

Therapist Cultural Intelligence as a Moderator of Working Alliance  
and Outcome in Multicultural Counseling

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## Abstract

There exist major disparities in mental health service utilization and outcome between ethnic minorities and non-minorities. As a response, counseling psychologists developed multicultural counseling competence (MCC) theories and instruments to define and measure MCC. Yet predominant theories of MCC lack definitional clarity, and measures of MCC have not demonstrated adequate construct and predictive validity. Cultural intelligence (CQ), developed in the field of global management, has been found to be a predictor of performance in cross-cultural situations. This study evaluates the effect of therapist CQ on clinical outcomes in a naturalistic setting at a university counseling center. Outcome data from 1621 clients attending therapy was combined with originally-collected data from 28 therapists. Therapists completed a self-report measure of their CQ and provided demographic information. Data were analyzed using a hierarchical linear modeling (HLM) approach. Two sets of models were tested. The first set of models was conducted on the entire sample and did not include therapeutic bond data. The second set of models used only those clients who completed the bond measure. Data analysis demonstrated no effect of client ethnicity or ethnic matching on client improvement over time. Results for the effects of cultural intelligence on outcome were equivocal across the two models. Results from the first model showed no relationship between CQ and outcomes. The second set of models showed a positive moderating effect of therapist motivational CQ on client improvement over time. Therapist behavioral CQ positively moderated the relationship between client readiness for therapy and outcome. These results suggest that therapist CQ may be a predictor of outcome in therapy.

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## Chapter 1: Introduction

### *Background of the Problem*

For the last 30 years, considerable attention has been devoted to disparities in psychological services for racial and ethnic minorities compared to whites. In 2001, the Surgeon General's Report on Mental Health: Culture, Race, and Ethnicity (U.S. Department of Health and Human Services) concluded that, in comparison to whites, ethnic minorities have less access to mental health services, receive care of poorer quality, and continue to be underrepresented in research. In addition, minority clients continue to be over-diagnosed, more often receiving diagnoses consistent with greater severity (e.g. schizophrenia) than those considered to be less severe (e.g. depression) (Aklin & Turner, 2006). However, the majority of new students entering the counseling profession continue to be Caucasian (Sue & Sue, 2008). Leong and Lee (2006) argue that current theoretical models of psychotherapy do not adequately address important sociocultural variables for cultural minorities. They suggest that adapting current theory to diverse communities is necessary in order to provide culturally appropriate services. An attempt to clarify the qualities necessary to provide culturally relevant services led to the creation of the multicultural competence guidelines (Sue et al., 1982; Sue, Arredondo, & McDavis, 1992; Arredondo et al., 1996). These guidelines have formed the basis for current conceptualizations of multicultural counseling competence, specifically the tripartite model of multicultural counseling competence, including a therapist's knowledge, awareness, and skills.

However, as Herman et al (2007) note, current conceptualizations of multicultural

counseling competence, culturally responsive health care, and cultural sensitivity rely on definitions that are broad, difficult to measure, and hard to teach. Further, there has been a paucity of empirical research evaluating the models that emerged during the “infancy” period of multicultural research and theory in the 1980s (Worthington, Soth-McNett, & Moreno, 2007). Several researchers, including Atkinson and Israel (2003) and Ponterotto, Fuertes, & Chen (2000), have argued for a more empirical focus with respect to multicultural counseling competence, suggesting additional true experiments, field studies and outcome studies using actual client data. Ponterotto et al. go on to assert that the question of whether therapists who possess a high degree of multicultural counseling competence demonstrate better therapeutic outcomes across cultures has not yet been answered.

Recent research from the field of global management suggests that cultural intelligence (CQ), a theoretical extension of current conceptualizations of intelligence (e.g., multiple intelligence theory; Sternberg, 1988), may offer counseling psychologists an alternative to the tripartite model of multicultural counseling competence (Goh, Koch, & Sanger 2008). In addition to being well-researched and methodologically sound, CQ expands upon multicultural counseling competence theory by including metacognitive (i.e., an individual’s ability to mentally strategize) and motivational components. The theoretical underpinnings of CQ and its methodological strengths are more fully explored in Chapter 2.

### *Significance of the Problem*

The most proximal potential benefit of the study is the evaluation of the

theoretical model of cultural intelligence, which would advance knowledge in the field. As current theoretical models of multicultural counseling competence suffer from a variety of theoretical and methodological problems, counseling psychology would benefit greatly from a theoretically parsimonious and methodologically supported model of multicultural counseling competence. This exploratory study offers support for the predictive validity of cultural intelligence within the context of a therapeutic setting. No other study examining a multicultural counseling construct has demonstrated predictive validity in a therapeutic context. Additionally, establishing the hypothesized relationship between cultural intelligence and working alliance and/or therapeutic outcome may be the first step toward training counselors to become more culturally competent. Given the necessity of multiculturally competent counselors, training programs must identify ways to promote this type of growth. Follow-up studies may begin to identify experiences that lead some counselors to have higher CQ than others. This information would be essential to counselor educators and supervisors in devising interventions to promote multicultural competence.

Ultimately, the desired distal outcome would be the improvement of services in cross-cultural counseling contexts. As previously noted, current counseling services are not meeting the needs of these populations. Cultural intelligence represents a potential framework within which to approach improving services to cultural minorities. Considerable research must be done to establish the utility of this construct in counseling. The current study represents the first step toward that ultimate end.

### *Definition of Terms*

Multicultural counseling has been defined as a philosophy, a set of guidelines, and recommendations for conducting therapy in a more inclusive way. Multicultural counseling is contrasted with ethnocentric counseling, which references the western roots of psychological systems and theories. Culture, in this context, is used in its fully-inclusive sense and incorporates ethnicity, gender, sexual orientation, age, nationality, socioeconomic status, disability, and other cultural differences. As such, it has been suggested that all counseling is, therefore, multicultural counseling. A comprehensive definition is offered by Sue and Torino (2005)

“multicultural counseling or therapy can be defined as both a helping role and process that uses modalities and defines goals consistent with the life experiences and cultural values of clients, recognizes client identities to include individual, group, and universal dimensions, advocates the use of universal and culture-specific strategies and roles in the healing process, and balances the importance of individualism and collectivism in the assessment, diagnosis, and treatment of client and client systems.”

Within the current study, a specific dimension of race/ethnicity was used in analysis due to the complexity of including multiple dimensions of cultural difference.

S. Sue (1998) defines cultural competence in the context of counseling as “the belief that people should not only appreciate and recognize other cultural groups but also be able to work effectively with them” (p.440). Multicultural counseling competence is traditionally conceptualized using the tripartite model, referring to a therapist’s knowledge, awareness, and skills when working cross-culturally (D.W. Sue et al., 1998). Knowledge refers to declarative knowledge about cultural experiences, cultural history,

and cultural norms. Awareness is the therapist's ability to acknowledge that he/she is a cultural being with biases that are brought into the counseling relationship and the ability to critically reflect upon these biases. Finally, skills pertain to a therapist's behavior within the context of multicultural counseling.

Cultural Intelligence (CQ) is defined by Early and Ang (2003) as an individual's capacity to perform effectively in culturally diverse situations. CQ is a multidimensional construct, comprised of metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ. Metacognitive CQ is defined as a person's ability to acquire and understand cultural knowledge (analogous to fluid intelligence), whereas cognitive CQ is general knowledge about culture (analogous to crystallized intelligence). Motivational CQ is the "capacity to direct and sustain energy toward learning about and functioning in situations characterized by cultural diversity" (Ang et al, 2007). Finally, behavioral CQ is the ability to demonstrate appropriate verbal and nonverbal actions when interacting cross-culturally.

### *Purpose of the Study*

Using an existing data set that was collected as part of routine clinical care between 2007 and 2012 at a counseling center at a major research university in the Midwest, this study has been undertaken to examine the relationships among therapists' cultural intelligence, working alliance, and therapeutic outcome (e.g., symptoms, well-being, and life functioning). Secondly, this study endeavors to explain how therapist and client self-identified ethnicity may affect these relationships. Finally, this study was conducted to explore possible antecedents to therapist cultural competence.

### *Research Questions and Hypotheses*

With these objectives, the current study addresses five questions. First, what life experiences may lead a therapist to develop a high degree of cultural intelligence? Based upon previous research, it is hypothesized that:

*Hypothesis 1a)* Experience living in another country will positively correlate with self-reported multicultural counseling competence.

*Hypothesis 1b)* Multicultural counseling experience will show a positive relationship with self-reported multicultural counseling competence.

*Hypothesis 1c)* Therapists who possess fluency in multiple languages will exhibit greater self-reported multicultural counseling competence.

Second, what are the effects of client ethnicity on counseling outcomes? Based upon the literature, it is hypothesized that:

*Hypothesis 2a)* Clients who self-identify as ethnic minorities will exhibit a greater degree of psychological distress at baseline.

*Hypothesis 2b)* Clients who self-identify as ethnic minorities will demonstrate less improvement over time in comparison to white clients (i.e., there will be a disparity in outcome between white and non-white clients).

Third, how does therapist ethnicity affect the relationship between client ethnicity and outcome?

*Hypothesis 3a)* A match between the self-reported ethnicity of a client and her therapist will be associated with improved counseling outcomes.

*Hypothesis 3a)* Therapist cultural intelligence will mediate the relationship

between ethnic matching and improved outcomes.

Fourth, what is the relationship between therapist cultural intelligence and counseling outcomes?

*Hypothesis 4)* Therapist cultural intelligence will positively moderate the effect of time on therapeutic improvement (i.e., clients whose therapists exhibit high levels of cultural intelligence will improve faster).

Fifth, how might therapist cultural intelligence moderate the relationship between therapy process variables (e.g., therapeutic alliance, client readiness for change)? Because this is the first such study of cultural intelligence and process variables, these analyses will be conducted on an exploratory basis and no specific hypotheses were made prior to data analysis.

## Chapter 2: Critical Review of the Literature

The purpose of this review is to examine state of multicultural competence research in the field of counseling psychology and is divided into two major sections. The first section will examine the current state of multicultural counseling competence theory and measurement and will conclude with an exploration of the relationships between these instruments and important process and outcome measures. The second section will present the theory of cultural intelligence (CQ), discuss the development of the CQS, an instrument recently developed to measure CQ, and evaluate researcher's first attempts to examine the effects of CQ on outcomes in global management. Finally, a summary of the literature will be presented.

### *Multicultural Counseling Competence: Theory and Measurement*

Though several models of multicultural counseling competence (MCC) have been proposed (see Mollen, Ridley, and Hill, 2003 for a thorough review), the most significant is the tripartite model proposed by D.W. Sue and colleagues (Sue et al., 1982; Sue, Arredondo, & McDavis, 1992). For the purposes of this review, multicultural counseling refers to "any counseling relationship in which two or more of the participants differ with respect to cultural background, values, and lifestyle" (Sue et al., 1982, p. 47). The tripartite model proposes that a culturally competent counselor possesses important characteristics across three important dimensions: beliefs / attitudes, knowledge, and skills (Sue, Arredondo, & McDavis, 1992). Sue and his colleagues suggest that awareness of one's own values, heritage, and biases and respect for differences are important components of the beliefs / attitudes dimension. The knowledge dimension refers to

understanding specific details about the values, practices, and beliefs of the cultural identities with which the client identifies, as well as understanding the sociopolitical history of minorities in the US and institutional barriers to mental health. Finally, important skills include seeking out cultural learning activities and being able to use a variety of verbal and nonverbal helping behaviors to send and receive important messages. Not only has this model received the most attention from researchers in the field of counseling psychology, but it is the underlying model supporting all of the most significant measurements of multicultural competence in the field. Multiple independent teams of researchers have developed instruments to measure an individual's cultural competence according to the tripartite model. The section that follows broadly reviews important research on these instruments.

An extensive body of research exists regarding the development and utility of several measures of multicultural counseling competence, and this literature has been reviewed several times (e.g., Ponterotto, Rieger, Barrett, and Sparks, 1994; Dunn, Smith, & Montoya, 2006; Hays, 2008; Krentzman & Townsend, 2008). In their review of the literature, Dunn, Smith, and Montoya (2006) identified 137 studies that included quantitative assessment of individual's multicultural counseling competence. This section will include a summary of the most widely used instruments and is intended to represent the current state of multicultural competence assessments within the field.

The Cross-Cultural Counseling Inventory-Revised (CCCI-R; LaFromboise, Coleman, & Hernandez, 1991) is a 20-item 6-point Likert-type scale (1 = strongly disagree, 6 = strongly agree). Originally designed as an instrument for supervisors to rate

the multicultural competence of their supervisees, the CCCI-R has also been adapted as a self-report instrument. Estimates of the internal consistency of the CCCI-R range from  $\alpha = 0.91$  (Dunn, Smith, & Montoya, 2006) to  $\alpha = 0.95$  (Hays, 2008). Criterion-related validity has been established, as the CCCI-R detects differences between those with and without multicultural counseling training (Hays, 2008). Though initially designed as a three-factor instrument consisting of knowledge, awareness, and skills, exploratory factor analysis suggests that the CCCI-R may have only one factor (Barone, 1997), calling into question the construct validity of the instrument.

The Multicultural Counseling Inventory (MCI; Sadowski, Taffe, Gutkin, & Wise, 1994) is a self-report measure consisting of 43 4-point Likert-type items in which respondents are asked to indicate the degree to which the statement describes their work (1 = very inaccurate, 4 = very accurate). The MCI consists of four subscales: Skills (14 items), Awareness (10 items), Knowledge (11 items), and Relationship (8 items). With the exception of the Relationship subscale ( $\alpha = 0.65$ ), the MCI subscales and total have acceptable internal consistency reliability ( $\alpha = 0.76-0.86$ ; Dunn, Smith, & Montoya, 2006). As with the CCCI-R, the factor structure of the MCI has been questioned (e.g., Constantine, Gloria, & Ladany, 2002), suggesting that the MCI may not have adequate construct validity. Hays (2008) reports that the MCI has adequate construct validity in that the MCI detected significant differences between counselors whose caseloads consisted of more than 50% ethnic minorities and those with fewer than 50% minorities in their caseloads.

