruptures and Related Phenomena		Outcome Indices	
		Factor 1	Factor 2
MODERATE R-R ONLY (NO Serious)	Pearson Correlation	-.322	-.291
	Sig. (2-tailed)	.193	.242
	N	18	18
Serious R-R event occurred?	Pearson Correlation	.155	-.128
	Sig. (2-tailed)	.540	.613
	N	18	18
# of Serious R-R events	Pearson Correlation	.019	-.321
	Sig. (2-tailed)	.942	.194
	N	18	18
Unresolved Rupture occurred?	Pearson Correlation	.285	.135
	Sig. (2-tailed)	.251	.594
	N	18	18
# of Unresolved Ruptures	Pearson Correlation	.505(*)	-.098
	Sig. (2-tailed)	.032	.700
	N	18	18

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4.17
Analysis of Variance - Number of Alliance Ruptures and
Treatment Outcome:
BRT Treatment Condition

		Sum of Squares	df	Mean Square	F	Sig.
Factor 1 - Symptomology	Between Groups	392.147	2	196.073	.624	.549
	Within Groups	4714.669	15	314.311		
	Total	5106.816	17			
Factor 2 - Interpersonal Functioning	Between Groups	1326.658	2	663.329	.915	.422
	Within Groups	10879.404	15	725.294		
	Total	12206.062	17			

Table 4.18-A
Analysis of Variance - Number of Alliance Rupture-and-
Repair Events and Treatment Outcome:
BRT Treatment Condition

		Sum of Squares	df	Mean Square	F	Sig.
Factor 1 - Symptomology	Between Groups	689.886	2	344.943	1.171	.337
	Within Groups	4416.930	15	294.462		
	Total	5106.816	17			
Factor 2 - Interpersonal Functioning	Between Groups	6837.368	2	3418.684	9.552 (*)	.002
	Within Groups	5368.694	15	357.913		
	Total	12206.062	17			

* Significant at the 0.01 level.

Table 4.18-B
Tukey HSD Post-Hoc Multiple Comparison Analysis:
BRT Treatment Condition

Dependent Variable	(I) Total # of R-R events	(J) Total # of R-R events	Mean Difference (I-J)	Std. Error	Sig.
Factor 1 - Symptomology	No R-R	1-2 R-R	5.8041	11.29603	.866
		3+ R-R	17.4846	12.53182	.368
	1-2 R-R	No R-R	-5.8041	11.29603	.866
		3+ R-R	11.6805	9.39886	.448
	3+ R-R	No R-R	-17.4846	12.53182	.368
		1-2 R-R	-11.6805	9.39886	.448
Factor 2 - Interpersonal Functioning	No R-R	1-2 R-R	28.2569	12.45374	.092
		3+ R-R	58.9271 (*)	13.81618	.002
	1-2 R-R	No R-R	-28.2569	12.45374	.092
		3+ R-R	30.6702 (*)	10.36214	.025
	3+ R-R	No R-R	-58.9271 (*)	13.81618	.002
		1-2 R-R	-30.6702 (*)	10.36214	.025

* The mean difference is significant at the .05 level.

Table 4.19
Analysis of Variance - Number of Unresolved Alliance
Ruptures and Treatment Outcome:
BRT Treatment Condition

		Sum of Squares	df	Mean Square	F	Sig.
Factor 1 - Symptomology	Between Groups	604.908	2	302.454	1.008	.388
	Within Groups	4501.908	15	300.127		
	Total	5106.816	17			
Factor 2 - Interpersonal Functioning	Between Groups	846.883	2	423.441	.559	.583
	Within Groups	11359.179	15	757.279		
	Total	12206.062	17			

Table 4.20
Correlation of Rupture Phenomena with Treatment Outcome:
CBT Treatment Condition

Alliance Ruptures and Related Phenomena		Outcome Indices	
		Factor 1	Factor 2
Any Alliance Rupture occurred?	Pearson Correlation	-.110	.326
	Sig. (2-tailed)	.654	.174
	N	19	19
Total # of Alliance Ruptures	Pearson Correlation	.406	.219
	Sig. (2-tailed)	.085	.367
	N	19	19
Moderate Rupture occurred?	Pearson Correlation	.068	.411
	Sig. (2-tailed)	.781	.080
	N	19	19
# of Moderate Ruptures	Pearson Correlation	.161	.112
	Sig. (2-tailed)	.511	.649
	N	19	19
MODERATE Rupture ONLY (NO Serious)	Pearson Correlation	-.575 (**)	-.211
	Sig. (2-tailed)	.010	.387
	N	19	19
Serious Rupture occurred?	Pearson Correlation	.532 (*)	.360
	Sig. (2-tailed)	.019	.130
	N	19	19
# of Serious Ruptures	Pearson Correlation	.554 (*)	.264
	Sig. (2-tailed)	.014	.276
	N	19	19
Any complete R-R event occurred?	Pearson Correlation	.194	.371
	Sig. (2-tailed)	.426	.118
	N	19	19
Total # of R-R events	Pearson Correlation	.348	.250
	Sig. (2-tailed)	.144	.301
	N	19	19
Moderate R-R event occurred?	Pearson Correlation	.279	.422
	Sig. (2-tailed)	.248	.072
	N	19	19
# of Moderate R-R events	Pearson Correlation	.174	.238
	Sig. (2-tailed)	.476	.327
	N	19	19

Table 4.20 (Continued)
Correlation of Rupture Phenomena with Treatment Outcome:
CBT Treatment Condition

