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Client Characteristics and Therapist Competence and Adherence to Family Therapy for Schizophrenia

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CLIENT CHARACTERISTICS AND THERAPIST COMPETENCE AND ADHERENCE TO FAMILY THERAPY FOR SCHIZOPHRENIA

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The current study aims to clarify how therapist competence/adherence relates to client characteristics, consumer satisfaction, and dropout rates for family interventions for schizophrenia. The study was conducted as part of a larger treatment trial which will test the efficacy of a culturally informed therapy for schizophrenia (CIT-S), against a treatment as usual (TAU) comparison group. Encouragingly, overall, therapists were found to demonstrate very high levels of competence/adherence in both treatment conditions. As hypothesized, less severe psychiatric symptoms and lower ratings of family difficulty were related to greater therapist competence/ adherence in several non-specific (e.g., establishing rapport) and CIT-S specific (fostering family cohesion) domains of treatment. Also as hypothesized, certain aspects of greater competence/ adherence were related to lower dropout rates and higher consumer satisfaction. Contrary to expectations, general emotional distress and family cohesion were not related to competence/adherence. This study suggests that clinicians and clinical researchers may want to take certain client characteristics into account when evaluating therapist performance, choosing clients who are most suitable for therapy, and providing feedback to supervisees. Additionally, clinicians and researchers may want to monitor therapist performance early on in treatment in order to address issues which may impact consumer satisfaction and treatment retention.

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Chapter 1: Introduction

Mental health treatments are increasingly being standardized by manuals that lay out specific guidelines for therapists to follow as they proceed through treatment (Miller & Binder, 2002; Cukrowicz et al., 2005). A primary aim of treatment manuals is to limit variance due to therapists, so that any differences in outcome can be more clearly attributed to specific aspects of the treatment under investigation (Barber, Mercer, Krakauer, & Calvo, 1996). In fact, some empirical evidence does suggest that using a treatment manual minimizes therapist effects (Crits-Christoph et al., 1991). Treatment manuals increase scientific rigor and are gaining popularity in treatment outcome research for several reasons. For example, having explicit implementation guidelines makes it easier to establish internal validity and allows for more confidence in the results of treatment studies (Addis & Krasnow, 2000). Treatment manuals offer clear clinical and practical value as well. Once research has been completed, manuals can be released to practicing clinicians so that they can have straightforward guidelines on how to implement the therapy with their clients (Addis & Krasnow, 2000). Policy-makers and insurance companies are also more inclined to support the use of manualized treatments (Miller & Binder, 2002).

However, using treatment manuals does not guarantee that therapists deliver treatment in the intended manner (Miller & Binder, 2002). Humans have idiosyncratic ways of interpreting information and treatment guidelines are no exception. For example, some therapists may misinterpret aspects of the manual or may not follow the instructions precisely. Other therapists may follow the manual so literally that they do so with a loss of treatment finesse and competence. Thus, even when using a standardized manual, it is

critical for researchers to examine therapist competence and adherence to the guidelines outlined in the treatment manual in order to ensure treatment fidelity and integrity and to establish internal validity of the study (Barber, Foltz, Crits-Christoph, & Chittams, 2004). Surprisingly, Moncher and Prinz (1991) found that less than 6% of 359 treatment outcome studies provided adequate methods to ensure treatment fidelity (i.e., used a treatment manual, provided ongoing supervision, and checked for treatment adherence). If treatment fidelity is not established, client outcome can not be attributed to the specific treatment (Waltz, Addis, Koerner, & Jacobson, 1993). Additionally, once adequate competence and adherence have been established, therapist variation can be used as a covariate to better determine what outcomes are attributable to the treatment. Measuring competence and adherence near the beginning of a treatment outcome study can also help rectify problems early on in the research process (Bellg et al., 2004).

This study will outline a procedure for measuring treatment fidelity and will describe two scales in detail that were developed to measure two specific family treatments for schizophrenia. These scales can easily be tailored to many cognitive behaviorally oriented or psychoeducation family treatments. This study will also evaluate client characteristics associated with poor fidelity with the aim of helping researchers and clinicians identify traits that may make treatment fidelity more difficult. The study also assesses how fidelity relates to dropout and consumer satisfaction, to assess whether using a structured measure can help researchers and clinicians identify potential clients, whom, without special attention, may be more likely to be resistant to therapy or to terminate treatment prematurely. As noted above, there is a dearth of studies that

measure competence and adherence (Rector & Beck, 2001). As treatment fidelity is paramount for sound clinical outcome studies, more research in this area is clearly needed (Bellg et al., 2004; Waltz et al., 1993). The current study aims to help fill this gap as well as provide a foundation for future research in this area.

Treatment Fidelity

Therapist adherence is one of the primary components of establishing treatment fidelity. Adherence refers to how closely the therapist follows the protocol of the treatment manual (Perepletchikova & Kazdin, 2005). In addition to prescribed behaviors, Waltz, Addis, Koerner, and Jacobson (1993) also include avoiding proscribed behaviors in their definition of adherence. In other words, it is not enough to measure what the therapists are doing right, but also what they are doing wrong. Proscribed behaviors can include practices that are usually prohibited from therapies (e.g., treating clients with disrespect) and behaviors that distinguish two therapies (e.g., using hypnosis in cognitive behavioral therapy). If two treatments are being compared with each other, it must be determined that the treatments are truly unique and do not use treatment-specific techniques from the other condition in order to conclude that outcome differences are due to the specific treatment (Waltz et al., 1993).

Therapist competence is the other main component of establishing treatment fidelity. Competence refers to the level of skill the therapist uses in conducting psychotherapy. Competence includes skills such as building rapport, appropriately dealing with problems that arise throughout therapy, and efficiently utilizing time (Shaw et al., 1999). Establishing therapist competence is not only important for research, but it

is also listed as a vital component for practicing clinicians by the American Psychological Association's *Ethical Standards* (2002). The therapeutic alliance, or the collaborative client-therapist relationship, has also been studied extensively independent from other factors of therapist competence (Horvath & Symonds, 1991; Crits-Christoph & Connolly, 1999).

In addition to therapist competence and adherence, the Treatment Fidelity Workgroup of the National Institutes of Health Behavior Change Consortium (Bellg et al., 2004) recommends that patient receipt and enactment of the treatment also be measured. Patient receipt of treatment is defined as the degree to which the patient understands the material presented in therapy, and treatment enactment is the degree to which the patient actually implements and utilizes the material and skills presented in therapy. Thus, this model proposes measuring what is taught, what is learned, and what is used (Bellg et al., 2004). Several researchers have begun to implement this type of treatment evaluation (Resnick et al., 2005).

Measurement of Treatment Fidelity

There are numerous ways that therapist competence and adherence have been measured. Since competence and adherence are usually treatment-specific, new scales must be developed for each type of therapy and inter-rater reliability must be established for each study. Usually, trained raters watch videotaped therapy sessions and use checklists or Likert-type scales to assess various areas of competence and adherence. The checklist scales often rate only the frequency or presence/absence of a certain behavior, rather than the degree to which the behavior occurred. Some scales take each

item and rate it on quality (competence) and frequency (adherence) separately (Barber & Crits-Christoph, 1996; Barber, Mercer, Krakauer, et al., 1996; Barber et al., 2004; Barber, Liese, & Abrams, 2003; Carroll et al., 2000), while others measure only adherence (Dobscha, Gerrity, Corson, Bahr, & Cuilwik, 2003) or only competence (O'Malley et al., 1988).