The Multicultural Awareness-Knowledge-and-Skills Survey (MAKSS; D'Andrea,

Daniels, & Heck, 1991) is a self-report instrument consisting of 60 items relating to the effect of instruction on students' multicultural counseling development. Items are on two different 4-point Likert-type scales (1 = very limited to 4 = very aware; 1 = strongly disagree to 4 = strongly agree). The 60 items are equally divided across three subscales measuring multicultural awareness, knowledge, and skills. The three subscales and the instrument as a whole demonstrate acceptable internal consistency ( $\alpha = 0.78 - 0.91$ ) with the exception of the awareness subscale ( $\alpha = 0.64$ ). Responding to criticism regarding the construct validity of the MAKSS, Kim et al. (2003) used exploratory and confirmatory factor analyses to develop a revised version, the MAKSS-CE-R, which demonstrates comparative fit indices (CFI) in excess of 0.95, suggesting adequate factor structure. Hays (2006) reports that the MAKSS has adequate criterion-validity supported by post-test increases over baseline scores following multicultural counseling training experiences.

The Multicultural Knowledge and Awareness Scale (MCKAS; Ponterotto, Gretchen, Utsey, Reiger, & Austin, 2002) is a 32-item self-report measure developed from a revision of the Multicultural Counseling Awareness Scale – Form B (Ponterotto, Sanchez, & Magids, 1991). The MCKAS contains two subscales, knowledge (20 items) and awareness (10 items), scored on a 7-point Likert-type scale (1 = not at all true, 4 = somewhat true, 7 = totally true). The MCKAS and its subscales demonstrate adequate internal consistency reliability ( $\alpha = 0.80 - 0.88$ ) (Dunn, Smith, & Montoya, 2006). The MCKAS demonstrates adequate goodness of fit for a two-factor solution (Ponterotto et al., 2002). Hays (2008) suggests that the MCKAS demonstrates adequate criterion-related

validity in that significant differences have been reported on MCKAS scores between doctoral and master's/bachelor's students (Ponterotto et al., 2002).

In their review, Dunn, Smith, and Montoya (2006) aggregated data across seven studies to create a multitrait-multimethod matrix as a method to evaluate convergent and discriminant validity. They report that although similar traits measured across different instruments demonstrated the strongest correlation coefficients (average  $r = 0.46$ ), the correlation among dissimilar subscales across different instruments was nearly as large (average  $r = 0.39$ ), suggesting that the scales lack divergent validity. Additionally, although all of the four measures are based on Sue et al.'s tripartite model of multicultural competence (Sue, Arredondo, and McDavis, 1992), only the MAKSS-CE-R demonstrates adequate fit for a three-factor structure. Additionally, multiple studies have demonstrated a lack of relationship between self- and other-rated multicultural competence using these instruments (Dunn et al.) These data lend credence to theoretical criticisms that the tripartite model lacks clarity with regard to definitions, terms, and relevant conceptual components (Mollen, Ridley, & Hill, 2003).

#### *MCC and its Relationship to Measures of Process and Outcome*

Worthington, Mobley, Franks, and Tan (2000) investigated the relationships among multicultural competence, verbal expression of cultural content, case conceptualization, and social desirability. Participants were 55 counselors (38 professionals, 17 graduate students) ranging in age from 23 to 62 years old ( $M = 37.53$ ,  $SD = 10.96$ ). Forty-one of the participants were women, and the participants self-identified as European American (47), Latino (2), African American (3), Asian American

(3) and other (1). Participants averaged 11.14 years counseling of experience ( $SD = 8.98$ ). Participants viewed videotape of a simulated client, a female Mexican American experiencing adjustment difficulties during her first semester at a mostly White university. The client was portrayed by an actor. The tape was divided into nine 1-3 minute segments, between which participants were asked to respond to the tape as though they were counseling the client. Verbal responses were recorded and transcribed.

Following the simulated session, participants completed the MCI, the Causal Dimension Scale (CDS; Russell, 1982), the Etiology Attribution Scale (EAS; Worthington, 1995), and the Marlowe-Crowne Social Desirability Scale (SDS; Crowne & Marlowe, 1960). Additionally, six graduate-student judges trained in the use of the CCCI-R read session transcripts to rate the participants' MCC. Each transcript was randomly assigned to three of the six judges. The average measure intraclass correlation coefficient was used to compute interrater reliability ( $\alpha = 0.80$ ). Multicultural verbal content was defined as "explicit verbal reference to culture, race, ethnicity, minority status, cultural values, cultural differences, cultural conflict, racial-cultural identity, and environmental, geographical, or social conditions arising from any of the above factors" (Worthington, et al., 2000, p. 463). Judges for this measure were the principal investigators, Roger L. Worthington and Michael Mobley. Interrater reliability was computed as a kappa coefficient = 0.85.

Preliminary analysis was conducted to determine whether participants differed on the dependent variables across gender and level of training. Professional counselors and trainee counselors did not differ with respect to the CCCI-R or the MCI, and men and

women did not differ on the MCI. However, men and women differed on the CCCI-R. Despite this result, the authors collapsed across gender and professional experience for subsequent analyses, citing the overwhelming proportion of women in the sample (75%) and insufficient power to include gender as an independent variable.

Bivariate correlation coefficients were computed for all predictor and criterion variables. High ratings on the CCCI-R were positively related to sociocultural etiology attributions ( $r = 0.43$ ), and multicultural verbal content ( $r = .49$ ). Self-report MCI scores were positively correlated with social desirability ( $r = 0.31$ ). Women scored higher than men on the CCCI-R ( $r = -0.36$ ) and were more likely to make sociocultural etiology attributions ( $r = -0.28$ ) and to respond in socially desirable ways ( $r = -0.37$ ) (all  $ps < .05$ ).

Hierarchical multiple regression analysis was used to determine the ability of self-report MCI scores to predict observer-rated CCCI-R scores. Social desirability was entered as a control variable in step 1, and the MCI subscales were entered in step 2. The SDS accounted for nonsignificant variance in the CCCI-R ( $p = 0.78$ ). The subscales in step two accounted for an additional 20% of the variance in the CCCI-R. Only the Knowledge subscale of the MCI was significantly related to the CCCI-R total.

These results fail to demonstrate concurrent validity of the two multicultural competence instruments. Although the authors note that self- and other- ratings of performance tend to correlate only moderately (e.g. Atwater & Yamarino, 1997), the majority of the intercorrelations among the MCI and CCCI-R were near-zero or negative and provide modest support for the relationship between MCC and cognitive (client conceptualization) and behavioral (verbal response) performance. However, the study

suffers from multiple threats to validity. First, responding to a tape of a simulated client may not provide the opportunity for counselors to demonstrate their skills in multicultural counseling. Additionally, ratings of the counselors' multicultural competence were done based upon written transcripts, ignoring potentially important nonverbal behaviors. Despite finding that women and men differed in their ratings on the CCCI-R, gender was not included as an independent variable in the study. Further, the authors did not measure level of experience in multicultural counseling, an important control variable.

Constantine and Ladany (2000) used a survey design to explore the ability of self-report MCC instruments to predict multicultural case conceptualization performance. Surveys were distributed to 250 participants randomly selected from a list of American Counseling Association members and personal contacts in counseling psychology programs. The authors received 135 fully-completed packets (54% response rate). No follow-up procedures were conducted to improve response rate. Respondents were 44 doctoral-level counseling psychologists, 47 master's-level counselors, and 44 graduate students in counseling psychology programs. Of the 135 respondents, 101 (75%) were women and the mean age was 35.8 years ( $SD = 11.38$ ). Respondents indicated their racial / ethnic identity as follows: White (77%), African American (8%), Latino (7%), Asian American (5%), American Indian (1%) and Biracial (2%). Respondents reported a median of 48 months of counseling experience, and 84% had completed at least one course in multicultural counseling.

In the first part of the survey participants were asked to read case notes of an intake session of a 25-year-old, single Mexican American woman who presented for

counseling at a local clinic. The client had recently moved to a small, mostly White town in Iowa and exhibited symptoms of depression, including relevant psychosocial issues. The diagnosis by the intake counselor was adjustment disorder with depressed mood. After reading the scenario, participants were asked to write a minimum of three sentences describing the etiology of the client's difficulties and three sentences indicating their beliefs about effective treatment strategies. Following the case study, participants completed self-report measures of the CCCI-R, the MAKSS, the MCI, the MCKAS, and the SDS.

Participants' responses to the case conceptualization task were coded by two advanced doctoral students who received 10 hours of training. The conceptualization was coded with respect to two dimensions: differentiation and integration. Differentiation was defined as a counselor's ability to offer alternative explanations of the client's presenting problem and the treatment that could be provided. The more options presented, the larger the differentiation of the response. Integration was defined as the counselor's ability to form associations among the differentiated interpretations. Responses were coded from 0 (no differentiation, no integration) to 5 (high differentiation, high integration). Interrater reliability for etiology and treatment ratings were 0.93 and 0.82, respectively.

In order to examine the relationship between self-reported MCC and social desirability, Constantine and Ladany (2000) conducted multiple regression analysis, using all the subscales of the MCC instruments as predictor variables and the SDS as the criterion variable. The full model of the MCC subscales accounted for significant variance in the SDS. Follow up univariate analyses demonstrated significant positive

relationships between the SDS and the MAKSS Knowledge subscale, the MCI Relationship subscale, and a significant negative relationship with the MCKAS Awareness subscale. The ability of the MCC measures to predict ratings of etiology and treatment was assessed using multivariate multiple regression with the MCC measures as predictor variables, the SDS as a covariate, and the ratings of participants' conceptualization of etiology and treatment as the criterion variables. None of the MCC scales returned significant results for either of the criterion variables.

This study has numerous limitations that make interpreting the results difficult. The most important limitation is the choice of case conceptualization task and the coding of participants' responses. Constantine and Ladany rated responses based on the number of alternate explanations of the etiology, the number of proposed treatment options and the degree of integration of these responses, suggesting a strong relationship between length of response and ratings. The authors reported no data regarding the length of participants' responses. Further, as participants were not instructed to provide as many different explanations as possible, we cannot assume that their responses reflect their capacity in this regard. Participants may have considered several possible explanations and chosen one that they believed best explained the case. Regardless of the quality of this response, or the number of alternate possibilities considered, such a participant would receive a low score on the task. The authors suggested that the discrepancy between the participants' self-report and their performance on the case study indicates that participants overestimated their own competence. An equally plausible explanation is that the task and instructions failed to elicit participants' competence.

Another limitation of the study is the fact that many of the participants self-selected, combined with the low response rate of the survey. Because so many participants did not respond, we cannot assume that those who responded represent counselors as a whole. For example, we might expect that those who responded have a particular interest in multicultural counseling issues. Another way in which the sample of respondents might differ from those who did not respond is with respect to social desirability. We might expect that those who responded have a tendency to want to be viewed more positively by others in comparison to those who did not respond. Finally, participants likely were cued in to the purpose of the experiment by the case study and the instruments provided.

Constantine (2001) designed a study based on actual counseling sessions, to address the limitations of the analog nature of prior studies of the relationship between self-reported MCC and observer-rated measures of MCC. Participants were 52 counselor trainees (38 women) currently enrolled in either master's or doctoral programs in counseling psychology. Ages in the sample ranged from 22-44 ( $M = 29.77$ ,  $SD = 6.07$ ). Participants self-reported their racial / ethnic identity as follows: 31 White American (60%), 11 Latino(a) American (21%), and 10 Black American (19%). Participants reported a mean of 38.06 months ( $SD = 31.72$ ) of counseling experience, and 92% reported having previously taken a multicultural counseling course. Clients for the study were 52 ethnic minorities (41 women) with a mean age of 35.60 ( $SD = 8.60$ ). Racial / ethnic identity was self-reported as follows: 32 Black American (62%), 15 Latino(a) American (29%), 4 Asian American (8%) and 1 Biracial American (2%). Two of the

clients reported prior counseling experience.

All counselors in the present study were completing a required practicum course through a community counseling training clinic at the time of the study. In order not to alert the counselors to the purpose of the study, all intake sessions were conducted prior to the administration of the survey measures. Counselors each completed one 45-minute audiotaped intake session with a client who was determined to have an adjustment disorder. Tentative diagnoses were based on a brief phone screening conducted by the director of the clinic. Of the 52 dyads, 9 (17%) were ethnically matched. Seven of these dyads were Black Americans and the other two were Latino(a) American. Following the intake sessions, counselors completed the MCI and a demographic questionnaire, which included questions about race / ethnicity, age, gender, highest degree attained, total months of counseling experience, and the number of multicultural counseling courses taken. Intake sessions were transcribed by four graduate students in a master's program, and CCCI-R ratings were given by two advanced doctoral students who had received 15 hours of training. The intraclass correlation coefficient for the two raters was  $r = 0.84$ .

Preliminary analysis was conducted to examine whether the counselor trainees differed with respect to counseling experience, prior multicultural counseling coursework, MCI full-scale scores, and CCCI-R scores. MANOVA results yielded a significant main effect for race/ethnicity. Follow-up univariate ANOVA yielded significant results on multicultural counseling coursework and the CCCI-R. Follow-up Tukey HSD tests demonstrated that Black and Latino(a) American counselors reported more multicultural coursework than their White American peers. Black and Latino(a)

American counselors were also rated more highly on the CCCI-R than the White American trainees.

Hierarchical multiple regression analysis was conducted using the CCCI-R ratings as the criterion variable. Client and counselor ethnicity were entered in step 1; step 2 included counselor-client ethnic match; step 3 was the number of previous multicultural counseling courses; and step 4 was the full-scale MCI scores. Counselor and client race/ethnicity accounted for significant variance in CCCI-R scores ( $R^2 = .68$ ), however only beta values for counselor race/ethnicity were statistically significant ( $p < .001$ ). Counselor-client race/ethnicity match did not account for significant variance in CCCI-R above counselor / client race. Number of previous counseling experiences did account for significant variance in CCCI-R ( $\Delta R^2 = .08$ ). More multicultural counseling coursework was associated with higher scores on the CCCI-R. Finally, the full-scale MCI self-report measure contributed significant variance to the model above the previous three steps ( $\Delta R^2 = .03$ ). However, given the lack of a bivariate correlation between the MCI and CCCI-R scores, Constantine interpreted this result as a suppression effect.

