EVALUATING THE RELATIONSHIP BETWEEN COLLABORATIVE THERAPIST BEHAVIORS,

HOMEWORK ADHERENCE, AND TREATMENT OUTCOME IN COGNITIVE BEHAVIORAL

THERAPY

by

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Thanks to my mother and appointed, late in life family for their continuous support.

ABSTRACT

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THERAPY

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The use of homework assignments is considered an integral part of cognitive behavioral therapy (CBT). Although homework adherence has been shown to contribute to treatment outcome for depression, little research has been conducted which successfully identifies therapist characteristics which may facilitate homework adherence. Although therapeutic collaboration is referenced in clinical literature as a method of facilitating homework, no empirical investigation documents the extent to which therapeutic collaboration facilitates homework adherence. The following study proposes to test the extent to which therapeutic collaboration facilitates homework adherence and treatment outcome, and to further validate the positive relationship between homework adherence and treatment outcome. Data collected for this study consists of audiotaped therapy sessions of social workers and licensed professional counselors delivering a manualized CBT protocol for depression. The protocol included twenty, 60 minute CBT sessions delivered to patients diagnosed with Major Depressive Disorder (MDD). The hypotheses for the proposed study are: 1) Adequate therapist directiveness will have a positive relationship with treatment outcome and homework adherence 2) Inadequate therapist direction will have a

negative relationship with treatment outcome and homework adherence 3) Excessive therapist direction will have a negative relationship with treatment outcome and homework adherence; 4) Homework adherence will mediate the relationship between therapist directiveness and treatment outcome.

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CHAPTER 1

INTRODUCTION

Homework Adherence and Treatment Outcome

Cognitive behavioral therapy (CBT) (Beck, Emery, & Shaw, 1979) is an empirically validated treatment for depression (e.g., Chambless & Hollon, 1998; Dobson, 1989; Robinson, Berman, & Neimeyer, 1990). Homework assignments are considered to be an integral component of CBT, allowing patients to reinforce the skills learned in sessions through the application of those skills in their daily environment. A growing interest in brief therapy has popularized the use of homework in psychotherapeutic practice (Tompkins, 2002) with as many as 83percent of practitioners reporting the frequent use of homework in clinical settings (Kanzantzis, Bush, Ronan & Merrick, 2007). Furthermore, cognitive behavioral therapists report using homework assignments more than other practitioners and report more positive attitudes toward the utilization of homework in therapy (Kanzantzis, et al., 2007; Kanzantzis, Lampropoulos, & Deane, 2005). Perhaps this can be attributed to the fundamental role homework assignments have in the therapeutic process of CBT and their systematic focus (Wilson, 1999).

The role of homework in CBT not only has clinical importance but there is extensive empirical support for its therapeutic effects. Specifically homework adherence predicts a more positive treatment outcome for depression (Addis & Jacobson, 2000; Bryant, Simons, & Thase, 1999; Burns & Spangler, 2000; Burns & Nolen-Hoeksema, 1991,1992; Kazantzis, Deane, & Ronan, 2000; Persons, Burns, & Peloff, 1988). Wilson (1999) proposes that homework may be a mechanism of change in CBT, accounting for the rapid effectiveness of CBT for depression.

In evaluating factors that predict homework adherence, the probable sources are the patient, the therapist, and the therapeutic relationship. Interestingly, patient factors seem to be

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the most explored (Detwieler & Whisman, 1999). Prior research examined multiple patient characteristics including demographic variables, motivation, social functioning, chronicity and severity of depression, and improvement in symptomology and comorbidity in relation to homework adherence. Although some contradictory findings (e.g. Persons, Burns, & Peloff, 1988) exist, the majority of studies yielded few, if any, significant results. For example, among the demographic variables examined, age, gender and level of education have been shown to not predict homework adherence (Addis & Jacobson, 2000; Bryan et al., 1999).

Other patient characteristics found not to be linked to homework adherence include level of social functioning, learned resourcefulness, motivation, coping skills, willingness to engage in therapy, and acceptance of the treatment rationale (Addis & Jacobson, 2000; Bryant et al., 1999; Nolen-Hoeksema, 1991; 1992). Despite attempts to find an adherent personality type, limited data supports the existence of such a personality type (Detweiler & Whisman, 1999) and, in general, limited empirical support exists for patient factors influencing homework adherence (Kazantzis, Deane, & Ronan, 2004).

Perhaps most importantly, the severity of depression, comorbidity, medication, change in symptomology, and other presenting problems have also failed to consistently predict homework adherence (Bryant et al., 1999; Burns & Nolen-Hoeksema, 1991; Leung & Heimberg, 1996). Burns and Spangler (2000) found that on average patients with severe levels of depression completed as much homework as patients with mild to moderate levels of depression. The results are inconsistent regarding the relationship between chronicity and adherence (Bryant et al., 1999). Bryant et al. (1999) found that although depression severity was not related to homework adherence, the number of depressive episodes negatively related to homework adherence.

Even with the lack of evidence for patient factors as a variable in homework adherence, limited research has examined therapist factors in relation to homework adherence (Detweiler & Whisman, 1999). When therapist factors have been addressed the predominant focus is on characteristics of adherence to therapeutic method and strategy such as reviewing homework

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from previous sessions, asking about homework at the subsequent session, clarity of the assignment, and realistic expectations for assignments in terms of patient ability (Detweiler & Whisman, 1999; Malouff & Schutte, 2004; Shelton & Levy, 1981; Tompkins, 2002).

