

DOES DEPRESSIVE SEVERITY HAVE AN IMMEDIATE EFFECT ON
THERAPEUTIC DISTANCE AT MID-ACUTE PHASE IN COGNITIVE THERAPY
FOR RECURRENT MAJOR DEPRESSIVE DISORDER?

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DEDICATION

To Lillian Barger

1938-1996

Always Present In My Heart.

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ABSTRACT

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The degree to which severity of depression predicted Therapeutic Distance (TD) was researched with 375 patients with recurrent Major Depressive Disorder who received Cognitive Therapy. Therapeutic Distance was calculated by subtracting Working Alliance Inventory-Form C (WAI-C) from Working Alliance Inventory-Form T (WAI-T). Therapeutic Distance of each of the three subscales of the WAI was also calculated in order to determine whether the severity of depression predicted TD in the Bond, Task, or Goal subscales. The extent to which the severity of depression had an effect on the TD from midpoint to endpoint of the study was determined. Furthermore, the severity of depression and response to treatment at the first blind evaluation was analyzed. Results suggested that depressive severity was not predictive of TD overall or of the three

subscales. However, when looking at TD over time, it seems that TD task is significantly different from midpoint to endpoint of the acute phase CT. Additionally, it appears that regardless of the severity of depression, the working alliance was established rather quickly and remained fairly stable throughout the acute phase of the study.

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LIST OF ABBREVIATIONS

MDD-Major Depressive Disorder

TD-Therapeutic Distance

WAI-T-Working Alliance Inventory-Therapist Version

WAI-C-Working Alliance Inventory-Client Version

IDS-SR-Inventory of Depressive Symptomatology-Self-Report

HRSD-17-Hamilton Rating Scale for Depression-17-Item

A-CT-Acute Phase Cognitive Therapy

r-Pearson Correlation Coefficient

CHAPTER ONE

Introduction

The National Institute of Mental Health (NIMH) states that “depression is the leading cause of disability in the U.S.,” and it significantly increases the risk of other life-threatening diseases (Young, Weinberger, & Beck, 2001). Depressive disorders affect approximately 20.9 million American adults age 18 and older each year (Kessler, Chui, Demler, & Walters, 2005). This number includes those with Major Depressive Disorder (MDD), Dysthymic Disorder, and Bipolar Disorder. Depression costs the United States more than \$83 billion per year in direct and indirect economic burden from deficits in work-related functioning (Lam, Michalak, & Yatham, 2009). According to the National Co-morbidity Survey (NCS), only approximately 15% of the U.S. population who struggles with depression seeks treatment (Kessler et al., 2003). The U.S. Agency for Healthcare Research and Quality reports that approximately 15% of the depressed population commit suicide (2003).

Depression is a debilitating disorder that often impairs interpersonal functioning. A recent study found that patients with chronic depression were viewed as “more submissive and hostile than the comparison groups” which can lead to maladaptive relationship building (Constantino et al., 2008). Even though treatment of depression has evolved greatly over the course of the century; however, research “suggests that depressed patients still have persistent psychosocial and occupational impairment after recovering from an acute episode” (Ay-Woan, Sarah, LyInn, Tsyr-Jang, & Ping-Chuan, 2006). There is a great amount of research suggesting that the working alliance between

the patient and the therapist is important to outcome when treating patients who have a history of depression, (Bambling, King, Raue, Schweitzer, & Lambert, 2006; Santiago et al., 2002; Shirk, Gudmundsen, Kaplinski, & McMakin, 2008) .

The influence of the collaborative relationship between the patient and the therapist on the outcome of psychotherapy is a common theme in psychotherapy research. The phrase *working alliance* was coined to describe this relationship by Greenson in *The Technique and Practice of Psychoanalysis* (1967). Greenson saw the therapeutic alliance between patient and therapist as a vital factor in therapy. Several studies have suggested the idea that there *is* a significant relationship between the working alliance and outcome of therapy (A. Horvath & Symonds, 1991; Joyce, Ogradniczuk, Piper, & McCallum, 2003; Meyer et al., 2002). In a meta-analytic study of the working alliance and its relation to therapy outcome, Horvath and Symonds (1991) concluded that the working alliance is “a relatively robust variable linking therapy process to outcome” (p. 146).

The alliance between the patient and the therapist is a common theme in research. A widely used tool for measuring working alliance is the Working Alliance Inventory (WAI). The WAI was developed by Horvath and Greenberg in order to measure Bordin’s transtheoretical model of alliance which contains the three components of the working alliance: Bond, Task, and Goal (Safran, Muran, & Proskurov, 2009). The three subscales within the WAI are the Bond, Task, and Goal. Each of these subscales aims to gain further information regarding the working alliance between the patient and the therapist. The purpose of the Bond subscale is to determine the relationship status between the therapist and the patient. The Task subscale refers to the specific techniques

of the therapy sessions and whether or not the patient and therapist both agree on these specific responsibilities. Finally, the Goal subscale characterizes the mutual agreement of the patient and therapist with regard to the goals outlined throughout therapy.

Early therapeutic alliance between the patient and the therapist has been found to generate change in the severity of depression largely through its positive influence on the patient (Santiago et al., 2006). In that same study, the authors found that the Bond subscale of the Working Alliance Inventory (WAI), “moderated the relationship between cognitive change and changes in depression” (Santiago, et al., 2006, p. 813). However, the extent to which the bond can be salvaged and “whether that reduces depression, prevents relapse, or both is also unknown” (Diamond, Diamond, & Liddle, 2000, p. 1039).

There has been some variation in the research regarding the theory of working alliance. It is important to note that researchers score the working alliance inventory in different ways. Some consider there to be only a one-factor composition, whereas others think that working alliance is measuring two alternate factors (Andrusyna, Tang, DeRubeis, & Luborsky, 2001; Hatcher & Barends, 1996). The above study explored cognitive-behavioral therapy and the Working Alliance Inventory (shortened version) to challenge the theory that suggests that there is one factor in the alliance and that is the relationship between the patient and the therapist. That is, the idea that the relationship factor between the patient and the therapist has to do with mutual trust and liking versus the two remaining subscales which take into account the more practical elements of the therapy process. Upon completion of the study, results suggested that the original one-factor

structure did not take into account the agreement and the confidence the patient possesses in the efficacy of the technique utilized and the ability of the therapist to deliver the therapy well (Andrusyna, et al., 2001).

Regardless of the theory one has regarding the working alliance, it is suggested that working alliance is a predictor of therapeutic outcome. Joyce & Piper (1998) explored expectancy ratings and therapeutic alliance as related to treatment outcome. They found that the patient's "capacity for mature relationships and expectancies for therapy" were important predictors of treatment outcome (p. 236). This is another example suggesting that therapeutic alliance is strongly correlated to treatment process and positive outcome in therapy. In a more recent study, the therapeutic alliance was considered to be a highly recognized component in any form of treatment, including pharmacotherapy (Macneil, Hasty, Redlich, & Berk, 2009).

Overall, several studies have shown how working alliance has an effect on post-treatment depressive severity, but little research explores depression severity and its immediate relation to working alliance (Bambling, et al., 2006; Klein et al., 2003; Shirk, et al., 2008). Studies utilizing pre-treatment severity focus on how depression may affect the development of the working alliance. However, depression severity may also have an effect on how a person perceives his/her relation to other individuals (in this case, his/her therapist). That is the focus of this thesis. We wanted to look at the immediate effect of depressive severity on working alliance and ultimately on Therapeutic Distance. We defined the difference between the Working Alliance Inventory-Client Form (WAI-C) and the Working Alliance Inventory-Therapist Form (WAI-T) the therapeutic distance

(TD) (R. Jarrett, personal communication, June 11, 2010). That is, TD is the difference between patient's and therapist's perspective of their working alliance. In this study, we look at the immediate effects of depressive severity on the TD. Several studies have taken into account the patient's and therapist's versions of the Working Alliance Inventory and its effect on treatment outcome (Bordin, 1976; Hintikka, Laukkanen, Marttunen, & Lehtonen, 2006; Safran, et al., 2009); however, the construct of Therapeutic Distance is novel to this study, and will be researched extensively with the current sample population. By calculating the distance between the two versions of the working alliance, we are working with one number to determine the extent to which the patient and the therapist agree with one another regarding their working relationship.

Each version of the WAI has three subscales: bond, task, and goal. We expect these three subscales (factors), and hence the TD computed in the subscales, to be influenced differently by the immediate effects of depression severity. For example, if the patient rates the Bond subscale low and the therapist rates the Bond subscale high, resulting in a positive TD, this could mean that each party has a different perspective of the relationship and this may affect the patient's motivation to engage actively in the therapeutic interventions. If the TD of the Task subscale between the patient and therapist differ significantly, this may mean that the therapeutic interventions or tools that the therapist is offering may not seem beneficial to the patient. If there is a discrepancy between the two perspectives of the Goal subscale, this likely means that the patient and therapist have different views or expectancies of the outcome of therapy. Overall, if the patient and the therapist do not agree on how they perceive their relationship, the success

of treatment may be affected.

As mentioned earlier, therapeutic distance (TD) is the discrepancy between the patient's and therapist's perspectives of their working alliance and is measured as the difference between the WAI-T and WAI-C. The Working Alliance Inventory scores are based upon a 7-point Likert scale. Since we are taking the difference between the therapist and patient version of the WAI, the possible range of scores is between negative six and six. A small TD means the patient and therapist agree more on the level of working alliance between them while a large TD reflects a disagreement regarding the working alliance. Therapeutic distance (TD) could also be calculated for each of the three subscales: bond, task, and goal and the range of TD in each subscale is also between negative six and six.

