

BEYOND ETHNIC MATCH: EFFECTS OF CLIENT–THERAPIST COGNITIVE MATCH IN PROBLEM PERCEPTION, COPING ORIENTATION, AND THERAPY GOALS ON TREATMENT OUTCOMES

Nolan Zane, Stanley Sue, and Janet Chang
University of California, Davis

Lillian Huang
Alliant University, Alameda

John Huang
Azusa Pacific University

Susana Lowe
University of California, Berkeley

Shobha Srinivasan
National Institute of Environmental Health Sciences

Kevin Chun
University of San Francisco

Karen Kurasaki
California Endowment Foundation, Sacramento

Evelyn Lee
Richmond Area Multi-Services, San Francisco

This study examined the outcome effects of cognitive match between Asian and White outpatient clients and their therapists. Many clinicians believe that one hindrance to the treatment of ethnic minority clients is that therapists and clients may not share common assumptions and attitudes

This study was supported by the National Research Center on Asian American Mental Health (National Institute of Mental Health grant MH59616).
Correspondence to: Nolan Zane, Department of Psychology, University of California, Davis, CA, 95616.
E-mail: nzwane@ucdavis.edu

about therapy and about the problems that are presented in treatment. The study investigated client–therapist similarity in their perceptions of the presenting problem, coping orientation, and expectations about treatment goals. This study constituted a more rigorous test of the cognitive match hypotheses in that it was prospective in nature, used separate and independent sources for the cognitive predictors, employed multiple outcome measures, and focused on specific attitudes and perceptions that are quite salient and relevant to treatment. Cognitive match on treatment goals was predictive of session impact. Moreover, cognitive matches in avoidant coping orientation and in perceived distress associated with interpersonal problems were predictive of certain treatment outcomes. The findings may help explain why clients matched on ethnicity with their therapists tend to stay longer in treatment and do better in psychotherapy. © 2005 Wiley Periodicals, Inc.

For some time now, cultural diversity- and ethnic minority-oriented researchers have tried to specify those factors that enhance treatment effectiveness with ethnic minority clients. Despite widespread discussion of cultural competency, few studies have examined treatment outcomes with these clients. Out of the numerous treatment outcome studies judged to be of sufficient rigor to constitute an empirically validated treatment, Chambless et al. (1996) could not find a single published study that focused on any ethnic minority group. The inadequate research base for developing culturally effective treatments for ethnic minority populations has been cited as a major problem in the mental health field (U.S. Surgeon General, 2001). Thus far, the components that constitute cultural competency in psychotherapy have remained elusive.

One of the most widely proposed factors in cultural competency has been the type of psychosocial match between clients and their therapists. For example, some researchers and practitioners believe that ethnic match is associated with favorable treatment outcomes. Sue, Fujino, Hu, Takeuchi, and Zane (1991) found that for some ethnic minority groups ethnic similarity between therapists and clients was associated with less premature termination and more favorable treatment outcomes, especially for clients who were unacculturated to American society. Other studies have yielded equivocal results. In a review of the relationship between ethnic match and termination, Maramba and Hall (2002) found that effect sizes from seven studies were small. After the first session, ethnic match was not a significant clinical predictor of dropping out. Beutler, Machado, and Neufeldt (1994) believe that ethnic similarity may facilitate retention in therapy but ethnicity may have only a minor role in therapy outcomes. Smith, Glass, and Miller (1980) examined the educational and economic backgrounds and upward mobility of therapists and clients in treatment outcome studies. An index of similarity was calculated and then used as a predictor of treatment outcomes. The investigators found that similarity accounted for only a small amount of variance in treatment outcomes. However, Gaston (1990) has argued that therapist–client *match* or agreement on goals and tasks in therapy is important in establishing a therapeutic alliance.

It is not surprising that consensus is lacking on the importance of demographic similarity for treatment outcomes. Ethnic and demographic matches are distal and structural variables that affect attitudes, values, and expectancies, which, in turn, are

presumably more proximal to treatment outcomes (Sue & Zane, 1987). Even when clients and their therapists are ethnically similar, they may differ in cultural attitudes and levels of acculturation. Ethnic matches do not ensure cognitive matches (Maramba & Hall, 2002). Therapist–client matches in attitudes, beliefs, and expectancies may be the more direct and important predictors of treatment outcomes. If cognitive match is important, it may help to explain why research findings have not been convergent on the importance of ethnic match. Moreover, ethnicity and race are immutable characteristics. One cannot change these characteristics in order to effect favorable treatment outcomes, but attitudes, beliefs, and expectancies are changeable, albeit with difficulty. In fact, earlier research found that the provision of “pretreatment preparation” to low-income clients to better align their expectations with what therapists provided in treatment led to more favorable outcomes (Lorion, 1974). If cognitive match is important, this may be a more feasible approach to addressing cultural competence issues.

It is still unclear how ethnic and cultural differences are linked to processes that result in effective psychotherapy. Sue and Zane (1987) have proposed a model for articulating how cultural differences cause or exacerbate problems in psychotherapy for ethnic minority clients. The proximal–distal model organizes the current knowledge of cultural differences into a set of testable research hypotheses. The model proposes that one variable is more likely to be influenced by a second variable when the second is proximal rather than distal to the first. For example, ethnicity is more distal to treatment outcomes than, say, therapist or client attitudes. In this case, outcomes may be more directly affected by attitudes (proximal variable) than ethnicity (distal variable) because ethnicity may affect attitudes that, in turn, affect outcomes.

