DETECTION OF RUPTURE-REPAIR SEQUENCES IN PATTERNS OF ALLIANCE
DEVELOPMENT: THE EFFECTS OF CLIENT VS. THERAPIST Raters AND
THERAPIST TRAINING STATUS

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This thesis entitled
DETECTION OF RUPTURE-REPAIR SEQUENCES IN PATTERNS OF ALLIANCE
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THERAPIST TRAINING STATUS

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Detection of Rupture-Repair Sequences in Patterns of Alliance Development: The Effects of Client vs. Therapist Raters and Therapist Training Status (120 pp.)

Director of Thesis: Timothy Anderson

In an attempt to extend and replicate work by Kivlighan & Shaughnessy (2000) and Stiles et al. (2004) that showed client-reported rupture-repair sequences are associated with improved outcome, client and therapist WAI data from sessions 1, 3, 5, and 7 of a 7-session treatment in the Ohio University Helping Relationships Study are cluster analyzed. Clients (n=44) are undergraduates. Therapists are novice (n=5) and advanced (n=6) trainee graduate psychology students and graduate students in unrelated fields (n=12). Outcome is measured by IIP-C and OQ. Cluster analysis of client data reveals no quadratic pattern. Cluster analysis of therapist data reveals a quadratic pattern. Alternative coding reveals 5 client ruptures and 7 therapist ruptures. None is associated with outcome. Clients who indicate ruptures have high social skills. Four of five therapists have low Facilitative Interpersonal Skills. This work provides preliminary evidence that when therapists are interpersonally challenged, ruptures are not associated with outcome.

Approved: Timothy Anderson

Associate Professor of Psychology
Dedication

I dedicate this work to my parents, Jim and Sarah Davis. Working through ruptures with you led me here, to a successful outcome. Thank you for teaching me that I can be anything I want. And thank you for supporting me as I figured out what that is.
Acknowledgements

I would like to gratefully acknowledge the assistance and advice of my committee, Drs. Ben Ogles and John Garske. I would also like to thank Dayhun Chun and Dr. Bruce Carlson for their kind assistance as I dealt with thorny statistical issues. I am also grateful to Dr. Bill Stiles for his comments on a presentation of this work at the Ohio Society for Psychotherapy Research. I have many reasons to thank Greg Goldman, my fiancé and partner in life and work. He stayed late at school so I could keep working, he kept my life going so I could concentrate on my work, and he talked with me for hours about the alliance. Greg, you are an inspiration. Finally, I would like to thank Dr. Timothy Anderson, my adviser, for helping me find my place in psychology, his many hours of work on this project, his encouragement, and his faith in me.
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Introduction

The therapeutic alliance is well established as an important predictor of therapeutic outcome. Clients who have stronger alliances with their therapists also have better outcomes (see Horvath & Symonds, 1991; Martin, Garske, & Davis, 2000). However, some research has suggested that even more predictive value can be obtained by studying fluctuations in the alliance, or patterns of alliance development across sessions. Although the results are far from conclusive, several studies seem to point toward the possible therapeutic benefit of alliance rupture development and repair across treatment (see Safran, Muran, Samstag, & Stevens, 2002, for a review).

A body of evidence recently has been accumulating that indicates rupture-repair sequences predict outcome variance beyond that accounted for by alliance level alone. Kivlighan and Shaughnessy (2000) used cluster analysis to define three different patterns of alliance development over the course of four therapy sessions. They found that a quadratic (high-low-high) pattern of alliance development had the greatest association with outcome. In a replication study, Stiles et al. (2004) looked at alliance development in 8- and 16-session treatments. This study did not replicate the quadratic pattern. They found a variety of other patterns of alliance development, which will be discussed in greater detail below. None of these patterns was differentially associated with outcome. Most importantly, they found a subset of dyads that indicated a pattern of V-shaped deflections from the overall pattern of alliance development. These V-shaped deflections were associated with better outcomes. See Figure 1.
The figure above is a stylized representation of the types of rupture-repair development patterns found by Stiles and Kivlighan and Shaughnessy. The points shown represent theoretical WAI deviation scores rather than actual data. For Stiles’ data, the figure depicts an overall pattern of alliance stability over time, with a brief, V-shaped deflection, the lowest point of which occurs at session 2. For Kivlighan and Shaughnessy’s data, the figure depicts an overall high-low-high pattern.

A third study (Stevens, 2002) also used cluster analysis to search for a pattern of rupture and repair across treatment. This study examined patterns of alliance
development in 44 dyads. Participants met for 30 sessions of brief, manualized therapy in one of three treatment conditions, Brief Adaptive Psychotherapy, Brief Relational Therapy, and Cognitive Behavioral Therapy. Using a cluster-analytic technique similar to the one used by Kivlighan and Shaughnessy (2000), he analyzed client-rated WAI scores. He did not detect a global high-low-high pattern of alliance scores. However, he did document local tear-and-repair patterns (V-shaped deflections from the overall pattern) in 22 of the 44 cases. He also found second grouping of cases, a linear pattern of alliance development in 29 of 44 cases. Outcomes did not differ for the two groups.

The current study builds upon and extends the findings of these three projects. Data from the Ohio University Helping Relationships Study (Anderson, 1998) were cluster analyzed. Clients and therapists in the OUHRS study rated working alliance following sessions 1, 3, 5, and 7. Four sessions is not long enough for a V-shaped deflection of the type seen in Stevens or Stiles et al.’s studies to develop. Therefore, it was expected that a pattern of high-low-high WAI ratings, such as those found by Kivlighan and Shaughnessy (2000), would appear in a subset of dyads, and that this pattern would be associated with better therapeutic outcomes.

The three previous studies depended solely upon client ratings of the alliance. The current study also analyzed therapist ratings of the alliance. Therapist ratings have been demonstrated to show more variability over time (Martin, Garske, & Davis, 2000), and therefore it was expected that therapists would indicate ruptures more often than clients. Although it is known that client-rated WAI at a given session is more predictive of outcome than therapist- or observer-rated WAI (Martin, Garske, & Davis, 2000), only one study has ever attempted to show that the same holds true for patterns of alliance
development. That study, Kivlighan and Shaughnessy (1995) used hierarchical linear modeling to show that although a linear pattern of therapist alliance rating was related to outcome, linear client ratings were unrelated to outcome. However, given the limitations of HLM, it was expected that the current study’s cluster analysis would reveal that client-rated WAI pattern would predict outcome better than therapist-rated WAI pattern.

In addition, no previous study on patterns of alliance development has controlled for therapist training status. The current study includes therapists with three levels of experience: lay therapists, novice trainees, and advance trainees. The OUHRS showed that training status (or experience) did not predict outcome or alliance. Therefore, it was predicted that therapist training status would have no effect on the number of rupture-repair sequences reported by clients. However, Mallinckrodt and Nelson (1991) found that advanced trainees rated their sessions lower than novice trainees, and it was expected that pattern would be replicated in the therapist ratings here.

However, before the present research is explored in more depth, it will be useful to examine the construct of the alliance from its inception. The literature review below begins with a brief history of the alliance, followed by an overview of alliance research since Bordin’s (1979) pantheoretical formulation of the concept. I will then discuss the history of the concept of alliance rupture, including the definition of rupture, and an explanation of the types of ruptures. Research on patterns of alliance development is discussed next, including the research upon which the current study is based (Kivlighan and Shaughnessy, 2000; Stiles et al., 2004). The goal of this section is to review the evidence that the rupture-repair pattern of alliance development is related to therapeutic
outcome and to show how the current study was expected to bolster current findings in that area.

The literature review next turns to therapist training, one of the major independent variables in the Ohio University Helping Relationships Study. It examines the major studies of training, including Vanderbilt I and II. The relationship between therapist experience and outcome is explored next. Finally, the training literature is placed in the context of the current study.
History of Alliance

The therapeutic alliance, in various guises, has been the subject of speculation since the early days of psychoanalysis. Freud saw “transference,” projections arising from past relationships, as a phenomenon laden with contradictions. He referred to it as both “the most intractable impediment to a cure and its most effective agent” (Gay, 1986, p. 300). Transference provides the opportunity for “a cure through love” (Gay, 1986, p. 301).

Drawing on Freud’s work, Sterba (1934, as cited in Bordin, 1979) saw the alliance as existing between the analyst and the rational ego of the therapist.

The term “therapeutic alliance” was introduced by Zetzel in 1956. She used it to refer to the positive affectionate attachment to the therapist. According to a review by Crits-Christoph and Connolly Gibbons (2003), Zetzel believed early experiences influenced a client’s ability to engage in trusting relationships. She believed the therapist should strive to provide a supportive environment to encourage a trusting relationship.

According to Bordin (1979), Zetzel’s work moved the concept of alliance from the realm of transference and projection to a focus on the real relationship between the therapist and the patient.

The next major development in the concept of alliance came from Greenson, who in 1965 coined the term “working alliance.” He believed the working alliance arose both from positive transference and from reality-based attachment (Crits-Christoph &
After the transference reactions have been disposed of by successful interpretation, the working alliance develops.

At the same time as these developments were taking place in psychodynamic psychotherapy, behaviorists and client-centered therapists were also speculating about the role of the alliance in therapy. According to Horvath (2000), behavior therapists tended to see the role of the alliance as secondary. They believed that the quality of the relationship was a direct consequence of the therapist’s expertise and that therapists whose interventions are more effective are likely to have a better relationship with their clients, rather than the other way around as was thought in the psychodynamic school. Horvath (2000) credits Carl Rogers with developing the idea that the therapeutic relationship in and of itself may have a positive healing function. In his 1951 book, Rogers presents three necessary and sufficient conditions for change: empathy, congruence, and unconditional positive regard. This was the first suggestion that the relationship with the therapist is what makes therapy effective (Horvath, 2000).

**Modern Era of Alliance Research**

The modern era of alliance research begins with Bordin’s (1979) pan-theoretical formulation of the concept. He synthesized developments in psychodynamic therapy, behavior therapy, and client-centered therapy. He saw the alliance as consisting of three key concepts: agreement between therapist and client on the goals of therapy, agreement between client and therapist on the tasks of therapy, and the emotional bond between client and therapist. Bordin had four proposals regarding the alliance:
1. All genres of psychotherapy have embedded working alliances and can be
differentiated most meaningfully in terms of the kind of working alliance each
requires.

2. The effectiveness of a therapy is a function, in part, if not entirely, of the
strength of the working alliance.

3. Different approaches to psychotherapy are marked by the difference in the
demands they make on patient and therapist.

4. The strength of the working alliance is a function of the closeness of fit
between the demands of the particular kind of working alliance and the
personal characteristics of patient and therapist. (Bordin, 1979, p. 253)

Bordin saw the alliance as both a facilitative condition for implementing
therapeutic tasks and a beneficial agent of change in its own right (Horvath, 2000).

*The Alliance As a Transtheoretical Construct*

Bordin’s article triggered a wave of research developments. Within two years,
Horvath (1981) had designed a self-report measure of alliance, the Working Alliance
Inventory, which remains one of the most widely used research tools in alliance research.
By 1986, Greenberg and Pinsof featured the therapeutic alliance in their handbook for
psychotherapy process research. They said one very attractive component of Bordin’s
tripartite model is that it eliminates the rigid distinction between general relationship
factors (nonspecific factors) and specific (technical) factors, combining the two within an
“overarching construct that does justice to the complexity of the processes involved in
therapeutic change” (Greenberg & Pinsof, 1986, p. 10). Indeed, Hartley and Strupp
(1982) had said that relationship and technique may best be viewed as interacting processes, with the concept of alliance capturing this interaction (p. 8).

In 1990, Gaston elaborated on Bordin’s model. She saw the alliance as consisting of four elements: the patient’s capacity to work purposefully in therapy, the patient’s affective bond with the therapist, the therapist’s empathic understanding and involvement; and the agreement between client and therapist on the goals and tasks of treatment (Gaston, 1990, as cited in Crits-Christoph & Connolly Gibbons, 2003).

*Common Factors vs. Specific Factors*

More recently, researchers have begun trying to untangle whether common factors, such as the alliance, or specific factors, such as techniques used in a given type of therapy, exert greater influence over outcome. One such study was performed Castonguay, Goldfried, Wiser, Raue, & Hayes (1996). They examined process variables in 30 depressed clients who received cognitive therapy. They found that improvement was predicted by two common factors, the alliance and client experiencing, but the one unique factor they studied (therapist’s focus on impact of distorted cognitions on depressive symptoms) was actually negatively correlated with outcome at the end of treatment. In addition, they found that therapists sometimes focused on impact of distorted cognitions when they felt there were problems in the alliance, a tendency that did not help resolve alliance strains. However, the main finding of the study was that the process of change in cognitive therapy is a process found in all types of therapy.

This leads us to the related question of sudden gains in cognitive therapy. Ilardi and Craighead (1994) reviewed eight studies of CBT for depression. They found that that many patients in CBT for depression had sudden, large improvements from one session
to the next. These improvements took place in the first few sessions, before the specific techniques of cognitive therapy had been implemented. This suggests that nonspecific factors play a larger role in patients’ improvement than specific factors.

Tang and DeRubeis (1999; 2005) have contested this conclusion, arguing that in fact cognitive techniques are implemented from the beginning of treatment. In fact, their most recent study (2005) shows that sudden gains are preceded by substantial cognitive changes. Another study currently in press shows that 41.9% of patients experienced sudden gains and that these gains were not associated with cognitive changes (Kelly, Roberts and Ciesla, in press).

It seems likely that an allegiance effect is at work here, with those who believe most strongly in CBT finding cognitive changes, and thus support for their specific techniques while those who believe in common factors are finding support for common factors.

*Meta-Analytic Research on the Alliance*

Twelve years after Bordin’s seminal work was published, Horvath and Symonds (1991) published a meta-analysis of 24 studies relating the quality of the therapeutic alliance to therapy outcome. Their definition of working alliance had two parts: “(a) the working alliance captures the collaborative element of the client-therapist relationship and (b) it takes account of both therapist’s and client’s capacities to negotiate a contract appropriate to the breadth and depth of therapy” (p. 139). Horvath and Symonds found that client ratings of the alliance were more predictive of outcome than therapist or observer ratings. They also found that studies showed alliance ratings at the beginning and end of therapy were more predictive of outcome than ratings averaged across all
sessions. Horvath and Symonds said averaged alliance scores fail to capture the break and repair of the relationship that is typical of the middle part of therapy. They added, “It has been suggested that the degree of success in resolving the disruption of the interpersonal process is more predictive at this time in therapy than the quantitative aspects of the alliance” (p. 145). Horvath and Symonds also found that length of treatment (which varied among the studies from fewer than 10 to more than 50 sessions) had no significant effect on the relationship between alliance and outcome. Overall, they found an effect size of .26, which indicates a moderate association between good working alliance and positive therapeutic outcome.

Research on the alliance proliferated in the years following Horvath and Symonds’ meta-analysis. By 2000, Martin, Garske, and Davis found 140 published and 37 unpublished studies of the relationship between alliance and outcome to consider for their updated meta-analysis based on Horvath and Symonds’ work. Of these, a total of 79 studies performed from 1977 to 1997 met inclusion criteria. Martin, Garske, and Davis found an effect size of .22, replicating Horvath and Symonds’ finding of a moderate relationship between good working alliance and positive therapeutic outcome. Patients were the most often used rater of the alliance (n=37), compared with therapists (n=26) and observers (n=25). Martin, Garske, and Davis speculated that the overrepresentation of patient ratings could be a result of Horvath and Symonds’ finding that patient ratings were more correlated with outcome than therapist ratings. Martin, Garske, and Davis indicated a tentative finding that patients tend to view the alliance as stable over time, whereas observers and therapists tend to indicate more change over time (p. 447). The current research will add to the information available on this finding by examining
therapist and client alliance ratings over time. As noted, it was expected that therapist WAI ratings will indicate more ruptures than clients, which is consistent with the finding that they tend to indicate more change over time. Martin, Garske, and Davis did not address Horvath and Symonds finding that averaged alliance scores were less predictive of outcome than early and late alliance scores.

Ruptures in the Therapeutic Alliance

Definition of Rupture

As far in the past as Bordin’s (1979) pantheoretical formulation of the alliance, ruptures in the therapeutic alliance have been the subject of speculation. Bordin discussed the influence of the patient’s capacity to see the therapist as a good object on the bond aspect of the alliance. He said it was likely that these are not just static conditions, but rather responsive to the adaptive responses of the therapist (p. 258). This early work implies the concept of patterns in alliance development, and it clearly heralds the development of the concept of rupture. “Pattern of alliance development” refers to the way the alliance changes over time. The relationship between client and therapist is generally experienced differently at different times. One example of a pattern would be a therapeutic relationship that improves at every session. This pattern of alliance development might be characterized as a pattern of linear growth. Another example of a pattern would be a relationship that starts by improving at every session, goes through a period of tension, and finishes with a period of repair. This pattern of alliance development might be characterized as a rupture pattern.
History of the Concept of Rupture

One of the first documented cases of alliance rupture is the one that took place between Freud and Dora in 1900. Dora was Freud’s analysand, a teenage hysteric who abandoned treatment after just 11 weeks. Dora complained that an older friend of the family had made an unwelcome sexual advance to her. Freud offered an interpretation that in fact she was in love with this older family friend and was afraid of her temptation to yield to him. At the session following this interpretation, Dora announced that she was terminating the analysis.