Research needs to make further attempts to identify therapist skills that increase homework adherence (Addis & Jacobson, 2000; Bryant et al., 1999; Detweiler & Whisman, 1999; Kazantzis, Deane, & Ronan, 2000, 2001, 2004). Bryan et al. (1999) examined the relationship between the "General Therpeutic Skills" subscale of the Cognitive Therapy Scale (Young & Beck, 1980) and homework adherence. They found the "General Therpeutic Skills" subscale of the Cognitive Therapy Scale or CTS, which contains the items "Agenda", "Feedback", "Interpersonal Effectiveness", "Collaboration", and "Pacing and Efficient Use of Time", to be a predictor of homework adherence. Another study conducted by Burns & Nolen-Hoeksema (1992) examined the relationship between therapeutic empathy and homework adherence and found therapeutic empathy to be associated with treatment outcome but not homework adherence.

Collaboration and Homework in CBT for Depression

As addressed previously, a dearth in the literature exists regarding therapist actions that predict homework adherence. Consequently, the majority of suggestions in the literature for enhancing homework adherence are posited from clinical experience as opposed to empirical investigation. For example, collaboration is an aspect of therapeutic alliance often referenced in clinical literature to be a vital component to facilitating homework in CBT (Beck et al., 1979; Beck, 1995; Kazantzis & Datillo, 2005; Malouff & Schutte, 2004; Tyron & Winograd, 2001; Tompkins, 2002). Although a collaborative therapeutic alliance is a concept shown to be a central component across theoretical orientations including CBT and interpersonal therapy (Krupnick et al., 1996; Horvath & Greenberg, 1989; Tyron & Winograd, 2001), collaboration itself may be of particular relevance to homework adherence in CBT due to its role in the working relationship between patient and therapist (Beck et al., 1979; Beck, 1995).

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According to Beck, et al. (1979) the role of collaboration sets cognitive therapy apart from other therapeutic orientations, because the therapist is continuously interacting with the patient and structuring the therapy to encourage participation and collaboration. This form of guided discovery is essential to forming and evaluating hypotheses regarding maladaptive thinking, including examining evidence, considering alternatives, and examining advantages and disadvantages of thoughts (Young & Beck, 1980). To achieve ideal collaboration, Beck et al. (1979) proposed that the therapist should avoid minimal direction as this could adversely affect depressed patients, allowing them to remain in negative cognitive patterns. At the same time, the therapist should avoid overly directive techniques prohibiting a patient's full understanding and cooperation. In sum, "The manner in which the therapist goes about each step in therapy…will directly determine whether the collaboration…[is] increased or decreased". (p. 56)

In essence, this implies varying levels of inadequate directiveness can be detrimental in cognitive therapy, and furthermore that the therapist's behavior is responsible for the level of collaboration. Therefore, a therapist's directiveness is a continuous variable in the therapeutic process which, in theory, significantly relates to patient participation and collaboration, particularly in regards to homework adherence. To examine this empirically, the varying levels of therapist behavior influencing collaboration as discussed in clinical literature need to be identified and defined. The proposed study identifies three basic levels of directiveness established by a therapist: inadequate or passive direction, ideal direction, and excessive direction.

Tompkins (2002) states collaboration is one of the key enhancing features of therapist's manners which promotes homework adherence. Potential benefits of collaboration include giving patients more control, and creating opportunities to work through misunderstandings and challenges, thereby strengthening the therapeutic alliance. Tompkins (2002) further stated collaboration acknowledges the patient as the expert on determining realistic, relevant, and meaningful goals to therapy. A strong, collaborative therapeutic alliance

is also essential to the goal of teaching patients the skills they need to become their own therapists (Ledley, Marx, & Heimberg, 2005), and the skills they learn in session are reinforced through homework assignments.

In general, collaboration is not evaluated independently from therapeutic alliance. One of the problems in research on therapeutic alliance is the lack of discrimination among aspects of alliance (Hatcher & Barends, 1996). In conducting an exploratory factor analysis over three prominent alliance measures (California Psychotherapy Alliance Scales, Helping Alliance Questionnaire, and Working Alliance Inventory) Hatcher and Barends (1996) determined a Confidence Collaboration factor, which had the strongest correlation with treatment outcome. This factor was rated by the patient and encompassed the degree to which the patient was confident and committed to the therapeutic process. The authors noted an overall lack of assessment measures incorporating the therapist's effort to engage the patient in therapeutic work; however they believed that such additions would enhance the ability to adequately measure a more collaborative scale of alliance.

A study conducted by Watson and McMullen (2005) investigated the concept of therapist directiveness in relation to client resistance in CBT and interpersonal therapy (IPT) using the Client Resistance Code (CRC) and the Therapist Behavior Code-Revised (TCB-R). The CRC (Chamberlain, Patterson, Reid, Kavanaugh, & Forgatch, 1984) identifies resistance as behaviors in-session which present opposition to the therapist, including talking over the therapist or disagreeing. The TCB-R identifies therapist directiveness as any statement that leads, directs, or controls the verbal activity of therapy or challenges or confronts the client (Bischoff & Tracey, 1995). Nondirective behavior on the TCB-R refers to behavior that is supportive, accurately reflective, and allows the client to take responsibility over verbal activity. Interestingly the CBT therapists were significantly more directive than IPT therapists, but therapist directiveness did not predict client resistance. However, it should be noted the TBC-R identifies directiveness as more dominating therapist behaviors, which are more incongruent

with collaboration. Furthermore, homework adherence was not included in measuring client resistance.

Therapist directiveness has also been explored within ethnicity. Beutler and Consoli (1993) posited that the therapist's role in directive behavior is not a static trait but is individually tailored to clients based on their motivation level and coping style. A study conducted by Wong, Beutler, and Zane (2007) investigated whether expectations for directive therapist behavior, client resistance, and ambiguity tolerance differed among European American and Asian college students. Even though Asian Americans in the study did show a lower tolerance for ambiguity in therapy than European Americans, the difference did not account for ethnic group differences in initial responses to treatment for directive versus nondirective therapist approaches. Also, no significant ethnic differences were found for expectations of directiveness in therapy.