As several researchers point out, competence and adherence should not be measured in isolation from each other. Rather, Waltz et al., (1993) and Barber et al., (2003) propose defining competence in terms of adherence. For example, a therapist who conducts Eye Movement Desensitization and Reprocessing (EMDR) in lieu of identifying problematic cognitions in a Cognitive Behavioral Therapy (CBT) trial should not be rated as highly competent regardless of his/her finesse in administering EMDR. Using this definition, therapists can not be competent unless they are also adherent (Waltz et al., 1993; Barber et al., 2003). It can further be stated that therapists are not fully adherent unless they are appropriately, or competently, conducting the treatment according to the treatment manual's guidelines. For example, using the illustration above, a therapist should not be rated as highly adherent while conducting Cognitive Behavioral Therapy if they do not first build rapport and appropriately pace the session, as these are necessary behaviors for conducting CBT.

The current study utilizes the definition above by defining competence and adherence in terms of each other, since we believe that the constructs are delicately intertwined. This is supported by several studies which have demonstrated that competence and adherence, when measured separately, correlate strongly (Barber &

Crits-Christoph, 1996; Barber, Mercer, Krakauer, & Calvo, 1996; Barber et al., 2003). Thus, when measuring adherence and competence, instead of using a checklist or another scale to determine whether treatment-specific behaviors occurred or not, we use a Likert-type scale that measures how optimally therapists employed treatment-specific behaviors (e.g., in the current study, the therapist's ability to fortify a strong sense of family cohesion in a family collectivism module). Additionally, we will also measure behaviors that are essential but not specific to the treatment, such as building rapport and appropriate pacing the session. All behaviors that are measured are outlined in the treatment manual. However, instead of simply measuring if behaviors occur or do not occur, we measure the quality of the therapist's performance when employing these strategies. Therefore, we are combining the ideas of adherence and competence in order to assess a more meaningful construct.

Predictors of Treatment Fidelity

It is also important to examine predictors of therapist competence and adherence in order to determine factors potentially interfering or contributing to the therapeutic environment. Identifying these variables may help determine if certain clients are inappropriate for the therapy in question. For example, if it is found that therapists are unable to adequately follow the protocol with clients who have symptoms above a certain cutoff score on a structured clinical interview, then therapy may need to be redesigned for severely symptomatic patients or these clients may need to be referred elsewhere until stabilized. Additionally, elucidating client characteristics that predict poorer therapist competence and adherence may be useful for supervision purposes. Supervisors can

provide additional guidance when trainees are working with a subset of clients previously found to make treatment fidelity more challenging. In treatment outcome studies, researchers may look to results from prior studies identifying predictors of therapist performance, in order to explore potential covariates for their current study. This is necessary to more accurately measure how therapist competence and adherence relate to certain outcomes, such as dropout and participant functioning at the end of treatment.

Many client characteristics have been examined as potential predictors of therapist competence and adherence with mixed findings. The current study aims to help clarify the discrepancies in the literature by further examining the predictors. Symptom severity is one variable that has been shown to predict therapist performance in some studies but not others. In a study looking specifically at the treatment of schizophrenia, better social functioning for the patient and fewer symptoms of activation and autistic preoccupation rated from the Positive and Negative Syndrome Scale were predictive of higher therapist's ratings of therapeutic alliance (Couture et al., 2006). In a study treating troubled youth, Schoenwald, Halliday-Boykins, and Henggeler (2003) found that severity of problems (criminal offenses combined with substance abuse, prior arrests, and school suspensions) negatively predicted adherence. Barber, Crits-Christoph, and Luborsky (1996) found that improvement of depressive symptoms in early sessions of therapy predicted greater adherence to expressive techniques of supportive expressive dynamic psychotherapy in session 3, but did not predict competence. Not all studies have shown a predictive relationship between symptom severity and therapist performance. For example, Startup and Shapiro (1993) found that levels of therapist adherence to a

treatment for depression were not related to baseline symptoms of depression. In a similar study, Elkin, Falconnier, Martinovich, and Mahoney (2006) found baseline levels of depression were not related to therapist effects. It may be that symptoms associated with more severe forms of psychopathology such as delusions or hallucinations may have more impact on therapist performance than more normative symptoms such as depression, anxiety, and stress.

In the present study we examine severe psychiatric symptoms (e.g., delusions, hallucinations) as well as more common symptoms (i.e., depression, anxiety, and stress) within the same population to determine the differential effects they may have on therapist performance. Furthermore, when evaluating family therapies, it is also important to examine family member functioning. This is particularly important when studying schizophrenia, as patient functioning is closely tied with family functioning (Mueser, Torrey, Lynde, Singer, & Drae, 2003; Dixon et al., 2001; Pitschel-Walz, Leucht, Bauml, Kissling, & Engel, 2001). Caring for a patient with schizophrenia also has a negative impact on quality of life for family members (Foldemo, Gulberg, Ek, & Bogren, 2005).

Severity of symptoms has also been found to be related to ratings of family difficulty. For example, Tompson, Rea, Goldstein, Miklowitz, & Weisman (2000) found that more severe bipolar symptoms were associated with greater ratings of family difficulty (Tompson et al., 2000). Client or family difficulty may also negatively predict ratings of therapist performance (Foley, O'Malley, Rounsaville, Prusoff, & Weissman, 1987) and therapeutic alliance (Trepka, Rees, Shapiro, Hardy, & Barkham, 2004).

Clients who are difficult, uncooperative, and hostile likely make it harder for therapists to adhere to specific therapeutic techniques and to competently conduct therapy (Waltz et al., 1993; Perepletchikova & Kazdin, 2005). However, some studies have not found a clear connection between client difficulty and therapist performance. For example, Elkin et al. (2006) found that patient difficulty was not related to therapist effects for treatment of depression. However, this study was not looking directly at therapist competence and adherence, but instead at the differential effects of outcome between therapists. Additionally, they defined patient difficulty by looking at baseline levels of Axis-II personality features, hostility, perfectionism, and the patient's expectations of improvement. Different results may have been found if this study looked at patient difficulty as measured during therapy sessions, as well as within-therapist variance in performance. Another study by Weisman et al. (1998) did look at client difficulty (in this case, family difficulty) as rated during the session and therapist competence/adherence for a family treatment for bipolar disorder. This study found that family difficulty was not related to most areas of therapist competence/adherence, though it was related to the therapist's ability to control the session. Due to mixed findings in the literature, as well as lack of studies looking at interventions with schizophrenia, research in this area is needed to determine the nature of the relationship between client difficulty and competence/ adherence in schizophrenia.