Alliance Ruptures and Related Phenomena		Outcome Indices	
		Factor 1	Factor 2
MODERATE R-R ONLY (NO Serious)	Pearson Correlation	-.244	.160
	Sig. (2-tailed)	.314	.513
	N	19	19
Serious R-R event occurred?	Pearson Correlation	.421	.178
	Sig. (2-tailed)	.072	.465
	N	19	19
# of Serious R-R events	Pearson Correlation	.483 (*)	.139
	Sig. (2-tailed)	.036	.569
	N	19	19
Unresolved Rupture occurred?	Pearson Correlation	.224	.117
	Sig. (2-tailed)	.357	.633
	N	19	19
# of Unresolved Ruptures	Pearson Correlation	.308	.088
	Sig. (2-tailed)	.200	.721
	N	19	19

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4.21
Analysis of Variance - Number of Alliance Ruptures and
Treatment Outcome:
CBT Treatment Condition

		Sum of Squares	df	Mean Square	F	Sig.
Factor 1 - Symptomology	Between Groups	3906.535	2	1953.268	2.901	.084
	Within Groups	10774.757	16	673.422		
	Total	14681.292	18			
Factor 2 - Interpersonal Functioning	Between Groups	5082.025	2	2541.012	1.487	.256
	Within Groups	27349.205	16	1709.325		
	Total	32431.230	18			

Table 4.22
Analysis of Variance - Number of Alliance Rupture-and-
Repair Events and Treatment Outcome:
CBT Treatment Condition

		Sum of Squares	df	Mean Square	F	Sig.
Factor 1 - Symptomology	Between Groups	1075.335	2	537.668	.632	.544
	Within Groups	13605.957	16	850.372		
	Total	14681.292	18			
Factor 2 - Interpersonal Functioning	Between Groups	4751.840	2	2375.920	1.373	.282
	Within Groups	27679.390	16	1729.962		
	Total	32431.230	18			

Table 4.23
Analysis of Variance - Number of Unresolved Alliance
Ruptures and Treatment Outcome:
CBT Treatment Condition

		Sum of Squares	df	Mean Square	F	Sig.
Factor 1 - Symptomology	Between Groups	1339.816	2	669.908	.803	.465
	Within Groups	13341.477	16	833.842		
	Total	14681.292	18			
Factor 2 - Interpersonal Functioning	Between Groups	459.402	2	229.701	.115	.892
	Within Groups	31971.828	16	1998.239		
	Total	32431.230	18			

Table 4.24
Correlation of Rupture Phenomena with Treatment Outcome:
BAP Treatment Condition

Alliance Ruptures and Related Phenomena		Outcome Indices	
		Factor 1	Factor 2
Any Alliance Rupture occurred?	Pearson Correlation	.108	.038
	Sig. (2-tailed)	.752	.911
	N	11	11
Total # of Alliance Ruptures	Pearson Correlation	-.224	.124
	Sig. (2-tailed)	.508	.717
	N	11	11
Moderate Rupture occurred?	Pearson Correlation	-.397	-.137
	Sig. (2-tailed)	.227	.688
	N	11	11
# of Moderate Ruptures	Pearson Correlation	-.113	.062
	Sig. (2-tailed)	.741	.857
	N	11	11
MODERATE Rupture ONLY (NO Serious)	Pearson Correlation	.016	-.069
	Sig. (2-tailed)	.962	.840
	N	11	11
Serious Rupture occurred?	Pearson Correlation	.069	.092
	Sig. (2-tailed)	.840	.789
	N	11	11
# of Serious Ruptures	Pearson Correlation	-.239	.133
	Sig. (2-tailed)	.480	.697
	N	11	11
Any complete R-R event occurred?	Pearson Correlation	-.397	-.137
	Sig. (2-tailed)	.227	.688
	N	11	11
Total # of R-R events	Pearson Correlation	-.369	.240
	Sig. (2-tailed)	.265	.477
	N	11	11
Moderate R-R event occurred?	Pearson Correlation	-.397	-.137
	Sig. (2-tailed)	.227	.688
	N	11	11
# of Moderate R-R events	Pearson Correlation	-.215	.367
	Sig. (2-tailed)	.526	.267
	N	11	11

Table 4.24 (Continued)
Correlation of Rupture Phenomena with Treatment Outcome:
BAP Treatment Condition

Alliance Ruptures and Related Phenomena		Outcome Indices	
		Factor 1	Factor 2
MODERATE R-R ONLY (NO Serious)	Pearson Correlation	-.018	-.014
	Sig. (2-tailed)	.958	.967
	N	11	11
Serious R-R event occurred?	Pearson Correlation	-.435	-.140
	Sig. (2-tailed)	.181	.682
	N	11	11
# of Serious R-R events	Pearson Correlation	-.435	-.140
	Sig. (2-tailed)	.181	.682
	N	11	11
Unresolved Rupture occurred?	Pearson Correlation	.254	.070
	Sig. (2-tailed)	.451	.838
	N	11	11
# of Unresolved Ruptures	Pearson Correlation	.242	-.201
	Sig. (2-tailed)	.474	.554
	N	11	11

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4.25
Analysis of Variance - Number of Alliance Ruptures and
Treatment Outcome:
BAP Treatment Condition

		Sum of Squares	df	Mean Square	F	Sig.
Factor 1 - Symptomology	Between Groups	657.287	2	328.644	.519	.614
	Within Groups	5069.982	8	633.748		
	Total	5727.269	10			
Factor 2 - Interpersonal Functioning	Between Groups	13.447	2	6.724	.007	.993
	Within Groups	8233.070	8	1029.134		
	Total	8246.518	10			