Therapeutic Alliance and Treatment Outcome in CBT for Depression

Although little research has focused solely on collaboration, extensive documentation exists for a positive relationship between therapeutic alliance and treatment outcome in CBT for depression (Howard, Turner, Olkin, & Mohr, 2006; Hovarth & Symonds, 1991; Krupnick et al., 1996; Martin, Garske, & Davis, 2000; Stiles, Agnew-Davies, Hardy, Barkham, & Shapiro, 1998; Trepka, Ress, Shapiro, Hardy, & Berham, 2004). This relationship remains a significant predictor of treatment outcome in studies after accounting for symptom reduction, cognitive change, and pharmacotherapy (Krupnick et al., 1996; Watson & Greenberg, 1994). A meta-analysis conducted by Martin, Garske, and Davis (2000) found that overall therapeutic alliance was related to treatment outcome across psychotherapy orientations, source of rating (therapist, patient, and observer), point in treatment, and measures used to assess alliance.

One variable of concern when measuring therapeutic alliance is selecting the point in time during treatment most ideal for predicting therapeutic alliance and treatment outcome. Despite many findings that alliance can be best predicted early in treatment (Constantino et al, 2002; Hovath & Luborsky, 1993; Hovath & Symonds, 1991; Klein et al., 2003; Saunders,

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Howard, & Orlinsky, 1989), contrasting evidence indicates determining the mean of alliance across multiple sessions is in fact a more significant predictor for alliance and treatment outcome (Kivlighan & Shaughnessy, 1995; Krupnick et al., 1996). From a clinical standpoint one should take into account that the symptomology of MDD often requires more directive behaviors from the therapist for the first two sessions, and therefore the therapeutic relationship should not be assessed until after this point (Wright, Basco, & Thase, 2005). Although alliance has been positively linked with outcome, the inconsistencies concerning stages in treatment for strongest prediction may lie in differences in sample size (Krupknick, et al., 1996) and measurements (Stiles et al., 1998). Further variability in findings linking outcome and alliance suggest the need to further explore and define specific aspects of alliance (Hatcher & Barends, 1996; Stiles et al., 1998) such as collaboration.

The Nature of the Relationships Between Homework Adherence, Therapeutic Alliance and Treatment Outcome

While both homework adherence and therapeutic alliance are typically considered significant contributors to treatment outcome, the nature of their relationship is debatable. Several hypotheses have been considered defining the nature of the relationship between homework adherence and treatment outcome (Burns & Spangler, 2000). One explanation is that homework adherence has a causal relationship with treatment outcome in decreasing depressive symptomology. Another explanation is a positive feedback loop where homework adherence and the decrease in depressive symptomology have a circular causal relationship. The final explanation is a spurious relationship exists due to a confounding third variable. Using structural equation modeling to examine the above hypotheses, Burns and Spangler (2000) found that homework adherence appeared to have a causal effect on treatment outcome, regardless of symptom change, level of depression and patient characteristics such as motivation, hope and self-reliance. Although this was an exceptionally sophisticated study, interpreting causation from retrospective, correlational models as opposed to prospective, experimental research is not sufficient (Kazantzis, Deane, & Ronan, 2001).

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Therapeutic alliance shares similar statistical controversy and proposals. For example, debate exists over whether the alliance causes a decrease in depressive symptomology, the relationship runs in the opposite direction (where decrease in depressive symptomology causes a stronger alliance), or whether there is a spurious relationship due to a confounding variable (Klein et al., 2003). Previous research has strove to determine whether therapeutic alliance is a mediator or an independent predictor of treatment outcome. Sanitago et al. (2005) investigated therapeutic alliance in relation to patient skill acquisition and treatment outcome and determined that therapeutic alliance was not a mediator but an independent predictor of treatment outcome. However, the authors attributed this to the possibility that they were investigating a variation of CBT (cognitive behavioral analysis system of psychotherapy), which may have different mechanisms of action than traditional CBT.

Concerning the directional relationship between therapeutic alliance and decrease in depressive symptomology, studies have shown therapeutic alliance remains a strong predictor of treatment outcome after accounting for a decrease in depressive symptomology (Klein et al., 2003; Krupnick et al., 1998). As in research on homework adherence and treatment outcome, research to identify patient characteristics that predict treatment outcome have had few significant findings and inconsistent results (Klein et al., 2003). Furthermore, many of these studies have made few attempts to rule out patient characteristics as spuriousness (Klein et al., 2003), and few replication studies have been conducted to validate significant findings (Constantino, 2002).

Goals of Proposed Study

Identifying therapist skills that encourage homework adherence could have clinical implications for improving treatment outcome. A better understanding of this relationship may further empirical understanding of how aspects of therapist competency are particularly relevant in CBT. The focus of prior research on patient variables in adherence is an interesting contrast to the basic principle that the therapist is most accountable for establishing the therapeutic environment necessary for a positive treatment outcome. Furthermore, the identification of

therapist factors should be primary to patient factors, because therapists have more control over their skill to enhance homework adherence than over patient variables (Tompkins, 2002). Such research is also relevant in light of the increasing popularity of homework and CBT (Addis & Jacobson, 2000).

After reviewing the literature, Detweiler and Whisman (1999) were hesitant to draw conclusions regarding therapist factors influencing homework adherence because so little research has been done in this area. They encouraged investigation into therapist characteristics that have strong associations with clinical improvement. Although collaboration or therapist directiveness have not been investigated specifically, therapeutic alliance as a whole has been found to be efficacious for treatment outcome. Collaboration is assumed to be an aspect of therapeutic alliance, but it may have more implications for CBT, particularly in relation to homework.

