Therapist Adherence, Patient Alliance, and Depression Change in the NIMH Treatment for Depression Collaborative Research Program

by

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To Megan and Lia

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Table of Contents

Dedication……ii
Acknowledgements…….....iii
List of Appendices……..vi
Abstract…….....vii
Chapter 1: Introduction……1
Previous Studies on Therapist's Adherence and Alliance in Manualized Treatments…….....4
Previous Studies on Adherence and Outcome in Manualized Treatments……15
Research Questions and Hypotheses…….....28
Chapter 2: Method……35
Participants……35
Patients……...35
Therapists……...35
Design……36
Treatments……..37
Measures……40
Collaborative Study Psychotherapy Rating Scale……..40
Vanderbilt Therapeutic Alliance Scale……..41
Beck Depression Inventory ……...42
Data Reduction and Analysis……43
Chapter 3: Results……..46
Descriptive Statistics for Patient Alliance and Therapist Adherence……46
Results of the Main Analysis……50
Findings Across All Four Treatments……52
Cognitive Behavioral Psychotherapy……54
Interpersonal Psychotherapy……..55
Clinical Management Plus Imipramine……57
Clinical Management Plus Placebo……...58
Additional Exploratory Analysis……...……59
Cognitive Behavioral Psychotherapy……59
Interpersonal Psychotherapy……..60
Chapter 4: Discussion……61
Synthesis of the Main Findings……62
Limitations and Strengths of this Study and Suggestions for Future Research…75
Conclusion……79
Appendices……82
Bibliography…….....123

List of Appendices

Appendix

1 Figures Recording Therapist Adherence and Patient Alliance Predicting Residual Change in Patient Depression…….83

2 Tables Recording Early and Late Therapist Adherence and Patient Alliance Means and Standard Deviations……...112

3 Summary of Results…….118

4 Vanderbilt Therapeutic Alliance Scale (VTAS) (Patient Factor and Therapist Factor) and Collaborative Study Psychotherapy Rating Scale (CSPRS)……...119

Abstract

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Using data from the National Institute of Mental Health Treatment of Depression Collaborative Research Program (NIMH TDCRP), this dissertation examined the relationship between the patient alliance (Vanderbilt Therapeutic Alliance Scale patient factor) and therapist adherence to five subscales of the Collaborative Study Psychotherapy Rating Scale: Cognitive Behavior Therapy (CBT), Interpersonal Therapy (IPT), Clinical Management (CM), Facilitative Conditions (FC), and Explicit Directiveness (ED) and their influence on depression change as measured by the Beck Depression Inventory. Analyses were conducted using path models examining the interrelationship between early and later alliance and adherence as predictors of depression change for the full TDCRP sample (n = 239) and for each treatment comprising the TDCRP: CBT (n = 59), IPT (n = 61), imipramine plus clinical management (IMI-CM; n = 57), and placebo plus clinical management (PLA-CM; n = 62). The results indicate that, in each of the treatments, early patient alliance predicted later patient alliance, and later patient alliance predicted depression change. Early therapist adherence rarely predicted later therapist adherence and later therapist

adherence rarely predicted depression change with the following exceptions. Later IPT adherence predicted greater reductions in depression in IPT and later CBT adherence predicted greater reductions in depression in both IPT and in PLA-CM. Across all the treatments, there was a positive relationship between both IPT and FC adherence and patient alliance, and a negative relationship between both ED and CM adherence and patient alliance. In each treatment group, the relationship between adherence and the patient alliance was different. In IPT, greater ED predicted reduced patient alliance. In CBT and PLA-CM, greater CM adherence predicted reduced patient alliance. Early patient alliance predicted: (a) greater later FC, IPT, and CBT adherence in CBT; (b) greater IPT adherence in IPT; and (c) greater FC adherence in PLA-CM.

These results have important implications for psychotherapy training and clinical practice. Particularly relevant are the findings that non-target techniques had a positive influence on patient alliance and depression change, and that therapist directiveness negatively influenced the patient alliance in IPT. In sum, this study highlights the complex interrelationship of relational and technical dimensions of psychotherapy.

Chapter 1

Introduction

Treatment manuals have produced a revolution in therapeutic research, training, and clinical practice (Luborsky& DeRubeis, 1984). They are one of the most significant results of the movement for an evidence-based psychotherapy which started in the early 1980s. This development was a response to problems like the excessive number of therapeutic methods in use and their questionable scientific basis, and the ineffectiveness and potential harmfulness of a psychotherapy based primarily on anecdotal evidence and on the personal judgment of the clinician (Parry, 2000).

Psychotherapeutic manuals first appeared for behavioral (Wolpe, 1969) and cognitive-behavioral (Beck et al., 1979) psychotherapies. Soon after, treatment manuals were also developed for other therapeutic approaches, like interpersonal therapy (Klerman et al., 1984), psychodynamic therapy (Davanloo, 1980; Strupp & Binder, 1984), and experiential psychotherapy (Greenberg & Goldman, 1988). Treatment manuals are currently standard in clinical practice and extensive research supports the use of manualized treatments for a broad range of psychological disorders (Nathan & Gorman, 1998). In particular, the National Institute for Health and Clinical Excellence (NICE) recently recommended structured psychological interventions for the treatment of depression using Cognitive Behavioral and Interpersonal Psychotherapy (Timonen & Liukkonen, 2008). However, some findings suggest a tension when applying a manually-based psychotherapy treatment, between the requirement to follow specific guidelines

and the ability of therapists to respond flexibly to the needs of each patient and to develop a strong therapeutic alliance (Miller & Binder, 2002). The importance of the therapist's clinical judgment and flexibility has unanimous recognition in psychotherapy (American Psychological Association, 2006). Nonetheless, even though many of the more recent therapeutic manuals allow considerable flexibility (Linehan, 1993; McCullough, 2000), the implicit assumption, when using a manualized treatment, is that the closer the therapist follows the protocol, the more effective the therapy (Brotman, 2004; DeRubeis & Feeley, 1990). This assumption is not supported by studies that show limited and inconsistent effects of therapist's adherence to the manual on the outcome (Beutler et al., 2004; Elkin, 1988) and by other findings which suggest that following a manual too strictly can be detrimental to the therapeutic alliance (Miller & Binder, 2002).

There has also been criticism of the medical model implicit in the use of manualized treatments that emphasizes the importance of specific therapeutic techniques for the treatment of a particular disorder (Wampold, 2001). Randomized controlled trials comparing different treatments of a disorder, in fact, rarely show the superiority of one therapeutic approach over another. Instead, more often the influence on the outcome of common factors, like the therapeutic alliance, is more significant than the influence of specific theory-driven techniques (Wampold, 2001). There are a few exceptions to this general tendency to equivalence across different therapeutic treatments for particular disorders. Cognitive behavioral therapy, for instance, has been consistently more effective in treating severe phobias (agoraphobia, panic disorder), social anxiety, compulsions and bulimia nervosa, and other disorders connected to physical health such as tension headaches and insomnia (DeRubeis et al., 2005; Lambert & Ogles, 2004).

Also related to the relevance of specific treatments for particular disorders is the fact that in practice, therapists will often deviate from the treatments recommended by a manual and integrate techniques from other psychotherapy approaches (Hill et al., 1992). Some studies show that the presence of techniques borrowed from other approaches in a manualized treatment is not an inert event without clinical significance, but a therapeutic factor with a strong influence on the treatment outcome (Ablon & Jones, 1998; Hayes et al., 1996; Jones & Pulos, 1993, Pole et al., 2008).

Thus, the results of research and debates in the field of clinical psychology call attention to two main problems related to the use of manualized treatments. One problem is how adherence to a structured treatment is influenced by the need to develop a therapeutic alliance based on a mutual agreement about tasks and goals of the treatment and on the therapist's ability to respond flexibly to the needs of each patient. The second problem concerns the manner in which the use of particular therapeutic techniques prescribed by the manuals or imported from other treatments can affect the therapy.

This dissertation explores the relationship between the therapeutic techniques used by the therapist, the therapeutic alliance, and the treatment outcome, using data from the Treatment for Depression Collaborative Research Program (TDCRP) study. The TDCRP compared the effectiveness of three different treatments for depression: Cognitive Behavioral Therapy, Interpersonal Therapy, and a pharmacological treatment (Clinical Management plus Imipramine), which was contrasted with a placebo condition (Clinical Management plus pill placebo). This dissertation provides a new perspective for addressing the questions raised above by manualized treatments in psychotherapy. The question about the reciprocal influence between the therapeutic alliance and the

therapeutic techniques used by the therapist has not yet been addressed using data from the TDCRP. In studies that have focused on this matter, only the effects on the alliance of the therapist's adherence to the treatment manual have been considered, not the effects on the alliance of adherence to non-target techniques. The second question about the effect of the use of specific techniques on the outcome has already been addressed in the TDCRP by Elkin (1988), but only in regard to the overall influence of the therapist's adherence to the treatment manual. The extensive TDCRP data allow for a much more complex analysis of the relationship between adherence, alliance, and outcome. For a richer understanding of this relationship, it is necessary to take into consideration not only the therapist's adherence to the manual but also the presence in a treatment of therapeutic processes that are different from those prescribed by a manual. This study will also examine whether the different phases of a psychotherapy treatment are an important variable. In fact, the reciprocal influence between adherence and the alliance, and the effects of adherence on the outcome, may vary depending upon the particular phase of the treatment under consideration.

Previous Studies on Therapist's Adherence and Alliance in Manualized Treatments

One of the most common criticisms about the use of therapeutic manuals is that they might limit the ability of the therapist to connect with patients and to develop a strong therapeutic alliance. From a humanistic perspective, it is believed that the manual induces the therapist to see patients as examples of a group rather than as single persons, and that a therapist who follows a manual is less flexible, and less able to respond to the unpredictable demands of the therapeutic context (Bohart, 2000). The therapist who uses a manual is considered to be more inclined to assume that the solution of the patient's

problem is already known, while some therapists believe that an effective solution can come only from the joint effort of the therapist and the patient (Bohart, 2000). Similarly, some authors claim that the patient's experience of a supportive and emphatic therapist is the main therapeutic factor, while the specific techniques prescribed in the different manuals have more limited effect on the outcome and are therefore less important (Zuroff & Blatt, 2006). Others claim that the positive correlation between alliance and outcome found in empirical studies is often an epiphenomenon resulting from the positive influence of the competent use of appropriate therapeutic techniques on both the alliance and the outcome (DeRubeis et al., 2005). Finally, a mediating position between these two extremes claims that a good therapeutic outcome is the result of effective techniques in the context of a positive alliance (Castonguay & Beutler, 2006). This more balanced view recognizes the importance of both the common and relational factors and the specific and technical factors. Castonguay and Beutler (2006) wrote that the more generous research estimates attribute to the alliance only 10% of the variance of the outcome of therapy and to specific techniques, only another 10%. Hatcher and Barends (2006) also claimed that considering alliance and techniques to be two different aspects of the treatment is inappropriate because the technical and the relational dimensions of a treatment are strongly interconnected and cannot be separated. In the literature, authors distinguish between "techniques," with the goal of promoting change, and "relational" interventions, with the goal of strengthening the alliance and facilitating the therapeutic work. The arbitrariness of this distinction is demonstrated by research showing that effective therapeutic interventions are considered by the patients to be the most important factor in the development of the therapeutic alliance (Bedi et al., 2005; Hatcher & Barends, 2006).

Traditionally the cognitive behavioral perspective was more focused on techniques (Skinner, 1993) and the humanistic and psychodynamic perspective gave more emphasis to the healing effect of the therapeutic relationship (Rogers, 1957). More recently, in the behavioral and cognitive approaches, too, there has been a growing attention to the importance of the therapeutic alliance, not only as a way to facilitate the effective use of therapeutic techniques, but also as an aspect of the treatment that directly contributes to change (Goldfried & Davila, 2005; Klein et al., 2003). In particular, in the treatment of patients with personality disorders, the therapeutic relationship is seen as a fundamental "corrective experience" of the maladaptive schemata of the patient (Beck et al., 2004; Hoffart et al., 2005). At the same time, humanistic therapists also endorse a more complex understanding of the process of change, where both relational skills and competent use of appropriate therapeutic techniques contribute to the patients' improvement (Elliott, Greenberg, & Lietaer, 2004; Paivio et al., 2004).

The positive correlation between the therapeutic alliance and the treatment outcome is a widely confirmed result in clinical research. A meta-analysis by Horvath and Symonds (1991) found an average correlation of .26 between alliance and symptomatic improvements. A more recent meta-analysis found a similar average correlation of .22 (Martin et al., 2000). These correlations explain from 5% to 6% of the variance in the outcomes. In the TDCRP, the therapeutic alliance as measured by the Vanderbilt Therapeutic Alliance Scale (VTAS; Hartley & Strupp, 1983) and the patients' evaluation of the relational qualities of their therapists as measured by the Barrett-Lennard Relationship Inventory (B-L RI; Barrett-Lennard, 1962) were both found to be significant predictors of the outcome (Krupnick et al., 1996; Zuroff & Blatt, 2006). The

VTAS accounted for for 21% of the variance in combined patient-reported and expert-rated measures of the outcome, but the positive effect of the alliance on the outcome did not persist after controlling for the influence of previous patient symptom changes. However, the positive influence on the outcome of the patient's initial evaluation of the relational qualities of the therapist (B-L RI) persisted after controlling for the shared variance between the measure and previous changes of the patient. The correlation of the patient's B-L RI scores was higher than r = .10 with measures of symptomatic change, and higher than r = .20 with a measure of improved resilience to depression (Enhanced Adaptive Capacity (EAC; Zuroff, et al., 2003).

The therapeutic alliance is strongly influenced by the personality of the patient. DeRubeis et al. (2005) wrote that one of the possible explanations for the relationship between alliance and outcome, alternative to the assumption of a direct effect of the alliance on the outcome, is the presence of other variables, like personality characteristics of the patient that influence both the alliance and the outcome. Research has identified characteristics of the patient that have a positive influence on the alliance, like psychological mindedness and the quality of object relations, and characteristics that have a negative influence, like avoidance, interpersonal difficulties, depressive cognitions, hostility, under involved interpersonal style, and subtle forms of dysfunctional parental style (Castonguay, Constantino, et al., 2006). Hersoug et al. (2001) found that the patient's characteristic that more strongly predicted the patient's evaluation and the therapist's evaluation of the therapeutic alliance were the "... patient's interpersonal relations in the cold-warm dimension" (p. 214). Ryan and Cicchetti (1985) showed that object relations, hope, psychological mindedness, psychic pain, and intra-psychic

flexibility accounted for more than 40% of the variance in the quality of the alliance. The quality of object relations alone accounted for almost 30% of the variance. Other studies explored the relationship between the attachment style of the patient, the quality of the therapeutic alliance, and the technical dimensions of the treatment. Mallinckrodt et al. (1995) found that patients with an anxious- avoidant attachment can develop good alliances with their therapists, but are more reluctant to engage in the self-exploratory and self revealing tasks of the treatment. Hardy et al. (1997) found that therapists focus more on emotions and on relationships with patients with an over-involved preoccupied style and use more cognitive interventions with patients with an under-involved dismissing style. These authors also found that over-involved patients develop a faster and stronger connection with their therapists.

The alliance is also affected by the match between the values of the therapist and the values of the patient (Hersoug et al., 2001), and by the interaction between the characteristics of the treatment and the aptitudes and beliefs of the patient. In the TDCRP, Blatt and Zuroff (2005) have shown that patients with high levels of perfectionism in short term treatments for depression, significantly reduced their contribution to the therapeutic alliance in the second part of the therapy and consequently, by the end of the treatment, they showed very limited improvement. The authors believe that these patients reacted negatively to the anticipated termination and withdrew prematurely from the treatment. The therapeutic alliance of perfectionist patients, instead, seems to be more positive in open-ended treatments (Blatt & Zuroff, 2005). Also using data from the TDCRP, Elkin et al. (1999) found that when patients who had a preference for psychotherapy were assigned to medication or vice versa, they were four times more

likely to terminate the treatment early than the patients whose treatments were congruent with their preferences. These patients also made less of a contribution to the therapeutic alliance and thought that their therapists had less positive relational dispositions. Instead, in this study, the patients' preference for one of the two psychotherapies (CBT and IPT) made no difference in the patients' early engagement in the treatment, whether they were assigned to CBT or to IPT.

Another factor reported in the literature that significantly influences the patient's involvement in the treatment is the patient's initial expectation about the effectiveness of the therapy. Meyer et al. (2002) found that, in the TDCRP, patients with pessimistic expectations about the therapy had more negative outcomes. This negative effect was mediated by a lower contribution of these patients to the therapeutic alliance. The patients' negativity about the treatment affects not only on the patients' contribution to the therapeutic work, but also on the therapists' contribution. Foley et al. (1987) found that in the pilot/training phase of the TDCRP, the IPT therapists had more difficulty with patients with higher hostility scores and presumably less ability to engage in a productive therapeutic relationship (O'Malley, Sush, & Strupp, 1983). The therapists' performance with these patients was also judged by their supervisors as less competent. In a naturalistic study on CBT for depression involving six therapists and 30 patients, Trepka et al. (2004) evaluated the respective contributions of the therapists and of the patients to adherence to the manual and competent delivery of the treatment and to the quality of the therapeutic alliance. They found that the variability in adherence to the protocol, competent delivery of the treatment and therapeutic alliance were clearly related to the therapist's contribution only in the case of patients who completed the treatment.

Otherwise, in all the treatments in the study, the patient's contribution to these variables was more important. This result suggests that not only the therapeutic alliance, but also the therapist's adherence and competence, are strongly influenced by the patient's degree of involvement in the therapeutic work and commitment to the therapy. Psychotherapy is an interpersonal process that requires the active collaboration of both participants. The therapist's technical and relational skills can be effectively implemented only if the patient is capable and willing to engage productively in the therapeutic work.

Research has provided various indications about the aptitudes and behaviors of the therapist associated with a good alliance. Ackermann et al. (2003) found a positive relationship between the alliance and certain aptitudes of the therapist such as authenticity, flexibility, interest, alertness, calmness, confidence, respect, empathy, and clarity in communication. They also found a positive relationship between the alliance and some specific interventions like collaborative interactions, reflective and active listening, accuracy in interpretations, appropriate suggestions and exploration of interpersonal themes. Alliance research confirms the importance of the supportive dimensions of the treatment, like reassurance, education and role preparation, the enthusiastic engagement of the therapist in the relationship with the patient, but also suggests that well planned and structured therapies are usually more effective than therapies that are unstructured (Orlinsky et al., 1994).

The research on the therapist's contribution to the therapeutic alliance and on the patient's experience and use of psychotherapy clearly suggests that the technical and relational aspects of the therapeutic process are deeply connected and strongly influence each other. As the alliance becomes stronger, the therapist can use techniques in more

effective ways to deepen the exploration of the patient's experience, to challenge beliefs or behaviors more engrained in his/her personality, or to try new experiences that feel more threatening. Every technique is ineffective if not grounded in trust between the therapist and the patient. In deciding when to use a particular technique and how to use it, it is necessary for the therapist to evaluate its impact and its relational meaning, which changes depending on the context and on the characteristics of the patient. For instance, patients with high levels of reactance tend to perceive the therapist's suggestions as threats to their freedom and do better if the therapist's approach is less directive (Beutler et al., 2002). Patients with high quality of object relationships can benefit from an expressive psychotherapy with a moderate level of relational interpretations, while patients with low quality of object relationships do better in a supportive psychotherapy (Piper et al., 2002). The quality of the therapeutic alliance is an important parameter when deciding between an explorative intervention and a supportive one. If the alliance is strong, explorative interventions have better results. If the alliance is weak, explorative interventions can be perceived as critical or intrusive and damage the alliance even more, while the patient can feel more reassured and does better with a supportive intervention (Piper et al., 2002).

According to Bordin (1979), the characteristics of the therapeutic alliance that are most effective for the therapeutic work will depend upon the tasks and goals of the specific treatment. The kind of trust necessary to express uncomfortable and shameful feelings and desires, for example, is different from the trust necessary to confront the fear of flying. Previous studies exploring the characteristics of the therapeutic alliance in different therapeutic approaches have conflicting results. Marmar et al. (1989) found no

differences in patient, therapist and external observer measures of alliance using the California Psychotherapy Alliance Scale (CALPAS, Marmar et al., 1989) in brief behavioral, cognitive, and psychodynamic psychotherapies. Raue et al. (1993) however, found that observer ratings of the therapeutic alliance (Working Alliance Inventory Observer Rating (WAI-O); Horvath, 1982) in CBT were significantly higher than in Psychodynamic Interpersonal (PI) therapies. The sessions assessed in this research were those considered more significant by the therapists, and the authors suggest that it is possible that the psychodynamic therapists thought that some difficult sessions in which the alliance was strained were also more effective in fostering change.

Another study by Raue et al. (1997) analyzed the levels of alliance in cognitive behavioral (CBT) and psychodynamic interpersonal (PI) psychotherapies for depression in sessions considered more or less helpful in promoting change. The five therapists in this study were trained in both treatments and used CBT with some patients and PI with others. The results show that the therapists had higher levels of alliance (WAI-O) and showed more empathy, support, and connection with the patient while using CBT. The authors suggested that while in CBT there was more emphasis on fostering the patient's collaboration in the therapeutic work, in PI there was greater focus on the transference and on possible conflictual feelings of the patient toward the therapist. Another explanation of the higher evaluation of the alliance in CBT is that the tasks and goals of the therapy were more clearly discussed in CBT because of the more structured nature of that treatment. The measure of the alliance in this research (WAI) gives equal weight to each of the three dimensions of the alliance: the bond, the agreement on the tasks, and the agreement on the goals of therapy. It is possible for the bond to be a more important

component of the alliance in treatments which require more self-disclosure from the patient, like IPT and PI, than in treatments more task focused and goal oriented like CBT.

Studies which have specifically evaluated the relationship between the therapist's adherence and the strength of the therapeutic alliance also have conflicting results. Some suggest that high levels of adherence can have a negative impact on the therapeutic alliance and on the treatment outcome (Henry et al., 1993a; Henry et al., 1993b). Castonguay et al. (1996) demonstrated that in a manualized treatment of cognitive therapy (CT) for depression, while the therapeutic alliance and the client's emotional experiencing were positively related to the outcome, the more frequent use of the technique of focusing on the intra-psychic consequences of distorted cognitions was negatively related to measures of depression ($r = -.44$) and to measures of general change ($r = -.26$). In trying to explain this surprising finding, the authors conducted a descriptive analysis of sessions in which the cognitive technique was used in the context of a stronger and a weaker alliance. In treatments with a strong alliance, the patients responded to the therapist's focus on the negative consequences of their distorted cognitions by actively participating in the therapeutic work. Instead, in treatments with a weak alliance, the therapist's focus on the negative consequences of the patient's distorted cognitions resulted in more critical and invalidating interactions with the patient and greater damage to the alliance. In the Vanderbilt II study, Strupp and Binder (1984) found that therapists following a manual of TLDP (Time Limited Dynamic Therapy) often used interventions that seemed formally correct, but in fact were mechanical, generic, insensitive, and wrongly timed. Henry et al. (1993b) found that the therapists with higher levels of adherence after training in TLDP were those with more self-

controlling and self-blaming introjects. Paivio et al. (2004) found a negative relationship between adherence and alliance in a study in which 37 patients who were adult survivors of child abuse were treated with Emotional Focused Therapy for Adult Survivors (EFT-AS).

In contrast, in many studies of Cognitive Behavioral Psychotherapy, in treatments with higher levels of adherence there is also a stronger alliance (Addis, Wade, & Hatgis, 1999; Brotman, 2004; Carroll et al., 1997; Loeb et al., 2005; Wilson, 1998). In Brotman's research on CBT treatments for depression, the correlation between alliance and the therapist's adherence was .42 to .66, suggesting the significant overlap of these two dimensions of the therapeutic process. In CBT and IPT treatments for Bulimia Nervosa the variance shared between alliance and adherence was from .15 to .69, showing again that in these treatments the two variables were deeply interconnected (Loeb et al., 2005). In the TDCRP, the finding that when the alliance improved, the patients in IPT produced more relational narratives and the patients in CBT produced fewer narratives also supports the hypothesis that a positive alliance can facilitate the therapist's adherence to the treatment protocol (Crits-Christoph et al., 1999).

Some findings suggest that the optimal level of adherence to the manual might depend on the quality of the therapeutic alliance. Data on adherence and alliance in a manualized treatment of individual drug counseling (IDC) as part of the National Institute on Drug Abuse Collaborative Cocaine Treatment Study shows that with patients with poorer alliances, treatments with moderate levels of adherence had better outcome than treatments with levels of adherence that were too high or too low (Barber et al., 2006). This study also found that when the alliance was strong, treatments were equally effective

with any level of adherence. Similar findings are also shown when looking at the patient's motivation for change in CB treatments for panic disorders. Moderate levels of adherence were more effective than too high levels of adherence when the patients had low motivation (Huppert et al., 2006). These findings support clinical wisdom which suggests that therapists need to be more flexible when working with difficult patients, but also that they need to work with a consistent theoretical framework. The finding that in the context of a positive alliance the level of adherence is not relevant for the outcome suggests, also, that the appropriate level of adherence is actively negotiated by the therapeutic dyad depending on the needs of each patient (Bordin, 1979).

Overall, these findings suggest that the optimal levels of therapist's adherence vary depending on the quality of the therapeutic alliance and the specific needs of each patient. They suggest that techniques are effective only in the context of a positive alliance, but also that effective therapeutic work increases the strength of the alliance. Alliance theory and previous findings also suggest that certain aspects of the therapeutic alliance are more important in some treatments than in others.

Previous Studies on Adherence and Outcome in Manualized Treatments

There have been numerous studies that examined the relationship between the therapist's adherence to a treatment manual and the outcome and the relationship between the use of specific techniques and the outcome. These studies will be considered in this section with a particular focus on those that utilized the TDCRP data.