The most important threat to the internal validity of the current study is the fact that one session may not accurately reflect a counselor's multicultural competence. This is especially important to consider given that key client variables (racial/cultural identity development, personality, etc.) may influence ratings of multicultural competence. Additionally, due to a small sample size the current study may not have had sufficient power to detect important relationships among variables. Though Constantine (2001) acknowledged this limitation, she did not report the results of post hoc power analysis.

Finally, given that only counseling trainees were included in the study, the results cannot be generalized outside of that population.

Constantine (2002) assessed the relationships among counselor general competence, multicultural competence, and client satisfaction. Participants were 112 ethnic minority clients (78 women) who averaged 20.98 years of age ( $SD = 3.17$ ). Clients' self-identified racial/ethnic identities were as follows: 52 Black American, 29 Latino(a) American, 25 Asian American, 3 American Indian, 3 Biracial American. All were students. Clients saw their assigned therapists for the study for an average of 6.5 sessions ( $SD = 2.67$ ). Counselors were 37 counseling professionals (26 women) with a mean of 6.89 years of experience ( $SD = 4.36$ ). Most counselors (35) had completed at least one course in multicultural counseling.

Clients completed the following: a demographic questionnaire; a measure of attitudes toward counseling, the Attitudes Toward Seeking Professional Help Scale-Short Form (ATSPPHS-S; Fischer & Farina, 1995); a measure of general counseling competence, the Counselor Rating Form-Short (CRF-S; Corrigan & Schmidt, 1983); the CCCI-R; and a measure of their satisfaction, the Client Satisfaction Questionnaire-8 (CSQ-8; Larsen et al., 1979).

Data were analyzed using hierarchical multiple regression analysis using the CSQ-8 as the criterion variable. The ATSPPHS-S, CRF-S, and CCCI-R (entered in steps 1, 2, and 3 respectively) all accounted for significant variance in ratings of satisfaction in each step. The CRF-S accounted for variance beyond attitudes ( $\Delta R^2 = 0.31$ ). Ratings of counselor MCC accounted for unique variance above the CRF-S and ATSPPHS-S in step

3 ( $\Delta R^2 = 0.07$ ). In all, the full model accounted for 58% of the variance in the CSQ-8. Additional post hoc analysis was conducted to determine whether clients' CCCI-R ratings moderated the relationship between general competence and satisfaction given the high correlation between the CCCI-R and the CRF-S ( $r = 0.78$ ). Thus, an additional hierarchical multiple regression model was tested in which the CCCI-R was entered in step 2 and the CRF-S was entered in step 3. When entered as the second step the CCCI-R accounted for 5% more variance than the CRF-S ( $\Delta R^2 = 0.36$ ), suggesting that the CCCI-R partially mediated the relationship between the CRF-S and satisfaction ratings.

These results must be considered within the context of the limitations of the design. First, the quasi-experimental design means that we cannot conclude that counselors' multicultural competence causes client satisfaction. Furthermore, because clients were not randomly assigned to their counselors, we cannot rule out other client variables as possible explanations of the relationships found. These findings are also limited with respect to client population (college students) and a restricted definition of culture (race/ethnicity); other important elements of culture such as client gender, sexual orientation, SES, disability status, etc. were not considered.

Fuertes and Brobst (2002) also examined the relationship between client perceptions of therapist multicultural competence and client satisfaction with counseling using a similar design to that reported by Constantine (2002). Fuertes and Brobst surveyed 230 graduate students in counseling psychology regarding their experiences in therapy as clients. Of the 230, 186 responded however only 85 had received personal counseling, 54 of whom were currently participating in counseling and 31 of whom had

been in counseling recently. Sixty-eight of the participants were women, and the mean age of the sample was 30 years ( $SD = 7.17$ ). Of the sample, 49 identified as European American, 9 as Asian American, 8 as African American, 18 as Hispanic American, and 1 as American Indian. Participants also reported the gender, race, and level of training of their therapists. Forty-eight of the therapists were female, 28 were male, and 11 were not identified. Participants reported the race of their therapist as follows: 64 European American, 3 Hispanic, and 2 African American; 16 participants did not indicate the race of their therapist. In terms of level of training, 50 of the therapists were PhDs in counseling / clinical psychology, 8 had master's degrees in counseling, 21 held master's degrees in social work, and 4 were MDs.

Participants completed the CCCI-R, the CRF-S, the 16-item empathy subscale of the Barrett-Lennard Relationship Inventory (Barrett-Lennard, 1962), and the Miville-Guzman Universality-Diversity Scale-Short (UDS; Fuertes, Miville, Mohr, Sedlacek, & Gretchen, 2000). Finally, participants completed the 5-item client satisfaction subscale Counselor Evaluation Inventory (CEI; Linden, Stone, & Shertzer, 1965). Participants completed the surveys after their classes and completion typically took 15-20 minutes. Measures were counterbalanced to avoid effects due to order.

Bivariate correlations revealed significant positive relationships (all  $ps < .001$ ) between the CCCI-R and the Empathy subscale of the BLRI ( $r = 0.55$ ), the CRF-S ( $r = 0.72$ ), and client satisfaction ( $r = 0.79$ ). Hierarchical multiple regression analysis using client satisfaction scores as the criterion variable was conducted with European American clients and ethnic minority clients as separate groups. In both models, step 1 included the

UDO; general competence (CRF-S) and Empathy were entered in step 2; and step 3 included CCCI-R scores. For both European American clients ( $\Delta R^2 = 0.02$ ) and ethnic minority clients ( $\Delta R^2 = 0.16$ ), CCCI-R scores added significant variance to the model in step 3. The regression coefficient for the CCCI-R was statistically significant for ethnic minority clients ( $p < .001$ ) but not for European American clients ( $p > .05$ ). In both models, the full model accounted for 84% of the variance in client satisfaction.

An important limitation to consider with respect to this study is the convenience sample. Although the familiarity with therapy developed through their graduate training allowed the clients in this study to provide an informed perspective regarding the general and multicultural competence of their therapists, these participants in no way represented the client population at large. Additionally, the majority of the respondents in the study were European American, which required the authors to treat ethnic minorities as a singular group, ignoring potentially important within-group differences. Finally, the authors did not examine the possible influence of time on satisfaction or competence ratings – it is possible that participants who had finished therapy responded in a systematically different way than those who were currently in counseling.

#### *Summary of MCC: Theory and Measurement*

As a whole, the studies of the relationship between MCC, as measured by the MCI, MAKSS, MCKAS, and CCCI-R suggest that more work is necessary in developing a sound instrument to measure multicultural competence and one that is supported by a strong theoretical foundation. Studies of the factor structure of instruments based on the tripartite model of MCC raise questions about the ability of the tripartite model to capture

the essence of multicultural competence. Worthington, Mobley, Franks, and Tan (2000) and Constantine (2001) both found a lack of relationship between self-reported MCI scores and expert ratings on the CCCI-R, questioning the convergent validity of the instruments. Further, Worthington et al., and Constantine and Ladany (2000) both found a potentially troubling relationship between social desirability and self-reported multicultural competence.

Taken together, the studies by Constantine (2002) and Fuertes and Brobst (2002) suggest that ethnic minority clients' ratings of their counselors' general competence and multicultural competence both account for significant variance in their ratings of satisfaction. Despite the high degree of overlap between client ratings of general and multicultural competence (60% in Constantine (2002); 62% in Fuertes and Brobst (2002)), ratings of counselor multicultural competence accounted for an additional seven percent (Constantine, 2002) and sixteen percent (Fuertes and Brobst, 2002) of the variance in satisfaction ratings above general competence. This finding supports the hypothesis that therapist multicultural competence is an important variable with respect to satisfaction with counseling for ethnically diverse communities.

However, the body of literature investigating the relationships between therapist multicultural competence and process and outcome measures of therapy suffers from many limitations. Dunn, Smith, & Montoya (2006) noted that considerable work needs to be done in order to establish the criterion validity of multicultural counseling instruments, noting that fewer than 13 of the 137 quantitative studies they reviewed focused on therapy process or outcome. Although multicultural competence appears to be an important

variable in counseling process and outcome, researchers need to continue to expand the theoretical models of MCC and to continue to refine instruments intended to measure the construct. Hays (2008) notes that the current crop of multicultural counseling instruments assess therapists' self-reported competence in working with racial/ethnic minorities. She further suggests that researchers seek broader instruments with a more inclusive definition of culture. Cultural Intelligence, a promising new theory, has recently emerged from the literature in global management and may complement the limitations of current theory and instruments of multicultural competence.

### *Theory of Cultural Intelligence*

Cultural Intelligence (CQ) is defined as a person's capability to function effectively in situations characterized by cultural diversity (Early & Ang, 2003; Ang & Van Dyne, 2008). Recently, intelligence researchers have broadened their conceptualization of intelligence beyond academic settings, to include social intelligence (Thorndike & Stein, 1937), emotional intelligence (Mayer & Salovey, 1993) and practical intelligence (Sternberg, 2000). Based in these theoretical roots, cultural intelligence is a multidimensional construct consisting of metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ. These four dimensions mirror the four foci of general intelligence proposed by Sternberg and Detterman (1986). In Sternberg's model, general intelligence can be described via the following constituent parts: 1) metacognitive intelligence, the ability to control one's own cognition; 2) cognitive intelligence, one's knowledge; 3) motivational intelligence, a recognition that cognition requires directed energy sustained over time; and 4) behavioral intelligence, individual capabilities with

respect to behavioral skills. The four dimensions and nomological network of CQ are discussed below.

Metacognitive CQ is an individual's conscious cultural awareness in cross-cultural contexts. Persons with high metacognitive cultural intelligence question cultural assumptions, reflect during cross-cultural interactions, and adjust cultural knowledge based on their interactions (Ang & Van Dyne, 2008). Metacognitive CQ also reflects the higher-level processes used to acquire and evaluate cultural knowledge. Within the context of counseling psychology, metacognitive CQ bears resemblance to the awareness dimension of the tripartite model of multicultural competence (Sue and Sue, 2003) and S. Sue's (1998) conception of dynamic sizing.

In contrast to metacognitive CQ, which identifies important higher-order mental processes, cognitive CQ is an individual's cultural knowledge, including knowledge of norms, practices, values, conventions and important historical events within other cultures. This factor reflects knowledge of both etic and emic constructs. Within counseling psychology, cognitive CQ refers to a counselor's knowledge about her client's culture and is conceptually similar to the knowledge dimension of the tripartite model (Sue & Sue, 2003).

Motivational CQ describes an individual's "capability to direct and sustain attention and energy in situations characterized by cultural differences" (Ang & Van Dyne, 2008, pg. 6). An important concept related to an individual's motivational CQ is self-efficacy (Bandura, 1997); CQ theory hypothesizes that belief in one's ability to be effective in cross-cultural environments is essential for one to feel motivated in culturally

different contexts. Additionally, self-determination theory (Deci & Ryan, 1985) provides a theoretical foundation to understand intrinsic motivation to seek out cross-cultural experiences. Though motivation to engage in cross-cultural counseling is not an explicit component in multicultural counseling competence as described by Sue et al. (1982), one's motivation for cross-cultural interactions represents a promising addition to current conceptualizations of multicultural competence.

Behavioral CQ represents one's ability to exhibit a flexible behavioral repertoire of culturally appropriate verbal and nonverbal behaviors in situations characterized by cultural differences (Ang & Van Dyne, 2008). Behavioral CQ also can be conceptualized as an individual's ability to manifest overtly their metacognitive, cognitive, and motivational cultural intelligence. Broadly, one can consider those with high behavioral CQ to have a mastery of emotional display and physical presence across cultures (Early & Ang, 2003). Behavioral CQ is conceptually similar to the skills facet of the tripartite model of multicultural competence (Sue & Sue, 2003).

#### *Nomological Network of CQ*

Ang and Van Dyne (2008) identified four major relationships within the initial model of CQ's nomological network (Appendix C). First, Ang and Van Dyne hypothesized that distal, traitlike individual differences such as personality and demographic (e.g. ethnicity, gender) or biographic (e.g. years lived in a foreign country) differences relate to effectiveness in cross-cultural situations through the statelike individual differences of the four factors of cultural intelligence. Secondly, the four factors of CQ also relate to intercultural effectiveness through intervening constructs such

as an individual's subjective perception of cultural encounters. Thirdly, Ang and Van Dyne hypothesize that CQ is related to other factors that explain intercultural effectiveness, such as general cognitive ability, emotional intelligence, social intelligence, and practical intelligence. Finally, contextual variables, such as the clarity or strength of the cues for appropriate task performance, may moderate the relationships between CQ and intercultural effectiveness. Specifically, Ang and Van Dyne hypothesize that CQ would be expected to play a more important role in situations with less clarity, when an individual would need to rely on his or her skills to navigate an ambiguous or complex situation. In situations in which cultural differences are minimized, though present, CQ is hypothesized to play a less significant role.

#### *Development of the Cultural Intelligence Scale*

In order to assess cultural intelligence, Ang et al. (2007) developed the Cultural Intelligence Scale (CQS). From an initial item pool of 53 positively-worded items, the researchers narrowed the pool to 40 items (the 10 best items for each facet of CQ) based on the rankings of six experts (three faculty and three business executives, all of whom had significant cross-cultural experience). This pool of 40 items was given to 576 business school undergraduates (74% female, mean age 20) in Singapore and was examined using confirmatory factor analysis. Items were removed from the pool based upon high residuals, low factor loadings, small standard deviations / extreme means, and low correlations with the overall score. Twenty items (four metacognitive, six cognitive, five motivational, five behavioral) were retained to form the CQS (see Appendix A). Confirmatory factor analysis (CFA) supported the hypothesis of a four-factor model of

cultural intelligence and demonstrated better fit relative to five competing models.

Intercorrelations among the four factors ranged from  $r = 0.21$  to  $r = 0.45$ , and composite reliabilities exceeded 0.70.

The model was cross-validated on a sample of 447 undergraduates in Singapore (70% female, mean age 20) and CFA again demonstrated support for a four-factor model. The CQS was also tested on a sample of 337 undergraduates in the United States (55% female, mean age 22) to show generalizability across countries. Again the four-factor model demonstrated good fit, suggesting that the four-factor model of CQ generalizes from Singapore to the United States.