Freud’s biographer writes that “Freud’s inability to enter Dora’s sensibilities speaks to a failure of empathy that marks his handling of the case as whole” (Gay, 1998, p. 249). Freud wrote about the case in terms of resistance. In classical psychoanalytic theory therapeutic impasses are often understood to stem from resistance (Safran & Muran, 2000). “Resistance has been understood as any aspect of the patient’s activity (either intrapersonal or interpersonal) that obstructs the therapeutic process” (Safran & Muran, 2000, p. 77). Compare this with Samstag, Safran, and Muran’s (2004) definition of a rupture in the therapeutic alliance: tension in the therapeutic relationship; or a negative shift in the quality of the existing alliance or difficulty establishing one. The two seem similar, although rupture is more than a pantheoretical re-packaging of the psychodynamic concept of resistance. It seems that resistance can be conceptualized as a kind of rupture. The main difference is that while resistance is typically conceptualized as being located within the client, a rupture is typically conceptualized as an interactive process in which the client and therapist both play a part (Samstag, Muran, & Safran, 2004).
Although Freud did not use the word rupture, it is clear that Dora’s resistance to his interpretations was indicative of tension in the relationship. Freud proceeded steadily on with his interpretations despite Dora’s reluctance to accept them. Freud’s initial incorrect interpretation was what would now be called a misunderstanding event (described in a later section). Dora’s resistance to the interpretation is analogous to a rupture. Her announcement of her decision to terminate treatment was Freud’s opportunity to try to repair the rupture, but instead he used their final session to continue to interpret her feelings about the family friend who had made advances to her. Dora’s resistance must have continued unabated because she was not swayed from her plan to stop the treatment. Dora’s case history is an example of an unrepaired alliance rupture.

A period of resistance is common in psychotherapy, particularly in time-limited psychotherapy. Mann (1973) set out a process model that describes time-limited therapy as occurring in stages. During stage 1 (sessions 1-3), the client experiences rapid improvement in symptoms. During stage 2 (sessions 4 to 6), the client can become frustrated by the therapists’ adherence to the focal problem. During stage 3 (sessions 7 to 9), the client shows evidence of resistance, negative transference, or scheduling problems. During stage 4, termination issues come to the forefront. The behaviors characteristic of the third stage, defined by Mann as resistance, can be seen as markers that the client is experiencing tension in the therapeutic relationship, or a rupture. This model is described in greater detail below. Defining the problem as existing solely within the client – as this model does – absolves the therapists of responsibility for their contribution to the tension. As later work built on the conceptualization of resistance to encompass ruptures, therapists began to be seen as having a more equal role in both
causing and alleviating the tension. The rupture model places client and therapist in a more equal position, with both seen as contributing to events in the relationship.

Hartley & Strupp (1983) gave preliminary evidence of the waxing and waning process in the alliance as they developed the Vanderbilt Therapeutic Alliance Scale. They found that observer-rated alliance varied over time, and that it varied differently for high and low outcome cases. (The Vanderbilt studies are discussed in further detail below). However, it was not until the 1990’s that a literature on rupture research began to develop.

Modern Conceptualization of Ruptures

Samstag, Muran, and Safran (2004) define therapeutic alliance ruptures “as a negative shift in the quality of the existing alliance or as difficulty establishing one” (p. 188). They see it as an inevitable event in therapy, and as an event to which both client and therapist contribute. In their conceptualization, unlike resistance or transference, a rupture is not located solely within the client or therapist, but rather it is an interactive process. It is often experienced subjectively as tension within the therapeutic relationship. Ruptures can vary in intensity from minor tensions, of which one or both parties may be only vaguely aware, to major breakdowns in understanding and communication, which can lead to premature termination or treatment failure (Safran, Muran, Samstag, & Stevens, 2002).

Rupture episodes consist of two components, misunderstanding events and patient rupture markers, according to Samstag, Muran, and Safran (2004). A misunderstanding event can be broken down into the immediate background and the precipitant. The immediate background is the therapeutic task in which the dyad was engaged. The
precipitant is the way in which the therapist did something the patient did not need or else failed to provide what the patient needed (p. 195). Samstag, Muran and Safran also mention the impact of experiences outside the session (such as a trauma that leaves the patient feeling emotionally raw) and the impact of accumulated experience with the therapist (as when the patient reaches a frustration threshold). Thus, misunderstanding events come about as a result of a complex interaction of influences. An example of a misunderstanding event might be a situation in which a therapist misses a session. In that case the immediate background is the client waiting alone in the waiting room, and the precipitant is the therapist failing to provide what the client needs in the moment, in this case to be informed of the therapist’s absence. The second component of a rupture episode is the patient rupture marker. These are expressions or indications of a patient’s distress resulting from an emotional disconnection from the therapist (p. 198). These indications can be indirect expressions of anger or any item in a list of physical behaviors, narrative manners, or narrative content (See pp. 199-200).

Definitions of related terms that are used throughout the text are provided in Table 1.

*Types of Ruptures*

Ruptures can be classified in several different ways. Safran, Muran, Samstag, and Stevens (2002) use Bordin’s tripartite model to categorize ruptures as consisting of disagreements about the tasks of therapy, disagreements about the goals of therapy, or strains in the bond between client and therapist (p. 236). This formulation informs rupture
Table 1
Definitions of Key Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working alliance</td>
<td>The emotional bond between client and therapist, along with their agreement on the tasks and goals of therapy (Bordin, 1979).</td>
</tr>
<tr>
<td>Therapeutic relationship</td>
<td>The “real” relationship. Therapist behaviors that help forge the alliance, such as openness and genuineness (Greenson, 1967, in Samstag, Safran &amp; Muran, 2004.) Also how the client perceives these therapist qualities and experiences being helped by the therapist (Samstag, Safran, &amp; Muran, 2004).</td>
</tr>
<tr>
<td>Rupture</td>
<td>Tension in the therapeutic relationship. Also, a negative shift in the quality of the existing alliance or difficulty establishing one (Samstag, Safran, &amp; Muran, 2004).</td>
</tr>
<tr>
<td>Pattern of alliance development</td>
<td>How the operation of alliance components varies across the course of psychotherapy (based on Kivlighan &amp; Shaughnessy, 2000).</td>
</tr>
<tr>
<td>Rupture-repair sequence</td>
<td>A decline in alliance followed by an increase to earlier levels. Can take place within a single session, over the course of two or more sessions, or over the length of therapy (Stiles, 2004). Hypothesized to be an important factor in the change process (Samstag, Safran &amp; Muran, 2004).</td>
</tr>
<tr>
<td>U-shaped pattern of alliance development</td>
<td>High-low-high pattern that extends across the entire length of treatment. Characterized by strong initial alliance, followed by rupture during the middle part of therapy, and return to initial alliance strength as treatment ends (Kivlighan &amp; Shaughnessy, 2000).</td>
</tr>
<tr>
<td>Quadratic pattern</td>
<td>See U-shaped pattern.</td>
</tr>
<tr>
<td>V-shaped deflection</td>
<td>An alliance profile with a large downward deflection or spike at some unpredictable point in treatment, followed by a quick return to previous or higher levels. This deflection indicates a rupture-repair sequence (Stiles, et al., 2004).</td>
</tr>
</tbody>
</table>
intervention strategies. Interventions can be direct or indirect, and they can be targeted at a surface (manifest) or underlying level of meaning.

When the rupture consists of a strain in the bond, a direct, surface intervention would entail clarifying misunderstanding. An indirect surface intervention would be to ally with the client’s resistance. For example, if a client experiences an attempt to explore painful feelings as too threatening, the therapist might retreat from that attempt and instead emphasize that the client’s attempt to protect herself is understandable. On the underlying meaning level, direct bond-related interventions consist of exploring core relational themes, while indirect bond-related interventions consist of providing the client with new relational experiences.

When the rupture consists of disagreement on tasks or goals, a direct surface-level intervention consists of providing a therapeutic rationale for the task or goal in question, whereas an indirect surface-level intervention would be to reframe the meaning of the task or goal. When working with underlying meaning, a direct intervention would entail exploring core relational themes, and an indirect intervention would be to simply change the focus to a task or goal with which the client is more interested in working.

Another way to categorize ruptures is by the type of reaction the client has to the misunderstanding event. Samstag, Muran, and Safran (2004) break down ruptures into three subcategories: withdrawal, attacking, and manipulative.

Withdrawal ruptures are marked by patients physically turning away from the therapist (e.g. averting gaze), verbal disengagement (e.g. changing topic, long silences), or displaying a mismatch between affective expression and narrative content (e.g. an obviously tearful patient denies feeling anything). These ruptures are passive and can be
very subtle, and thus easy to miss. “A slight decrease in the patient’s speaking volume or a deep sigh after a therapist’s intervention, for instance, can be a clue to a patient feeling misunderstood by a therapist” (Samstag, Muran, & Safran, 2004, p. 202-203).

Attacking and blaming ruptures are characterized by the patient’s verbal criticism of the therapist. Typical behaviors include physical evidence of the patient’s hostility or aggression (such as gripping the chair arms, clenching the fists or crossing the arms), and a hostile, dismissive or sarcastic manner of communication.

Finally, manipulative rupture markers are best understood by their effect on the therapist, which seems to be that the therapist feels pulled to shift the role relationship with the patient in some way. For example, a patient who behaves in a sexually suggestive manner toward the therapist may provoke the therapist to respond in a complementary sexual fashion. Markers of this type of rupture include the patient acting in a helpless or passive-aggressive fashion. Another example of this type of manipulation would be the client who indicates she might have difficulty making it to an early appointment on time and indirectly hints that the therapist should do something to ensure the patient gets there. This patient could be experienced to be pushing the therapist into a more nurturing role (Samstag, Muran, & Safran, 2004).

One use of this taxonomy has been in training clinicians and helping them choose interventions that are most likely to restore alliances. Safran, Muran, and their colleagues work primarily using Brief Relational Therapy, a treatment modality that combines the principles of relational psychoanalysis and humanistic psychotherapy with contemporary theories on cognition and emotion (Stevens, 2002).
Researchers who study other types of therapy also direct some of their attention to ruptures. For example, Watson and Greenberg (2000) discuss ruptures in process-experiential therapy. They limit their taxonomy to the phase of therapy in which the rupture takes place – early, middle, or late – and they give advice on interventions to use to repair the alliance. Ruptures have also been written about in the context of cognitive therapy (e.g. Arnkoff, 2000). However, Safran and Muran’s work seems to maintain dominance in the field of rupture research. Overall, the community of alliance researchers seems not to have done empirical research that would challenge the above categorizations. It appears there is a need for researchers outside Safran and Muran’s immediate circle to attempt to replicate their categories of ruptures. However, the current study fills another important need. It is an attempt to support and extend the currently tentative evidence pointing to a link between a rupture-repair alliance development pattern and improved outcome.

The current study does not attempt to categorize ruptures by type because of the nature of the available data (only the objective measure of WAI scores). However, this type of measurement is adequate for detecting various patterns of alliance development.

Ruptures As Part of the Change Process

Why are ruptures important? They are seen as a key part of the change process. In their landmark 1990 article establishing ruptures as a therapy event for empirical investigation, Safran, Crocker, McMain, and Murray wrote that successfully resolving an alliance rupture can be a powerful means of disconfirming the client’s dysfunctional interpersonal schema. Failure to adequately resolve an alliance rupture will likely result
in poor outcome, while successfully resolving an alliance rupture can be “one of the more potent means of inducing change” (p. 156).

Relationship-focused therapists such as Safran and Muran would be expected to welcome alliance ruptures as an opportunity for growth. Conversely, psychodynamic therapists who encounter resistance in their clients would be expected to see overcoming the resistance as a hurdle to therapy rather than the work of therapy itself.

In order to test the idea that resolving ruptures is an important part of the change process, an experiment would require the following components: two groups of clients with similar initial alliance scores but divergent outcomes; reported ruptures for each client in each group; a process measure that can detect the different interventions used and the process of resolution or lack of resolution; evidence that alliance rating recovered concurrently with the resolution of the rupture for the group with better outcome; evidence that the rupture was not effectively addressed in therapy for the low outcome group; and evidence that alliance ratings remained low for the low outcome group. As yet, the writer is unaware of any study that has sufficiently controlled for these detailed process and outcome measures to provide evidence of working through ruptures as an active ingredient of change. Similarly, very few available process articles explicate the actions of therapists in unresolved alliance ruptures.

However, some empirical evidence exists to support the idea that it is the process of working through the interpersonal difficulty of a rupture that leads to improved outcome. Foreman and Marmar (1985) studied six female patients treated for bereavement in time-limited dynamic psychotherapy. All had initially poor alliance scores, as measured by the California Therapeutic Alliance Scale, an observer-rated
measure. Three patients went on to have improved alliances and good outcomes, while three others had continued poor alliances and poor outcomes. An examination of therapist actions in the six cases revealed three major differences: (1) Therapists whose clients had improved alliances addressed the defenses their patients used to deal with feelings in relation to the therapist and to others. This was the most consistent finding differentiating the two groups. (2) Therapists in the improved alliance cases addressed the triangle of punishment (the patients’ need for self-punishment to relieve the guilt over feelings of anger or responsibility for another person’s suffering). This was addressed both in the patient-therapist relationship, and in patient-other relationships. (3) Therapists addressed the patients’ problematic feelings in relation to the therapist in improved alliance cases. In two of the three unimproved alliance cases, therapists tended to ignore or avoid addressing this issue. This study, despite its small sample size, provided preliminary evidence that the process of working through ruptures provides the means of therapeutic change. However, as the authors point out, it was marred by a lack of balancing for possible confounding variables, such as age, type of stress event, and quality of social support. In addition, it is unclear how well the findings would generalize to a nonbereaved sample.

In another small-sample study, Lansford (1986) studied six clients and four therapists in six short-term therapies. Using an observer-rated scale developed for the study, initial alliance scores, alliance weakenings, and repairs were correlated with observer-rated outcome. Raters were able to predict outcome from weakening and repair excerpts. Immediately after therapists took direct action to repair weakened alliances, observer alliance ratings were highest. An example of direct action in this study would be
a transference interpretation in which the difficulties in the alliance were related to similar difficulties in the external world and then connected to relationships with early objects. Success in addressing weaknesses predicted outcome. However, one possible confound exists in this study: the same observers rated both alliance and outcome.

The work of Foreman and Marmar (1985) and Lansford (1986) provides a close look at cases in which ruptures are and are not resolved. Despite their methodological problems, including small samples, the two studies provide some support for the idea that the process of working through the misunderstanding is what improves alliance and fosters therapeutic change.

Later studies have operationalized therapeutic change as improvement in outcome measures. The evidence is growing that resolving alliance ruptures leads to improved outcome. In addition to the two studies upon which the current study expands (Kivlighan & Shaughnessy, 2000; Stiles et al., 2004), three other studies have examined the effect on outcome of patterns of alliance development (Kivlighan & Shaughnessy, 1995; Patton, Kivlighan, & Multon, 1997; Stevens, 2002). Overall, three of the five studies show that patterns of alliance rupture and repair are associated with improved outcome. These studies will be discussed in detail below.

Research on Patterns of Alliance Development

The studies in this section are organized into three categories. The first category consists of early studies that showed the therapy process consists of distinct stages. These studies formed the theoretical basis for later studies on patterns of alliance development. The second category includes process studies that provided evidence that a pattern of alliance rupture and repair can be documented over time. Finally, outcome studies linked
patterns of alliance rupture and repair to therapeutic outcome. See Table 2 for a summary of these studies and their findings.

*Early studies.* Early attempts to formulate patterns of alliance development (e.g. Golden and Robbins, 1990) generally relied on Mann’s (1973) model of client behavior over the course of 12-session time-limited therapy. Mann found that client ambivalence toward the therapist and pessimism about treatment was strongest in the middle part of time-limited therapy. Although Mann did not use the word rupture, the events he describes in the middle part of therapy seem to point toward “a negative shift in the quality of the alliance,” which is how Samstag, Muran, and Safran (2004, p. 188) define alliance rupture.