Hypotheses

The current study will examine homework adherence as a mediating variable in the relationship between therapist directiveness and treatment outcome. Therapist directiveness was selected as the independent variable and homework adherence as the mediator for two primary reasons. Therapist directiveness is an aspect of therapeutic alliance which has been shown to have a causal relationship with treatment outcome. Furthermore, for a mediational model the independent variable first interacts with the mediator, and in turn the mediator partializes the effect of the independent variable on the dependent variable. As therapist directiveness is established prior to homework adherence, it is assumed that therapist directiveness is the independent variable in a simple mediation.

The current study aims to determine whether therapeutic collaboration mediates the relationship between homework adherence and treatment outcome in CBT. Given the clinical experience reviewed in the literature concerning CBT, homework adherence and depression, an assumed ideal level of collaboration exists. This is defined as the therapist exhibiting a level of directive behavior that facilitates patient involvement in all aspects of the therapeutic process

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and adequately teaches CBT skills. The level of directiveness a therapist exhibits will be evaluated using the Therapist Directiveness Scale (TDS). An adequate level of direction includes the therapist eliciting feedback from the patient, encouraging the patient to apply their own examples through CBT skills training, and the therapist employing Socratic questioning to guide the patient through his/her problems.

If a therapist is not exhibiting adequate collaborative behaviors two alternatives exist: inadequate direction resulting in passivity during the therapeutic process or being overly directive and as a result the therapist dominates the therapeutic process. Inadequate direction is defined by the criteria in the TDS and includes the therapist allowing the patient to dominate the session to the extent that the agenda is not set or accomplished, the therapist is not active enough in session to initiate or complete CBT skills training, the therapist makes minimal attempts to provide feedback or guidance, and allows patient to talk excessively about topics not relevant to the session. In general, when a therapist is exhibiting inadequate collaboration the patient is controlling the session.

Excessive-direction is defined by the criteria in the TDS and includes the therapist not eliciting feedback from the patient, doing the majority of the work in session including working through CBT skills training by applying examples for the patient, lecturing, giving advice or asking leading questions, and processing the majority of patient problems on his/her own. In general, the therapist dominates the session. Hence either alternative results in the opposite of collaboration. Given these varying levels of direction in collaboration, the following hypotheses are proposed: The hypotheses for the proposed study are: 1) "Adequate" therapist directiveness will have a positive relationship with treatment outcome and homework adherence 2) Inadequate therapist direction will have a negative relationship with treatment outcome and homework adherence 3) Excessive therapist direction will have a negative relationship with treatment outcome and homework adherence; 4)Homework adherence will mediate the relationship between therapist directiveness and treatment outcome.

CHAPTER 2

METHOD

Participants and Sample

The current study analyzed audiotapes of CBT sessions with patients diagnosed with Major Depressive Disorder (MDD). Therapists consisted of social workers and licensed professional counselors in community mental health centers (CMHC's) across Texas. All therapists delivered therapy using a manualized CBT protocol with session-by-session outlines (Basco, 2005) and received a 32 hour didactic training on how to administer CBT. The treatment protocol consisted of twenty, 60-minute sessions of CBT. During data collection therapists were undergoing weekly supervision that addressed their CBT skills including collaboration and attention to homework adherence.

351 audiotapes from 11 therapists were collected during the CBT training and supervision phase. However, only a fraction of the original sample was used due to notable limitations. One of the primary limitations related to the ability to adequately rate homework adherence. To rate homework adherence, any tape sampled for data collection must have the preceding tape to adequately determine the homework assigned. The submission of audiotapes varied in consistency for all 20 sessions across therapists, resulting in skewed amounts of audiotapes per therapist. For example, the sample contained a high variance in the amount of patients available per therapist, and amounts of audiotapes in succession (e.g., sessions1,2,3…). Audiotapes of the first and second sessions were excluded from analysis due to research showing therapeutic alliance is best predicted after the second session. In consideration of these limitations, 10 percent of audiotapes were randomly selected from each therapist when a prior session was available and homework had been assigned in that session and the session fell within the range of session numbers 4-15.

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Measures

Quick Inventory of Depressive Symptomology (Self- Report) (QIDS-SR 16-SR 16)- The QIDS-SR 16 is a 16-item measure of depression severity. Participants from this study were assessed with the self-report form of the QIDS-SR 16. This form has been shown to have high concurrent validity, internal consistency and sensitivity to symptom change in populations with chronic depression (Rush, et al., 2003). This assessment is included in the Appendix.

      Assignment Scale (AS)- The Assignment Scale was developed for the current study to measure the extent to which a patient completed their homework and the nature of the assignment. For example, the scale indicates whether an assignment was a cognitive recording or behavioral activation, and whether the assignment was the therapist's idea, the patient's idea, or both. The extent to which the assignment was completed is measured on a five point Likert scale from "None" to "All". This assessment is included in the Appendix.

Therapist Directiveness Scale (TDS) - The TDS was developed for the current study to measure the extent to which a therapist engages and guides a patient through multiple aspects of the cognitive behavioral therapeutic process. The scale has three items that measure the amount of collaboration through identifying directive therapist behaviors while setting the agenda, proportions of work between therapist and patient during explanations of cognitive principles, and the therapist's method of eliciting information and guiding the patient towards insight into their problems. Therapists are ranked according to three categories: Inadequate Direction, Adequate Direction and Excessive Direction. This assessment is included in the Appendix.

Training

      Data collectors were trained on how to rate therapists according to the TDS and homework adherence using the AS. Training consisted of listening to audiotapes of therapy sessions with the principle investigator to identify how to rate using the AS and TDS. For each tape selected for data collection, the tape prior was assessed to accurately determine the homework assigned. Raters were co-rated as a group during training and were co-rated randomly in pairs during data collection.