In order to test generalizability across time, a subset of participants from the cross-validation sample in Singapore ( $n = 204$ , 76% female, mean age 20) completed the CQS four months after their initial test. CFA with eight latent variables (four time-one CQ factors and four time-two CQ factors) demonstrated acceptable fit. In addition, Ang et al (2007) tested the hypothesis that CQ dimensions are malleable with two sample *t*-tests. Cognitive and behavioral CQ both increased in the four-month interim between measurements. The authors explained this result due to coursework in which students studied cultural values and role-played cross-cultural scenarios. These results support test-retest reliability as well as the malleability of cognitive and behavioral CQ.

Due to the self-report nature of the CQS, establishing the validity of cultural intelligence across methods was especially important. Van Dyne, Ang, and Koh, (2008) developed an observer version of the CQS. Multitrait multimethod techniques were employed to establish convergent and discriminant validity. Data for these analyses were

gathered in an executive MBA program at a large university in the US ( $n = 142$ ; 47% female, average age 35). In addition to completing the self-report CQS and the observer CQS for a randomly assigned peer, participants completed a self-report and other-report measure of interactional adjustment (1 = extremely unadjusted, 7 = extremely adjusted). Appendix C shows descriptive statistics and results of the MTMM analysis. Results of the MTMM correspond to Campbell and Fiske's (1959) guidelines. First, reliability coefficients forming the diagonal are the largest in the matrix. Second, validity coefficients for metacognitive CQ (0.41), cognitive CQ (0.54), motivational CQ (0.50) and behavioral CQ (0.45) are significantly different from zero and are larger than values in each respective row and column. These data indicate convergent and discriminant validity.

Ang, Van Dyne and Koh (2006) examined the relationships among the Big Five personality traits and the four-factor model of CQ. Participants for the study were 465 business students at a university in Singapore. Data were collected at two time points; at time one participants completed the CQS, and at time two (six weeks later) participants completed the Personal Characteristics Inventory (PCI; Mount & Barrick, 1995) and provided demographic data. At time two, 338 participants (70% female, mean age 20.17 years) completed both measures (27% attrition rate). The authors tested for possible differences in the CQ of participants who completed all measures and those who only completed the CQS and found no differences in any of the four factors. CFA analysis was used to assess the distinctiveness of CQ relative to the Big Five personality factors. Results demonstrated good fit for a nine-factor model.

Further, hierarchical regression analyses were conducted to evaluate the relationships among the five personality factors and the four CQ factors. Separate regression analyses were conducted for each factor of CQ, all using age, gender, and experience with other cultures as control variables entered in step 1. Results, indicated significant relationships between metacognitive CQ and conscientiousness and openness; cognitive CQ and extraversion and openness; motivational CQ and extraversion and openness; and behavioral CQ and agreeableness, emotional stability, extraversion, and openness. It is worth noting that openness to experience, representing an individual's imagination, creativity, worldliness, intelligence, and artistic sensitivity, was the only personality factor to relate to all four factors of CQ.

In sum, these studies reveal a clear and meaningful four-factor model of cultural intelligence. The results are stable across samples, time, and countries. MTMM analysis demonstrates similar results across self- and peer-report versions of the CQS. Further, Ang, Van Dyne and Koh (2006) and Ang et al. (2007) demonstrated discriminant validity of the CQS with respect to personality, emotional intelligence, cognitive ability, cultural judgment and decision-making, interactional adjustment and well-being. In total, these data from more than 1500 participants across two countries provide evidence that the CQS is a reliable and valid measure of cultural intelligence. Further research is warranted regarding the nomological validity of CQ, for example research examining the predictive validity of CQ with respect to performance (job, task, contextual, adaptive, etc.). Additionally, validation of CQS in countries other than the US and Singapore is necessary. Given that the majority of participants in the samples were undergraduate

students in business, examining the reliability and validity of the CQS in other demographic groups is also necessary.

*Relationships between CQ, adaptation, and performance*

In an attempt to address the relative lack of empirical literature supporting the theoretical predictions of cultural intelligence, Ang et al. (2007) investigated the relationships among CQ factors and cultural judgment and decision making (CJDM; cognitive outcome), cultural adaptation (affective outcome) and task performance (behavioral outcome), using the CQS across three separate studies. The researchers hypothesized that CDJM, which requires reasoning through a scenario and applying knowledge to choose an appropriate response, would positively relate to metacognitive and cognitive CQ (but not to motivational and behavioral). Similarly, the researchers hypothesized that cultural adjustment—relating to outcome expectations and self-efficacy in situations characterized by cultural diversity and the ability to behaviorally adapt to a new environment—would be positively related to motivational and behavioral CQ (but not to metacognitive and cognitive CQ). Finally, the researchers hypothesized that all four dimensions of CQ would positively relate to task performance.

In order to test the hypothesis that cognitive and metacognitive CQ would be positively related to cross-cultural efficacy, Ang et al. (2007) provided CJDM tasks to two samples. The first sample was 235 undergraduates from the Midwestern US (45% female, mean age 22), and the second sample was 358 undergraduates from Singapore (76% female, mean age 19). Both samples completed the study as a course requirement. In order to assess CJDM, students from the US sample were given five cross-cultural

decision-making scenarios that emphasized several cultural values (collectivism, power distance, masculinity, specific-diffuse, and low-high context communication) and involved people from the US, France, South Korea, Japan, the Philippines, China, and the Middle East. Participants selected the best response to explain each scenario; correct responses were summed to create a measure of CJDM. In the sample from Singapore, students read a cross-cultural case study and described how they would resolve the dilemma presented. Their responses were scored by their instructors on the effectiveness of the response (0-10).

Students in both samples also completed measures of cultural intelligence (CQS), cognitive ability (WPT; Wonderlic, 1999), and cultural adaptation (results discussed below). The US sample also completed measures of emotional intelligence (EI; Schutte et al., 1998) and Big 5 personality (FFM; Costa & McCrae, 1992). The Singapore sample completed the four-factor Cross-cultural adaptability inventory (CCAI; Kelley & Meyers, 1995). Measures of students' gender, cross-cultural experience and age were included as control variables.

Ang et al. (2007) conducted multiple regression analysis for each sample. For the US sample, age, gender, cross-cultural experience, general mental ability, emotional intelligence, and personality were used as control variables. For the Singapore sample, age, gender, cross-cultural experience, general mental ability, emotional intelligence, and CCAI were used as control variables. In each sample, adding CQ increased the amount of variance explained in the CJDM task by 5% (US) and 3% (Singapore). Individual tests on the regression coefficients for metacognitive CQ and cognitive CQ demonstrated that

both of these variables explained variance above and beyond the control variables (all  $ps < .05$ ). As hypothesized, motivational and behavioral CQ were unrelated to CJDM.

These results provide evidence that metacognitive and cognitive CQ are related to cognitive outcomes measuring intercultural effectiveness. However, there are significant limitations to the study. First, because it is a correlational design, we cannot conclude that the relationship between CQ and CJDM is causal. Additionally, the researchers provided no explanation for the differences between the US and Singapore samples with respect to the control variables included (e.g., personality in the US, another measure of intercultural effectiveness in Singapore) or the differences in the CDJM task. In the case of the US sample, it seems that forcing students to choose among an unspecified number of predetermined courses of action may mask differences in cultural decision-making. For example, it is possible that students were unable to convey their sophistication, and that CQ could have predicted differing levels of sophistication. In the Singapore sample, only one case study was presented to the sample. Though the way in which the students' performance was scored allowed for finer distinctions of sophistication in their response to the dilemma, the fact that only one case was presented calls into question what the task actually measured. No data were provided to suggest that the case study presented measured a general ability to make decisions in cross-cultural situations, rather than measuring the ability to make judgments in the specific case presented. Finally, the authors presented no argument for the equivalency of the two CDJM tasks.

To test the hypothesis that cultural adaptation can be predicted by motivational CQ and behavioral CQ, Ang et al. (2007) used the same two samples from the US and

Singapore. They were given a cultural adaptation instrument that included interactional adjustment and well-being. Both measures were Likert-type scales developed for the study, ranging from 1 to 7.

Multiple regression analyses were conducted with each sample using measures of interactional adjustment and well-being as criterion variables. For the US sample controls were age, gender, cross-cultural experience, general mental ability, emotional intelligence, and Big Five personality. The four CQ variables were entered in step 3 and accounted for additional variance above the controls in both interactional adjustment ( $\Delta R^2 = 0.04$ ) and well-being ( $\Delta R^2 = 0.04$ ). In the Singapore sample, control variables were age, gender, cross-cultural experience, general mental ability, emotional intelligence and CCAI. Independent multiple regression showed that CQ accounted for unique variance above control variables in interactional adjustment ( $\Delta R^2 = 0.03$ ) and well-being ( $\Delta R^2 = 0.03$ ). In both samples, the hypothesis that motivational CQ and behavioral CQ would predict cultural adaptation was supported by tests of the regression coefficients. Motivational CQ and behavioral CQ predicted interactional adjustment and well-being in both samples.

A major limitation to the finding that CQ predicts cultural adjustment is the fact that the authors made no explicit reference regarding the relevance this measure has to the subject pool selected. No data were provided indicating that subjects in the US and Singapore samples were international students or had significant travel experiences to other cultures. As such, we can make no statement about the relevance of the cultural adjustment measure; if students were not in a culturally unfamiliar setting, a measure of

their cultural adjustment does not have any meaning. Furthermore, both measures are self-report and it is possible that some of the relationship between CQ and the measures of cultural adjustment is due to method.

In the second study, Ang et al. (2007) gathered a sample of 98 international managers who were participating in a three-day professional development program given by a public university in Singapore. Participants were mostly male (64%) and nonlocal (69%) and the average age was 28 years old. Participants attended from 17 countries and all participants had bachelor's degrees and held jobs with international scope. The program included lectures, case studies, workshops, and business case proposals related to global management.

The researchers investigated how these managers' CQ scores related to outcomes in CJDM and task performance. They chose not to investigate cultural adaptation due to the short duration of the program. CJDM was measured based upon written responses to a case involving a US executive managing a South Korean business. Responses were scored by a single rater. To assess task performance, participants were randomly assigned into dyads and given a task to produce a single written business proposal and verbal presentation for developing a vacant plot of land in a culturally diverse section of Singapore.

Task performance was rated by peers on a three-item scale adapted from Tsui (1984, 1990) and Williams and Anderson (1991). The items were 1. Overall, my partner effectively fulfilled his/her roles and responsibilities concerning the business proposal assignment; 2. Overall, my partner's performance met my expectations; 3. For the

business proposal assignment, my partner performed his/her tasks the way I would like them to be performed (1 = strongly disagree; 7 = strongly agree).

In addition, the 98 participants also completed the CQS as a measure of their cultural intelligence and the WPT (Wonderlic, 1999) as a measure of their general cognitive ability. Rhetorical sensitivity (Hart et al, 1980) and social desirability (SDS; Strahan & Gerbasi, 1972) measures were included as controls for communication skill and social desirability, respectively. In addition, gender, cross-cultural experience (total number of countries worked in), and dyadic similarity (0 = different countries, 1 = same country) were included as control variables.

Data were analyzed using hierarchical multiple regression. For both CJDM and task performance, gender, citizenship, cross-cultural experience, and dyadic similarity were entered in step 1; general cognitive ability, rhetorical sensitivity, and social desirability were entered in step 2; and the four dimensions of CQ were entered in step 3. Entering CQ variables into the models significantly increased variance explained for CJDM ( $\Delta R^2 = 0.22$ ) and task performance ( $\Delta R^2 = 0.24$ ). Tests of individual regression coefficients supported the hypothesis that metacognitive and cognitive CQ predict CJDM. For task performance, metacognitive CQ and behavioral CQ predicted significant variance.

The results of study two provide further support for the first hypothesis developed by Ang et al. (2007) that cognitive and metacognitive CQ predict CJDM tasks. With respect to task performance, results are more difficult to interpret. That behavioral CQ would significantly predict variance in the performance of the assigned task is

unsurprising, given the nature of the task and the fact that the assessment of performance contained questions focused on participants' behaviors. Motivational CQ may not have shown relevance in task performance due to this selection bias. Managers who attend an international conference related to cross-cultural management and who hold jobs with an international focus are likely to be at least moderately motivated individuals with respect to cross-cultural situations. Mean motivational CQ scores from the different samples suggest that this might be the case; the mean for the business managers sample (5.85) is higher than for the samples of students in the US (5.38) and Singapore (4.61). In any case, the self-selected sample limits the generalizability of the findings.

In study three, Ang et al. (2007) used a field sample of 103 foreign professionals and their supervisors from an information technology consulting firm located in Singapore. The professionals were 83% male, averaged 34 years old, and had a mean job tenure of 2.6 years. The professionals represented the multiple countries from around the world. No data were provided about the demographics of the supervisors. Participants completed web questionnaires regarding cultural adjustment and well-being, whereas supervisors completed web questionnaires on their employees' task performance and adjustment (interactional adjustment and work adjustment). Task performance was measured on a 7-point Likert-type scale (1 = strongly disagree; 7 = strongly agree) and contained two items: fulfills the work responsibilities of the job; meets performance expectations. Cultural adaptation was rated both by supervisors (interactional adjustment and work adjustment) and employees (interactional adjustment, work adjustment, general adjustment and well-being). Items for interactional adjustment and well-being were the

same as for the first study. Items for work adjustment and general adjustment were adapted from Black and Stephens (1989). Work adjustment included items about adjustment related to specific job responsibilities, supervisory responsibilities, and performance standards / expectations. General adjustment included items about adjustment to living conditions in general, food, shopping, cost of living, and healthcare facilities. All items were scaled 1 = extremely unadjusted to 7 = extremely adjusted. In addition, cultural intelligence, gender, and cross-cultural experience (years of foreign assignment work) were included as controls.

The authors conducted hierarchical multiple regression with gender and cross-cultural experience entered in step 1 and CQ variables entered in step 2. CQ accounted for statistically significant amounts of variance above control variables for self-ratings of interactional adjustment ( $\Delta R^2 = 0.26$ ), work adjustment ( $\Delta R^2 = 0.19$ ), general adjustment ( $\Delta R^2 = 0.20$ ), and well-being ( $\Delta R^2 = 0.29$ ), as well as supervisor ratings of interactional adjustment ( $\Delta R^2 = 0.28$ ), work adjustment ( $\Delta R^2 = 0.29$ ), and task performance ( $\Delta R^2 = 0.36$ ).