Mann’s process model describes time-limited therapy as occurring in a series of distinct stages. Miller et al. (1983) provided the first empirical support for Mann’s model. Two of the central tenets of time-limited therapy as conceptualized by Mann are adherence to the limit on the number of sessions and focusing on the central issue in therapy. The model is perhaps best understood in the terms used to operationalize it in Miller’s study. The therapy is broken into quarters, each consisting of 3 sessions. During stage 1 (sessions 1-3), the client experiences rapid improvement in symptoms. During stage 2 (sessions 4 to 6), the client can become frustrated by the therapists’ adherence to the focal problem. During stage 3 (sessions 7 to 9), the client shows evidence of resistance, negative transference, or scheduling problems. During stage 4, termination issues come to the forefront. Overall, the therapy would show a U-shaped, or high-low-high, pattern of alliance development. In an observational study of six therapists with
<table>
<thead>
<tr>
<th>Study</th>
<th>N</th>
<th>Theoretical Orientation</th>
<th>Method</th>
<th>Analysis</th>
<th>Results</th>
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<tbody>
<tr>
<td>Golden &amp; Robbins (1990)</td>
<td>2 clients 1 therapist</td>
<td>PD</td>
<td>Single-case analysis Sessions: 12 Alliance meas: WAI Outcome meas: VPPS</td>
<td>WAI scores were examined to determine patterns of alliance development.</td>
<td>WAI scores were found to be lowest in the middle phase of treatment in both cases studied. No measure of therapeutic outcome was included.</td>
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<tr>
<td>Horvath &amp; Marx (1990)</td>
<td>4 clients 2 therapists</td>
<td>PD</td>
<td>Single-case analysis Sessions: 10 Alliance meas: WAI Outcome meas: SEQ</td>
<td>Two counselors with two clients each gave alliance ratings and Session Evaluation Questionnaires</td>
<td>Working alliances showed a pattern of development, followed by decay. There were indications that alliances were repaired during the final session. No outcome measure.</td>
</tr>
<tr>
<td>Kivlighan &amp; Shaughnessy (1995)</td>
<td>21 clients 21 therapists</td>
<td>Not listed</td>
<td>College counseling with volunteer subjects Sessions: 5-17 Alliance meas: WAI-S Outcome meas: IIP</td>
<td>Hierarchical linear model analyzed relationship between client or therapist working alliance ratings and client outcomes.</td>
<td>A significant association between the linear growth function of therapist and client ratings of the working alliance and outcome. No quadratic pattern was found in client nor therapist ratings of alliance. Client-rated alliance level was unrelated to outcome. Therapist-rated alliance level at end of treatment was related to outcome.</td>
</tr>
<tr>
<td>Patton, Kivlighan, &amp; Multon (1997)</td>
<td>14 clients 6 therapists</td>
<td>PA</td>
<td>College counseling Sessions: 2-20 Alliance meas: IIP, Brief Symptom Inventory, Global Instability Scale</td>
<td>Hierarchical linear model analyzed 4 factors: psychoanalytic technique, working alliance, client resistance, and client transference, for patterns of development and change.</td>
<td>The significant t tests for the quadratic coefficient indicated that client outcome was significantly related to a high-low-high pattern of alliance development.</td>
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Table 2

Research on Patterns of Alliance Development (continued)

<table>
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<tr>
<th>Study</th>
<th>N</th>
<th>Theoretical Orientation</th>
<th>Method</th>
<th>Analysis</th>
<th>Outcome</th>
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<tbody>
<tr>
<td>Kivlighan &amp; Shaughnessy (2000)</td>
<td>Sample 1: 38 clients 38 therapists</td>
<td>PD</td>
<td>College counseling with volunteer subjects Sessions: 4 Alliance meas: WAI Outcome meas: IIP</td>
<td>Cluster analysis was used to determine patterns of alliance development, which were then correlated with IIP and BIC.</td>
<td>Three patterns of working alliance development were found: stable alliance, linear alliance growth, and quadratic alliance growth. The high-low-high quadratic pattern was found to have the greatest association to outcome.</td>
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<td>Sample 2: 41 clients 41 therapists</td>
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<td>Stevens (2002)</td>
<td>46 clients number of therapists not listed</td>
<td>BAP, BRT, CB</td>
<td>Manualized treatment study Sessions: 30</td>
<td>Cluster analytic techniques were used to determine if a global high-low-high pattern was present; Outcome was measured in terms of symptom distress and interpersonal functioning.</td>
<td>Two patterns of working alliance development were found: linear alliance growth and late-linear alliance growth (initial drop followed by increase). No relationship was found between either pattern and outcome.</td>
</tr>
<tr>
<td>Stiles et al. (2004)</td>
<td>79 clients 5 therapists</td>
<td>CB, PI</td>
<td>Clinical trial of brief psychotherapies for depression Sessions: 8 or 16</td>
<td>Cluster analysis was used to determine patterns of alliance development, which were then correlated with a battery of outcome measures.</td>
<td>Four patterns of working alliance development were found, but none was associated with outcome. However, a subset of dyads showed brief, V-shaped deflections indicative of rupture-repair sequences. These deflections were associated with outcome.</td>
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Expands upon a table in Safran, Muran, Samstag, & Stevens (2002).
Notes: CB = cognitive behavioral. PI = psychodynamic-interpersonal. PA = psychoanalytic. PD = psychodynamic. BAP = Brief Adaptive Psychotherapy. BRT = Brief Relational Therapy. VPPS = Vanderbilt Psychotherapy Process Scales. IIP = Inventory of Interpersonal Problems. BIC = Battery of Interpersonal Capabilities. SEQ = Session Evaluation Questionnaire.
varying theoretical orientations, seeing a total of 12 clients, Miller found strong support for the model. For example, resistance issues appeared with similar frequency in quarters 1, 2, and 4, but were more than twice as prevalent in the third quarter. Because of the similarity between resistance and rupture (explored in greater depth below), this study set the stage for later researchers to hypothesize about patterns of alliance development.

The work of Gelso and Carter is also an important foundation for the studies in this section. Gelso and Carter (1985; 1994), speculated that patterns of alliance vary over time in two ways. First, they believe that although the alliance is initially in the forefront of the relationship, it tends to fade into the background over time, and it returns to the forefront during times of need. They proposed that “a sound working alliance is especially important during crises in the relationship, at which times the alliance facilitates the participants’ working through of those crises” (p. 301). Examples of crises included those “precipitated by therapists’ empathic failures, separations, the emergence of negative transferences, and other client resistances to understanding” (p. 301). Gelso and Carter proposed that a second way for the alliance to vary over time was: “Especially in treatments that abbreviate duration, an initially sound working alliance will subsequently decline, but in successful therapy this decline will be followed by an increase to earlier, high levels” (pp. 301-302). They based this proposition largely on Miller et al. (1983), who found heightened client resistance during the middle phase of 12-session time-limited therapy. As discussed above, Miller and colleagues did not measure the alliance directly. Gelso and Carter touch on the idea that successful therapy will include a pattern of rupture and repair, but their formulation does not include the idea
that the process of working through the rupture is the thing that makes the therapy successful.

Hartley and Strupp (1983) created the Vanderbilt Therapeutic Alliance Scale (VTAS), and used it to observationally code five sessions (first session and one session from each quartile of treatment) from the first Vanderbilt Psychotherapy Study. The Vanderbilt studies will be discussed in greater detail in the section of this paper dealing with training. For the VTAS analysis, the therapists were experienced clinicians, and the clients were college students who had completed 25 sessions of psychodynamic therapy. Based on a variety of outcome measures, the clients were split into high- and low-outcome groups. Using analysis of variance, Hartley and Strupp found that alliance in high outcome cases tended to peak after 25% of sessions had been completed, whereas low outcome cases showed a trough at the same point. The high- and low-outcome groups began with similar alliance ratings at session 1, and in later phases there were no substantial differences in alliance between the groups. The only differences observed were at the 25% mark. However, overall they found more variance in alliance between groups than within groups and no significant differences attributable to outcome group were found. Nonetheless, this study provides preliminary support for different patterns of alliance development being linked to different outcomes.

Although the studies above lead to the conclusion that successful treatments go through a waxing and waning process of alliance development or session satisfaction, it is important to note that a successful outcome can be achieved without such fluctuations. For example, a dyad’s alliance could remain steadily high throughout treatment, and the client could still have a good outcome. Finally, these studies included only observer
ratings of alliance, and it’s unclear how the findings would have changed if client ratings had been used.

*Process studies.* Golden and Robbins (1990) examined two clients treated by the same therapist. They based their decision to employ this approach on Strupp’s observation that this approach was uniquely suited to illuminate variables that promote or hinder therapeutic change (Golden and Robbins, 1990, p. 477). They speculated that the alliance would vary along the same lines as those set out by Mann and validated by Miller. Dividing the therapy into thirds, rather than quarters, they hypothesized that the first four sessions would be characterized by the rapid mobilization of positive feelings toward the therapist and treatment. During the middle four sessions, the client’s initial enthusiasm wanes and ambivalence toward the therapist and treatment outcomes surfaces (p. 476). This phase was labeled resistance by Mann, but it clearly corresponds to the idea of tension in the therapeutic relationship, or a rupture. Finally, in approximately the last four sessions of therapy, as the ambivalence is clarified and worked through, the working relationship strengthens and is used to negotiate the termination process (p. 476). This process corresponds to the repair portion of a rupture-repair sequence.

Using a case study design, Golden and Robbins had one therapist see two clients in 12 sessions of psychodynamic therapy. They hypothesized that despite consistent therapist action, clients would display more negative affect, attitudes and behavior in the middle phase of therapy than at the beginning or end. Indeed, client ratings for each of the three WAI subscales fell during the middle phase of treatment. For client 1, ratings rose again during the final phase of treatment. For client 2, ratings for the final phase of treatment stayed flat for task and goals, but recovered to early levels for bond. Thus,
each client demonstrated a pattern of rupture and repair for the bond component of the alliance and client one demonstrated a pattern of rupture and repair for all three components. The therapist, however, showed a pattern of consistently rising alliance scores for all three aspects of the alliance for both clients. Golden and Robbins speculated that the reason for this discrepancy could be that time limits might create doubts for the client regarding the bond aspect of the alliance and that these doubts are not shared by the therapist. The process of “working through” these doubts would be reflected in the WAI-bond scores.

This study provided preliminary evidence for a high-low-high pattern of alliance development. However, it was a process study, and did not include any outcome measures, so it cannot be used to support the hypothesis that the pattern of rupture-repair predicts improved outcome. In addition, a case study design such as the one employed in this study is vulnerable to threats to internal validity. Although steps were taken to minimize this threat, it is still possible that extraneous factors were mistaken for effects of treatment. Finally, Golden and Robbins did not provide an operational definition of “drop in alliance score.” Rather than try to operationalize a criterion for a significant drop, they simply reported that alliance levels were lower in phase two of treatment based on a simple comparison.

Horvath and Marx (1990) also documented a pattern of alliance rupture and repair. Their study included two counselors of different theoretical orientations seeing a total of 4 clients for 10 sessions of time-limited therapy. The therapists in this study reported initially high alliances followed by a middle period of relationship decay. By the end of treatment, there were signs that the alliance had recovered. However, client data
did not necessarily lend support to the idea of a pattern of rupture and repair. Clients’
ratings were more difficult to fit onto a relatively smooth pattern than the therapist data.
This study also provides support for the existence of a pattern of rupture and repair as rated by the therapist. Its sole outcome measure is the Stiles’ Session Evaluation Questionnaire, which provides outcome data only on the session level, rather than for the therapy as a whole. One potential problem the authors pointed out was that the WAI was designed to be administered one time during the course of treatment, and it might not be sensitive enough to detect the small but important fluctuations that would indicate a problem with alliance.

**Outcome studies.** Five previous studies relate an alliance development pattern to outcome. The first is Kivlighan and Shaughnessy (1995), who used hierarchical linear modeling (HLM) to examine the relationship between the growth trajectory of the working alliance and therapy outcome. Unlike previous studies, which had divided therapy into arbitrary stages, this study included measures of therapeutic alliance after each session in their analyses rather than averaging across stages of therapy. Participants were 21 therapist-client dyads. The therapists were novice therapists participating in their first, second or third practicum. Length of treatment varied from 5 to 17 sessions. Clients and therapists filled out WAI-short forms after each session. They found that the correlation between client and therapist ratings was poor near the start of treatment but improved as treatment continued. The three main findings of the study in regard to client WAI ratings were: (1) client working alliance data showed a linear growth pattern, but not a quadratic growth pattern. In other words, no pattern of rupture and repair was seen in the data; (2) working alliance level, whether measured early, at the midpoint, or at the
end of treatment, was unrelated to client outcome; (3) the linear growth pattern of client alliance ratings was related to client outcome. The three main findings of the study in regard to therapist WAI ratings were: (1) therapist working alliance data showed a linear growth pattern, but not a quadratic growth pattern. In other words, no pattern of rupture and repair was seen in the data; (2) working alliance level, measured at the end of treatment, but not the beginning or midpoint was related to client outcome; (3) the linear growth pattern of therapist alliance ratings was related to client outcome. The study appears to offer little support for the notion of a high-low-high pattern of alliance development. However, the authors report that some therapists and clients did report such a pattern (others reported a low-high-low pattern).

One major weakness of hierarchical linear modeling in terms of detecting such patterns among subgroups is that HLM analyses test for consistent temporal patterns across clients or therapists. HLM can detect differences when the groups are defined by the user in advance, but in the absence of a priori groups, it creates one model that best fits all the data. Thus, subgroups that showed different patterns of alliance development may have gone undetected. In fact, Kivlighan and Shaughnessy mention in their discussion section that some clients showed a high-low-high pattern of alliance development, while others showed a low-high-low pattern. However, they said the type of analysis they used wasn’t able to detect the groups.

Following up on Kivlighan and Shaughnessy’s previous research, Patton, Kivlighan, and Multon (1997) included measures of alliance and outcome in a larger study of psychoanalytic processes. In this study, 14 clients saw six different pre-doctoral counselors for 7 to 20 sessions. Hierarchical linear modeling was used to analyze client
WAI scores. Unlike in the previous study, when a quadratic term was added to the linear model, the results were statistically significant. In this case, the quadratic term accounted for an additional 18% of the variance in outcome. In addition, results showed that high alliance scores at the midpoint of treatment also predicted better outcome. The study was not able to examine the relative predictive power of level and pattern of working alliance score. Overall, the results supported the existence of a high-low-high pattern of alliance development, and they supported that this pattern was related to alliance outcome. The authors of this study offered no theories as to why their study, which revealed a high-low-high pattern of alliance development, had not replicated the findings of Kivlighan and Shaughnessy (1995), which did not find a high-low-high pattern of alliance development. Both studies included varying lengths of treatment. The clients in each group were similar. However, the therapists’ levels of training might have been different. In Kivlighan and Shaughnessy (1995), the therapists were in their first (n=10), second or third (n=11) practicum. Patton, Kivlighan, and Multon (1997) used mostly doctoral students and one advanced master’s student. They do not specify the number of practica completed by the therapist participants, nor do they specify the number of clinical hours accumulated. However, it seems likely that these therapists were more experienced overall than the therapists in the previous study. As will be seen below, some research has shown that there may be differences in how novice trainees and advanced trainees evaluate their own therapeutic alliances. However, the effect of therapist training on client ratings of alliance is less clear. Nonetheless, it seems possible that the difference in therapist experience might have contributed to the different findings. Another possible explanation is that using different versions of the WAI might have contributed to the
discrepancy. The only difference in the alliance measures is that Kivlighan and Shaughnessy (1995) used the short form of the WAI, while Patton, Kivlighan and Multon (1997) used the long form. Although the two forms have been found to be highly correlated (Busseri & Tyler, 2003), perhaps some difference exists that shows itself most strongly in the items related to tension. Overall, there is no way to tell whether either of these explanations is correct. It is possible that the difference in form of WAI led to the discrepant findings, and it is possible that the difference in training of the counselors led to the discrepant findings, and it is possible that another, unknown factor is the cause.

Continuing their work on alliance development patterns, Kivlighan and Shaughnessy (2000) used cluster analysis to study client alliance development over the course of four sessions in brief therapy with trainee counselors. Unlike HLM, which can detect group differences only when the user defines the groups in advance, Kivlighan and Shaughnessy (2000) use cluster analysis to sort cases into groups based on how similar their patterns of alliance development are. (This statistical method is also used in the current study, and it is discussed in detail in the Method section.) This study was conducted using two samples. Both samples were drawn from students in an undergraduate developmental psychology course. They received extra credit for their participation. In sample 2, only students who presented with a moderate amount of distress as measured by the IIP were included. They were selected to show interpersonal problems severe enough to give them something to work on with their counselor but moderate enough that a novice therapist could adequately address them in a time-limited treatment. The counselors-in-training were involved in a skills course that included both lectures and experiential practice. The principle text for the didactic portion of the course
was Strupp and Binder’s (1984) *Psychotherapy in a New Key: A Guide to Time-Limited Dynamic Psychotherapy*. Clients were seen for four sessions. In the first sample, 41 volunteer clients rated alliance using the WAI. Cluster analysis for sample 1 revealed three patterns of alliance development: stable alliance, linear growth, and quadratic growth. Sample 2, which included 38 volunteer clients, replicated the finding of three patterns of alliance development. In addition, clients in this sample completed outcome measures, the Inventory of Interpersonal Problems (Horowitz et al., 1988) and the Battery of Interpersonal Capabilities (Paulhus & Martin, 1987). Clients in the quadratic growth cluster reported significantly greater therapeutic benefits than clients in the other two clusters. This study supported the existence of a high-low-high pattern of alliance development, and it provided support for the hypothesis that the pattern is associated with improved outcome. They found that a curvilinear pattern of alliance development accounted for outcome variance beyond that accounted for by alliance level alone, indicating that a pattern of alliance rupture and repair was operating to improve outcome in some cases. This study was somewhat limited in generalizability because it used novice counselor trainees and volunteer clients. In addition, the abbreviated number of sessions could have caused the results to develop differently than they would have in a longer treatment.

Stevens (2002) examined patterns of alliance development in 44 dyads. Participants met for 30 sessions of brief, manualized therapy in one of three treatment conditions, Brief Adaptive Psychotherapy, Brief Relational Therapy, and Cognitive Behavioral Therapy. Using a cluster-analytic technique similar to the one used by Kivlghan and Shaughnessy (2000), he analyzed client-rated WAI scores. He did not
detect a global high-low-high pattern of alliance scores. However, he did document local
tear-and-repair patterns (V-shaped deflections from the overall pattern) in 22 of the 44
cases. He also found second grouping of cases, a linear pattern of alliance development in
29 of 44 cases. Outcomes did not differ for the two groups. Overall alliance level was
correlated with improved outcome. Stevens mentioned several possible limitations of his
study: first, he questioned whether the WAI operationalized alliance well enough to
accurately measure the therapeutic change process. In addition, the database he drew
from contained 128 cases, but because of problems with patient compliance, only 44
cases contained enough data to be usable. It is impossible to say how his results might
have differed had he been able to use a larger sample. Finally, he recommended that
observer ratings could capture ruptures that took place outside the awareness of the dyad.

The most recent study on patterns of alliance development is Stiles and
Using data from the Second Sheffield Psychotherapy Project, a clinical trial of two time-
limited treatments for depression, Stiles tracked client-rated alliance over 8 sessions for
some clients and 16 sessions for other clients. Seventy-nine clients rated alliance after
each session using the Agnew Relationship Measure (ARM). A battery of outcome
measures was used, including the Beck Depression Inventory, the Symptom Checklist-
90-Revised, and the Inventory of Interpersonal Problems. Stiles found four clusters:
linear alliance growth, stable alliance, negative slope with positively accelerated curve
and high variability, and positive slope with negatively accelerated curve and low
variability. Outcomes for the four patterns were not significantly different. However,
when each client’s alliance pattern was analyzed using alternative criteria for rupture-
repair sequences, they found brief, V-shaped deflections in 17 patterns. These indicated a brief rupture followed by repair. Clients with this pattern tended to have better outcomes than clients who did not have this pattern. Although the Stiles et al. study failed to replicate the global high-low-high pattern of alliance development, it showed that a more localized pattern of alliance tear and repair was predictive of outcome. Stiles et al. point out that their results are correlational; there is nothing in the data to indicate that the rupture-repair sequences caused the improved outcome. Limitations of this study include the fact that clients were all depressed and all from one city. In addition, the therapists were also investigators on the project. Finally, outcome was assessed only by self-report instruments. A multi-method approach to outcome assessment would have provided a more complete look at therapeutic change.