The current study utilizes cognitive therapy (CT) in order to reduce depressive symptomatology as rated by the Inventory for Depressive Symptomatology-Self-Report (IDS-SR) (Rush et al., 1986). The IDS-SR is a self-report inventory that will be used to measure the depressive symptoms as rated by the patient. The patient and the therapist versions of the WAI are implemented to elicit data on the therapeutic alliance between the patient and the therapist. These separate inventories will be used to show the relationship between the severity of depression as rated by the patient (IDS-SR) and the TD between the patient and the therapist.

With a large population of patients with depression in the U.S. and around the world, there is a strong need to determine a mode of treatment that will be provided in an effective, timely, and tailored manner depending on the patient's unique circumstances.

That being said, a substantial amount of research has been conducted in order to determine whether the therapeutic alliance moderates the severity of depression after treatment (Bambling, et al., 2006; Shirk, et al., 2008; Zuroff & Blatt, 2006); however, minimal research has been found to determine what, if any, the role depressive severity plays in the perception of therapeutic alliance. There is a need for research regarding the effect that depressive symptomatology has on the perceived relationship between the patient and the therapist. The implication for this study involves a better understanding of how depressive severity can moderate the working alliance thus impacting treatment outcome.

CHAPTER TWO

Review of the Literature

Prevalence of Depression

As above, NIMH reports that depression is a considerable source of disability and significantly increases the risk of other life-threatening diseases (Young, et al., 2001). According to the Epidemiologic Catchment Area (ECA) study, the prevalence of MDD was estimated to be 15% of the population for lifetime depression and approximately 9 % for 12-month prevalence (Kessler, et al., 2003). Annually, depressive disorders are diagnosed in close to 21 million adults age 18 and older in the United States (Kessler, et al., 2003). Moussavi and colleagues' research projects that depression will become "the second leading cause of disease burden by the year 2020" (Moussavi et al., 2007, p. 851). Depression costs the United States more than \$51 billion per year in absenteeism and subsequent loss of productivity (Lam, et al., 2009). Despite the staggering statistics, approximately 85% of the depressed population is not currently seeking any treatment (Kessler, et al., 2003).

In order to be diagnosed with Major Depressive Disorder (MDD), a patient must meet at least 5 of the possible criteria in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR) (Rush et al., 2000). The symptoms of depression must include "clinically significant distress or impairment in social, occupational, or other important areas of functioning" (Rush, et al., 2000, p. 349). Kessler and colleagues aimed to find severity of impairment for MDD by using the six domains of functioning in the World Health Organization disability assessment scale

(WHO-DAS). The six scales include, out-of-role (inability to perform normal daily functioning within a thirty day period), self-care (ability to dress, feed, bathe oneself), mobility (ability to walk and stand when necessary), cognition (ability to think, concentrate, and remember), social functioning (ability to converse and control emotions while in a social situation), and productivity (ability to have normal production in home and work activities) (Kessler, et al., 2003). Upon completion of the study, it was found that the greatest impact of depression was in the cognitive and social domains of the six possible domains. In fact, the impairments of the patients with depression were over one standard deviation above the mean in the sample in these particular domains (Kessler, et al., 2003). This further supports the idea that depressive symptomatology has a significant effect on basic cognitive functioning and relationships with others.

Working Alliance Predictive of Post-Treatment Depression

The research regarding therapeutic alliance is vast and varied as it is considered to be one of the most impactful aspects of treatment outcome (A. Horvath & Symonds, 1991; Joyce, et al., 2003; Meyer, et al., 2002). Klein and colleagues treated 367 chronically depressed patients, and found that alliance was predictive of improvement of depressive symptoms at the end of the study (Klein, et al., 2003). This study also found that medication adherence combined with psychotherapy increased early alliance between the patient and the therapist. While Klein and colleagues focused on the effects of working alliance on depressive symptoms, the current study aims to determine the immediate effect depressive severity may have on the differing perspectives of the working alliance inventory as measured by the therapist and the patient.

Research regarding working alliance indicates that a patient's depressive symptomatology is "mediated by the patient's contribution to the alliance (Joyce, et al., 2003, p. 673)." It was also shown that a patient's perceived expected outcome was connected to the therapeutic alliance. Though there is a myriad of research with conflicting views on the therapeutic alliance and its relation to depression, it is clear that the working alliance is considered a factor related to improved therapeutic outcome (Meyer, et al., 2002; Missirlian, Toukmanian, Warwar, & Greenberg, 2005). According to Missirlian and colleagues (2005), the working relationship measured early, mid, and late-phase of therapy has been shown to be "important in predicting a decrease in self-reported depression" toward the end of the therapy (p. 869).

Therapeutic alliance between the patient and the therapist measured early in treatment has shown to predict depression outcome (Krupnick et al., 1996). The patient's view of the early, middle, and late working alliance is a strong predictor of post-treatment outcome; however, the therapist's perception of the working alliance is less significantly related to outcome (Krupnick et al, 1996). This indicates the importance of the patient's and therapist's perception of the working alliance. If the two do not agree on their level of working alliance, it may ultimately hinder treatment outcome as a patient with depression likely has a more negative outlook of his/her therapeutic process than one without depression.

Barber and colleagues (2000) found that patients who have had an alleviation of depressive symptoms often view their relationship with their therapist more positively

than those who have not had a reduction of depressive symptoms. Crits-Christoph and colleagues (2006) suggested that the working alliance between the patient and the therapist is essential when treating patients who have a history of depression. However, minimal research has been found to convey that the severity of depression plays a role in the differing perspectives of the working alliance.

Factors of Cognitive Therapy

Cognitive therapy (CT) for depression has been researched extensively and shown to be an efficacious intervention for the treatment of anxiety and depressive disorders (Tolin, 2010). Cognitive therapy is active, structured, and time-limited. Upon completion of as few as twelve sessions, patients have shown a decrease of depressive symptoms (Hardy et al., 2001). In a study evaluating the efficacy of CT utilized with patients who have moderate levels of depression as rated by the Beck Depression Inventory (BDI), Shaw found that those who received CT had a “significantly lower mean score” on the BDI than those who did not receive CT (Shaw, 1977, p. 547). Cognitive Therapy uses a number of techniques in order to improve the patient’s recognition of his/her negative thoughts and feelings and ultimately correct any maladaptive assumptions (Beck, Rush, Shaw, & Emery, 1979). Cognitive Therapy addresses the feelings of hopelessness, aims to alter negative cognitions, and provides therapeutic tools to assist the patient in thinking more adaptively. Cognitive Therapy utilizes techniques such as Socratic questioning, thought records, activity scheduling, reality testing, and guided discovery.

Further Research on Working Alliance is Necessary

The early working alliance has been described as being an important predictor of therapeutic change measured post-treatment (A. Horvath & Symonds, 1991). Literature suggests that the perception of an illness is “likely to impact many aspects of their experience” specifically, response to treatment (Manber et al., 2003, p. 335). Depression is a chronic disease and the way in which an individual views their depressive illness and their relationship with a therapist is liable to have an effect on the path of their depression. For instance, a patient with a higher rating of depression severity may view their relationship with their therapist in a completely different way than a patient who has a lower rating of depression severity. Depression is a debilitating disorder that often impairs interpersonal functioning (Coryell et al., 1992). The disorder, if untreated, has the ability to bleed into many aspects of a patient’s life including the relationship with their cognitive therapist.

Patients with depression often have psychosocial impairments that taint many aspects of functioning. That being said, the psychosocial impairment would likely have an impact on the working alliance of the patient and therapist. Beck proposed the idea of the negative cognitive triad. This theory stated that one’s depression elicited a negative view of the self, the negative world/environment, and the negative thoughts about the future (Beck, et al., 1979). Therefore, if a patient with severe depression, as rated by the Inventory of Depressive Symptomatology (IDS), seeks treatment, will their negative view of the self, the world, and the future blemish their perception of the working alliance thus causing a discrepancy in the way in which they view their working alliance?

Research demonstrates that patient expectancies (i.e., the patient's perception of their expected treatment outcome) "may be mediated by the therapeutic alliance" which further addresses the importance of the alliance between the patient and the therapist on treatment outcome (Joyce, et al., 2003, p. 673). Patients perception of their illness, their attitudes whether positive or negative, and their styles of coping all result in differing degrees of treatment outcomes. Those who have an overall positive outlook of their prognosis typically receive a greater benefit from treatment. In addition to viewing the situation in a positive manner, patients who are treated as a "whole person" as opposed to solely an illness appear to have some degree of impact on their overall therapeutic experience (Dean, 1999).

Krupnick and colleagues (1996), researched patients with depression who were separated into four treatment groups. The four treatment categories to which patients were assigned were cognitive-behavioral therapy, interpersonal psychotherapy, imipramine with clinical management, or placebo with clinical management. The results of the study showed that those receiving therapeutic interventions had an increase in working alliance when measuring alliance in early sessions and a decrease in symptoms at the end of the treatment ; whereas, those receiving placebo reported a less significant rating for their perception of the working alliance. If those patients who are utilizing psychotherapy or pharmacotherapy treatment have a higher alliance than those having no psychotherapy or pharmacotherapy intervention, it is likely that the change in alliance is due to the patient's subsiding depression.