Examining other measures of family functioning, such as family cohesion, may help to clarify the relationship between family difficulty and therapist competence/ adherence. Family cohesion is defined as the degree to which members view their family

as emotionally connected, supportive, and committed to each other (Harris & Molock, 2000). Family cohesion has been shown to be positively related to mental health (Harris & Molock, 2000), particularly for minorities such as Hispanic families (Weisman, Rosales, Kymalainen, & Armesto, 2005). Family cohesion also has a positive relationship with family functioning (Baer, 2002), which should in turn make it easier for the therapist to achieve competence/adherence. One study on multisystemic family therapy for delinquent youth found that the therapist's ability to direct sessions and build a feeling of collaboration with the family predicted family cohesion as rated by adolescents at outcome (Schoenwald, Henggeler, Brondino, & Rowland, 2000). Although this relationship doesn't speak to a predictive power of family cohesion at baseline, these results do suggest that family cohesion and therapist performance may be connected. It can be postulated that baseline levels of family cohesion may positively predict levels of therapist competence/adherence, as families who already view themselves as a cooperative team would be more conducive to therapeutic intervention than families who are more fragmented. As family members' and schizophrenia patients' ratings of family cohesion are not related (Weisman et al., 2005), it is important to obtain both patients' and family members' perspectives, and examine how each perspective relates to therapist performance.

Therapist Fidelity, Client Satisfaction, and Treatment Retention

Clients' attitudes about therapy are also likely to be intertwined with therapists' performance. If clients appear satisfied with the therapy sessions, therapists may also be more likely to feel motivated to perform to the best of their ability. Likewise, if

therapists are demonstrating greater skill when conducting therapy and appear to be following clear guidelines throughout the sessions, clients are likely to be more satisfied with treatment. Previous studies have shown a relationship between therapist behaviors and client attitudes in the form of consumer satisfaction. One study found that some aspects of therapist competence (e.g., attentiveness, supportiveness, warmth) were positively related to consumer satisfaction for conducting case management with homeless clients with severe mental illnesses (Klinkenberg, Calsyn, & Morse, 1998). A review article on consumer satisfaction with treatment for Attention Deficit Hyperactivity Disorder, Bukstein (2004) states that various components of therapist competence and adherence (e.g., having good rapport, being knowledgeable) are important contributors to consumer satisfaction.

Similarly, therapist performance is likely to impact clients' motivations to continue with therapy. One study found that one aspect of therapist competence, ability to foster a greater therapeutic alliance, was related to better treatment retention for three different therapies for substance abuse (Barber et. al., 2001). Another study with opioid-dependent patients found that stronger therapeutic alliance predicted better treatment retention for patients with moderate to severe levels of psychiatric symptoms (Petry & Bickel, 1999). We did not find any studies examining this relationship with the treatment of schizophrenia. Therefore, the current study aims to fill this gap by examining therapist performance during family therapy for schizophrenia and consumer satisfaction and dropout rates. We hypothesize that therapist competence/adherence will be closely tied to consumer satisfaction and dropout rates due to the impact of therapist performance on

consumer attitudes as well as the proposed impact of consumer attitudes on therapist performance.

The Current Study

The current study describes a new measure of treatment fidelity and uses this instrument to evaluate therapist competence and adherence to a Culturally Informed Therapy for Schizophrenia (CIT-S) and Treatment As Usual (TAU). CIT-S is a 15-session, weekly family therapy for patients with schizophrenia and their family members. The therapy includes 5 modules (Family Cohesion, Psychoeducation, Communication Training, Spirituality, and Problem Solving) and is tailored to meet the needs of Hispanic families. See Weisman, Duarte, Koneru, & Wasserman (2006) for a review of CIT-S and the ongoing study to test its efficacy.

The current study also evaluated competence/adherence to a treatment as usual (TAU) control group. TAU serves as a comparison against which we will test the efficacy of CIT-S in future studies. TAU is a three week, Psychoeducation-only family therapy which is equivalent to the Psychoeducation module of CIT-S. In addition to establishing levels of competence and adherence, the current study also examined factors that predict competence/adherence and assessed whether competence/ adherence predicted consumer satisfaction and treatment retention.

In summary, based on the research reviewed above, in the present study we test whether the following variables will be associated with higher competence/adherence ratings: less severe psychiatric symptoms in patients, lower ratings of family difficulty, lower ratings of general emotional distress, and greater family cohesion. As some

research has demonstrated a relationship between patient symptoms and family difficulty with competence/adherence, the current study asserts that family member's general emotional distress and family cohesion will predict competence/adherence above and beyond what symptoms and difficulty already predict. Additionally, the current study hypothesizes that higher competence/adherence will be related to greater consumer satisfaction and lower dropout rates.

As recommended by prior researchers (Waltz et al., 1993), proscribed behaviors are also examined as part of this adherence/competence study. Treatment receipt and enactment are measured as well to determine levels of client comprehension and involvement. The current study examined all of these variables for both CIT-S and TAU cases, with no differences expected between these two conditions on these characteristics.

Chapter 2: Method

Participants

Participants were drawn from a larger, ongoing schizophrenia family treatment-outcome study (See Weisman et al., 2006 for a description of the larger study). Twenty-three families were included in the current study. Fifteen of the families were randomly assigned to CIT-S, and 8 to TAU. Twenty-two patients diagnosed with schizophrenia or schizoaffective disorder participated in this study. One family member from each family was randomly picked in order to maintain independence of data, resulting in 11 mothers, 4 fathers, 3 significant others, 2 sisters, 1 brother, 1 son, and 1 grandmother participating in this study.

Patients were between the ages of 18 and 60 (M = 30.95, SD = 12.40) and family members were between the ages of 27 and 77 (M = 53.91, SD = 12.16). Eleven participants identified themselves as White, 29 as Hispanic, 1 as African American, and 2 as other. Demographic information was missing for one patient and one sister. Therapist competence/adherence data was collected from videotapes with 6 different therapists. Five therapists were upper-level clinical psychology graduate students and one therapist was a licensed clinical psychologist.

Overview of Treatment

Culturally Informed Therapy for Schizophrenia (CIT-S). CIT-S is a family therapy that consists of five modules lasting three sessions each over the course of 15 weeks. Therapists use handouts from the treatment manual to guide each segment. The first of the five modules, Family Collectivism, aims to build a strong sense of unity and teamwork among the family members. Handouts explore family members' concepts of

the meaning of family, the role of each member in the family, and how each member views the other family members. The second module, Education, provides factual information about schizophrenia. Handouts cover the symptoms of schizophrenia, how those symptoms develop, and how the family can help. The third module, Spirituality, aims to utilize the family's pre-existing spiritual and existential beliefs and/or develop new adaptive ways of viewing their beliefs in order to better conceptualize and cope with the illness. Handouts explore the family's religious or existential beliefs, what role it plays in their lives, and whether those beliefs have caused any problems in their relationships. The Spirituality module has two sets of handouts: one for family members who identify themselves as religious and one for family members who would rather explore their philosophical or existential beliefs. To avoid reinforcing delusions, therapists only use the second set of handouts when treating patients with religious delusions. The fourth module, Communication Training, teaches family members more effective methods of communicating through the use of role-playing. Handouts cover the expression of positive and negative feelings and also provide homework assignments for communicating at home. The fifth module, Problem Solving, aims to strengthen family members' problem-solving abilities by teaching the family how to better identify problems together, brainstorm possible solutions, and decide which solution is best and how to implement it. Handouts outline steps for solving problems, as well as worksheets with which to practice.