Table 4.26
Analysis of Variance - Number of Alliance Rupture-and-
Repair Events and Treatment Outcome:
BAP Treatment Condition

		Sum of Squares	df	Mean Square	F	Sig.
Factor 1 - Symptomology	Between Groups	1195.020	2	597.510	1.055	.392
	Within Groups	4532.249	8	566.531		
	Total	5727.269	10			
Factor 2 - Interpersonal Functioning	Between Groups	1206.252	2	603.126	.685	.531
	Within Groups	7040.265	8	880.033		
	Total	8246.518	10			

Table 4.27
Analysis of Variance - Number of Unresolved Alliance
Ruptures and Treatment Outcome:
BAP Treatment Condition

		Sum of Squares	df	Mean Square	F	Sig.
Factor 1 - Symptomology	Between Groups	699.717	2	349.858	.557	.594
	Within Groups	5027.553	8	628.444		
	Total	5727.269	10			
Factor 2 - Interpersonal Functioning	Between Groups	2190.721	2	1095.361	1.447	.291
	Within Groups	6055.796	8	756.975		
	Total	8246.518	10			

Table 4.28-A
Univariate Analysis of Variance -
Number of Alliance Ruptures:
Descriptive Statistics
(Dependent Variable = Outcome Factor 2)

Treatment Condition	Total # of Ruptures	Mean	Std. Deviation	N
BRT	No Rupture	33.4962	.	1
	1-2 Ruptures	-1.5019	30.08676	5
	3+ Ruptures	-4.4144	25.68790	12
	Total	-1.4992	26.79559	18
CBT	No Rupture	-73.1404	.	1
	1-2 Ruptures	-20.5381	44.61697	11
	3+ Ruptures	-.9260	35.21947	7
	Total	-16.0811	42.44685	19
BAP	No Rupture	18.9498	13.47175	2
	1-2 Ruptures	22.2083	18.99560	3
	3+ Ruptures	21.4138	38.28816	6
	Total	21.1824	28.71675	11
Total	No Rupture	-.4362	49.56622	4
	1-2 Ruptures	-8.7792	40.08028	19
	3+ Ruptures	2.7611	32.16590	25
	Total	-2.0734	36.48580	48

Table 4.28-B
Univariate Analysis of Variance -
Number of Alliance Ruptures:
Tests of Between Subjects Effects
(Dependent Variable = Outcome Factor 2)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	16105.364 (a)	8	2013.171	1.690	.132
Intercept	5.637	1	5.637	.005	.946
TX_COND	11741.122	2	5870.561	4.928 (*)	.012
#_RUP	590.863	2	295.431	.248	.782
TX_COND * #_RUP	5899.064	4	1474.766	1.238	.311
Error	46461.679	39	1191.325		
Total	62773.386	48			
Corrected Total	62567.044	47			

* Significant at the 0.05 level.

a R Squared = .257 (Adjusted R Squared = .105)

Table 4.28-C
Univariate Analysis of Variance -
Number of Alliance Ruptures:
Estimated Marginal Means of Treatment Condition
(Dependent Variable = Outcome Factor 2)

Treatment Condition	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
BRT	9.193	13.034	-17.170	35.556
CBT	-31.535	12.779	-57.384	-5.686
BAP	20.857	11.505	-2.414	44.129

Table 4.28-D
Univariate Analysis of Variance -
Number of Alliance Ruptures:
Pairwise Comparisons of Treatment Condition
(Dependent Variable = Outcome Factor 2)

(I) Treatment Condition	(J) Treatment Condition	Mean Difference (I-J)	Std. Error	Sig (a)	95% Confidence Interval for Difference (a)	
					Lower Bound	Upper Bound
BRT	CBT	40.728 (*)	18.253	.031	3.807	77.649
	BAP	-11.664	17.385	.506	-46.829	23.501
CBT	BRT	-40.728 (*)	18.253	.031	-77.649	-3.807
	BAP	-52.392 (**)	17.195	.004	-87.173	-17.611
BAP	BRT	11.664	17.385	.506	-23.501	46.829
	CBT	52.392 (**)	17.195	.004	17.611	87.173

Based on estimated marginal means

** The mean difference is significant at the .01 level.

* The mean difference is significant at the .05 level.

a Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Table 4.29-A
Univariate Analysis of Variance -
Number of Rupture-and-Repair Events:
Descriptive Statistics
(Dependent Variable = Outcome Factor 2)

Treatment Condition	Total # of R-R episodes	Mean	Std. Deviation	N
BRT	No R-R event	30.5677	6.29779	3
	1-2 R-R events	2.3108	21.89406	10
	3+ R-R events	-28.3594	15.61426	5
	Total	-1.4992	26.79559	18
CBT	No R-R event	-41.7161	35.47767	5
	1-2 R-R events	-4.0345	48.79638	10
	3+ R-R events	-14.1541	20.12416	4
	Total	-16.0811	42.44685	19
BAP	No R-R event	27.3147	17.33949	3
	1-2 R-R events	7.4202	20.03888	4
	3+ R-R events	30.3455	41.77032	4
	Total	21.1824	28.71675	11
Total	No R-R event	-3.1758	43.98518	11
	1-2 R-R events	.5185	34.50177	24
	3+ R-R events	-5.9255	35.90963	13
	Total	-2.0734	36.48580	48

Table 4.29-B
Univariate Analysis of Variance -
Number of Rupture-and-Repair Events:
Tests of Between Subjects Effects
(Dependent Variable = Outcome Factor 2)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	22478.695 (a)	8	2809.837	2.734	.017
Intercept	46.606	1	46.606	.045	.832
TX_COND	11517.432	2	5758.716	5.602 (*)	.007
#_R-R	544.795	2	272.398	.265	.769
TX_COND * #_R-R	11685.423	4	2921.356	2.842	.037
Error	40088.349	39	1027.906		
Total	62773.386	48			
Corrected Total	62567.044	47			