In the model, it is also hypothesized that treatment-relevant cultural differences can occur in at least three areas: problem conceptualization, means for coping with or solving the problem, and goals for treatment. First, if the client’s problems are conceptualized in a manner that is incongruent with the client’s belief systems and personal constructs (Frank, 1961), the credibility of the therapist or the treatment may diminish. For example, it is possible that cultural differences in mental health beliefs can result in differing perceptions of the problem between client and therapist (Sue, Wagner, Ja, Margullis, & Lew, 1976; Lum, 1982). Second, cultural incongruities in therapy can also arise over the ways in which clients and therapists prefer to solve the client’s problems. Therapeutic procedures and the client–helper roles adopted as the means for problem resolution may run counter to certain preferred ways of coping with the problem or violate certain behavioral norms considered important in the client’s culture. Requiring from clients responses that are culturally incompatible or unacceptable may decrease the credibility of the therapist or the treatment. Thus, expectations concerning the therapist’s role, coping preferences or orientations, and beliefs about the types of help to be received may affect the problem-solving process in therapy. Finally, even when there exists cultural congruence between therapists and ethnic minority clients in problem conceptualization and the preferred means for problem resolution, the latter may leave therapy because they feel that therapy has been unsuccessful. With respect to treatment goals, the model points to the hypothesis that certain ethnic minority clients are using different criteria to judge the effects of therapy from those commonly used by therapists (Murase & Johnson, 1974).

The present study examined the relationship between client–therapist cognitive match and treatment outcomes among White American clients and Asian American clients, an ethnic minority clinical population that historically has underutilized mental

health services and experienced poor outcomes relative to White clients (e.g., Sue, 1977; Zane, Enomoto, & Chun, 1994). This study constituted a more rigorous test of the match hypotheses in several ways. First, the study was prospective in nature so that it was possible to determine if cognitive matches between clients and their therapists *prior to* treatment actually resulted in better outcomes. Previous match-oriented research has been limited by cross-sectional strategies that associated match with outcomes. Few studies on match have used prospective designs to examine if match is actually predictive of more positive outcomes (Beutler et al., 1994). Second, the investigation used separate and independent sources for the cognitive predictors, one based on clients' perceptions and attitudes and the other based on their therapists' perceptions and attitudes. This allowed for the match variables to be truly empirically based indices of similarities between clients and their therapists. Earlier match research tended to rely on client or therapist reports of cognitive match rather than direct comparisons of client and therapist responses that indicate the actual degree of match. Third, multiple measures of therapeutic outcomes from different sources were employed. Previous studies have tended to use outcome measures from a single source or perspective (e.g., client self-reports of outcome). Finally, the study focused on specific attitudes and perceptions that are quite salient and relevant to treatment, namely, perception of the problem, coping orientations or the preferred ways of dealing with the problem, and belief in the effectiveness of treatment (i.e., treatment credibility). Earlier research has tended to examine match on general values and attitudes that may be quite distal to the processes occurring in treatment between clients and their therapists.

We wanted to test the effects of different forms of therapist–client similarity in the cognitive domains that had been identified in Sue and Zane's (1987) proximal–distal model of cultural responsiveness. Specifically, we measured the degree of cognitive match between clients and their therapists on (a) problem perception, (b) coping orientation, and (c) goals for treatment. In this case, *match* referred to the extent of similarity between the client's views (e.g., problem perception) or orientation (e.g., coping orientation) and the therapist's views of how the client should be responding to the problem following treatment. This type of cognitive match between client and therapist may be especially important in understanding how ethnic and cultural variations may affect treatment response. Findings from previous psychotherapy research strongly suggest that ethnocultural differences between clients and therapists may involve differing orientations about how mental health problems should be addressed (Zane, Hall, Sue, Young, & Nunez, 2004). Degree of cognitive match was then used to predict two types of responses to treatment on the part of clients, session impact and short-term treatment outcomes. In this way, the study determined how such culture-related cognitive matches or mismatches prior to treatment were related to various types of outcomes. The focus on short-term outcomes was particularly appropriate for examining the clinical experience of Asian Americans. Earlier studies have consistently found that relative to White clients, Asian clients have higher premature termination rates and shorter treatment stays (e.g., Sue, 1977). This suggests that problems are likely to occur in the early stages of treatment for Asian Americans.

Therapy outcomes also were evaluated from two perspectives, the clients' ratings of personal distress and the therapists' clinical judgments. Moreover, the outcome study was able to examine the effects of cognitive match on negative symptoms as well as on prosocial functioning. Both types of outcome are important to consider, especially in light of some research that indicates the two are not necessarily highly related to each other (Kazdin, 1994).

METHOD

Participants

Sixty clients from a community mental health agency in San Francisco participated in the study. The agency served a multiethnic community, in which over half the population were Asian Americans and a significant number were Russian Americans. The ethnic backgrounds of the 60 clients used in the study were as follows: 27 White Americans (including 10 Russian Americans who were recent immigrants from the former Soviet Union), 33 Asian Americans (including 14 whose ethnic background was Chinese, 10 Vietnamese, 2 Chinese–Vietnamese, 1 Cambodian, 1 Japanese, 1 Korean, 1 of mixed Asian race, and 3 from other Asian groups). The sample included 31 (52%) women and 29 (48%) men. The majority of participants were single (82%), lived with their families (55%), had an education level of high school or lower (72%), were not employed full-time (87%), and were foreign born (63%). The average age of the participants was 41 years ($SD = 12.92$). The participants met the DSM-III-R criteria (American Psychiatric Association, 1987) for various diagnoses, and the most frequent diagnoses were major depression or bipolar disorder (35%), schizophrenia (15%), dysthymia (11%), and post-traumatic stress disorder (9%). Close to two thirds of the clients were receiving medication, but medication use was not significantly related to either ethnic or cognitive match. Given the practical and ethical realities of assigning non-English–proficient clients to bilingual therapists, as expected, ethnic matches occurred relatively more often for Asian American clients (67%) than White clients (42%), $\chi^2 = 4.03$, $p < .05$.

An intake therapist initially screened clients over the telephone to determine their suitability for participation in the study. Eligibility for the study was based on (a) consent to the pretreatment and post-fourth session interviews by the research staff and (b) sufficient capacity to complete all the measures. A research staff member contacted those clients who agreed to participate and scheduled face-to-face meetings to discuss the general procedures and the time commitment for the study. Clients were paid \$15 for their participation, and therapists were paid \$20 for their participation. Clients who agreed to be in the study were randomly assigned to a bilingual or English-speaking therapist depending on their English-speaking ability. Originally, 65 clients were included in the study, but five clients left therapy before completing four sessions of treatment. The research staff attempted to contact these clients at least twice to collect their posttest data, but none responded to the follow-up inquiries. Attrition analyses found no significant differences between these clients and those who remained in treatment on any of the match or outcome variables.