Treatment as Usual (TAU). TAU consists of the three session Education section of CIT-S. Therapists are advised to avoid using techniques from the other four CIT-S

modules in order to assure that the therapies are distinct. Handouts from the Education section described above are also used in the TAU sessions. Because this study is aimed at assessing client characteristics and symptoms associated with therapist competence/adherence, rather than with examining differences between participants assigned to CIT-S and TAU, we do not distinguish between treatment conditions when considering non-treatment-specific therapist behaviors (e.g., building rapport, pacing the session, etc.). A large scale longitudinal study will test the efficacy of CIT-S relative to TAU at a later date.

Translation of Measures

All assessments and therapies in this study are offered in English and Spanish. Measures were translated from English to Spanish using the editorial board approach, which is considered to be more effective than the translation-back translation approach (Geisinger, 1994). This method also takes into account the within group language variations that are often an issue. Measures were first translated by a native Spanish speaker of Cuban descent, who then met with the editorial board. This editorial board was comprised of native Spanish speakers of Cuban, Nicaraguan, Costa Rican, Columbian, Mexican, and Puerto Rican descent, as well as the Primary Investigator of the previously mentioned larger study, who is a non-native Spanish speaker with personal and professional experience in Spanish speaking countries (e.g., Mexico, Cuba, Spain) and U.S. cities where Spanish is frequently spoken (Los Angeles, Miami). The members of the board independently reviewed the translations and carefully compared them with the original English versions. The board then met with the original translator and

discussed any concerns or discrepancies with the Spanish translations in order to create the most language-generic version of the measures. Board members independently reviewed the measures for a second time before meeting again to make final revisions in which all members agreed that the language was clear and targeted the intended constructs.

Measures

Structured Clinical Interview for the DSM-IV Axis I Disorders, Version 2.0, patient edition (SCID-I/P). The SCID-I/P (First, Spitzer, Gibbon, & Williams, 1996) is a semi-structured interview designed for diagnosing patients with Axis I disorders according to DSM-IV criteria. This study used the psychotic symptoms section of the SCID-I/P to confirm diagnoses of schizophrenia or schizoaffective disorder. The SCID-I/P is widely used and has demonstrated high inter-rater reliability on individual symptoms and overall diagnosis (Ventura, Liberman, & Green, 1998). To assess inter-rater reliability in the current study, all interviewers as well as the Principle Investigator (PI, Amy Weisman de Mamani) watched five videotaped interviews and independently rated each question and determined an overall diagnosis. Inter-rater agreement for presence or absence of diagnosis between each rater and the PI ranged from 80%-100% agreement.

CIT-S Therapist Competence Adherence Scale (CIT-S-TCAS). The CIT-S-TCAS was used to evaluate therapist competence and adherence to CIT-S. The CIT-S-TCAS is modeled after the *Behavioral Family Management Therapist Competency/Adherence Scale* (BFM-TCAS, Weisman et al., 1998) but has been modified to fit the specifications

of CIT-S. Behavioral Family Management has three modules in common with CIT-S, therefore questions were added to cover the Family Cohesion and Spirituality modules. Additionally, the BFM-TCAS included one question regarding co-therapists cooperation, which was removed since our study only utilizes one therapist per family. Due to the multicultural focus of CIT-S, we also added a question on cultural sensitivity. In accordance with the recommendations outlined in the introduction, the CIT-S-TCAS also includes questions on proscribed behaviors and patient/family receipt and enactment of treatment. In total, the CIT-S-TCAS consists of twenty-four 7-point Likert-type scale items which are broken into eight sections. The sections cover the five modules of CIT-S, general skills, proscribed behaviors, and patient/family characteristics. Rating criteria are described in detail for every other anchor point on each question.

The first five sections assess therapist adherence to the treatment manual's guidelines for the five modules of CIT-S. The first section, Family Cohesion, contains one question evaluating the therapist's ability to fortify a strong sense of family unity and an understanding of family members' roles. The second section, Education, consists of one question assessing the therapist's ability to convey information about schizophrenia in a language that is easy for participants to understand. The third section, Spirituality, has one question measuring how well the therapist helps participants to utilize spirituality in conceptualizing schizophrenia. The fourth section, Communication Training, is made up of three questions assessing how well the therapist gives instructions, directs role plays, and gives and solicits feedback. The fifth section, Problem Solving, contains one

question evaluating the therapist's ability to facilitate identification and solutions to problems by family members.

The next section of the CIT-S-TCAS is made up of seven general skills that do not pertain to any specific module of CIT-S. The first question addresses the therapist's skill at building rapport and maintaining a therapeutic alliance. The second question assesses the therapist's ability to efficiently structure the session for optimal pacing and use of time. The third question evaluates the therapist's capacity to appropriately identify functionally relevant problems and goals in the session. The fourth question measures whether or not the therapist assigns homework and whether or not it is clearly explained and reviewed. The fifth question assesses the therapist's skill at resolving problems and crises that arise during therapy. The sixth question evaluates how well the therapist maintains control over the sessions. The seventh question addresses the therapist's cultural sensitivity.

The next section of the scale evaluates proscribed behaviors, or actions that the therapist is instructed to avoid. The first question assesses whether the therapist treats the participants with any disrespect. The second question measures whether the therapist places any blame on the patient or family members for the problems in the family. The third question evaluates whether the therapist inappropriately challenges or encourages a patient's delusions or hallucinations. The fourth question assesses the degree to which the therapist uses techniques from other therapy interventions. The fifth question measures the amount of inaccurate information presented by the therapist.

The last section of the CIT-S-TCAS deals with patient and family characteristics. The first question assesses the difficulty of the family, including how cooperative or disruptive they are. Two questions evaluate patient and family receipt, or how well the patient and family members appear to understand the material presented in therapy, as evidenced by their discussions with the therapist. Two other questions evaluate patient and family enactment, or the degree to which the patient and family members actually utilize the information presented in therapy, as evidenced by their interactions in the therapy sessions as well as any mention of use outside of sessions.

TAU Therapist Competence Adherence Scale (TAU-TCAS). The TAU-TCAS is similar to the CIT-S-TCAS, with the exception of a few questions. Instead of measuring adherence to the five modules of CIT-S, the TAU-TCAS only measures adherence to the Education module. Additionally, to measure treatment differentiation, there are four questions assessing the use of the other four proscribed modules of CIT-S (Family Cohesion, Spirituality, Communication Training, and Problem Solving).

One graduate student and one post-baccalaureate student rated videotapes for this study using the CIT-S-TCAS and the TAU-TCAS. To establish inter-rater reliability, coders rated 3 videotapes from each module, equaling 15 tapes. Inter-rater reliability was satisfactory for all 24 questions, ranging from intraclass correlations from .75 for problem specification to 1.00 for instructions, problem-solving, and delusions/ hallucinations. Ratings on five questions had zero variance, as therapists demonstrated excellent performance for these items (cultural sensitivity, disrespect, blame, other techniques, and inaccurate information). See Table 1 for all intraclass correlation coefficients. Internal

reliability was also adequate, with a Chronbach's alpha of .80 for the therapist competence/adherence questions and .72 for the patient/family characteristics.