Discussion of Studies on Alliance Patterns

Research on patterns of alliance development grew out of efforts (Mann, 1973; Miller, 1983; Gelso & Carter, 1985; 1994) to understand the effect of time limits on therapy and the therapeutic relationship. It is because of this early constraint that the pattern of high-low-high alliance development was originally expected to span the entire length of treatment. Kivlighan and Shaughnessy’s (2000) finding confirming that pattern used a 4-session treatment length. With so few data points, it would be impossible to show whether what appears to be a U-shaped profile would continue in quadratic pattern were treatment length extended or if it would instead demonstrate a V-shaped deflection from a different overall pattern. It might be that U-shaped development patterns only make sense for extremely abbreviated treatments, while treatments of eight sessions or longer have enough data points to show both an overall pattern and a V-shaped deflection.
from that pattern, indicating a rupture and repair sequence. Thus, in terms of patterns of development, the final three studies discussed do not seem to contradict each other.

Although the fact the Stevens (2002) failed to show better outcomes for clients reporting rupture-repair sequences is more troubling, it seems there could be a logical explanation for this finding as well. Stevens makes the excellent point that WAI scores can only document rupture-repair sequences that span more than one session. It is possible in this and other studies (including Kivlighan & Shaughnessy, 2000 and Stiles, et al., 2004) that some rupture-repair sequences took place within a single session and were not picked up by the WAI. In at least one of Stevens conditions (Brief Relational Therapy), it seems quite possible that a disproportionate number of ruptures were identified and repaired in a single session. Stevens notes that ruptures were slightly, but significantly, more likely to occur in the BRT condition. Clients in 66% of BRT cases reported ruptures. This modality was developed by Safran and Muran (2000), and it entails an intensive focus on the here-and-now of the relationship. In fact, they write: “Our primary impetus for developing BRT has been our interest in consolidating, refining and empirically testing principles relevant to resolving ruptures in the therapeutic alliance and potentially pernicious transference-countertransference enactments” (pp. 175-176). Given that the focus of the therapy emphasizes rupture resolution, it seems likely that even the BRT clients who did not report ruptures on the WAI did in fact experience within-session rupture-repair sequences and thus displayed the benefits of rupture resolution in their outcome measures, masking the effects of WAI-detected rupture-resolution sequences on outcome.
One problem in this body of literature is the lack of a consistent operationalization of “rupture.” Although several studies have used the WAI (Golden & Robbins, 1990; Kivlighan & Shaughnessy, 2000; Stevens, 2002), no two have defined rupture in exactly the same way. How much of a drop is required for clinically significant change in alliance? It’s not clear whether it would be internally valid to subject a process measure like the WAI to a formula like Jacobson & Truax’s (1991) Reliable Change Index, as is often done with outcome measures because a drop in alliance of even a point or two might indicate a problem in alliance that needs to be addressed. The current study employs a method that builds on those used by Stevens (2002) and Stiles et al. (2004). It is described in the results section.

Overall, these studies show that there is mixed but promising evidence for rupture-repair sequences as predictors of improved outcome. Although the overall shape of the pattern of alliance development was different in the studies by Stiles et al. (2004) and Kivlighan and Shaughnessy (2000), both found that rupture-repair sequences in therapy predicted significantly greater gains at treatment termination. One purpose of the current study is to use the database of the Ohio University Helping Relationships Study to replicate both the existence of a rupture-repair pattern of alliance development and improved outcome for clients in dyads that show rupture-repair sequences.

**Training**

The Ohio University Helping Relationships Study included as one of its main variables therapist training status. Therapists were either graduate students in clinical psychology or graduate students in a field unrelated to the helping professions. The
current research examined the relationship between training status and rupture-repair status.

Training can be understood to mean two different things in the context of psychotherapy research. First, it can mean experience, or amount of training. In the literature, therapists are generally classified as lay therapists, novice trainees, advanced trainees or experienced clinicians with number of years in practice specified. The OUHRS included lay therapists (graduate students in fields unrelated to the helping professions) and psychology graduate students. In the proposed study, the psychology graduate students will be subdivided into novice trainees and advanced trainees. Second, training can be understood to mean training in a given treatment modality, often in the context of a treatment manual. This type of training was not part of the OUHRS design, and is not discussed in the proposed research.

Several studies have explored the relative contribution of specific and common factors in psychotherapy. Specific factors include therapists’ technical skills. Common factors are the qualities inherent in any good human relationship (Strupp & Hadley, 1979). OUHRS was a study that examined the relative contribution of two different common factors, training or experience, and the qualities of a good human relationship.

The Vanderbilt Psychotherapy Studies

OUHRS continued a line of research that was established by Hans Strupp in 1979 with the publication of the first of the Vanderbilt Psychotherapy Studies. The Vanderbilt research team reasoned that if therapy is influenced by both specific and nonspecific factors, and if nonspecific factors are present in all helping relationships, then the specific expertise of professional therapists should lead to superior treatment outcomes (Strupp,
Strupp and colleagues tested this hypothesis by comparing two groups of therapists who were “presumed to provide equal nonspecific factors but who differed in technical expertise (trained psychodynamic and experiential clinicians versus college professors noted for their warmth and empathic understanding)” (Strupp, 1993, p. 431). The hypothesis was not supported. Clients treated by “kindly professors” showed, on average, as much improvement as clients treated by professional psychotherapists.

Micro-analyses of tapes of Vanderbilt I sessions led to the finding that the emergence of a productive therapeutic alliance by the end of the third session is associated with positive outcome (regardless of training status). Conversely, professionals and lay therapists both did poorly with clients who entered therapy with “attitudes of negativism, hostility, and resistance” (Strupp, 1993, p. 432). Even experienced therapists were vulnerable to negative transference with these “less suitable” clients, as evidenced by such things as subtly blaming “supportive” communications. Vanderbilt II represented an effort to teach therapists not to fall prey to this problem. Therapists in this five-year training study first saw two clients in their usual style, and then underwent manualized training in time-limited dynamic psychotherapy, and then saw two clients using the manualized technique. It was hypothesized that training would result in improved outcomes generally and that differentially greater improvement would be seen in the clients considered less suitable for brief dynamic therapy. Outcome data did not support either hypothesis (Bein et al., 2000). However, Strupp (1993) wrote:

Conceptually, TLDP represented a marked departure from earlier thinking based on the assumption of a dichotomy between specific and nonspecific factors. TLDP stresses the careful monitoring, exploration
and use of the therapeutic relationship as a technical strategy in its own right, merging so-called relationship factors with technique (p. 432).

Vanderbilt II is not directly related to the training aspect of the proposed research, but it plays into the other constructs in the OUHRS, client social skills and therapist facilitative interpersonal skills. These will be discussed in further detail below.

Experience and Outcome

Returning to the question of whether therapy is improved when therapists are trained in psychology as opposed to untrained natural helpers, a meta-analysis by Stein and Lambert (1995) of studies of training level and outcome showed that a variety of outcome measures are associated with modest effect sizes favoring more trained therapists. Alliance, a process measure, was not included in the analysis. In addition, the finding grouped therapists by level of experience differently than is done in the proposed study. The proposed study breaks therapists down as novice trainees, advanced trainees, and lay therapists. Stein and Lambert included studies that looked at the full range of experience, including doctoral psychologists with many years of clinical practice. They classified therapists’ experience as had been done in the original studies, and mostly looked at trainees versus experienced clinicians. Thus, although the finding is encouraging for students who are in the process of being trained, it is not closely related to the current study.

Experience and Alliance

Mallinckrodt and Nelson (1991) studied the relationship of training level and working alliance. They separated counselors into three groups: novice (in their first practicum), advanced trainee (second practicum through predoctoral internship), and
experienced (postdoctoral counselors.) They found that across training levels, client and therapist agreement on WAI was quite low ($r = .11$ to $.26$). This indicates that clients and therapists tend to have differing views of the alliance. In addition, they found a significant difference in client ratings of goal and task agreement (but not bond), depending on the level of training. Finally, they found that advanced trainees tended to rate their alliances lower than either novices or experienced counselors. The study did not include an outcome measure.

Dunkle and Friedlander (1996) examined the contribution of therapist experience to client-rated working alliance, as measured by the short form of the WAI at the third, fourth or fifth session. They studied 73 therapists, and categorized them as having attained a bachelor’s degree, master’s degree, or doctoral degree. They found no significant differences by experience level in client-rated alliance. The current research could help clarify the disparate findings of this study with those of Mallinckrodt and Nelson.

Burlingame and Barlow (1996) examined this issue in the context of group therapy. They compared experienced psychologists (30-40 years in practice) and college professors of about the same age who were known to be “natural helpers” as they led 15-session psychotherapy groups. They found no significant differences in outcome, primarily because of a floor effect on several measures. They also measured the alliance using the Therapeutic Alliance Scale at sessions 3, 8, and 14, and found no significant differences in client-rated alliance at any timepoint. This study used experience therapists rather than trainees as is done in the current research, and its finding might not generalize to the sample used in the OUHRS.
Hersoug, Hoglend, Monsen, and Havik (2001) studied therapist experience and WAI scores as part of the Norwegian Multisite Project on Process and Outcome of Psychotherapy. They also found no significant differences in WAI scores for therapists of varying experience. However, their sample included therapists with a mean of 10.1 +/- 6.64 years of experience. Therapists were psychologists, psychiatrists, social workers, and nurses. No trainees were included, so generalizability is again in question.

**Training and the Current Study**

Overall, the literature seems to show that client perception of alliance is unaffected by therapist training level, although very few studies classified therapists in exactly the same categories as used in the current study (lay therapists, novice trainees, and advanced trainees). However, the question addressed in the current study has never been asked before. No study to date has compared patterns of alliance development for trained vs. untrained therapists, and thus no evidence exists as to whether ruptures happen with the same frequency and in the same sessions when therapists are lay counselors as opposed to when they are trained in psychology.

Given the lack of significant differences by training status in client-rated alliance at specific timepoints, it seemed likely that the current study would find no difference in client-reported ruptures. However, some evidence suggests therapists themselves show group differences in their ratings of alliance. As found by Mallinckrodt and Nelson (1991), it was expected that mean alliance ratings of advanced trainees would be lower than those of the therapists in the other two groups.

No research is available specifically addressing the effect of therapist training on resolution of alliance ruptures. Theoretically, managing ruptures should require strength
in both the relationship (nonspecific) factor and the technique (specific) factor. As Strupp (1993) pointed out, manualized therapies such as TLDP can be used to teach therapists how to monitor, explore, and “use the therapeutic relationship as a technical strategy in its own right, merging so-called relationship factors with technique” (p. 432). Thus, if training works like it is supposed to, trained therapists should have the benefit of both their relationship skills and their specialized training to allow them to negotiate ruptures in the therapeutic alliance more effectively than lay therapists. However, Strupp’s research showed that outcome was not improved by manualized training. Although alliance was not directly measured, the research suggests that alliance was also not improved. Strupp’s experiment compared the same experienced therapists before and after training. The current study will examine lay therapists and psychology trainee therapists. It might be that at this low level of expertise, the incremental increase in technical knowledge for advanced psychology trainees over novice trainees and lay counselors will provide the wherewithal to better negotiate ruptures, leading to improved outcomes. One possible drawback to the methodology of the current study is that the same technical knowledge that allows advanced trainees to better negotiate ruptures might cause them to fully resolve ruptures within a single session, which would make them undetectable by WAI scores. Similarly, if a rupture took place during a session for which WAI is not recorded, it will be undetectable in the current study.
The Current Study

Rationale

The current study was designed to replicate and extend previous findings by Kivilghan and Shaughnessy (2000) and Stiles et al. (2004). As stated above, further evidence is needed to document the existence of a pattern of alliance development indicative of rupture and repair. In addition, further evidence is needed to show that alliance rupture-repair sequences predict improved outcome beyond that predicted by alliance level. It was expected that the current study would reveal a subset of dyads whose WAI ratings fall into a pattern of high-low-high, such as was found by Kivlighan and Shaughnessy (2000).

The previous studies have generally focused only on client ratings of the alliance. The current study also examined therapist alliance ratings in an effort to determine whether their ratings fall into the same patterns as those seen in client ratings and whether their ratings are as predictive of outcome as client ratings. It was expected that client-rated WAI pattern will predict outcome better than therapist-rated WAI pattern.

In addition, no previous rupture study has varied therapist training status. The literature on therapist experience contains only the barest hint of what to expect in terms of experience and patterns of alliance development. The current study includes therapists with three levels of experience: lay therapists, novice trainees, and advanced trainees. In the OUHRS study, trainees were grouped into a single category. Using that breakdown, no difference was found between lay therapists and psychology therapists for outcome or alliance. However, the current study examined the effect of putting advanced trainees in a separate category. It was expected that client-reported alliance patterns will not vary by
therapist training. However, based on Mallinckrodt and Nelson’s (1991) finding that advanced trainees rated their sessions lower than novice trainees (using WAI scores), it was expected that advanced trainee therapists would report lower mean alliance levels than novice trainees or lay therapists.

Independent Variables: (1) WAI alliance rater (therapist/client); (2) therapist training status (advanced trainee, novice trainee, or non-psychology student)

Dependent Variables: (1) alliance development pattern (rupture/not rupture); (2) alliance level; (3) outcome

Hypotheses

Major Hypotheses

Hypothesis 1: Cluster analysis will reveal a cluster of dyads whose WAI ratings reflect a pattern of rupture-repair. This hypothesis will be tested separately for client ratings and therapist ratings.

Hypothesis 2: The rupture-repair pattern of alliance development will account for outcome variance beyond that accounted for by mean alliance level. This hypothesis will be tested separately for client ratings and therapist ratings.

Hypothesis 3: Client-reported rupture-repair sequences will account for more outcome variance than therapist-reported rupture-repair sequences.

Hypothesis 4: Intraclass correlation will reveal that the present sample replicates the alliance pattern solutions found by Kivlighan and Shaughnessy (2000).

Hypotheses Related to Training

Hypothesis 5: Therapists ratings are more likely to indicate an alliance pattern of rupture and repair than clients, regardless of training status.
Hypothesis 6: Advanced trainee therapists will rate alliance level lower than therapists with less training.

Hypothesis 7: There will be no relationship between therapist training status and client-reported rupture-repair sequences.

Method

The Ohio University Helping Relationships Study

The current study is archival research drawn from the database of the Ohio University Helping Relationships Study (Anderson, 1998). The purpose of that study was to examine how “common” therapist variables affect treatment outcome and alliance development. The OUHRS had two major independent variables: training status and therapist facilitative interpersonal skills. Training status is a component of the proposed study and was discussed above. Participant selection and relevant measures used in the study are described below.

Therapist FIS. Therapist facilitative interpersonal skills (FIS) are a therapist pre-treatment variable that was hypothesized to influence alliance, and through alliance, outcome. The working definition of high facilitative interpersonal skills used in the study was “the general and personal qualities of persons capable of 1) perceiving, understanding, and sending a wide range of interpersonal messages and 2) persuading others with personal problems to use proposed solutions to problems and abandon maladaptive patterns” (Anderson & Weis, 1999; in Crowley, 2000, p. 78).

Each of the constructs that comprised FIS had been shown in the literature to relate in some way to the formation of the alliance. The OUHRS found that therapist psychological mindedness was moderately positively related to client-rated alliance at
session 3, and therapist social skills were significantly related to client-rated alliance at session 3. Therapist empathy and sociability were not significantly related to alliance.

Although therapist FIS seems likely to contribute to the successful navigation of tensions in the therapeutic relationship, it is difficult to form hypotheses regarding FIS and rupture-repair sequences. High FIS therapists would likely deal well with threats to the alliance in sessions. Thus, it seems likely that ruptures could be repaired within a single session, rendering them undetectable by WAI score. Similarly, it is possible that low FIS therapists would mishandle threats to the alliance, potentially causing ruptures to go unrepaired, which would leave WAI scores stable but low. For this reason, the current study does not include hypotheses regarding FIS.

The Current Study

Participants. Participants in the current study were selected from the database of the Ohio University Helping Relationships Study (OUHRS). The purpose of that study was to examine how “common” therapist variables affect treatment outcome and alliance development. The proposed study uses all the participants in the active condition who completed at least 5 sessions. A total of 45 undergraduates who reported clinically significant levels of psychological distress participated in the OUHRS and are included in the proposed study. Therapists included 11 graduate students in clinical psychology and 12 graduate students in fields unrelated to the helping professions.

The procedure for selecting client participants is described in detail in Crowley (2000). The procedure is summarized here, based on her description. It involved screening 2,142 students enrolled in introductory psychology courses between March 1998 and June 1999. The students were screened for general psychological distress and
depression using a commonly used, brief self-report questionnaire, the Symptoms Checklist-90-R (Derogatis, 1977). Undergraduates who scored at least two standard deviations above the mean on the SCL-90-R were invited to participate in a more in-depth screening one week following their initial screening. The in-depth screening included an assessment interview, a second administration of the SCL-90-R, and an initial administration of the Inventory of Interpersonal Problems-CX (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988).

A total of 204 participants qualified to continue in the OUHRS. These students had SCL-90-R Global Severity Index scores at least two standard deviations above the mean for two administrations, at least three IIP subscales clinically elevated, and a DSM-IV diagnosis that reportedly interfered with interpersonal functioning. Participants were screened out and referred to counseling if they were diagnosed with drug or alcohol abuse or dependence, frequent suicidal ideation, or severe personality disorders. Students currently in psychotherapy or planning to start psychotherapy in the next 22 weeks were also screened out, as were those who did not voluntarily admit to problems during the assessment interview (Crowley, 2000).