Treatment Setting and Personnel

The mental health agency was comprised of multidisciplinary staff, including social workers, marriage and family counselors, psychiatrists, and psychologists. Agency staff had been extensively trained in ethnocultural issues to serve the surrounding Asian American population. Of the 18 therapists who participated in the study, 17 were female and 1 was male. The average age of the therapists was 31.8 years ($SD = 6.23$). The ethnic backgrounds of the therapists were as follows: 5 were White Americans (including 2 Russian Americans) and 13 were Asian Americans, from backgrounds that included Chinese(8), Vietnamese(2), Cambodian(1), Japanese(1), and Korean(1). The treatment personnel who participated in the study included 5 psychologists,

3 psychiatrists, 6 social workers, 2 psychology interns, and 2 vocational rehabilitation therapists. All of the Asian American therapists in the study were fluent in their native Asian languages and the two Russian American therapists were fluent in Russian. It should be noted that when a Russian client was paired with a Russian therapist, it was considered an ethnic match; any other pairing was considered an ethnic mismatch that included a Russian client seen by a non-Russian therapist. All Russian clients could complete the various outcome measures in English. Therapists had an average of 7.2 years of clinical experience ($SD = 10.1$). Most of the therapists (85%) reported using primarily psychodynamically oriented, short-term treatment approaches in their work, and the remainder used primarily cognitive behavioral treatments. The average number of clients seen by therapists was 3.3 ($SD = 3.63$). Some therapists saw more clients than other therapists, but preliminary analyses found no therapist effects on any of the outcomes assessed.

Match and Control Measures

The data collected included demographic information that served as control variables and other data used to determine the extent of client and therapist cognitive match on problem perception, coping orientation, and treatment goals.

Demographic Variables. Clients and therapists provided the following demographic information: age, gender, ethnic background, birthplace, marital status, living arrangement (i.e., living with family members vs. without family members), education (i.e., high school degree or less vs. some college education or more), language preferred in treatment (English vs. non-English), employment status (i.e., full-time vs. part-time/not employed), and occupation. Occupation was used to determine the level of the client's socioeconomic status according to the Nam-Powers socioeconomic index (Miller, 1991). Criterion validity for the Nam-Powers has been supported by high correlations with such measures as the Duncan Socioeconomic Index, $r = .97$ (Miller, 1991). In 1980, men's and women's scores were found to be similar, so a single set of scores is commonly used to reflect socioeconomic status for both sexes (Miller, 1991). The Nam-Powers has been used successfully to assess socioeconomic status among both immigrant and American-born Asian Americans (e.g., Huang, 2000; Kim, 2001; Mak, 2000).

Perception of the Problem. The perceptual rating scale (PERCEPT) was specifically developed for this study to test the hypothesis concerning cognitive match between client and therapist in problem perception. The PERCEPT is an 11-item self-report measure, and it assesses how clients and therapists perceive interpersonal problems often presented in psychotherapy. Clients were asked to answer the PERCEPT items in reference to an important social relationship problem they had experienced within the last 12 months. Clients answered questions such as "How controllable was the problem?" and "How shameful did you feel about the problem?" rating their responses on a 4-point Likert scale from 0 (*not at all*) to 3 (*extremely*). Therapists completed the PERCEPT scale in its entirety four times, each time in reference to a distinct scenario that reflected one type of social relationship problem for a client. The scenarios represented four distinct interpersonal problems: 1) difficulty with/fear of intimacy, 2) lack of assertion or fear of confrontation, 3) overinvolvement, and 4) egocentrism or lack of empathy (Zane, 1996). Therapists were instructed to rate how their client should respond to the problem after treatment. The measure was intended to

ascertain what therapists considered desirable for clients in general. Discrepancies between therapist views and client responses were used as a measure of cognitive match or mismatch. For the therapist PERCEPT score, only scenarios 1, 2, and 4 were used to create an average therapist score because scenario 3 (overinvolvement) had very low correlations with the other three scenarios ($r = -.28, .10, \text{ and } -.38$, respectively).

To ascertain the dimensional structure of the PERCEPT, client and therapist data were factor analyzed using principal axis factoring with varimax rotation to generate orthogonal factors. This analysis yielded two factors, and they accounted for 32% of the total variance. The first factor accounted for 20% of the variance, and it included items that assessed the extent to which the problem was threatening, shameful, anxiety producing, and stressful. This factor appeared to reflect the amount of distress associated with the problem so it was labeled *Problem Distress*. Its internal consistency was adequate, with a Cronbach's alpha of .74. The second factor accounted for 12% of the variance, and it included items that assessed the extent to which the problem was controllable, solvable, predictable, and caused by internal as opposed to external factors. This factor appeared to reflect the controllability of the problem, so it was labeled *Problem Controllability*. Its internal consistency Cronbach's alpha was .74.