* Significant at the 0.01 level.

a R Squared = .359 (Adjusted R Squared = .228)

Table 4.29-C
Univariate Analysis of Variance -
Number of Rupture-and-Repair Events:
Estimated Marginal Means of Treatment Condition
(Dependent Variable = Outcome Factor 2)

Treatment Condition	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
BRT	1.506	8.505	-15.697	18.709
CBT	-19.968	7.926	-35.999	-3.937
BAP	21.693	9.756	1.960	41.427

Table 4.29-D
Univariate Analysis of Variance -
Number of Rupture-and-Repair Events:
Pairwise Comparisons of Treatment Condition
(Dependent Variable = Outcome Factor 2)

(I) Treatment Condition	(J) Treatment Condition	Mean Difference (I-J)	Std. Error	Sig (a)	95% Confidence Interval for Difference (a)	
					Lower Bound	Upper Bound
BRT	CBT	21.475	11.625	.072	-2.040	44.989
	BAP	-20.187	12.943	.127	-46.366	5.992
CBT	BRT	-21.475	11.625	.072	-44.989	2.040
	BAP	-41.662 (*)	12.570	.002	-67.086	-16.237
BAP	BRT	20.187	12.943	.127	-5.992	46.366
	CBT	41.662 (*)	12.570	.002	16.237	67.086

Based on estimated marginal means

* The mean difference is significant at the .01 level.

a Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Table 4.30-A
Univariate Analysis of Variance -
Number of Unresolved Alliance Ruptures:
Descriptive Statistics
(Dependent Variable = Outcome Factor 2)

Treatment Condition	# of Unresolved Ruptures (URR)	Mean	Std. Deviation	N
BRT	No URR	-8.0550	30.18894	4
	1-2 URR	3.8655	28.61412	11
	3+ URR	-12.4290	14.78825	3
	Total	-1.4992	26.79559	18
CBT	No URR	-24.1681	53.67678	5
	1-2 URR	-12.6412	43.46280	11
	3+ URR	-15.2160	27.90068	3
	Total	-16.0811	42.44685	19
BAP	No URR	18.6543	38.92891	4
	1-2 URR	29.7828	17.37479	6
	3+ URR	-20.3069	.	1
	Total	21.1824	28.71675	11
Total	No URR	-6.0341	43.68818	13
	1-2 URR	2.9344	36.30651	28
	3+ URR	-14.7489	18.44799	7
	Total	-2.0734	36.48580	48

Table 4.30-B
Univariate Analysis of Variance -
Number of Unresolved Alliance Ruptures:
Tests of Between Subjects Effects
(Dependent Variable = Outcome Factor 2)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	13180.240 (a)	8	1647.530	1.301	.272
Intercept	604.516	1	604.516	.477	.494
TX_COND	3255.140	2	1627.570	1.285	.288
#_URR	2878.964	2	1439.482	1.137	.331
TX_COND * #_URR	1521.010	4	380.252	.300	.876
Error	49386.804	39	1266.328		
Total	62773.386	48			
Corrected Total	62567.044	47			

a R Squared = .211 (Adjusted R Squared = .049)

Table 4.30-C
Univariate Analysis of Variance -
Number of Unresolved Alliance Ruptures:
Estimated Marginal Means of Treatment Condition by # of URR
(Dependent Variable = Outcome Factor 2)

Treatment Condition	# of Unresolved Ruptures (URR)	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
BRT	No URR	-8.055	17.793	-44.044	27.934
	1-2 URR	3.866	10.729	-17.837	25.568
	3+ URR	-12.429	20.545	-53.986	29.128
CBT	No URR	-24.168	15.914	-56.358	8.022
	1-2 URR	-12.641	10.729	-34.344	9.061
	3+ URR	-15.216	20.545	-56.773	26.341
BAP	No URR	18.654	17.793	-17.335	54.644
	1-2 URR	29.783	14.528	.398	59.168
	3+ URR	-20.307	35.586	-92.285	51.672

Table 4.30-D
Univariate Analysis of Variance -
Number of Unresolved Alliance Ruptures:
Pairwise Comparisons of Treatment Condition by # of URR
(Dependent Variable = Outcome Factor 2)

# of URR	(I) Tx Cond.	(J) Tx Cond.	Mean Diff. (I-J)	Std. Error	Sig. (a)	95% Confidence Interval for Difference (a)	
						Lower Bound	Upper Bound
No URR	BRT	CBT	16.113	23.871	.504	-32.172	64.398
		BAP	-26.709	25.163	.295	-77.606	24.187
	CBT	BRT	-16.113	23.871	.504	-64.398	32.172
		BAP	-42.822	23.871	.081	-91.107	5.462
	BAP	BRT	26.709	25.163	.295	-24.187	77.606
		CBT	42.822	23.871	.081	-5.462	91.107
1-2 URR	BRT	CBT	16.507	15.174	.283	-14.185	47.198
		BAP	-25.917	18.060	.159	-62.448	10.613
	CBT	BRT	-16.507	15.174	.283	-47.198	14.185
		BAP	-42.424 (*)	18.060	.024	-78.954	-5.894
	BAP	BRT	25.917	18.060	.159	-10.613	62.448
		CBT	42.424 (*)	18.060	.024	5.894	78.954
3+ URR	BRT	CBT	2.787	29.055	.924	-55.983	61.557
		BAP	7.878	41.091	.849	-75.236	90.991
	CBT	BRT	-2.787	29.055	.924	-61.557	55.983
		BAP	5.091	41.091	.902	-78.023	88.204
	BAP	BRT	-7.878	41.091	.849	-90.991	75.236
		CBT	-5.091	41.091	.902	-88.204	78.023