Of the screened students who were eligible to complete the OUHRS, 83 agreed to participate. They were randomly assigned to “active” (n=52) and “control” (n=20) conditions. Active participants were asked to meet for seven weekly one-hour sessions with one of the graduate student “therapists” to discuss their problems and fill out additional questionnaires. They were also asked to complete termination questionnaires and an interview with one of the assessment clinicians, as well as follow-up questionnaires three months following the termination interview. Control participants
were asked to complete a termination interview and questionnaires on three separate occasions over a twenty-two week period (Crowley, 2000).

Seven participants dropped out, leaving 45 active participants who completed the OUHRS. Only data from OUHRS active participants are used in the proposed study because only they completed therapy sessions, and therefore, Working Alliance Inventories.

Demographics for the client participants who completed the study are as follows: Twenty-seven were female, and 18 were male. They ranged in age from 17 to 23, with a mean of 19. A total of 36% reported some prior psychotherapy experience. 90.9% were Caucasian, 2.3% were African American, 2.3% were Asian/Pacific Islander, and 4.5% were multi-racial. Active participants earned class credit and $50 for completion of the study (Crowley, 2000).

Therapist participants included eight males and 15 females. Eleven were from the clinical psychology graduate program at Ohio University, and 12 were from various other disciplines. They ranged in age from 23 to 53 with a mean of 31. Among clinical psychology graduate students, 9 were Caucasian, 1 was Hispanic, and 1 was Asian. This group included 8 females and 3 males. Among non-psychology graduate students, 10 were Caucasian and 2 were Asian. Seven were female, and 5 were male. All therapist participants were paid $200 for their participation (Crowley, 2000).

The psychology students varied widely in their reports of how many hours of clinical experience they had before starting the study. Five reported 35 or fewer hours. Six reported 113 or more hours. The maximum reported by any therapist participant was
In the proposed study, the psychology students will be subdivided into novice trainees (35 or fewer hours) and advanced trainees (113 or more hours).

Clients met with their therapists once a week for seven weeks. All sessions were audiotaped, and session 3 was also videotaped.

**Measures.** A battery of measures was recorded for clients and therapists. Only the measures included in the analyses for the proposed study are described here.

The Outcome Questionnaire (OQ; Lambert, Lunnen, Umphres, Hansen, & Burlingame, 1994) is a 45-item general symptom measure. The OQ includes subscale measures of symptom distress, interpersonal relationships, and social role performance. The measure has reasonably good internal consistency (alphas from .70 to .93; Ogles, 1996). Support has also been found for the construct and concurrent validity of the OQ with both patients and nonpatients (Umphress, Lambert, Smart, & Barlow, 1997). The OQ was given at pre-treatment screenings, after the third session, and again at termination.

The Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988) is one of the few measures of interpersonal distress available with good psychometric properties. The OUHRS used the IIP-CX (Alden, Wiggins, & Pincus, 1990), a 64-item version of this self-report questionnaire with items that match interpersonal circumplex scales. The test is divided into two parts: “things you find hard to do with other people” and “things you do too much.” Clients rate their distress regarding a series of problems on a 5-point Likert-like scale. This measure was given to clients prior to therapy and at termination in order to assess changes in relationships that are not measured with symptom measures. Construct validity has been found to be
adequate (Gurtman, 1996). Test-retest reliability has been reported at .98 for the overall inventory (Horowitz, et al., 1988).

The Working Alliance Inventory (WAI; Horvath, 1981; Horvath & Greenberg, 1989) is a widely used alliance measure with three subscales for measuring agreement on tasks, agreement on goals, and the existence of a therapeutic bond. Each subscale contains 12 items, which the participant rates on a 1 to 7 scale. High internal consistencies have been reported with the WAI (e.g., alpha=.98; Tichenor & Hill, 1989). There is some evidence for convergent validity of the subscales (Horvath & Greenberg, 1989). There is also evidence for discriminant validity for the Goal scale, while results for the Task scale were limited. Results for the Bond scale were equivocal (Horvath & Greenberg, 1989). The therapist and patient forms of the WAI were administered following sessions 1, 3, 5, and 7.

Procedure

The procedures in the present study were statistical in nature and developed to replicate and extend the work of Kivlighan and Shaughnessy (2000).

Cluster Analysis

Cluster analysis is used to search data for a structure of “natural” groupings (Johnson & Wichern, 2002, p. 668). Grouping is done on the basis of similarities or dissimilarities (distances) among variables or cases. In hierarchical cluster analysis, no assumptions are made concerning the number of groups or the group structure. In K-means cluster analysis, the analysis is forced to a solution that includes a given number (k) of clusters.
The current study uses agglomerative, hierarchical cluster analysis, which means that cases are grouped on the basis of their similarities. According to The American Heritage Dictionary (2000), agglomerative means “to form in to a rounded mass,” and hierarchical means “classified according to various criteria into successive levels or layers.” Agglomerative, hierarchical methods start with the individual objects, which means that initially there are as many clusters as there are objects. The most similar objects are grouped first, and these groups are merged in an iterative process according to their similarities. Eventually, as the similarity decreases, all subgroups could be merged into a single cluster. The results of this process are displayed in a two-dimensional diagram known as a dendogram. The dendogram illustrates the mergers that have been made at successive levels.

Similarity between cases can be measured in a variety of ways. To prepare the data for clustering, a symmetric proximity matrix is created. This matrix shows the distance of each case from each other case using, for example, correlation, Euclidean distance (the square root of the sum of the squared differences between values for the items), or squared Euclidean distance (the sum of the squared differences between the values for the items) (SPSS, Inc., 2003). When grouping variables, it is common to use correlation (Johnson & Wichern, 2002). When grouping cases, Euclidean distance or squared Euclidean distance are more commonly used.

After one has determined what type of distance to use, it is necessary to choose a criterion for merging the data into clusters. Four options are available: single linkage, which entails forming clusters of minimum distance using nearest neighbor items; complete linkage, which entails forming clusters of maximum distance using farthest
neighbor items; average linkage, which entails using the average distance between all pairs of members in the respective sets; and Ward’s hierarchical clustering method, which is the method used in the proposed study, and is discussed in greater detail below.

Ward’s (1963) method for hierarchical clustering is based on minimizing the loss of information from joining two groups. This method is usually implemented with loss of information taken to be an increase in an error sum of squares criterion (Johnson & Wichern, 2002). As Johnson and Wichern explain, at each step in the analysis, the joining of every possible pair of clusters is considered, and the two clusters whose combination results in the smallest increases in error sum of squares (minimum loss of information) are joined (p. 691). Ward expects clusters of multivariate observations to be roughly elliptical (Johnson & Wichern, 2002).

The analysis reveals a series of possible solutions, each with a different number of clusters. To choose the solution that best fits the data, the user can plot the error terms. When the error term shows a sharp increase (drop in the proportion of variance accounted for when two clusters are joined), the solution before the increase is often seen as the best solution (Stiles et al., 2004).

*Cluster Analysis vs. Hierarchical Linear Modeling*

As noted above, studies on patterns of alliance development have used two different statistical methods. Although cluster analysis has been the method of choice recently, and was used in the three studies most closely related to this one, hierarchical linear modeling was used in two studies (Kivlghan & Shaughnessy, 1995; and Patton, Kivlghan, & Multon, 1997).
HLM is used to study processes of change in repeated measures studies. It is seen as superior to ANOVA and MANOVA because its design requirements are more flexible than the design requirements for ANOVA and MANOVA (Francis et al., 1991). As explained by Kivlighan and Shaughnessy (1995), HLM involves a two-stage analysis. In the first model, the growth trajectory of each case is characterized by a set of parameters, which are assumed to vary randomly. In the second model, the parameters from the first model are used as dependent variables in a series of regressions. The result of this work is a set of parameters for how well an individual participant’s growth pattern fits a single pattern of change over time that describes the growth pattern for all participants.

In cluster analysis, the identification of disparate groups is the result of the analysis. HLM, on the other hand, allows users to compare patterns for known groups, which have been identified on an *a priori* basis.

In the context of the current study, HLM would be unable to detect group differences in patterns of change across time, and thus it could provide a misleading or incomplete view of the data. Cluster analysis, on the other hand, can accurately distinguish various groups of clients with similar patterns of development over time. For this reason, cluster analysis is used in the current study.

*Cluster Analysis in the Current Study*

In the current research, cluster analysis was conducted on cases, specifically, profiles of working alliance ratings. Each dyad had two profiles of working alliance ratings. One profile consisted of the four ratings by the client and the other consisted of the four ratings by the therapist. Data for each rater were analyzed separately. The analyses in the proposed study followed the model set forth by Kivlighan and
Shaughnessy (2000). This model was chosen over the model of Stiles et al. (2004) because the proposed study has the same number of session scores available as in the Kivlighan and Shaughnessy study, whereas the Stiles et al. study includes 8 to 16 sessions, which necessitated more complicated profile development than is called for here.

Kivlighan and Shaughnessy said that each profile can be defined by two dimensions: its level (mean alliance score) and its pattern (how scores change over time). In order to study the two dimensions separately, they ipsatized each profile by averaging the four WAI scores and then subtracting the average score from each rating, resulting in a deviation profile that describes how each session deviates from the client’s average, independent of the overall level of the scores. These ipsatized scores were then used to form clusters of WAI profiles. Kivlighan and Shaughnessy studied only client ratings. In the current study, the same procedure was followed for both client and therapist ratings.

For the cluster analysis, Kivlighan and Shaughnessy used Ward’s (1963) minimum variance technique. This method forms hierarchical clusters that have minimum within-group and maximum between-group variance. When relatively disparate groups are combined, the error index from this analysis indicates an increase in within-group variance.

WAI profiles were subjected to a cluster analysis, in an effort to determine the pattern of alliance formation for the proposed sample. Each profile (or case) was first considered as a separate cluster, and through an iterative process the number of clusters was systematically reduced. Based on previous researchers’ findings, it was expected that the final solution would include 3 to 4 clusters of patterns. It was expected that one of the
clusters would show a pattern that indicates alliance ruptures followed by repair (i.e., a U-shaped pattern of alliance development).

It was expected that approximately one third of client and therapist ratings would indicate a rupture-repair sequence. In studies by Kivlighan and Shaughnessy (2000) and Stiles et al. (2004), rupture-repair sequences appeared in approximately one third of cases. Each of these studies measured the alliance after every meeting, but in the current study, the alliance was measured only after sessions 1, 3, 5, and 7. It seemed likely that because information was gathered at fewer timepoints, fewer rupture-repair sequences would show in the data. However, in the current study, both the client and the therapist rate the alliance, providing twice as many opportunities for a rupture-repair sequence to be reported. It was expected that these two circumstances will balance each other, leaving a percentage of ruptures similar to that found in previous research.

The solution of the current study’s cluster analysis was compared with the solution revealed in Kivlighan and Shaughnessy’s (2000) work. Similarity between each pair of clusters was tested using one-way intraclass correlation (Haggard, 1958, in Curry & Thompson, 1982). ICC is based on analysis of variance and provides an index of the proportion of variance shared by two profiles (clusters). This method is sensitive to profile shape, elevation and additive bias, and compares favorably to alternative measures (Curry & Thompson, 1982).
Results

Cluster Analysis

Hypothesis 1

Client. The hypothesis that cluster analysis would reveal a solution that included a cluster of dyads whose WAI ratings reflect a pattern of alliance rupture and repair was not supported in the client data.

In the case of the client Working Alliance Inventory data, four clusters were derived from the hierarchical cluster analysis, using squared Euclidean distance as the measure of similarity and Ward’s method as the criterion for merging the data into clusters. Examination of the error terms led to the selection of a four-cluster solution. However, one cluster contained only one case. At the next stage of the agglomeration, this case merged with another cluster. In order to maximize the practical usefulness of the current solution, the three-cluster solution was selected. An additional benefit to the selection of the three-cluster solution is that it will allow the solution of the current study to be compared with the solution of Kivlighan and Shaughnessy (2000), permitting a test of hypothesis 3.

Of 45 cases, 38 contained data for all 4 WAI administrations. Seven cases had missing data and were dropped.

Means and standard deviations for each of the four client WAI ratings are displayed for the three clusters in Table 3. A graphical representation of this information is shown in Figure 2. The clusters are described in detail below.
Table 3

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<th>Cluster 1</th>
<th>WAI Deviation Score Session 1</th>
<th>WAI Deviation Score Session 3</th>
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<th>WAI Deviation Score Session 7</th>
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<th>WAI Deviation Score Session 7</th>
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<tr>
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<td>-5.74</td>
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<td>(SD)</td>
<td>(6.77)</td>
<td>(6.78)</td>
<td>(5.22)</td>
<td>(6.63)</td>
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<tr>
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<th>Total</th>
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<th>WAI Deviation Score Session 7</th>
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<td>(SD)</td>
<td>(16.23)</td>
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<td>(8.53)</td>
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<tr>
<td>N</td>
<td>38</td>
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*Client Stable Alliance Cluster.* Client cluster 1 contained 23.6% of the sample (n=9). Upon visual inspection, this cluster appeared to show a pattern of rupture and repair. It was characterized by an initially high alliance (high by comparison with the mean across sessions), followed by a drop in alliance for sessions 3 and 5, and a partial recovery in alliance rating by session 7. A one-way repeated measures analysis of variance was conducted to compare WAI deviation scores at sessions 1, 3, 5, and 7 (time). The effect for time approached significance, with Wilks’ Lambda =.341, $F(3,6)=3.866, p=.075$, partial eta squared=.659. Because the small sample size limited the power of the analysis, Friedman’s test, a non-parametric alternative to repeated measures ANOVA was also run. This test was also non-significant, with $\chi^2 (3)=3.635, p=.304$. This
indicates that there was no clear pattern of WAI deviation scores in the client cluster, and thus it is best described as showing a stable alliance. This cluster contained 2 therapists with high FIS and 7 therapists with low FIS. In addition, it contained 4 lay therapists, 2 novice trainees, and 3 advanced trainees. Finally, the clients in this cluster consisted of 6 men and 3 women with an average age of 19.25 years.

*Client Linear Increase Cluster.* Client cluster 2 contained 65.8% of the sample (n=25). It was characterized by initially low alliance ratings that increased steadily across sessions. A one-way repeated measures analysis of variance was conducted to compare WAI deviation scores at sessions 1, 3, 5, and 7 (time). There was a significant effect for time, with Wilks’ Lambda =.116, $F(3,22)=55.722, p<.001$, partial eta squared=.884. Pairwise comparisons were examined to determine the pattern of the effect. A Bonferroni
correction was used to adjust for multiple comparisons. Significant differences were found for all possible pairs except the pairing of session 1 with session 3, which approached significance with $p = .087$. Thus, the cluster can be classified as showing steady linear increase. This cluster contained 14 therapists with high FIS and 11 therapists with low FIS. In addition, it contained 13 lay therapists, 6 novice trainees, and 6 advanced trainees. Finally, the clients in this cluster consisted of 9 men and 16 women with an average age of 19.12 years.

*Client Early Steep Increase Cluster.* Client cluster 3 contained 10.5% of the sample (n=4). It was characterized by initially very low alliance ratings that increased dramatically from session 1 to session 3 and increased steadily thereafter. A one-way repeated measures analysis of variance was conducted to compare WAI deviation scores at sessions 1, 3, 5, and 7 (time). The effect for time was nonsignificant, with Wilks’ Lambda =.021, $F(3,1)=15.557$, $p = .184$, partial eta squared=.979. Because the small sample size limited the power of the analysis, Friedman’s test was also run. It was significant, with $\chi^2 (3)=9.900$, $p = .019$. Thus, this cluster can be characterized as showing early steep increase. This cluster contained 1 therapist with high FIS and 3 therapists with low FIS. In addition, it contained 2 lay therapists, 1 novice trainee, and 1 advanced trainee. Finally, the clients in this cluster consisted of 1 man and 3 women with an average age of 18.50 years.

Cluster membership was broken down by therapist training and therapist facilitative interpersonal skill. A nonsignificant trend was found for clients of high FIS therapists to be members of the two linear growth clusters rather than the stable alliance cluster more often than clients of low FIS therapists ($\chi^2 (1) = 3.89, p = .07$). However, two
cells had expected cell counts less than 5. The minimum expected cell count was 4. There was no significant relationship between client-reported rupture and therapist training status. Table 4 displays cluster membership by therapist characteristics.

Table 4

Characteristics of Clients by Cluster Membership

<table>
<thead>
<tr>
<th></th>
<th>Client Cluster 1</th>
<th>Client Cluster 2</th>
<th>Client Cluster 3</th>
<th>Client Total</th>
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<td>N</td>
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<td>4</td>
<td>38</td>
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<tr>
<td>Therapist Training</td>
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<td></td>
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<tr>
<td>Lay therapist</td>
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<td>13</td>
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<td>19</td>
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<tr>
<td>Novice trainee</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>9</td>
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<td>Advanced trainee</td>
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<td>1</td>
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</tr>
<tr>
<td>Therapist FIS</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Low FIS</td>
<td>7</td>
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<td>1</td>
<td>19</td>
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<tr>
<td>High FIS</td>
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<td>14</td>
<td>3</td>
<td>19</td>
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<td>Working Alliance Inventory</td>
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<tr>
<td>Session 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>198.67 (34.76)</td>
<td>200.52 (26.14)</td>
<td>137.50 (15.00)</td>
<td>193.44 (33.19)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>196.78 (31.16)</td>
<td>206.72 (27.83)</td>
<td>190.50 (30.87)</td>
<td>202.66 (28.72)</td>
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<td>Session 5</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>191.78 (36.16)</td>
<td>217.08 (26.13)</td>
<td>208.50 (11.09)</td>
<td>210.18 (29.16)</td>
</tr>
<tr>
<td>Session 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>194.22 (37.40)</td>
<td>225.52 (23.70)</td>
<td>218.50 (13.12)</td>
<td>217.37 (29.26)</td>
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<tr>
<td>Overall</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>195.36 (34.30)</td>
<td>212.46 (25.19)</td>
<td>188.75 (14.44)</td>
<td>205.91 (27.77)</td>
</tr>
</tbody>
</table>

Therapist. Similarly, in the case of the therapist Working Alliance Inventory data, a cluster was found that showed a pattern of alliance rupture and repair, providing
support for hypothesis one. Four clusters were derived from the hierarchical cluster analysis, using squared Euclidean distance as the measure of similarity and Ward’s method as the criterion for merging the data into clusters. Examination of the error terms again led to the selection of a four-cluster solution. However, one cluster contained only one case. This case did not fit neatly into any other cluster. In fact, inspection of the agglomeration schedule revealed that it did not join another cluster until the final step in the process, when all cases were merged into a single cluster. This case was dropped from analyses. Of the remaining 44 cases, 39 contained data for all 4 WAI administrations. Five cases had missing data and were dropped.