In psychotherapy, studies show that the therapist's overall adherence to the manual has a positive correlation with the treatment outcome, but one that is not

significant and clinically meaningful (Beutler et al., 2004). There have been few studies, however, that have explored the effects of techniques different from the manual on the outcome or the effect of adherence in different phases of the treatment on the outcome. Elkin (1988) found that in the TDCRP, adherence to the IPT and CBT manuals in the respective treatments were not related to the outcome. In this study, where there were a number of different measures of the outcome, adherence to the treatment manuals accounted for only 1 to 4% of the variance across the different measures. Some of the outcome measures in the TDCRP were chosen deliberately to illustrate the differential effects of the specific therapeutic ingredients pertaining to each treatment. However, the results show the almost complete absence of differential effects of the specific components of each treatment (Imber et al., 1990). Only the "Need for Approval" of the patient (as measured by the Dysfunctional Attitude Scale (DAS, Weissman & Beck, 1979) was reduced to a greater extent in CBT than in the other treatments, as expected. Instead, the patients' social adjustment (Social Adjustment Scale, SAS, Weissman & Paykel, 1974) did not improve more significantly in IPT than in other treatments, and the patient's neurovegetative and somatic symptoms (Hopkins Symptom Checklist; HSCL-90, Derogatis, Lipman and Covi, 1973) were not greatly improved in pharmacotherapy, as the researchers had expected. When asked about what was helpful in their treatment, the patients gave more importance to common factors, particularly those treated with interpersonal psychotherapy. But many patients also mentioned specific techniques corresponding to the treatment that they had received, and those who did also expressed more satisfaction with their treatment (Gershefski et al., 1996).

Some studies show effects of adherence to the manual on the outcome that are greater. DeRubeis and Feeley (1990) examined the aspects of the therapeutic process that are more significantly related to change in CBT for depression. In measuring adherence to CBT, they considered two factors: the 'concrete procedures' of the treatment that focused on symptoms (e.g. agenda, homework, labeling cognitive errors) and factors related to more 'abstract procedures' (relating thoughts and feelings, negotiating contents of sessions, explaining direction of sessions). In this study, adherence to the more concrete CB procedures in the initial phase of the treatment was significantly related to change. The more abstract CB procedures, in contrast, had no influence on the patient's change. Adherence has been significantly related to change, too, in some studies of IPT treatments for depression (Frank et al., 1991; Spanier et al., 1996). Other studies, on the other hand, show a null or even negative correlation between adherence and outcome (Carrol et al., 1997; Loeb et al., 2005).

Loeb et al. (2005) give three possible hypotheses for this low correlation between adherence and outcome. The first hypothesis is that adherence might be negatively correlated with outcome only when it is too low; and that above this minimum level, a stronger or weaker adherence is less important. However, they argue, the supposed negative effect of low adherence on the treatment outcome will not show up in Randomized Control Trials like the TDCRP where therapists are carefully selected and trained and the therapists' adherence very rarely goes below the minimum level required for the treatment to be effective. Their second hypothesis is that, in a treatment manual, some techniques may be more important than others and a general measure of adherence doesn't reveal the extent to which the most effective techniques have been used in the

treatment. This hypothesis is supported by DeRubeis and Feeley's findings that only adherence to the 'concrete' CBT techniques was important to the outcome (1990), and by Jacobson and Hollon's findings (1996) that the behavioral activation component of CBT for depression was just as effective as the treatment with all its behavioral and cognitive components. The third hypothesis proposed by Loeb et al. (2005) is that therapists with high levels of adherence may have different degrees of competence. Theoretically, it is the competent use of the techniques that is supposed to be effective, not just the formal adherence to the manual. Other hypotheses suggested in the literature are that common factors are more important than specific techniques (Wampold, 2001) and that the most appropriate level of adherence will differ depending on the quality of the therapeutic alliance (Barber et al., 2006), the patient's motivation for change (Huppert et al., 2006), the personality characteristics of the patients (Sotsky et al., 1991; Barber & Muents, 1996; Hardy, Stiles et al., 1997), and the particular needs of the patients which emerge over the course of the therapy (Huppert et al., 2006, Stiles & Shapiro, 1994). In addition to these factors, this dissertation will argue that it is possible that high adherence to the manual might be associated with a different effectiveness of the therapeutic work, depending on the phase of the treatment in which adherence is considered.

According to Stiles and Shapiro's (1994) "responsiveness theory", the main reason that adherence to the manual is not an important predictor of the outcome is because the optimal frequency and the nature of the therapist's interventions should not be determined in advance. The therapist's interventions should, instead, be applied flexibly, with the goal of fostering change in specific contexts for the specific needs of particular patients. According to responsiveness theory, more is not necessarily better

because the appropriate number of techniques that a therapist needs to use will vary from patient to patient. This theory also supports the integration of therapeutic techniques that vary from those prescribed by the manual and that are more congruent with the needs of the patients. Therapeutic integration is also supported by Prochaska and DiClemente's "stage of change theory", which suggests that a therapist should adapt his or her interventions in relation to the patient's readiness for change (Prochaska & DiClemente, 1992). According to this theory, when patients are in what the authors call a "pre-contemplation" or a "contemplation" stage regarding change, they respond better to techniques that are exploratory and aim to increase awareness and motivation. When patients are ready for change, in the "preparation" and "action" stages, they respond better to more active techniques which guide their efforts to overcome their problems.

Manualized treatments and the relationship between specific techniques and outcome have also been studied by researchers who did not focus on measures of therapist's adherence to the manual, but were interested instead in other ways of looking at the therapeutic process. Ablon and Jones (1999), using the Psychotherapy Process Q-Set (Jones, 2000), analyzed the transcripts of the fourth and twelfth sessions of 35 patients in IPT and 29 patients in CBT in the TDCRP. The Q-sort analysis of the sessions shows that in both treatments the therapists used different interventions according to their respective manuals. The most frequent interventions in IPT were the exploration of interpersonal relationships, the request for clarifications or elaborations, emphatic attunement, and sharing the emotional experience of the patient. The most frequent interventions in CBT were the therapist's active control of the interaction, discussion of specific tasks for the patient out of the session, and discussion of cognitive themes. An

important difference between the two treatments was in the way in which the therapists addressed the emotional experience of their patients. The IPT therapists facilitated the exploration of emotions, used techniques that helped patients to get in touch with less conscious aspects of their experiences and that explored the therapeutic relationship. The CBT therapists focused on the patients' cognitions and more frequently gave suggestions. However, even with these important differences, the two treatments were similar in more than half of the Q-sort process items. Some behaviors of the therapists were similar, like an engaged and supportive stance and the frequent request for clarifications and elaborations. Most important, there were very strong similarities in the contribution of the patients. Of the 23 process items more strongly associated with the outcome, 22 were related to the patients, and 18 were equally present in both treatments. Positive outcomes were associated with items describing patients who felt helped and understood, and were actively engaged in the therapeutic work. Negative outcomes were associated with a critical disposition toward the therapist and disengagement from the therapy. In both treatments, a successful outcome was primarily related to two important dispositions of the patient: a positive view of the self and an idealized view of the therapist. Both dispositions were expressed very early on in the therapy and positively influenced all subsequent sessions. The therapists' interventions were also important, but in both treatments they seemed to support the same dispositions of the patient that promoted change. In this study, Ablon and Jones did not find a significant correlation between specific therapeutic techniques and outcome. In interpreting this finding, the authors say that it was less likely that techniques were irrelevant, and more likely that their effect on

the outcome changed depending on the context and on the way in which the techniques were used (cf. Stiles & Shapiro, 1994).

In a subsequent study that also analyzed the therapeutic process in CBT and IPT treatments using the Psychotherapy Process Q-Set, in both IPT and CBT treatments, the factor "collaborative exploration of emotions" was positively related to the outcome, while the factor "educative/directive process" was not related (Combs et al., 2002). Many aspects of the therapeutic process included in the factor "collaborative exploration of emotions" are strongly associated with the therapeutic alliance; but other aspects, like processes that facilitate the exploration and the awareness of emotions make a contribution to the outcome that goes beyond the positive effect of the therapeutic alliance. In this study, as expected, the "collaborative exploration of emotions" was more present in IPT, while the "educative/directive process" was more present in CBT. The findings of Ablon and Jones (1999) suggest that the quality of the patient's engagement in the treatment is the more important predictor of a positive outcome and that different therapeutic approaches might promote change in ways that are very similar. The findings of Combs et al. also suggest that in CBT, in the context of a positive alliance, the presence of a therapeutic process more characteristic of IPT can be associated with a better outcome.

Studies also show that certain techniques were more effective when working with different patients. Sotsky et al. (1991), analyzing data from the TDCRP, determined that patients with lower levels of social dysfunction had better outcomes with IPT, and patients with lower levels of cognitive dysfunction had better outcomes with CBT or imipramine plus Clinical Management (IMI-CM). Barber and Muents (1996) also found

that patients with avoidant personalities had better improvements in CBT and patients with obsessive personalities had better improvements in IPT. These findings suggest that in the TDCRP the therapists could have been more effective if they used the manual flexibly, adopting therapeutic strategies that were in opposition to the maladaptive personality traits of their patients and which addressed areas of the patients' functioning that were less severely impaired.

In another study on CBT and psychodynamic interpersonal (PI) treatments for depression, patients who tended to be over-involved immediately developed an intense attachment to the therapist and had a preference for affective and relationship-oriented interventions. Under-involved patients were more cautious in participating in the therapeutic relationship and had a preference for techniques that focused on cognitions or on insights and allowed more distance from the therapist. In this study, the therapists complied with their respective manuals, but also adapted their interventions to the needs of each patient, giving to patients with different interpersonal styles a different version of the treatment (Hardy, Stiles, et al., 1997). This finding is in line with responsiveness theory (Stiles and Shapiro, 1994).

The flexible use of manualized treatments is, in fact, documented in studies using the TDCRP data set. Hill et al. (1992) evaluated the therapist's adherence in the TDCRP to show that while the CBT, IPT, and CM therapists used more techniques from their own manuals, in their treatments there was also a consistent presence of therapeutic processes characteristic of the other manuals. The clinicians in the two psychotherapy groups, in particular, shared a consistent number of their respective techniques. On the other hand, the psychiatrists in the clinical management plus pharmacotherapy or placebo

groups used significantly fewer techniques borrowed from psychotherapy manuals (adherence to the CBT and IPT subscales of the CSPRS). Other findings from the TDCRP confirm that therapists used more techniques from their respective manuals, but were also significantly flexible in adapting the treatment to the characteristics and needs of each patient. Connolly-Gibbons et al. (2002) analyzed the transcripts from the CBT and IPT sessions, noting the number of the statements made by the therapists per session and evaluated these statements according to different categories of intervention. They found that with different patients, the number of therapists' statements in one session varied significantly, ranging between 88 to 541 in CBT; and between 37 and 496 in IPT. The difference between the patients also explained a significant part of the variance in the therapists' interventions, with effects from moderate (9%) to large (25%) depending on the categories of interventions (Connolly-Gibbons et al., 2002). Still other findings from the TDCRP show that in both psychotherapies (IPT and CBT) therapists used significantly more questions and clarifications and significantly more statements overall for more severely depressed patients (Connolly-Gibbons et. al., 2003, p. 178). The authors suggest that more depressed patients needed more help from the therapist than less depressed patients in exploring in detail their cognitive patterns or their interpersonal relationships. It is not clear if the higher activity of the therapist with more depressed patients was also associated with higher levels of the overall adherence, or with higher levels of adherence in some phases of the treatment. In this same study, the CBT therapists used significantly less statements helping the patients to see patterns in their cognitions with patients reporting higher interpersonal distress. Interpreting this finding, the authors suggest that with patients with more interpersonal distress the CBT therapists

were less likely to work within the interpersonal context to explain cognitive patterns than with patients with lower interpersonal distress (Connolly-Gibbons et al., 2003, pp. 180-181). In contrast, the IPT therapists used a similar level of learning statements exploring patterns and maintained a similar interpersonal focus with both groups of patients.

Another analysis of the TDCRP data (Crits-Christoph et al., 1999) suggests that the therapists' level of adherence might be also influenced by the patients' expectations of the treatment. This study found that the patients' initial desire to focus the treatment on interpersonal themes was significantly related to the frequency and completeness of interpersonal narratives in CBT, but not in IPT. The IPT therapists focused their treatment on the exploration of interpersonal relationships also when the patients initially did not consider their problem as interpersonal. Both in CBT and in IPT, the therapeutic alliance was positively related with the length of the patients' narratives and with the increase in the length of the narratives during the treatment (Crits-Christoph et al., 1999). These data suggest a positive, reciprocal influence between the length of the patients' narratives, the therapists' more accurate interpretation of the patients' interpersonal patterns, and the patients' desire to deepen the exploration of their interpersonal experience. It suggests a reciprocal influence, in both CBT and IPT, between the patient's connection with the therapist and engagement in the therapeutic work (patient factor of the therapeutic alliance) and the presence of therapeutic processes characteristic of IPT (interpersonal narratives).

In conclusion, in these studies, in CBT treatments for depression, the presence of IPT therapeutic processes seem more likely with certain patients. These patients tend to

be over-involved (Hardy et al. 1997), have lower levels of interpersonal distress (Connolly-Gibbons et al., 2003), wish to focus on interpersonal themes (Crits-Christoph et al., 1999), develop immediately a strong attachment to the therapist (Hardy et al., 1997), and be more actively engaged in the therapeutic work (Crits-Christoph et al., 1999).

As noted earlier, the borrowing of techniques from other approaches in a manualized treatment is a therapeutic factor that can have a strong influence on the outcome. CBT treatments seem to be more efficacious if the therapist discusses interpersonal themes (Hayes et al., 1996) in the sessions or uses some psychodynamic techniques. Even a very small degree of psychodynamic intervention in a cognitive behavioral treatment can have a significant impact on the patients' change (Jones & Pulos, 1993). We have already seen that in CBT in the TDCRP, the "collaborative exploration of emotions", a therapeutic process closer to IPT, is significantly related to outcome, while the "educative/directive process" closer to CBT, is not related (Combs et al., 2002). Ablon and Jones (1998) also found that in CBT, a focus on the past experiences of the patient was positively related to the treatment outcome, while the use of specific CBT techniques was not related. Conversely, other studies suggest that therapeutic processes associated with CBT have a positive influence on the outcome in interpersonal psychotherapy. Ablon and Jones compared the Q-Sort ratings of the IPT and CBT sessions in the NIMH TDCRP with Q-Sort ideal prototypes for these two treatments developed by expert therapists of each of the treatments. This comparison shows the surprising result that IPT therapies were more similar to the CBT prototype than to the IPT prototype. In the interpersonal psychotherapies, the level of similarity

with the Q-Sort prototype of cognitive behavioral therapy was also positively related with all the measures of the outcome (Ablon & Jones, 2002).

The assumption that the overall adherence to the manual can be a reliable measure of the effectiveness of the therapy is also contradicted by the possibility that the effects of the therapist's adherence on the outcome might be different in different phases of the treatment. Interestingly, one of the few studies which showed a more significant effect of adherence on the outcome considered not the overall adherence, but adherence in the initial phase of the treatment (DeRubeis & Feeley, 1990). Higher levels of adherence early in the treatment might predict a better outcome because it may be associated with a stronger initial alliance and engagement of the patient. In the middle phase of the treatment, the appropriate level of adherence might be more actively negotiated between the therapist and the patient, depending upon the patient's needs. Finally, in the later sessions, higher adherence might suggest a lack of improvement and the persisting need of the therapeutic work to focus on the patient's symptoms rather than on the termination process and the consolidation of previous changes.

It is also possible that in different types of therapies, the relationship between therapist's adherence and outcome in the different phases of the treatment will be different. The study by Hardy and Stiles (1997) suggested that over-involved patients connect with the therapist and engage in the therapeutic work faster than under-involved patients. This study also shows that over-involved patients are more comfortable with affect and relationship oriented interventions while under-involved patients are more comfortable with cognitive interventions. These data suggest that in the initial phase of interpersonal psychotherapy, higher levels of adherence to the IPT manual might be more

easily found in over-involved patients with a stronger therapeutic alliance. These patients are also more comfortable with techniques that require higher levels of emotional connection and self disclosure, and are likely to be the patients who receive greater benefits from interpersonal psychotherapy. We can, therefore, assume that in interpersonal psychotherapy, higher levels of therapist's adherence to the IPT protocol early in the treatment will be associated with a stronger initial contribution of the patient to the alliance and will predict a better outcome. In CBT, the early alliance might be a less important predictor of the early adherence to the CBT manual, and early adherence might be a less important predictor of the outcome. In fact, under-involved patients, who seem more comfortable with a cognitive-behavioral approach, engage more slowly in the relationship with the therapist and also in the therapeutic work (Hardy et al., 1997). We can also assume that in different phases of the treatment, the use of therapeutic processes characteristic of different approaches might be more responsive to the patient's needs. For instance, it is possible that in the final phase of the treatment, the task-oriented approach of CBT needs a more significant integration of techniques focused on the therapeutic relationship and on the patient's feelings about termination. Previous studies also suggest a different emphasis on therapeutic techniques in cognitive behavioral and interpersonal psychotherapies. Overall, CBT therapists were significantly more active than IPT therapists. They adhered more to the CBT manual than IPT therapists adhered to the IPT manual, and they used IPT techniques more frequently than IPT therapists used CBT techniques (Hill et al., 1992).

Previous research evaluating the therapist's competence in the TDCRP also suggests that the therapist's adherence to the manual was a less significant factor in the

therapist's competence in IPT than in CBT. In IPT, the focus of the trainers seems to have been more on the therapist's ability to use the interventions appropriate in the specific context (Miller & Binder, 2002; Rousanville et al., 1988). In CBT, the assumption was that the "[t]herapist's skillfulness is based on a solid foundation of the therapeutic alliance and protocol adherence" (Shaw et al., 1999, p. 839). Researchers who rated the IPT therapists' competence in the pilot/training phase of the TDCRP (Rounsaville et al., 1988) found that the therapist's competence was not related to adherence and was a significant predictor of the outcome. These authors also found that the therapists who deviated from the manual with more difficult patients had better results, and that levels of therapist's adherence that were too high were associated with a way of delivering the treatment that was particularly rigid and mechanical, and that strained the therapeutic alliance (Rounsaville et al., 1988). On the other hand, a study on the competence of the CBT therapists in the research phase of the TDCRP shows that competence was strongly associated with adherence, but had a minimal effect on the outcome. The only factor of the therapist's competence which had some influence on the outcome was "setting the agenda, pacing and homework review and assignment" (Shaw et al., 1999, p. 839). This factor, however, was not related to the therapist's adherence. In the section that follows the research questions fundamental to this dissertation are presented.

Research Questions and Hypotheses

Even when using a manual, psychotherapy is a very complex phenomenon and cannot be explained by a single theory and a single mechanism of change. The research

hypotheses of this dissertation try to remain as close as possible to this complexity and to explore interesting patterns in the interaction between the multiple technical and relational factors that determine the therapeutic process. These research questions focus on the relationship between the therapist's adherence, the therapeutic alliance, and the reduction of the patient's depressive symptoms in the TDCRP. The measures of adherence will be based upon the Collaborative Study Psychotherapy Rating Scale (CSPRS; Hill et al., 1992) (see Appendix 4). This 96 items scale, divided in five subscales (CBT, IPT, CM, FC, and ED subscales), evaluated the extent to which the therapists, during the sessions, used therapeutic processes described in the CBT, IPT or CM manuals. The CSPRS also registered the levels of facilitative conditions and explicit directiveness expressed by the therapists in their interactions with the patients. The measures for the therapeutic alliance will utilize the Vanderbuilt Therapeutic Alliance Scale (VTAS, modified version, Krupnick et al., 1996) (see Appendix 4). This modified version of the VTAS describes behaviors of the therapist, of the patient, and of the patient and therapist together, which are supposed to facilitate or hinder the quality of the therapeutic relationship and of the collaborative engagement in the therapeutic work. The reduction of the patient's depressive symptoms will be evaluated according to the difference between the pre- and post-treatment scores of the Beck Depression Inventory (BDI; Beck et al., 1961).

The data provided by Hill et al. (1992) and by Krupnick et al. (1997) offer a unique possibility to answer more complex questions about the relationship between adherence, alliance and outcome in empirically supported treatments. In fact, Hill et al. evaluated the therapist's adherence to the treatment protocol, but also adherence to the

competing approaches used in the TDCRP and adherence to non-specific interventions describing the overall level of the therapist's directiveness (Explicit Directiveness scale) and facilitative conditions (Facilitative Conditions scale). On the other hand, Krupnick et al. (1996) distinguished within the therapeutic alliance two factors. The "therapist factor" describes the therapist's contribution to the alliance (e.g., therapist makes sure patient understands procedures of therapy; therapist shows respect, acceptance and compassion). The "patient factor" describes the patient's contribution and encompasses, also, the quality of the mutual engagement of the therapist and the patient in the therapeutic work (e.g., patient experiences therapist as understanding and supportive; patient and therapist work in joint effort). Krupnick et al. found that while the therapist factor of the alliance had no significant influence on the outcome, the patient factor early in the treatment was a significant predictor of a better outcome in all four treatment conditions in the TDCRP. One of the reasons why the therapist factor had a limited influence on the outcome was that the therapists' engagement with the patients was generally positive with limited variability among the therapists, particularly in the two psychotherapies. On the basis of the findings of Krupnick et al., we believe that more important than the interaction between the general alliance and adherence is the reciprocal influence between the patient factor of the alliance and the therapist's adherence. The patient factor is not only a stronger predictor of the outcome, but also a more reliable measure of the patient's engagement in the therapeutic work, which, it can be argued, has a stronger reciprocal influence with the technical dimensions of the treatment. The patient factor more clearly shows if the therapeutic tasks are imposed upon the patient, or are actively negotiated between the therapist and the patient. The patient factor is also a more relevant measure

of the quality of the therapeutic bond, which might be more important in treatments requiring more emotional engagement and self-disclosure, like interpersonal psychotherapy, than in treatment more cognitively oriented and task focused like cognitive behavioral psychotherapy.

The studies of Hill et al. and of Krupnick et al. both provide measurements of adherence and alliance in various sessions in the course of the treatment. Adherence was evaluated in the 1st, 4th, 7-8th, and 14-15th sessions, and alliance in the 3rd, 9th and 15th sessions (or in the sessions immediately preceding when those sessions were not available). These multiple measures allow us to evaluate the relationship between early and later measures of therapist's adherence and of the alliance, and to consider the possible influence of early adherence on later alliance and of early alliance on later adherence. In our main analyses we will consider as therapist's early adherence, the adherence scores in session 1, and as later measures of adherence the mean scores of sessions 4, 7-8, and 14-15. Early patient alliance will be the patient alliance scores in session 3, and later measures of patient alliance will be the mean scores of sessions 8-9, and 14-15. An additional exploratory analysis will consider as therapist's early adherence session 4 and as later adherence the mean scores of sessions 7-8 and 14-15. In this additional analysis the measures of early and later patient alliance will not be changed. The main goal of this additional analysis is to evaluate the possibility of a different interaction between adherence, alliance and depression change in different phases in the course of the therapy.

Our first research hypothesis is that later patient alliance will strongly and consistently predict depression change, while later therapist's adherence will weakly and

inconsistently predict depression change. This hypothesis builds on previous research that strongly suggests that the quality of the patient's engagement in the treatment was the most important predictor of therapeutic change (Ablon & Jones, 1999; Krupnick et al., 1996; Meyer et al., 2002; Zuroff & Blatt, 2006). Previous research also strongly suggests that the therapist's adherence to the manual was a much less consistent and significant predictor of patient's improvement (Elkin, 1988).

Our second research hypothesis is that early alliance will consistently predict later alliance, while early adherence will inconsistently predict later adherence. In the TDCRP, there are previous findings suggesting consistency between early and later patient alliance (Ablon & Jones, 1999), but no findings addressing the relationship between early and later adherence. We expect some consistency, but also some flexibility in the levels of the therapist's adherence in the course of the treatment. This is because we anticipate that the therapist's adherence changed depending on the context and on the particular needs of the patients emerging during the treatment (responsiveness theory; Stiles and Shapiro, 1994). We also know from previous studies that the therapist's adherence in the initial session was unusual compared to adherence in other sessions (Hill, 1992). We expect, therefore, to find less consistency between early and later adherence in the main analyses, where the measure of early adherence will use data taken from session 1. In the secondary exploratory analyses, however, where the measure of early adherence will be taken from session 4, we expect more consistency between early and later adherence.

Our third research hypothesis is that early alliance will predict later therapist's adherence depending on type of treatment, and early therapist's adherence will predict later alliance depending on type of treatment. Based on previous findings from the

TDCRP, we can expect that an initially stronger patient alliance, in each psychotherapy treatment, will predict higher levels of therapist's adherence to the target manual (IPT or CBT adherence) (Crits-Christoph et al., 1999). On the other hand, in IMI-CM and PLA-CM, we expect that when the patient alliance was stronger, the patients probably had experienced greater improvement and the psychiatrists exhibited less adherence to the CM scale because they had less of a need to address issues related to the patients' symptoms/illness or to the management of the medication. We can also expect that the relationship between FC and ED adherence and the patient alliance will be different in different treatments. For instance, in CBT, we can expect that when the patient alliance increased, in some cases the therapists were more directive in promoting therapeutic change, while in other cases, the therapists were less directive because the patients were already actively engaged in their therapeutic work. On the other hand, in interpersonal psychotherapy, we can expect that a strong patient alliance will be more likely associated with lower levels of therapist's directiveness because in IPT, therapists were instructed to support the patients' initiative as much as possible. Finally, it is possible that the therapist's facilitative conditions and psychotherapeutic techniques were more important in PLA-CM than in IMI-CM, on account of the absence of the medication.

Our fourth research hypothesis is that non-target psychotherapeutic techniques will positively influence patient alliance and depression change in all the treatment conditions in the TDCRP. Previous research suggests that the IPT and CBT treatments might have been more effective if the therapist responded to the specific characteristics and needs of each patient by integrating therapeutic processes different from those prescribed by the manual (Ablon & Jones, 2002; Barber & Muenz, 1996; Combs et al.,

2002; Hardy et al., 1997; Sotsky et al., 1991). With this research question we also want to test the possibility that IPT and CBT therapeutic techniques could explain, in part, the psychological factors that we know from previous research were very important also in the IMI-CM and PLA-CM groups (Krupnick et al., 1996; Zuroff & Blatt, 2006). Our hypothesis challenges the previous conclusions of Zuroff and Blatt that the positive effect of the patient's experience of the relational dispositions of the therapist was not influenced by the specific therapeutic techniques used in the treatment.

Our fifth hypothesis is that IPT adherence will be more positively and consistently related to the patient alliance than CBT and CM adherence. We know from previous findings that over-involved patients develop immediately a strong attachment to their therapist and have a preference for affective and relationship-oriented interventions (Hardy et al., 1997). These findings suggest that treatments of over-involved patients scored higher on the patient factor of the alliance, particularly early in the treatment, and had higher levels of therapeutic processes closer to IPT in interpersonal psychotherapy, and also in cognitive behavioral psychotherapy and in clinical management plus pharmacotherapy or placebo. The hypothesis of a stronger interaction between the patient factor of the alliance and adherence to the IPT scale of the CSPRS is also supported by a previous finding on data from the TDCRP which shows that in both CBT and IPT, patients who were more engaged in the therapeutic relationship produced more extensive and richer interpersonal narratives (Crits-Christoph et al., 1999).