CHAPTER 3

ANALYSIS AND RESULTS

Descriptives

      This study analyzed data collected from therapists and patients in CMHC's across

Texas. Nine therapists from the CMHC's were included in the current study. Their level of

education, licensure, years of experience, theoretical orientation, and prior knowledge and

experience with CBT were examined. Means and standard deviations were calculated for total

years of experience as well as prior knowledge and prior experience in CBT. Prior knowledge

and experience in CBT were rated by the therapists using a 5 point Likert scale from "None" to

"Extensive". Years of experience among the therapists varied greatly, from the least

experienced therapist with one year to the greatest experienced therapist with 25 years, ($M=$

9.78, S$D=$ 8.15). Multiple psychotherapeutic theoretical orientations were endorsed and

followed among the therapists. Five therapists were eclectic, one was client centered, one was

solution focused, and two were cognitive. Overall, therapists reported a modest amount of

knowledge ($M=$ 2.22, SD .73) as well as experience ($M=$ 2.67, SD .70) with CBT. Six of the

therapists were Licensed Professional Counselors, and the remaining three were Licensed

Masters and Clinical Social Workers. Table 1 presents information on therapist experience and

background.

Table 1 Summary of Therapist Experience

	Mean	*SD*
Experience		
Years of Experience	9.78	8.15
Prior Knowledge*	2.56	.73
Related Experience*	2.67	.70

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Table 2 Summary of Therapist Licensure and Orientation

	Percentage
Licensure	
LPC	67
LMSW	11
LCSW	22
Orientation	
Client Centered	11
Eclectic	56
Cognitive	22
Solution Focused	11

*Rated on a 5 point Likert scale from "None" to "Extensive

Among the 25 patients included in the study, the sample was predominantly female (84percent) and of the total sample 32 percent reported Hispanic or Latino ethnicity. The patient sample was predominantly Caucasian (92 percent), with 4percent African American and 4percent Asian. Average age was 41 (*SD* 12.57), with the youngest patient 22 and the oldest 65. Only 16 percent of patients were married, 36 percent were divorced, 36 percent were singe, and eight percent were separated. The patient population for this sample was more inclusive than typically seen in treatment outcome studies. For example, many patients had psychiatric and medical co-morbidities, as well as psychosocial stressors such as poverty and legal issues. For example, during treatment many patients had open cases with Child Protective Services, unemployment, applications for disability, and problems with substance abuse. 40 percent of patients reported previous psychiatric hospitalization, and the mean age of first depressive episode was 18.21 (*SD* 12.38). Table 3 shows patient descriptives.

Table 3 Patient Descriptives

	Percent
Gender	
Female	84
Male	16
Marital Status	
Single	36
Married	16
Separated	8
Divorced	36
Ethnicity	
Hispanic or Latino	32
Non-Hispanic or Latino	68
Experienced Psychiatic Hospitalization	
Yes	40
No	60

From the original sample of 351 audiotapes collected from study therapist, 68 tapes were randomly selected. Excluding tapes from sessions one through three, tapes included after random selection ranged from session numbers 4-15. Tapes included also had the prior session audiotape available to determine the homework assigned. The nine therapists varied greatly in overall amount of tapes recorded and number of patients treated. Twenty percent of the tapes from each therapist were randomly selected. Of the 68 tapes, 59 percent came from two of the nine therapists. There were 25 patients that accounted for the 68 tapes. Therapists treated one to eight patients. Although a broad range of sessions as sampled, 53 percent of the tapes were from sessions four through six. Table 4 shows the distribution of taped sessions by therapist.

Interrater Reliability

Eight of the 68 tapes were randomly selected for co-rating. Pairs of co-raters were randomly assigned to the tapes selected. Interrater reliability for the TDS was calculated to determine a mean percentage of agreement, and showed a percentage of agreement at .75. A post hoc analysis for Kappa was run to account for chance agreement, and agreement was reduced to .45. This was most likely due to limited variability in ratings.

Table 4 Proportions of Tapes and Patients Per Therapist

Therapist	Number of Tapes			
	N= 68		N= 25	
	Frequency	Percent	Frequency*	Percent
1	5	7	2	3
2	7	10	2	3
3	5	7	1	2
4	4	6	3	4
5	24	35	8	12
6	16	26	5	7
7	2	3	1	2
8	1	2	1	2
9	4	6	2	3

*Column also represents number of patients per therapist for both samples.

Sample Size

The sample of 68 tapes collected for this study had 20 patients with duplicate ratings (more than one session rated per patient). These multiple samples within patients were eliminated to comply with the independent observation assumptions for a regression analysis. Therefore, the sample was reduced to 25 to eliminate duplicate ratings, resulting in 43 tapes being excluded from the regression analysis. To determine which session number to select when a given patient contributed more than one tape, a mean was calculated for each session number to determine the most frequently used sessions in the sample. After the means were determined, the session number for each patient closest to the highest mean was used. Most tapes fell within the range of session numbers 4-6, and the final sample of 25 had 84 percent of tapes in this range. The mean session was 5.68, *SD* 1.87. Table 5 shows the distribution of session numbers.

Table 5 Breakdown of Sessions

Session Number	Samples			
	N= 68		N= 25	
	Frequency	Percent	Frequency	Percent
4	12	18	3	12
5	14	21	14	56
6	10	15	4	16
7	6	9	2	8
8	7	10		
9	6	9	1	4
10	2	3		
11	1	2		
12	1	2		
13	4	6	1	4
14	3	4		
15	2	3		

Coding Assessments

Therapist directiveness and homework adherence were the independent variables for analysis. Homework adherence was originally rated on a 5 point Likert scale from "None" (0 points) to "All" (5 points); however, multiple assignments were often given per session. A composite score was needed to capture patient adherence per session. Therefore, homework adherence was collapsed into a categorical variable of either "Patient Did Homework" or "Patient Did Not Do Homework" to determine a adherence rating for the entire session. If a patient was rated on the Likert scale as having done any of their homework assigned, they were coded into the "Patient Did Homework" category. If a patient was rated on the Likert scale as having done none of the homework assigned, they were coded into the "Patient Did Not Do Homework" category.