Means and standard deviations for each of the four therapist WAI ratings are displayed for the three clusters in Table 5. A graphical representation of this information is shown in Figure 3. The clusters are described in detail below.

Therapist Quadratic Cluster. Therapist cluster 1 contained 46.2% of the sample (n=18). It was characterized by initial alliance ratings near the mean that dropped for session 3 and then increased over sessions 5 and 7. A one-way repeated measures analysis of variance was conducted to compare WAI deviation scores at sessions 1, 3, 5, and 7 (time). There was a significant effect for time, with Wilks’ Lambda =.242, \( F(3,15)=15.690, p<.001 \), partial squared eta squared=.758. Pairwise comparisons were examined to determine the pattern of the effect. A Bonferroni correction was used to adjust for multiple comparisons. Significant differences were found for the pairing of session 3 with session 5 (p<.001) and session 5 with session 7 (p<.001). No other significant differences were found. Thus, this cluster can be characterized as showing a pattern of rupture and repair. This cluster contained 7 therapists with high FIS and 11
therapists with low FIS. In addition, it contained 10 lay therapists, 3 novice trainees, and 5 advanced trainees. Finally, the clients in this cluster consisted of 7 men and 11 women with an average age of 19.18.

**Therapist Shallow Low-High-Low Cluster.** Therapist cluster 2 contained 38.4% of the sample (n=15). It was characterized by alliance ratings that rose from session 1 to session 3 and then fell again over sessions 5 and 7. A one-way repeated measures analysis of variance was conducted to compare WAI deviation scores at sessions 1, 3, 5, and 7 (time). There was a significant effect for time, with Wilks’ Lambda =.383, $F(3,12)=6.447, p=.008$, partial squared eta squared=.617. Pairwise comparisons were examined to determine the pattern of the effect. A Bonferroni correction was used to adjust for multiple comparisons. Significant differences were found for the pairing of
session 1 with session 3 ($p=.014$). No other significant differences were detected. Thus, this cluster can be characterized as having a shallow “n” shape, or slight low-high-low pattern of alliance development. This cluster contained 6 therapists with high FIS and 9 therapists with low FIS. In addition, it contained 9 lay therapists, 3 novice trainees, and 3 advanced trainees. Finally, the clients in this cluster consisted of 7 men and 8 women with an average age of 18.92.

**Therapist Linear Increase Cluster.** Therapist cluster 3 contained 15% of the sample (n=6). It was characterized by initially low alliance ratings that increased over time. A one-way repeated measures analysis of variance was conducted to compare WAI deviation scores at sessions 1, 3, 5, and 7 (time). There was a significant effect for time, with Wilks’ Lambda = .022, $F(3,3)=43.635$, $p=.006$, partial squared eta squared=.978.
Pairwise comparisons were examined to determine the pattern of the effect. A Bonferroni correction was used to adjust for multiple comparisons. Significant differences were found for the pairing of session 1 with session 3 ($p = .047$); the pairing of session 1 with session 5 ($p = .001$); and the pairing of session 1 with session 7 ($p < .001$). No other significant differences were detected. Thus, this cluster can be characterized as showing a pattern of steady linear increase. This cluster contained 5 therapists with high FIS and 1 therapist with low FIS. In addition, it contained 2 lay therapists, 2 novice trainees, and 2 advanced trainees. Finally, the clients in this cluster consisted of 2 men and 4 women with an average age of 19.00 years.

Cluster membership was broken down by therapist training and therapist facilitative interpersonal skill. Table 6 displays cluster membership by therapist characteristics.

\textit{Hypothesis 2}

\textit{Client analyses.} It was predicted that the rupture-repair pattern of alliance development would account for outcome variance beyond that accounted for by mean alliance level. This hypothesis could not be tested for the client data because no quadratic cluster emerged in the cluster analysis.

\textit{Therapist analyses.} It was predicted that the rupture-repair pattern of alliance development would account for outcome variance beyond that accounted for by mean alliance level. This hypothesis was not supported for the therapist data. A two-level MANCOVA was performed comparing members of the quadratic cluster with all other participants. The covariate was client’s mean alliance level across all sessions.
Table 6

Therapist Cluster Characteristics

<table>
<thead>
<tr>
<th>Therapist Cluster</th>
<th>Cluster 1</th>
<th>Cluster 2</th>
<th>Cluster 3</th>
<th>Total</th>
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</thead>
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<td>N</td>
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<td>Lay therapist</td>
<td>10</td>
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<tr>
<td>Novice trainee</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Advanced trainee</td>
<td>5</td>
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<td>Therapist FIS</td>
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<tr>
<td>Low FIS</td>
<td>11</td>
<td>9</td>
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<tr>
<td>High FIS</td>
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<td>5</td>
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Working Alliance Inventory

Mean (SD)

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<tr>
<td>Mean</td>
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<td>185.80</td>
<td>171.17</td>
<td>180.56</td>
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<td>(SD)</td>
<td>(15.95)</td>
<td>(21.02)</td>
<td>(35.53)</td>
<td>(21.64)</td>
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<td>Session 3</td>
<td>Mean</td>
<td>169.83</td>
<td>196.33</td>
<td>197.50</td>
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<td></td>
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<td>(22.04)</td>
<td>(18.08)</td>
<td>(39.54)</td>
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<td>Session 5</td>
<td>Mean</td>
<td>183.50</td>
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<td></td>
<td>(SD)</td>
<td>(23.33)</td>
<td>(20.15)</td>
<td>(36.51)</td>
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<tr>
<td>Session 7</td>
<td>Mean</td>
<td>187.83</td>
<td>188.13</td>
<td>221.50</td>
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<tr>
<td></td>
<td>(SD)</td>
<td>(22.15)</td>
<td>(17.72)</td>
<td>(28.29)</td>
</tr>
<tr>
<td>Overall</td>
<td>Mean</td>
<td>180.13</td>
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<tr>
<td></td>
<td>(SD)</td>
<td>(19.62)</td>
<td>(17.67)</td>
<td>(34.47)</td>
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Residualized IIP and OQ scores served as the multiple dependent variables. The hypothesis was not supported. The multivariate test was nonsignificant, with $F(2, 35)=0.37, p=.695$ and Wilks’ Lambda = .979. Membership in the quadratic cluster was not significantly positively related to outcome as measured by IIP score ($F(1,36) = .010, p=.923$) nor to outcome as measured by OQ score ($F(1,36)=.368, p=.548$). Therapist’s
mean alliance rating also was not significantly related to outcome as measured by OQ 
\((F(1,36)=.006, p=.938)\) and IIP \((F(1,36)=.066, p=.798)\).

**Hypothesis 3**

It was predicted that the amount of variance accounted for by client-reported rupture-repair sequences would exceed that accounted for by therapist-reported rupture-repair sequences. Because no quadratic cluster emerged in the client cluster analysis, this hypothesis could not be tested.

**Hypothesis 4**

It was predicted that intraclass correlation would show that the cluster solution of the current study would duplicate the cluster solution found by Kivlighan and Shaughnessy (2000). Intraclass correlation was used to validate the cluster solution of the current sample. Validation using ICC was only possible for the client data because no previously published study has included therapist data.

Kivlighan and Shaughnessy (2000) published the means and standard deviations of the two samples of data they collected at University of Missouri. They used their second sample to validate the results of their first sample. In the current research, the two Missouri samples were used to validate the cluster solution revealed in the OUHRS data.

Figures 4, 5, and 6 display graphs of the mean alliance ratings of the two Missouri samples alongside the sample of the current study. Figure 4 shows Missouri’s quadratic clusters along with the Ohio stable alliance cluster, which was the one that most resembled a quadratic pattern; figure 5 shows the linear increase clusters; and figure 6 shows the Missouri stable alliance clusters along with the Ohio linear increase cluster, which was the one that most closely resembled them.
Each cluster from the Ohio data was compared with each cluster from the Missouri data. Mean alliance deviation scores were compared using ICC. Typically, standardized scores would have been used, but Kivlighan and Shaughnessy did not do this, and therefore it was not done in the current study.

As seen in Figure 5, the two clusters from the Missouri samples labeled linear do not match each other as well as the clusters labeled stable and quadratic match each other. In fact, although Kivlighan and Shaughnessy report an intraclass correlation coefficient of .99, this number could not be duplicated in the current research. Calculations revealed an ICC of just .726 ($p=.158$) for Missouri linear cluster 1 and Missouri linear cluster 2. The coefficients for the quadratic and stable clusters were duplicated. They were .99 ($p<.01$) and .975 ($p<.01$), respectively.

OUHRS Cluster 1 (Stable Alliance) did not match any Missouri cluster. It most closely resembled the quadratic clusters, but the intraclass correlation coefficients were .385 ($p=.350$) and .381 ($p=.351$) for Missouri samples 1 and 2, respectively. This coefficient is not high enough to indicate a profile match.

OUHRS Cluster 2 (Linear Increase) was a very good match for the Missouri sample 2 linear cluster (ICC=.957, $p<.05$). However, it was a poor match for the Missouri sample 1 linear cluster (ICC=.564, $p=.256$). It also matched fairly well with both Missouri stable clusters, but the intraclass correlation coefficients did not reach significance. The most parsimonious explanation of the data seems to be that OUHRS cluster 2 replicates the Missouri sample 2 linear cluster.

OUHRS cluster 3 (Steep Linear increase) did not achieve a significant intraclass correlation with any Missouri cluster.
Figure 4

Quadratic Clusters from Missouri Data and OUHRS Data

![Graph showing quadratic clusters]

Figure 5

Linear Increase Clusters from Missouri Data and OUHRS Data

![Graph showing linear increase clusters]

*ICC=.957 (p<.05)
Overall, the cluster solution revealed in the OUHRS data replicates only one of Kivlighan and Shaughnessy’s three clusters. OUHRS Clusters 2 (linear increase) is shown to match a profile that reveals a pattern of linear increase in alliance scores over time. OUHRS Cluster 1 contains cases that show a pattern of stable alliance over time. However, the trend in OUHRS Cluster 1 is downward, whereas the trend in the Missouri stable alliance clusters is upward.

Hypotheses Related to Training

Hypothesis 5

It was hypothesized that therapists would be more likely than clients to indicate ruptures, regardless of their training status. This hypothesis was supported, given that the
therapist cluster analysis revealed a quadratic cluster, and the client cluster analysis did not.

**Hypothesis 6**

It was hypothesized that advanced trainee therapists would rate mean alliance level lower than therapists with less training. The hypothesis was not supported. ANOVA revealed no difference between groups for mean alliance level ($F(2,42)=1.488, p=.237$). ANOVA also revealed no difference between groups for alliance at session 3 ($F(2,41)=.824, p=.446$).

**Hypothesis 7**

It was hypothesized that there would be a relationship between therapist training status and client-reported rupture-repair sequences. The hypothesis was not tested because the client cluster analysis did not reveal a quadratic pattern.

**Post-Hoc Analyses**

**Ruptures Detected Using Alternate Criteria**

**Hypothesis 1.** In order to maximize the chances all ruptures would be detected, a second method of detecting ruptures was developed. The criteria were as follows: Session 7’s score had to be greater than or equal to Session 1’s score; Session 3 or 5 had to show a score that represented a drop of at least 1 standard deviation from the session before it. Thus, the rupture-repair sequences would only be detected if they were part of a rising or flat alliance, rather than part of a pattern of descending alliance. In addition, the drop would be great enough to represent a genuine change in the alliance. The standard deviation used was specific to each client, so that ruptures could be detected no matter how tightly clients’ WAI scores varied around their mean alliance score.
Client ruptures using alternative criteria. Using the method described above, 11.4% of the sample (n=5) met criteria for rupture. This group contained 1 therapist with high FIS and 4 therapists with low FIS. In addition, it contained 2 lay therapists, 1 novice trainees, and 2 advanced trainees. Finally, the clients in this group consisted of 3 men and 2 women with an average age of 19.40.

Therapist ruptures using alternative criteria. Using this method, 15.6% of the sample (n=7) met criteria for rupture. This group contained 1 therapist with high FIS and 6 therapists with low FIS. In addition, it contained 3 lay therapists, 3 novice trainees, and 1 advanced trainee. Finally, the clients in this group consisted of 4 men and 3 women with an average age of 19.33.

Hypothesis 2. The hypothesis that client-reported rupture-repair pattern would predict outcome was tested using the alternative criteria for ruptures outline above. The hypothesis was not supported. The multivariate test was nonsignificant, with Wilks’ Lambda = .988, $F(2,39) = .242, p = .786$.

The hypothesis that therapist-reported rupture-repair pattern would predict outcome was tested using the alternative criteria for ruptures outline above. The hypothesis was unsupported. The multivariate test was nonsignificant, with Wilk’s Lambda = .941, $F(2,40) = 1.255, p = .296$.

Hypothesis 5. It was hypothesized that therapists would be more likely than clients to indicate ruptures, regardless of their training status. Using the alternative criteria, therapists reported a total of 7 ruptures, and clients reported a total of 5 ruptures. Chi-squared analysis was performed, and the results were nonsignificant (Pearson $\chi^2(1) = .085, p = .771$).
Hypothesis 7. It was hypothesized that there would be a relationship between therapist training status and client-reported rupture-repair sequences. The hypothesis was not supported. Chi-squared analysis revealed that there was no relationship between therapist training status and client-reported rupture-repair sequence. For ruptures detected using the alternative criteria, $\chi^2(2)=.757$, $p=.685$.

Other Post-Hoc Analyses

Client-therapist agreement on cluster placement. A Chi-squared contingency table was constructed to determine whether client and therapist agreed on which cluster the case belonged in. A total of 36 cases had complete data for both therapist and client. The analysis revealed that although 25 clients and 6 therapists were placed in their respective linear increase clusters, only 3 dyads agreed on placement in that cluster. The other clusters did not match each other, so agreement was not compared.

Client alliance ratings of therapists at different training levels. It was hypothesized that clients of advanced trainees would rate alliance lower than clients of other therapists. However, results showed that clients of novice trainees rated alliance significantly lower than clients of the other two groups. This held true both for mean alliance ($F(2,41)=3.484$, $p=.04$) and alliance measured at session 3 ($F(2,41)=4.049$, $p=.025$). Mean alliance ratings and alliance at session 3 are displayed in Table 7.

Therapist alliance ratings at different FIS levels. Another related hypothesis was that high FIS therapists would rate alliance higher than low FIS therapists. This held true for mean alliance and alliance at session 3. Mean alliance $F(1,43)=21.318$, $p<.001$. At session 3, $F(1,43)=9.851$, $p=.003$. The alliance ratings are displayed in Table 8.
Table 7

Client Mean Alliance Ratings and Ratings At Session 3 by Therapist Training Status

<table>
<thead>
<tr>
<th></th>
<th>Mean Alliance</th>
<th>Session 3 Alliance</th>
<th>Session 3 Task</th>
<th>Session 3 Goals</th>
<th>Session 3 Bond</th>
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<td>Novice Trainee</td>
<td>Mean 186.97</td>
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<td></td>
<td>(SD) (23.38)</td>
<td>(24.58)</td>
<td>(9.02)</td>
<td>(9.86)</td>
<td>(8.24)</td>
</tr>
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<td>N 10</td>
<td>10</td>
<td>10</td>
<td>10</td>
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<tr>
<td>Advanced Trainee</td>
<td>Mean 211.27</td>
<td>210.45</td>
<td>71.00</td>
<td>69.73</td>
<td>69.73</td>
</tr>
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<td></td>
<td>(SD) (21.02)</td>
<td>(21.99)</td>
<td>(8.39)</td>
<td>(8.30)</td>
<td>(8.26)</td>
</tr>
<tr>
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<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>Mean 205.57</td>
<td>202.61</td>
<td>67.68</td>
<td>67.39</td>
<td>67.55</td>
</tr>
<tr>
<td></td>
<td>(SD) (26.78)</td>
<td>(27.45)</td>
<td>(9.63)</td>
<td>(10.48)</td>
<td>(9.30)</td>
</tr>
<tr>
<td></td>
<td>N 44</td>
<td>44</td>
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</tr>
</tbody>
</table>

Table 8

Therapist Mean Alliance Ratings and Ratings At Session 3 by Therapist FIS

<table>
<thead>
<tr>
<th></th>
<th>Mean Alliance</th>
<th>Session 3 Alliance</th>
<th>Session 3 Task</th>
<th>Session 3 Goals</th>
<th>Session 3 Bond</th>
</tr>
</thead>
<tbody>
<tr>
<td>High FIS</td>
<td>Mean 200.94</td>
<td>195.90</td>
<td>64.25</td>
<td>61.35</td>
<td>70.30</td>
</tr>
<tr>
<td></td>
<td>(SD) (19.51)</td>
<td>(27.64)</td>
<td>(10.07)</td>
<td>(11.95)</td>
<td>(6.84)</td>
</tr>
<tr>
<td></td>
<td>N 20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Low FIS</td>
<td>Mean 174.66</td>
<td>171.38</td>
<td>54.63</td>
<td>53.63</td>
<td>63.13</td>
</tr>
<tr>
<td></td>
<td>(SD) (18.53)</td>
<td>(24.19)</td>
<td>(9.49)</td>
<td>(9.65)</td>
<td>(7.25)</td>
</tr>
<tr>
<td></td>
<td>N 25</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>Mean 186.34</td>
<td>182.52</td>
<td>59.00</td>
<td>57.14</td>
<td>66.39</td>
</tr>
<tr>
<td></td>
<td>(SD) (22.94)</td>
<td>(28.34)</td>
<td>(10.79)</td>
<td>(11.31)</td>
<td>(7.87)</td>
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<tr>
<td></td>
<td>N 45</td>
<td>44</td>
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</tr>
</tbody>
</table>
Client alliance ratings at different therapist FIS levels. The final related analysis was that clients of high FIS therapists would rate alliance higher than clients of low FIS therapists. This held true for mean alliance \((F(1,42)=5.195, p=.028)\) and alliance at session 3 \((F(1,42)=5.025, p=.025)\). The alliance ratings are displayed in Table 9.