Psychiatric Symptoms. Severity of psychiatric symptoms was rated using the Brief Psychiatric Rating Scale (BPRS; Ventura et al., 1993). The BPRS is a semi-structured interview with 24 questions evaluating symptoms such as anxiety, depression, suspiciousness, hallucinations, and unusual thought content. All questions are on a 7-point Likert-type scale ranging from 1 (not present) to 7 (extremely severe). This widely used scale has been shown to be reliable in both white and minority populations, both in English and in Spanish (Caram, Agraz, Ramos, & Garcia, 2001; Nuechterlein et al., 1992). Following Shafer (2005), the current study used 17 of the 24 items to evaluate the following five symptom subscales: positive symptoms, negative symptoms, resistance, activation, and affect. A total score was created by summing across the 17 items. To establish inter-rater reliability, all interviewers, including the PI, watched 10 videotaped BPRS interviews. Total score intraclass correlation coefficients (ICC) between the 4 study interviewers and the PI (Amy Weisman de Mamani) was .91 with an average score on each symptom of .81. Reliability for individual items ranged from .45 for Tension to 1.00 for Mannerisms-Posturing. In general, and as is common in studies using this scale (e.g., Ventura, Green, & Liberman, 1993; Schutzwohl et al., 2003) coefficients were higher for items with structured verbal prompts (M = .91, SD = .05) and lower for items based on interviewer observations throughout the interview (M = .69, SD = .19). Restriction of range in the observation-only scores appeared to contribute to lower

coefficients, as there was less variability for these items than other items. Refer to Table 2 for all intraclass correlation coefficients and breakdown of subscales.

General Emotional Distress. The Depression Anxiety Stress Scale (DASS) was used to measure symptoms of depression, anxiety, and stress (Lovibond & Lovibond, 1995). The DASS consists of 42 questions answered on a scale from 0 to 3 where 0 = Did not apply to me at all, and 3 = Applied to me very much, or most of the time. A total score is calculated by adding across the items, with possible totals ranging from 0 to 126. The DASS has shown excellent internal consistency and test-retest reliability, as well as convergent and discriminant validity in previous studies (Brown, Chorpita, Korotitsch, & Barlow, 1997). Internal reliability for the current study was good for family members and patients using Chronbach's alpha (family members, $\alpha = .98$; patients, $\alpha = .98$).

Family Cohesion. Family cohesion was measured using the Family Cohesion Subscale of the *Family Environment Scale (*FES; Moos & Moos, 1986). This subscale has 9 True/False questions designed to measure the commitment, help, and support that family members provide to one another. The FES subscale has demonstrated adequate reliability and validity in previous studies (Moos, 1990). A total score was obtained by summing the number of "True" answers, after three questions had been reverse-scored. A higher score indicates greater family cohesion. In the current study, the FES demonstrated adequate internal reliability for patients ($\alpha = .81$) and lower internal reliability for family members ($\alpha = .68$).

Consumer Satisfaction Survey. This brief scale measures how satisfied each family member is with that day's session. It consists of one question ("Using the

following scale, how satisfied were you with today's session?) answered with a 7-point Likert-type scale, ranging from 1 ("Very Dissatisfied") to 7 ("Very Satisfied").

Procedure

All aspects of assessments and treatments were offered in both English and Spanish. Baseline assessments were conducted with all participants through interview format prior to treatment assignment. The SCID and BPRS were administered to patients only, and all other measures were conducted with both the patients and the family members. Additional measures not used in this study were also administered during this time as part of the previously mentioned larger study. After each baseline assessment was completed, the family was randomly assigned to receive either CIT-S or TAU. Each therapy session was videotaped. After each session, participants completed the Consumer Satisfaction Survey. Trained raters later reviewed videotapes of the first session from each module of the CIT-S and TAU and rated the therapist using the CIT-S-TCAS or the TAU-TCAS. Sixty-nine videotapes were rated, 35 of which were in Spanish and 34 were in English.

Chapter 3: Results

Preliminary analyses

We examined for differences in competence and adherence in primary demographic variables and found no differences based on ethnicity, language use (Spanish versus English), gender of patient, and age of patient ($p > .05$ for all comparisons). Thus, these variables were not included as covariates in any further analyses.

Primary analyses

Overall, therapists demonstrated excellent competence and adherence ($M = 6.29$, $SD = .45$). Therapists were most competent/adherent at avoiding proscribed behaviors and being culturally sensitive ("Very Good" to "Excellent" range), and least adherent to assigning homework for the family to work on in between sessions ("Fair" to "Competent" range). All other means were in the "Good" to "Very Good" range. Refer to Table 3 for mean levels and standard deviations of competence and adherence for each question. Refer to Table 4 for means and standard deviations for all other measures.

Because more than one relative from each family may participate in treatment, data from only one family member was chosen at random so as not to violate the independence of data assumption. Patients' scores were analyzed separately from family members'. CIT-S and TAU groups were combined for shared domains between therapies (i.e., non-specific factors: general skills and general proscribed behaviors) and separate analyses were conducted for questions in which they differed (i.e., specific factors: questions about specific CIT-S modules, use of proscribed CIT-S modules for TAU families). Scores for CIT-S families and TAU families did not significantly differ on any

of the baseline measures or on non-specific therapist competence/ adherence scores ($p >$ .05 on all comparisons). Exploratory analyses using individual competence/ adherence questions were conducted to further examine significant results.

Pearson correlation coefficients were computed to determine the relationship between patients' and family members' understanding and use of material, as related to therapist competence and adherence. Level of receipt and enactment was high, with family members overall demonstrating greater understanding and use of material than patients. Patient and family receipt and enactment were not related to therapist performance ($p >$ .20 for all correlations). Therefore, these variables were not included in subsequent analyses. Refer to Table 5 for mean levels of receipt/enactment.

Baseline variables predicting therapist competence/adherence

We hypothesized that several baseline characteristics of patients and family members would predict therapist competence/adherence. A series of hierarchical regression analyses were conducted to examine the additive predictive power of each variable. Separate regression analyses were used for patient predictors and family member predictors. Separate regression analyses were also used for predicting non-specific therapist competence/adherence factors, CIT-S-specific factors, and TAU-specific factors.

Based on literature reviewed in the introduction, for patients, psychiatric symptoms were added in step 1, GED was added in step 2, and family cohesion as rated by the patient was added in step 3. Refer to Table 6 for results of hierarchical regression analyses. As hypothesized, patients' baseline psychiatric symptoms as measured by the

BPRS did negatively predict competence/adherence ratings for non-specific factors. There was also a trend for psychiatric symptoms to negatively predict competence/ adherence for CIT-S-specific factors. There was no significant relationship between psychiatric symptoms and TAU-specific competence/adherence. No additional variance was explained when patients' general emotional distress and patients' ratings of family cohesion were added to the models.

For models using family members, patient/family difficulty was added in step 1, family members' GED was added in step 2, and family cohesion as rated by family members was added in step 3. Refer to Table 7 for results of hierarchical regression analyses. As hypothesized, higher levels of patient/family difficulty significantly predicted lower levels of competence/adherence for non-specific factors and CIT-S factors. Family members' GED and FES did not significantly explain additional variance for non-specific factors or CIT-S specific factors. A different relationship was found when looking at TAU-specific factors. Interestingly, though the model with family difficulty was not significant in Step 1, family difficulty and family member GED both became significant predictors in Step 2, with the full model reaching a marginal level of significance. Thus GED appeared to serve as a suppressor variable by removing variance that enhanced the association between family difficulty and therapist competence/ adherence. None of the predictors, or the model, was significant in Step 3.