Coping Orientation. To test the hypothesis concerning cognitive match between clients and therapists on how one solves or copes with problems, coping orientation was assessed using a modified version of the COPE scale (Carver, Scheier, & Weintraub, 1989). The COPE scale is a 60-item self-report measure sampling 13 domains of coping that have been identified in research on stress and coping, such as active coping, planning, focusing on and the venting of emotions, and behavioral disengagement. Participants rated their frequency of use of each coping strategy on a 4-point Likert scale ranging from 0 (*not at all*) to 3 (*fairly often*). Carver et al. found acceptable internal consistency, with only one subscale (mental disengagement) falling below a Cronbach's alpha of .60. Carver et al. also found support for the concurrent validity of the various subscales of the measure. The COPE was used to assess coping orientations among both clients and therapists. Clients were asked to answer the COPE items in reference to an important interpersonal problem they had experienced within the last 12 months. Therapists completed the COPE scale in its entirety four times, each time in reference to the same scenarios that were used for scoring the PERCEPT scale. Therapists were instructed to rate how clients should be responding to the problem after completing therapy. For the therapist coping score, only scenarios 1, 2, and 4 were used to create an average therapist coping score, to remain consistent with the way the score was calculated for the PERCEPT measure. Three subscales (suppression of competing activities, acceptance, and mental disengagement) were excluded from further analysis because of their low reliabilities (Cronbach's alpha = .40, .52, and .46, respectively). The remaining COPE subscales were clustered into two measures reflecting the major higher order factors found by Carver et al. The first coping composite included the active coping, planning, restraint coping, seeking social support, positive reinterpretation, turning to religion, focusing on and venting of emotions, and humor subscales. This composite appeared to reflect the extent to which a person actively attempted to cope with problems, so it was labeled *Active Coping*. Its internal consistency Cronbach's alpha was .82. The second composite included the subscales that assessed denial, behavioral disengagement, and alcohol-drug disengagement. This type of coping seemed to involve the extent to which people avoided and

emotionally distanced themselves from problems, so it was labeled *Avoidant Coping*. Its internal consistency Cronbach's alpha was .68.

Treatment Goals. The Treatment Goals Measure (TGM) was specifically developed to test the hypothesis concerning cognitive match between clients and therapists on the types of goals treatment should have. Items from the TGM constituted revisions of certain items from the Therapist Orientation Questionnaire (Sundland & Barker, 1962; Sundland & Anthony, 1980). The TGM assessed therapist as well as client attitudes about the importance of focusing on certain issues or problems in therapy. The TGM included items that asked therapists and clients questions about how important it is that therapy help the clients reduce their anxiety, get along with people, understand their feelings better, or release their feelings and frustrations. Each item on the TGM was rated using a 5-point Likert scale ranging from 1 (*unimportant*) to 5 (*important*). The TGM was factor analyzed and all 18 items loaded onto one factor that accounted for 58% of the total variance and seemed to reflect the extent to which therapy served several functions or had multiple benefits, with higher scorers expecting more benefits from therapy than lower scorers. The internal consistency of the *Treatment Goals* factor was high (Cronbach's alpha = .95).

Outcome Measures

Two types of treatment effects, session impact and short-term treatment outcomes, were measured to evaluate the effects of cognitive match (i.e., client-therapist similarity on problem perception, coping orientation, and treatment goals). Measurement of session impact involved having clients rate how they felt about the first three sessions of treatment. Measurement of short-term treatment outcome was assessed in terms of the client's self-rating of symptom distress and the therapist's evaluations of client psychopathology and overall level of psychosocial functioning after the fourth session.

Session Impact. The Session Evaluation Questionnaire (SEQ)—Form 3 (Stiles & Snow, 1984) was utilized in the current study to measure client-rated session impact. The SEQ is comprised of 24 bipolar adjective scales presented in a 7-point differential format. Twelve items comprise the postsession evaluation scale on which the client responds to the statement "This session was" and chooses from bipolar adjective pairs such as *bad-good*, *relaxed-tense*, and *rough-smooth*. The other 12 items comprise the postsession mood scale on which the client responds to the statement "Right now I feel:" and chooses from bipolar adjective pairs such as *happy-sad*, *confident-afraid*, and *quiet-aroused*. Stiles, Orth, Scherwitz, Hennrikus, and Vallbona (1984) reported that the two dimensions on the postsession evaluation scale had high internal consistency: Depth (Cronbach's alpha = .87) and Smoothness (Cronbach's alpha = .93). The dimension of Depth included items that involved value (e.g., *valuable* vs. *worthless*) and intensity (e.g., *powerful* vs. *weak*). The dimension of Smoothness included items referring to comfort and relaxation. Similarly, the two dimensions on the postsession mood, the Positivity (Cronbach's alpha = .89) and Arousal (Cronbach's alpha = .78) scales, had high internal consistency. Ratings of the three sessions were averaged to derive measures of session impact.

Psychological Distress. The Symptom Checklist-90 Revised (SCL-90R; Derogatis, Rickels, & Rock, 1976) was utilized to assess the client's level of psychological distress both

before entering therapy and after the fourth session of treatment. The SCL-90R is one of the most widely used outcome measures and consists of a 90-item self-report symptom inventory designed for use with a broad spectrum of individuals, ranging from nonpatient *normal* respondents to individuals with psychiatric disorders. High concurrent validity has been demonstrated across multiple outcome indices (Boleloucky & Horvath, 1974; Summers, Harrow, & Westermeyer, 1983; Summers & Hersh, 1983; Derogatis et al.). Variations of the SCL-90R also have demonstrated good reliability and validity with Asian American groups (e.g., Mollica, Wyhak, de Marneffe, Khuon, & Lavelle, 1987; Zane et al., 1994). The global severity index of the SCL-90R, which is the measure's total score summed across all items, was used to evaluate respondents' self-reported degree of psychological distress. The index is sensitive to changes in treatment and tends to be the most useful measure of overall psychological distress experienced by clients in their lives (Derogatis, 1977; Derogatis & Cleary, 1977). The index was highly reliable with a Cronbach's alpha of .96.

Psychiatric Symptomatology. Therapists used the Brief Psychiatric Rating Scale (BPRS) of Overall and Gorham (1962) to rate the psychiatric condition of patients. The BPRS provides an assessment of a patient's psychiatric condition with respect to a variety of discrete symptom areas. The measure includes 18 single-item symptom ratings, each using a 7-point Likert scale of severity ranging from 1 (*not present*) to 7 (*extremely severe*). Examples of the 18 symptom areas include: somatic concern, anxiety, emotional withdrawal, and blunted affect. Hafkenscheid (1993) reported good interrater and intrarater reliabilities for samples of short-stay psychiatric patients. Chan and Lai (1993) indicated that the BPRS was a useful measure for cross-cultural research purposes. Lachar et al. (2001) found that the BPRS consisted of four highly reliable and valid subscales that assessed four types of clinical symptoms: (a) Client Resistance (e.g., uncooperativeness, hostility), (b) Positive Symptoms involving characteristics that clients tend to have more than nonclients (e.g., disorientation, hallucinatory behavior), (c) Negative Symptoms involving characteristics that clients tend to have less than nonclients (e.g., blunted affect, motor retardation), and (d) Psychological Discomfort (e.g., anxiety, depression). Resistance, Positive Symptoms, and Psychological Discomfort were adequate with respect to internal consistency with Cronbach's alphas ranging between .67—.77. However, the reliability of the Negative Symptom subscale was not adequate (Cronbach's alpha = .48), which precluded using this variable in the subsequent outcome analyses.