Our sixth and final hypothesis is that the effects of the therapist's adherence on the patient alliance and on depression change will be different in different phases of treatment. This hypothesis has not been discussed in previous research and is exploratory.

Chapter 2

Method

Participants

Patients

The 250 patients selected for the study had depressive symptoms for two or more weeks and had a score of 14 or more on the evaluator measure of depression (HRSD; Hamilton, 1967). Participants were excluded if they suffered from other specific psychiatric disorders; were currently in another treatment; had a physical illness or other medical conditions that contraindicated the use of imipramine; or had clinical conditions requiring immediate treatment, like being actively suicidal. Some of the patients (n = 11) withdrew from the study before the first treatment session. The 239 patients who started treatment were mostly women (168; 70%), and Caucasian (212; 89%). They were between 21 and 60 years old (average 35 years); 40% completed college; 35% began but did not complete college, and 25% had high school education or less. Of the 239 patients who started treatment, only 162 completed at least 12 sessions of therapy. The early terminators were distributed as follows across treatment conditions: CBT (n = 19), IPT (n = 14), IMI-CM (n = 19), and PLA-CM (n = 25).

Therapists

The therapists were 18 psychiatrists and 10 clinical psychologists. They had an average of 11.4 years of clinical experience (between 2 and 27 years), were mostly male

(71%), and were between 30 and 60 years old (M = 41.5 years). All the therapists had high levels of enthusiasm and commitment to their therapeutic approaches. Most were experienced in the treatment that they delivered prior to being selected to participate in the TDCRP, but all received additional training. During the 13 to 18 months of training, the therapists received individual weekly supervision of at least four cases. The therapists who failed to achieve adequate levels of competence and adherence to their respective manuals were excluded from the study. The psychiatrists in the clinical management conditions also received intensive training and supervision, particularly to improve their relational skills. While the study was in progress, the therapists received only a monthly consultation in order to approximate the usual circumstances of private practice (Elkin et al. 1985, p. 309).

Design

The National Institute of Mental Health sponsored Treatment of Depression Collaborative Research Program (NIMH TDCRP) was designed to compare the efficacy of two psychological treatments for depression (cognitive behavioral therapy; CBT) and interpersonal therapy; IPT) and a pharmacological treatment for depression (orally administered imipramine plus minimal psychosocial clinical management; (IMI-CM). The study also included a placebo plus clinical management (PLA-CM) condition, which was expected to be less effective than the active psychotherapeutic and pharmacological treatments. The treatments were performed at three different research sites: at George Washington University, at the University of Pittsburgh, and at the University of Oklahoma. Thus, the overall design of the original TDCRP was a 4 treatments (CBT,

IPT, IMI-CM, PLA-CM) X 3 site between-subjects factorial design. The present study is a secondary analysis of the TDCRP dataset aimed at determining how adherence to prescribed and proscribed therapy techniques (Collaborative Study Psychotherapy Rating Scale, CSPRS, Hollon, 1984) and therapeutic alliance (Vanderbilt Therapeutic Alliance Scale, VTAS modified version, Krupnick et al. 1996) interacted and influenced outcomes. This dissertation examined these processes as they unfolded over time considering how early alliance influenced later adherence and outcome and how early adherence influenced later alliance and outcome.

Treatments

All treatments were planned to last for 16 weeks. CBT had two weekly meetings in the first four weeks of the treatment and a total of 20 sessions. IPT involved 16 individual weekly sessions with the possibility of some additional joint sessions (up to 4) with the patient and significant others, if deemed necessary (Elkin et al., 2006). The PLA-CM and IMI-CM conditions were limited to 16 weekly sessions. The average number of sessions for those who completed the treatment was 16.2; for the early terminators, 6.2; and for the entire patient sample, 13.0. Psychotherapy sessions were 50 minutes long. The initial clinical management session lasted 45-60 minutes but subsequent sessions were only 20-30 minutes.

The therapists were instructed to deliver CBT and IPT in ways that adhered to their respective manuals and maximized the differences between therapies. For example, in contrast to the CBT therapists, who were instructed to establish the agenda for the therapy session, IPT therapists were instructed to allow the patient to initiate and decide

the content of the session (Stuart & Robertson, 2003). In the initial phase of the treatment, the IPT therapist is supposed to invite the patient to describe his/her relationships in detail and to ascertain links between the patient's depression and one of the following interpersonal domains: an incomplete mourning process, a role conflict, a role transition, or a deficit in interpersonal competencies. After agreeing with the patient on an interpersonal focus for the therapeutic work, in the second phase of the treatment, the therapist uses the techniques described in the manual (e.g., pointing out patterns in interpersonal relationships, or considering options for interpersonal change) to help resolve this problem and alleviate the patient's depression. In the third and last phase of the treatment the therapist helps the patient to consolidate his/her improvements and to learn how to respond to future situations that could trigger depression.

The CBT manual (Beck et al., 1979) describes depression as maintained by distorted cognition and behaviors of avoidance and isolation. In contrast to the IPT therapists, CBT therapists were instructed to emphasize internal cognitions rather than interpersonal relationships (Stuart & Robertson, 2003). In the initial phase of the treatment, the therapist is expected to explain the CBT rationale and to suggest some immediate changes in the patient's daily life (e.g., to reduce his/her passivity and to increase pleasurable activities). In the second phase, the therapist uses Socratic questioning to help the patient recognize his/her errors in thinking and to find less distorted and maladaptive ways of understanding and responding to events that trigger his/her depression. In the third and last phase, the therapist helps the patient recognize and change his or her maladaptive and self-invalidating schemata.

The pharmacological treatment was delivered double blind (i.e., neither patients nor therapists were told whether the patient was in the drug [IMI-CM] or placebo [PLA-CM] condition). However, it should be noted that it is rarely possible to achieve a true double blind because of the many clues suggesting the nature of the "pill." There are no data on the effectiveness of the double blind in the NIMH TDCRP, but in other studies, when therapists and patients were asked to guess if they were using medication or a placebo more than 70% gave the right answer, instead of the 50% expected in a random distribution (Wampold et al., 2007). The imipramine (IMI-CM) treatment was based on the assumption that depression is maintained by a biochemical imbalance in the functionality of neurotransmitters and neuroreceptors, which is corrected by the medication. Imipramine is thought to inhibit the reuptake of serotonin and norepinephrine and to enhance brain dopamine. In addition to the drug, patients received a manualized clinical management (CM) treatment (Fawcett et al., 1987), which encouraged the psychiatrist to show empathy and concern, to enhance the patient's hope for improvement, and to give appropriate suggestions when necessary. In the initial phase of the treatment, the psychiatrist and the patient were expected to be collaboratively engaged in producing an accurate description of the patient's symptoms and general functioning, and a comprehensive psychiatric history of the patient and of his/her family. The psychiatrist was required to explain the rationale for pharmacotherapy and to educate the patient on the biochemical and psychological changes expected with the medication. Throughout the course of the treatment, the psychiatrist was told to encourage the patient's medication compliance and to discuss the clinical process and possible side effects of the medication. The placebo treatment (PLA-CM) in the study did not contain

specific ingredients intended to be effective, aside from the expectation of improvement or a possible conditional response induced by the simulacrum of the pill and the psychological improvement that would result from the relationship with a warm and supportive therapist.

Measures

Collaborative Study Psychotherapy Rating Scale

The Collaborative Study Psychotherapy Rating Scale (CSPRS; Hollon, 1984) (see Appendix 4) was used to evaluate the therapists' adherence to their respective manuals in the two psychotherapies and in the clinical management conditions. Hollon (1984) developed the CSPRS specifically for the treatments in the NIMH TDCRP by adapting a previous scale for the evaluation of the therapists' adherence in IPT and CBT for depression (Minnesota Therapy Rating Scale; DeRubeis, Hollon, et al. 1982), The CSPRS was applied to the NIMH data by Hill et al. (1992). The CSPRS has 96 items, divided in 3 main scales, describing the therapists' activities in the 3 treatment conditions. The CBT and IPT scales have 32 items each, and the clinical management scale has, instead, 20 items. Two other scales describe therapists' activities that are not specific to any given treatment: Facilitative Conditions (FC, 8 items) and Explicit Directiveness (ED, 4 items). The FC scale describes activities of the therapist considered important to facilitate the patients' engagement in the treatment (the therapist shows support, encouragement, and competence; has a communicative style that is clear, involved, shows warmth, empathy, and little formality). The ED scale describes therapists' behaviors that actively structure and direct the therapeutic work (level of

verbal activity, explicit guidance, subtle guidance) and behaviors that encourage the patients' initiative and communication (receptive silence).

Trained therapists reviewed videotaped sessions and sorted the therapist interventions in the 96 categories of CSPRS, evaluating on a 7 point Likert scale, the frequency of each intervention. "For the modality-specific scales, a rating of 1 indicated that the *behavior was not present*, whereas 2 or more represented *increasing amounts of the behavior*. For the non-modality-specific scales, a rating of 4 represented *average levels of behavior"* (Hill et al., 1992, p. 75). The evaluators rated four videotaped sessions (1, 4, 7 or 8, and 14 or 15) of 180 patients who had attended at least 14 sessions. The raters were eight advanced doctoral students in counseling and clinical psychology. Each audiotaped session was evaluated by two raters, who reviewed an equal number of tapes pertaining to the three treatment sites, the three treatment modalities, and the 28 participating therapists. The teams of raters were rotated and each rater was reviewed only one session per patient (Hill et al., 1992, p. 75). The interrater reliability for all the scales was acceptable (CBT .92; IPT .82; CM 92; FC .58; ED .73) but somewhat low for the FC scale (Hill et al., p. 75). The levels of internal consistency of the subscales contained in each scale were also acceptable for all except the ED scale (CBT .79; IPT .86; CM .69; FC .79; ED .50) (Hill et al., 1992, p. 75).

Vanderbilt Therapeutic Alliance Scale

The Vanderbilt Therapeutic Alliance Scale (VTAS) was modified by Krupnick et al. (1996) to evaluate the therapeutic alliance in the four treatment conditions in the NIMH TDCRP. In its original form, this measure is composed of 44 items divided in 3

subscales: Therapist, Patient, and Therapist-Patient interaction (Hartley, Strupp, 1983). Krupnick et al. (1996) eliminated from the scale 7 items more specifically related to psychodynamic therapy, and revised the manual to adapt it to the treatments in the TDCRP. The authors also conducted a factor analysis of this modified version of the VTAS (see Appendix 4) and found that 50% of the variance in this measure is explained by two factors: a patient factor strongly correlated with 20 items of the scale, and a therapist factor strongly correlated with 11 other items. The therapist factor included most of the items of the original therapist subscale (e.g., therapist makes sure patient understands procedures of therapy; therapist shows respect, acceptance, and compassion). The patient factor included all the items from the original patient subscale (e.g., patient experiences therapist as understanding and supportive) and a number of patient and therapist interaction items (e.g., patient and therapist work in joint effort). External observers, using the VTAS, evaluated the quality of the alliance in videotaped sessions of the 225 patients who had completed at least 2 sessions. They rated the third, the ninth, and the fifteenth session for each patient, or the sessions immediately preceding these if they were not available. Three sessions were evaluated for 182 patients, two sessions for 212 patients, and one session for 225 patients.

Beck Depression Inventory

The Beck Depression Inventory (BDI; Beck et al., 1961) is a set of 21 multiple choice self report questions. It is also probably the most commonly used measure of the level of depressive symptoms from the perspective of the patient. There is a large amount of evidence for the psychometric adequacy of this instrument (Beck et al. 1988). In the

TDCRP, the internal consistency of the BDI measured with the Cronbach's α was .93. The patients' BDI was assessed at the beginning of the treatment, every four weeks during the treatment, and after 6, 12, and 18 months during the follow up. A residualized change score was calculated capturing the amount of change in depression at termination not accounted for by the participant's pre-therapy depression level. This residual gain score was used as the index of outcome in the present study.

Data Reduction and Analysis

This study focused on how adherence and the patient alliance influenced each other in predicting outcome in the CBT, IPT, IMI-CM and PLA-CM cases. The measures of therapy process were reduced to early and later measures of CBT adherence, IPT adherence, CM adherence, FC adherence, ED adherence, and patient alliance. The adherence scores from the early session (session 1) and the average adherence scores for later sessions (session 4, session 7 or 8, and session 14 or 15) will be examined in the analysis. The patient alliance scores from the early session (sessions 2 or 3) and the average patient alliance scores from later sessions (session 8 or 9, and session 14 or 15) were also be examined in the analysis. The study was limited to four potential predictors out of statistical power considerations. Our eventual aim was to examine the role of these predictors in the individual treatments, which each had approximately 60 observations (cases). It is recommended that SEM models (like other regression-based models) have no more than one predictor for every 15 observations (4 X 15 = 60) (Stevens, 1996).

These early and later alliance and adherence scores were put into a path model in which: (a) early adherence was assumed to predict later adherence and later adherence

was assumed to predict depression change; (b) early patient alliance was assumed to predict later patient alliance and later patient alliance scores was assumed to predict depression change; (c) early adherence scores was assumed to predict later patient alliance; and (d) early patient alliance was assumed to predict later adherence. The overall data analytic strategy was to determine for each adherence type (CBT, IPT, CM, FC and ED), which paths were significant in the model. Of primary interest were the questions of whether early alliance predicted later adherence or early adherence predicted later alliance. These models were first tested across all four treatments (CBT, IPT, IMI-CM, PLA-CM) and then retested separately for each treatment type. Within each type of treatment, adherence to all five therapy processes (CBT, IPT, CM, FC and ED) was examined in separate models. For example, the models recognize that CBT therapists may partially adhere to IPT and/or CM processes and that IPT therapists may partially adhere to CBT and/or CM processes.

A subset of our path models were re-analyzed after redefining early adherence from adherence during the first session to adherence during the fourth session. Later adherence was redefined from the mean of the 4^{th}, $7\text{-}8^{th}$, and $14\text{-}15^{th}$ sessions to just the mean of the ($7\text{-}8^{th}$ and 14^{th}) sessions. Early and later patient alliance scores were not changed. We made this choice for two reasons. The first is that the therapist's adherence in the first session was more unusual compared to adherence in the later sessions. For example, in the first session, the CBT and IPT therapists used more CM techniques to assess the patient's psychiatric symptoms and general functioning and the CBT and CM therapists used more IPT techniques to assess family history and current relationships than in later sessions (Hill et al., 1992). The second reason was to provide an initial

exploratory test of our hypothesis that in different phases of the treatment, the relationships between adherence and the patient alliance in predicting depression changes might be different. Because our purposes are exploratory, we will only consider adherence to CBT and IPT technique in the cognitive-behavioral and interpersonal therapies.

These SEM models will be tested using longitudinal structural equation modeling (SEM) in Amos 6. Missing values will be imputed using maximum likelihood procedures. The analyses will focus on the significance of the path coefficients in each model rather than focusing on overall model fit. It is acknowledged that other variables not included in the present study would likely contribute importantly to some of the models tested. Our interest is in understanding the direction of influence of adherence and alliance on the change process in these brief psychotherapies.

Chapter 3

Results

Descriptive Statistics for Patient Alliance and Therapist Adherence

The means and standard deviations of early and later patient alliance (patient factor of the VTAS), and early and later adherence to the five therapeutic processes considered in the CSPRS (CBT, IPT, CM, FC, ED adherence) are recorded in Appendix 2. The data are taken from the study on the therapist's adherence in the NIMH TDCRP by Hill et al. (1992), and from the study on the therapeutic alliance in the NIMH TDCRP by Krupnick et al. (1996). For the measures of adherence, the frequency of each of the therapist's interventions was evaluated on a seven-point Likert scale. Hill et al. (1992) explained that "[f]or the modality-specific scales, a rating of 1 indicated that the *behavior was not present*, whereas 2 or more represented *increasing amounts of the behavior*. For the non-modality-specific scales, a rating of 4 represented *average levels of behavior*" (p. 75). The VTAS comprises items describing the therapist's contribution to the alliance, items describing the patient's contribution, and items describing the interaction of the patient and therapist. Each item was evaluated on a Likert scale from 0 (not at all) to 5 (great deal). In our analyses we focused on the patient factor, which included the patient contribution to the alliance and "... a number of patient and therapist interaction items, which described how the therapy dyad worked in a joint effort" (p. 534). The descriptive statistics related to our main analyses are recorded in Tables 1-5 in Appendix 2. In these tables, "early adherence" corresponds with the therapist adherence rating in session 1 and "late adherence" is the mean adherence in sessions 4,

7-8, 14-15. “Early patient alliance” is the patient alliance in session 3, while “late patient alliance” is the mean patient alliance in sessions 8-9 and 14-15. The descriptive statistics related to the additional exploratory analyses appear in Table 6. Here “early adherence” is considered the adherence in session 4, while “late adherence” is the mean adherence in sessions 7-8, 14-15. In Table 6, the definitions of early and late patient alliance are not changed.

In Table 1 are reported the measures of early and late adherence, and patient alliance mean across all the treatments. Particularly remarkable, in this table, is the difference between the means of early and later CM adherence. In the initial session, the therapists adhered to a much greater extent to the CM manual than they did later in the treatment. IPT mean adherence was also higher in the first session than in the later sessions, while CBT mean adherence was lower in the first session than in later sessions. Early and later FC and ED mean adherences are very similar, as are the early and late patient alliance means. The Table also reports the standard deviations for each measure which range from .37 (early CBT adherence) to .59 (early CM adherence).

In Table 2 the measures of early and late adherence, and patient alliance means in CBT are reported. We see that the mean CBT adherence in the initial session was significantly lower than it was later in the treatment, and that CBT adherence was significantly stronger than adherence to the non-target treatments. We also see that the mean IPT adherence increased later in the treatment, while the CM adherence decreased. The mean FC and ED adherences also increased over the course of the treatment. The mean patient alliance, on the other hand, had a slight decrease over the course of the treatment. The standard deviations were particularly high for early FC adherence (.65) and for later patient alliance (.61), suggesting more variability in these two measures across the treatments.

In Table 3 the measures of early and later mean adherence, and early and later patient alliance in IPT are reported. We see consistency between early and later IPT mean adherence, and note that IPT adherence was significantly stronger than adherence to the non-target treatments. We see more CM adherence in the initial session and significantly less CM adherence in later sessions. We see some increase in CBT adherence in later sessions, as compared to the initial session, no differences between early and later FC adherence, and a relevant decrease in ED adherence in later sessions as compared to the initial session. The mean ED adherence in IPT was significantly lower than in CBT, while the mean FC adherence was very similar in both treatments. Interestingly, while in CBT the patient alliance means decreased over the course of the treatment, in IPT the patient alliance means in later sessions were higher than in the initial session. In IPT, the patient alliance mean scores in later sessions were also higher than in CBT (later patient alliance mean of 3.89 in IPT compared to later patient alliance mean of 3.63 in CBT). This data suggest that the patient alliance was more positively affected by the therapeutic conditions provided in IPT. The higher standard deviations are in the early patient alliance (.66) and in the early FC adherence (.56).

Table 4 records the measures of early and late adherence, and patient alliance means in IMI-CM. We see that CM adherence in the initial session was higher than CM adherence in later sessions, and that CM adherence was significantly stronger than adherence to the non target treatments. We also see that while CBT and IPT therapists shared some techniques from their respective manuals, the therapists in IMI-CM used very few CBT and IPT techniques. The mean FC adherence was lower in IMI-CM, compared to IPT and CBT, particularly later in the treatment. The levels of ED adherence

were, instead, comparable to the levels of ED adherence in CBT, and higher than the levels of ED adherence in IPT. The patient alliance mean in later sessions had a marginal increase, compared to the initial sessions, probably because of the positive effect of the medication. The standard deviations were higher in the late patient alliance (.51) and in the early FC adherence (.51), suggesting more variability in these two measures across the treatments.

In Table 5 the measures of early and late adherence, and patient alliance means in PLA-CM are reported. We see that CM adherence in the initial session was higher than CM adherence in later sessions, and that the mean CM adherence in later sessions in PLA-CM was marginally lower than the mean CM adherence in later sessions in IMI-CM (later CM adherence in PLA-CM = 1.81, compared to later CM adherence in IMI-CM = 1.90). CM adherence was significantly stronger than adherence to the non-target treatments, and, just as in IMI-CM, in PLA-CM very few CBT and IPT techniques were used. Later FC adherence was also lower in PLA-CM (3.05) compared to IMI-CM (3.26). The levels of early and late ED adherence were similar in PLA-CM and in IMI-CM. On the other hand, in PLA-CM the mean late patient alliance was lower than the early patient alliance in PLA-CM and lower than the later patient alliance in PLA-CM. The measures of late FC adherence and later patient alliance in PLA-CM both suggest a strain in the therapeutic relationship probably related to the absence of the positive effects expected from the medication. In PLA-CM we also see a large standard deviation in later patient alliance (.60).

Finally, in Table 6 the measures of early (session 4) and late (sessions 7-8, 14-15) IPT and CBT adherence means in CBT (table 6a) and in IPT (table 6b) are recorded.

Comparing Table 6a and 6b, we see that the CBT therapists were more adherent to the CBT manual than the IPT therapists were to the IPT manual, both early and later in the treatment. We also see that CBT therapists, early and later in the treatment, used significantly more IPT techniques than IPT therapists used CBT techniques. Finally we see that in CBT, later CBT adherence was marginally lower than early CBT adherence, and later IPT adherence was marginally higher than early IPT adherence. These measures suggest that later in the treatment the CBT therapists used somewhat fewer CBT techniques and a somewhat greater number of IPT techniques than early in the treatment. On the other hand in IPT, there was more consistency between the early and later IPT adherence means, and between the early and later CBT adherence means. The standard deviations of early and late IPT adherence in CBT are higher than the standard deviations of early and late CBT adherence in IPT, suggesting more variability across the treatments in the use of IPT techniques in CBT, as compared to the use of CBT techniques in IPT.

Results of the Main Analysis

This section presents the results of the analysis of how adherence and the patient factor of the alliance influence each other in predicting residual changes in patient depression (as measured by the Beck Depression Inventory) in the cognitive behavioral therapy (CBT), interpersonal therapy (IPT), clinical management plus placebo (CM-PLA), and clinical management plus imipramine (CM-IMI) treatments in the National Institute of Mental Health Treatment of Depression Collaborative Research Program (NIMH TDCRP) study. We examine how the initial adherence (session 1) influences average adherence in later sessions (sessions 4, 7-8, 14-15), and how average adherence

in the later sessions influences residual change in patient depression. We also examine how the initial patient alliance (session 3) influences the average of later patient alliance (sessions 9, 14-15), and how the later patient alliance influences the residual change in patient depression. Most importantly, we examine whether and how early adherence influences the later patient alliance, and whether and how the early patient alliance influences the later adherence. We examine adherence to both the target treatment model (e.g., CBT adherence in CBT) and adherence to the non-target treatment models (e.g., IPT adherence in CBT) and adherence to common factors (e.g., adherence to facilitative conditions in CBT).

In the first part of this presentation, we examine how patient alliance and each of the five adherence subscales of the Collaborative Study Psychotherapy Rating Scale, CSPRS, (CB, IPT, CM, FC and ED scales) influence each other and predict the depression change in the full sample. In second part, we discuss how these variables influence each other in predicting the outcome in the four separate treatment conditions. In the third part we present an additional exploratory analysis of how CBT and IPT adherence subscales and the patient factor of the alliance influence each other and predict depression change in cognitive behavioral and interpersonal psychotherapy, using as early adherence, the evaluations of adherence at session 4, and as late adherence the average adherence in later sessions (sessions 7-8. 14-15).

All figures discussed in this chapter are in Appendix 1.

Findings Across All Four Treatments

Figure 1 presents the path-model of the interactions between the patient alliance, adherence to the IPT techniques, and change in depression in the full sample. We see that the early patient alliance had a significant positive influence on the later patient alliance ($r = .40$, $p < .001$), which, in turn, was a significant predictor of the reduced depression ($r = -.53$, $p < .001$). Early IPT adherence also had a significant positive influence on later IPT adherence ($r = .66$, $p < .001$), but later IPT adherence did not predict depression change. Early IPT adherence was significantly correlated with better early patient alliance ($r = .16$, $p = .017$) and predictive of better later patient alliance ($r = .13$, $p = .030$). This finding suggests that across all treatments, early IPT adherence indirectly reduced depression symptoms by increasing later patient alliance.

Figure 2 presents the path-model of the relationship between the patient alliance, CBT adherence, and change in depression in the full sample. There was no significant effect of CBT adherence on depression change, and there was also no significant influence of early CBT adherence on later patient alliance, or of the early patient alliance on later CBT adherence. We see, instead, a very high correlation between early and later CBT adherence ($r = .80$, $p < .001$), suggesting that, in the full sample, the level of adherence to the CB manual in the first session strongly predicted the mean adherence to the CBT manual in the later sessions.

We can see in figure 3 that CM adherence had no significant influence on depression change or on the patient alliance in the full sample. Early CM adherence, instead, had a negative influence on the later patient alliance that approached statistical significance ($p = .052$). The prediction of later CM adherence based on early CM

adherence is particularly strong ($r = .81$, $p < .001$), suggesting that, like adherence to the CBT scale, adherence to CM technique, too, was fairly consistent in the course of the treatments.

In figure 4, we see how adherence to the "non-specific" facilitative conditions influenced the patient alliance and predicted depression change. Looking at the prediction of later FC adherence based on early adherence, we see some consistency, but not as strong as in the treatment specific scales. The therapist's early FC adherence was significantly correlated with the early patient alliance ($r = .20$, $p = .003$), but only marginally predictive of later patient alliance ($p = .08$). Early patient alliance, on the other hand, significantly predicted later FC adherence ($r = .15$, $p = .020$), but later FC adherence had no significant influence on depression change. Early FC adherence might have had an indirect effect on depression change through its relationship with early patient alliance.

Looking, finally, at figure 5, which shows the role of the other "non-specific" factor, Explicit Directiveness (ED) adherence, we see that early ED adherence significantly predicted later ED adherence ($r = .55$, $p = < .001$), but that later ED adherence did not predict depression change. Early patient alliance significantly predicted later patient alliance, which, in turn, predicted reduced depression. Early ED adherence and early patient alliance were not significantly correlated. Higher initial ED adherence predicted reduced patient alliance in later sessions ($r = -.18$, $p = .004$). Early patient alliance did not significantly influence later ED adherence.