The role of therapeutic alliance in outcome illustrated that the working alliance ratings as recorded by the patients were strongly correlated with treatment outcome; however, working alliance ratings from the therapists were not “significantly linked” to the therapeutic outcome (Krupnick, et al., 1996, p. 532). Therefore, the patient’s perspective of the working alliance appears to be a better predictor of treatment outcome than the therapist’s perspective. When a patient is severely depressed, it increases the likelihood that they will have impairments in their interpersonal functioning thus leading to maladaptive forming of working relationships; therefore, having an effect on their scores on the WAI, particularly, the Bond subscale (Constantino, et al., 2008). If a patient who is severely depressed rates working alliance, his/her ratings of working alliance on the WAI-Bond subscale could be influenced by their severity of depression and consequently, by their negative view of self and others.

Patients with Major Depressive Disorder, often have impairments in their interpersonal functioning thus leading to challenges in forming working relationships (Constantino, et al., 2008). Additionally, a patient with depressive severity may rate their working alliance adversely due to their negative outlook. . Depression oftentimes negatively affects interpersonal functioning; therefore, the TD-bond subscale will likely be affected adversely by the greater severity of depression. Zuroff and Blatt (2006) had four views of the therapeutic relationship and its relation to the process of change. One of which stated that “a positive relationship contributes directly to therapeutic outcome,” and this is regardless of the different therapeutic interventions (p. 130).

Research shows that the relationship between the patient and the therapist is the most crucial aspects of treatment (Meyer, et al., 2002). The Bond subscale encompasses the “complex network of positive personal attachments” that transpire between the patient and the therapist (Adam Horvath & Greenberg, 1989, p. 224). Barber and colleagues (2000) researched the working alliance inventory and outcome, and found that “patients who improved symptomatically tended to have a stronger bond and collaboration with their therapists, and that, in turn, led to subsequent improvement in depression (p. 1031).”

Purpose of the Current Study

The current study provides both the therapist’s and patient’s perspectives of the working alliance and the patient’s view of their severity of depression. The patient’s measure of depression and the two working alliance scores represent the separate perspectives of the therapist and the patient. The Working Alliance Inventory-Therapist Form is comprised of a scale measuring the therapist’s perspective of their relationship with the patient; whereas the Working Alliance Inventory-Client Form measures the patient’s perspective of their relationship with the therapist. The Inventory for Depressive Symptomatology-Self Report takes into account the patient’s perception of their depressive symptoms.

The purpose of the current study is to determine whether or not the severity of depression in patients as measured by the IDS-SR at the ninth therapy session led to an effect on the Therapeutic Distance. That is, do patients who are severely depressed view their working alliance with their respective therapists any differently than their therapist’s perspective of the same alliance with the patient resulting in a large (in absolute value) therapeutic

distance? An aim of the current study was to shed light on a new construct, Therapeutic Distance (TD), and its relation to depressive severity. The construct of TD was researched extensively in the current study in order to gain a better understanding of how this is impacted by severity of depression. We have also investigated if the therapeutic distance changes during the course of treatment and if change in depressive severity accounts for that change in TD. Finally, another intention of the study was to determine whether or not TD predicted response to treatment. Note that, response to treatment is defined as the absence of Major Depressive Episode (MDE) in addition to a Hamilton Rating Scale for Depression (17-item) score (HRSD-17) of 12 or below.

Klein and colleagues (2003) studied patients with chronic Major Depressive Disorder (MDD), those with recurrent Major Depressive Disorder, and those with Dysthymic Disorder. They found that higher therapeutic alliance was related to higher medication adherence and positive treatment outcome. Several studies have shown that depression greatly impacts working alliance and is an instrumental part of psychotherapy; however, minimal research has explored how the severity of depression impacts each subscale of the WAI, patient and therapist perspective (Constantino, et al., 2008; Klein, et al., 2003; Zuroff & Blatt, 2006).

This study goes beyond looking at trends in the WAI ratings and its role in therapeutic outcome; rather, it looks at TD as confounded by the severity of depression.

Furthermore, it computes the TD in the three subscales and determines the extent to which each subscale is affected by depressive severity. The Bond subscale takes into account the therapeutic relationship. Many patients with depression have a negative

outlook and interpersonal difficulty. Therefore, we expected to see those patients who have higher depressive severity to rate their working alliance higher than that of patients with lower depressive severity. However, we did not expect to see much of a difference in TD Task and TD Goal.

As above, if there is a large TD in the Bond subscale, this likely denotes that each party perceives their relationship differently. If there is a disagreement in the relationship, this could affect the patient's motivation to achieve the agreed upon goals. The Goal subscale takes into account the degree to which each party is in agreement/disagreement of the stated goals of therapy. If there is a large TD in the Goal subscale, this may indicate that each party has different views of the goals for therapy. The Task subscale deals with the specific interventions utilized by the therapist in treatment. If there is a large TD in the Task subscale, this likely means that the patient or therapist may not find that those specific interventions are of benefit to that particular patient. In finding the TD in each subscale, we can determine which subscale is most affected by depression severity, thus tailor treatment interventions to each patient's needs in order to improve therapy.

Research Questions of the Current Study

1. Does severity of depression as measured by the IDS-SR at mid-acute phase CT (ninth therapy session) predict therapeutic distance measured two to four sessions later in the mid-acute phase CT? It is hypothesized that the severity of depression as measured by IDS-SR during the mid-acute phase CT (measured at the ninth therapy session) will have a positive effect (positive slope) on

Therapeutic Distance measured during mid-acute phase CT (measured after the eleventh or twelfth therapy session for the patient, and measured the eleventh or thirteenth therapy session for the therapist). The higher the patient's ratings on IDS-SR, indicating higher severity of depression, the higher the therapeutic distance as measured by WAI. Alternatively, the lower the patient's ratings on IDS-SR, indicating lower severity of depression, the lower the therapeutic distance as measured by WAI.

2. Does severity of depression as measured by IDS-SR at mid-acute phase CT (ninth therapy session) predict therapeutic distance among the three subscales in the WAI measured two to four sessions later at mid-acute phase CT? It is hypothesized that the severity of depression as measured by IDS-SR during the mid-acute phase CT (measured during the ninth therapy session) will have a positive effect (positive slope) on the Therapeutic Distance-Bond subscale measured at mid-acute phase CT (measured at the eleventh or twelfth therapy session for the patient, and measured the eleventh or thirteenth therapy session for the therapist). The higher the patient's ratings on IDS-SR, the greater the TD of the Bond subscale. On the other hand, the lower the patient's ratings on IDS-SR, the lesser the TD of the Bond subscale. However, due to the literature suggesting that the relationship between the patient and the therapist is highly impactful of outcome, it is hypothesized that depression severity will not have such effect on the Task and Goal subscales (A. Horvath & Symonds, 1991; Joyce & Piper, 1998; Meyer, et al., 2002).
3. Is there variability in TD from mid-acute phase CT (measured at the eleventh or

twelfth therapy session for the patient, and measured at the eleventh or thirteenth therapy session for the therapist) to end-acute phase CT (measured at the sixteenth or twentieth session for the therapist, and measured at the first blind evaluation after the last session for the patient)? If so, is this variability in TD accounted for by change in depressive severity (measured from the ninth session to the last session, depending on response to treatment)? It is hypothesized that the therapeutic distance will decrease from mid-acute phase CT (measured at the eleventh or twelfth therapy session for the patient and measured at the eleventh or thirteenth therapy session for the therapist) to the end-acute phase CT (measured at the sixteenth or twentieth session for the therapist, and measured at the first blind evaluation after the last session for the patient). However, this decrease will be accounted for by the change in severity of depression. Thus, we predict that change in the Therapeutic Distance from mid-acute phase CT to end-acute phase CT will be completely accounted for by the change in self-reported severity of depressive symptoms over the same time period.

4. Does TD at mid-acute phase CT (measured at the eleventh or twelfth session for the patient and eleventh or thirteenth session for the therapist) predict response to treatment measured at the first blind evaluation (one session after the completion of the last therapy session)? It is hypothesized that TD in the patient/therapist relationship from middle of the acute phase CT (measured at the eleventh or twelfth therapy session for the patient, and measured the eleventh or thirteenth therapy session for the therapist) will be predictive of response to treatment at the first blind evaluation (measured one session after the completion of the final

therapy session). That is, the closer the alliance between the patient and the therapist, the higher the likelihood that the patient will respond to treatment and show a decrease in depressive symptoms. However, those patients with a higher TD will likely have less of a response to treatment. That is, the greater the discrepancy between the two versions of the Working Alliance Inventory, the less likely the patient will be to respond to treatment thus, the less likely the patient will be to experience a reduction of depressive symptoms.

CHAPTER THREE

Methodology

This study is part of a greater trial, and was funded by the National Institute of Mental Health (NIMH) by Grants Number K24-MH001571, R01 MH-58397, R01 MH-69219 (to Robin B. Jarrett, Ph.D.) and R01 MH-58356 and R01 MH-69618 (to Michael E. Thase, M.D.). For further information regarding the complete study design, refer to Jarrett and Thase, (2010) (see reference section for full citation).

Participants

Inclusionary Criteria

Inclusion criteria included: male and female patients, aged 18 to 70 years, capable of providing informed consent, with a diagnosis of non-psychotic, recurrent MDD, as diagnosed by the Structured Clinical Interview for DSM-IV (SCID-I), included one of the following criteria: remitted between depressive episodes, at least one prior depressive episode with complete inter-episode recovery, or a prior diagnosis of dysthymic disorder; and attained a score of 14 or higher on the 17-item HRSD at the first or second interview.