Psychosocial Functioning. The Global Assessment of Functioning (GAF) scale from the DSM-III-R (American Psychiatric Association, 1987) assessed the overall level of the client's psychosocial functioning. The GAF consists of 10 behavioral descriptors ranging from "persistent danger of severely hurting self or others (e.g., recurrent violence) or persistent inability to maintain minimal personal hygiene or serious suicidal act with clear expectation of death" to "absent or minimal symptoms (e.g., mild anxiety before an exam) . . . generally satisfied with life, no more than everyday problems" (p.12). Clients are rated between 1 and 100, with the higher scores reflecting better psychosocial functioning. Jones, Thornicroft, Coffey, and Dunn (1995) found that the GAF was a valid measure of clinical outcomes with a sample of chronically mentally ill patients.

Translation. The measures were translated into Chinese, Korean, and Vietnamese languages. Translation was performed according to the back-translation method. A bilingual researcher translated the measure into his or her native language with input from the other research staff members. A second bilingual researcher back-translated the measure into English. Both the translated and back-translated versions of the measure were compared. Discrepant items were revised based on input from the two original translators and the other bilingual research team members. Russian clients were proficient in English so that there was no need for a Russian translation of the measures.

Data Collection Procedures

Participants completed the demographic information questionnaire, the PERCEPT measure, the COPE scale, the Treatment Goals Measure, and the SCL-90R prior to their first therapy sessions. At the end of their first, second, and third sessions, participants completed the Session Evaluation Questionnaire. They also completed the SCL-90R after the fourth session. Therapists completed a demographic information questionnaire, the PERCEPT, the COPE scale, and the TGM. The therapists also assessed their clients' levels of functioning (as reflected by the GAF scores) and symptomatology (as reflected by the BPRS scores) after the first session and after the fourth session.

Analysis

As indicated earlier, our major interest was in the cognitive match between clients' views (in problem perception, coping orientation, and treatment goals) and therapists' views of how clients should be responding. In order to examine cognitive match, the current study utilized five continuous variables representing the extent of match between client and therapist endorsement of (a) perceived controllability of the problem, (b) perceived distress associated with the problem, (c) active coping orientation, (d) avoidant coping orientation, and (e) treatment goals. The degree of cognitive match between client and therapist was computed by determining the absolute value of the difference between the client cognitive variable and the analogous therapist cognitive variable. Lower absolute values of client–therapist differences reflected greater cognitive similarities or matches between clients and their therapists.

Stepwise multiple regression analyses were utilized to examine the effects of client–therapist cognitive match on session impact and short-term treatment outcomes. Criterion levels for entry and removal of the predictor variables were set at $p = .15$ and $p = .20$, respectively. Session impact variables included client-rated session depth, smoothness, positivity, and arousal. There were five treatment outcome variables: client-rated symptom distress, the three factors of therapist-rated psychiatric symptomatology (Resistance, Positive Symptoms, and Psychological Discomfort), and the therapist-rated level of psychosocial functioning. The five client–therapist, cognitive match variables and the following control variables were entered into each regression analysis: sex and ethnicity of client and therapist, client's preferred language (English vs. non-English), client's diagnosis (mood/anxiety disorder vs. schizophrenic related disorder/other), type of termination (normal termination vs. early termination), ethnic match or mismatch between the client and therapist, and, when an outcome variable was being examined, the clients' pretreatment scores (e.g., pretreatment score for symptom distress) or the therapist-rated post-first session scores.

RESULTS

Session Impact

As indicated earlier, four types of session impact were of interest: how affected the client felt by the therapeutic work (session depth), how relaxed or comfortable the client felt in the sessions (session comfort), how good the client felt about the sessions (session positivity), and how emotionally stimulated or interested the client was in the sessions (session arousal). Scores were combined across the first three sessions for each dimension, and regression analyses were used to determine whether demographic and cognitive match variables were predictive of session impact. Table 1 summarizes the stepwise regression results for these effects.

Session Depth. No control variables were significant predictors of session depth. However, cognitive match on treatment goals was predictive of session depth ($\beta = .27, p < .05$) in that clients with therapists who, prior to therapy, held expectations similar to their own with respect to the benefits of treatment felt more affected by their sessions than clients who began therapy with therapists who tended to differ from them on the expected benefits of treatment.

Session Smoothness. Ethnicity was significantly related to how comfortable the client felt in sessions ($\beta = .26, p < .05$) in that White American clients tended to feel more comfortable in therapy than Asian American clients. Ethnic match was predictive of session comfort ($\beta = .26, p < .05$). Clients who were ethnically matched with their therapists at the beginning of treatment felt more comfortable in subsequent sessions.

Table 1. Summary of Stepwise Regression Results for Session Impact

<i>Variable</i>	<i>B</i>	<i>SE B</i>	<i>β</i>
<i>Depth</i>			
Sex ^a - Cl	-5.70	3.58	-.20
Treatment goals match	3.84	1.80	.27*
$R^2 = 12^*$			
<i>Smoothness</i>			
Ethnicity ^b - Cl	9.31	4.41	.26*
Ethnic match ^c	9.62	4.42	.26*
Type of termination ^d	-10.91	5.748	-.23
Treatment goals match	4.29	2.14	.24*
$R^2 = 26^{**}$			
<i>Positivity</i>			
Ethnicity ^b - Cl	11.49	5.03	.34**
Treatment goals match	4.21	2.54	.26*
$R^2 = 16^{**}$			
<i>Arousal</i>			
Ethnicity ^b - Th	7.92	3.93	.26*
Language preferred ^e	4.73	3.15	.20
$R^2 = 14^*$			

Note. Th = Therapist variable; Cl = Client variable.