We conducted a multiple group analysis to determine whether the path coefficients for each of the above analyses were invariant across the four treatment

groups. The results revealed that there were significant differences in the path coefficients across treatment groups (Chi-square = 31.94, DF = 18, p = .022). Because it is likely that the specific relationships described above would vary for the different treatment conditions, we recomputed the path models separately for each treatment condition.

Cognitive Behavioral Psychotherapy

In figure 6 we see that, in the cognitive behavioral treatments, early CBT adherence had no significant effect on later patient alliance and later CBT adherence had no effect on depression symptoms. We see instead, as expected, that the early patient alliance predicted later patient alliance (r = .32, p = .016), and that later patient alliance predicted reduced depression (r =.-42, p < .001). There is also a positive effect, as a trend (r = .22, p = .10), of the early patient alliance on later CBT adherence.

In figure 7, looking at the relationship between IPT adherence, the patient alliance, and depression symptoms in CBT, we see that early IPT adherence significantly predicted later IPT adherence (r = .27, p = .047). IPT adherence, however, had no significant effect on depression change. Early patient alliance, on the other hand, significantly predicted later patient alliance (r = .32, p = .018) which, in turn, predicted reduced depression (r = .39, p = .002).

According to the results presented in figure 8, greater early CM adherence was significantly associated with poorer early alliance in CBT (r = -.32, p = 0.27). Though such early CM adherence did not significantly predict later patient alliance or later CM adherence, later CM adherence was a significant predictor of less improvement in depression (r = .35, p = .002). Also, as expected, early patient alliance marginally predicted later patient alliance (r = .27, p = .051, which significantly predicted reduced depression (r = -.45, p < .001).

Looking now at FC adherence in CBT (figure 9), we see that early FC adherence significantly predicted later FC adherence ($r = .33$, $p = .005$) but that later FC adherence did not predict depression change. Early patient alliance significantly predicted later patient alliance ($r = .31$, $p = .022$), which in turn significantly predicted reduced depression ($r = -.35$, $p = .006$). Better early patient alliance significantly predicted later increased FC adherence ($r = .36$, $p = .003$), but early FC adherence did not predict later patient alliance.

Finally, in CBT (figure 10), we see that early ED adherence was not a predictor of later ED adherence, and later ED adherence was not a predictor of depression change. Early patient alliance significantly predicted later patient alliance ($r = .32$, $p = .017$), which in turn significantly predicted reduced depression ($r = -.39$, $p = .002$). There was no significant relationship between early ED adherence and later patient alliance, between early patient alliance and later ED adherence, or between early ED adherence and early patient alliance.

Interpersonal Psychotherapy

In figure 11, we look now at the relationship between IPT adherence and patient alliance in predicting depression change in the group of patients treated with interpersonal psychotherapy. We see that, in this treatment, early IPT adherence did not predict later IPT adherence, but later IPT adherence significantly predicted depression change ($r = -.23$, $p = .029$). Early patient alliance significantly predicted later patient alliance ($r = .57$, $p < .001$), and later patient alliance significantly predicted reduced depression ($r = -.56$ $p < .001$). No significant relationship was found between early IPT

adherence and early patient alliance or later patient alliance. Early patient alliance significantly predicted increased later IPT adherence ($r = .36$, $p = .005$).

Interestingly, in figure 12, we can see that in IPT, later CBT adherence had a positive influence on depression change that approached significance ($r = -.20$, $p = .055$). The prediction of later CBT adherence based on early CBT adherence was statistically not significant. We also see, in figure 12, that early patient alliance significantly predicted later patient alliance ($r = .58$, $p < .001$), and later patient alliance significantly predicted reduced depression ($r = -.59$, $p < .001$). There was no significant relationship between early CBT adherence and early patient alliance or later patient alliance. Finally, the relationship between early patient alliance and later CBT adherence was, also, not statistically significant.

Looking now at CM adherence in IPT (figure 13), we see that there was no significant relationship between early CM adherence and later CM adherence, and between later CM adherence and depression change. Instead, as expected, early patient alliance significantly predicted later patient alliance ($r = .59$, $p < .001$), which, in turn, significantly predicted reduced depression ($r = -.61$, $p < .001$). There was no significant relationship between early CM adherence and early patient alliance, no significant relationship between early CM adherence and later patient alliance, and no significant relationship between early patient alliance and late CM adherence.

In figure 14, looking at the role of adherence to facilitative conditions in IPT, we see no relationship between early FC adherence and later FC adherence, and no relationship between later FC adherence and depression change. We see, instead, that there was a positive relationship between early patient alliance and later patient alliance

($r = .57$, $p < .001$), and that later patient alliance significantly predicted reduced depression ($r = -.63$, $p < .001$). There was no relationship between early FC adherence and later patient alliance, and no relationship between early patient alliance and later FC adherence. There was a significant positive correlation between early facilitative conditions and early patient alliance ($r = .30$, $p = .026$).

In figure 15, looking at the role of the therapist's directiveness in IPT, we see that the data shows significant consistency between early and later ED adherence ($r = .54$, $p < 0.001$) and early and later patient alliance ($r = .62$, $p < .001$). We see that, as usual, later patient alliance significantly predicted reduced depression ($r = -.61$, $p < .001$), while later ED adherence had no influence on depression change. We also see that the therapists' early ED adherence had a significant negative influence on later patient alliance ($r = -.35$, $p < 0.001$). Better early patient alliance, on the other hand, led to reduced later ED adherence ($r = -.30$, $p = 0.06$). No significant relationship was found between early ED adherence and early patient alliance.

Clinical Management Plus Imipramine

Looking now at the treatments with clinical management plus imipramine (IMI-CM), in figure 16, we see, as expected, that the initial patient alliance significantly predicted later patient alliance ($r = .44$, $p < .001$), and later alliance significantly predicted reduced depression ($r = -.49$, $p < .001$). Neither early CM adherence nor early patient alliance had a significant influence on later CM adherence, but increased later CM adherence significantly predicted more depression ($r = .30$, $p = .007$). The predictions of

early and later patient alliance based on early CM adherence were statistically not significant.

No significant relationships, either, were detected in clinical management plus imipramine, between early and later IPT adherence, between later IPT adherence and depression change, and between early IPT adherence and early and later patient alliance (figure 17). Similarly, no significant relationship was detected between early and later CBT adherence, between later CBT adherence and depression change, and between early CBT adherence and early or later patient alliance (figure 18). Finally, neither facilitative conditions (figure 19) nor explicit directiveness (figure 20) exerted significant influence on either patient alliance or depression change. Nor did early facilitative conditions predict later facilitative conditions (figure 19) or early ED adherence predict later ED adherence (figure 20).

Clinical Management Plus Placebo

Interestingly, in the clinical management plus placebo (PLA-CM) condition (figure 21), the initial patient alliance did not significantly predict later patient alliance, although later patient alliance was a significant predictor of change in depression ($r = -.53$, $p < .001$). Early CM adherence did not predict later CM adherence, and later CM adherence did not predict depression change. Early CM adherence had a significant negative relationship with the later patient alliance ($r = -.34$, $p = .008$), and a negative relationship that was not statistically significant with the early patient alliance.

Early IPT adherence (figure 22) significantly predicted later IPT adherence ($r = .27$, $p = .043$), but later IPT adherence did not effect changes in depression. Early IPT

adherence had, also, no influence on early or later patient alliance, and early patient alliance had no significant effect on later IPT adherence.

Early CBT adherence (figure 23) was not predictive of later CBT adherence, but later CBT adherence had a positive influence, as a trend, on reduced depression (r = -.19, p. = .095). No significant effect was detected between early CBT adherence and early or later patient alliance, and between early patient alliance and later CBT adherence.

Early facilitative conditions (figure 24) did not predict later facilitative conditions, and later facilitative conditions did not predict changes in depression. Early facilitative conditions, also, did not predict early or later patient alliance. Early patient alliance significantly predicted increased later FC adherence (r = .29, p = .24).

Finally, early ED adherence (figure 25) was a significant predictor of later ED adherence (r = .34, p = .010), but later ED adherence had no effect on depression changes. The effects of early ED adherence on early and later patient alliance were not statistically significant; and the effects of early patient alliance on later ED adherence were also not significant.

Additional Exploratory Analysis

Cognitive Behavior Therapy

In the cognitive behavior therapies, early CBT adherence (now defined as session 4) marginally predicted later CBT adherence (now defined as the mean of sessions 7-8 and 14-15) (r = .24, p = .08), but later CBT adherence had no effect on depression change (figure 26). There was no significant relationship between early CBT adherence and either early or later patient alliance.

When we look at IPT adherence in cognitive behavioral treatments (figure 27), we see that early IPT adherence significantly predicted later IPT adherence (r = .33, p - .010), but later IPT adherence did not predict depression change. Also not significant was the correlation between early patient alliance and early IPT adherence. Instead, early patient alliance was a significant predictor of increased later IPT adherence (r = .34, p = .009).

Interpersonal Therapy

In the interpersonal therapies, we see that early CBT adherence was not a significant predictor of later CBT adherence or of later patient alliance. Later CBT adherence was also a non significant predictor of later depression change. Early patient alliance was marginally associated with early CBT adherence (r = 24, p = .083) (figure 28).

If we look at IPT adherence (figure 29), we see a statistically significant relationship between early IPT adherence and later IPT adherence (r = 30, p = .047), but no influence of later IPT adherence on changes in depression. We also see a significant relationship between early patient alliance and early IPT adherence (r = .41, p = .004).

If we compare the influence of late IPT adherence on depression change in figure 29 and in figure 11, where session 4 was included in the measure of later adherence, we see that while in figure 11 later IPT adherence significantly predicted reduced depression, in figure 29 later IPT adherence was not related to depression changes. This data suggests that in interpersonal psychotherapy, the positive effect on depression changes of later IPT adherence in figure 11 was primarily due to IPT adherence in session 4.

Chapter 4

Discussion

This dissertation provides new information showing an important reciprocal influence between the patient contribution to the alliance and the technical interventions and relational style of the therapist. This dissertation also provides new support to the growing literature showing that the presence in a manualized treatment of non-target therapeutic techniques can improve the therapeutic alliance and the treatment outcome (Ablon & Jones 1998; Hayes et al., 1996; Jones & Pulos, 1993; Pole et al., 2008). We found significant effects of patient alliance on depression change and only limited effects of therapist's adherence on depression change. We found consistency between early and later patient alliance, but less consistency between early and later therapist's adherence. Also, as expected, we found a significant reciprocal influence between therapist's adherence and patient alliance, with effects that were contingent upon the characteristics of each treatment. Among the most important findings were the special kinship between IPT adherence and the patient alliance across all the treatments, the negative effect of early ED adherence on later patient alliance in IPT, and the negative effect of early CM adherence on the patient alliance in CBT and PLA-CM. In most of the treatments, the use of non-target therapeutic techniques was positively related with the patient alliance or had a positive influence on depression change. Our secondary analysis gave some preliminary support to the hypothesis that the effects of adherence on the patient alliance and on

depression change might be different in different phases of the treatment. The hypothesis that in the IMI-CM and PLA-CM group there was a significant influence of psychotherapeutic interventions on the patient alliance and on depression change was not supported by our findings. IPT and CBT adherence had no effects on the patient alliance in IMI-CM and PLA-CM, and CBT adherence had only a marginal effect on depression change in PLA-CM.

Synthesis of the main findings

This dissertation revealed several important new findings about the relationship between therapist's adherence, patient alliance, and depression change in the TDCRP. Two of our main hypotheses, that there was a significant influence of the patient alliance on depression change and a marginal influence of the therapist's adherence to target and non-target techniques on depression change, were both confirmed. These two findings are also supported by previous research on the alliance (Krupnick et al., 1997) and on adherence (Elkin, 1988) in the TDCRP, as well as the more general findings reported in the literature (Beutler et al., 2004; Miller & Binder, 2002). The only significant relationships between adherence to the target manual and depression change registered in our findings were the positive effects of later IPT adherence in interpersonal psychotherapy, and the negative effect of later CM adherence in IMI-CM and in CBT. The positive effect of IPT adherence on depression change is consistent with the finding of Ablon and Jones (2002) that in IPT, in the TDCRP, higher levels of adherence to the IPT prototype were significantly related to various measures of change including the BDI. The positive reciprocal influence between the patient alliance and IPT adherence,

and the positive effects of IPT adherence on depression change, are also consistent with the previous finding that the 'collaborative exploration of emotions' (a factor related to therapeutic processes characteristic of IPT) was also strongly related to the therapeutic alliance and to the patients' improvements (Combs et al., 2002). Finally, these results are consistent with the finding of Crits-Christoph et al. (1999) that the patients' interpersonal narratives were more frequent and complete when the therapeutic alliance was stronger. When the alliance increased, so, too, did the length and depth of the patients' narratives. The authors suggested a positive reciprocal influence between the patient's attachment to the therapist, the length and depth of the patients' narratives, the therapists' potential to give more accurate interpretations of the patients' interpersonal patterns, and the patients' desire to deepen the exploration of their interpersonal experience. Our finding further suggests that this virtuous cycle may have been supported by higher levels of IPT adherence and that such a cycle may have had a positive effect on the patient's depression.

Later CM adherence predicted less depression change in IMI-CM, but not in PLA-CM. It is possible, therefore, that the negative effect in IMI-CM was related to the use of the medication. The psychiatrists were probably not fully blind to the effects of the medication (Wampold et al., 2007) and in the IMI-CM group they might have been more persistent than in PLA-CM in addressing issues related to the medication later in the treatment. It is therefore possible that later in the treatment the psychiatrists were using more CM techniques with patients who were less compliant to the medication or who were experiencing less benefit from the drug.

The lack of relationship between CBT adherence and depression change in our analysis needs to be reconciled with a previous finding of a positive influence of therapeutic processes closer to the CBT prototype on the outcome, in both CBT and IPT treatments in the TDCRP (Ablon & Jones, 2002). The difference in our finding is probably due to the fact that Ablon and Jones's CBT prototype included both therapists' and patients' behaviors, while the measure of CBT adherence used in our study addresses only the therapist's behaviors. It seems that the patient's adherence and productive use of the cognitive behavioral techniques suggested by the therapist were more important than the therapist's adherence to the manual. This is also suggested by findings from another data-set showing that the patients that were more compliant facilitated the therapist's adherence to the CBT protocol and demonstrated significantly more improvement than the patients who were less actively engaged in the treatment and less supportive of the therapist's adherence (Brotman, 2004).

When we consider adherence to non-target techniques, we see that late CBT adherence had marginal positive effects on depression change in both the IPT and PLA-CM groups. These two findings provide partial support of our hypothesis that non-target techniques had an important influence on the patient's improvement.

A third important finding of this study is that early patient alliance was a significant, and generally strong, predictor of later patient alliance in all the treatments. The finding of a strong consistency between early and later patient alliance confirms our hypothesis and is supported by another previous study on IPT and CBT treatments in the NIMH TDCRP. Ablon and Jones (1999), using a different measure of the therapy process, found that the essential characteristics of the relationship between the therapist

and patient and of the therapeutic work were established very early and did not change significantly during the treatment.

Across all the treatments, the relationship between early and later CBT, IPT and CM adherence also had significant levels of consistency. These findings are congruent with previous research on adherence in the TDCRP, which found a clear distinction between the different treatment conditions, with the therapists using consistently more techniques from their respective manuals (Hill et al., 1992). In the initial and in the later sessions CBT therapists were consistently more adherent to the CBT scale, IPT therapists were consistently more adherent to the IPT scale, and the psychiatrists in the IMI-CM and PLA-CM groups were consistently more adherent to the CM scale. Our results therefore suggest that the distinctive characteristics of each treatment were already established in the initial session.

As expected, when we considered each treatment condition separately, early adherence was, in general, much less consistent in predicting later adherence. The relative inconsistency between early and later adherence for the treatment specific scales can be explained, in part, by the fact that the therapist's adherence in the initial session was unusual compared to the other sessions (Hill et al., 1992). In fact, when we consider the prediction of later adherence based on adherence in session 4, we see that early IPT adherence was a significant predictor of later IPT adherence in interpersonal psychotherapy, and that early CBT adherence marginally predicted later CBT adherence in cognitive behavioral psychotherapy. Overall, the data on the relationship between early and later adherence suggest that there was some consistency, but also some flexibility, in

the therapeutic style (FC and ED adherence) and techniques (IPT, CBT, CM adherence) used by the therapists in the course of the treatment.

Our fourth, and probably most important, finding is the strong reciprocal influence between therapist's adherence and patient alliance, both across the four treatments and in each of the individual treatments. Looking at this relationship across the four treatments, we found, as expected, that early FC adherence was significantly related to the early patient alliance and marginally related to the later alliance, but also that early IPT adherence was significantly related to early patient alliance and was a significant predictor of later patient alliance. This finding supports our hypothesis of a special kinship between the quality of the mutual engagement between the therapist and the patient and therapeutic techniques focused on understanding and changing the patient's participation in interpersonal relationships. Krupnick et al. (1994), in a previous investigation on the effect of the alliance in the seven most improved and the seven least improved cases in the four treatment conditions of the TDCRP, found a positive association between the alliance and the outcome for all the treatments, but an association that was statistically significant only in IPT. Interpreting these findings, the authors formulated the hypothesis that the quality of the therapeutic alliance was more important in IPT than in the other treatments, because IPT therapy was specifically focused on understanding and changing the patient's participation in interpersonal relationships (p. 34). This hypothesis of an interaction between specific techniques and the therapeutic alliance was abandoned in a later study, because in a larger sample comprising all the patients who had attended at least three treatment sessions, the effects of the therapeutic alliance on the outcome had similar, and equally significant, results for all the treatment

conditions (Krupnick et al., 1996). Our results seem, instead, to support the initial hypothesis of Krupnick et al. (1994). The findings of a positive relationship between facilitative conditions and patient alliance, and between IPT therapeutic processes and patient alliance, are also supported by previous research. Ackerman et al. (2003) have shown the positive effects on the therapeutic alliance of the facilitative therapist qualities such as authenticity, flexibility, interest, alertness, calmness, confidence, respect, empathy, and clarity in communication, and also of therapeutic techniques like facilitating the expression of affect, the exploration of interpersonal themes and accurate interpretations.

Our results contradict the tendency in the literature to consider alliance and techniques as two separate dimensions of the therapeutic process (Brotman, 2004, Wampold, 2001, Zuroff & Blatt, 2006). They also contradict the tendency in the literature to make a distinction between aspects of the therapist's interventions aimed at strengthening the alliance (e.g., facilitative conditions) and therapeutic techniques aimed at promoting change according to a specific theoretical framework (Crits-Christoph et al., 2006). Hatcher and Barends (2006) wrote that an important component of the therapeutic bond, which is a central dimension of the alliance, is the ability of the therapist to recognize and share with the patient potentialities for change previously not seen, which they call the 'potentiating bond'. We believe that an integral part of the corrective experience provided for the patient by a positive therapeutic relationship is the development of this 'potentiating bond'. This bond involves the discovery and the realization of new potentialities through collaborative work which require both a warm

and facilitating therapeutic environment as well as the use of 'techniques' that convey a new understanding and suggest new solutions to the patient's problems.

A possible explanation for the finding that there is a significant relationship between the patient alliance and IPT adherence is that the therapeutic techniques used in Interpersonal Psychotherapy are more deeply integrated with aspects of the treatment that are traditionally defined as 'common factors' than the techniques used in CBT or in IMI-CM or PLA-CM. Previous data from the TDCRP show, in fact, that IPT patients reported 'common factors' as the most helpful aspect of their treatment more frequently than CBT and CM patients. The patients in the other treatment groups also cited the positive influence of the medication or of specific therapeutic techniques (Gershefski, et al., 1996). Other data from the TDCRP show that the factor 'collaborative exploration of emotions', in which were included therapeutic processes characteristic of IPT, was positively related to change in both IPT and CBT (Combs et al., 2002). The authors suggest that this positive result could be, in part, explained by the significant overlap between therapeutic processes included in the factor 'collaborative exploration of emotions' and the therapeutic processes characteristic of a good therapeutic alliance.

Early patient alliance came close to being a significant predictor of later CBT adherence also in cognitive behavioral psychotherapy. The positive effect of the patient alliance on CBT adherence is consistent with previous findings in the TDCRP, showing that in cognitive behavioral psychotherapy, when the alliance increased, the patients significantly reduced their production of clinical material more characteristic of IPT (interpersonal narratives) and participated in the treatment in ways that were more congruent with the theoretical framework of the CBT therapists (Crits-Christoph et al.,

1999). This finding also suggests that an important condition of the therapeutic work is the agreement on task and goals of the treatment between the patient and the therapist. Our result is also consistent with previous research on CBT in other data sets showing that in treatments with higher levels of alliance, there was also a greater level of adherence (Addis, Wade, & Hatgis, 1999; Carroll et al., 1997; Wilson, 1998; Brotman, 2004; Loeb et al., 2005).

Early CBT adherence did not predict later patient alliance, and, instead, early patient alliance predicted later CBT adherence. The kind of interaction between adherence and alliance that is suggested by this finding is congruent with the traditional view of the therapeutic alliance as a catalyst for the effective use of the therapist's techniques. This is a view endorsed by some cognitive behavioral psychotherapists (Beck et. al., 1979). The conception of the alliance as an epiphenomenon of the positive effects of the techniques is, however, contradicted by the fact that the patient alliance, and not more adherence to CBT techniques, significantly predicted depression change.

Both the finding of a positive effect of the patient alliance on FC adherence in CBT and the finding of a negative relationship between the patient alliance and ED adherence in IPT, show how the therapist's therapeutic style was strongly influenced by the patient's contribution to the therapeutic relationship. The negative association between ED adherence and the patient alliance in IPT also shows that the effects of the patient's and the therapist's relational style on the patient alliance is contingent upon the specific characteristics of the treatment. Interpersonal therapists were, on average, much less directive than cognitive behavioral and clinical management therapists (Hill et al., 1992). However, in CBT, the patient alliance was not affected by the therapist's

directiveness. Contrary to CBT, in IPT, the levels of directiveness in the initial session were also strongly consistent with the levels of directiveness in later sessions. This important finding suggests that therapists who were initially more directive induced a negative reaction in their patients. The reason for this may be that the therapist's directiveness was incompatible with the IPT framework and the patient might have felt confused by the therapist's directiveness and by the opposite message given by the IPT therapists, that patients should take the lead of their own therapy.

The negative correlation between early CM adherence and early patient alliance in CBT is another example of the finding that the relationship between adherence and alliance was contingent upon the particular characteristics of each treatment. In CBT, a greater degree of CM adherence in the first session was significantly associated with a poorer later patient alliance and a greater degree of CM adherence in later sessions predicted less improvement of depression. In IPT, there was no significant relationship between early CM adherence and early patient alliance, and no significant effect of later CM adherence on depression change. As Hill et al. (1992) have noted, in both psychotherapies, the use of CM techniques was more frequent in the initial session and consisted of interventions for the assessment of the patient's psychiatric symptoms, general functioning, and history of illness in the family. In later sessions, the use of CM techniques was much more sporadic. There was also no difference in the frequency of CM techniques used in the first session in IPT and CBT (Hill et al., 1992). However, our findings show that the relationship between early CM adherence and initial patient alliance in the two psychotherapies was significantly different. The reason for this difference is not clear and warrants further study.

The positive relationship between early FC adherence and early patient alliance in IPT is also a finding that we think can be explained by the particular characteristics of interpersonal psychotherapy. A disposition of the therapist that was more facilitating at the start of the therapy was an important condition for the development of a positive alliance in IPT because the patient needed to feel connected with the therapist in order to explore openly, and not defensively, interpersonal relationships with others.

Interesting differences were also found in the relationship between adherence and alliance in IMI-CM versus the PLA-CM treatments. In PLA-CM, CM adherence in the initial session significantly predicted lower patient alliance in later sessions. We can assume that the more the psychiatrists praised the benefits of the medication in the initial session, the more the patients were disappointed when these promised benefits did not appear. Another possible explanation of our results emerges from previous findings showing that the psychiatrists in the PLA-CM and IMI-CM groups who were most effective were less exclusively focused on the medication as a viable treatment for depression (Blatt et al., 1996). Thus, psychiatrists who were more adherent to the CM manual in the initial session may not have been as psychologically oriented as those who were less adherent and therefore may have been less effective at fostering a positive alliance. The PLA-CM treatment condition was also the only one in which early patient alliance was not a significant predictor of later patient alliance. It is possible that the potential for consistency in the patient alliance between the initial and the later session in the placebo condition was undermined by disappointment experienced by the patients when they failed to perceive the improvements that they expected from the medication. The disappointment was probably stronger in the more severely depressed patients, for

whom the treatment with placebo was mostly ineffective (Elkin, 1994). With less severely depressed patients, the 'psychological factors' embedded in the placebo and in other aspects of the therapeutic process were sufficient to allow levels of improvement similar to those found in the other treatments.

Finally, the positive effect of the early patient alliance on later FC adherence and the marginal positive effect of later CBT adherence on depression change in PLA-CM suggest that facilitative conditions and cognitive behavioral interventions might have been more important resources in the placebo group because of the absence of the medication. Previous research shows that psychological factors played an important role in IMI-CM and PLA-CM treatments (Krupnick et al., 1996). Our findings show that psychotherapeutic interventions had no influence on the patient alliance, and very limited influence on depression change. However, interventions addressing the patients' concerns about their symptoms and about the medication could also have promoted psychological changes in the patients' relationship with themselves and with others. For instance, the patients may have learned not to rely too much on the medication for their improvement and through that experience, they may also have learned not to rely solely on help from other people in order to feel better. The results seem also to suggest that FC adherence was the consequence of the initial patient alliance rather than the cause of that alliance. It is possible, therefore, that factors related to the patients, like the ability to connect with the therapist or the tendency to be positively influenced by the symbolic effect of the placebo, were also important predictors of the quality of the alliance and of the therapist's facilitative conditions.

The results of the additional exploratory analysis give an initial support to our hypothesis that higher levels of adherence might have different effects on the patient alliance and on depression change in different phases of the treatment. In cognitive behavioral therapies, the early patient alliance was a significant predictor of the new measure of later IPT adherence (sessions 7-8 and 14-15), while in the initial measure of later IPT adherence, in which session 4 was also included, this had not been the case. This finding shows that in cognitive behavioral therapies, the initial patient alliance predicted more IPT adherence in sessions 7-8 and 14-15, but not in session 4. We know from a previous finding that when the patients, prior to the beginning of the treatment, believed that their therapy should be more focused on their relationships, the CBT therapists initially allowed more space for the interpersonal narratives of the patients (Crits-Christoph et al., 1999). However, the therapists also tried as early as possible to educate the patients about their role in the CBT model and to reduce the patients' digressions about their relationships. Greater IPT adherence later in the treatment, instead, might have been more actively and consensually chosen by the therapist and by the patient. We know from previous findings that in CBT, therapists used the interpersonal context to explain cognitive patterns more often with patients with lower levels of interpersonal distress than with patients who had more interpersonal distress (Connolly-Gibbons et al., 2003). It is possible that patients with less interpersonal distress were also more likely to have a better alliance with their therapists. As a consequence, therapists may have used IPT techniques more frequently later in the treatment when working with these patients because of the more open and intimate therapeutic relationship that had developed.