Based on estimated marginal means

* The mean difference is significant at the .05 level.

a Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

v) In the BRT treatment condition subset, greater numbers of alliance ruptures were associated with a decrease in client interpersonal problems.

vi) In the BRT group, the presence of any rupture-and-repair episode at all was associated with a decrease in client interpersonal problems.

vii) In the BRT treatment condition subset, the presence of a rupture-and-repair episode of moderate severity was associated with a decrease in client symptoms, and was strongly associated with a decrease in client interpersonal problems.

viii) In the BRT treatment condition subset, increased numbers of moderate rupture-and-repair episodes were associated with a decrease in client interpersonal problems.

ix) In the BRT treatment condition subset, greater numbers of completed rupture-and-repair episodes were strongly associated with decreased client interpersonal problems (e.g. a significant difference was found in strength of association with client interpersonal problems, depending upon whether a course of therapy contained up to 2 rupture-and-repair episodes, or if it contained 3 or more such episodes).

x) In the BRT group, increased numbers of unresolved alliance ruptures were associated with increased client symptoms.

xi) In the subset of the sample where the treatment condition was Cognitive-Behavioral Therapy (CBT), the presence of an alliance rupture of no more than moderate severity was strongly associated with a decrease in client symptoms.

xii) In the CBT treatment condition, the presence of a serious alliance rupture was associated with an increase in client symptoms.

xiii) In the CBT treatment condition, increased numbers of serious alliance ruptures were associated with an increase in client symptoms.

xiv) In the CBT treatment condition, larger numbers of serious rupture-and-repair episodes were associated with increased client symptoms.

xv) A significant association was found between treatment condition and the client interpersonal problem portion of therapy outcome. This association was also shaped by the reported numbers of alliance ruptures in the different treatment conditions, with the CBT treatment

found to be significantly different from both BRT and BAP in its effect.

xvi) A similar significant association was found in the effect of treatment condition and number of reported rupture-and-repair episodes on client interpersonal problems. In this finding, CBT and BAP appeared significantly different from one another; however, neither treatment differed significantly from BRT in its effect.

xvii) A significant difference was found between CBT and BAP in reported numbers of unresolved alliance ruptures.

Hypothesis #3b: In an exploratory question posed as corollary to the main hypotheses of this research, it was proposed that therapists' ratings of working alliance might display a level of variability that could be shaped, in part, by the training, supervision, and clinical emphases of the treatment condition in which they were seeing their clients. It was suggested, for example, that treatments placing greater emphasis on tracking and utilizing the interpersonal process within a therapy dyad might rate the working alliance differently from treatments wherein less emphasis is placed on interpersonal process (e.g., BRT

therapists might rate the alliance with greater variability over the course of a 30-session treatment).

This exploratory hypothesis did not receive direct support, as Analysis of Variance and related statistical procedures uncovered no significant differences from treatment to treatment in the variability of working alliance ratings. However, as noted above, analysis of the influence of alliance ruptures, rupture-and-repair episodes, etc., and their interaction with treatment outcome, did indicate statistically significant differences among treatment conditions in the strength of these interactions. Or, to put it another way, differences in treatment condition did not enable one to predict differences in working alliance rating patterns, but they did show some possibility of enabling one to predict other types of data and/or relationships (e.g., whether treatment outcome was likely to be better given the presence of multiple rupture-and-repair events).

CHAPTER V

DISCUSSION

This study set out to detect and examine what relationship might exist between: (A) the therapeutic alliance (aka "working alliance", aka "treatment alliance" - see CHAPTER II: REVIEW OF THE LITERATURE above) as recorded by therapists during the course of 30-session, time-limited, psychotherapy treatments with members of an outpatient clinical population who met diagnostic criteria for an Axis II, Cluster C Personality Disorder or for Personality Disorder Not Otherwise Specified (as defined by the Diagnostic and Statistical Manual, 4th Edition); and (B) treatment outcome for these subjects as measured by residual gain scores drawn from several post-treatment measures and compared against the subjects' responses on pre-treatment measures, with one score (Factor 1) serving to indicate the subject's level of symptoms, and the other score (Factor 2) serving to indicate the level of interpersonal problems experienced by the subject.

Elements distinguishing this study from previous studies of the therapeutic alliance-treatment outcome relationship included the following: (1) the use of therapists' ratings of treatment alliance, rather than those of the subjects themselves or those of external observers; (2) the use of a research sample drawn from an actual clinical population, rather than from a simulated population (c.f. Kivlighan & Shaughnessy, 2000); (3) the richness of the data set (e.g., the number of sessions or data points available per treatment); and (4) the diagnostic qualities of the subjects themselves, (i.e., research yielding information on the vicissitudes of the treatment alliance and treatment outcome appeared particularly apposite, given the presence of personality disorder diagnoses within the subject pool). It was hoped that this study would provide a robust addition to the research literature, given the distinguishing qualities mentioned above (among others) and given the fact that this research was designed to complement an earlier study (Stevens, et al., 2007) in which similar hypotheses were proposed and evaluated, but using client ratings of treatment alliance instead of the therapist ratings used herein.