^a0 = Female; 1 = Male. ^b0 = Asian; 1 = Caucasian. ^c0 = Mismatch; 1 = Match. ^d0 = Completed; 1 = Other. ^e0 = Non-English; 1 = English.

* $p < .05$. ** $p < .01$.

In terms of cognitive variables, cognitive match on treatment goals also was predictive of session smoothness ($\beta = .24, p < .05$). Clients with therapists who, prior to therapy, held expectations similar to their own with respect to the benefits of treatment felt more comfortable in subsequent sessions than clients who began therapy with therapists who tended to differ from them on the expected benefits of treatment.

Session Positivity. As with session smoothness, client ethnicity was predictive of session positivity ($\beta = .34, p < .05$). White American clients felt more positive about their therapy sessions than did Asian American clients. Similar to the findings with session depth and smoothness, cognitive match on treatment goals also was predictive of session positivity ($\beta = .26, p < .05$) with greater match resulting in more positive feelings about the therapy sessions.

Session Arousal. For the fourth type of session impact, session arousal, only client ethnicity was a significant predictor ($\beta = .26, p < .05$). White American clients felt more stimulated in their therapy sessions than did Asian American clients.

Short-Term Outcomes

Similar to the previous analyses, regression analyses were conducted to determine the effects of cognitive match on each type of treatment outcome while controlling for the effects of client and therapist characteristics and the pretreatment level of that particular outcome variable. Table 2 summarizes the results of the regression analyses.

Symptom Distress. The only significant predictor of client-rated symptom distress besides its pretreatment covariate was the client's language preference ($\beta = -.25, p < .05$). Clients who preferred to speak a non-English language in treatment experienced more distress after four sessions than English-speaking clients. No cognitive match effects were found for client distress.

Psychiatric Symptomatology. There were three types of therapist-based ratings of psychiatric symptomatology: Resistance, Positive symptoms, and Psychological discomfort. As shown in Table 2, besides their pretreatment covariates, there were no significant predictors of client Resistance or Positive symptoms following short-term treatment. However, with respect to Psychological discomfort, cognitive match on avoidant coping was a significant predictor ($\beta = .21, p < .05$). Clients with therapists who held similar expectations with respect to their orientation toward avoidant coping at pretreatment exhibited less discomfort and dysphoria after short-term treatment than clients with therapists who were less matched on this coping orientation.

Psychosocial Functioning. After controlling for pretreatment level of functioning and for client and therapist characteristics as well as ethnic match, cognitive match on problem distress ($\beta = .20, p < .05$) was a significant predictor of psychosocial functioning. Clients who held perceptions similar to their therapists' with respect to the distress associated with the problem at pretreatment were functioning better after short-term therapy than clients who were less similar to their therapists with respect to this type of problem perception.

Table 2. Summary of Stepwise Regression Results for Treatment Outcomes

Variable	B	SE B	β
Symptom distress			
Pretreatment symptom distress - Cl	.42	.08	.52***
Sex ^a - Cl	.30	.16	.19
Ethnicity ^b - Cl	-.26	.17	-.17
Type of termination ^c	-.36	.21	-.18
Language preference ^d	-.39	.17	-.25*
$R^2 = 47$ ***			
Psychological discomfort			
Pretreatment discomfort - Cl	.60	.11	.58***
Sex ^a - Cl	-.39	.21	-.19
Type of termination ^c	-.50	.27	-.19
Avoidant coping match	.22	.11	.21*
$R^2 = 43$ ***			
Resistance			
Pretreatment resistance - Cl	.58	.09	.64***
$R^2 = 41$ ***			
Positive symptoms			
Pretreatment positive symptoms - Cl	.53	.08	.64***
$R^2 = 41$ ***			
Psychosocial functioning			
Pretreatment functioning - Cl	6.83	1.37	.53***
Ethnicity ^b - Th	5.69	3.62	.18
Sex ^a - Th	-10.96	7.27	-.15
Problem distress match	2.62	1.23	.20*
$R^2 = 51$ ***			

Note. Th = Therapist variable; Cl = Client variable.

^a0 = Female; 1 = Male. ^b0 = Asian; 1 = Caucasian. ^c0 = Completed; 1 = Other. ^d0 = Non-English; 1 = English.

* $p < .05$. ** $p < .01$. *** $p < .001$.

In sum, client–therapist cognitive matches were predictive of three types of session impact (session depth, smoothness, and positivity), one form of symptom outcome (psychological discomfort), and psychosocial functioning. Moreover, matches in all three domains hypothesized by the Sue and Zane (1987) proximal–distal model, namely, problem perception, coping orientation, and treatment goals were predictive of either session impact or treatment outcomes. In particular, similarities on avoidant coping orientation and perceived problem distress were significant predictors of outcomes.

DISCUSSION

The purpose of the study was to investigate the relationship between the cognitive matches between clients and their therapists and treatment outcomes. Specifically, we wanted to determine if cognitive match in problem perception, coping orientation, and treatment goals would be predictive of greater session impact and better treatment outcomes. This study constituted a substantive test of the match hypotheses in that it was prospective in nature, used separate and independent sources for the cognitive predictors, utilized multiple measures of therapeutic response, and focused on specific attitudes and perceptions that are quite salient and relevant to treatment.