Table 9

Client Mean Alliance Ratings and Ratings At Session 3 by Therapist FIS

<table>
<thead>
<tr>
<th></th>
<th>Mean Alliance</th>
<th>Session 3 Alliance</th>
<th>Session 3 Task</th>
<th>Session 3 Goals</th>
<th>Session 3 Bond</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High FIS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>215.64</td>
<td>213.21</td>
<td>71.16</td>
<td>71.42</td>
<td>70.63</td>
</tr>
<tr>
<td>(SD)</td>
<td>(21.68)</td>
<td>(22.18)</td>
<td>(7.93)</td>
<td>(8.51)</td>
<td>(8.41)</td>
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<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Low FIS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>197.91</td>
<td>194.56</td>
<td>65.04</td>
<td>64.32</td>
<td>65.20</td>
</tr>
<tr>
<td>(SD)</td>
<td>(28.12)</td>
<td>(28.72)</td>
<td>(10.10)</td>
<td>(10.95)</td>
<td>(9.42)</td>
</tr>
<tr>
<td>N</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
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<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>205.57</td>
<td>202.61</td>
<td>67.68</td>
<td>67.39</td>
<td>67.55</td>
</tr>
<tr>
<td>(SD)</td>
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<td>44</td>
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</tr>
</tbody>
</table>

FIS and cluster membership. Overall, chi squared analysis showed that clients of high FIS therapists were more likely to report a pattern of alliance development that was increasing over time (client clusters 2 and 3) rather than stable over time (client cluster 1). The finding, depicted in Figure 7, approached significance, with \(X^2=3.88, p=.07\).
Figure 7

Client Clusters and Therapist FIS

![Bar chart showing linear increase and stable alliance with High FIS and Low FIS categories]
Discussion

Overview of Findings

Using cluster analysis, no high-low-high pattern of alliance development was found in the client data. Such a pattern was found in the therapist data, but it was not associated with outcome. In addition, rupture-repair sequences were detected using a coding method as an alternative to cluster analysis. These were not found to be associated with outcome, either. Contrary to expectations, the patterns of the client clusters did not replicate previous research findings. Consistent with meta-analytic findings, therapist data showed more variability, as evidenced by their displaying a quadratic cluster while the clients did not. Training status had no effect on therapist alliance rating.

The discussion of the findings of the current study begins with a brief examination of the state of the literature when adding the current findings to the previous three cluster analyses. This is followed by a look at the current study’s results for each hypothesis. Finally, an examination of the samples of the four studies is undertaken, in an effort to understand the divergent results. By examining the samples, it is possible to see a pattern emerge that suggests if either the therapist or the client is relationally challenged, then rupture-repair sequences do not lead to improved outcome.

Only one study (Kivlighan and Shaughnessy) shows an overall quadratic pattern spanning the length of the treatment. This pattern was predicted to be the typical pattern of development for brief therapy by Gelso and Carter (1994), Miller (1983), and Mann (1973). At this point it seems safe to say that a quadratic pattern of alliance development is one of several possible patterns. All four studies showed a subset of cases that
displayed a linear increase pattern of alliance development. Although this was not shown to be associated with outcome, its consistent presence in the data is worth noting.

On the other hand, of the three studies whose cluster analysis did not reveal an overall quadratic pattern (Stevens, Stiles, and the current study), all three did detect localized rupture-repair sequences. These two previous studies included 30 sessions (Stevens) or 8 or 16 sessions (Stiles) of treatment, while Kivlighan and Shaughnessy’s study included 4 sessions of treatment. Thus, one rationale for these authors’ failure to duplicate Kivlighan and Shaughnessy’s findings was that treatment length influenced the cluster solutions. Stevens and Stiles both found localized tear-and-repair episodes (which lasted just a few sessions) rather than patterns of rupture-repair spanning the treatment. But in a four-session treatment, a localized tear-and-repair episode could span the entire length of treatment. The reason the current study did not show a quadratic cluster but did show ruptures detected by an alternative method may be simply an artifact of the clustering process. The five cases in question could have been more similar to the members of their respective clusters than they were to each other, but nonetheless showed rupture-repair sequences.

*Cluster Analysis (Hypotheses 1-4)*

In the cluster analysis phase of the current study, cluster analysis with squared Euclidean distances was applied to a sample of clients and therapists in the Ohio University Helping Relationships Study. The participants were cluster analyzed based on their Working Alliance Inventory deviation scores across time as the treatment progressed. The initial analysis revealed the same number of clusters (3) as the Kivlighan
and Shaughnessy study for both the clients and the therapists. Findings regarding clients will be discussed first, followed by findings regarding therapists.

**Client**

In the client data, the clusters themselves did not follow the pattern found by Kivlighan and Shaughnessy. They found a quadratic cluster, a linear increase cluster, and a stable cluster in each of two samples they analyzed. The cluster analysis of the OUHRS data replicated only one of these clusters.

No cluster in the current study showed a pattern of alliance rupture and repair. At first glance, cluster 1 (stable alliance) appears to show a pattern of rupture and repair, but repeated measures ANOVA and Friedman’s test both showed that in fact this cluster showed no significant change over time. Indeed, this cluster’s intraclass correlation coefficient did not reach significance with any of Kivlighan and Shaughnessy’s clusters. One reason for this may be the changes over time in this cluster were too shallow to match Kivlighan and Shaughnessy’s rupture-repair cluster. Also, the downward trend in this cluster was in the opposite direction of the stable alliance clusters Kivlighan and Shaughnessy found. In the end, client cluster 1 is interpreted as showing a pattern of stable alliance that is unlike any cluster found by Kivlighan and Shaughnessy.

Client cluster 2 was characterized by a steady linear increase in alliance over time. As reported above, intraclass correlation showed it to be a good match for one of Kivlighan and Shaughnessy’s two linear increase clusters. Client cluster 3 was characterized by a steep early increase in alliance. It was not a good match for any of Kivlighan and Shaughnessy’s clusters.
Overall, then, the linear increase cluster pattern of alliance development was replicated, but the high-low-high pattern of development was not replicated. In addition, it appears that “stable alliance” pattern can mean different things in different studies. In the OUHRS study, the stable alliance cluster shows an overall drop in WAI score of 4.45 points over time, while in the Missouri study, the stable alliance clusters showed an increase of 18.39 for sample 1 and 15.95 for sample 2.

Although the present study failed to replicate Kivlighan & Shaughnessy’s work, it should be noted that two other studies have also failed to replicate Kivlighan and Shaughnessy’s cluster solution. Stiles and colleagues (2004) found clusters they described as stable alliance, linear alliance, negative slope with slightly positively accelerated curve, and positive slope with negatively accelerated curve. Stevens (2002) found two clusters, which he termed stable linear increase and late linear increase. These two previous studies included 30 sessions (Stevens) or 8 or 16 sessions (Stiles) of treatment, while Kivlighan and Shaughnessy’s study included 4 sessions of treatment. Thus, one rationale for these authors’ failure to duplicate Kivlighan and Shaughnessy’s findings was that treatment length influenced the cluster solutions. Stevens and Stiles both found localized tear-and-repair episodes (which lasted just a few sessions) rather than patterns of rupture-repair spanning the treatment. But in a four-session treatment, a localized tear-and-repair episode spans the entire length of treatment.

The reasons why the current study could have failed to replicate Kivlighan and Shaughnessy’s cluster pattern are not as clear. First, it’s impossible to say what effect the missing data from sessions 2, 4, and 6 could have had on the results of the current study’s cluster analysis. Second, leaving aside the problem of the missing data, the repeated
measures ANOVA for cluster 1 approached significance, which could mean that with a larger sample size, cluster 1 would have qualified as quadratic rather than stable. However, the changes over time are quite shallow and it’s possible that even if the ANOVA were significant, intraclass correlation would still not have shown that the OUHRS cluster matched the Missouri clusters.

Post-Hoc Ruptures (Hypotheses 1-5). The post-hoc method of identifying ruptures was inspired by the work of Stiles (2004) and Stevens (2002). They each developed different ways to operationalize ruptures. The current study’s method (described above) was designed to maximize the possibility that genuine ruptures with genuine repairs would be detected, thus maximizing the opportunity to detect an effect on outcome. Only five rupture-repair sequences met criteria, and no effect on outcome was detected.

Why was there no effect on outcome of ruptures identified by the alternative method? Two of the three studies that inspired the current study found that – in various degrees – rupture-repair sequences were associated with improved outcome. One can look to more traditional ways to predict outcome from WAI. For example, mean alliance and early alliance are both widely acknowledged as good predictors of outcome (Martin, Garske, & Davis, 2000; Horvath & Symonds, 1991). In the current study, the three clusters have no significant differences in mean alliance and no significant differences in alliance at session 3. If one puts aside the data on rupture-repair sequences improving outcome, one would expect that if the three clusters have similar alliances at session 3 and similar mean alliances, they would also have similar outcomes. Similarly, the mean alliance for those clients who show ruptures defined using alternative criteria is almost identical to the mean alliance for clients without ruptures.
Another possible explanation for the lack of association between rupture and outcome is that the base rate of ruptures was deflated in this study compared with previous studies. Stiles detected ruptures in 17 of 79 cases (21%). Stevens detected ruptures in 22 of 44 cases (50%). Kivlighan and Shaughnessy detected ruptures in 23 of 79 cases (29%). The current study showed only 5 out of 44 cases (11%) had ruptures reported by clients. With more cases, these researchers had more statistical power. Two simple explanations provide possible reasons why the base rate of ruptures was deflated in the current study. First, the missing data could have caused ruptures that included the missing sessions to be undetected. Second, the stringent criteria might have caused the current study to not include some rupture episodes that other studies might have included. With a lower number of cases comes an increased chance of a Type 2 error, failing to reject a false null hypothesis (in this case, that there is no difference in outcome associated with rupture-repair sequences). It is possible that the current study has fallen victim to this type of error.

*Theory Links.* Another possible reason why the study failed to show a relationship between client-reported rupture-repair sequence and outcome is cognitive dissonance. As presented by Festinger (1957), dissonance theory began by postulating that pairs of cognitions (elements of knowledge) can be relevant or irrelevant to one another. If two cognitions are relevant to one another, they are either consonant or dissonant. Two cognitions are consonant if one follows from the other, and they are dissonant if the opposite of one cognition follows from the other. The existence of dissonance, being psychologically uncomfortable, motivates the person to reduce the dissonance and leads to avoidance of information likely to increase the dissonance. The greater the magnitude
of the dissonance, the greater is the pressure to reduce dissonance. Dissonance can be relieved in three ways: by reducing the importance of the conflicting beliefs, acquiring new beliefs that change the balance of the conflicting thoughts, or removing the conflicting attitude or behavior.

In the case of therapy clients who report strong initial and ending alliances but outcomes that are no better than the outcomes of clients with poor alliances, dissonance theory could be applied as follows. The client’s first cognition might be something along the lines of: “I expend a great deal of effort coming to therapy, and I really need it to work.” The second cognition might be: “My therapist is not helping me/understanding me.” These two thoughts are dissonant, and the client will be motivated to reduce the dissonance by using one of the three methods described above. If either the second or the third method (acquiring new beliefs or removing the conflicting attitude) is employed, the client will work to convince himself or herself that in fact their therapist does understand them or is helping them despite the fact that this is not genuinely the case. It seems likely that clients who are fooling themselves that they have repaired an alliance with their therapist are unlikely to reap the benefits in terms of outcome that a genuine rupture-repair helps provide.

In addition, the concept of rupture-repair sequence is operationalized differently in each study. Stevens (2002) operationalized rupture several ways, including as a drop of just a single point in WAI score. Stiles et al. (2004) used a deviation from the expected ARM score based on a fitted curve. Kivlighan and Shaughnessy (2000) used only the U-shaped curve found in their cluster analysis. The current study builds on Stiles’ and Stevens’ work and uses a drop of one standard deviation from the client’s previous score.
This lack of consistent operationalization could contribute to the lack of consistent outcome findings. If WAI scores continue to be utilized in studying rupture-repair sequences, it will become necessary for the community of researchers to reach a consensus on what represents a clinically significant change in alliance scores.

Another interesting possible reason that rupture was not associated with outcome is that the nature of the study caused clients to perceive the alliance differently than clients in a more typical research situation. The clients were clinically distressed, but they were also members of the university’s subject pool, and received class credit for their participation. This could somehow have influenced their alliance formation or their ability to report on alliance development accurately. (Although Kivlighan and Shaughnessy used subject pool clients, Stevens and Stiles both used community members who had sought treatment rather than recruits.) Although it seems an unlikely scenario given IRB safeguards for human subjects, it is possible that “clients” who are recruited from classes might fear that their therapist is somehow able to influence their grade. This could cause them to feel tension in the alliance that they feel constrained against reporting, which would then serve to keep their reported alliance levels high while preventing them from benefiting from treatment. In addition, while the other three studies employed an identifiable therapeutic orientation, the OUHRS study was intended to study nonspecific factors, and thus therapists were instructed to use any type of therapy they pleased. Relatedly, the fact that half the clients in the current study were treated by non-psychology graduate students might have caused the alliance to develop in an atypical manner.
Alliance measures are famous in the research community for suffering from the “ceiling effect.” Clients’ ratings tend to hover near the top of the scale, which would make it difficult for them to show a drop severe enough to constitute a rupture. However, this explanation is seems unlikely, given that other studies have found rupture-repair sequences. For example, in Kivlighan and Shaughnessy’s (2000) study, the mean client-rated alliance scores for the overall sample at each session ranged from 183 to 225. This is similar to the range found in the current study, which is 193 to 217.

It is also possible that one of the independent variables for the OUHRS, therapist facilitative interpersonal skill, exerted such an influence on outcome that it masked any effect of rupture-repair sequence on outcome. In the OUHRS, therapists with high FIS had better alliances than therapists with low FIS, and alliance was related to outcome. In the current study, of five client-reported rupture-repair sequences, four included a low FIS therapist, and only one included a high FIS therapist. This imbalance might provide an explanation for the lack of relation to outcome.

However, the most likely explanation seems to be that no association between rupture-repair and outcome was found because the lack of data for all sessions makes it impossible to accurately see the pattern. The lack of WAI scores for session 2, 4, and 6 could mask all sorts of variability in the alliance. It’s possible, for example, that half the members of the linear alliance cluster had ruptures at session 4 that went undetected but caused their outcomes to improve dramatically. Even more, the lack of moment-to-moment data on relative client tension reveals just how gross is the level of end of session alliance ratings. The WAI was not designed to be used repeatedly (Horvath and Marx, 1990), and it was not designed to capture changes in tension in the alliance from session
to session. Currently available post-session measures offer only the most crude glimpse into the tensions that develop within the therapeutic relationship. WAI-type indicators of alliance ruptures may indeed capture only the most dramatic disagreements between patients and therapists. Within-session measures currently under development (e.g. Samstag, Safran, Muran, & Stevens, 2002) offer better hope of reflecting the tensions that occur within the alliance.

**Therapist**

Moving on to the therapist data, three clusters were found. They included a high-low-high cluster \((n=18)\), a shallow low-high-low cluster \((n=15)\), and a linear increase cluster \((n=6)\). The current study’s analysis of therapist data begins to fill a major gap in the literature up to this point. No previously published study has included analyses of therapist ratings of alliance development pattern. The therapist data are interesting on their own, but the opportunity to compare the therapist data with the client data provides a rich resource for learning about the way clients and therapists perceive alliance differently.

Two of the clusters were shaped differently from the client clusters, and one was similar. The therapist linear increase cluster looks similar to the client linear increase cluster, but it has far fewer members \((6 \text{ compared with } 25)\). There are no previous studies available for comparison because no previous study has analyzed therapist WAI patterns as is done in the current study. However, Martin, Garske, and Davis (2000) found that therapist WAI scores tended to show more variability than client WAI scores, and the patterns shown in the current study each have precedents in the literature based on client ratings of the alliance. The high-low-high cluster, of course, is expected based on
Kivlighan and Shaughnessy’s work with client data. The low-high-low cluster has some limited precedent in the literature. Hartley and Strupp’s (1983) analysis of observer ratings of the alliance found that dyads with good outcomes had a peak in alliance a quarter of the way into treatment followed by a drop in alliance to levels similar to what was seen at the beginning of treatment. The linear increase cluster joins similar clusters found in client data, both in the current study and in Kivlighan and Shaughnessy (2000), Stevens (2002), and Stiles et al. (2004).

The therapists in the high-low-high cluster can be assumed to have felt tension in the alliance (a feeling that apparently was not shared by the clients) that dissipated by the end of the treatment. Two different scenarios seem possible when trying to think how therapists in the low-high-low cluster might have felt about the alliance. They might be assumed to have had a relatively rocky start to the relationship, followed by a period of smooth sailing before ending treatment with a decline in the relationship. Another possibility is that they might have felt the relationship started strong but went through a period of even greater strength before ending back about where they started. The therapists in the linear increase cluster can be assumed to have experienced the relationship as constantly improving.