For the purpose of evaluating the hypotheses enumerated above in Chapters II and IV, the working alliance data were sifted and sorted in several ways, reflecting the presence or absence within each course of treatment of what were deemed to be meaningful shifts in the strength of the alliance. These phenomena were considered as potentially associated with treatment outcome, and cases were evaluated to determine what association might exist. The results of these analyses were presented above in Chapter IV; the import of the results will be discussed in the following pages.

Implications of the Findings - General Observations:

This study confirmed an often seen result in psychotherapy research on the therapeutic alliance, i.e., ratings of the alliance between the client and the therapist are strongly and positively associated with treatment outcome; that is, in general, the stronger the treatment alliance, the better the therapy outcome. Although the limits of the study - which shall be discussed later in this chapter - may restrict the generalizability of the results in certain ways, it may nevertheless be informative and useful to consider the implications of this

study's other findings within the larger context of research efforts to clarify, with as much nuance and detail as possible, the construct of the therapeutic alliance and how it interacts with therapy outcome. The findings presented in the previous chapter indicate that there may be alliance-related forces at work - beyond simple strength of alliance - that exert a significant influence on treatment outcome.

Observing the treatment alliance over the course of time and marking the occurrence of shifts in the alliance - that is, taking into account changes in the strength of the alliance over time, examining how many changes occurred in a treatment, and of what sort, etc. - were fundamental aspects of this study, and the details gleaned from these observations provided a framework by which much of the data were sorted and analyzed. Because significant interactions were found between some of these alliance components and one or another of the outcome indices, the results of this study provide evidence that the evolution of the treatment alliance over the course of time may be a meaningful predictor of treatment outcome. Because some components of said evolution were correlated with treatment outcome more strongly than others, and because the different components of outcome (i.e., symptoms and interpersonal problems) were

sometimes correlated differently with the various components of the alliance that were examined, it would appear that the more we understand about which aspects of therapeutic alliance are related to which aspects of treatment outcome, the greater will be the therapist's potential ability to shape treatment to promote the optimal - or the desired - outcome. In addition, the data analyses conducted in this investigation considered the matter of the particular treatment provided; the relationships referred to above (i.e., between components of treatment outcome and components of treatment alliance evolution) often varied significantly from one treatment condition to another. This would appear to indicate that the statement made above must be amended as follows: the more we understand about which aspects of therapeutic alliance are related to which aspects of treatment outcome - in the context of which treatment model - the greater will be the therapist's potential ability to shape treatment in the desired manner.

It is to be hoped that, as research continues and we draw ever closer to a clear delineation of the alliance construct (including its component parts, the meaningful aspects of its evolution during treatment, and their differential relationships with components of therapy

outcome), the practicing clinician will be able to utilize this information to enhance his or her ability to efficiently address the problems with which clients present for treatment. This is, of course, desirable for many of the same reasons that it is desirable to develop skill in case formulation and models of time-limited psychotherapy: in addition to guiding the therapist, enriching the treatment, and (hopefully) assisting the therapist in more swiftly mitigating the suffering that has brought the client to treatment, this enhanced efficiency will likely be appealing to both insurance companies and clients in times of ever increasing economic insecurity, wherein insurance coverage is increasingly limited and clients may be less and less capable of covering therapy costs out-of-pocket.

Implications of the Findings - Significant Relationships:

It is difficult to do more than speculate on the meaning of some of the specific significant relationships detected by the data analyses of this investigation. In addition to detailing the results, Chapter IV reports on how the results answer the original hypotheses being tested by this study. Those significant associations that were

discovered incidentally - i.e., as a result of analyses not directly dictated by the research questions, but rather by extended investigation of assorted rupture-related phenomena - stimulate curiosity and invite conjecture, but will most likely require additional research to clarify their true implications. Some broad observations and initial speculations follow:

(A) Significant associations between alliance rupture events and treatment outcome were few in number when considering the aggregate data, but to an extent these seemed to conform to that which one might intuitively expect --e.g., increased client symptoms were associated with serious alliance ruptures (repaired or not) and greater numbers of unresolved alliance ruptures. In contrast, alliance ruptures of only moderate severity were associated with decreased client symptoms. This picture - somewhat, although not completely paradoxical - may be a consequence of combining disparate subgroups, since it would appear from the other results that the treatment conditions are not equivalent to one another in regard to relationships between treatment outcome and various alliance rupture events. The relatively small number of significant interactions found within the total sample might possibly be explained in the same way, i.e.,

subgroups within the larger group may have balanced each other in such a way that trends in the subgroups' data contrasted with - and obscured - one another, diminishing the statistical significance of the trends when viewed in the larger group framework.

(B) While the significant associations found within the CBT treatment condition subgroup involved some aspect of alliance rupture and the level of client symptoms, the significant associations found in the BRT treatment condition subgroup mostly involved some aspect of alliance rupture and the level of client interpersonal problems. It might be that this finding is somehow an artifact of the different ways in which each of these treatments would conceptualize, prioritize and/or work with client complaints. It could also be related to how clinicians trained to work in these different models might vary in noting and understanding the occurrence of shifts in the working alliance. For example, one might begin to form the hypothesis that the particular emphasis of CBT on addressing symptom complaints was facilitated or impeded by the relative robustness or weakness of the therapeutic alliance (e.g., the openness of the client to accepting the therapist's formulations of their problems, recommendations for building skills, modifying cognitive schemas, etc.).

Whatever the exact mechanics or the specific treatment models under discussion, the underlying point of this line of thinking is the possibility that different treatment models might have a differential impact on aspects of treatment outcome because of their particular guiding ideologies, points of focus, and/or technical repertoire - mediated, of course, by the vicissitudes of the working alliance.