The results from study three provide further support for the hypothesis that motivational CQ and behavioral CQ predict cultural adaptation. Hypothesis three, that all four CQ variables will predict task performance, was partially supported: metacognitive CQ and behavioral CQ predicted significant variance in supervisor-rated task performance. However, study three has important limitations that may limit the conclusions we can draw from the results. Though the researchers included a general measure of cross-cultural work experience, they did not include a measure of length of

time worked in their current position (either in their native country or in Singapore) and also did not include the length of time participants had lived in Singapore. Each of these variables seems highly relevant to the measure of cultural adjustment and task performance, as we would expect those who had spent more time in Singapore to have a greater degree of adjustment and those who had spent longer working in their job (specifically) and that type of work (generally) to have better task performance. One possible way in which this could influence the results would be if those with lower CQ scores had spent more time in Singapore and their jobs than those with higher CQ scores. In this case, not controlling for these variables would lead the researchers to underestimate the effect of CQ on adjustment and task performance.

Taken as a whole, the three studies conducted by Ang et al. (2007) demonstrated support for the utility of CQ to predict outcome with respect to CJDM, cultural adaptation, and task performance over and above variance explained by gender, cross-cultural experience, emotional intelligence, cross-cultural adaptability, personality, social desirability, and age. Results were mostly consistent across setting (university college students, business conference participants, foreign IT managers). With respect to the three hypotheses examined by the researchers, the first hypothesis, that metacognitive and cognitive CQ would predict CJDM, was supported. Theoretically, this suggests that sophistication in cultural knowledge and cognitive strategies such as questioning assumptions and biases and adjusting mental models of cultural differences have an important role in predicting the ability to make accurate judgments and decisions in situations characterized by cultural diversity. The studies also contributed further to the

discriminant validity of CQ with respect to personality, emotional intelligence, cognitive ability, cultural judgment and decision-making, interactional adjustment and well-being

However, the analog nature of the CJDM tasks limit the generalizability of the findings. Though the ability to write a sophisticated and culturally appropriate response to a case study is clearly related to the ability to conceptualize and make decisions in situations characterized by cross-cultural differences, there are significant differences between this task and the demands of decision-making in diverse work settings. For example, participants were provided with a dilemma in a cross-cultural management situation; the ability to identify these dilemmas and anticipate possible value conflicts are important components of cultural judgment. Additionally, the nature of the task (writing in response to a case) does not capture the ability to make in-the-moment decisions necessary when interacting with individuals or groups. Because of these limitations, caution must be exercised when generalizing the results to field settings

The second hypothesis, that motivational and behavioral CQ would predict the affective outcome of cultural adjustment, was supported by study one and study three. Further supporting these results is the fact that they hold across country (US and Singapore), setting (university, business) and method (self-report, other-report). These results indicate that a flexible behavioral repertoire and the ability to direct and sustain energy in culturally diverse settings are important variables with respect to predicting the ability to cope in culturally diverse settings. However, the lack of justification for including a measure of cultural adaptation in study one and the potential confounds of length of time spent in Singapore and on the job in study three limit potential

conclusions.

The third hypothesis, that all four CQ variables would predict task performance, received mixed support. Results indicated that only metacognitive CQ and behavioral CQ predicted task performance. Ang et al. (2007) argued, based on difference in the bivariate correlation between motivational CQ and task performance, that the relationship between motivational CQ and task performance may have been moderated by participants (conference attendees, foreign professionals), raters (peers versus supervisors), or length of the task (short-term project versus ongoing work responsibilities). They also hypothesized that due to the generic nature of the task presented for the task performance measure, specific cultural knowledge (cognitive CQ) and intrinsic interest and self-efficacy in culturally diverse settings (motivational CQ) may not have been relevant to success.

As a whole, these studies have limitations that must be considered when interpreting the results. Because the designs of all three studies are ex post facto, we cannot draw causal conclusions regarding the relationship between cultural intelligence and any of the outcome variables. Additionally, though the results were generally consistent across the three different studies, control variables and outcome measures differed from study to study and, as such, the models have not been truly replicated. In all three studies, the participant pool was self-selected (university students enrolled in a particular course in study one, conference attendees in study two, employees and supervisors of a specific IT company in study three); thus we cannot assume that these samples resemble the population at large.

*CQ and task performance*

Within the field of organizational psychology, Oolders, Chernyshenko, and Stark (2008) examined cultural intelligence as a mediating variable in the relationship between the big-five personality factor openness to experience and adaptive performance. Oolders et al. hypothesized that CQ is a characteristic adaptation (e.g. McCrae & Costa, 1996), that is, a construct consisting of competencies, beliefs, attitudes and behavior that is acquired over time as an individual interacts with her environment. McCrae and Costa hypothesized that characteristic adaptations mediate relationships between innate tendencies, such as cognitive ability, and performance. Oolders et al. chose to explore openness to experience based on the finding that openness to experience has the strongest relationship to CQ of the Big Five personality factors (Ang et al., 2006). Adaptive performance, defined as “the proficiency with which people alter their behavior to meet the demands of the environment, an event, or a new situation” (Oolders et al., pg. 148), was chosen as the performance dimension for the study because prior research in organizational psychology demonstrated a strong relationship with openness to experience.

Participants for the study were 311 volunteers (90 male), all of whom were first- or second-year undergraduates in New Zealand. Participants’ ages ranged from 17 to 57 with a mean of 24 (sd = 7). Further, all of the volunteers had full- or part-time jobs and all spoke English as their primary language. Participants completed a series of self-report questionnaires to measure openness to experience, cultural intelligence, adaptive performance, and the other four Big Five personality factors. Openness to experience was

assessed using a 120-item measure including six facets of openness: intellectual efficiency, ingenuity, curiosity, tolerance, aesthetics, and depth (Chernyshenko et al., 2007). Each facet was measured with 20 questions. The other four personality factors were measured using Goldberg's (1992) instrument. Cultural intelligence was measured with the CQS, whereas the adaptive performance measure was developed for this study. The adaptive performance scale consisted of eight dichotomous items (yes = 1, no = 0) and included items such as, "I belong or have belonged to a university club or society." The coefficient alpha for the instrument was  $\alpha = 0.51$ .

Data showed significant correlations between CQ and openness ( $r = 0.49$ ), CQ and adaptive performance ( $r = .26$ ), and adaptive performance and openness ( $r = .22$ ), demonstrating that the preconditions for a mediating relationship were met. Data were analyzed using mediated regression analysis, and the extent of the mediation effect was tested using the Sobel test. The relationship between openness to experience and adaptive performance was partially mediated by CQ. The Sobel test indicated that 45% of the original effect between openness and adaptive performance was mediated by CQ.

There are several limitations inherent to the design used in this study. First, as an ex post facto design, we can draw no conclusions about causality. Secondly, there are significant problems in the adaptive performance measure. Since data regarding performance originated from the same source as the data for openness and cultural intelligence, we must consider the possibility that these relationships may be, in part, due to common method. Further, the students' responses to the questions may be influenced by social desirability (e.g. Constantine & Ladany, 2000), leading respondents to over-

state their adaptability. If social desirability was a factor in this study, it is likely that participants with a tendency toward social desirability would over-state their cultural intelligence and their adaptive performance, which may account for their relationship. In addition, the internal consistency of the measure of adaptive performance was low, indicating that the measure may not capture a unified construct. Finally, the sample of participants, undergraduate students in their country of origin, may not have been placed in a sufficiently different cultural environment. Although in a broad sense, the university environment constitutes a unique culture, this difference does not speak to the core of CQ. Despite these problems, the study provides further evidence for the utility of CQ in predicting behavior above and beyond personality characteristics. Additionally, the study supports the connection between distal traits such as personality and state-like constructs, such as CQ, in the nomological network proposed by Ang and Van Dyne (2008).

Rockstuhl, Seiler, Ang, Van Dyne, and Annen (2011) studied the predictive power of CQ on cross-border leadership effectiveness with 126 military leaders studying at the Swiss Military Academy. Participants were officers in a 3-year program focused on developing both domestic and cross-border leadership abilities. All participants were Caucasian males with an average of 6.44 ( $SD = 4.79$ ) years of leadership experience. Participants' ability in domestic and cross-border leadership was rated by two peers in the program with different cultural backgrounds (e.g., participants with a French background were rated by peers with a German background and vice versa). Participants also completed cultural intelligence, emotional intelligence, and demographic questionnaires. Archival general intelligence and personality data were also used.

After controlling for the effects of age, leadership experience, international experience, Big-Five personality, EQ and IQ, cultural intelligence predicted cross-border leadership effectiveness ( $\beta = .27, p < .05$ ) and accounted for 24.7% of the variance. CQ did not predict domestic leadership effectiveness ( $\beta = -.07, p > .05$ ). International experience was positively related to both domestic ( $\beta = .30, p < .01$ ) and cross-border leadership ( $\beta = .35, p < .001$ ) effectiveness.

In interpreting the above results, we must consider the limitations of the study. As a cross-sectional design, the study precludes causal inferences. As a result, future research should employ longitudinal designs to investigate the effects of CQ over time. Second, although the authors provided justification for using peer evaluations, the ratings of cross-cultural leadership effectiveness may not adequately capture participants' actual leadership qualities. Ratings from multiple sources and / or observations of actual leadership performance would strengthen these findings. Third, the sample employed in the current study was limited only to Caucasian males, and the research setting was exclusively military. Thus, caution is warranted when interpreting the result more broadly.

### *Summary of the Literature*

Though considerable progress has been made since 1982 when Sue and colleagues first proposed the tripartite model of multicultural competence, there remains much work to be done with respect to the development of multicultural competence theory and its measurement. Cultural intelligence is a promising new construct that offers counseling psychology opportunities to broaden our understanding of what makes

individuals effective in cross-cultural interactions. Whereas the theoretical underpinnings of current measures of multicultural competence have been called into question (e.g. Mollen, Ridley, & Hill, 2003), cultural intelligence is rooted in the strong theoretical foundations of intelligence theory (e.g., Sternberg & Detterman, 1986). Furthermore, repeated confirmatory factor analyses are consistent with the four-factor model of CQ, which provides statistical evidence to support the theoretical model of cultural intelligence. With the exception of the MAKSS, current measures of multicultural competence continue to demonstrate factor structures inconsistent with their theoretical models (Dunn, Smith, & Montoya, 2006). Whereas current measures of MCC continue to have problems with respect to divergent validity, Ang and colleagues have demonstrated the discriminant validity of CQ with respect to important theoretically-related constructs (e.g., general cognitive ability, emotional intelligence). Further, although prior studies have failed to demonstrate a relationship between self- and other-rated MCC, self- and peer-rated CQ have demonstrated convergence.

The most salient limitation of the theory and measurement of cultural intelligence is the fact that it has yet to be investigated with respect to counseling psychology. Though the theory appears to be readily adaptable to the encounters between counselor and client (Goh, Koch, & Sanger, 2008), there is at present no evidence to support the criterion-related validity of CQ. Furthermore, given the newness of the construct, few empirical studies exist and the majority of these studies have been conducted by Ang and her colleagues. Thus, exploration of the ability of CQ to predict process and outcome measures specifically relevant to counseling psychology is warranted.

Regardless of the instrument of choice for measuring cultural competence, serious problems exist in the literature regarding the operationalization of counseling outcomes. The majority of the current research has been conducted in analogue settings, using designs that may not elicit sufficient data to draw conclusions about competence. For example, no one would argue that multicultural case conceptualization ability is not a necessary skill in order to be a multiculturally competent therapist. Although essential, case conceptualization skills are useless without the behavioral skill to communicate one's expertise to others and the motivation to do so.

Furthermore, the few studies involving actual psychotherapy clients have tended to focus on college students for short periods of time. Numerous researchers (e.g., Griner & Smith, 2006; Dunn, Smith, & Montoya, 2006; & Worthington & Dillon, 2011) have called for explorations of competence from multiple perspectives (client, therapist, expert) within the same study, to investigate the correlation between multicultural competence and therapeutic relationship, and to advocate for granting agencies to devote the necessary funding to this important issue. Thus, further research exploring multicultural competence should attempt to enlist therapists and clients in natural settings.

### Chapter 3: Methodology

#### *Design*

This study is a naturalistic design which includes a combination of secondary analysis of archival client data gathered at a university counseling center at a Big Ten university between 2007 and 2012 and originally gathered therapist data collected in the summer of 2012. These client data were originally collected at the center for the purposes of ongoing client assessment / client care and research. Because of the hierarchical nature of the data (e.g., sessions nested within clients; clients nested within therapists), this study can be considered to employ both a within-subjects and a between-subjects design. As no variables were manipulated, the study employs a correlational design. This is appropriate given that 1) the research hypotheses seek to understand the relationships between variables and 2) the principal construct of interest, therapists' cultural intelligence, cannot be experimentally manipulated.

#### *Participants*

Therapists who participated included staff psychologists and doctoral trainees who had conducted therapy between 2007 and 2012, roughly the time period in which the center had been routinely collecting outcome data. Thus, the sample of therapists includes both counselors who are currently employed at the center and those who have previously worked at the center. Therapists who were employed at the center during the time of the study were recruited by the research coordinator at the center, who solicited participation via email contact and in person at staff meetings. Therapists who had been previously employed at the center were contacted via email only.

Twenty-eight therapists completed the study. Therapists' ages ranged from 27 to

62 (*mean* = 36.29, *S.D.* = 10.3). Of the 28 therapists, 18 (64.3%) identified as female and 10 (35.7%) identified as male. Fourteen therapists identified their ethnicity as White / Caucasian / European American (50%). Ten therapists identified as Asian / Asian American / Pacific Islander (35.17%). Three therapists identified as multi-racial or multi-ethnic (10.71%) and one therapist identified as African American / Black (3.57%). Nine therapists (32.1%) were born outside of the US and 10 therapists had lived outside of the US at some point in their lives (35.7%). Therapists varied in their experience as therapists, ranging from 2 to 38 years of experience conducting therapy (*mean* = 8.5, *S.D.* = 8.09) and in their experience with multicultural counseling, ranging from 1 to 38 years of experience (*mean* = 7.89, *S.D.* = 8.16). Seventeen (60.71%) of the therapists were doctoral students in counseling or clinical psychology at the time of the study; the rest of the sample (11 therapists; 39.3%) were doctoral level psychologists. Data regarding sexual orientation, socio-economic status and ability / disability status were not gathered. Therapists' data were matched with clients they had seen while conducting therapy at the center. Because all clients complete the outcome measures as part of routine care, the client sample includes all clients with whom the therapists worked between 2007 and 2012.