Our finding that in CBT early patient alliance significantly predicted IPT adherence in sessions 7-8 and 14-15, suggests a possible indirect effect of IPT therapeutic processes on depression change through their influence on the patient alliance. This finding is congruent with a previous study on CBT and psychodynamic interpersonal (PI) treatments for depression in which the 'over-involved' patients, who showed a preference for affective and relationship-oriented interventions, also developed a more immediate and intense attachment to their therapists (Hardy, Stiles, et al., 1997). 'Under-involved' patients had, instead, a preference for techniques that focused on cognition and allowed for a greater degree of distance from the therapist. These patients were also more cautious in engaging in the therapeutic relationship. In this study, the therapists complied with their respective manuals, but also adapted their interventions to the needs of each patient. We lack sufficient evidence in our study to assume that the higher initial IPT adherence was drawn by the patient's needs more than by the therapist's decisions. However, Connolly-Gibbons et al. (2002) found that in IPT and CBT treatments in the TDCRP, the therapists' interventions were influenced by the differences among the patients more than by the differences among the therapists. The differences among the patients had effects from moderate (9%) to large (25%), depending on the type of intervention of the therapist. This finding of Connolly-Gibbons et al. is in line with the 'responsiveness theory' of Stiles and Shapiro (1994), which suggests that the way in which the therapists apply their treatment is strongly influenced by the particular needs and demands of the patients.

The effect of later IPT adherence on depression change in interpersonal psychotherapy was also significantly different in the secondary analysis. When session 4

was included in the measure of later IPT adherence in our first analysis, there was a significant relationship between later IPT adherence and depression change. When session 4 was excluded, however, later IPT adherence did not predict change in depression. These results suggest that in interpersonal psychotherapy, the positive effect on depression change of IPT adherence was primarily due to IPT adherence in session 4. In the same session, IPT adherence had also a strong positive correlation with the early patient alliance. Thus, higher levels of IPT adherence in interpersonal therapy seemed more important in the initial phase of the treatment and much less important later in the treatment. These findings also suggest that higher levels of IPT adherence in session 4 might have contributed, in part, to the positive influence of the patient alliance on depression change in interpersonal treatments. Interestingly, early patient alliance was also marginally associated with CBT adherence in session 4. This result suggests that the effective therapeutic work, in the context of a positive alliance, that took place in session 4 consisted not only of higher IPT adherence, but also, marginally, of higher CBT adherence. These results support the view that adherence might play a different role in the patient alliance and in the outcome in different phases of the treatment. They also suggest a strong reciprocal interplay between target and non-target techniques, and between the technical and the relational dimensions of the treatment.

Limitations and Strengths of this Study and Suggestions for Future Research

There are various limitations of this study. The most important is the limited sample size, which prevented a more detailed exploration of the reciprocal influence between adherence and patient alliance across the treatments. Another limitation is the

fact that in our study more than one patient was assigned to the same therapist and therefore the findings relative to each patient were not fully independent. It is, in fact, reasonable to assume that the patients who were clustered with the same therapist had relationships between adherence, alliance, and depression change that were influenced by that particular therapist. The clustering of patients with a single therapist also meant that the actual number of independent observations in our study was lower than the number of patients because the data related to each of the patients were not fully independent. Unfortunately, because of the limited sample size, we could not control for the effect of the therapist and it is possible that our findings would have been different, had we been able to evaluate the effects of the therapists both on adherence and on the patient alliance. On account of the limitation of the sample size, we also could not control for the effect of the different sites where the study was conducted. We therefore lack precious information on the consistency of the findings across the different sites which, in turn, increases the possibility that at least some of the findings might be due to chance. Finally, there was low inter-rater reliability for the FC scale (.58) and low internal consistency for the ED scale (.50). Both limitations suggest that caution be used when interpreting the validity of the findings related to these two adherence scales. In particular, it is possible that some effects involving FC adherence might have been missed or underestimated.

The most significant strength of this study is, in our opinion, the attempt to provide a more comprehensive view of the reciprocal influence between multiple therapeutic processes, the patient alliance, and changes in depression. This perspective has provided new findings that seem particularly important for clinical practice and for future research. One of the questions that should be further addressed in future research is

the extent to which the therapist's competence is related to the use of a higher level of therapeutic techniques from other, non-target treatments. Another important question is how the patient influences the flexibility expressed by the therapist. Previous findings on the TDCRP already suggest that most of the variance in the therapist's interventions in CBT and IPT was explained by the patients' characteristics (Connolly Gibbons et al., 2002). It can be indirectly assumed from our findings that the patients did not passively receive the therapists' interventions, but actively negotiated and co-determined the levels of explicit directiveness and facilitative conditions expressed by the therapists, and the levels of adherence to the treatment specific scales. Our data, however, allowed only the exploration of the effects of the patient alliance on the therapist's adherence and of the therapist's adherence on the patient alliance. They did not show directly how the patient's contributions and characteristics influenced the therapist's adherence. Another important direction for future research is to explore the general validity of our preliminary finding that the effects of adherence on the patient alliance and on the outcome changed in different phases of the treatment, and that the reciprocal influence between the patient alliance and adherence also changed. This line of research could potentially answer important clinical questions about when it is the appropriate moment in a treatment to follow the protocol more intensively and when it is preferable to use more interventions ascribed to other protocols.

Various other findings from our study that have important implications for training and for clinical practice need to be further explored. Among the most significant are the finding of a special kinship between interpersonal therapeutic processes and the patient alliance, not only in IPT, but also in CBT. Another important finding is the

positive effects of cognitive behavioral therapeutic processes in IPT. These findings provide a much needed empirical basis for teaching clinicians to allow themselves more flexibility. These findings suggest that the therapist who learns how to use a manual needs also to know, recognize, master, and, when necessary, promote therapeutic processes that are different from those prescribed by the manual. Future research should explore whether the positive effects of non-target techniques on the patient alliance and on depression change are similar in all patients, or are particularly important for patients who are not responding to the target treatment.

Two other findings from our study with important implications for training and clinical practice are the strong negative influence on the patient alliance of high levels of directiveness in the initial session in IPT, and the strong negative influence on the patient alliance of high levels of CM adherence in CBT. If these results can be generalized in relation to these therapies when practiced in the field, they could have implication for teaching therapists to avoid certain pitfalls. In particular, in interpersonal psychotherapy, therapists should avoid being too directive, particularly when tempted by patients who are less engaged in the therapeutic relationship and in the therapeutic work. The clinical implication of the finding that in CBT, early CM adherence was negatively related to later patient alliance is less clear. This is because the reasons for this negative correlation are difficult to determine. A preliminary suggestion based on an examination of the specific items from the CM scale that were correlated with patient alliance seems to be that it may be important that the CBT therapists evaluate carefully a potential negative response of their patients when assessing their psychiatric symptoms. A tentative explanation of this possible negative response, which is not addressed in previous

research, is that in CBT the patients might feel that their illness is not sufficiently acknowledged by the therapist and they might perceive as a criticism the therapists' emphasis on distorted cognition as the main cause of their depression.

Conclusion

In the literature, the therapeutic alliance has been considered primarily the expression of 'common factors', like the relational dispositions and facilitative interventions of the therapist. It has also been suggested that "... within different treatment approaches, the therapeutic relationship may be established in similar ways" (Krupnick et al., 1996, p. 536). The therapy relationship is considered to provide for the patient a corrective experience and to have a positive effect on the patient's change that is independent of the specific techniques used by the therapist (Zuroff & Blatt, 2006). These two common assumptions are both contradicted by our findings. Our analysis of the relationship between adherence and the patient alliance in the four treatment conditions in the TDCRP shows, in fact, that there were significant influences of the patient alliance and the therapeutic techniques on each other. Our findings also suggest that the positive influence of the patient alliance on depression change, at least in one of the treatments (IPT), was clearly mediated by the positive effect of the early alliance on later IPT adherence. Our findings show in many other ways how the patient alliance is the result of a complex interaction between the therapist's technical (CBT, IPT, CM adherence) and relational responses (FC and ED adherence), and the theoretical framework and practical conditions of the treatment. These results suggest that both the target and non-target techniques used in a treatment hindered or facilitated the patient alliance, and at least in

part, contributed to the positive influence of the patient alliance on depression change. While the therapist's facilitative conditions are usually considered the necessary and sufficient conditions for the development of the therapeutic alliance, it would appear that in these treatments, the special kinship found between IPT adherence and the patient alliance was just as significant. Our results thus contradict the tendency in the literature to consider the alliance and techniques as two separate therapeutic processes (Brotman, 2004; Zuroff & Blatt, 2006). They also contradict the tendency to measure separately the effects of these variables on the outcome in order to determine whether relational factors or theory-driven techniques are more important in a psychotherapy treatment (Wampold, 2001). This study supports, instead, the view that the technical and the relational dimensions of a treatment are interconnected. The development of a therapeutic alliance should not be considered a separate task that can be achieved through facilitative condition, or other 'techniques' aimed at fostering a positive relationship with the patient. It should be seen as an integral part of the ability to engage with the patient in effective work, within the theoretical, technical, and relational framework of a particular therapeutic model (Hatcher & Barends, 2006).

Paradoxically, we found that in IPT, where adherence was less emphasized (Rounsaville et al., 1988) and the therapists were usually less adherent to their manual than in CBT (Hill, et al., 1992), IPT adherence was more significantly related to depression change. On the other hand, CBT adherence predicted lower depression in IPT and PLA-CM, but not in CBT. These findings imply that particularly in CBT and IPT, the therapists didn't apply a uniform strategy when working with their patients, but rather, used their manuals flexibly and integrated techniques from other, non-target treatments,

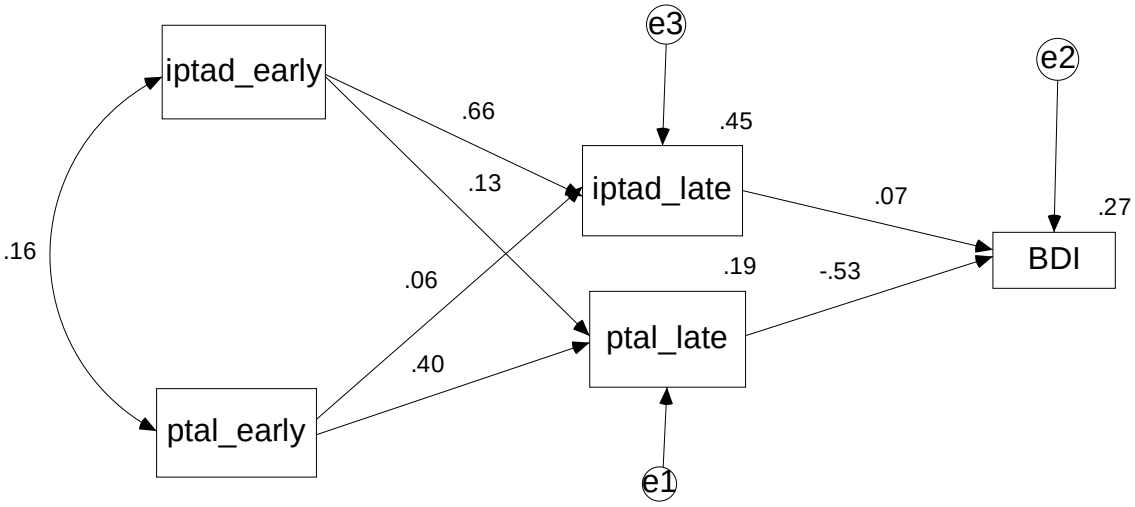
probably also to respond to the specific preference and needs of their patients (Stiles & Shapiro, 1994). Our findings also suggest that the use of IPT techniques in CBT treatments was associated with a stronger patient alliance, and that the use of CBT techniques in non-target treatments (IPT, PLA-CM) was associated with improvements in depression. It is possible that in previous research reporting the positive effect of non-target techniques as well as in our study, a better outcome was as much the result of the specific contribution of these techniques, as the consequence of the higher flexibility shown by the therapists who were more willing to allow, and eventually to introduce, therapeutic processes that were outside the prescribed framework for the treatment.

Appendices

Appendix 1:

Figures Recording Therapist Adherence and Patient Alliance Predicting Residual Change in Patient Depression

Figure 1



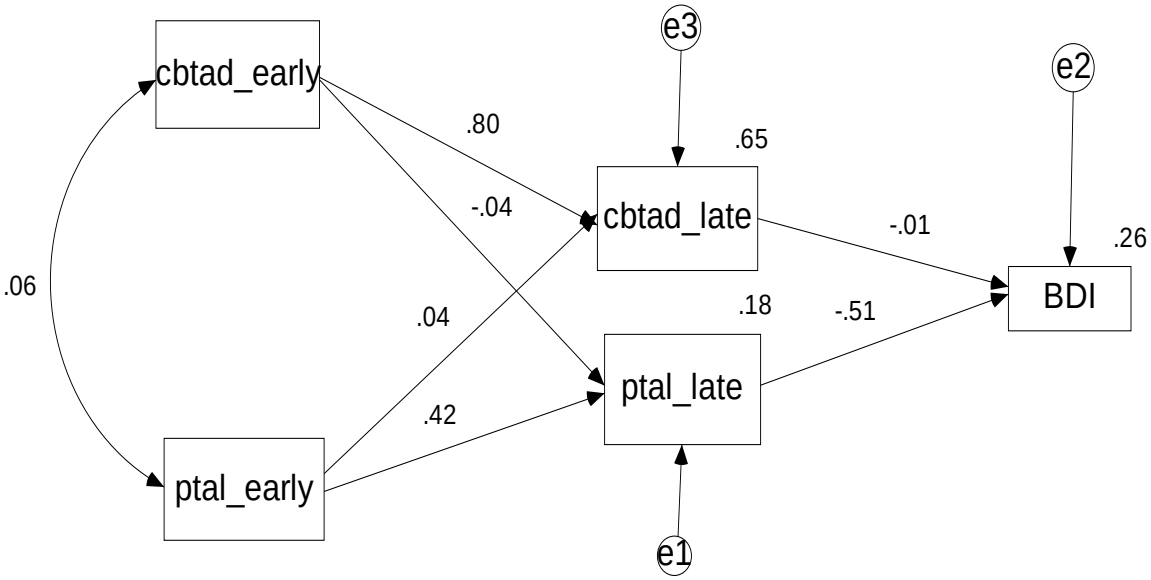
IPT Adherence and Patient Alliance Predicting Residual Change in Patient Depression (Full Sample)

Table 1. IPT Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients. (In this table the significance of the correlation between early alliance and early adherence is not reported).

			Std. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.395	.433	.068	6.354	***
iptad_late	<---	iptad_early	.661	.688	.053	12.915	***
iptad_late	<---	ptal_early	.059	.047	.041	1.161	.246
ptal_late	<---	iptad_early	.134	.192	.088	2.175	.030
BDI	<---	ptal_late	-.529	-9.685	1.063	-9.112	***
BDI	<---	iptad_late	.069	1.743	1.462	1.192	.233

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
iptad early: IPT adherence early
iptad late: IPT adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late IPT adherence

Figure 2



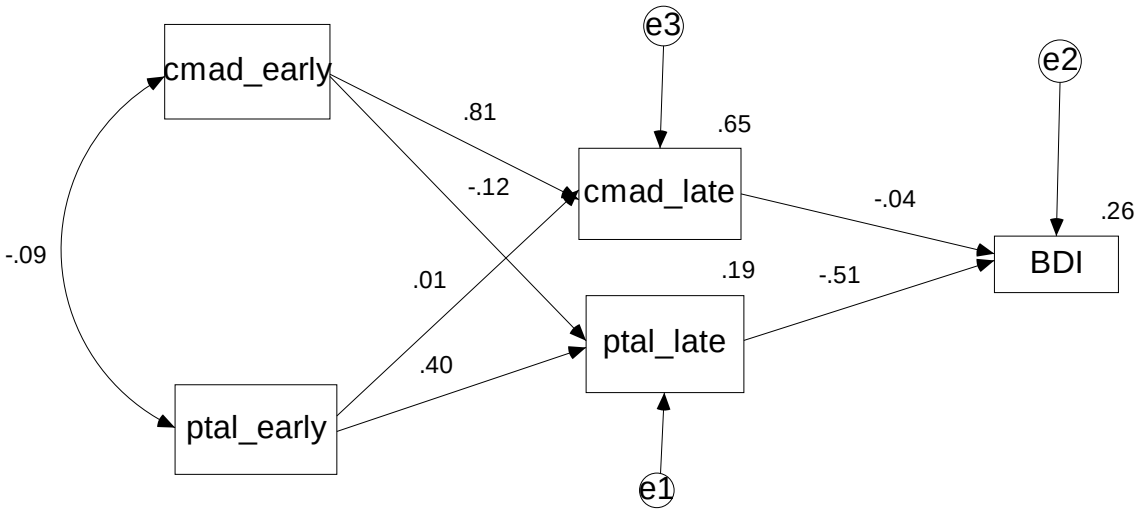
CBT Adherence and Patient Alliance Predicting Residual Change in Patient Depression (Full Sample)

Table 2. CBT Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients

		Std. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<--- ptal_early	.420	.461	.068	6.771	***
cbtad_late	<--- cbtad_early	.802	1.220	.062	19.743	***
cbtad_late	<--- ptal_early	.037	.040	.043	.918	.359
ptal_late	<--- cbtad_early	-.042	-.066	.097	-.677	.499
BDI	<--- ptal_late	-.508	-9.286	1.058	-8.780	***
BDI	<--- cbtad_late	-.006	-.122	1.087	-.113	.910

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
cbtad early: CBT adherence early
cbtad late: CBT adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late CBT adherence

Figure 3



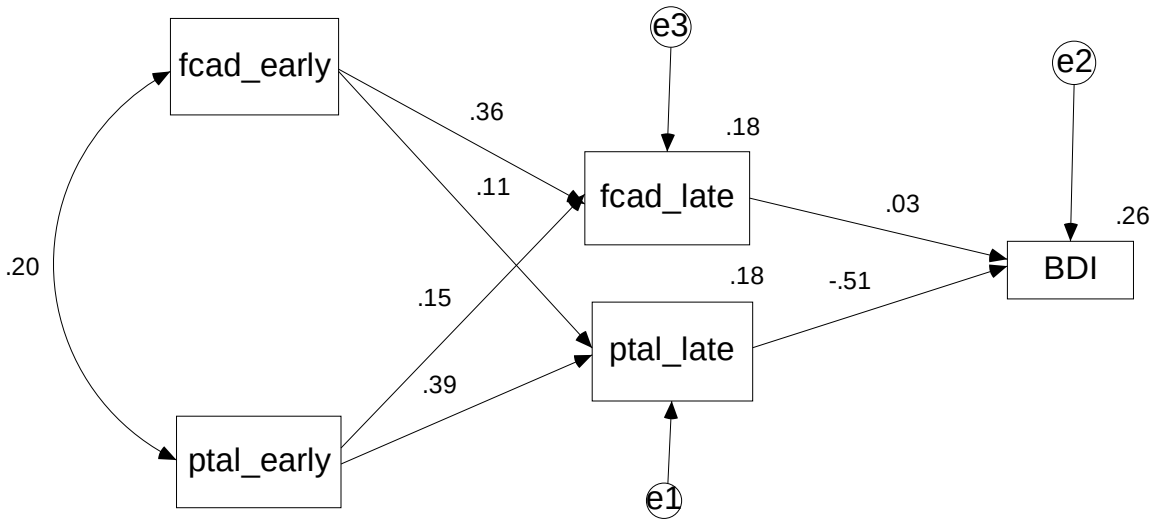
CM Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(Full Sample)

Table 3. CM Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients

			Stnd..Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.404	.442	.068	6.535	***
cmad_late	<---	cmad_early	.806	.517	.026	19.788	***
cmad_late	<---	ptal_early	.009	.006	.029	.224	.822
ptal_late	<---	cmad_early	-.119	-.118	.061	-1.941	.052
BDI	<---	ptal_late	-.511	-9.361	1.070	-8.752	***
BDI	<---	cmad_late	-.036	-1.011	1.639	-.617	.537

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
cmad early: Clinical Management adherence early
cmad late: Clinical Management adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Clinical Management adherence

Figure 4



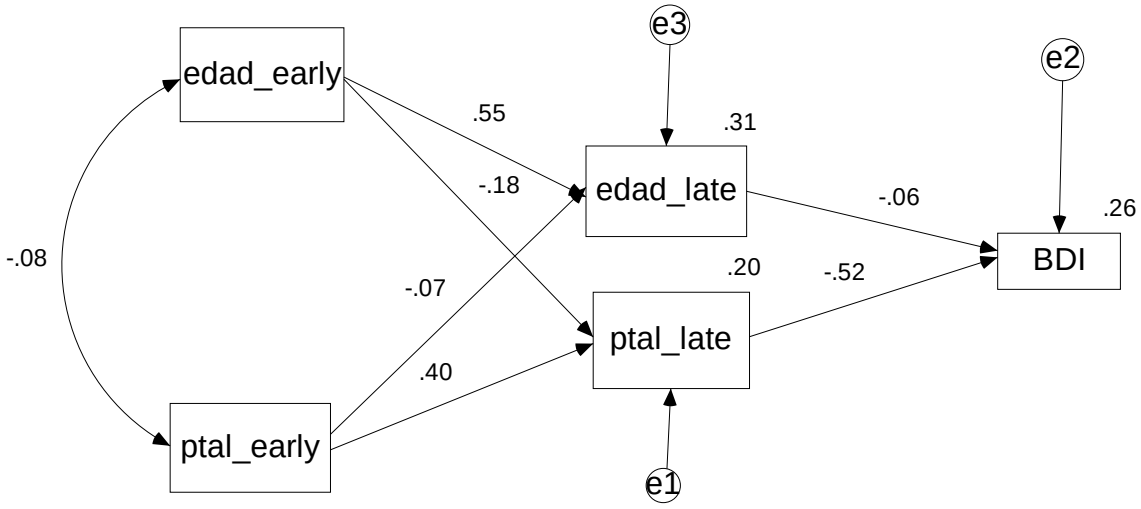
FC Adherence and Patient Alliance Predicting Residual Change in Patient Depression (Full Sample)

Table 4. FC Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.392	.429	.069	6.227	***
fcad_late	<---	fcad_early	.364	.346	.060	5.751	***
fcad_late	<---	ptal_early	.147	.152	.065	2.322	.020
ptal_late	<---	fcad_early	.111	.112	.063	1.772	.076
BDI	<---	ptal_late	-.514	-9.444	1.070	-8.823	***
BDI	<---	fcad_late	.029	.563	1.147	.491	.624

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
fcad early: Facilitative Condintions adherence early
fcad late: Facilitative Conditions adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Facilitative Conditions adherence

Figure 5



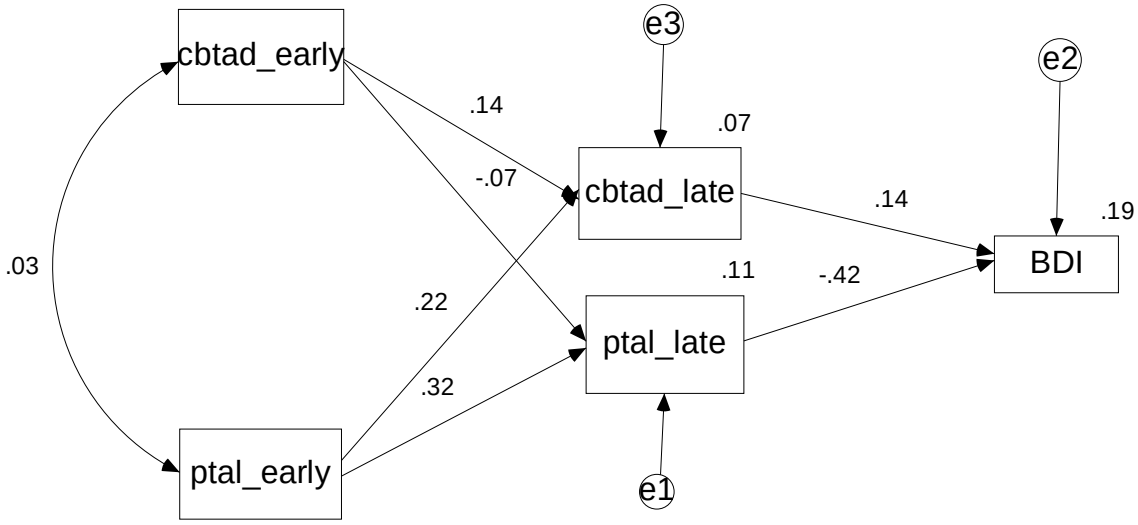
ED Adherence and Patient Alliance Predicting Residual Change in Patient Depression (Full Sample)

Table 5. ED Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients

		Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<--- ptal_early	.396	.431	.067	6.451	***
edad_late	<--- edad_early	.548	.529	.055	9.627	***
edad_late	<--- ptal_early	-.075	-.075	.057	-1.314	.189
ptal_late	<--- edad_early	-.176	-.185	.064	-2.883	.004
BDI	<--- ptal_late	-.515	-9.478	1.075	-8.820	***
BDI	<--- edad_late	-.057	-1.134	1.179	-.962	.336

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
edad early: Explicit Directiveness adherence early
edad late: Explicit Directiveness adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Explicit Directiveness adherence