Exclusionary Criteria

Exclusion criteria included: patients who have had poorly controlled comorbid medical disorders that could subsequently cause depression or require medication that could cause depressive symptomatology; suffered from any of the following disorders: any psychotic or organic mental disorder, bipolar disorder, active alcohol abuse or drug dependence,

principal obsessive compulsive or eating disorder; attained a score of 14 or lower on the 17-item HRSD at the first or second interview; could not complete or understand surveys written in English; were an active suicide risk; had not responded previously to a trial of at least 8 weeks of CT carried out by a certified therapist; had not responded previously to a trial of at least 6 weeks of 40 mg of fluoxetine (FLX); were pregnant or intended to become pregnant during the first 11 months after intake; or were not willing to provide informed consent. Those patients who were not accepted into the study for any of the above reasons were referred to community treatment.

Procedure

The acute phase data will be used to address our hypotheses and is described below. The acute phase CT included 523 patients who engaged in 16-20 individual session protocol carried out in accordance with the Beck et al. treatment manual (Beck, et al., 1979).

However, this particular study includes 375 of the 523 patients. The protocol allowed 12-14 weeks to complete CT in order to allow for any rescheduling of missed appointments. The first 4 weeks consist of 2 sessions per week. Patients who completed the 4 weeks of CT and experienced 40% or more improvement of their depressive symptoms as measured by the 17 item Hamilton Rating Scale for Depression (HRSD-17), were categorized as “early responders” and started weekly sessions. However, those who upon completion of the 4 weeks experienced less than 40% reduction in depressive symptoms as measured by HRSD-17 scores, were categorized as “late responders” and maintained two sessions per week. The 4 supplementary sessions provided to the “late responders” were provided in order to increase the likelihood that those who were not responding to

CT might respond (defined as HRSD rating of 12 or less by therapist at first blind evaluation) from continued, intensive CT; therefore, they would be able to continue to participate in the study. Patients suspended psychotropics prior to entry. Patients were not paid to participate in therapy sessions. Therapy sessions were videotaped.

Prior to the therapists treating protocol patients, it was essential that they were competent (a) in CT and Continuation Phase Cognitive Therapy (C-CT), which is defined by the site supervisors' decision and by retaining a score of 39 or higher on the Cognitive Therapy Scale (CTS); and (b) in their clinical ratings for the 17-item Hamilton Rating Scale for Depression (HRSD-17) and Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV) diagnoses of MDD. Trained therapists, Robin Jarrett, Ph.D. and Sander Kornblith, Ph.D., were able to lead weekly supervision sessions at each site and afforded, when necessary, individualized case discussion.

Each session was videotaped and chosen at random for review in group supervision.

Upon completion of the CTS by supervisors, the therapists were offered feedback assessing their competence. Dr. Jarrett was available for supervision of the therapists at the Dallas location while Dr. Kornblith was the available CT supervisor for the Pittsburgh site. The Principal Investigators and Data Safety and Monitoring Board (DSMB) observed the quality of the CTS scores across sites and time.

Cognitive Therapists' Characteristics

The study included a total of fifteen participating therapists (seven in Dallas and eight in Pittsburgh). Out of the fifteen therapists, eleven were females and four were males. All

therapists at the Dallas site had PhD's, while at the Pittsburgh location, three were PhD's, one was an MD, and the remaining four had Master Degrees. Faculty who were experienced and highly trained led weekly supervision meetings in order to provide case consultation.

Setting

Patients were recruited from the Department of Psychiatry, Psychosocial Research, and Depression Clinic at The University of Texas Southwestern Medical Center at Dallas and from the Mood Disorders Treatment Research Program at the Western Psychiatric Institute and Clinic of the University of Pittsburgh Medical Center. We recruited patients from January of 2000 through July of 2008.

Measures

Working Alliance Inventory Form T (WAI-T)

The Working Alliance Inventory-Therapist Version (WAI-T; Adam Horvath & Greenberg, 1989) is a multidimensional inventory that allows the therapist to rate the patient on three different subscales of working alliance. The Working Alliance Inventory is a self-report instrument that captures the patient's, therapist's, and observer's perception of the working alliance during therapy. The therapist's version of the WAI assesses the therapist's perception of their working alliance while the client's version of the WAI assesses the patient's perception of their working alliance. The observer's version of the WAI assesses the perception of an independent party with regard to the

working alliance between a patient and a therapist (Adam Horvath & Greenberg, 1989). However, only the WAI of the client and therapist were utilized in this study.

Each item in the WAI was designed to elicit responses depending on the strength of one of the three components of Bordin's concept of the working alliance-Bond, Task, and Goal (Bordin, 1976). The instrument has 36 items, 12 nonoverlapping items in each subscale. The items are measured on a 7-point Likert scale that ranges from 1 (never) to 7 (always). The total scores for the working alliance inventory range from 36 to 252 (Adam Horvath & Greenberg, 1989).

Reliability for the Working Alliance Inventory as a whole is in the upper range from .84 to .93. When measuring the individual subscales, reliability ranges from .68 to .92. The test-retest reliability for the instrument over a 3-week period is .80; and the subscales range from .66 to .74. In the current sample, the three subscales, Bond, Task, and Goal are all strongly correlated with the scale intercorrelations ranging from .70s to .90s. The three subscales are under two independent factors. The Bond items are under one factor while the Task and Goal subscales fall under another factor.

The Bond subscale aims to measure a positive relationship between the patient and the therapist. This concept includes issues such as, the patient-therapist trust in one another, warmth, empathy, approval, and assurance. The therapist's version of this subscale consists of the following 12 items: 1, 5, 8, 17, 19, 20, 21, 23, 26, 28, 29, and 36. The items include statements such as, "I am genuinely concerned for _____'s welfare." and "_____ and I have built a mutual trust." These statements are to yield

data about the therapist's perspective of their bond with the patient (Adam Horvath & Greenberg, 1989).

The Task subscale refers to the specific techniques that "form the substance of the [therapy] session." Both the patient and the therapist must agree that the tasks of the treatment are going to be efficient and effective. The therapist's version of this subscale consists of the following 12 items: 2, 4, 7, 11, 13, 15, 16, 18, 24, 31, 33, and 35. The items include statements such as, "_____ and I agree about the steps to be taken to improve his/her situation." and "I am clear as to what I expect _____ to do in these sessions." These statements are to gain more data about the therapist's understanding of the collaborative tasks from session to session (Adam Horvath & Greenberg, 1989).

The Goal subscale is characterized by the therapist's and patient's "mutually endorsing and valuing" the outcomes of therapy (Horvath, A. & Greenberg, L., 1989). A patient and therapist must believe that a goal is specific, attainable, and realistic in order to ensure a productive, dynamic relationship. The therapist's version of this subscale consists of the following 12 items: 3, 6, 9, 10, 12, 14, 22, 25, 27, 30, 32, and 34. The items include statements such as, "_____ and I have a common perception of her/his goals." and "I have doubts about what we are trying to accomplish in therapy." These statements are to yield data about the therapist's perspective of the collaborative goals and outcome of therapy (Adam Horvath & Greenberg, 1989).

Working Alliance Inventory Form C (WAI-C)

The Working Alliance Inventory-Client Version (WAI-C; Adam Horvath & Greenberg, 1989) is a multidimensional inventory that allows the patient to rate the therapist on three different subscales of working alliance which include: Bond, Task, and Goal. The three subscales are under two independent factors. The Bond items are under one factor while the Task and Goal subscales fall under another factor.

Reliability for the Working Alliance Inventory as a whole is in the upper range from .84 to .93. When measuring the individual subscales, reliability ranges from .68 to .92. The test-retest reliability for the instrument over a 3-week period is .80; and the subscales range from .66 to .74. In the current sample, the three subscales, Bond, Task, and Goal are all strongly correlated with the scale intercorrelations ranging from .60s to .80s. The three subscales are under two independent factors. The Bond items are under one factor while the Task and Goal subscales fall under another factor.

The Bond subscale aims to measure a positive relationship between the patient and therapist. This concept includes issues such as, the patient-therapist trust in one another, warmth, empathy, approval, and assurance. The patient's version of this subscale consists of the following 12 items: 1, 5, 8, 17, 19, 20, 21, 23, 26, 28, 29, and 36. The items include statements such as, "I believe _____ is genuinely concerned for my welfare." and "_____ and I trust one another." These statements yield data regarding the patient's perspective of the collaborative bond (Adam Horvath & Greenberg, 1989).

The Task subscale refers to the specific techniques that “form the substance of the [therapy] session.” Both the patient and the therapist must agree that the tasks of the treatment are going to be efficient and effective. The patient’s version of this subscale consists of the following 12 items: 2, 4, 7, 11, 13, 15, 16, 18, 24, 31, 33, and 35. The items include statements such as, “I am clear on what my responsibilities are in therapy.” and “I am clear as to what _____ wants me to do in these sessions.” These statements help to gain information regarding the patient’s perspective of the tasks or techniques necessary in therapy (Adam Horvath & Greenberg, 1989).

The Goal subscale is characterized by the therapist’s and patient’s “mutually endorsing and valuing” the outcomes of therapy (Horvath, A. & Greenberg, L., 1989). A patient and therapist must believe that a goal is specific, attainable, and realistic in order to ensure a productive, dynamic relationship. The patient’s version of this subscale consists of the following 12 items: 3, 6, 9, 10, 12, 14, 22, 25, 27, 30, 32, and 34. The items include statements such as, “_____ perceives accurately what my goals are.” and “_____ and I are working towards mutually agreed upon goals.” These statements are to gain understanding of the patient’s perspective of the collaborative goals and outcome of therapy (Adam Horvath & Greenberg, 1989).