Further analyses were conducted with significant predictors in order to clarify which specific areas of competence/adherence were related to client variables. Zero-order correlation coefficients revealed that for the BPRS, symptom severity related to the

therapist's ability to pace the session (r = -.43, p < .05), identify problems and goals in therapy (r = -.42, p = .05), trouble shoot in session (r = -.42, p = .05), and command the session (r = -.48, p < .05). For CIT-S-specific factors, there was a trend for BPRS scores to be negatively correlated with therapist behaviors related to the family collectivism module (r = -.48, p = .07). Very similar relationships were also found when looking at zero-order correlations with patient/family difficulty. The relationship between patient/family difficulty and therapist performance was most evident for adhering to the family collectivism material (r = -.55, p < .05), identifying problems and goals in therapy (r = -.55, p < .01), trouble shooting in session (r = -.58, p < .01), and commanding the session (r = -.52, p < .01). In other words, it appears that the more cooperative a family was in session, the greater the ability of the therapist to: comply with treatment guidelines when helping the family build cohesion, target important areas to address in treatment, and appropriately deal with problems that arose in therapy.

Therapist Fidelity, Client Satisfaction, and Treatment Retention

We also hypothesized that therapist competence/adherence would be related to participants' attitudes towards therapy in terms of consumer satisfaction and their dropout rates. We used point-biserial correlation analyses to evaluate whether therapist adherence and competence was negatively related to attrition. Pearson correlation coefficients were used to analyze the relationship between competence/adherence and participant satisfaction.

As hypothesized, higher therapist competence/adherence ratings in terms of non-specific factors and CIT-S-specific factors were related to better treatment retention.

Competence/adherence ratings for TAU-specific factors were not related to treatment retention. These results suggest that greater therapist competence/ adherence in terms of general skill and proficiency for conducting CIT-S were associated with decreased dropout rates. See Table 8 for point-biserial correlation values and levels of significance. Many specific aspects of competence/adherence were related to dropout status, including performing behaviors specific to the family collectivism module (r_b = -.85, p < .001), building rapport (r_b = -.67, p < .05), pacing the session (r_b = -.44, p < .05), identifying problems (r_b = -.52, p < .01), trouble-shooting in session (r_b = -.52, p < .05), and commanding the session (r_b = -.55, p < .01)

Therapist competence/adherence for non-specific factors was positively related to consumer satisfaction for family members, but not patients. This relationship was most evident in regards to rapport (r = .50, p < .05) and problem specification (r = .42, p = .05). Competence/adherence for specific factors was not significantly related to consumer satisfaction for family members or patients. In other words, therapists' abilities to create a therapeutic relationship and identify appropriate problems in therapy were the most important aspects of therapist fidelity in relationship to family member satisfaction with therapy. See Table 9 for correlation coefficients and levels of significance.

Chapter 4: Discussion

Few studies have assessed how therapist competence/adherence relates to client characteristics and to treatment retention and client satisfaction. Furthermore, no studies that we are aware of have examined associates of treatment fidelity specifically in the context of family therapy for schizophrenia. The objective of the current study was to fill these gaps by examining the relationship between client characteristics (measured at baseline) and therapist competence/adherence to a new, family-focused, Culturally Informed Therapy for Schizophrenia (CIT-S) and a Psychoeducation control group (Treatment As Usual, TAU). The current study also examined how therapist competence and adherence for these two treatments relates to consumer satisfaction and dropout rates. Therapist competence/ adherence was measured in terms of non-specific factors, CIT-S specific factors, and TAU specific factors.

Encouragingly, overall, therapists demonstrated very high levels of competence and adherence while conducting both CIT-S and TAU. Therapists appeared particularly skilled at avoiding proscribed behaviors and showing cultural sensitivity. In line with prior research (Weisman et al., 1998) therapists in this study appeared to have the most difficulty following CIT-S guidelines for giving and following through with homework assignments.

Patients and family members also demonstrated good understanding and use of therapy materials, and these variables were not related to therapist performance. This is encouraging for two reasons. First, it suggests that it is possible to develop materials that are clear and understandable, even to clients who are coping with severe psychopathology. Second, it indicates that independent raters are able to separate their

evaluation of therapist performance, from participants' capacity to grasp the information presented.

Consistent with prior research (e.g., Couture et al., 2006), we did find that therapists had greater difficulty conducting therapy with patients who displayed more severe psychiatric symptoms at baseline. Specifically, therapists were less adept in terms of general skills, such as pacing the session, identifying problems and goals, trouble-shooting, and commanding the session. Many of the core symptoms of schizophrenia that are rated by the BPRS include factors that, by definition, would likely make it more challenging for therapists to maintain control over the session. For example, clients who are rated high on conceptual disorganization on the BPRS are likely to be tangential and circumstantial, making it more difficult for the therapist to keep the session on track. To give another example, clients rated as highly suspicious on the BPRS may be more likely to distrust their therapist. Such clients may be less forthcoming and open in treatment, making problem-identification more difficult.

There was also a trend for patients' psychiatric symptoms to be related to CIT-S specific factors of competence/adherence. However no relationship was found for TAU specific factors. Symptom severity may have more of an impact on CIT-S-specific behaviors compared to TAU-specific behaviors, as the non psychoeducation components of CIT-S require more interaction from patients and possibly skill from the therapist. On the other hand, TAU includes only one segment, psychoeducation, which is generally straightforward and didactic in nature.

In this study, contrary to expectations, general emotional distress was not related to therapist competence and adherence for patients nor for family members (except for the unusual instance where this variable became significant in a model predicting TAU specific factors, that also included family difficulty. This case is discussed further below). Thus, while patients' more severe psychiatric symptoms do likely interfere with the therapists' ability to skillfully conduct treatment, the more normative symptoms tapped by the DASS may not have this effect. This may be because symptoms of depression, anxiety, and stress (the areas assessed by the DASS), are so prevalent in patients presenting for psychotherapy, that therapists are likely to encounter some form or combination of these symptoms in most clients who present for treatment. Thus therapists may have move experience with this type of symptom and be less likely to become derailed by them.

Also as hypothesized, patient/family difficulty was related to non-specific factors and CIT-S specific factors of therapist competence/adherence. In other words, when families were viewed as less difficult and more cooperative, compliant with tasks, and engaged in therapy, the therapists were rated as demonstrating more skill in identifying problems and goals in therapy, trouble shooting in session, and commanding the session. Lower levels of family difficulty were also associated with greater skill in conducting the family collectivism module of CIT-S. This should not be too surprising, as the focus of the family collectivism module is on building family cohesion and having the family work as a team. If families are uncooperative and resistant in therapy, this module may be particularly difficult to conduct. Similarly, therapists may find it harder to identify

problems and trouble-shoot if the family is not amenable to the therapists' attempts. These results are consistent with previous studies demonstrating similar relationships between client difficulty and therapist performance with other therapies (e.g., Foley et. al., 1987). We did not find a relationship between patient/family difficulty and therapist competence/adherence for TAU sessions (except when GED was already in the model). As discussed earlier, therapists may be able to maintain control over sessions more easily with difficult clients when therapy goals are concrete and focused on providing factual information. We are not sure what to make of the apparent suppression effect that GED has on the association between family difficulty and therapist competence/adherence to TAU. Perhaps coders modulate their ratings of family difficulty when therapists are working with highly stressed, anxious, or depressed family members, so as not to merge the difficulty construct with that of general distress in clients. When the variance associated with GED is removed, the connection between family difficulty and competence/adherence may become more visible.