There is evidence that certain types of client–therapist cognitive match *prior to* treatment result in more positive treatment outcomes and session impact. Treatment-goals match was predictive of session effect and comfort. Coping-orientation match was predictive of less dysphoria after four sessions of treatment. Moreover, pretreatment similarities between clients and their therapists in the perceived distress associated with the problem appeared to result in higher psychosocial functioning at the end of the fourth session. Interestingly, client–therapist cognitive matches did not have generic halo-type effects. Different matches were predictive of specific types of outcomes. Treatment-goals match affected session impact whereas match on avoidant coping style was predictive of less dysphoric symptomatology after short-term treatment. On the other hand, client–therapist match in perceptions of distress seemed to positively affect level of functioning as opposed to session impact or symptomatology. Cognitive match was significant in some but not all of the comparisons. Given the relatively small sample size of clients and the prospective nature of the study, this is not surprising. What is noteworthy is the fact that whenever cognitive match was significantly related to outcomes, it was *always* in the direction of positive treatment outcomes or favorable session impact. Thus, there appears to be convergent evidence for the ameliorative influence of cognitive match on therapy. Finally, it should be noted that the evidence for the importance of cognitive match in treatment outcomes persisted even after controlling for ethnic match and the client’s language preference.

Why might cognitive match be important? Sue and Zane (1987) have argued that therapists who have cultural beliefs and attitudes that differ from their clients’ may not understand or may lose credibility with these clients. Clients with therapists who are mismatched rather than matched may be more likely to prematurely terminate treatment and/or feel misunderstood. Obviously, this does not mean that therapists should alter their beliefs to match those of clients. Many clients do have dysfunctional or superstitious beliefs that are not shared, and should not be shared, by therapists. The main point is that mismatches may hinder psychotherapy and reduce credibility. The therapists should be alerted to these problems and seek the means to restore their effectiveness or credibility in ways other than cognitive match.

The findings are important for several reasons. First, they may help to explain the greater effectiveness of therapists who work with ethnic minority clients and who are of the same ethnicity. Within ethnically matched dyads, those therapists who are more similar to clients in problem perception and attitudes about coping and treatment goals may be more effective. Second, if cognitive culturally-based matches are important, then therapists who are ethnically dissimilar but cognitively similar to their clients may be more effective than those who are ethnically similar but cognitively dissimilar. That is, perhaps the important ingredient in ethnic match has been the often-associated cognitive match that occurs when, say, a Mexican American client sees a Mexican American therapist. Third, if cognitive match is important, there may be implications for training. Therapists should be trained to assess how discrepant their views are from those of their clients concerning problem-perception, coping-orientation, and treatment-goals expectations. This is particularly pertinent when the therapists and clients come from very different cultural backgrounds. Such a situation may reveal marked mismatches and, consequently, major problems in establishing rapport, trust, and the therapeutic alliance.

A number of limitations need to be considered in interpreting the study’s findings. In view of the number of independent variables that were examined, the small sample sizes of the various Asian American ethnic groups precluded any inter-Asian

group analyses. Similarly, the small sample sizes among the White American groups prevented us from examining the possible heterogeneity within this ethnic sample. It would be informative in subsequent investigations to examine if match effects are moderated by inter-ethnic variations or variables associated with ethnocultural variations such as acculturation or cultural identity.

The study was prospective in nature, but it cannot be stated with certainty that cognitive matches affected treatment outcomes. It is possible that other variables that are related to both cognitive matches and outcomes may constitute the more important determinants of the latter. Furthermore, outcomes and evaluations were collected after the fourth session rather than at the end of treatment, so the results did not reveal end-of-treatment outcomes. However, this is the first clinical study to test the proposition advanced by Sue and Zane (1987) regarding cognitive cultural match. There is empirical support for an association between match and outcomes.

The major purpose of this investigation was to determine if culturally inferred cognitive matches do affect treatment response, and it appears that they do. Because it was important to first empirically test if cognitive matches were actually related to outcomes, it was beyond the scope of the current study to examine *how* cognitive matches per se actually facilitated improvement in treatment. On the one hand, cognitive matches may be critical core factors in treatment in that they may enhance certain precursors to positive outcomes such as the working alliance between client and therapist or client self-disclosure. On the other hand, matches may have resulted from certain behavioral competencies manifested by therapists who may be more sensitive to their clients' perceptions and worldviews. The next step would be to examine changes in the match predictors across the course of treatment, as well as their relationships to key treatment processes, to better understand how cognitive matches lead to better outcomes. Other important steps would be to test for the interactive effects of aspects associated with ethnicity (e.g., cultural identity, acculturation, idiocentric and allocentric value orientations, and interdependent and independent self-construals) and cognitive match and to extend the investigations to capture the final outcomes of treatment as well as those at follow-up.

REFERENCES

- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed., rev.). Washington, DC: Author.
- Beutler, L., Machado, P., & Neufeldt, S. (1994). Therapist variables. In A. Bergin & S. Garfield (Eds.), *Handbook of psychotherapy and behavior change* (4th ed.) (pp. 229–269). New York: John Wiley & Sons.
- Boleloucky, Z., & Horvath, M. (1974). SCL-90 rating scale: First experience with the Czech version in healthy male scientific workers. *Acta Psychologica*, 16(2), 115–116.
- Carver, C.S., Scheier, M.F., & Weintraub, J.K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56(2), 267–283.
- Chambless, D.L., Sanderson, W.C., Shoham, V., Bennett-Johnson, S., Pope, K.S., Crits-Christoph, P., et al. (1996). An update on empirically-validated therapies. *The Clinical Psychologist*, 49, 5–18.
- Chan, D.W., & Lai, B. (1993). Assessing psychopathology in Chinese psychiatric patients in Hong Kong using the Brief Psychiatric Rating Scale. *Acta Psychiatrica Scandinavica*, 87(1), 37–44.