Figure 6



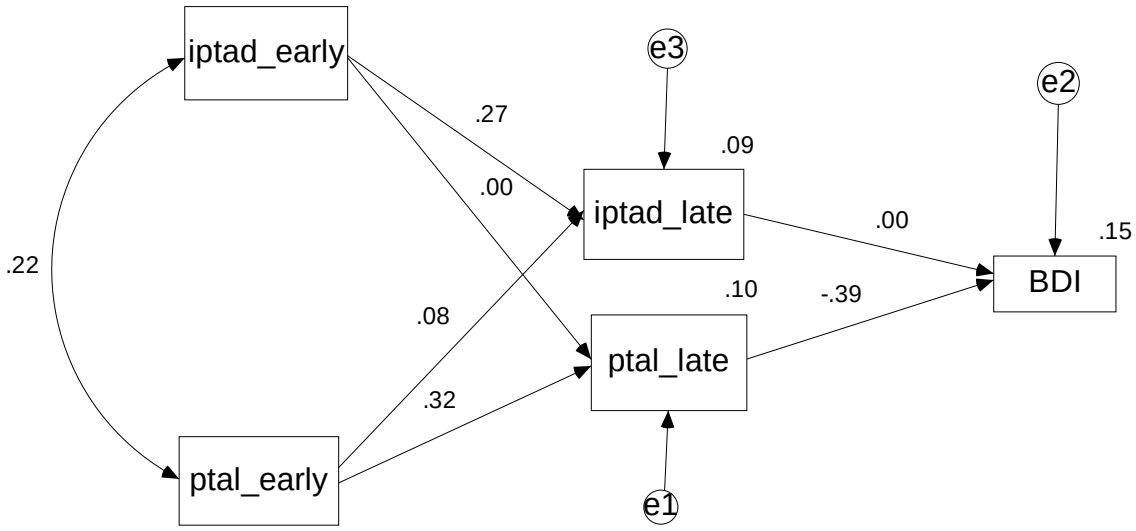
CBT Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Cognitive Behavior Therapy)

Table 6. CBT Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Cognitive Behavioral Therapy)

		Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<--- ptal_early	.319	.372	.154	2.414	.016
cbtad_late	<--- cbtad_early	.140	.117	.111	1.048	.295
cbtad_late	<--- ptal_early	.217	.132	.082	1.622	.105
ptal_late	<--- cbtad_early	-.068	-.109	.209	-.523	.601
BDI	<--- ptal_late	-.417	-7.775	2.315	-3.358	***
BDI	<--- cbtad_late	.144	5.155	4.463	1.155	.248

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
cbtad early: CBT adherence early
cbtad late: CBT adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late CBT adherence

Figure 7



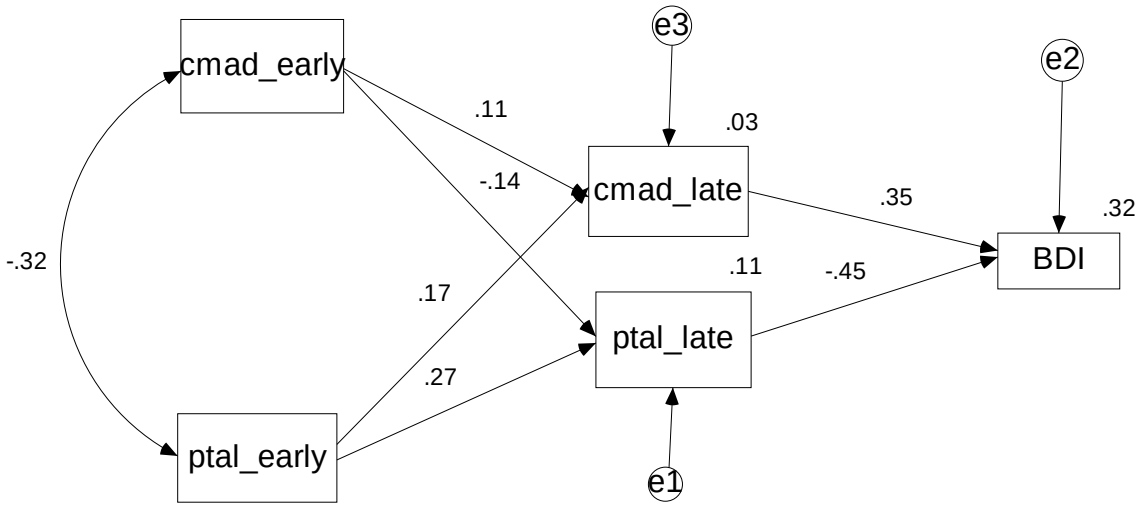
IPT Adherence and Patient Alliance Predicting Residual Change in Patient Depression (in Cognitive Behavior Therapy)

Table 7. IPT Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Cognitive Behavioral Therapy)

			Std. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.322	.376	.158	2.375	.018
iptad_late	<---	iptad_early	.270	.229	.115	1.989	.047
iptad_late	<---	ptal_early	.076	.040	.070	.563	.573
ptal_late	<---	iptad_early	-.003	-.006	.258	-.022	.982
BDI	<---	ptal_late	-.392	-7.242	2.338	-3.098	.002
BDI	<---	iptad_late	-.004	-.180	5.298	-.034	.973

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
iptad early: IPT adherence early
iptad late: IPT adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late IPT adherence

Figure 8



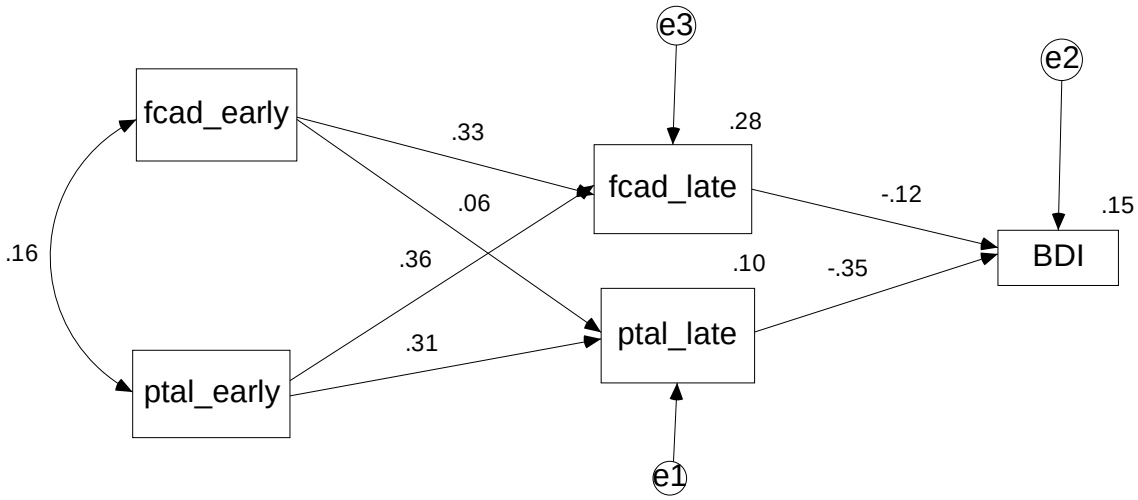
CM Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Cognitive Behavior Therapy)

Table 8. CM Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Cognitive Behavioral Therapy)

			Stnd. Estimate	Unstnd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.270	.316	.162	1.954	.051
cmad_late	<---	cmad_early	.108	.039	.051	.757	.449
cmad_late	<---	ptal_early	.169	.016	.014	1.173	.241
ptal_late	<---	cmad_early	-.137	-.594	.596	-.997	.319
BDI	<---	ptal_late	-.449	-8.488	2.146	-3.955	***
BDI	<---	cmad_late	.353	81.535	26.281	3.102	.002

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
cmad early: Clinical Management adherence early
cmad late: Clinical Management adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Clinical Management adherence

Figure 9



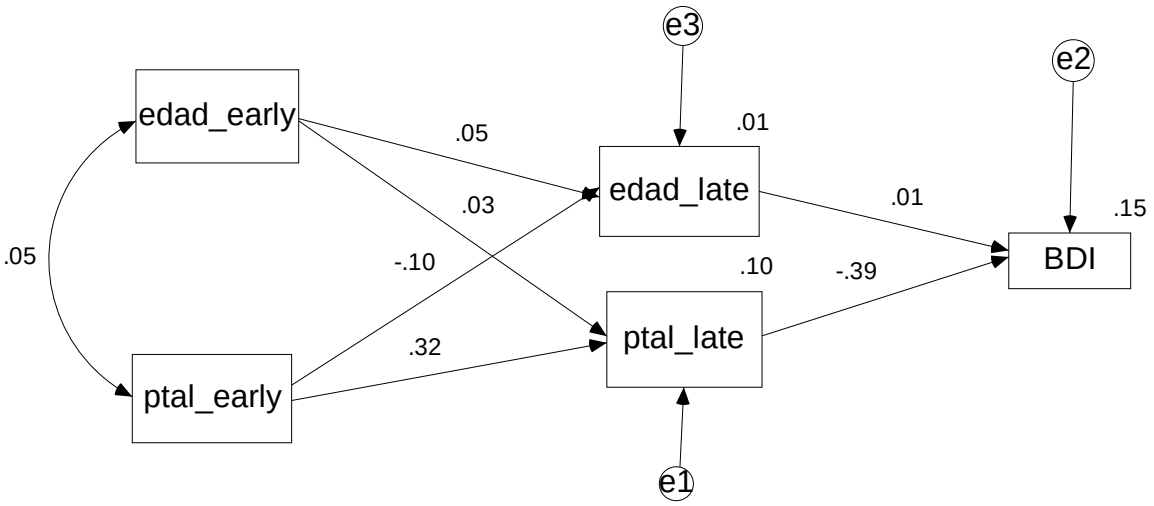
FC Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Cognitive Behavior Therapy)

Table 9. FC Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Cognitive Behavioral Therapy)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.306	.358	.156	2.290	.022
fcad_late	<---	fcad_early	.333	.253	.090	2.794	.005
fcad_late	<---	ptal_early	.359	.340	.113	3.009	.003
ptal_late	<---	fcad_early	.059	.055	.125	.443	.658
BDI	<---	ptal_late	-.353	-6.481	2.363	-2.743	.006
BDI	<---	fcad_late	-.124	-2.817	2.903	-.970	.332

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
fcad early: Facilitative Condintions adherence early
fcad late: Facilitative Conditions adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Facilitative Conditions adherence

Figure 10



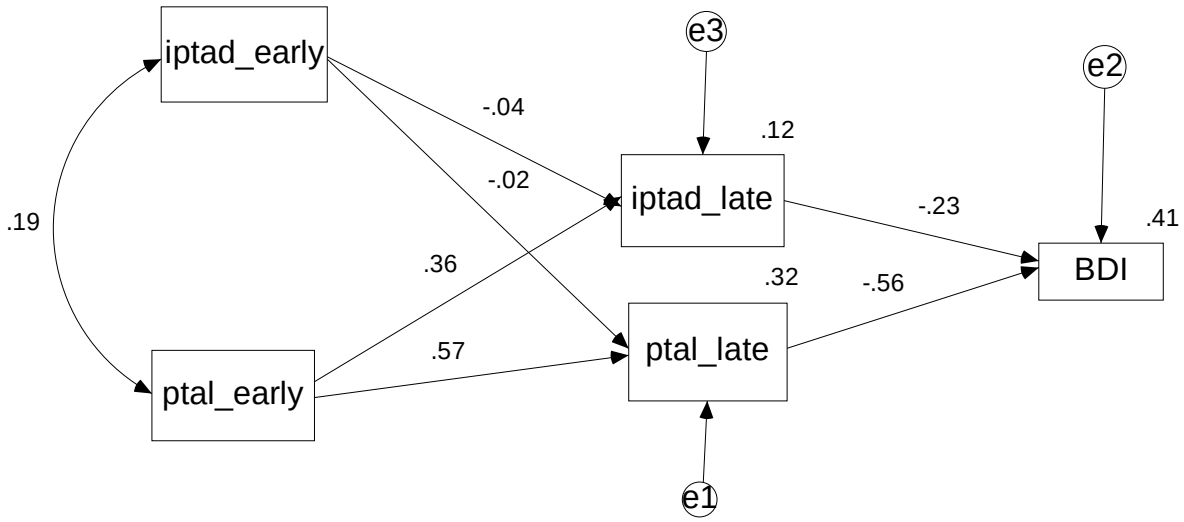
ED Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Cognitive Behavior Therapy)

Table 10. ED Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Cognitive Behavioral Therapy)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.316	.369	.155	2.385	.017
edad_late	<---	edad_early	.048	.038	.109	.351	.726
edad_late	<---	ptal_early	-.099	-.069	.097	-.715	.475
ptal_late	<---	edad_early	.028	.037	.173	.212	.832
BDI	<---	ptal_late	-.392	-7.251	2.340	-3.099	.002
BDI	<---	edad_late	.010	.313	3.929	.080	.936

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
edad early: Explicit Directiveness adherence early
edad late: Explicit Directiveness adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Explicit Directiveness adherence

Figure 11



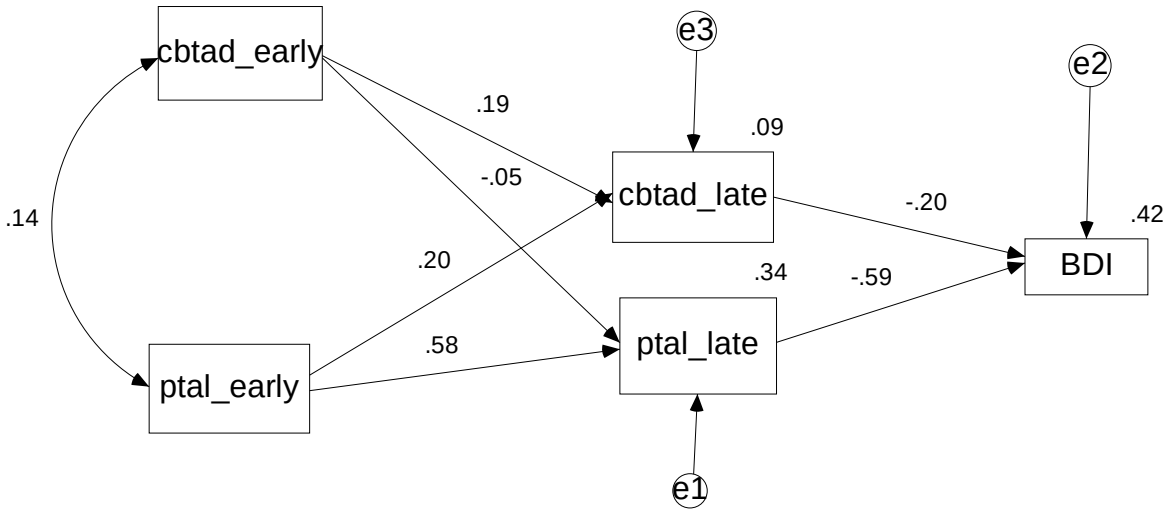
IPT Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Interpersonal Therapy)

Table 11. IPT Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Interpersonal Therapy)

.			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.570	.420	.083	5.058	***
iptad_late	<---	iptad_early	-.035	-.026	.095	-.278	.781
iptad_late	<---	ptal_early	.357	.146	.052	2.806	.005
ptal_late	<---	iptad_early	-.018	-.025	.152	-.162	.871
BDI	<---	ptal_late	-.556	-11.943	2.238	-5.337	***
BDI	<---	iptad_late	-.229	-8.874	4.054	-2.189	.029

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
iptad early: IPT adherence early
iptad late: IPT adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late IPT adherence

Figure 12



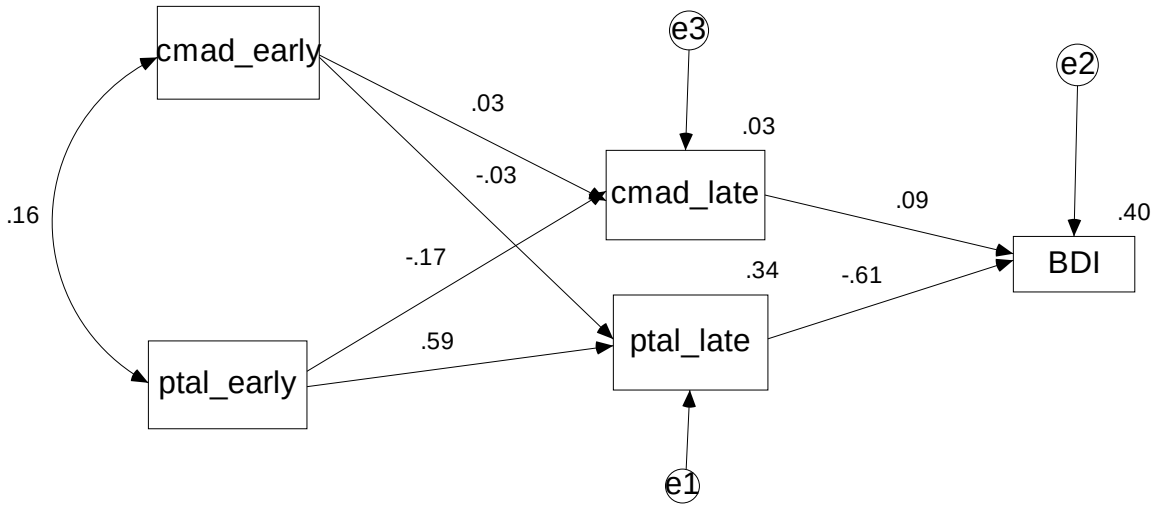
CBT Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Interpersonal Therapy)

Table 12. CBT Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Interpersonal Therapy)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.585	.439	.083	5.302	***
cbtad_late	<---	cbtad_early	.194	.160	.106	1.513	.130
cbtad_late	<---	ptal_early	.204	.039	.024	1.586	.113
ptal_late	<---	cbtad_early	-.047	-.154	.360	-.429	.668
BDI	<---	ptal_late	-.593	-12.589	2.163	-5.821	***
BDI	<---	cbtad_late	-.198	-16.599	8.633	-1.923	.055

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
cbtad early: CBT adherence early
cbtad late: CBT adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late CBT adherence

Figure 13



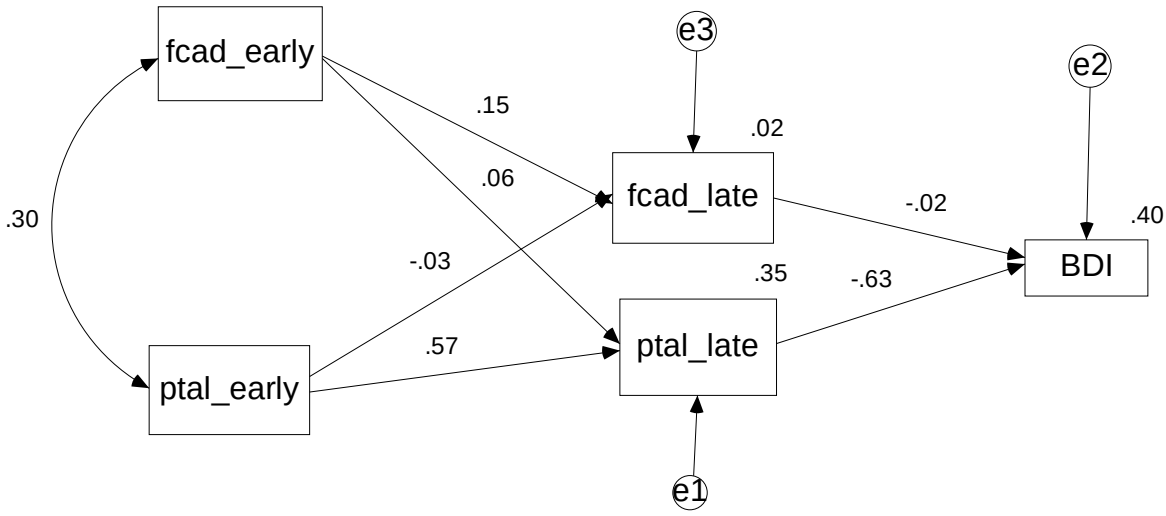
CM Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Interpersonal Therapy)

Table 13. CM Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Interpersonal Therapy)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.586	.440	.083	5.306	***
cmad_late	<---	cmad_early	.034	.014	.057	.252	.801
cmad_late	<---	ptal_early	-.165	-.015	.012	-1.238	.216
ptal_late	<---	cmad_early	-.030	-.105	.381	-.276	.782
BDI	<---	ptal_late	-.615	-13.152	2.212	-5.946	***
BDI	<---	cmad_late	.093	16.012	17.993	.890	.374

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
cmad early: Clinical Management adherence early
cmad late: Clinical Management adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Clinical Management adherence

Figure 14



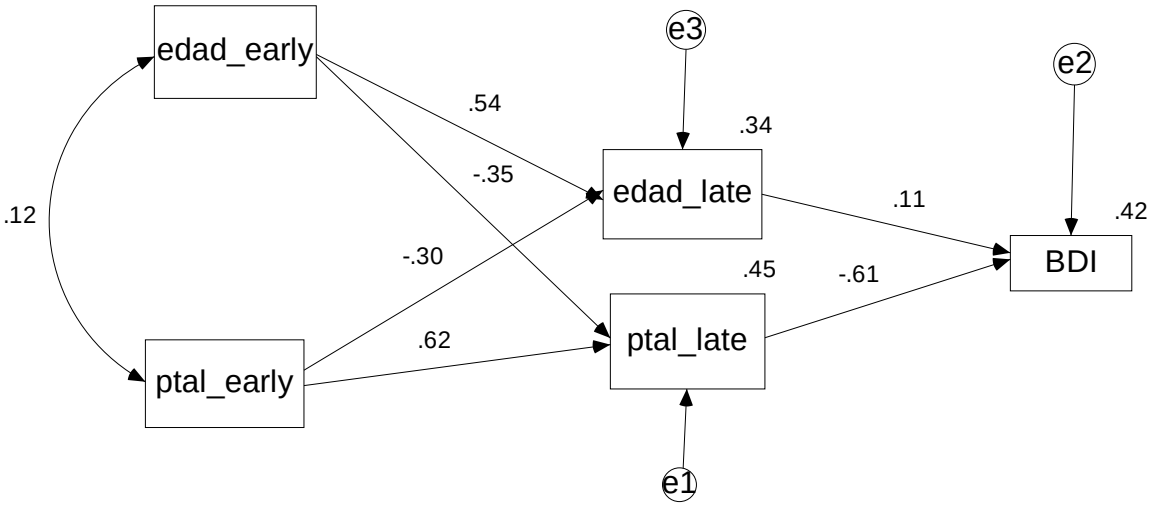
FC Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Interpersonal Therapy)

Table 14. FC Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Interpersonal Therapy)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.567	.428	.086	4.984	***
fcad_late	<---	fcad_early	.145	.097	.092	1.048	.295
fcad_late	<---	ptal_early	-.027	-.016	.078	-.198	.843
ptal_late	<---	fcad_early	.060	.053	.101	.526	.599
BDI	<---	ptal_late	-.632	-13.494	2.190	-6.162	***
BDI	<---	fcad_late	-.018	-.515	2.965	-.174	.862

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
fcad early: Facilitative Condintions adherence early
fcad late: Facilitative Conditions adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Facilitative Conditions adherence

Figure 15



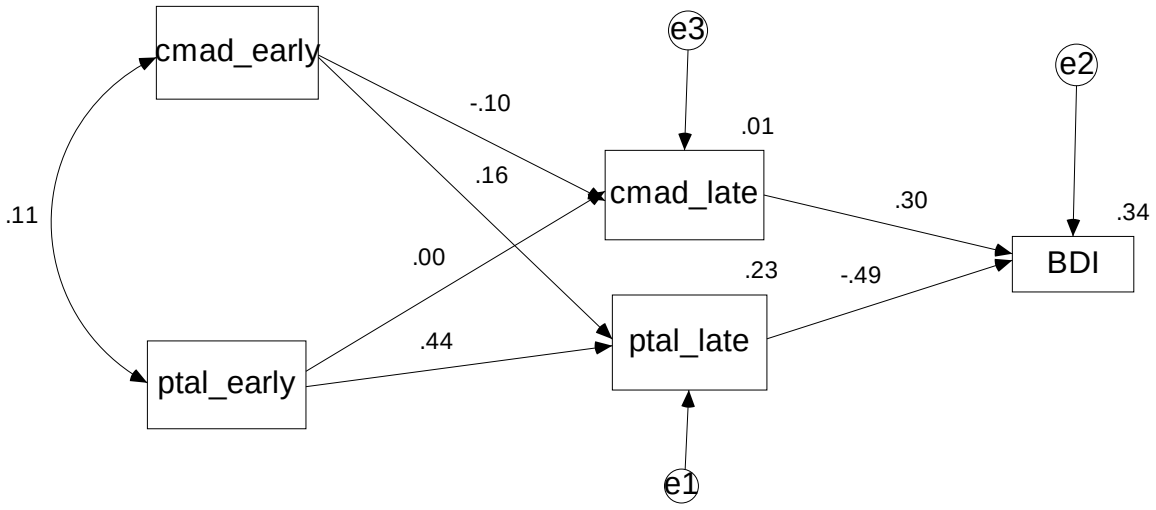
ED Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Interpersonal Therapy)

Table 15. ED Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Interpersonal Therapy)

			Stnd. Estimate	Unstnd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.617	.469	.076	6.162	***
edad_late	<---	edad_early	.541	.547	.110	4.965	***
edad_late	<---	ptal_early	-.299	-.188	.069	-2.747	.006
ptal_late	<---	edad_early	-.354	-.432	.122	-3.540	***
BDI	<---	ptal_late	-.607	-13.017	2.282	-5.705	***
BDI	<---	edad_late	.111	2.875	2.771	1.038	.299

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
edad early: Explicit Directiveness adherence early
edad late: Explicit Directiveness adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Explicit Directiveness adherence

Figure 16



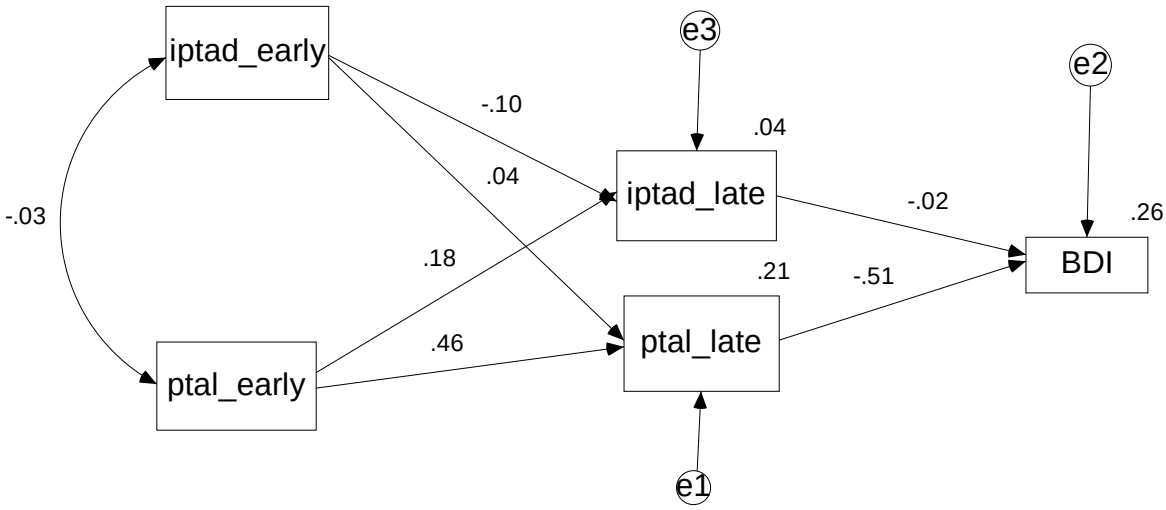
CM Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Clinical Management Plus Imipramine)