Inventory of Depressive Symptomatology (IDS-SR)

The Inventory of Depressive Symptomatology-Self Report (IDS-SR; Rush, et al., 1986) is a self-report inventory that was used to measure the depressive symptoms as rated by the patient. It includes 30 items with each item rated on a 3-point Likert scale with

higher scores characterizing more severe depression. The total score ranges from 0-78 with 26 out of the 30 items comprising the total score. The instrument was created to measure vegetative symptoms, cognitive changes, mood disturbance, endogenous symptoms, and anxiety symptoms. The average scores for patients with depression were 36.5 for the IDS, and for the control population, the average was 2.1. The internal consistency reliability in this sample are high with ratings ranging from 0.85 and 0.88. The 30-item questionnaire was utilized for this study. The consistency of the IDS-SR-30 has been found to be high with alpha at 0.92 (Rush, et al., 1986).

STATISTICAL ANALYSES

Research Hypothesis 1: Does severity of depression as measured by the IDS-SR at mid-acute phase CT predict therapeutic distance at the mid-acute phase CT?

Analysis

We estimated therapeutic distance (TD) by calculating the difference between the WAI-T and the WAI-C. Calculate $TD = (WAI-T) - (WAI-C)$. We used linear regression analysis to estimate a predictive model with TD at mid-point (measured at the eleventh or twelfth therapy session for the patient, and measured at the eleventh or thirteenth therapy session for the therapist) as the outcome and IDS-SR at mid-point (measured at the ninth session) as predictor and tested if the slope of the regression model is zero. In other words, in the regression model,

$$TD = \text{intercept} + \text{slope} \times \text{IDS},$$

We tested the null hypothesis:

H_0 : Slope = 0 vs. H_1 : Slope > 0

If the above null hypothesis is rejected, then we conclude that at mid-point of ACT, the depression severity is predictive of TD. Moreover, on the average, patients with higher IDS score (greater depression severity) will have a higher level of TD.

Research Hypothesis 2: Does severity of depression as measured by IDS-SR at mid-acute phase CT predict therapeutic distance among the three subscales in the WAI at mid-acute phase CT?

Analysis

We estimate therapeutic distance TD_{Bond} by calculating the difference between the Bond subscale of the WAI-T and the Bond subscale of the WAI-C. We estimate TD_{Task} by calculating the difference between the Task subscale of the WAI-T and the Task subscale of the WAI-C. We estimated TD_{Goal} by calculating the difference between the Goal subscale of the WAI-T and the Goal subscale of the WAI-C. We used linear regression analysis to estimate a predictive model with TD at mid-point (measured at the eleventh or twelfth therapy session for the patient, and measured at the eleventh or thirteenth therapy session for the therapist) as the outcome and IDS at mid-point (measured at the ninth session) as predictor and tested if the slope of the regression model is zero. In other words, in the regression model,

$$TD_{\text{Bonds}} = \text{Intercept} + \text{Slope} \times \text{IDS}$$

$$TD_{\text{Tasks}} = \text{Intercept} + \text{Slope} \times \text{IDS}$$

$$TD_{\text{Goals}} = \text{Intercept} + \text{Slope} \times \text{IDS}$$

We tested the null hypothesis:

H_0 : Slope = 0 vs. H_1 : Slope > 0

We expected that the TD_{Bond} subscale will yield a significant result, whereas the TD_{Task} and TD_{Goal} would not have a significant result.

Research Hypothesis 3: Does change in severity of depression as measured by IDS-SR from mid-acute phase CT to end-acute phase CT explain variability of therapeutic distance from mid-acute phase CT to end-acute phase CT?

Analysis

We used paired t- test to compare the mean of TD at mid-acute phase CT (measured at the eleventh or twelfth session by the patient, and measured at the eleventh or thirteenth session by the therapist) and the mean of TD at end-acute phase CT (measured at the sixteenth or twentieth session by the therapist, and measured at the first blind evaluation upon completion of the final therapy session by the therapist) to assess if on the average, TD decreased (or increased) from mid-point acute phase CT to the end-point acute phase CT. We expected to see a significant F test suggesting a change in mean TD over time. The mean levels of TD at mid point as well as end of the study were also reported. To assess if change in depression severity from mid-point to the end of the study was accounting for the change in TD over the same time period, we computed change in depression severity as the difference between mid-acute phase CT (measured at the ninth therapy session) and end-acute phase CT IDS-SR scores (measured at the fifteenth or nineteenth therapy session) for each patient. We expected that controlling for change in IDS would render the change in TD over time non-significant. This suggests that the

change in TD over time is explained by the change in depression severity over the same time period.

Research Hypothesis 4: Does TD at midpoint of the acute phase CT predict response to treatment at the first blind evaluation?

Analysis

We used a logistic regression to determine whether total TD, TD bond, TD task, and TD goal at mid-acute phase CT (measured at the eleventh or twelfth therapy session by the patient, and measured at the eleventh or thirteenth therapy session by the therapist) was predictive of response to treatment at the completion of the acute phase CT (measured at the first blind evaluation one session upon completion of the final therapy session). We expected to see a significant that total TD and TD among the subscales would be predictive of response to treatment at the end-point of the acute phase. That is, if the therapist rates their alliance higher than the patient, we are likely to see a lower response to treatment and a minimal amount of decrease in depressive symptoms. However, if the patient rates their alliance higher than the therapist, we are likely to see a higher response to treatment, thus a decrease in depressive symptoms.

CHAPTER FOUR

Results

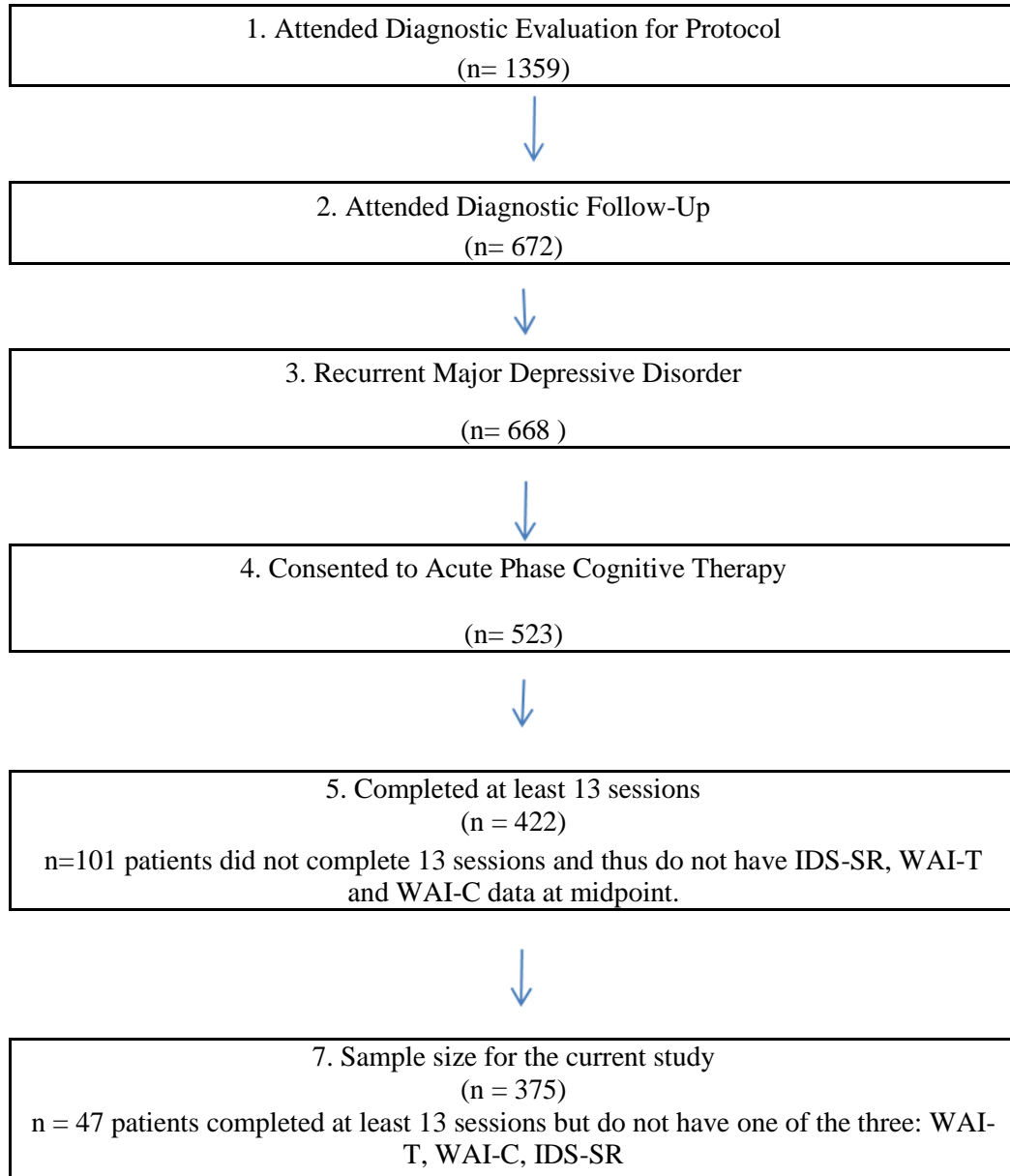
The purpose of the current study was to determine whether or not the severity of depression in patients as measured by the IDS-SR at mid-acute phase CT effected Therapeutic Distance. That is, if a patient was severely depressed, did that lead to a higher TD? The data analysis was completed utilizing the Predictive Analytical Software (PASW) version 18 also called the Statistical Package for Social Sciences (SPSS, 2009).