A total of 1621 clients are included in the sample. Number of clients seen per therapist ranged from 3 to 267 (*mean* = 58; *median* = 29.5; *S.D.* = 63.41). A total of 9444 sessions were conducted, ranging from 1 to 89 (*mean* = 5.83; *median* = 3; *S.D.* = 7.32) per client. Demographic data regarding the clients are limited to what is routinely collected by the center. Clients reported their ethnicity as follows: 1128 clients (69.6%)

identified as White / Caucasian / European American; 230 clients (14.2%) identified as Asian American / Pacific Islander; 49 clients (3.0%) identified as African American / Black; 11 clients (0.7%) identified as Native American; 39 clients (2.4%) identified as Latina/Latino/Hispanic; 58 clients (3.58%) identified as multi-racial; 102 clients (6.29%) identified as other; and 4 clients did not provide data regarding their ethnic identity. Of the 1621 clients, 1023 (63.1%) identified as female, with the rest of the clients (598; 36.9%) identifying as male. One hundred seventy one clients (10.55%) identified themselves as international students. All clients were enrolled students at the University of Minnesota. Data regarding clients' socio-economic status, major, sexual orientation, age, ability / disability status, and nationality are not available.

#### *Procedure*

Client data for the study was gathered as part of ongoing care during the course of treatment at the center. All clients of the center complete the Behavioral Health Measure 43 (BHM-43; Green, Lowry, & Kopta, 2003) prior to their first session and the Behavioral Health Measure 20 (BHM-20; Kopta & Lowry, 2002) prior to each subsequent session. Because the first measurement is taken prior to receiving psychological services, the first measurement can be considered a true baseline. At this time clients also provide demographic information and complete a subscale of the BHM, the Psychotherapy Risk Scale, which measures a clients' readiness for therapy (see Appendix E-G for instruments). Upon checking in at the front desk for their appointment, clients are directed to complete the BHM by administrative staff. Clients complete the BHM via computers in the waiting area of the center prior to each session throughout the

course of their treatment at the center. From the second session onward, clients are also instructed to complete the Bond Scale of the BHM, a measurement of the therapeutic alliance with their therapist. Once clients have completed the BHM and subscales, therapists are able to immediately access the results and use the information to make clinical decisions regarding treatment.

Data from therapists was collected using Survey Monkey, an online tool for creating surveys and collecting responses. Therapists who were recruited for participation were sent a link to the survey. Therapists were informed that the intent of the research was to examine the effects of therapist multicultural counseling competence on therapy process and outcome. They provided demographic information and completed the Cultural Intelligence Scale (CQS; Ang et al., 2007) from their personal or work computers.

### *Instruments*

Client data was collected using the Behavioral Health Measure – 20 (BHM-20; Kopta and Lowry, 2002) and the Behavioral Health Measure – 43 (BHM-43; Green, Lowry, & Kopta, 2003), which are available as appendix E. The BHM-20 consists of 21 Likert-type questions on a 5-point scale (0 to 4; 0 representing extreme distress and 4 representing excellent functioning) and contains three primary subscales: Well-Being, Psychological Symptoms, and Life Functioning. Well-Being measures emotional distress, motivation / energy levels, and life satisfaction. The Symptoms scale includes questions that assess for signs of depression, anxiety, substance abuse and risk (harm to self and/or others). The Life Functioning scale assesses an individual's ability to meet life's demands

(academic, intimate relationships, occupational) and also captures a person's ability to enjoy life. A Global Mental Health scale consists of all twenty-one items and can be considered to be a good indicator of an individual's overall mental health. The BHM-43 is 44-item client report instrument consisting of the same three subscales in the BHM-20 (Well-being, Psychological Symptoms, Life Functioning), with the addition of a personal effectiveness subscale. As with the BHM-20, a client's Global Mental Health scale consists of all 44 items as a composite of Well-being, Psychological Symptoms, and Life Functioning.

The BHM-20 demonstrated adequate internal consistency across four samples (community adults, college students, college counseling clients, and psychotherapy outpatients). Coefficient alphas ranged as follows across the four samples: Global Mental Health, .89 to .90; Well-Being, .65 to .74; Symptoms, .85 to .86; and Life Functioning, .72 to .77 (Kopta and Lowry, 2002). The college student sample also showed adequate test-retest reliability following a two-week interval (Global Mental Health, .80; Well-Being, .71; Symptoms, .83; Life Functioning, .80). Construct validity was demonstrated using a discriminant validity method. Significant group differences were found for all four subscales and each subscale was able to correctly discriminate among clinical and nonclinical populations. Additionally, all four subscales demonstrated sensitivity to change, with clients showing statistically significant improvement when comparing a baseline measurement to scores following session three. Concurrent validity was established by comparing BHM Scales with corresponding scales from the BASIS-32, the COMPASS, and the OQ-45.

The BHM-43 demonstrated adequate internal consistency across all four scales, with coefficient alphas as follows across samples: Global Mental Health, .94 to .95; Well-being, .75 to .84; Psychological Symptoms, .91 to .93, and Life Functioning, .77 to .87 (Green, Lowry, and Kopta, 2003). The Global Mental Health scale from the BHM-43 demonstrated concurrent validity by correlating .83 with the Outcome Questionnaire-45 and .92 with the Symptom Check List 90-Revised. As the BHM-20 and BHM-43 measure the same constructs, in this study data from the two instruments was aggregated into one data set.

Therapists' demographic information was collected via an online survey. Therapists' cultural intelligence was measured using the Cultural Intelligence Scale (CQS; Ang, Dyne, Koh, Ng, Templer, et al, 2007). The CQS is a 20-item, self-report measure on a seven-point Likert scale. Participants choose a value ranging from strongly disagree to strongly agree that they believe most accurately reflects their capabilities. Confirmatory factor analysis showed support for a four-factor model of the CQS, which generalizes across both time and country (Ang et al). The CQS also has demonstrated sufficient reliability (metacognitive CQ = .77, cognitive CQ = .84, motivational CQ = .77, behavioral CQ = .84) and has demonstrated discriminant validity with the Big 5 personality traits, cognitive ability, and emotional intelligence (Ang et al).

The CQS, originally developed for use in global management, was adapted for counseling psychology for the current study by modifying questions in the CQ section to reflect the multicultural knowledge, motivations, and skills that may be important for therapists during the course of treatment. For this purpose, five of the six questions in the

cognitive domain were re-written and one question from the motivation section was rewritten. Twelve potential questions were developed for the study and, in consultation with the original author, six were ultimately chosen for the study (See appendix A for the original CQS and appendix B for the modified CQS used in this study). Because the cognitive subscale altered four of the original six questions from the original version of the CQS, Cronbach's alpha was computed to assess the internal consistency of the redeveloped scale. Based upon this sample, the redeveloped cognitive subscale of the CQS showed adequate reliability ( $\alpha = .91$ ). The adapted motivational CQ scale differed by one item from the original CQS and showed acceptable internal consistency in this sample ( $\alpha = .67$ ). The metacognitive and behavioral subscales remained unchanged from the original CQS.

### *Independent Variables*

Several independent variables were used in the current study. For correlational analyses relating to therapists' cultural intelligence, therapist demographics such as nationality, experience of living abroad, position at the center (i.e., trainee or staff psychologist), years of therapy experience, and years of multicultural counseling experience were independent variables.

For the principal analysis, level 1 (session-level) independent variables included time, as measured in sessions, and therapeutic alliance, as measured by the Bond Scale of the BHM. Level 2 (client-level) independent variables included readiness for therapy, as measured by the Psychotherapy Risk Scale of the BHM, client ethnicity, and ethnic match with their therapist. Level 3 independent variables (therapist-level) included the

four factors of cultural intelligence (metacognitive, cognitive, motivational, and behavioral) as measured by the CQS, therapist ethnicity, therapists' experience living abroad, and therapists' multicultural counseling experience.

#### *Dependent Variables*

The dependent variable for the principal analysis of the study was the Global Mental Health scale of the Behavioral Health Measure. Additionally, CQ subscales (metacognitive, cognitive, motivational, and behavioral) were dependent variables for correlational analyses.

#### *Analysis of the Data*

Descriptive statistics were calculated for all variables used in the analysis. Correlational analyses were used to test the strength of the linear relationships between therapist demographic variables and their cultural intelligence, as outlined in hypotheses 1a through 1c. Effect sizes for these correlations were estimated by calculating R-squared for each of the correlation coefficients.

For the principal analysis, hierarchical linear modeling (HLM) was employed to evaluate hypotheses 2 through 4 and included exploratory analyses. HLM analysis is an appropriate statistical analysis when data have a hierarchical nature (Luke, 2004). In this case, session-level data are nested within clients, which in turn are nested within therapists. HLM analyses offer advantages over traditional ordinary least squares regression in that when data are grouped the assumption of uncorrelated errors is typically violated (Luke, 2004). Additionally, HLM approaches offer greater statistical power and parsimony as compared with ANOVA and ANCOVA models. Betas obtained

through the HLM analyses were evaluated using *t*-tests, and effect size was estimated using Cohen's *d*. HLM analyses were conducted with HLM-7 (Raudenbush, Bryk, & Congdon, 2011).

Preliminary data analyses demonstrated clear outliers with respect to sessions attended. For this reason, the maximum number of sessions per client in these analyses was limited to 20, reducing the total number of sessions from 9444 to 8690. Level 2 and Level 3 data were unaffected by limiting sessions in this way (i.e., client and therapist data and composition were unchanged). Clients were deleted from the full model listwise for missing data, resulting in 8635 sessions, 1608 clients, and 28 therapists.

Of the 8690 sessions in the data set, 4284 (49.3%) did not have associated Bond Scale data. Of these sessions with missing data, 1621 were first sessions and would not have been expected to have associated bond data. Of the 7069 sessions that would be expected to have Bond Scale data, 2663 did not (37.67%). Due to this missing data, two sets of analyses were conducted. The first set of analyses was conducted on the full model, excluding the Bond Scale from analyses. The second set of analyses included the Bond Scale data at level 1 and constitutes a reduced sample. This model deleted clients and their associated sessions listwise from the analyses, resulting in a reduction in sessions from 8635 to 4387 and the number of clients from 1608 to 850. The number of therapists in the reduced model remained 28.

The reduced sample included a total of 850 clients. Clients reported their ethnicity as follows: 595 clients (70.0%) identified as White / Caucasian / European American; 120 clients (14.12%) identified as Asian American / Pacific Islander; 26 clients (3.06%)

identified as African American / Black; 6 clients (0.71%) identified as Native American; 17 clients (2.0%) identified as Latina/Latino/Hispanic; 30 clients (3.53%) identified as multi-racial; and 56 clients (6.59%) identified as other. Of the 850 clients, 540 (63.53%) identified as female, with the rest of the clients (310; 36.47%) identifying as male. Eighty-three clients (9.76%) identified themselves as international students.

## Chapter 4: Results

The first section of this chapter presents descriptive statistics for relevant demographics and means, standard deviations, and correlations among study variables. The second section presents the results of analyses of the research hypotheses. The third section presents the results of an exploratory analysis of the effects of ethnic matching on change in global mental health throughout the course of therapy for therapists who identified as White/ Caucasian / European American. Finally, a summary of the results is presented.

### *I. Descriptive Analyses*

Means, standard deviations, minimum and maximum values for variables at each of the three levels of analysis are reported in Table 2. At intake, clients' mean GMH score was 2.48 ( $SD = 0.56$ ), ranging from 0.72 to 3.85. By the end of therapy, this mean had increased to 2.79 ( $SD = 0.60$ ). Correlational analyses were also conducted for each of the three levels. Level 1 correlations among session, global mental health, and bond scores showed small positive correlations. All correlations at Level 1 are significant at the  $p < .001$  level of significance (see Table 3).

In order to correlate variables across levels, data on lower levels were aggregated to group levels. When calculating level-2 correlations, data from level 1 (session level) were aggregated to the client level. Session became total number of sessions attended per client. In order to capture growth in global mental health and therapeutic bond over time, change scores were computed for GMH and Bond by subtracting the final measurement from the first measurement for each client. Additionally, as a measure of the average

therapeutic alliance, a mean Bond score was calculated for each client. Added to the aggregated Level 1 variables were the following level-2 variables: the Psychotherapy Risk Scale, clients' ethnic minority status, and whether clients' self-reported ethnic identities matched with their therapist's self-reported ethnicity. Results of the correlational analyses for level 2 are presented in Table 4.

When calculating correlations between Level 3 (therapist level) variables and Level 1 (client level) variables, data were again aggregated to level 3. For global mental health, an average for each therapist was computed by taking the mean of clients' GMH change scores. Similarly, an average change in therapeutic alliance score was calculated for each therapist by taking the mean of clients' Bond Change for each therapist. Finally, an average therapeutic alliance score was calculated by taking the mean of clients' Bond mean's for each therapist. Added to these aggregated data were the following Level 3 variables: therapist Metacognitive CQ, therapist Cognitive CQ, therapist Motivational CQ, therapist Behavioral CQ, therapist multicultural counseling experience (years), number of languages spoken fluently per therapist, and a dichotomous variable indicating whether therapists had ever lived outside their country of origin. Results of these correlational analyses are presented in Table 5.

## *II. Research Hypotheses Results*

*Hypothesis 1a: Experience living in another country will positively correlate with self-reported multicultural counseling competence.*

Correlational analyses revealed non-significant correlations between the experience of living abroad and therapists' self-reported Metacognitive CQ, Cognitive

CQ, Motivational CQ, and Behavioral CQ (see table 5 for correlations). This hypothesis is not supported.