Table 16. CM Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Clinical Management Plus Imipramine)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.436	.492	.138	3.559	***
cmad_late	<---	cmad_early	-.096	-.072	.104	-.687	.492
cmad_late	<---	ptal_early	-.005	-.003	.078	-.035	.972
ptal_late	<---	cmad_early	.162	.245	.185	1.323	.186
BDI	<---	ptal_late	-.495	-9.213	2.079	-4.432	***
BDI	<---	cmad_late	.303	11.441	4.257	2.687	.007

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
cmad early: Clinical Management adherence early
cmad late: Clinical Management adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Clinical Management adherence

Figure 17



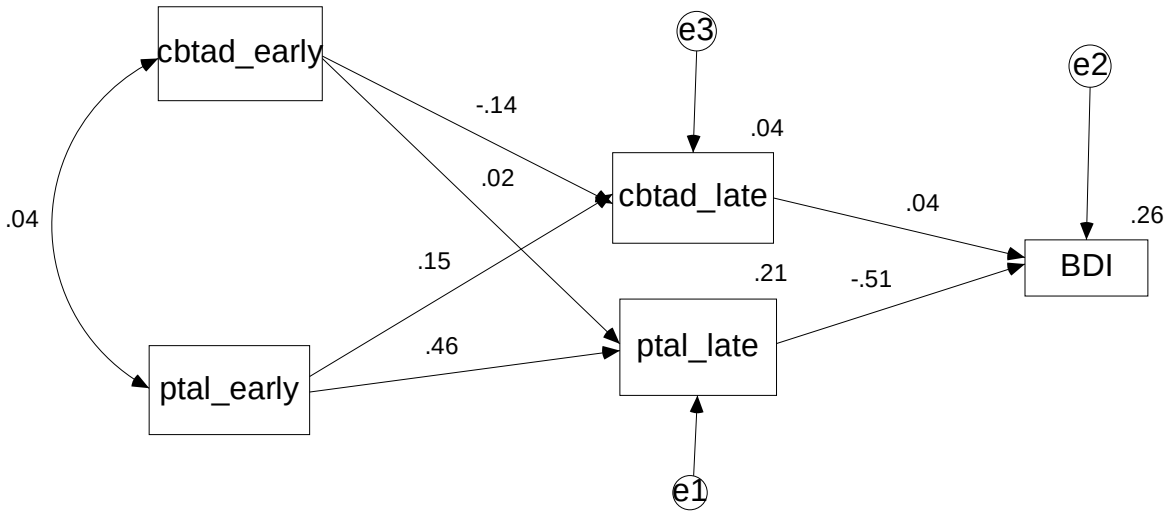
IPT Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Clinical Management Plus Imipramine)

Table 17. IPT Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Clinical Management Plus Imipramine)

.			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.456	.513	.139	3.697	***
iptad_late	<---	iptad_early	-.099	-.072	.100	-.723	.469
iptad_late	<---	ptal_early	.184	.047	.035	1.349	.177
ptal_late	<---	iptad_early	.035	.113	.397	.285	.776
BDI	<---	ptal_late	-.513	-9.692	2.234	-4.338	***
BDI	<---	iptad_late	-.019	-1.606	10.051	-.160	.873

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
iptad early: IPT adherence early
iptad late: IPT adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late IPT adherence

Figure 18



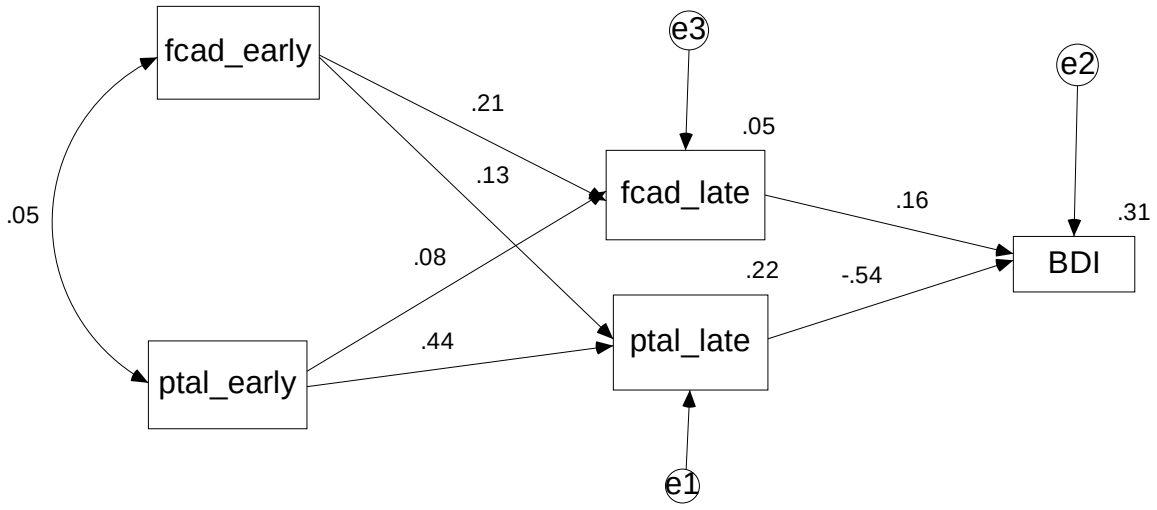
CBT Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Clinical Management Plus Imipramine)

Table 18. CBT Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Clinical Management Plus Imipramine)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.456	.514	.139	3.695	***
cbtad_late	<---	cbtad_early	-.143	-.122	.117	-1.045	.296
cbtad_late	<---	ptal_early	.155	.023	.020	1.128	.259
ptal_late	<---	cbtad_early	.017	.108	.793	.137	.891
BDI	<---	ptal_late	-.512	-9.609	2.219	-4.331	***
BDI	<---	cbtad_late	.044	6.255	17.068	.366	.714

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
cbtad early: CBT adherence early
cbtad late: CBT adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late CBT adherence

Figure 19



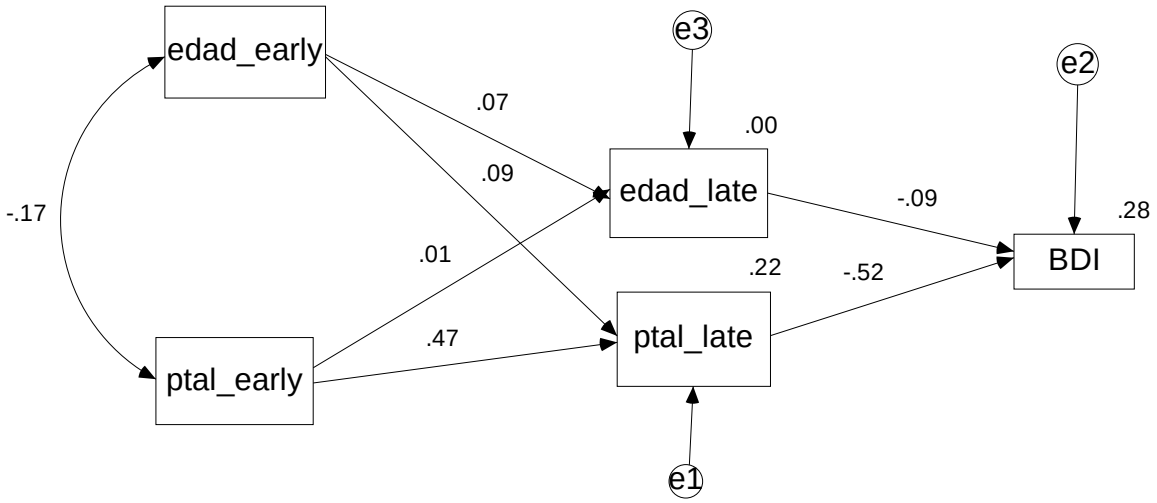
FC Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Clinical Management Plus Imipramine)

Table 19. FC Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Clinical Management Plus Imipramine)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.444	.495	.137	3.616	***
fcad_late	<---	fcad_early	.208	.195	.128	1.523	.128
fcad_late	<---	ptal_early	.080	.077	.131	.584	.559
ptal_late	<---	fcad_early	.126	.137	.134	1.026	.305
BDI	<---	ptal_late	-.543	-10.471	2.207	-4.745	***
BDI	<---	fcad_late	.159	3.562	2.602	1.369	.171

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
fcad early: Facilitative Condintions adherence early
fcad late: Facilitative Conditions adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Facilitative Conditions adherence

Figure 20



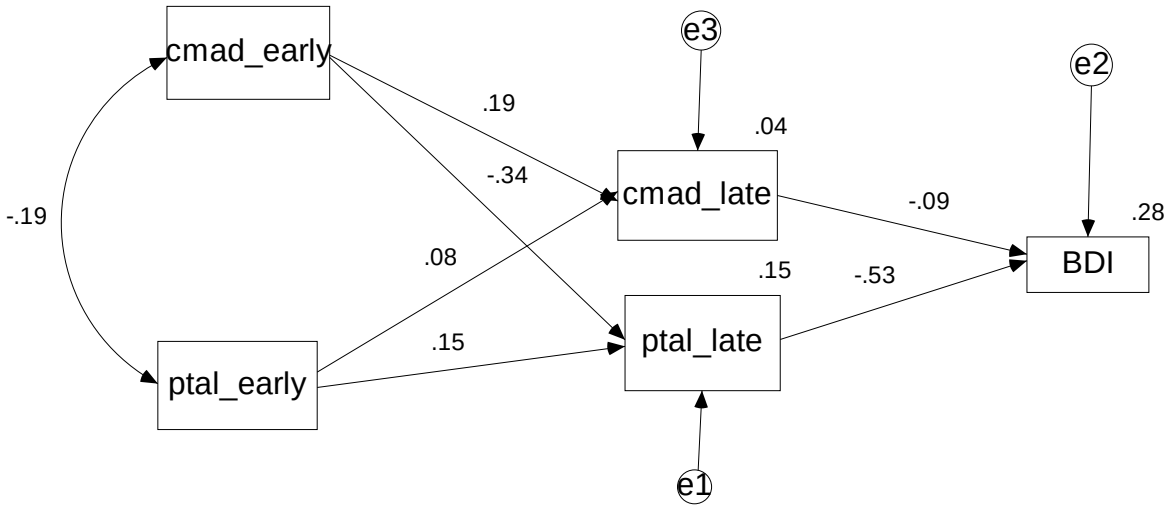
ED Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Clinical Management Plus Imipramine)

Table 20. ED Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Clinical Management Plus Imipramine)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.456	.513	.139	3.697	***
edad_late	<---	edad_early	-.099	-.072	.100	-.723	.469
edad_late	<---	ptal_early	.184	.047	.035	1.349	.177
ptal_late	<---	edad_early	.035	.113	.397	.285	.776
BDI	<---	ptal_late	-.513	-9.692	2.234	-4.338	***
BDI	<---	edad_late	-.019	-1.606	10.051	-.160	.873

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
edad early: Explicit Directiveness adherence early
edad late: Explicit Directiveness adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Explicit Directiveness adherence

Figure 21



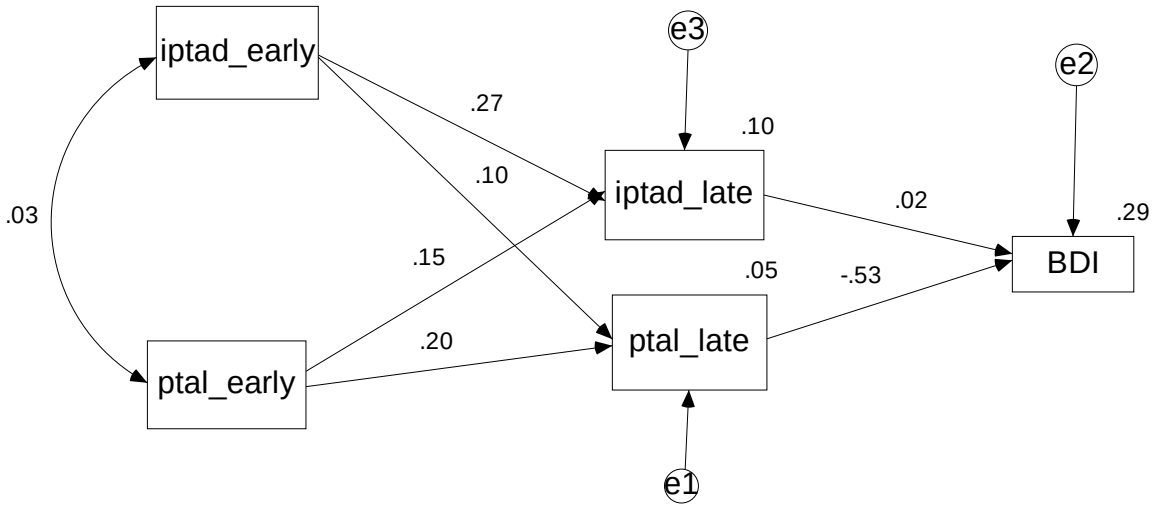
CM Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Clinical Management Plus Placebo)

Table 21. CM Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Clinical Management Plus Placebo)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.145	.199	.177	1.128	.259
cmad_late	<---	cmad_early	.193	.098	.071	1.393	.164
cmad_late	<---	ptal_early	.080	.034	.059	.576	.565
ptal_late	<---	cmad_early	-.337	-.556	.210	-2.648	.008
BDI	<---	ptal_late	-.527	-9.359	2.021	-4.630	***
BDI	<---	cmad_late	-.086	-4.924	6.723	-.732	.464

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
cmad early: Clinical Management adherence early
cmad late: Clinical Management adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Clinical Management adherence

Figure 22



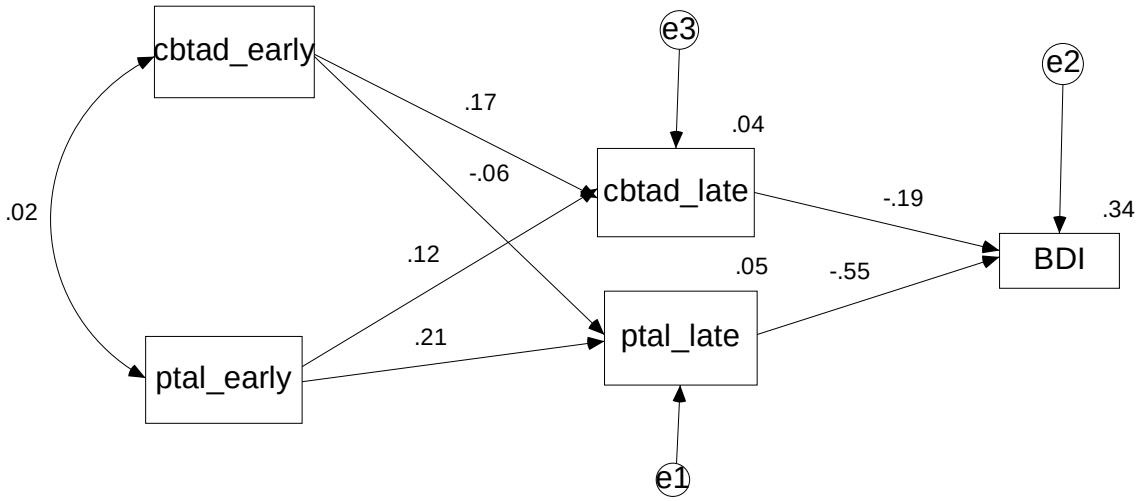
IPT Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Clinical Management Plus Placebo)

Table 22. IPT Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Clinical Management Plus Placebo)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.200	.275	.184	1.493	.135
iptad_late	<---	iptad_early	.267	.138	.068	2.028	.043
iptad_late	<---	ptal_early	.146	.040	.036	1.111	.267
ptal_late	<---	iptad_early	.102	.266	.344	.774	.439
BDI	<---	ptal_late	-.535	-9.401	1.999	-4.703	***
BDI	<---	iptad_late	.021	1.904	10.361	.184	.854

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
iptad early: IPT adherence early
iptad late: IPT adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late IPT adherence

Figure 23



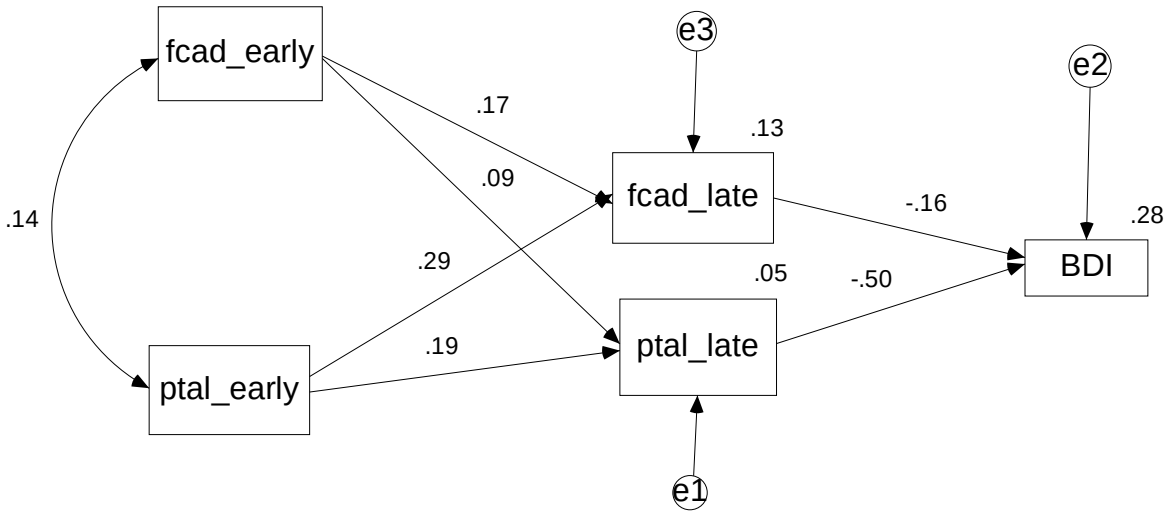
CBT Adherence and Patient Alliance Predicting Residual Change in Patient Depression (in Clinical Management Plus Placebo)

Table 23. CBT Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Clinical Management Plus Placebo)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.205	.282	.185	1.529	.126
cbtad_late	<---	cbtad_early	.169	.106	.085	1.251	.211
cbtad_late	<---	ptal_early	.117	.015	.018	.864	.388
ptal_late	<---	cbtad_early	-.063	-.413	.868	-.476	.634
BDI	<---	ptal_late	-.551	-9.844	1.946	-5.058	***
BDI	<---	cbtad_late	-.187	-34.935	20.906	-1.671	.095

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
cbtad early: CBT adherence early
cbtad late: CBT adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late CBT adherence

Figure 24



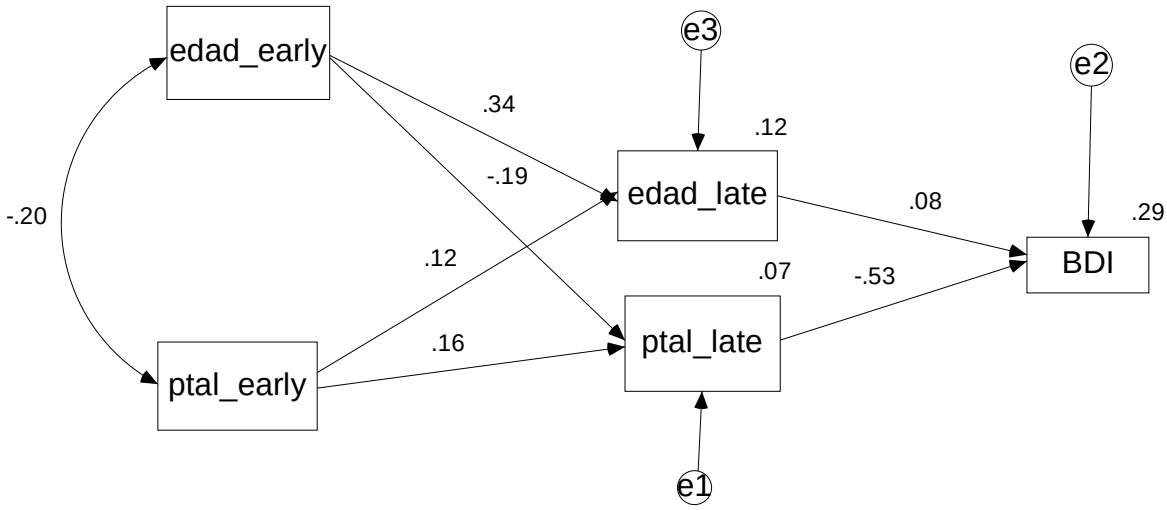
FC Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Clinical Management Plus Placebo)

Table 24. FC Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Clinical Management Plus Placebo)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.186	.255	.187	1.369	.171
fcad_late	<---	fcad_early	.167	.131	.102	1.280	.201
fcad_late	<---	ptal_early	.295	.245	.109	2.260	.024
ptal_late	<---	fcad_early	.094	.123	.174	.705	.481
BDI	<---	ptal_late	-.495	-8.630	1.995	-4.325	***
BDI	<---	fcad_late	-.160	-4.610	3.367	-1.369	.171

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
fcad early: Facilitative Condintions adherence early
fcad late: Facilitative Conditions adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Facilitative Conditions adherence

Figure 25



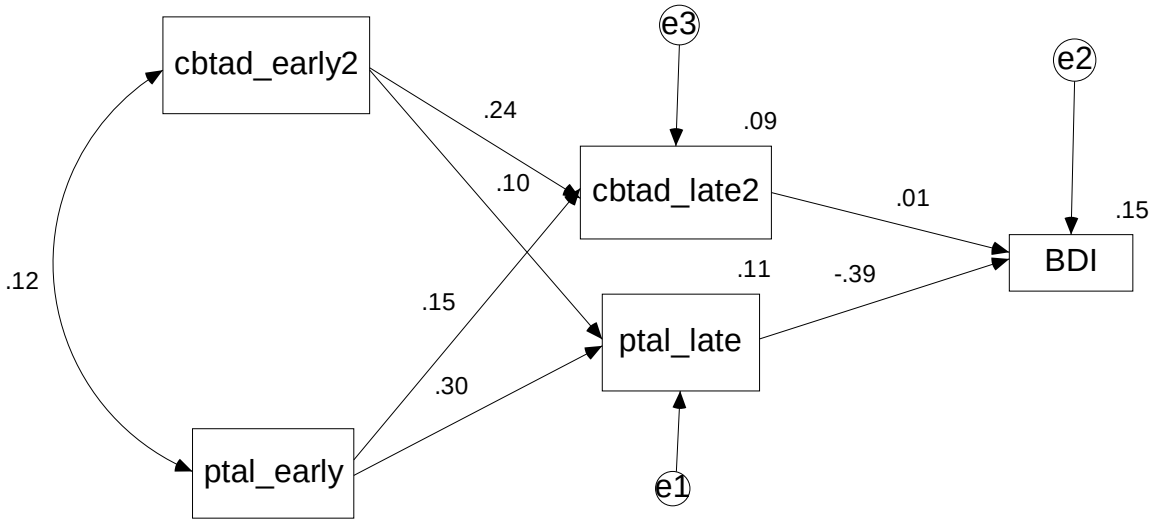
ED Adherence and Patient Alliance Predicting
Residual Change in Patient Depression
(in Clinical Management Plus Placebo)

Table 25. ED Adherence and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficients (in Clinical Management Plus Placebo)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.163	.224	.186	1.208	.227
edad_late	<---	edad_early	.343	.302	.117	2.584	.010
edad_late	<---	ptal_early	.117	.109	.124	.880	.379
ptal_late	<---	edad_early	-.189	-.247	.173	-1.423	.155
BDI	<---	ptal_late	-.529	-9.360	2.003	-4.674	***
BDI	<---	edad_late	.084	2.197	3.033	.725	.469

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
edad early: Explicit Directiveness adherence early
edad late: Explicit Directiveness adherence late
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late Explicit Directiveness adherence

Figure 26



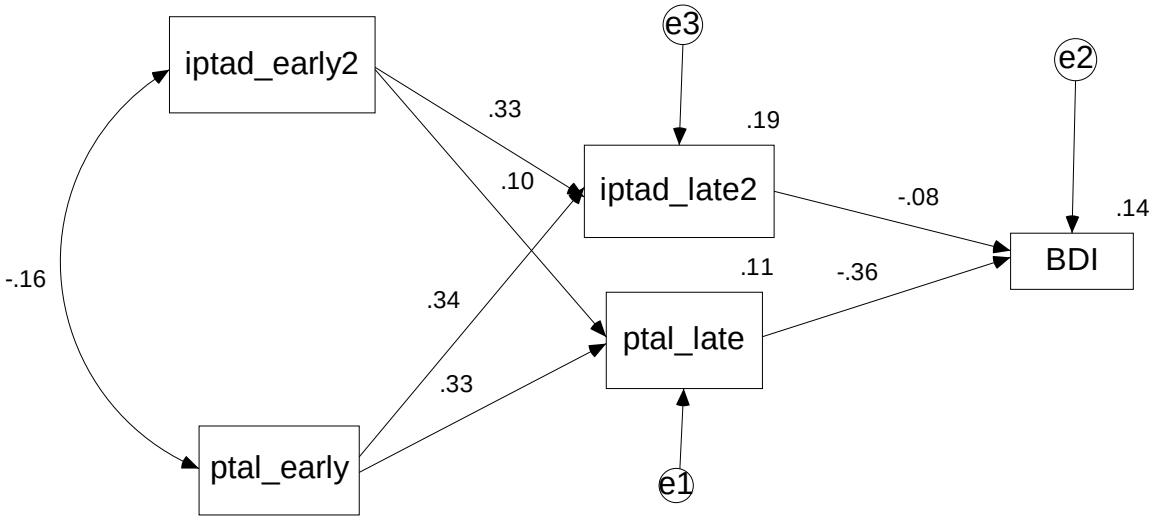
CBT Adherence (4th session) and Patient Alliance Predicting Residual Change in Patient Depression (in Cognitive Behavior Therapy)

Table 26. CBT Adherence (4th session) and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficient (in Cognitive Behavioral Therapy)

	Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late <--- ptal_early	.304	.355	.155	2.294	.022
cbtad_late <--- cbtad_early	.236	.250	.144	1.736	.083
cbtad_late <--- ptal_early	.152	.115	.102	1.122	.262
ptal_late <--- cbtad_early	.103	.169	.218	.773	.440
BDI <--- ptal_late	-.392	-7.249	2.351	-3.083	.002
BDI <--- cbtad_late	.009	.255	3.739	.068	.946