(C) More significant interactions were found between rupture-and-repair events and outcome in the BRT condition than were found in any other treatment condition. The BRT treatment condition also yielded more significant interactions than did the others between alliance rupture phenomena and client interpersonal problems. Given the attention and emphasis placed by BRT on utilizing rupture-and-repair events in treatment, and the interpersonal focus of the model's approach to treatment, it is difficult to avoid speculating that these results were highly influenced by the treatment condition itself.

(D) In addition to reflecting the associations with client interpersonal problems that are mentioned above, the significant findings in the BRT treatment condition indicated an association also seen in the larger, total sample, i.e., that increased numbers of unresolved alliance

ruptures were correlated with increases in client symptoms. Again, one might speculate that this finding is somehow an artifact of the treatment itself, e.g., the presence of an alliance rupture in the treatment marks the development of some problem or strain within the therapy dyad, as well as presenting the therapist with a point of intervention; if the rupture is due to some failure of attunement between therapist and client, the (non-attuned) therapist's efforts to address the rupture might serve to exacerbate the problem, leaving behind both an unresolved alliance rupture and a client who is feeling worse off than he or she did before the rupture event unfolded and - quite possibly - more vulnerable to the manifestation of symptoms.

Therapist Ratings of Treatment Alliance:

Returning to a point raised above - namely, that the data analyses of this study indicated the presence of some significant differences from one treatment condition to another with regard to the relationships between the evolution of the treatment alliance and treatment outcome - one is drawn to consider further the implications of this finding, and to weigh the possibility suggested earlier, i.e., that differences among treatment conditions might

have led to these results via the differences among the therapists' training and ways of viewing the treatment alliance. This question, in turn, draws attention to a larger issue: given that assorted meta-analyses of the research literature on the therapeutic alliance (e.g., Horvath & Symonds, 1991) have indicated that client ratings of alliance have generally been more robust predictors of treatment outcome when compared with alliance ratings made by therapists or observers, one might justifiably ask "Why would one bother at all to conduct research using therapists' ratings of treatment alliance?"

There are indeed some reasons why a therapists' view of the treatment alliance has - and deserves - a place in the psychotherapy research literature. First, by virtue of training, supervision, theoretical orientation, etc., therapists bring a unique viewpoint to the business of assessing treatment alliance and any alterations in the strength of the alliance. One might expect, for example, that in treatment models wherein training and supervision place heavy emphasis on monitoring the nuances of the treatment alliance, and wherein the repairing of alliance ruptures stands at the heart of the therapy work, that in such treatments the therapist would tend to rate aspects of the alliance's evolution differently from the therapist

working in a wholly different tradition, e.g., one wherein far less emphasis is placed on the alliance and its vicissitudes, and more focus is directed toward other variables more closely in line with the principles of that treatment model (e.g., affects, cognitions, etc.). What these treatment models will share, however, is that - whatever their main emphases - their practitioners are trained in providing therapy, and directing some attention and energy to establishing and maintaining a therapeutic alliance is a fundamental task of the trained therapist. In addition to training, the therapist's role within the therapy dyad will also shape his or her view of the therapeutic alliance.

The question of why client ratings of alliance have been more strongly associated with therapy outcome is as yet unclear. With respect to the client's view of the therapeutic alliance, one must note that the therapist is equally - albeit differently - involved in the dyad and alliance. "Differently" signals the important detail that each member of the dyad has his or her own vantage point from which to view the alliance, a construct which is sufficiently complex that multiple perspectives may be necessary to provide balance to one another and help in building a reasonably accurate picture of this phenomenon

(Lambert & Hill, 1994). Relying upon one perspective alone for capturing a picture of the working alliance may carry its own problems as well. For example, clients may rate alliance in a particular manner that is not so indicative of the actual strength of the alliance as it is of the presence of some confounding factor (J. C. Muran, personal communication, July 16, 2008) - e.g., a compliant attitude associated with a dependent personality style, or with a reaction to being in the less "empowered" role in the dyad. Another possibility is that the parameters established and/or the means used to measure the therapeutic alliance construct (i.e., the elements of the construct upon which we focus our attention) have, in some way, become shaped or skewed to align more with the viewpoint represented by the client. This possibility, together with other issues touched upon in the preceding section, underscore the need within this branch of psychotherapy research to consider how one's findings are shaped by how one defines and operationalizes the phenomenon under investigation (in this case the working alliance, although a related and equally pertinent example would be one of the events found to occur as part of the alliance's evolution through the course of treatment, e.g., a Rupture-and-Repair episode).

Impact of Operationalizing the Phenomenon of Interest:

Chapter II of this investigation includes a brief discussion of some of the various instruments available for measuring the working alliance. Each was developed to capture particular aspects of the working alliance seen as significant by the instrument's creators. This researcher points out (p. 7 above) that, while Martin, Garske, & Davis (2000) "found that all of those instruments used in the [meta-] studies examined had adequate and comparable reliability", this set of multiple instruments demonstrated that "there is no one universally accepted definition of the therapeutic alliance, no complete consensus on the list of component parts". The instrument used to collect the working alliance data examined in this study was the Working Alliance Inventory (WAI) (Horvath & Greenberg, 1989) - one among several available instruments, each with its own theoretical underpinnings. The definition of the working alliance adopted for use in this study was taken from Horvath & Bedi (2002) - although it tries to encompass multiple viewpoints, it too reflects a particular perspective and includes some concepts as components of the alliance, while excluding others.