Therapist directiveness was determined with the TDS, which classifies a therapist's behavior on a given tape into the categorical variables of "Inadequate Direction" (1), "Adequate Direction" (2), or "Excessive Direction" (3) across three items. The three items referred to interaction between patient and therapist in the areas of collaboration when setting the agenda, proportions of work completed by patient and therapist during interventions, and therapist's

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method of eliciting information and amount of eliciting information from the patient. To determine a therapist's overall performance the mode for the three items was determined as the score used in analysis. Overall, there was limited variability in overall scores per tape. For example, only 9 percent of tapes were rated as having overall "Inadequate Direction", and 14 percent of tapes were rated as having "Excessive Direction". "Adequate" was by far the most common TDS rating for the tapes (73 percent). A small percentage of the tapes (3.2 percent) were determined by raters to be split between two or more of the categories.

For regression analysis these categories were collapsed into dichotomous categories. All tapes rated as either "Inadequate Direction" or "Excessive Direction" were collapsed into a category for "Other", representing all tapes rated with excessive or inadequate overall therapist directiveness. Tapes rated "Adequate" represented the second category. Collapsing the categories of "Inadequate" and "Excessive" resulted in 16 percent of tapes for the "Other" category, and 84 percent of tapes rated in the "Adequate" category. By collapsing the categories, the tested hypothesis asserted that any level of collaboration besides "Adequate" is less effective for homework adherence and treatment outcome.

Treatment outcome was a continuous dependent variable, and was determined by calculating the percent change in pre and post treatment scores. The mean treatment outcome for the population was -.37 (*SD* .31).

Hypotheses

The purpose of this study was to determine whether the variables of therapist collaboration and homework adherence predicted treatment outcome. Specifically, it was hypothesized that there would be a relationship between level of therapist directiveness and degree of response to treatment, and that homework adherence would mediate this relationship. To test this hypothesis, a multiple regression analysis was used. Furthermore, the regression was chosen to determine variance of predicted variables in an assumed relationship.

A multiple-regression analysis examined the relationship between homework adherence and therapist directiveness in relation to treatment outcome. With treatment outcome

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as the dependent variable, the multiple R for the complete model was .21, $F(2,21) = .42$, ns,

and the adjusted R^2 was .05. Therefore, combined directiveness and homework adherence only

predicted five percent of variance in treatment outcome, thus rejecting the hypothesis. To

explore a mediational model, the independent variable of therapist directiveness would have

needed to predict the dependent variable of treatment outcome. The lack of a significant

relationship between the independent variable and dependent variable violated the Omnibus

test for significance. No subsequent hierarchal regression analysis was necessary to investigate

mediation. Regression results are shown in Table 6.

Table 6 Summary of Multiple Regression Analysis for Variables Predicting Treatment Outcome
in Cognitive Behavioral Therapy

Variable	B	SE B	*B*
Collaboration	.05	.17	.08
Homework Adherence	.22	.24	.21

Post Hoc Analysis

Limited variability in overall ratings of therapist directiveness and homework adherence

was suspected to be the primary factor in the non-significant findings. For example, data for

therapist directiveness and homework adherence was collapsed into dichotomous variables.

Furthermore, excluding duplicate patient ratings reduced sample size but allowed: data to be in

adherence with independent observations of a regression model and homework adherence to

be analyzed per session. To provide some insight into the role of variability in these findings, an

independent samples t-test was conducted, calculating the uncollapsed scores of the TDS (i.e.

"Inadequate", "Excessive", and "Adequate") in relation to treatment outcome.

Interestingly, significant results were found for inadequate versus adequate

directiveness in relation to treatment outcome, t(51)= -.78, *p<.01*, but not in the direction

expected. Inadequate directiveness had a better treatment outcome than adequate

directiveness. However, limits in group size should be noted. Although there was no

significance between adequate directiveness versus excessive directiveness in treatment

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outcome, the adequate group did have a better treatment outcome, $t(54)= .97$, *ns*. A crosstabulation was run to investigate a further relationship between homework adherence and treatment outcome with the containing all prior homework assigned with the original Likert scale scores for homework adherence and the uncollapsed scores of the TDS. Hence, data was analyzed by individual homework assignments and individual TDS scale items as opposed to adherence per session and dichotomous score of the TDS. These results did not show consistent differences between the amount of therapist directiveness and homework adherence. See Table 7 for t-test results.

Table 7 Independent t-test Results for Therapist Directiveness and Treatment Outcome

	Sample Size	Mean	Standard Deviation
TDS Score			
Inadequate	6	-.29	.15
Adequate	47	-.39	.31
Excessive	9	-.50	.34

CHAPTER 4

DISCUSSION

The findings of this study were contrary to the hypothesis that therapist directiveness would have a significant impact on treatment outcome and that homework adherence would mediate that relationship. The findings also contradict prior research findings (e.g., Bryant, Simons, & Thase, 1999; Zuroff & Blatt, 2006) which have shown significant relationships between homework adherence, therapeutic alliance, and treatment outcome. For example, Zuroff and Blatt (2006) found both the patients' perceived quality of the therapeutic relationship and therapeutic alliance predicted treatment outcome in CBT. This study however measured overall therapeutic alliance, whereas the present study measured therapist directiveness to determine overall collaboration. As noted previously, studies on therapeutic alliance often use different measures. In addition, the definition of therapeutic alliance is quite broad and therefore when results are significant it is difficult to isolate potential variables contributing to treatment gain. In measuring therapeutic alliance, the patient is often the rater for the relationship. In future attempts to measure therapist directiveness, the patient may be a more accurate rater than an independent observer in predicting treatment outcome.