We hypothesized that family cohesion would be positively associated with competence/adherence, since it may be easier for therapists to work with families who view themselves as a team working together. However, this hypothesis was not supported. These results suggest that therapists do not have more difficulty when working with families who view themselves as less unified and disconnected. While unified families may be less contentious and easier to engage in some senses, less cohesive families may offer therapists more to work with and therefore more opportunities to demonstrate their skill, thus canceling out any consistent findings. Families who are

willing to enter treatment together may already view themselves as at least somewhat cohesive. This was evidenced by our relatively high levels of family cohesion as rated by both family members and patients. A relationship between family cohesion and therapist performance may be more evident in a larger sample of families with a wider range of perceptions of family cohesion.

The current study also examined how therapist performance relates to the family's experiences in treatment. Consumer satisfaction was not related to competence and adherence for patients. For family members, however, as hypothesized, those who were working with therapists rated as more competent/adherent for non-specific factors (specifically skillful at building rapport and identifying problems and goals) also reported being more satisfied with therapy. This finding may be interpreted in multiple ways. For example, family members may pick up on and be more pleased with treatment when their therapist is conducting the sessions in an organized and skillful way. On the other hand, therapists may have an easier time being faithful to the treatment manual when working with clients who appear satisfied with what the therapist is doing. There is likely an interaction between the two variables in which satisfied families enable the therapist to conduct therapy as planned, and the skill of the therapist contributes to then greater satisfaction among participants.

Also as hypothesized, families who were working with therapists rated as demonstrating higher levels of competence/adherence were less likely to prematurely drop out of treatment. This relationship was evident for non-specific factors for both CIT-S and TAU and CIT-S-specific factors (it was not found for TAU-specific factors).

One conclusion may be that families are more motivated to continue working with a therapist who they have a good relationship with, skillfully conducts sessions, and appears to have a method by following a treatment protocol. Another conclusion may be that families who drop out may display less motivation and cooperation within the treatment early on, and thus make it more difficult for their therapist to follow the treatment guidelines as prescribed. The two variables may also impact each other in a way that families who are less committed to treatment (considering dropping out) decrease their therapists' confidence and increase their stress, making it harder for the therapist to skillfully perform the intervention. Consequently, lower levels of skill shown by the therapist may increase lack of commitment to therapy and the decision to drop out of treatment altogether.

Results of the current study suggest that clinicians and clinical researchers should pay close attention to therapist competence and adherence to the treatment manual. Therapist performance appears to be tied to consumer satisfaction and treatment retention, which are both critical factors for therapy success. For researchers and clinicians, treatment retention is a very important issue, as treatment efficacy cannot be fully evaluated if participants cease treatment and clinicians are not able to complete treatment plans and maximize benefits to clients. It is important to measure therapist competence and adherence early in a treatment outcome study so that potential problems can be detected and corrected. For example, greater emphasis may need to be placed on the skill of building rapport and identifying appropriate problems and goals for therapy, as these skills were related to a host of variables. Additionally, early evaluation can help

determine if certain therapists work better with certain types of clients (e.g., more or less symptomatic patients), which could be useful in the assignment of future clients.

Additionally, the results of this study suggest that researchers and clinicians may want to take client characteristics into account when conducting therapy and measuring levels of competence/adherence. Researchers could use variables such as family difficulty and patients' symptoms as covariates when measuring competence/ adherence. Clinicians may also want to be mindful of these characteristics when deciding which therapy is appropriate for particular clients. Supervisors may also find this information useful when working with trainees who have clients who may be more difficult and have greater symptoms so they can evaluate their performance more independently of these characteristics and provide more accurate feedback. Further work should also be done to see how therapists can improve levels of competence/ adherence when working with these clients to further eliminate therapist effects.

In general, the current study also demonstrated that therapist competence/adherence in terms of TAU-specific factors was not as influenced by baseline characteristics and was also not as important in terms of consumer satisfaction and treatment retention. This may mean that the ability to impart factual information and discuss the patient's psychiatric symptoms does not fluctuate in the same way that general skills such as building rapport and commanding the session do. For CIT-S specific factors, performance during the family collectivism module appeared to be the most influenced by patient/family characteristics, as well as the most important for family members' satisfaction and dropout status. These results may have occurred for a number

of reasons. First, family collectivism is the first module of CIT-S. Thus, therapists are getting to know the family and building rapport with them. Secondly, if families were going to drop out of treatment, they tended to do so early on in therapy. Thirdly, this module focuses on building the family's sense of unity and cohesion, thus the level of family difficulty should be closely tied to how well a therapist is able to perform during this module.

The current study was marked by several limitations. Most notable is the small sample size. Secondly, there was a restriction in range for therapist competence/ adherence as therapists generally exhibited very high levels of competence/adherence. Although uniformly high competence/adherence is desirable for treatment efficacy, limited range makes it much more difficult to examine how therapist performance is truly related to outcome and client variables. Future studies should utilize a larger sample of participants, as well as a more diverse group of therapists (ranging from more novice to senior level therapists), in order to further deduce the relationship between therapist competence/adherence and other variables. Future studies should also examine these variables using alternative measures. For example, our measure of family cohesion was a 9-item, true-false questionnaire. Using a longer, likert-type questionnaire may tap into more subtle differences in family cohesion which may reveal a stronger relationship with competence/adherence. Similarly, using questionnaires throughout the course of therapy rather than only at baseline could be useful for future studies. The current student presumed that patients and family members displaying greater general emotional distress and psychiatric symptoms before the start of therapy would continue to present with

greater symptoms throughout therapy. However, the current study did not examine how fluctuations in symptoms might correspond with therapists' competence and adherence over time. Also, using observers' ratings of general emotional distress in session could be used in conjunction with self-report measures to better determine how these symptoms impact behaviors during therapy.

In conclusion, this study provides an example of how therapist fidelity can be assessed in therapy outcome research, and offers further insight into the relationship of therapist competence/adherence, client characteristics, and client retention and satisfaction. Therapist competence/adherence appears to be important for increasing treatment retention and consumer satisfaction, and seems to be related to client characteristics such as psychiatric symptoms and patient/family difficulty in session. Future studies are needed to confirm these results as well as examine the processes underlying these relationships in further detail.

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Tables

Table 1

Inter-rater Reliability for Adherence/Competency Ratings

Items	Intraclass Correlation Coefficients
Family Cohesion	.978
Education	.995
Spirituality	.995
Communication Training	
Instructions	1.00
Role-play	.996
Feedback	.991
Problem Solving	1.00
General Skills	
Rapport	.928
Pacing/Efficiency	.773
Problem specification	.753
Homework	.992
Trouble shooting	.990
Session command	.844
Cultural sensitivity	*
Proscribed Behavior	
Disrespect	*
Blame	*
Delusions/Hallucinations	1.00
Other techniques	*
Inaccurate information	*
Patient/Family Characteristics	
Family difficulty level	.771
Patient receipt	.930
Patient enactment	.865
Family receipt	.899
Family enactment	.908

Note. Asterisks indicate zero variance.