It could hardly be otherwise - it is not only desirable, but necessary to operationalize a phenomenon in order to study it. However, any given attempt to do so is likely to have its own inherent flaws, and may not fully address all situations. The WAI is calibrated in such a way as to capture what are believed to be key data points for describing the working alliance. It remains possible, however, that there are other data points that are not captured by the WAI, and yet are critical components of the phenomenon of interest, the therapeutic alliance.

Similarly, the way in which Rupture-and-Repair episodes are defined may help us to learn more detail about some types of phenomena (e.g., a particular type of focal event, occurring at a particular scale). But in focusing on a single figure within a complex picture, one may blur - or even lose sight of - both ground and other significant figures. Put another way, while increased specificity may cause an investigation to gain in accuracy and reliability, it may simultaneously cause the investigation to lose in its capacity to recognize salient trends or events which are related to the phenomenon of interest, which but fall outside of the specified definition. To the extent that the true goal of the investigation is to better understand that phenomenon - say, the impact upon treatment outcome of

alliance ruptures - rather than simply to detect the presence or absence of certain well-defined events, then what is gained in accuracy and reliability may come at the cost of validity.

In the case of the present study it was necessary to do that which is a feature of many or most quantitative investigations of psychotherapy process variables, i.e., to quantify said variables. This was done based on what was possible in light of the abundant, available data - which was itself shaped by the measurement instrument used to collect that data (i.e., the WAI) - and in accordance with the models found in the relevant literature and examples provided by previous researchers (e.g., Stevens, et al., 2007; Strauss, et al., 2006; Stiles, et al., 2004). Therapeutic alliance Rupture-and-Repair episodes were defined in such a way so as to reflect what were deemed to be significant shifts in the strength of the alliance, occurring within a given timeframe, and representing what appeared to be relatively discrete, focal events. Some courses of treatment, however, contained apparently significant drops in level of alliance - i.e., alliance ruptures - that subsequently returned to levels which would otherwise have been considered repairs, but were not designated as such because they failed to return to the

appropriate level within the pre-defined time frame. Thus, they could not be considered examples of the sort of discrete, focal events that the Rupture-and-Repair definition was designed to detect. Many such events were categorized as Unresolved Ruptures in this study, and the data analyses attempted to detect the presence of significant relationships between those types of alliance rupture and treatment outcome. As seen from the results presented in Chapter IV, despite the fact that these events did not match the criteria by which the phenomenon of interest was operationalized, they nevertheless had - in certain circumstances - a significant association with aspects of treatment outcome.

Limitations of the Study:

Certain limitations to the study are suggested by aspects of the above discussion. The most basic of these has to do, in part, with the way that the reader understands the proper scope of this study - it is an investigation of the relationships between treatment outcome and working alliance as rated by therapists. As discussed above, this provides an important part of the picture we must construct to fully understand the

phenomenon of the alliance in therapy, but is only one part. This study can make only limited claims to generalizability because of this significant - albeit necessary - limitation.

Carrying this idea further, one must consider that in psychotherapy research studies the research is generally being conducted by the therapist or people associated with the therapist, and that this can result in the data collection process itself being shaped by a particular point of view. It is conceivable, therefore, that the data collection process and/or the data collected might be skewed, leading to results that are weighted in particular ways - e.g., could it be that the high percentage of cases reporting some sort of alliance rupture (44 out of 48, or 91.7%) is, in itself, an artifact of therapist training, attention to, and concern with this issue?

Another limitation to the study that is implied by the discussion above has to do with operationalizing the phenomenon to be investigated. While this process is necessary, one inevitably loses some data while simultaneously gaining in specificity. Using the tools at hand, such as the Working Alliance Inventory, may be the best option available due to the instrument's psychometric properties, the useful data it yields, and the opportunity

it affords other researchers to test or replicate research results. However, while it may work well to capture rupture phenomena that occur at a certain level (e.g., inter-session), by virtue of its construction it may miss related and important phenomena that occur at a different level (e.g., intra-session). The same may be said of the choices made by the researcher in defining and measuring the object(s) of investigation (e.g., the rupture-and-repair sequence was defined herein as occurring over the course of 3 to 5 sessions, but those shifts in alliance rating that followed the route - if not the predetermined timeframe - of an "official" rupture-and-repair episode may also have had some meaningful impact on the client's treatment outcome).

An additional limitation of the study had to do with attenuated statistical power, as shaped by the number of cases available for the assorted analyses of the data. While the original total sample of 48 cases represented a respectable number (particularly for a psychotherapy research investigation), the most meaningful and statistically significant results were found once that total sample was divided into subgroups by treatment condition. This, of course, reduced the number of cases per group and rendered the statistical power less robust. It is

possible that the paucity of significant findings associated with the BAP treatment condition was, in fact, a result of the relatively small number of cases within that subgroup (BAP cases accounted for less than 25% of the total sample, yet also accounted for 50% of the total number of cases reporting no alliance rupture at all).

Implications for Future Research:

Future studies of the phenomena considered by this investigation may build upon the findings presented above in many ways, but paths of inquiry that particularly recommend themselves include:

1) Studies that utilize one, uniform data set to construct a "multi-dimensional" picture of the therapeutic alliance via examination of all available viewpoints (e.g., client, therapist, observer, etc.).

2) Studies that will investigate the impact on treatment outcome of different levels of alliance rupture phenomena, e.g., within-session rupture-and-repair episodes; rupture-and-repair "episodes" that are spread out over greater spans of time (trends rather than focal events); etc.

3) Studies that conduct more controlled explorations of the relationships among treatment model, evaluation of working alliance, and aspects of therapy outcome (e.g., clarifying the stronger associations of BRT treatment with therapy impact on client interpersonal issues and the associations of CBT treatment with therapy impact on client symptom picture.

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