In investigating homework adherence and treatment outcome, Bryant, Simons, and Thase (1999) found adherence significantly predicted percent change from pre- to post treatment. Interestingly, this result was not consistent across measures. Specifically, the significant relationship between homework adherence and treatment outcome was only found with the Hamilton Rating Scale for Depression (HRSD), and not the Beck Depression Inventory (BDI). Using the QIDS-SR 16 may have played a role in the insignificant findings in evaluating the relationship between treatment outcome and homework adherence. Furthermore, the mean treatment change for the patients in this study was 79 percent on the HRDS and 75 percent on

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the BDI. The current study had a mean treatment change of 40 percent. The lower amount of treatment outcome in the present study may have also contributed to the insignificant findings.

In the present study, the therapist and patient samples were different from the Bryant et al. study (1999). Therapists sampled in Bryant et al. study (1999) had reported a minimum of two years supervised CBT training and consistently received CTS ratings of 39 (the cut-off criteria for passing as a quality level cognitive therapist). Therapists in the current study received six months of supervision after cognitive therapy training. The most substantial differences between these studies were the patient populations. The Bryant et al. study (1999) excluded all patients who had an episode of depression lasting more than 18 months, met DSM-III criteria for dysthymia, or had a diagnosis of substance abuse or dependence at the time of the study and within the prior two years. None of these exclusion criteria were applied to the patient sample of the present study. Also, the mean age of first depressive episode was 29.50, compared with the present study of 18.21. In sum, the present study represents a more psychiatrically severe population. This more than likely contributed to the smaller percent change in treatment outcome. On average, homework adherence and therapeutic alliance have independently been shown to predict 22 percent of treatment outcome (Kazantzis, Deane, & Ronan, 2000; Martin, Garske, & Davis, 2000). Differences in measures used for treatment outcome, therapist experience, and psychiatric severity of patient samples may have contributed to the contrary findings of the present study in comparison to other studies that have examined homework adherence, therapeutic alliance, and treatment outcome.

The contradictory findings may also be attributable to a small sample. Initially, 68 sessions were collected for analyses to meet the determined effect size. However, 43 tapes had to be excluded from analyses. These tapes were duplicates of patients rated in other tapes, and therefore were eliminated to comply with the assumption of independence of observations for inferential statistics. Also, the amount of tapes submitted per therapist were disproportionate, resulting in two therapists comprising 53 percent of the tapes used for analyses.

Data for the present study was sampled from prior data collected at CMHC's, and had more confounding variables than typically seen in other studies. For example, the patient population displayed many co-morbid psychiatric and medical disorders, had been shown prior to be non-responsive to medical treatment, and had multiple stressors such as poverty, unemployment, and legal issues. Typically, such patients are screened out of treatment outcome research. This patient sample represents a more generalizable population to mental health clinicians such as social workers and licensed professional counselors providing psychotherapeutic services in CMHC's. These patients often have higher rates of medical and psychiatric comorbidities and experience more stressors as described above (Basco et al., 2000).

Implementation of evidence-based practices, such as CBT, into community mental health treatment is encouraged (New Freedom Commission on Mental Health, 2003). The prioritizing of evidence-based practice in mental health treatment effects how social workers and other mental health practitioners working in community mental health settings administer care. Researching community mental health populations at both the clinician and patient level allows examination of the feasibility and efficacy of implementing evidence-based research into these populations. More recently research has begun exploring evidence-based practice in CMHC's and similar populations (Arntz, 2003; Foa et al., 2005; Merrill, Tolbert & Wade, 2003; Miranda et al., 2003; Morrison et al., 2004).

Finally, variability was probably the most formidable limitation to the present study. Limited variability was seen in homework adherence as well as therapist performance. For example, 91 percent of patients were rated as having completed their homework and 84 percent of therapists demonstrated "Adequate" levels of directive behaviors. Low variability in therapist performance is most likely due to the continual feedback on performance they were receiving during the original data collection, as they were undergoing supervision to learn CBT. The feedback was to improve their performance in CBT, and included encouraging the type of

collaborative behaviors observed in the TDS. Such results are promising for the CMHC therapist's and CBT with regard to feasibility of CBT in community mental health.

From a clinical perspective, it should be noted that homework adherence in collaboration should not be viewed as a static variable in therapy. Oftentimes a patient's non-adherence to homework can be utilized as a unique opportunity for intervention and enlightenment for both the therapist and patient. Barriers to attaining therapeutic goals previously unnoticed can be processed at the subsequent session, enhancing collaboration in the therapeutic relationship as well as future homework adherence.

Research has yet to consistently identify patient or therapist variables that enhance homework adherence. Future research should focus primarily on the therapist variables; as research on patient variables is much more explored and yet has not yielded conclusive results, and the therapist has more control over their behavior in session. Further studies exploring important therapeutic variables such as collaboration, homework adherence, and treatment outcome in CBT in CMHC's will help to generalize CBT research to therapists who work in such settings as well as more psychiatrically severe populations.

APPENDIX A

QUIDS-SR 16

(Rush, et al., 2003)

QUICK INVENTORY OF DEPRESSIVE SYMPTOMATOLOGY (SELF-REPORT) (QIDS-SR 16)

Please circle the one response to each item that best describes you for the past seven days.

1. Falling asleep:
0 I never take longer than 30 minutes to fall asleep.
1 I take at least 30 minutes to fall asleep, less than half the time.
2 I take at least 30 minutes to fall asleep, more than half the time.
3 I take more than 60 minutes to fall asleep, more than half the time.