*Hypothesis 1b: Multicultural counseling experience will show a positive relationship with self-reported multicultural counseling competence.*

Correlational analyses revealed non-significant correlations between therapists' multicultural counseling experience and therapists' self-reported Metacognitive CQ, Cognitive CQ, Motivational CQ, and Behavioral CQ (see table 5 for correlations). This hypothesis is not supported.

*Hypothesis 1c: Therapists who possess fluency in multiple languages will exhibit greater self-reported multicultural counseling competence.*

Correlational analyses revealed non-significant correlations between the number of languages spoken fluently and therapists' self-reported Metacognitive CQ, Cognitive CQ, Motivational CQ, and Behavioral CQ (see table 5 for correlations). This hypothesis is not supported.

#### *Hypotheses 2-4 and Exploratory Analyses*

In order to evaluate hypotheses 2-4, a series of HLM analyses were conducted. Prior to HLM analyses, the maximum number of sessions per client was limited to 20 in order to remove the effects of outliers. Limiting sessions in this way did not remove any clients or therapists from the sample. Due to a significant amount of missing data for the Therapeutic Bond Scale, two sets of models were developed: one set including the full sample, but excluding therapeutic bond from the analyses, and a second set of models operating on a reduced sample, which includes therapeutic bond in the analyses.

Descriptive statistics were re-calculated for the reduced sample (see Table 9). For all HLM analyses, the effect of time was treated as a random effect at the client level. Additionally, following the recommendation of Luke (2004), variables with a non-meaningful zero value were grand-centered for all models prior to analysis. This includes the Psychotherapy Risk Scale and the four factors of CQ. The dependent variable for all models was Global Mental Health. Finally, session was recoded such that zero was the baseline measurement for all models.

For both the full and reduced samples, HLM analyses began by first estimating a Level 1 model, before developing models including level-2 and Level 3 variables. This approach to model building is recommended, as it assists researchers with decision-making and leads to more parsimonious models (Luke, 2004). As this is the first study of cultural intelligence in the context of psychotherapy outcome, an exploratory approach to model building was employed.

For the full sample, the Level 1 model (see Tables 6a and 6b for the model and results, respectively) developed shows only the effect of time (measured by sessions) on global mental health. In the level-2 model client ethnicity and psychotherapy risk were added (see Tables 7a and 7b for the models and results, respectively). For the final, Level 3 model, in addition to each of the four CQ factors, therapist demographic characteristics were included as controls, including therapist ethnicity, multicultural counseling experience and experience living abroad (see Tables 8a and 8b for the model and results, respectively). This process was repeated for the reduced sample, with the exception that therapeutic bond was included at level 1 and in subsequent level-2 and Level 3 models

(see Tables 10a-12b for models and results).

For all models, time was an important predictor of outcome. Clients were expected to improve by approximately .05 on the GHM per session attended. Effect size estimates ranged from  $d = 0.19$  to  $d = 1.03$  across the models (see Tables 6b, 7b, 8b, 10b, 11b, 12b, and 13b, for estimates of coefficient  $\beta$ s across models). Additionally, in all models Psychotherapy risk was an important moderator on the effect of time on improvement in therapy. For each point above the mean Risk score, a client would be expected to improve by an additional 0.01 on GHM per session attended. This is a small effect as classified by Cohen's  $d = 0.19$  (see tables 7b, 8b, 11b, and 12b for estimates of coefficient  $\beta$ s across models). Finally, in the reduced sample therapeutic bond was an important predictor of outcome. For each point above the mean on the Bond Scale, we would expect a client's global mental health score to increase by 0.164. This is a moderate effect as classified by Cohen's  $d = 0.57$ .

*Hypothesis 2a: Clients who self-identify as ethnic minorities will exhibit a greater degree of psychological distress at baseline.*

This hypothesis was tested by evaluating the coefficient of the intercept for the ethnic minority variable using HLM analyses with the full sample including Level 1 and level-2 variables (see Table 7b). The coefficient  $\beta = -0.036$  was non-significant ( $t = -1.62$ ,  $p = 0.106$ ), indicating that ethnic minorities would not be expected to experience more distress at baseline than White clients.

*Hypothesis 2b: Clients who self-identify as ethnic minorities will demonstrate less improvement over time in comparison to white clients (i.e., there will be a disparity in*

*outcome between white and non-white clients).*

This hypothesis was tested by evaluating the coefficient of the slope for the ethnic minority variable using HLM analyses with the full sample including Level 1 and level-2 variables (see Table 7b). The coefficient  $\beta = -0.004$  was non-significant ( $t = -1.191, p = 0.234$ ), indicating that ethnic minorities would not be expected to demonstrate less improvement over time in comparison to white clients.

*Hypothesis 3a) A match between the self-reported ethnicity of a client and her therapist will be associated with improved counseling outcomes.*

The self-reported ethnic identities of the therapists made evaluating this hypothesis difficult. Although half of the therapists (14) identified as non-White, nine therapists (all of whom identified as Asian) were not born within the US. An additional three therapists identified as multi-racial. For clients of these therapists, it is difficult to determine whether clients perceived their ethnic identities to match with their therapists. For example, an Asian-American client may or may not perceive her therapist of Chinese nationality to be a match. Similarly, a multi-ethnic client may or may not perceive their multi-ethnic therapist to match based upon the uniqueness of being multi-ethnic. Because of these characteristics of the sample, it is difficult to determine how to code for matching. For this reason, an exploratory analysis was conducted on only the White-identifying therapists and their clients. Clients who identified as White / Caucasian / European American were considered to have matched. Descriptive statistics were calculated for this subset of the sample (see Table 13a).

This hypothesis was tested by evaluating the coefficient of the slope for the ethnic

match variable using an HLM including session at level 1 and ethnic matching at level 2 (coded 1 = match, 0 = no match). The coefficient  $\beta = 0.005$  was non-significant ( $t = 0.68$ ,  $p = 0.49$ ), indicating that ethnic matching had no effect on the improvement of clients over time (see Table 13c).

*Hypothesis 3b: Therapist cultural intelligence will mediate the relationship between ethnic matching and improved outcomes.*

In order for variables to be mediators, there first needs to be a relationship between a predictor and outcome variable (Frazier, Tix, & Barron, 2004). Because there was no evidence for an effect of ethnic matching on counseling outcomes, there cannot be a mediation effect. As such, no further analyses were conducted and there is no support for this hypothesis.

*Hypothesis 4: Therapist cultural intelligence will positively moderate the effect of time on therapeutic improvement (i.e., clients whose therapists exhibit high levels of cultural intelligence will improve faster).*

This hypothesis was tested by evaluating the coefficients for slope associated with each of the four factors of cultural intelligence in the Level 3 models. In the full sample (see Table 7b), the coefficient betas for Metacognitive ( $\beta = 0.000$ ), Cognitive ( $\beta = 0.000$ ), Motivational ( $\beta = 0.002$ ), and Behavioral CQ ( $\beta = 0.001$ ) were each non-significant (all  $p$ -values  $> 0.1$ ). These results were consistent in the reduced sample (see Table 11b) for Metacognitive ( $\beta = -0.000$ ), Cognitive ( $\beta = -0.001$ ), and Behavioral ( $\beta = -0.001$ ) CQ. However, the coefficient for Motivational CQ ( $\beta = 0.004$ ) was significant ( $t = 2.35$ ,  $p < .05$ ). This is a small effect as characterized by Cohen's  $d = 0.17$ .

### *Moderation Effects of CQ on Psychotherapy Process Variables*

Because of the exploratory approach to model building, all possible interaction effects were included at each step of the model building process. The effects of therapist Metacognitive ( $\beta = -0.002$ ), Cognitive ( $\beta = -0.000$ ), Motivational ( $\beta = -0.002$ ), and Behavioral CQ ( $\beta = 0.001$ ) were all non-significant (all  $p$ -values  $> .3$ ) and thus did not moderate the effects of Psychotherapy Risk on the slope for session in the full model (see Table 7b). These results were consistent with the reduced sample for Metacognitive ( $\beta = -0.005$ ), Cognitive ( $\beta = -0.001$ ), and Motivational CQ ( $\beta = -0.001$ ) (all  $p$ -values  $> .1$ ). However, in the reduced sample, therapist Behavioral CQ ( $\beta = 0.003$ ) was significant ( $t = 1.95, p < .05$ ). This moderation effect is small based upon Cohen's  $d = 0.14$ .

### *III. Summary of Results*

1. No therapist demographic / background variable significantly correlated with their cultural intelligence scores. This may have been due to lack of power to detect a small effect.
2. In all models, time was an important predictor of outcome and clients were expected to improve by approximately .05 on the GHM per session attended. Effect size estimates ranged from  $d = 0.19$  to  $d = 1.03$  across the models.
3. Psychotherapy Risk appears to moderate the effect of time on GHM. For each point above the mean Risk score, a client would be expected to improve by an additional 0.01 on GHM per session attended. This is a small effect as classified by Cohen's  $d = 0.19$ .

4. Clients' ethnicity appeared to have no effect on their global mental health. There were no significant differences at baseline and clients' ethnicity did not significantly moderate the relationship between time and therapeutic outcomes.
5. Exploratory analyses revealed that the effect of therapy on global mental health for clients who identified as ethnic minorities did not differ when compared to clients who identified as White in the subset of therapists who identified as White. In other words, the hypothesis that ethnic matching for minority clients leads to an improvement in outcome was not supported. Consequently, a hypothesis that CQ may mediate the effect of ethnic matching on outcome was not evaluated.
6. Therapist cultural intelligence did not significantly moderate the effects of time on improvement in models developed on the full sample. In the reduced sample, which included therapeutic bond, therapist Motivational CQ moderated the relationship between outcome and time. For each point a therapist scores above the mean on Motivational CQ, it would be expected that their clients would improve an additional 0.003 points on GMH per session. This would be classified as a small effect according to Cohen's  $d = 0.17$ .
7. In terms of the effects of therapist cultural intelligence on process variables, therapist CQ did not significantly moderate the effects of Psychotherapy Risk in the full sample. In the reduced sample, therapist Behavioral CQ positively moderated the effect of Psychotherapy Risk. For each point a therapist scores above the mean on Behavioral CQ, we would expect their clients to improve an additional 0.003 on GMH per session. This would be classified as a small effect

according to Cohen's  $d = 0.14$ . Therapist CQ did not moderate the effects of therapeutic bond on outcome.

## Chapter 5: Discussion and Recommendations

The purposes of this study were 1) to explore the effects of therapists' cultural intelligence, as a measure of multicultural counseling competence, on psychotherapeutic outcomes in a naturalistic setting, and 2) to explore how therapists' cultural intelligence may affect established relationships among process and outcome variables in psychotherapy, namely clients' readiness for therapy, clients' ethnicity and ethnic match with their therapist, and therapeutic alliance. As described in numerous other studies, no measure of therapist multicultural counseling competence has demonstrated predictive validity in either analogue (Worthington, Mobley, Franks, & Tan, 2000; Constantine & Ladany, 2000; Constantine, 2002) or naturalistic designs (Constantine, 2001; Fuertes and Borbst, 2002; Owen, Leach, Wampold & Rodolfa, 2011). The present study represents the first examination of cultural intelligence within the context of psychotherapy. Further, this study offers the first evidence that therapists' self-reported perceptions of their multicultural competence may predict client improvement. The following chapter presents a discussion of the findings, limitations to internal and external validity, and suggestions for future study.

### *Nomological Network of CQ*

As delineated by Ang and Van Dyne (2008), cultural intelligence exists within a broader theoretical network (see Appendix D) suggesting that CQ is influenced by distal factors such as personality, self-evaluation, demographics and biological information. As outlined in hypotheses 1a through 1c, the present study sought to examine the relationships among distal factors and CQ within the context of psychotherapy. The

present study found no significant relationships among biographic experiences of therapists (years of multicultural counseling practice, experiences of living abroad, and number of languages spoken) and cultural intelligence. To date, no other studies have examined these hypothesized relationships with psychologists; however, this result is inconsistent with existing literature of cultural intelligence in other contexts. For example Tarique and Takeuchi (2008) found moderate correlations (ranging from .48 to .6) between the number of international, non-work experiences and each of the cultural intelligence factors after controlling for the effects of age. Kim, Kirkman, and Chen (2008) also demonstrated that a business traveler's cognitive CQ was positively associated with multicultural experiences after controlling for tenure, gender, marital status, education, and location, while Shannon and Begley (2008) demonstrated a small, positive correlation between cognitive CQ and number of languages spoken.

The inconsistencies between the results of the current study and the CQ literature may be explained by several factors. First, and most likely, is that the number of therapists in the current study ( $n = 28$ ) led to insufficient power to detect a small effect. Post-hoc power analysis showed that the probability of detecting a small ( $r = 0.3$ ) effect in the correlational analyses was 0.36, assuming an alpha level of 0.05. As none of the correlations between therapists' experiences and CQ factors exceeded  $r = 0.28$  (see Table 5), the probability of detecting a true effect was low.

Secondly, the previous studies of antecedents of CQ employed different measurements of the construct of multicultural experiences. In the present study, international experience was defined as a dichotomous variable of whether therapists had

lived outside their native country. This is a narrower definition than that employed by both Tarique and Takeuchi (2008), who measured non-work international experience (which included travel and study-abroad experiences) and Kim, Kirkman, and Chen (2008), who defined multicultural experiences according to frequency, length, and number of locations of short business trips. Using a narrower definition of this type of experience may have masked the effect, and it is possible that expanding the definition used in the current study to include additional information (e.g., length of stay abroad, travel experiences, etc.) may have altered the outcome.

With respect to years of multicultural counseling experience, therapists tended to provide very similar answers when asked to report their years of experience providing therapy and their years of experience providing multicultural counseling (17 therapists reported identical numbers,  $r = 0.99$ ), which suggests that this is not an accurate way to assess differences among therapists in their experiences with providing therapy in cross-cultural situations. Therefore, it becomes difficult to interpret the lack of significant correlations between therapists' multicultural counseling experience and their self-reported cultural intelligence. Similar to the concerns with international experiences, it is possible that including additional information about therapists' experience providing multicultural psychotherapy (e.g., approximate percentage of nonwhite clients in current practice, multicultural counseling courses taken, etc.) may have led to a positive result.