SAMPLE CHARACTERISTICS

There were initially 523 patients who entered the study and consented to treatment. However, the current study utilizes only those patients who did not drop out before completing at least 13 sessions and those who did not have missing data from WAI-T, WAI-C, or IDS-SR. The number of patients who completed at least 13 sessions were n=422 while n=101 patients dropped out. Of the 422 patients who completed at least 13 sessions, 47 did not have data on any one of the measures (WAI-C, WAI-T, and IDS-SR) and were excluded from the study sample. Thus, the current sample utilizes data from 375 patients in the study. (see Figure 1 for details)

Figure 1

Flow chart identifying the missing data and those who dropped out of the study at differing time points



The majority of the patients were Caucasian (n= 322, 85.9%) followed by African American (n= 25, 6.7%). The remaining races comprising this sample were Hispanics (n=17, 4.5%), Asian/Pacific Islander (n=6, 1.6%), Native American (n=2, 0.5%), and other (n=3, 0.8%). The majority of the sample was female (n= 261, 69.6%). The sample consisted of n= 136 (36.3%) married, n= 104 (27.7%) single, and n= 77 (20.5%) divorced patients while very few were living together (n= 32, 8.5%), separated (n= 15, 4.0%), or widowed (n= 11, 2.9%). This particular sample had an average of 15.4 years of education (Standard Deviation (SD) =2.8) and the mean age of the sample was 43.7 years (SD =12.0). The sample consisted of those who had full time places of employment (n= 171, 45.6%), part time employment (n=43, 11.5%), homemaker/caregivers (n=25, 6.7%), and those who were unemployed (n= 84, 22.4%) while some of the patients were students (n= 15, 4.0%), were retired (n= 14, 3.7%), or other (n=23, 6.1%). (See Table 1 for details).

Table 1

Patient Demographics

Characteristics	Total (n=375)
Gender, n (%)	
Female	261 (69.6)
Male	114 (30.4)
Race, n (%)	
Caucasian	322 (85.9)
African American	25 (6.7)
Hispanic	17 (4.5)
Asian/Pacific Islander	6 (1.6)
Other	3 (0.8)
Native American/Alaskan	2 (0.5)
Age, mean (SD)	43.7 (12.0)
Marital Status, n (%)	
Married	136 (36.3)
Single, never married	104 (27.7)
Divorced	77 (20.5)
Living Together	32 (8.5)
Separated	15 (4.0)
Widowed	11 (2.9)
Employment, n (%)	
Full time	171 (45.6)
Part time	43 (11.5)
Homemaker/Caregiver	25 (6.67)
Student	15 (4.0)
Retired	14 (3.7)
Other	23 (6.1)
Unemployed	84 (22.4)
Education, mean (SD)	15.4 (2.8)

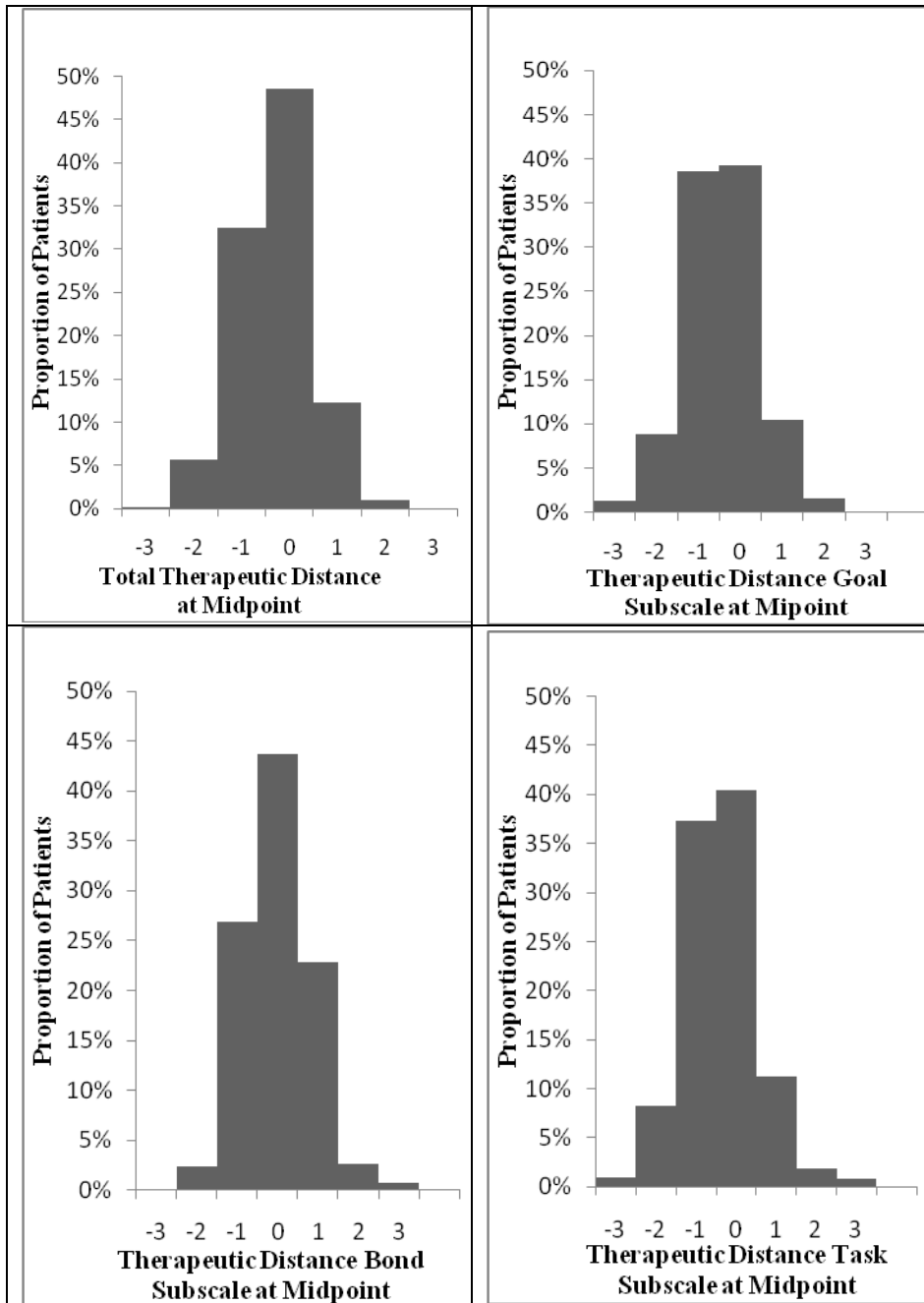
Therapeutic Distance as a Construct

Therapeutic Distance (TD) is a new construct, and was researched extensively in the current study. The construct can theoretically range from negative six to positive six with a negative TD meaning that the patient rated the alliance higher than the therapist or positive TD meaning that the therapist rated the alliance higher than the patient. A zero

TD means that the patient and the therapist rated their alliance equally. Therapeutic distance (TD) is the difference between the patient's and therapist's perspectives of their working alliance and is measured as the difference between the Working Alliance Inventory Therapist Form (WAI-T) and the Working Alliance Inventory Client Form (WAI-C) (as defined by R. Jarrett, personal communication, June 11, 2010). Therapeutic distance (TD) was also calculated for each of the three subscales: bond, task, and goal. This calculation was used to determine how each subscale is affected by severity of depression. Histograms for total TD, Bond TD, Task TD, and Goal TD at midpoint of the study showed a symmetric shape for the distributions (Figure 2).

Figure 2

Histograms of distribution of Midpoint Therapeutic Distance Total, and that of the Therapeutic Distance among the three subscales: Bond, Task, and Goal



The TD total at midpoint of the acute phase CT has a mean of -0.28 (SD= 0.744).

However, the distribution for TD Bond subscale is almost centered at a mean of 0.02 (SD= 0.81). The remaining two subscale yielded similar results with the TD Task (mean= -0.42, SD= 0.797) and the TD Goal (mean= -0.43, SD= 0.862). Summary statistics are shown in Table 2.

Table 2

Descriptive statistics for Therapeutic Distance total and the Therapeutic Distance in the three subscales: Bond, Task, and Goal at midpoint and endpoint of the acute phase Cognitive Therapy

Midpoint	N	Minimum	25%	Median	75%	Maximum	Mean	SD
TD Total	375	-2.61	-0.75	-0.25	0.17	2.39	-0.28	0.74
TD Bond	373	-2.3	-0.58	0	0.5	3.17	0.02	0.81
TD Task	376	-3.08	-0.92	-0.42	0	1.75	-0.42	0.8
TD Goal	375	-3.42	-0.83	-0.42	0.08	2.25	-0.43	0.86
Endpoint								
TD Total	332	-2.97	-0.69	-0.26	0.19	1.81	-0.23	0.71
TD Bond	331	-2.92	-0.5	0.08	0.5	2.58	0.03	0.82
TD Task	332	-3.92	-0.83	-0.33	0.08	1.83	-0.33	0.76
TD Goal	332	-3.42	-0.83	-0.42	0.08	2.17	-0.38	0.8

Primary Analyses

Hypothesis 1: Does severity of depression as measured by the IDS-SR at mid-acute phase CT (ninth therapy session) predict therapeutic distance measured two to four sessions later in the mid-A-CT?