Table 2

Inter-rater Reliability for Brief Psychiatric Rating Scale

Subscale	Items	Intraclass Correlation Coefficients
Positive Symptoms	Unusual Thought Content	.899
	Conceptual Disorganization	.689
	Hallucinations	.966
	Grandiosity	.871
Negative Symptoms	Blunted Affect	.629
	Emotional Withdrawal	.524
	Motor Retardation	.718
Resistance	Hostility	.982
	Uncooperativeness	.607
	Suspiciousness	.814
Activation	Excitement	.934
	Tension	.453
	Mannerisms-Posturing	1.00
Affect	Anxiety	.923
	Guilt	.955
	Depression	.899
	Somatic Concern	.917

Table 3

Mean Adherence/Competence Ratings[a] *and Level of Family Difficulty, Receipt, and Enactment*[b]

Variable	N	Mean	Standard Deviation
Family Cohesion	15	5.27	1.49
Education			
CIT-S	13	6.08	.76
TAU	8	6.38	.52
Spirituality	11	6.00	.00
Communication Training			
Instructions	11	6.09	.70
Role-play	11	6.38	.74
Feedback	11	6.30	.58
Problem Solving	11	6.27	.65
General Skills			
Rapport	23	6.17	.69
Pacing/Efficiency	23	5.55	.98
Problem specification	23	6.27	.78
Homework	23	3.77	2.43
Trouble shooting	23	6.53	.63
Session command	23	5.81	1.26
Cultural sensitivity	23	7.00	.00
Proscribed Behavior			
Disrespect	23	7.00	.00
Blame	23	6.97	.11
Delusions/Hallucinations	23	6.91	.42
Other techniques	23	7.00	.00
Inaccurate information	23	7.00	.00
Overall Competence/Adherence	23	6.29	.45

[a] CIT-S rating scale: 0 = not applicable; 1 = very poor; 2 = poor; 3 = fair; 4 = competent; 5 = good; 6 = very good; 7 = excellent.

Table 4

Means and Standard Deviations for All Measures

Measures	N	Mean	Standard Deviation
Psychiatric Symptoms	23	38.83	9.61
General Emotional Distress			
Patient	20	38.40	32.68
Family Member	23	27.18	28.64
Family Cohesion			
Patient	22	6.50	2.54
Family Member	23	6.83	2.02
Patient/Family Difficulty	23	1.60	.74
Consumer Satisfaction			
Patient	20	5.75	1.27
Family Member	22	6.26	.88
Competence/Adherence			
Non-Specific	23	6.33	.43
CIT-S Specific	15	5.48	1.31
TAU-Specific	8	6.69	.26

Table 5

Means and Standard Deviations for Patient and Family Member Receipt and Enactment

Measures	N	Mean	Standard Deviation
Receipt			
Patient	21	1.82	1.03
Family Members	23	1.09	.20
Enactment			
Patient	21	1.89	1.08
Family Member	23	1.16	.27

Note: Ratings are on a scale from 1 to 7 in which 1 represents the highest level of receipt or enactment.

Table 6

Hierarchical Linear Regression for Patient Characteristics Predicting Therapist Competence/Adherence

Step	N	R^2	*F*	*p*	R^2 *change*	*F change*	*p*
Non-Specific Factors	20						
Step 1		.21	4.90	.04	.21	4.90	.04
Psychiatric Symptoms (β = -.46, p = .04)							
Step 2		.33	4.24	.03	.12	3.03	.10
Psychiatric Symptoms (β = -.35, p = .11)							
General Emotional Distress (β = -.36, p = .10)							
Step 3		.40	3.51	.04	.07	1.71	.21
Psychiatric Symptoms (β = -.33, p = .13)							
General Emotional Distress (β = -.31, p = .15)							
Family Cohesion (β = .26, p = .21)							
CIT-S Specific Factors	13						
Step 1		.26	3.90	.07	.26	3.90	.07
Psychiatric Symptoms (β = -.51, p = .07)							
Step 2		.27	1.86	.21	.01	.14	.72
Psychiatric Symptoms (β = -.48, p = .13)							
General Emotional Distress (β = -.11, p = .72)							
Step 3		.28	1.17	.38	.01	.11	.75
Psychiatric Symptoms (β = -.48, p = .15)							
General Emotional Distress (β = -.14, p = .67)							
Family Cohesion (β = -.10, p = .75)							

TAU Specific Factors	7						
Step 1		.17	1.04	.35	.17	1.04	.35
Psychiatric Symptoms (β = -.42, p = .35)							
Step 2		.18	.43	.68	.01	.03	.88
Psychiatric Symptoms (β = -.43, p = .41)							
General Emotional Distress (β = .08, p = .88)							
Step 3		.18	.22	.88	<.01	.01	.92
Psychiatric Symptoms (β = -.40, p = .55)							
General Emotional Distress (β = .05, p = .93)							
Family Cohesion (β = .07, p = .92)							

Table 7

Hierarchical Linear Regression for Family Member Characteristics Predicting Therapist Competence/Adherence

Step	N	R^2	*F*	*p*	R^2 *change*	*F change*	*p*
Non-Specific Factors	22						
Step 1		.20	5.13	.04	.20	5.13	.04
Difficulty (β = -.45, p = .04)							
Step 2		.21	2.54	.11	.01	.17	.69
Difficulty (β = -.42, p = .06)							
General Emotional Distress (β = .09, p = .69)							
Step 3		.22	1.67	.21	.01	.15	.70
Difficulty (β = -.42, p = .08)							
General Emotional Distress (β = .08, p = .74)							
Family Cohesion (β = -.08, p = .70)							
CIT-S Specific Factors	14						
Step 1		.39	7.74	.02	.39	7.74	.02
Difficulty (β = -.63, p = .02)							
Step 2		.44	4.31	.04	.05	.92	.36
Difficulty (β = -.59, p = .03)							
General Emotional Distress (β = .22, p = .36)							
Step 3		.48	3.12	.08	.04	.85	.38
Difficulty (β = -.56, p = .04)							
General Emotional Distress (β = .25, p = .30)							
Family Cohesion (β = -.21, p = .38)							

TAU Specific Factors	8						
Step 1		.17	1.27	.30	.17	1.27	.30
Difficulty (β = -.42, p = .30)							
Step 2		.68	5.29	.06	.51	7.86	.04
Difficulty (β = -.90, p = .03)							
General Emotional Distress (β = -.86, p = .04)							
Step 3		.72	3.38	.14	.04	.54	.50
Difficulty (β = -.67, p = .21)							
General Emotional Distress (β = -.44, p = .55)							
Family Cohesion (β = .40, p = .50)							

Table 8

Point-Biserial Correlations between Competence/Adherence and Dropout Status

Measures	N	r_b	*p*
Non-Specific	23	-.65	.001
CIT-S Specific	15	-.82	<.001
TAU-Specific	8	-.45	.27

Table 9

Correlations between Competence/Adherence and Participant Satisfaction

Measures	N	*r*	*p*
Patients			
Non-Specific	20	-.23	.34
CIT-S Specific	14	-.42	.13
TAU-Specific	6	.28	.60
Family Members			
Non-Specific	22	.50	.02
CIT-S Specific	14	.32	.26
TAU-Specific	8	.11	.79