- Derogatis, L.R. (1977). The SCL-90 manual I: Scoring, administration, and procedures for the SCL-90. Baltimore: John Hopkins University School of Medicine, Clinical Psychometrics Unit.
- Derogatis, L.R., & Cleary, P.A. (1977). Confirmation of the dimensional structure of the SCL-90: A study in construct validation. *Journal of Clinical Psychology, 33*, 981–989.
- Derogatis, L.R., Rickels, K., & Rock, A.F. (1976). The SCL-90 and the MMPI: A step in the validation of a new self-report scale. *British Journal of Psychiatry, 128*, 280–289.
- Frank, J.D. (1971). Therapeutic components of psychotherapy. *American Journal of Psychotherapy, 25*, 350–361.
- Gaston, L. (1990). The concept of the alliance and its role in psychotherapy: Theoretical and empirical considerations. *Psychotherapy, 27*, 143–153.
- Hafkenscheid, A. (1993). Reliability of a standardized and expanded Brief Psychiatric Rating Scale: A replication study. *Acta Psychiatrica Scandinavica, 88*(5), 305–310.
- Huang, L. (2000). Cultural aspects of eating disorders in Asian and Caucasian populations. Unpublished doctoral dissertation, University of California, Santa Barbara.
- Jones, S.H., Thornicroft, G., Coffey, M., & Dunn, G. (1995). A brief mental health outcome scale: Reliability and validity of the global assessment of functioning (GAF). *British Journal of Psychiatry, 166*, 654–659.
- Kazdin, A. (1994). Methodology, design, and evaluation in psychotherapy research. In A. Bergin & S. Garfield (Eds.), *Handbook of psychotherapy and behavior change* (4th ed.) (pp. 19–71). New York: John Wiley & Sons.
- Kim, I. (2001). The relationship of culturally-based self-construals with emotional regulation and attachment styles in Asian American and White American male batterers. Unpublished doctoral dissertation, University of California, Santa Barbara.
- Lachar, D., Bailey, S.E., Rhoades, H.M., Espadas, A., Aponte, M., Cowan, K.A., Gummattira, P., Kopecky, C.R., & Wassef, A. (2001). New subscales for an anchored version of the Brief Psychiatric Rating Scale: Construction, reliability, and validity in acute psychiatric admissions. *Psychological Assessment, 13*, 384–395.
- Lorion, R.P. (1974). Patient and therapist variables in the treatment of low-income patients. *Psychological Bulletin, 81*, 344–354.
- Lum, R. (1982). Mental health attitudes and opinions of Chinese. In E.E. Jones & S.J. Korchin (Eds.), *Minority mental health* (pp. 165–189). New York: Praeger.
- Mak, W. (2000). A culture-specific model of vulnerability to psychological distress: The role of self construals and cognitive–personality styles on anxiety and depression. Unpublished doctoral dissertation, University of California, Santa Barbara.
- Maramba, G.G., & Hall, G.N. (2002). Meta-analysis of ethnic match as a predictor of dropout, utilization, and level of functioning. *Cultural Diversity and Ethnic Minority Psychology, 8*, 290–297.
- Miller, D.C. (1991). *Handbook of research design and social measurement* (5th ed.). Newbury Park, CA: Sage Publications, Inc.
- Mollica, R.F., Wyshak, G., de Marneffe, D., Khuon, F., & Lavelle, J. (1987). Indochinese versions of the Hopkins Symptom Checklist-25: A screening instrument for the psychiatric care of refugees. *American Journal of Psychiatry, 144*(4), 497–500.
- Murase, T., & Johnson, F. (1974). Naikan, Morita, and Western psychotherapy. *Archives of General Psychiatry, 31*, 121–28.
- Overall, J.E., & Gorham, D.R. (1962). The Brief Psychiatric Rating Scale. *Psychological Reports, 10*, 799–812.
- Smith, M.L., Glass, G.V., & Miller, T.I. (1980). *The benefits of psychotherapy*. Baltimore: The John Hopkins Press.

- Stiles, W.B., Orth, J.E., Scherwitz, L., Hennrikus, D., & Vallbona, C. (1984). Role behaviors in routine medical interviews with hypertensive patients: A repertoire of verbal exchanges. *Social Psychology Quarterly*, 47(3), 244–254.
- Stiles, W.B., & Snow, J.S. (1984). Dimensions of psychotherapy session impact across sessions and across clients. *British Journal of Clinical Psychology*, 23(1), 59–63.
- Sue, S. (1977). Community mental health services to minority groups—some optimism, some pessimism. *American Psychologist*, 32, 616–624.
- Sue, S., Fujino, D., Hu, L., Takeuchi, D., & Zane, N. (1991). Community mental health services for ethnic minority groups: A test of the cultural responsiveness hypothesis. *Journal of Consulting and Clinical Psychology*, 59, 533–540.
- Sue, S., Wagner, N., Ja, D., Margullis, C., & Lew, L. (1976). Conceptions of mental illness among Asian and Caucasian American students. *Psychological Reports*, 38, 703–708.
- Sue, S., & Zane, N. (1987). The role of culture and cultural techniques in psychotherapy: A critique and reformulation. *American Psychologist*, 42, 37–45.
- Summers, F., Harrow, M., & Westermeyer, J. (1983). Neurotic symptoms in the postacute phase of schizophrenia. *Journal of Nervous & Mental Disease*, 171(4), 216–221.
- Summers, F., & Hersh, S. (1983). Psychiatric chronicity and diagnosis. *Schizophrenia Bulletin*, 9(1), 122–133.
- Sundland, D.M., & Anthony, N. (1980). A longitudinal analysis of the effect of experience on the therapeutic approach: Revisited. *Journal of Clinical Psychology*, 36, 296–300.
- Sundland, D.M., & Barker, E.N. (1962). The orientations of psychotherapists. *Journal of Consulting Psychology*, 26, 201–212.
- U.S. Surgeon General. (2001). *Mental health: Culture, race, and ethnicity. A supplement to mental health: A report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services.
- Zane, N. (1996, April). Articulating cultural competence: The examination of culturally-based relational constructs in the psychological treatment of Asian Americans. Invited Speaker, Series on Culture, Ethnicity, and Mental Health, University of California, Berkeley.
- Zane, N., Enomoto, K., & Chun, C. (1994). Treatment outcomes of Asian and White American clients in outpatient therapy. *Journal of Community Psychology*, 22, 177–191.
- Zane, N., Hall, G.N., Sue, S., Young, K., & Nunez, J. (2004). Research on psychotherapy with culturally diverse populations. In M.J. Lambert (Ed.), *Handbook of psychotherapy and behavior change* (5th ed.). New York: John Wiley & Sons.