No, severity of depression (measured at the ninth therapy session) does not predict TD (measured at the eleventh or twelfth therapy session by the patient, and measured the eleventh or thirteenth session by the therapist) in the mid-acute phase CT in this sample. We used a linear regression analysis in order to determine if depression severity as measured by the IDS-SR at the ninth session predicts therapeutic distance at two to four sessions later, and the results indicated that depression severity at midpoint was not predictive of TD at midpoint ($b = -.032, p < 0.542$). (Table 3).

Hypothesis 2: Does severity of depression as measured by IDS-SR at mid-acute phase CT (ninth therapy session) predict therapeutic distance among the three subscales in the WAI (measured at the eleventh or twelfth therapy session by the patient, and measured at the eleventh or thirteenth therapy session by the therapist) at mid-acute phase CT?

No, severity of depression measured at the ninth therapy session does not predict TD (measured two to four therapy sessions later) in the three subscales at midpoint of the acute phase CT. We utilized linear regression analysis to determine if depression severity in terms of IDS-SR at the ninth session predicts Therapeutic Distance at midpoint in the three subscales (Bond, Task, Goal). In the linear regression models, Therapeutic Distance in each of subscales was the outcome variable while IDS-SR was the predictor variable. For the midpoint of the study, we estimated a linear regression models for TD Bond ($b = .010, p = .848$), for TD Task ($b = -.034, p = .517$), and TD Goal ($b = -.063, p = .230$). However, results indicated that depression severity measured at the ninth therapy session was not predictive of TD Bond, TD Task, and TD Goal measured two to four

sessions later. Pearson correlation coefficient (r) was also determined between IDS-SR and TD as well as IDS-SR among the subscales. Details are displayed in Table 3.

Table 3

Results of Linear Regression including Midpoint Therapeutic Distance Total as well as Therapeutic Distance of the three subscales: Bond, Task, Goal and the Pearson correlation coefficients

Variable	Standardized Beta coefficient	t-statistic	p-value	r
TD Total	-0.032	-0.611	0.542	-0.032
TD Bond	0.01	0.192	0.848	0.01
TD Task	-0.034	-0.648	0.517	-0.034
TD Goal	-0.063	-1.203	0.23	-0.063

Hypothesis 3: Is there variability in TD from mid-acute phase CT (measured at the eleventh or twelfth therapy session for the patient, and measured at the eleventh or thirteenth therapy session for the therapist) to end-acute phase CT (measured at the sixteenth or twentieth session for the therapist, and measured at the first blind evaluation after the last session for the patient)? If so, is this variability in TD accounted for by change in depressive severity (measured from the ninth session to the fifteenth or nineteenth session, depending on response to treatment)?

We first investigated if there is any change in TD total as well as TD in each of the subscales from midpoint to end of the A-CT and did not detect any such changes in the mean levels of TD. We used a paired t-tests to determine if the mean TD (total and in each of the subscales) at the mid-point of A-CT changed at the end of A-CT. Results

indicated that there was no change in mean TD from midpoint to endpoint for overall as well as for bond and goal subscales (For TD total $t = -1.765, p = .079$; for TD Bond $t = -.931, p = .353$; and for TD Goal $t = -1.403, p = .162$). However, there is statistically significant change in the mean TD for the task subscale ($t = -2.202, p = .028$; Details are shown in Table 4).

We then further investigated if the change in TD in the task subscale from midpoint to endpoint can be accounted for by the change in the IDS-SR levels over the same time points. We used a repeated measures analysis of variance with two time points and change in IDS-SR as the covariate and found that the change in TD in the task subscale becomes non-significant when change in IDS-SR is used as a covariate ($F = 0.38, p < 0.538$). This suggests that the change in TD task from midpoint to endpoint can be accounted for by change in depressive severity.

Table 4

Results of Paired T-Test depicting change in Therapeutic Distance from Midpoint to Endpoint of the Acute Phase Cognitive Therapy

Variable	t-statistic	p-value
TD Total	-1.765	0.079
TD Bond	-0.931	0.353
TD Task	-2.202	0.028
TD Goal	-1.403	0.162

Hypothesis 4: Does TD at mid-acute phase CT (measured at the eleventh or twelfth session for the patient and eleventh or thirteenth session for the therapist) predict response (defined as the absence of Major Depressive Disorder (MDE) and HRSD-17

score of twelve or below) to treatment measured at the first blind evaluation (one session after the completion of the last therapy session)?

No, therapeutic distance at midpoint of the acute phase CT does not predict response to treatment at the first blind evaluation. We used logistic regression in order to investigate whether TD total, or TD bond, task, or goal at midpoint was predictive of response to treatment at the completion of the acute phase CT. Total TD and TD of each of the subscales were not predictive of response. For TD total and response ($b = -.160$, odds ratio (OR) = .852, $p = .331$), TD Bond and response ($b = -.266$, OR = .766, $p = .077$), TD Task and response ($b = -.090$, OR = .914, $p = .559$), or TD Goal and response ($b = -.051$, OR = .950, $p = .714$). Details are shown in Table 5.

Table 5

Results of the logistic regression analysis of Response to acute phase cognitive therapy as the outcome variable with Therapeutic Distance Total as well as for the three subscales: Bond, Task, and Goal as predictor variables

Variable	Beta coefficient	<i>p</i> -value	Odds Ratio (OR)
TD Total	-0.16	0.331	0.852
TD Bond	-0.266	-0.266	0.766
TD Task	-0.09	-0.09	0.914
TD Goal	-0.051	-0.051	0.95

Secondary Analyses A Cross-Tabulation analysis was used to record the frequency of the sample with differing characteristics. Our interest was to explore if patients with negative TD has a different rate of response (defined as HRSD 17 score ≤ 12 and the

absence of a Major Depressive Episode (MDE) at first blind evaluation). Recall that, a zero TD shows that the patient and therapist agree completely on their working alliance, while a positive TD indicates that the therapist rated their alliance higher than the patient. On the other hand, a negative TD shows that the patient rated their alliance higher than that of the therapist. We used chi-square tests for these comparisons. The results suggest that there was not a significant difference in rate of response between the group consisting of positive and zero TD and that of the group consisting of negative TD.

Of the patients with negative TD total, $n = 208$ (76.8%) of patients responded to treatment ($n=63$, 23.2% did not respond); whereas, $n = 84$ (67.7%) of patients with positive or zero TD responded ($n=40$, 32.3% did not respond). However, the difference was not statistically significant at traditional alpha levels ($p < .058$). Details are given in Table 6.

In the case of the Bond subscale, $n = 164$ (77.7%) of patients with negative TD responded to treatment ($n=47$, 22.3% did not respond); whereas $n=128$ (69.6%) of patients with positive or zero TD responded ($n=56$, 30.4% did not respond). However, the difference was not statistically significant at traditional alpha levels ($p < .065$). Details are given in Table 6.

In the case of the Task subscale, $n=216$ (73.7%) of patients with negative TD responded to treatment ($n=77$, 26.3% did not respond); whereas $n=76$ (74.5%) of patients with positive or zero TD responded ($n=26$, 25.5% did not respond). However, the difference was not statistically significant ($p < .876$). Details are given in Table 6.

In the case of the Goal subscale, n=208 (73.8%) of patients with negative TD responded to treatment (n=74, 26.2% did not respond); whereas n=84 (74.3%) of patients with positive or zero TD responded (n=29, 25.7% did not respond). However, the difference was not statistically significant ($p < .906$). Details are given in Table 6.

Table 6

Results for Cross-Tabulation Analysis with frequency of response to treatment as the dependent variable and zero and positive Therapeutic Distance as one group for independent variable and negative Therapeutic Distance as the second group for independent variable

Total TD	Responder	Non-Responder
Negative TD	208 (76.8%)	63 (23.2%)
Positive or Zero TD	84 (67.7%)	40 (32.3%)
TD Bond	Responder	Non-Responder
Negative TD	164 (77.7%)	47 (22.3%)
Positive or Zero TD	128 (69.6%)	56 (30.4%)
TD Task	Responder	Non-Responder
Negative TD	216 (73.7%)	77 (26.3%)
Positive or Zero TD	76 (74.5%)	26 (25.5%)
TD Goal	Responder	Non-Responder
Negative TD	208 (73.8%)	74 (26.2%)
Positive or Zero TD	84 (74.3%)	29 (25.7%)

CHAPTER FIVE

Discussion of the Results

The aim of the current study was to shed light on a new construct, Therapeutic Distance (TD), and its relation to depressive severity. Therapeutic distance is a construct that is new to the literature. Therapeutic distance was derived by subtracting WAI-C from WAI-T. The theoretical range of TD is between negative six and positive six. We computed the descriptive statistics for the total TD as well as the TD for the three subscales: Bond, Task, and Goal.

The histogram for the total TD showed a slightly positive skewness with a mean at -0.28 (SD=0.744). This indicates that on average, the patient rated their alliance higher than that of the therapist. That is, overall the patient had a more positive view of the alliance than did the therapist. The positive skewness for total TD means that more patients rated their working alliance higher than their therapists resulting in large and positive TD. This could be due to a higher expectation of the patient about the working alliance which was reflected in the overall TD.