2. Sleep during the night:
0 I do not wake up at night.
1 I have a restless, light sleep with a few brief awakenings each night.
2 I wake up at least once a night, but I go back to sleep easily.
3 I awaken more than once a night and stay awake for 20 minutes or more, more than half the time.

3. Waking up too early:
0 Most of the time, I awaken no more than 30 minutes before I need to get up.
1 More than half the time, I awaken more than 30 minutes before I need to get up.
2 I almost always awaken at least one hour or so before I need to, but I go back to sleep eventually.
3 I awaken at least one hour before I need to, and can't go back to sleep.

4. Sleeping too much:
0 I sleep no longer than 7–8 hours/night, without napping during the day.
1 I sleep no longer than 10 hours in a 24-hour period including naps.
2 I sleep no longer than 12 hours in a 24-hour period including naps.
3 I sleep longer than 12 hours in a 24-hour period including naps.

5. Feeling sad:
0 I do not feel sad.
1 I feel sad less than half the time.
2 I feel sad more than half the time.
3 I feel sad nearly all of the time.

6. Decreased appetite:
0 There is no change in my usual appetite.
1 I eat somewhat less often or lesser amounts of food than usual.
2 I eat much less than usual and only with personal effort.
3 I rarely eat within a 24-hour period, and only with extreme personal effort or when others persuade me to eat.

7. Increased appetite:
0 There is no change from my usual appetite.
1 I feel a need to eat more frequently than usual.
2 I regularly eat more often and/or greater amounts of food than usual.
3 I feel driven to overeat both at mealtime and between meals.

8. Decreased weight (within the last two weeks):

0 I have not had a change in my weight.
1 I feel as if I've had a slight weight loss.
2 I have lost 2 pounds or more.
3 I have lost 5 pounds or more.

9. Increased weight (within the last two weeks):
0 I have not had a change in my weight.
1 I feel as if I've had a slight weight gain.
2 I have gained 2 pounds or more.
3 I have gained 5 pounds or more.

10. Concentration/Decision making:
0 There is no change in my usual capacity to concentrate or make decisions.
1 I occasionally feel indecisive or find that my attention wanders.
2 Most of the time, I struggle to focus my attention or to make decisions.
3 I cannot concentrate well enough to read or cannot make even minor decisions.

11. View of myself:
0 I see myself as equally worthwhile and deserving as other people.
1 I am more self-blaming than usual.
2 I largely believe that I cause problems for others.
3 I think almost constantly about major and minor defects in myself.

12. Thoughts of death or suicide:
0 I do not think of suicide or death.
1 I feel that life is empty or wonder if it's worth living.
2 I think of suicide or death several times a week for several minutes.
3 I think of suicide or death several times a day in some detail, or I have made specific plans for suicide or have actually tried to take my life.

13. General interest:
0 There is no change from usual in how interested I am in other people or activities.
1 I notice that I am less interested in people or activities.
2 I find I have interest in only one or two of my formerly pursued activities.
3 I have virtually no interest in formerly pursued activities.

14. Energy level:
0 There is no change in my usual level of energy.
1 I get tired more easily than usual.
2 I have to make a big effort to start or finish my usual daily activities (for example, shopping, homework, cooking or going to work).
3 I really cannot carry out most of my usual daily activities because I just don't have the energy.

15. Feeling slowed down:
0 I think, speak, and move at my usual rate of speed.
1 I find that my thinking is slowed down or my voice sounds dull or flat.
2 It takes me several seconds to respond to most questions and I'm sure my thinking is slowed.
3 I am often unable to respond to questions without extreme effort.

16. Feeling restless:
0 I do not feel restless.
1 I'm often fidgety, wringing my hands, or need to shift how I am sitting.
2 I have impulses to move about and am quite restless.

3 At times, I am unable to stay seated and need to pace around.

APPENDIX B

ASSIGNMENT SCALE

Please describe the specific homework task that was given to the patient.	*Please select one and write below:* Specify the category of homework (cognitive recording, behavioral activation,other).	Was the assignment the therapist's idea or patient's?	**Was the homework done?** *Select one of the following:* • None • Some (specify percentage: 25, 50, or 75) • All • Therapist did not ask about assignment

APPENDIX C

THERAPIST DIRECTIVENESS SCALE

General Description and Score	Inadequate Direction (1) Sounds like the patient is controlling the session.	Adequate Direction (2) Sounded like a CBT therapist.	Excessive Direction (3) Sounds like a lecture or sermon, therapist is dominating the session.
Patient/therapist interaction when setting the agenda. _____	Did not set agenda or did not follow the agenda. The therapist did not direct the patient from one agenda item to another.	The patient and therapist both actively contributed to the agenda, patient concerns were included. Therapist asked the patient if he/she approved of the agenda.	Did not ask patient to contribute to agenda. Did not put patient concerns on the agenda.
Proportions of work between the therapist and patient during explanations of cognitive principles. _____	CBT skills training was not initiated or completed due to the therapist's lack of control over the session. The therapist was not an active participant in the session.	Patient was encouraged to come up with his/her own examples and work through those examples in CBT exercises. Patient talks about 60percent of the time. Patient takes the lead in CBT interventions, therapist helps patient. Any case management issues are handled in a CBT context.	The therapist applied examples in CBT exercises for the patient. Therapist does the work for the patient, gives patient the answer. Therapist does any of the following: lecturing, advice giving or asking leading questions.
Therapist's method of eliciting information and guiding the patient toward insight into their problems. _____	Made minimal attempts to guide the patient into an understanding or insight into their problems and gave little feedback. Allowed patient to talk excessively about topics without relating them to CBT. Therapist did not contribute much to each topic.	Therapist asks the patient questions which guide the patient toward more understanding or insight into his/her problems.	The therapist rarely employed guided questioning, processed the majority of patient's problems on his/her own.
Overall Rating _____			

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