Clients and therapists apparently simply do not see the same thing when they look at their relationship through the lens of the Working Alliance Inventory. Using the alternative criteria, only one case (1178) was classified as a rupture by both the client and the therapist. Using the alternative criteria for clients and the cluster results for therapists, only two cases (1168 and 1076) were classified as a rupture by both client and therapist.
There is some sentiment in the field that the Working Alliance Inventory may not be the best possible measure of the construct of the therapeutic alliance (Goldman, Anderson, & Holmberg, 2005). Dating back as far as the construction of the scale, it has been known that the subscales correlate very highly (Horvath & Greenberg, 1989). This indicates that the items for the subscale might not actually tap three different constructs. In addition, Horvath and Marx (1990), in their study of alliance development patterns, mention that the WAI was designed to be administered one time per client over the course of an entire treatment. They believed the WAI might not be sensitive to the small but important fluctuations that would indicate alliance ruptures and repairs.

Further support for the idea that clients and therapists are not rating the same construct comes from Gillaspy’s (1998) factor analysis of the WAI. He found different factor structures for the client data and the therapist data. In addition, he found that a factor called “therapeutic tension” is a primary factor for therapists, but a less important “nuance factor” for clients. This different emphasis could help explain why a rupture cluster was found for the therapists but not the clients.

Finally, it’s important to examine the question of why the therapist ruptures had no association with outcome. Meta-analyses (Horvath & Symonds, 1991; Martin, Garske, & Davis, 2000) have consistently shown that client-rated alliance is most closely associated with outcome. This held true in the OUHRS study (Crowley, 2000). Martin, Garske, & Davis (2000) showed that therapist alliance data tends to be a less robust (but still adequate) predictor of outcome compared with client data. In addition, therapists tend to give alliance ratings that are less stable over time (Martin, Garske, & Davis, 2000). It appears that therapists display a certain amount of self-criticism in their ratings.
of their alliances. Perhaps they are harder on themselves than clients are on them. This is one possible reason why the therapists who reported rupture-repair sequences might not have had improved outcome. From the clients’ perspective, the ruptures did not exist, and thus the clients did not have an opportunity to work through tension in the relationship. It is this “working through” that Safran and Muran (2000) hypothesize is the mechanism of change. Thus, with nothing to work through, the clients were unable to use the working through to change and thus show improvement on outcome measures.

**Hypothesis 5**

The hypothesis that therapists would report more ruptures than clients was supported. This held true for both the cluster analysis and the post-hoc alternative method of detecting ruptures. In the cluster analysis, no client rupture cluster was detected. In the case of the alternative method there was a trend for therapists to report more ruptures. Clients reported 5 ruptures and therapists reported 7, a statistically insignificant difference ($t(44)=-.628, p=.533$). This study is the first to report information on therapist ruptures.

One of the aims of the current project was to help show empirically whether rupture-repair sequences in the alliance are a mechanism of therapeutic change. This point of view would have been best supported by a positive relationship between rupture-repair sequences and outcome. However, the lack of this finding does not necessarily imply that rupture-repair episodes are unrelated to therapeutic change. As mentioned earlier, it might be that clients aren’t able to use the WAI to report when something is wrong with the alliance. It’s possible that a different objective measure would be more sensitive to changes from session to session. It is also possible that any post-session
questionnaire is simply inappropriate to measure the construct of alliance rupture and repair. Although rupture-repair episodes can last over several sessions, many are likely resolved within a single session. Thus, within-session measures, such as are currently being developed by Samstag, Safran, Muran, & Stevens (2002), are likely more appropriate tools to shed light on the relationship between rupture-repair episodes and outcome. Finally, as will be seen below, it is likely that by examining differences between the sample of the current study and the samples of previous research, we can discover relational conditions that are necessary for rupture-repair sequences to lead to change.

Training (Hypotheses 6-7)

The existing literature contains conflicting results regarding variations in alliance by training level. The current study was uniquely positioned to help answer this question, by virtue of its 3 levels of training status. Few studies include this therapist variable, and even fewer contain the same levels of training as Mallinckrodt and Nelson’s (1991) study that found that advanced trainees rated alliance lower than novice trainees (and lower than experienced therapists). All that was missing in the OUHRS database for a complete picture of training was a group containing practicing professionals. The hypothesis that advanced trainees would rate alliance lower than therapists with less training was not supported. This hypothesis was intended to help determine whether therapists’ ability to accurately judge alliance or form alliance varies with experience level.

However, Mallinckrodt and Nelson’s was the only study available that found a difference in WAI for therapists of varying experience. Dunkle and Friedlander (1996), Burlingame and Barlow (1996), and Hersoug, Hoglend, Monsen, and Havik (2001) all
found no significant difference in WAI ratings of therapists of varying experience levels. The current research adds to the list another study that fails to support Mallinckrodt and Nelson’s finding.

Interestingly, in a post-hoc analysis, client ratings of mean alliance and alliance at session 3 were examined and showed a significant difference for therapist experience. Clients rated alliance with novice trainees significantly lower than alliance with lay therapists or experienced trainees. One possible explanation for this finding is that novice trainees who are trying to apply techniques they have just begun to learn might interact less naturally than clinicians who are more comfortable with the techniques they are using or lay therapists who are simply trying to be understanding. It seems like a similar phenomenon to what Bein and colleagues (2000) found in the Vanderbilt II study. Just as some therapists in that study applied the manualized training in a rigid fashion that was detrimental to outcome, perhaps novice trainees applied their new knowledge of how to be a therapist in a way that was detrimental to alliance.

Facilitative Interpersonal Skills

Finally, one of the most interesting findings from the post-hoc analyses was that therapist facilitative interpersonal skills influenced client’s reported pattern of alliance development. High FIS therapists were marginally significantly more likely to have clients report linearly increasing alliances, while low FIS therapists were marginally significantly more likely to have clients report stable alliances. It seems likely that these high FIS therapists are doing something better to help their clients steadily improve their opinion of the therapeutic relationship. High FIS therapists by definition were rated as skilled at verbal fluency, emotional expression, persuasiveness, warmth, hopefulness,
empathic accuracy, collaboration, client focus, process focus, and interpersonal complementarity (Crowley, 2000). Naturally, clients whose therapists were strong in these areas had a better chance at developing a strong alliance than clients whose therapists were weak in these areas. It is easy to see how, for example, a therapist’s persuasiveness could have an additive effect across sessions that results in increasingly high task and goal scores. No previous rupture studies have included FIS as a variable, which means that this study was the first opportunity to consider whether the relational conditions created by therapists with varying levels of FIS could affect the influence of rupture-repair sequences on outcome.

Sample Differences

In an effort to understand the implications of these four studies combined, we can decide that Kivlighan and Shaughnessy’s 4-session quadratic pattern is conceptually indistinguishable from the localized tear-and-repair patterns shown in the other three studies. This places us in a position to examine the data relating rupture-repair sequence and outcome. Stiles (2004) and Kivlighan and Shaughnessy (2000) both found an association between rupture-repair sequence and outcome. The current study and Stevens (2002) did not. One very good explanation for this discrepancy is that there is in fact no association between rupture-repair sequence and outcome. However, it is also possible that differences in the samples led to the discrepant results.

By examining differences in the samples, one can begin to understand the circumstances in which rupture-repair sequences lead to improved outcome. These differences are summarized in Table 10. The studies varied on several variables that could influence the effect on outcome of rupture-repair sequence. The variables of
interest are: age of client, client’s marital status, type of therapy, experience of therapist, training of therapist in the modality used, client social skills, and therapist facilitative interpersonal skills. Recall that the two studies that show an association between rupture-repair sequence and outcome are Kivlighan & Shaughnessy (2000) and Stiles et al. (2004). The two studies that show no association are Stevens (2002) and the current study.

In terms of age, one study that showed an association with outcome (Kivlighan & Shaughnessy, 2000) and one that did not (the current study) included college student clients. Similarly, Stiles et al. (2004) showed an association with outcome while including clients with a mean age of 41, while Stevens sample, with a mean age of 40 showed no association with outcome. Thus age does not seem to be a factor in determining whether rupture-repair sequence is associated with outcome.

Stiles (2004), reported that clients who were married or partnered were significantly more likely to report ruptures than single clients. Given that Stiles’ is one of the studies that showed an association with outcome, the marital status of the clients in the other studies was examined. The information is not reported by Stevens (2002). The marital status of clients in the current study is not available, and Kivlighan and Shaughnessy also do not report marital status. However, given that clients were college students, it seems likely that most of them were unmarried. The lack of information makes it difficult to decide whether marital status is an important factor.

Type of therapy was a factor that seemed likely to play an important part. Both improved-outcome studies used relationship-focused time-limited dynamic therapy.
However, Stiles’ study also included CBT. Stiles reported that rupture-repair sequences were numerically, but not significantly more likely in the psychodynamic condition. Stevens included CBT, a type of psychodynamic therapy that was more focused on maladaptive patterns than on the relationship, and Brief Relational Therapy, a relationship-focused therapy designed by Safran and Muran to help in the exploration of ruptures. Ruptures were significantly more likely in the BRT condition, but there was no association with outcome. Because it was designed to study the common factors, the OUHRS was nonspecific as to the type of therapy provided, which means that no information is available as to the degree of relationship-focused work done in the sessions. Overall then, it seems that the studies show a trend toward numerically more ruptures when the therapy is relationship focused, but no clear association with outcome that depends on type of therapy.

Experience of therapist also varied across the studies. Among the studies that found a relationship to outcome, Kivlighan & Shaughnessy (2000) used novice therapists in a pre-practicum didactic course, while Stiles et al. (2004) used clinical psychologists with 1 to 17 years clinical experience in the research clinic. As to the studies that found no relationship to outcome, the OUHRS used a combination of graduate students in clinical psychology and graduate students in other disciplines. Stevens (2002) used clinicians of a variety of levels of experience and disciplines, ranging from pre-doctoral interns in clinical psychology to experienced psychologists and psychiatrists. Given this split, it is difficult to see how clinician experience could have played a role in determining the relationship of ruptures and outcome.
Table 10

Key Differences in Samples

<table>
<thead>
<tr>
<th></th>
<th>Kivlighan &amp; Shaughnessy, 2000</th>
<th>Stiles, et al., 2004</th>
<th>Stevens, 2002</th>
<th>OUHRS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Undergrad</td>
<td>Adults. M=41 years</td>
<td>Adults. M=40 years</td>
<td>Undergrad</td>
</tr>
<tr>
<td>Presenting problem</td>
<td>Moderate distress from</td>
<td>Depression</td>
<td>Cluster C personality disorders</td>
<td>Interpersonal distress</td>
</tr>
<tr>
<td></td>
<td>interpersonal problems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td>Likely few married</td>
<td>Married = more ruptures</td>
<td>Not reported</td>
<td>Likely few married</td>
</tr>
<tr>
<td>Therapists</td>
<td>Novice trainees</td>
<td>Licensed</td>
<td>Licensed and unlicensed</td>
<td>Novice, lay, and advanced trainee</td>
</tr>
<tr>
<td>Type of therapy</td>
<td>Binder TLDP . Relationship</td>
<td>Psychodynamic and CBT. Rupture more likely in PD, but not significantly. PD is relationship focused</td>
<td>BAP = more maladaptive patterns, less support than most TLDP. BRT = relational. BRT had more ruptures</td>
<td>Told to use whatever they thought would work.</td>
</tr>
<tr>
<td></td>
<td>focused</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rupture cluster?</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>assoc w/ outcome?</td>
<td>Yes</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>V-shaped deflection?</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>assoc w/ outcome?</td>
<td>N/A</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Training in treatment modality</td>
<td>Novices in prepracticum</td>
<td>Licensed. Encouraged to maintain belief in both.</td>
<td>Well-trained and closely supervised.</td>
<td>No specific advice.</td>
</tr>
<tr>
<td>Other note</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Every client with rupture had high social skills (related to alliance). 4 of 5 therapists = low FIS.
Another possible contributing factor was the training of therapists in the modality used. Therapists in Stevens’ study were well-trained and closely supervised in their treatment modalities. By contrast, the therapists in the OUHRS study were not asked to use a particular modality, so this factor does not apply to that study. Kivlighan and Shaughnessy’s therapists were given a TLPD manual and presumably discussed the manual in class, but with such novice therapists it seems unlikely that they had achieved mastery by the time they started seeing their clients. Finally, Stiles et al. simply asked their therapists to maintain their belief in both modalities in which they saw clients. Overall then, training of therapists was a hodgepodge about which it is impossible to draw firm conclusions. However, given the lack of specific training in the OUHRS and in Stiles et al., it seems likely that training was not the key factor that explains the differences in outcome.

The presenting problems of the clients also varied across studies. For three of the studies, the clients had problems that fell largely onto Axis I. The undergraduates in Kivlighan & Shaughnessy’s study all presented with moderate distress from interpersonal problems. The white collar, community-member clients in Stiles et al.’s study presented with depression. They were excluded if they had a continuous history of psychiatric disorder extending more than two years or had received more than three sessions of psychiatric treatment in the last five years. The student clients in the OUHRS presented with interpersonal distress. However, the clients in Stevens’ study were all diagnosed with Cluster C personality disorders or personality disorders NOS (All but two also had an Axis I diagnosis). As noted in the DSM-IV-TR, “a personality disorder is an enduring pattern of inner experience and behavior that deviates markedly from the expectations of
the individual’s culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment” (p. 685). Cluster C includes the following personality disorders: avoidant, dependent, and obsessive-compulsive personality disorder. People with Cluster C disorders often appear anxious or fearful (APA, 2000). Personality disorders are notoriously difficult to treat. It seems possible that clients who have personality disorders experience alliance rupture and repair differently than clients who do not have personality disorders. Rupture-repair sequences as hypothesized to work to improve outcome by helping disprove clients’ dysfunctional interpersonal schemas. Perhaps the clients in Stevens’ study were able to see the alliance declining and rising, but because of the enduring, pervasive and inflexible nature of their personality pathology, they were unable to benefit from the rupture-repair experience as seems to happen for clients with Axis I diagnoses. Indeed, Safran and Muran (2000) allude to this process of change as sometimes requiring a series of rupture-repair events, and it seems likely that this would be doubly true for clients with personality disorders.

Overall, it seems likely that the client’s presenting problem has an influence on whether they show an association between rupture-repair sequence and outcome. When the clients’ problems are more transient, they are better able to benefit from the experience of rupture and repair. When clients are more interpersonally challenged, they seem not to be able to achieve the change that might otherwise be associated with rupture and repair.

This brings us to the final two variables that might influence the association of rupture-repair sequence and outcome: client social skills and therapist facilitative interpersonal skills. These variables were assessed only in the OUHRS. Each therapist
was classified either high or low FIS and then assigned one client with high social skills and one client with low social skills. Although the therapists and clients in the other studies would also have had varying levels of FIS and social skills, those characteristics were not measured and thus would have been part of the error variance rather than systematic variance. In the OUHRS, every client who reported a rupture had high social skills, while all but one therapist had low FIS. Therapists with low FIS were worse than the average therapist in the study at “perceiving, understanding, and sending a wide range of interpersonal messages; and persuading others with personal problems to use proposed solutions to problems and abandon maladaptive patterns (Anderson & Weis, 1999; in Crowley, 2000, p. 78).” It seems likely that in these five cases, the high social skills clients could tell that something was not right in the alliance, but their low FIS therapists were unable to do whatever it is that high FIS or regular therapists do to translate the rupture-repair sequence into therapeutic gain. It might be that the rupture was repaired for a different reason than it is in a more typical therapy situation. For example, maybe the high social skills client colludes with the low FIS therapist to avoid an issue the therapist isn’t equipped to address. In this case, the WAI would drop as the client tries to address the issue, and then rise as the two participants tacitly agree to work on something else. In this way, the alliance could look “repaired” on the WAI, without the client being able to go through the “working through” process in a way that will lead to improved outcome.

Thus it seems that when the therapist is interpersonally challenged, the rupture-repair sequence does not affect outcome in the way that it does when the therapist is not interpersonally challenged.
Overall, by examining the differences in the samples of the four studies, it seems reasonable to conclude that when either member of the dyad is interpersonally challenged, the rupture-repair sequence does not lead to improved outcome. When clients and therapists are more typical, rupture-repair sequences are associated with outcome.

**Limitations**

There are several potential limitations to the current study. First, the lack of WAI scores for each session is cause for concern. It is possible that some rupture-repair sequences were missed if the rupture occurred in a session for which data is not available. In addition, the current methodology is unable to detect rupture-repair sequences that take place within a single session.

Second, the small sample size calls into question the power of the analyses. Although 44 subjects provide acceptable power, several analyses called for dividing the sample into subgroups, whose small size might have limited the power of the analyses. However, because this area of research is still in its infancy, exploratory studies such as this can provide a jumping-off point for larger studies in the future.

Another possible limitation in the proposed study is the relative inexperience of the therapists used. Kivlghan and Shaughnessy (1995) question whether such inexperienced clinicians as were used in their study are able to provide an accurate assessment of the working alliance. Indeed, they cite Mallinckrodt and Nelson (1991), who found that novice and experienced therapists differed in their ratings of the working alliance. The novice trainee therapists in the current study were of similar levels of experience to those in the Kivlghan and Shaughnessy (1995) project.
Directions for Future Research

The current study has helped clarify the circumstances in which rupture-repair sequences are associated with outcome. It appears that if either the client or the therapist is interpersonally challenged, the rupture-repair sequence will not lead to improved outcome. Future studies should explore this conjecture.

In addition, the current study has highlighted the difference in the way clients and therapists perceive the development of the alliance. Future research on patterns of alliance development should attempt to tease out precisely which components of the alliance are perceived differently and whether this varies over time.

Finally, the current study has added to the evidence that WAI scores are likely not sufficient alone to measure patterns of alliance development. Future researchers would be well advised include use within-session measures to capture rupture-repair sequences that occur within a single session. Only by looking inside the session can we fully capture the prevalence of ruptures. In addition, it will be by studying interactions within sessions that future researchers come to understand how the mechanism of repair can lead to improved outcome.
References