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
cbtad early: CBT adherence early (session 4)
cbtad late: CBT adherence late (sessions 7-8, 14-15)
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late CBT adherence (sessions 7-8, 14-15)

Figure 27



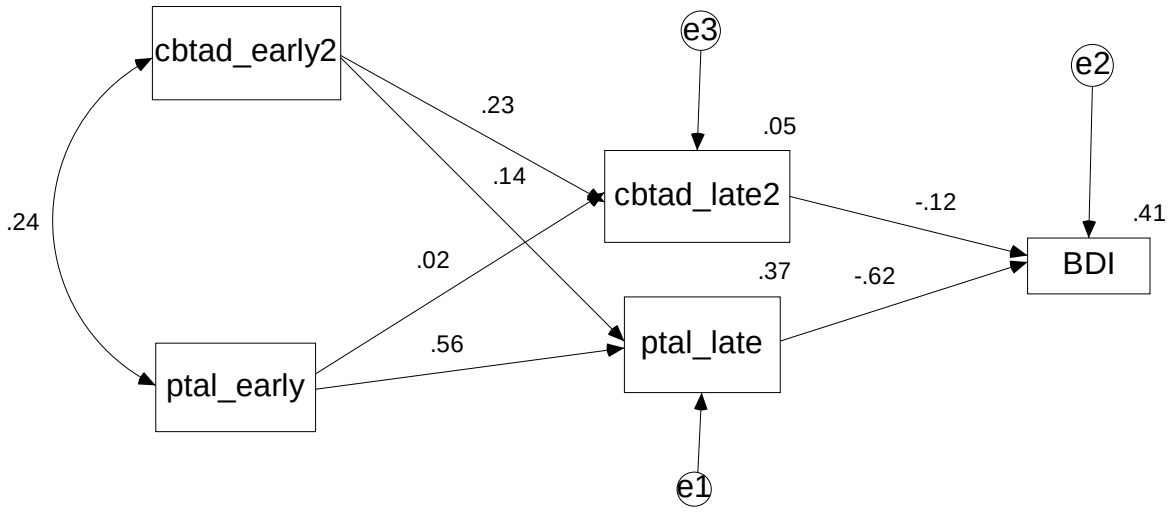
IPT Adherence (4th session) and Patient Alliance Predicting Residual Change in Patient Depression (in Cognitive Behavior Therapy)

Table 27. IPT Adherence (4th session) and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficient (in Cognitive Behavioral Therapy)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.332	.388	.156	2.491	.013
iptad_late	<---	iptad_early	.334	.350	.135	2.591	.010
iptad_late	<---	ptal_early	.339	.218	.083	2.626	.009
ptal_late	<---	iptad_early	.099	.188	.254	.740	.460
BDI	<---	ptal_late	-.361	-6.622	2.362	-2.803	.005
BDI	<---	iptad_late	-.076	-2.535	4.358	-.582	.561

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
iptad early: IPT adherence early (session 4)
iptad late: IPT adherence late (sessions 7-8, 14-15)
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late IPT adherence (sessions 7-8, 14-15)

Figure 28



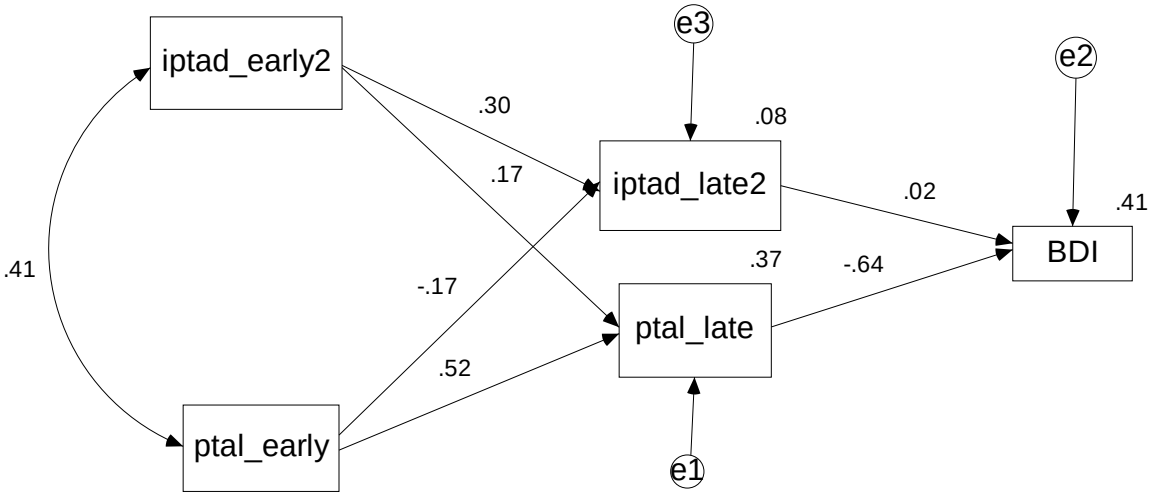
CBT Adherence (4th Session) and Patient Alliance Predicting Residual Change in Patient Depression (in Interpersonal Therapy)

Table 28. CBT Adherence (4th session) and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficient (in Interpersonal Therapy)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.556	.420	.083	5.049	***
cbtad_late	<---	cbtad_early	.225	.274	.175	1.563	.118
cbtad_late	<---	ptal_early	.023	.006	.035	.163	.870
ptal_late	<---	cbtad_early	.141	.530	.417	1.271	.204
BDI	<---	ptal_late	-.622	-13.225	2.172	-6.088	***
BDI	<---	cbtad_late	-.123	-8.089	7.219	-1.120	.263

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
cbtad early: CBT adherence early (session 4)
cbtad late: CBT adherence late (sessions 7-8, 14-15)
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late CBT adherence (sessions 7-8, 14-15)

Figure 29



IPT Adherence (4th Session) and Patient Alliance Predicting Residual Change in Patient Depression (in Interpersonal Therapy)

Table 29. IPT Adherence (4th session) and Patient Alliance Predicting Residual Change in Patient Depression Path Coefficient (in Interpersonal Therapy)

			Stnd. Estimate	Unstd. Estimate	S.E.	C.R.	P
ptal_late	<---	ptal_early	.520	.394	.088	4.459	***
iptad_late	<---	iptad_early	.301	.260	.131	1.985	.047
iptad_late	<---	ptal_early	-.171	-.076	.067	-1.132	.257
ptal_late	<---	iptad_early	.167	.245	.172	1.423	.155
BDI	<---	ptal_late	-.636	-13.574	2.179	-6.228	***
BDI	<---	iptad_late	.015	.547	4.001	.137	.891

Note:
ptal earl: patient alliance early
ptal late: patient alliance late
iptad early: IPT adherence early (session 4)
iptad late: IPT adherence late (sessions 7-8, 14-15)
BDI: Beck Depression Inventory
e1: error variance for late patient alliance
e2: error variance for Beck Depression Inventory
e3: error variance for late IPT adherence (sessions 7-8, 14-15)

Appendix 2:

Tables Recording Early and Late Therapist Adherence and Patient Alliance Means and Standard Deviations

Table 1

Early and Late Adherence and Patient Alliance Means and Standard Deviations Across all Treatments

	N	Minimum	Maximum	Mean	Std. Deviation
cbtad_early	239	1.07	3.27	1.4617	.37435
cbtad_late	215	1.06	3.17	1.5472	.57555
iptad_early	239	1.02	3.07	1.5279	.41267
iptad_late	215	1.00	2.53	1.4992	.43380
cmad_early	239	1.15	3.40	1.9466	.59424
cmad_late	215	1.05	2.48	1.5098	.38296
fcad_early	239	2.13	5.31	3.5743	.58372
fcad_late	215	1.63	4.83	3.5100	.55586
edad_early	239	3.00	5.88	4.4540	.55676
edad_late	215	3.00	5.42	4.4118	.54086
ptal_early	226	.60	4.70	3.6774	.53730
ptal_late	212	1.20	4.70	3.6818	.55777
Valid N (listwise)	212				

Note.
Early Adherence: Session 1.
Late Adherence: Mean and Standard Deviation Scores of Sessions 4, 7-8, 14-15.
Early Patient Alliance (ptal_early): Session 3.
Late Patient Alliance (ptal_late) sessions 8-9, 14-15.

cbtad: Cognitive Behavioral Psychotherapy Adherence;
iptad: Interpersonal Psychotherapy Adherence;
cmad: Clinical Management Adherence;
fcad: Facilitative Conditions Adherence,
edad: Explicit Directiveness Adherence.

Table 2

Early and Late Adherence and Patient Alliance Means and Standard Deviations in Cognitive Behavioral Psychotherapy

	N	Minimum	Maximum	Mean	Std. Deviation
cbtad_early	59	1.34	3.27	1.9937	.38279
cbtad_late	53	1.66	3.17	2.4932	.31969
iptad_early	59	1.04	2.46	1.4946	.31909
iptad_late	53	1.22	2.32	1.5912	.27198
cmad_early	59	1.15	2.00	1.3849	.14069
cmad_late	53	1.05	1.30	1.1578	.04993
fcad_early	59	2.63	5.31	3.7468	.65236
fcad_late	53	2.81	4.83	3.8664	.49833
edad_early	59	3.25	5.63	4.5508	.46547
edad_late	53	3.79	5.42	4.7167	.36751
ptal_early	54	2.30	4.50	3.7056	.52356
ptal_late	52	2.10	4.50	3.6327	.61044
Valid N (listwise)	52				

a treatment group = CBT

Note.
Early Adherence: Session 1.
Late Adherence: Mean and Standard Deviation Scores of Sessions 4, 7-8, 14-15.
Early Patient Alliance (ptal_early): Session 3.
Late Patient Alliance (ptal_late) sessions 8-9, 14-15.

cbtad: Cognitive Behavioral Psychotherapy Adherence;
iptad: Interpersonal Psychotherapy Adherence;
cmad: Clinical Management Adherence;
fcad: Facilitative Conditions Adherence,
edad: Explicit Directiveness Adherence.

Table 3

Early and Late Adherence and Patient Alliance Means and Standard Deviations in Interpersonal Psychotherapy

	N	Minimum	Maximum	Mean	Std. Deviation
cbtad_early	61	1.11	2.00	1.3499	.15117
cbtad_late	57	1.16	1.76	1.3597	.12379
iptad_early	61	1.29	3.07	2.0248	.35861
iptad_late	57	1.39	2.53	2.0565	.26454
cmad_early	61	1.18	1.85	1.4636	.14291
cmad_late	57	1.08	1.43	1.1923	.06116
fcad_early	61	2.63	4.94	3.8062	.55893
fcad_late	57	3.04	4.75	3.8311	.37167
edad_early	61	3.00	5.00	3.8975	.40857
edad_late	57	3.00	4.67	3.7646	.39891
ptal_early	60	.60	4.70	3.7467	.65728
ptal_late	55	2.75	4.70	3.8973	.41671
Valid N (listwise)	55				

a treatment group = IPT

Note.
Early Adherence: Session 1.
Late Adherence: Mean and Standard Deviation Scores of Sessions 4, 7-8, 14-15.
Early Patient Alliance (ptal_early): Session 3.
Late Patient Alliance (ptal_late) sessions 8-9, 14-15.

cbtad: Cognitive Behavioral Psychotherapy Adherence;
iptad: Interpersonal Psychotherapy Adherence;
cmad: Clinical Management Adherence;
fcad: Facilitative Conditions Adherence,
edad: Explicit Directiveness Adherence.

Table 4

Early and Late Adherence and Patient Alliance Means and Standard Deviations in Clinical Management Plus Imipramine

	N	Minimum	Maximum	Mean	Std. Deviation
cbtad_early	57	1.07	1.48	1.2641	.08668
cbtad_late	52	1.06	1.43	1.1804	.07349
iptad_early	57	1.02	1.79	1.2713	.17259
iptad_late	52	1.00	1.58	1.1411	.12513
cmad_early	57	1.70	3.40	2.5075	.36830
cmad_late	52	1.48	2.48	1.9093	.27291
fcad_early	57	2.13	4.69	3.3557	.50631
fcad_late	52	1.63	4.31	3.2615	.47640
edad_early	57	3.75	5.63	4.6513	.45668
edad_late	52	3.67	5.25	4.5901	.31147
ptal_early	56	1.60	4.50	3.6625	.49491
ptal_late	52	1.90	4.40	3.7144	.51338
Valid N (listwise)	52				

a treatment group = IMI-CM

Note.
Early Adherence: Session 1.
Late Adherence: Mean and Standard Deviation Scores of Sessions 4, 7-8, 14-15.
Early Patient Alliance (ptal_early): Session 3.
Late Patient Alliance (ptal_late) sessions 8-9, 14-15.

cbtad: Cognitive Behavioral Psychotherapy Adherence;
iptad: Interpersonal Psychotherapy Adherence;
cmad: Clinical Management Adherence;
fcad: Facilitative Conditions Adherence,
edad: Explicit Directiveness Adherence.

Table 5

Early and Late Adherence and Patient Alliance Means and Standard Deviations in Clinical Management Plus Placebo

	N	Minimum	Maximum	Mean	Std. Deviation
cbtad_early	62	1.09	1.48	1.2471	.09243
cbtad_late	53	1.06	1.31	1.1627	.05792
iptad_early	62	1.02	2.11	1.3065	.23333
iptad_late	53	1.01	1.66	1.1592	.12094
cmad_early	62	1.68	3.18	2.4407	.36580
cmad_late	53	1.43	2.29	1.8113	.18692
fcad_early	62	2.38	4.50	3.3828	.46653
fcad_late	53	2.19	3.88	3.0519	.36573
edad_early	62	3.50	5.88	4.7278	.46525
edad_late	53	3.88	5.38	4.6278	.41118
ptal_early	56	2.40	4.30	3.5911	.44119
ptal_late	53	1.20	4.25	3.4745	.60141
Valid N (listwise)	53				

a treatment group = PLA-CM

Note.
Early Adherence: Session 1.
Late Adherence: Mean and Standard Deviation Scores of Sessions 4, 7-8, 14-15.
Early Patient Alliance (ptal_early): Session 3.
Late Patient Alliance (ptal_late) sessions 8-9, 14-15.

cbtad: Cognitive Behavioral Psychotherapy Adherence;
iptad: Interpersonal Psychotherapy Adherence;
cmad: Clinical Management Adherence;
fcad: Facilitative Conditions Adherence,
edad: Explicit Directiveness Adherence.

Table 6

a) Early (session 4) and Late (sessions 7-8. 14-15) Adherence Means and Standard Deviations for the CBT and IPT Adherence Scales in Cognitive Behavioral Psychotherapy

(a)

	N	Minimum	Maximum	Mean	Std. Deviation
iptad_early2	53	1.02	2.54	1.5471	.32231
iptad_late2	51	1.13	2.54	1.6208	.33720
cbtad_early2	53	1.66	3.25	2.5570	.37172
cbtad_late2	51	1.65	3.45	2.4646	.39148
Valid N (listwise)	51				

a treatment group = CBT

b) Early (session 4) and Late (sessions 7-8. 14-15) Adherence Means and Standard Deviations for the CBT and IPT Adherence Scales in Interpersonal Psychotherapy

(b)

	N	Minimum	Maximum	Mean	Std. Deviation
iptad_early2	57	1.39	2.95	2.0977	.33399
iptad_late2	49	1.41	2.71	2.0570	.29466
cbtad_early2	57	1.14	1.75	1.3501	.13142
cbtad_late2	49	1.13	1.88	1.3765	.15996
Valid N (listwise)	49				

b treatment group = IPT

Note.
Early Adherence: Session 4.
Late Adherence: Mean and Standard Deviation Scores of Sessions: 7-8, 14-15.

cbtad: Cognitive Behavioral Psychotherapy Adherence;
iptad: Interpersonal Psychotherapy Adherence;

Appendix 3: Summary of Results

Summary of Primary Results

Type of Therapy	Type of Adherence	Is Early Adherence Related with Early Alliance?	Does Early Adherence Predict Later Alliance?	Does Early Alliance Predict Later Adherence?	Does Late Adherence Predict Depression Change?	Does Late Patient Alliance Predict Depression Change?
Full Sample	CBT	No	No	No	No	Yes
	IPT	Yes	Yes	No	No	
	CM	No	Yes+ (-)	No	No	
	FC	Yes	Yes+	Yes	No	
	ED	No	Yes (-)	No	No	
CBT	CBT	No	No	Yes+	No	Yes
	IPT	No	No	No	No	
	CM	Yes (-)	No	No	Yes (-)	
	FC	No	No	Yes	No	
	ED	No	No	No	No	
IPT	CBT	No	No	No	Yes+	Yes
	IPT	No	No	Yes	Yes	
	CM	No	No	No	No	
	FC	Yes	No	No	No	
	ED	No	Yes (-)	Yes (-)	No	
CM-IMI	CBT	No	No	No	No	Yes
	IPT	No	No	No	No	
	CM	No	No	No	Yes (-)	
	FC	No	No	No	No	
	ED	No	No	No	No	
CM-PLA	CBT	No	No	No	Yes+	Yes
	IPT	No	No	No	No	
	CM	No	Yes (-)	No	No	
	FC	No	No	Yes	No	
	ED	No	No	No	No	

Summary of Results from Additional Exploratory Analysis

CBT	CBT	No	No	No	No	Yes+
	IPT	No	No	Yes	No	Yes
IPT	CBT	No	No	Yes+	No	No
	IPT	Yes	No	No	No	Yes

Note. CBT = Cognitive Behavior Therapy. IPT = Interpersonal Therapy. CM = Clinical Management. IMI = Imipramine. PLA = Placebo. FC = Facilitative Conditions. ED = Explicit Directivness.
+ = approached statistical significance ($.05 < p < .10$). (-) = negative effect.

Appendix 4:

Vanderbilt Therapeutic Alliance Scale (VTAS) (Patient Factor and Therapist Factor)

and

Collaborative Study Psychotherapy Rating Scale (CSPRS)

VTAS Factor Loadings After Varimax Rotation

Item no. and description	Factor 1	Factor 2
Items loading on Factor 1 (Patient factor)		
14. Patient expresses feeling better	.64	.01
15. Patient experiences therapist as understanding and supportive	.78	.40
16. Patent identifies with therapist's method of working	.86	.19
17. Patient expects therapist to change him[a]	.70	−.08
18. Patient makes effort to carry out therapeutic procedures	.75	.08
19. Patient acknowledges problems therapist could help him with	.80	.19
20. Patient indicates strong desire to overcome problems	.69	.20
21. Patient talks freely, openly, and honestly about himself	.69	.17
22. Patient acts in hostile, attacking, or critical manner[a]	.65	.08
23. Patient acts in mistrustful or defensive manner[a]	.71	−.11
24. Patient becomes so anxious it interferes with therapy[a]	.51	−.26
25. Patient misses appointment, comes late, or resists next appointment[a]	.46	.08
26. Patient shows enthusiasm that makes session alive	.73	.44
27. Patient and therapist work in joint effort	.75	.52
28. Patient and therapist share common viewpoint about patient's problems	.84	.20
29. Patient and therapist relate in honest, straightforward way	.76	.44
30. Patient and therapist agree on tasks and goals	.76	.41
32. Patient and therapist seem engaged in power struggle[a]	.64	−.02
33. Patient and therapist express possibility of premature termination	.73	−.02
35. Patient and therapist accept different roles and responsibilities	.78	.40
Items loading on Factor 2 (Therapist factor)		
1. Therapist conveys idea of his competence	.08	.82
2. Therapist expresses hope and encouragement	.51	.41
3. Therapist commits himself and his skills to helping patient	.11	.88
4. Therapist shows respect, acceptance, and compassion	.26	.75
5. Therapist acknowledges validity of patient's thoughts, feelings	.17	.78
6. Therapist makes sure patient understands procedures of therapy	−.10	.60
7. Therapist intervenes in way to preserve patient's self-esteem	.15	.70
9. Therapist expresses own reactions in appropriate ways	−.07	.24
11. Therapist makes irrelevant comments[a]	−.05	.14
12. Therapist builds mutuality by using the terms "we" and "us"	.08	.66
13. Therapist misses interventions when needed	.17	.53
Remaining items (included in total alliance score)		
8. Therapist intrudes own ideas or values[a]	−.10	.06
10. Therapist fosters undue dependency[a]	.01	−.01
31. Therapist and patient focus on therapeutic task	.31	.66
34. Therapist and patient allow session to become empty, boring[a]	.17	.30
36. Therapist and patient refer back to experiences together	.15	.31
37. Therapist and patient have awkward silences or pauses[a]	.38	.03

Note. VTAS = Vanderbilt Therapeutic Alliance Scale.
[a]These items are reverse keyed.

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1. Patient Factor and Therapist Factor of the Vanderbilt Therapeutic Alliance Scale

(Krupnick et al., 1996, p. 539)

Table 1
List of all Items, Subscales, and Major Scales of the CSPRS

I. Cognitive/Behavioral Therapy Scale (CB)

- CB1. Cognitive Rationale
  - CB11. Relationship of thoughts and feelings (54)
  - CB12. Cognitive therapy rationale (55)
  - CB13. Relate improvement to cognitive change (56)
- CB2. Assessing Cognitive Processes
  - CB21. Specific examples (21)
  - CB22. Reporting cognitions (57)
  - CB23. Exploring personal meaning (58)
  - CB24. Recognizing cognitive errors (59)
  - CB25. Exploring underlying assumptions (60)
- CB3. Evaluating and Changing Beliefs
  - CB31. Distancing of beliefs (61)
  - CB32. Examine available evidence (62)
  - CB33. Testing beliefs prospectively (63)
  - CB34. Searching for alternative explanations (64)
  - CB35. Realistic consequences (65)
  - CB36. Adaptive/functional value of beliefs (66)
  - CB37. Practicing "rational responses" (69)
- CB4. Behavioral Focus
  - CB41. Planning/practicing alternative behaviors (70)
  - CB42. Increasing pleasure and mastery (73)
  - CB43. Scheduling/structuring activites (74)
  - CB44. Self-monitoring (75)
- CB5. Homework
  - CB51. Homework reviewed (2)
  - CB52. Homework assigned (72)
  - CB53. Recording thoughts (76)
- CB6. Collaborative Structure
  - CB61. Setting and following agenda (1)
  - CB62. Collaboration (15)
  - CB63. Encourages independence (16)
  - CB64. Negotiating therapy content (78)
  - CB65. Explanation for therapist's direction (79)
  - CB66. Summarizing (80)
- TCB1. Alternative Cognitive Strategies
  - TCB11. Didactic persuasion (67)
  - TCB12. Substituting positive thoughts (68)
- TCB2. Operant Approaches
  - TCB21. Skills training (71)
  - TCB22. Manipulating behavior via cues or consequences (77)

2. Collaborative Study Psychotherapy Rating Scale

(CSPRS, Hollon et al., 1988)

Table 1 Continued

II. Interpersonal Therapy Scale (IPT)

IPT1. Interpersonal Rationale
- IPT11. Interpersonal rationale for depression (25)
- IPT12. Interpersonal therapy rationale (26)
- IPT13. Relating interpersonal change to therapy (27)

IPT2. Focus on Feelings
- IPT21. Feelings about loss/deceased (50)
- IPT22. Exploration of feelings (51)
- IPT23. Acknowledgement of affect (52)
- IPT24. Acceptance of affect (53)

IPT3. Assessing Interpersonal Relationships and Tendencies
- IPT31. Interpersonal focus (28)
- IPT32. Patterns in relationships (29)
- IPT33. Communication patterns (30)
- IPT34. Interpersonal expectations (31)
- IPT35. Relationship satisfaction (32)

IPT4. Assisting Changes in Interpersonal Functioning
- IPT41. Changes desired in relationships (33)
- IPT42. Consider options (34)
- IPT43. Ways of changing relationships (35)
- IPT44. Developing new relationships (36)

IPT5. Role Transition
- IPT51. Focus on role transition (41)
- IPT52. Exploring positive aspects of new role (42)
- IPT53. Evaluate losses in role change (43)
- IPT54. Preparation for new role (44)

IPT6. Interpersonal Disputes
- IPT61. Focus on interpersonal conflict (37)
- IPT62. Consequence of disparate expectations (38)
- IPT63. Relating disputed relationships to other relationships (39)
- IPT64. Maintaining the dispute (40)

IPT7. Interpersonal Deficits
- IPT71. Focus on interpersonal deficits (45)
- IPT72. Understanding past difficulties (46)
- IPT73. Therapy as a model (48)
- IPT74. Best aspects of prior relationships (49)

TIPT. Tangential Interpersonal Therapy
- TIPT1. Interpretations (22)
- TIPT2. Dependency conflicts (23)
- TIPT3. Defense mechanisms (24)
- TIPT4. Relating problems to childhood (47)

Table 1 Continued

III. Clinical Management Scale (CM)

- CM1. Pharmacotherapy Rationale
  - CM11. Biochemical rationale for depression (81)
  - CM12. Pharmacotherapy rationale (82)
  - CM13. Concerns about medication (83)
- CM2. Symptom/Illness Focus
  - CM21. Psychiatric history (3)
  - CM22. Symptoms inquiry (4)
  - CM23. Suicide ideation (5)
  - CM24. Assessing general functioning (6)
- CM3. Medication Effects Expected and Achieved
  - CM31. Medication effects expected (84)
  - CM32. Generalized improvement will result from medication (85)
  - CM33. Relating change to medication (86)
  - CM34. Optimistic reassurance (87)
- CM4. Medication Regime
  - CM41. Nonresponse to medication (88)
  - CM42. Medication dosage (89)
  - CM43. Medication schedule (90)
  - CM44. Adherence to regime (91)
  - CM45. Medication noncompliance (92)
  - CM46. Use of other substances (93)
- CM5. Side Effects
  - CM51. Side effects education (94)
  - CM52. Occurrence of side effects (95)
  - CM53. Side effects (Handling) (96)

IV. Facilitative Conditions Scale (FC)

- FC1. Supportive encouragement (7)
- FC2. Convey competence (8)
- FC3. Therapist's communication style (9)
- FC4. Involvement (10)
- FC5. Warmth (11)
- FC6. Rapport (12)
- FC7. Empathy (13)
- FC8. Formality (14) (Reverse Scored)

V. Explicit Directiveness Scale (ED)

- ED1. Level of verbal activity (17)
- ED2. Explicit guidance (18)
- ED3. Subtle guidance (19) (Reverse Scored)
- ED4. Receptive silence (20) (Reverse Scored)

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