The histogram for the TD Bond subscale showed an almost completely centered, symmetric shape for the distribution with a mean of 0.02 (SD=0.81). Since the mean level of the TD Bond subscale is so close to zero, this suggests that on average, there is more agreement between the patient and the therapist about the Bond aspects of the working relationship. That is, the patient and therapist appear to be in agreement about the trust, warmth, and empathy in the alliance. The fact that the mean of the Bond subscale is so close to zero could be due to the experience of the therapists in the current

study. The therapists were highly trained in cognitive therapy and this was a treatment protocol that was followed fairly precisely without much deviation. Perhaps, we would see a greater discrepancy of the TD if given different circumstances.

The histogram for the TD Task subscale showed a slight positive skewness of the distribution with a mean of -0.42 (SD=.797). This suggests that, on average, the patient rated their alliance higher than that of the therapist. That is the patient had a more positive view of the techniques and skills utilized in therapy sessions than did the therapist. This could be due to the patient having a sense of a greater mastery of the skills and techniques in therapy.

The histogram for the TD Goal subscale showed a slight positive skewness of the distribution with a mean of -0.43 (SD=0.862). This suggests that, on average, the patient rated their Goal aspect of the alliance higher than that of the therapist. This indicates that the patient has a more positive view of the outcome or goals of therapy than did the therapist.

Overall, it appears that the therapist and the patient strongly agreed on their bond/relationship with one another. Thus there appears to be a general understanding of the Bond aspects of the therapy from the patient and the therapist perspectives. However, greater variability in the experience of the therapists might provide a greater amount of generalizability to future research.

Hypothesis 1

Severity of depression as measured by IDS-SR at mid-acute phase CT (ninth therapy session) of the study will have an immediate effect on the TD at mid-acute phase of the study (two to four sessions later).

Results indicated that severity of depression as rated by the patient does not predict TD at mid-acute phase CT of the study. This suggests that depression severity does not have an effect on how the patient and therapist perceive their overall working alliance. We expected depression severity to predict TD due to the amount of research indicating that alliance affects treatment outcome and in turn, depression severity; however, in this sample, we found that severity of depression is not an immediate predictor of TD.

Horvath & Symonds (1991) researched how alliance affects treatment outcome and found that alliance is a determinant of outcome. However, in this study we did not find that depressive severity has an immediate effect on therapeutic distance and thus on the perception of alliance between the patient and the therapist as measured by WAI. This could be in part because of the small amount of variability in the total TD in this sample. The sample had very specific inclusionary criteria and this could explain a weakness in this study. The fact that the sample of therapists involved in the study was all highly specialized and experienced could have contributed to the minimal variability in the TD as well. However, a different sample of therapists with varying degree of experience and patients with differing expectations may help better understanding of this new construct of TD and the effect of depressive severity on TD.

Hypothesis 2

Severity of depression as measured by IDS-SR at mid-acute phase CT (ninth therapy session) of the study will have an effect on the TD of the subscales at mid-acute phase of the study (two to four sessions later).

Results showed that severity of depression as rated by the patient does not predict TD of the subscales at mid-acute phase CT. This result indicates that depression severity does not have an immediate effect on the TD in three separate subscales of the WAI. Thus, the patient and the therapist tend to agree on their relationship with one another (Bond), the techniques of therapy (Tasks), and prospective outcome of the treatment (Goals). We expected to see a change in TD Bond subscale because of the research suggesting that those who are severely depressed have challenges with interpersonal relationships and the Bond subscale most closely captures the relationship/emotional aspect of alliance.

However, we did not expect to see TD of Task or Goal to be affected by severity of depression. That is, we expected that those patients with a greater depressive severity would have a higher TD Bond as compared to those patients with a lower depressive severity. It is possible that a sample with greater variability among the therapist, as far as level of experience, might provide additional information regarding how depressive severity might impact working alliance between the therapist and the patient. As mentioned above, the patients and therapists were all seen under specific circumstances. The therapists were all experienced and received supervision on a weekly basis. This could be a reason for the null results. Perhaps, utilizing more experienced therapists who were continuously being supervised provided for a level of expertise regarding their

relationship with their patients. That is, experienced therapist might be more knowledgeable about what the particular patient may need.

Hypothesis 3

Therapeutic Distance will decrease from mid-acute phase of the study to end-acute phase CT of the study. This change in TD will be accounted for by depression severity.

Results suggested that there was no change in mean TD total as well as TD Bond and TD Goal from midpoint of the A-CT (measured at the eleventh or twelfth therapy session by the patient, and measured the eleventh or thirteenth therapy session by the therapist) to endpoint of the A-CT (measured at the sixteenth or twentieth session by the patient, and measured at the first blind evaluation by the therapist).

We first investigated if there was any change in TD total as well as TD in each of the subscales from midpoint to endpoint of the acute phase CT. We did not detect any such changes in TD Bond or TD Goal. However, there was a trend in TD total. Additionally, there was a significant difference in TD Task at midpoint versus TD Task at endpoint. The t-statistic for TD Task indicates that the difference is negative meaning that the TD task changed towards zero over this time period. However, in both time points, the patient rated the TD task subscale higher than that of the therapist.

Note that, we calculated TD midpoint minus TD endpoint. Therefore, a negative t-statistic indicates that TD task subscale was closer to zero (no TD) at the final evaluation of the acute phase than at the midpoint of the acute phase. That is, the patient and therapist agreed more on the tasks or techniques of therapy at the mid-acute phase than at

the end-acute phase of CT. Thus, it appears that working alliance Bond and Goal subscales are established fairly quickly and remain stable throughout the acute phase of treatment. However, the task subscale changes over time. The patient and the therapist started out in somewhat lower levels of agreement of the Tasks, and during the course of treatment, patients and therapists achieved a better level of agreement regarding perceptions of the Task subscale.

A follow-up repeated measures analysis of variance was then utilized using change in depressive severity as a covariate in order to determine whether or not this change in TD Task from midpoint to endpoint is accounted for by change in depressive severity over time. We found that the change in TD task from midpoint to endpoint can be accounted for by change in depressive severity.

In general, the patient's depressive symptoms are reduced over the period of time from mid-acute phase CT to end-acute phase CT, and as the depressive symptoms are reducing, the patient's ratings on the Task subscale increase. This suggests that as the patient is experiencing less depressive symptoms, the TD is decreasing. Thus, the patient and the therapist are agreeing more on the tasks of therapy. At the beginning and middle of therapy, the patient might be more hesitant on the techniques of the therapy; however, once they begin to practice the techniques and experience a reduction of depressive symptoms, they may rate their tasks of therapy in a more positive manner. Additionally, it could be the case that patients are getting better at understanding the task aspects of the relationship; therefore, their depression is getting better as a consequence.

Hypothesis 4

Therapeutic distance at mid-acute phase CT (measured at the eleventh or twelfth therapy session for the patient and measured at the eleventh or thirteenth therapy session for the therapist) will predict response to treatment at first blind evaluation (measured one session after the completion of the final therapy session).

Results indicated that TD in total as well as in the subscales at mid-acute phase CT was not predictive of response to treatment at the end-acute phase CT. One would expect TD to have some effect on response. However, there was a trend in TD Task and TD Goal. This suggests that this result could be significant in another sample. It appears that in this sample, if there was an agreement on the tasks and goals of therapy, there appeared to be a higher tendency for the patient to respond to treatment. Furthermore, this may be different in another sample with a larger variability in TD. Perhaps, TD Task and/or TD Goal would be found to be predictive of response.

Limitations of the Current Study and Implications for Future Research

The current study has some limitations. One methodological limitation of the study is that the WAI data were not gathered at the same time point for the therapists and the patients. In fact, the WAI-Client version was measured at the eleventh or twelfth therapy session, whereas the WAI-Therapist version was measured at the eleventh or thirteenth therapy session. This may account for some weakness in calculating total TD as well as TD for the three subscales: Bond, Task, and Goal. Future studies may consider

measuring these inventories at the same time point for both the patients and the therapists.

In addition, the initial sample size of the current study was 523 and was reduced to 375 due to either patients who dropped out or a lack of data at a particular time point. Thus, it does not take into account how the variance might have been different with data from those who did not complete this portion of the study. Perhaps those who were not bonded to their therapist, dropped out of the study before completing all stages thus overall affecting the variability in the data. Future research might attempt to gather WAI at each session; therefore, if the patient drops out of the study, the latest WAI information would be available.

Furthermore, the current study utilizes the effects of recurrent major depressive disorder population on working alliance. It does not consider patients with mental illnesses other than depression. Future investigations might produce a higher variance by including those patients of varying mental illness in order to provide a broader outlook of the construct.

Additionally, it does not consider the possibility that TD is affected by a mismatch of gender and race between therapist and patients. Perhaps there would be a greater variability in TD if there were therapists and patients of different backgrounds. Future studies might investigate how TD might be affected by a mismatch in background between the therapist and the patient.

Finally, this study does not take into account how the variability of TD might differ by utilizing therapists who are not as experienced or highly specialized in cognitive therapy. The population of the therapists in the current study were highly specialized and experienced cognitive therapists who attended weekly supervision. Perhaps, future studies should focus on therapists with differing levels of expertise as well as from varying theoretical orientations.

CHAPTER SIX

Conclusion

The goal of the study was to introduce the new construct of therapeutic distance to the literature, explore its properties, its association with depression severity as well as to determine whether or not this new construct is predictive of response to acute phase CT. The results of this study provide evidence that further research needs to be conducted on the construct of TD. Overall, therapeutic distance is a new construct and merits more research.

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