Additionally, therapists in the sample scored relatively highly on all 4 CQ dimensions relative to other published samples (e.g., Ang et al., 2007). Whereas in the Ang et al., 2007 studies of undergraduates means for CQ scale scores ranged from 3.16 –

4.89, means for the therapists in the present study ranged from 4.51 to 5.73. The increased levels of cultural intelligence demonstrated by the therapists in the current study relative to others suggest that the results in the current study may be limited by a ceiling effect.

Finally, it is possible that the discrepancy between the literature and the current study represents inherent differences between the populations of the previous studies (business students / business travelers) and the current study (mental health practitioners). If this were true we would conclude that multicultural experiences do not lead to the development of cultural intelligence in psychologists. However, qualitative studies have emphasized the role of cultural experience in the development of multicultural counseling competence (Goh, Skovholt, Yang, & Starkey, 2012; Jennings, Skovholt, Goh, & Lian, 2013). Given the alternate explanations detailed above and the results of these qualitative studies, it seems unlikely that multicultural experience is unrelated to the development of cultural intelligence in psychotherapists.

#### *Effect of Ethnicity and Ethnic Matching*

It was hypothesized in this study that clients who identified as racial and ethnic minorities would show greater psychological distress at baseline and that these clients would receive less benefit than white clients from the therapy they received. Neither of these hypotheses was fully supported. HLM models showed no significant effect for ethnicity at baseline in the full sample ( $p = 0.106$ ), but did in the reduced sample ( $p < 0.05$ ;  $d = 0.15$ ). Ethnicity did not affect treatment over time in either the full ( $p = 0.106$ ) or reduced samples ( $p = 0.27$ ). Similarly, exploratory analyses of the white therapists and

their clients found no significant moderating effect for ethnic matching on therapeutic outcomes (See Table 13c;  $p = 0.49$ ). As a result of the lack of relationships among client ethnicity and outcome, and ethnic matching and outcome, the hypothesis that CQ would mediate the effects of ethnic matching on outcomes was not able to be examined, and is thus not supported by the present study.

These results are consistent with other studies of race and ethnic matching in psychotherapy, which have demonstrated no difference in the efficacy of treatment for Caucasian and African American clients and no effect for ethnic matching (Jones & Zoppel, 1982). Additionally, Lerner (1972) investigated the effect race by examining the effects of treatment for African American and Caucasian clients treated by Caucasian therapists and found no evidence of racial differences in outcomes. The most recent meta-analysis of the effects of ethnic matching for African-American and White clients also demonstrated no effects for ethnic matching (Shin et al., 2005). Additionally, although a meta-analysis including African American, Caucasian, Latino, and Asian-identifying clients found small effects for ethnic matching on dropout rates ( $r = .03$ ) and utilization ( $r = .04$ ), the small effect sizes led the authors to conclude that ethnic matching was unimportant (Maramba & Hall, 2002). Additionally, the authors found no effect for ethnic matching on clinical distress at termination (Maramba & Hall, 2002).

However, other studies have found that ethnic minority clients have higher attrition rates and that ethnic matching between therapist and client mitigates this effect (e.g., Sue, Fujino, Hu, Takeuchi, & Zane, 1991). Additional research has demonstrated that ethnic matching for African American children and adolescents leads to fewer

attended sessions, not because of attrition but because they needed less treatment (Gamst, Dana, Der-Karabetian, & Kramer, 2004). Shillington and Clapp (2003) found that ethnic minority adolescents are overrepresented in substance abuse treatment in comparison to Caucasian youth, but also that these clients experience “unsatisfactory treatment” to a greater degree. Flicker and colleagues (2005) offered methodological criticisms of the literature, concluding that studies measured outcomes indirectly (attrition, treatment duration) and that outcome instruments used, may be insufficiently sensitive to capture differences. They later demonstrated that Hispanic youth made significantly greater gains in treatment when matched with a Hispanic therapist.

In summary, a consensus regarding the effects of client ethnicity and ethnic matching on treatment outcomes remains elusive. While client ethnicity and ethnic matching were found to have no significant effects in the present study, there are several methodological constraints to consider as we interpret this lack of result. First, although 1608 clients were included in the sample, the large proportion of White clients necessitated aggregating ethnic minorities into a single group. Aggregating clients across ethnic minority groups in this way may have masked outcome effects, particularly if those effects were present for ethnic groups that were minimally represented (e.g., Native American, Latino/Latina/Hispanic, African American). This is especially important given the fact that the effects of ethnic matching have not been consistent across ethnic minority groups in previous studies (e.g., Sue, 1998).

Although there were no significant differences in the effects of therapy across White and ethnic minority clients, this does not necessarily preclude an effect for ethnic

matching. In other words, ethnic minority clients may receive roughly the same benefit from therapy as White clients, but may receive a greater benefit from therapy when receiving treatment from an ethnically-matched therapist. Also at issue is the ethnic composition of the therapist sample. Because 9 of the 14 ethnic minority therapists were born outside of the US (all Asian), it was not possible to conclude with conviction that Asian American clients would have perceived their therapists to have matching ethnicities. Other researchers have spoken to the possible confounding of acculturation in studies of ethnic matching (Sue, 1988). Similar issues were present in determining how to code match with therapists and clients who reported their ethnic identities as multi-racial. It was for these reasons that an exploratory analysis was conducted with only White therapists and their clients. Although this analysis showed no result, the inability to completely cross the conditions, combined with the conflicting results from the literature, precludes a definitive statement about the effects of ethnicity and ethnic matching in therapy.

#### *Effects of CQ as a Moderator of Process and Outcome*

The present study found limited support for the hypothesis that therapist cultural intelligence predicts improved clinical outcomes in psychotherapy. Adding the four CQ factors in the third model produced discrepant results across the full and reduced samples used in this study. None of the four CQ factors directly moderated the effect of time on clinical outcomes in the full model. Additionally, in the full sample, CQ factors had no effect on the relationships between client readiness for therapy and client ethnicity on outcomes. However, in the reduced sample, statistically significant results were found for

the moderating effect of motivational CQ on outcome and for the moderating effect of behavioral CQ on the relationship between client readiness and outcome. Before beginning to examine the possible interpretations of the results of the analysis of the effects of CQ on outcome, a discussion of the discrepant results across the full and reduced samples in the study is warranted.

In order to examine hypotheses related to therapeutic alliance, a reduced sample was used due to the degree of missing data in the obtained sample. One possible explanation for the discrepant results is that clients who completed the therapeutic bond scale, measuring the quality of relationship between therapist and client, differ in some important way from clients who do not. As previously discussed, the demographic characteristics of the reduced sample were almost identical to the full sample, suggesting that ethnic minorities were not less likely to complete the bond scale when compared with white clients. Descriptive statistics (see Tables 2 and 9) reveal that the average length of treatment was higher for those clients who completed the bond scale. Largely contributing to this is the fact that all clients who terminated therapy following session one were not included in the reduced sample, as bond scale data collection does not begin until session 2. Similarly, clients in the reduced sample had a larger mean GMH score when compared with the full sample, though this difference may be due to the additional treatment received.

The specific reasons that clients did not complete the therapeutic bond scale are unknown. Because data from the BHM are used as part of routine clinical care at the center, data are made immediately available to therapists after clients complete the

assessment. Therapists routinely discuss the results of the BHM with their clients, who then know that the results are not anonymous. For this reason, one could reasonably argue that clients who had negative alliance with their therapist may not want their therapist to know how they perceived their therapeutic alliance. One would speculate these clients would disproportionately choose not to complete the assessment. The high mean of the bond scale (Table 9) of 3.4 out of a possible 4 may lend credence to this hypothesis, in the fact that clients who consistently completed the bond scale had good relationships with their therapist. However, the standard deviation of scale ( $SD = 0.61$ ) and the minimum reported value (zero) suggest that at least some clients who always completed the bond scale were willing to report negative perceptions of their therapist.

Another possible explanation for the discrepancy lies in the fact that clients in the reduced sample completed more sessions on average than clients who did not. It is easy to imagine that the effects of CQ on outcome may become more pronounced as therapy progresses and that the effects of CQ may not be immediately noticeable. This is particularly salient given that the reduced sample excluded clients from the analysis who had only completed one session. If therapist CQ is unrelated to client attrition, including these clients in the analysis may well have masked the relatively small effects of CQ ( $d = 0.17$  and  $d = 0.14$ ).

An equally likely possibility is that because the demonstrated effects are small, the significant results of CQ in models of the reduced sample are due to the inclusion of the therapeutic bond data. Therapeutic bond has been consistently shown to be one of the best predictors of outcome in therapy (e.g., Clarking & Levy, 2004; Hubble, Duncan, &

Miller, 1999). Bond exhibited a moderate effect on outcome in the present study (range from  $d = 0.24$  to  $0.64$ ). The inclusion of therapeutic bond explained additional variance in the model, reducing error variance. Again, given the small effect sizes for significant results of CQ factors, this reduction in error variance could mean the difference between a significant and a non-significant effect.

Contrary to the research hypotheses, only motivational CQ and behavioral CQ produced significant results in the current study. One possible explanation for the lack of significant results between clinical outcomes and metacognitive and cognitive CQ may lie in the nomological network of CQ (see Appendix D). In their development of the nomological network, Ang and Van Dyne (2008) suggest that cultural intelligence affects outcomes through intervening variables, and may not exert a direct effect on an individual's performance in cross-cultural situations. In the context of the present study, the implications are that a therapist's cognitive CQ would not be, in itself, therapeutic, but would lead a therapist to behave differently (e.g., choosing different interventions) or to be perceived differently by their clients (e.g., having more credibility with a client from a different ethnic background than the therapist). In this case, the direct effects of cultural intelligence factors on therapeutic outcomes may be weak or nonexistent.

An additional consideration when interpreting the results in the present study is the conceptualization of outcome. This study chose to use a broad measure, global mental health, to explore the effects on clients' overall mental health. Given that this was the first study of CQ and outcome, an overall measure was justified. Lambert (2010) argues routine outcome assessment, such as the system employed by the center in the current

study, should be commonplace in order to track progress and identify at-risk clients. Outcome management systems such as those using the OQ-45 (Lambert, Okiishi, Finch, & Johnson, 1998) employ measures of overall mental health. The choice to examine global mental health tests the premise that therapist CQ affects outcome for all clients in all cases. A more plausible assumption is that the importance of therapist CQ factors to outcome is context dependent. For example, the importance of therapist CQ may depend on client diagnosis / presenting problem. Additionally, therapist CQ may only exert influence on a subset of psychotherapy outcomes (e.g., symptoms). Unless the effects on these subset of outcomes were either very large or very numerous, they would be missed in the present study design, using a measure of global mental health and all psychotherapy clients.

The results of the present study are both consistent and inconsistent with results from previous studies of multicultural counseling competence. The current body of literature has mostly examined multicultural counseling competence based on instruments rooted in the tripartite model, including knowledge, awareness, and skills. Further, these studies, both analogue and naturalistic, have failed to find significant predictive validity of therapist multicultural counseling competence with numerous outcomes, including verbal responses to a simulated client (Worthington, Mobley, Franks, & Tan, 2000) and observer CCCI-R ratings of recorded intake sessions (Constantine, 2001). If one grants that metacognitive CQ and cognitive CQ are roughly equivalent to multicultural awareness and multicultural knowledge in the tripartite model (Goh, Koch, & Sanger, 2008) the lack of significant findings in the present study is consistent with the

literature.

However, although client-report of therapist multicultural counseling competence has been linked to increased client satisfaction with services (e.g., Fuertes et al., 2006), no published study to date has demonstrated a significant effect of therapist self-reported multicultural competence in relation to clinical outcomes. It is impossible to state with certainty why the present study found significant results where others have not; there are numerous possible explanations. First, the CQS is methodologically sound and conceptually consistent with the theory of cultural intelligence, claims which cannot be made about measures of multicultural counseling competence in previous research (Mollen, Ridley, & Hill, 2003; Dunn, Smith, & Montoya, 2006). Second, the present study included a relatively large sample of clients who completed therapy in a natural environment, whereas previous research has been limited by small sample sizes (e.g., Constantine, 2001) and has been questioned regarding the relevance of analogue outcome measures (Dunn, Smith, & Montoya, 2006). Third, the tripartite model includes no mention of an individual's motivation and self-efficacy in cross-cultural situations. Finally, no previous studies of multicultural counseling competence have included measurements of client readiness for therapy, precluding an examination of the moderating effects of therapist cultural intelligence with these variables.

As previously mentioned, motivational CQ represents an individual's drive for learning and functioning in cross-cultural situations, and also reflects self-efficacy beliefs in one's cross-cultural effectiveness. That therapists with higher degrees of motivational CQ would produce better outcomes is consistent with qualitative studies of master

therapists and multicultural master therapists. In their study of master therapists, Jennings and Skovholt (1999) found that therapists considered the “best of the best” displayed a hunger and drive for learning. Future research using similar methodology replicated this result in Japan, Singapore, and Canada (Jennings, Skovholt, Goh, & Lian, 2013). This theme was articulated even more explicitly in a replication of this study with multicultural master therapists. Goh, Starkey, Skovholt, and Jennings (2007) found that therapists considered exemplars of multicultural counseling competence were “fervent learners of their own culture and the culture of others” (pg. 19) and that they demonstrated a personal commitment to multiculturalism. A second study of multicultural exemplars reported that experts interviewed yearned for multicultural experiences (Goh, Skovholt, Yang, & Starkey, 2012). Finally, Goh, et al. (2007) found that these therapists were “humble, yet assured,” echoing the cross-cultural self-efficacy captured by motivational CQ.

This study constitutes the first examination of effect of therapist cultural intelligence as a moderator of the relationship between client readiness for therapy and outcome. Furthermore, no research has been published examining the effects of other measures of therapist multicultural competence on this relationship. Behavioral CQ is defined as an individual’s skill exhibiting appropriate verbal and non-verbal behaviors in cross-cultural situations. In the context of psychotherapy, there are numerous behaviors that are likely to affect the outcome of treatment. Some of the more well-researched behavioral characteristics in therapy include therapist directiveness (e.g., Klausner et al., 1998), interpersonal style (e.g., Constantino, 2000), and self-disclosure (e.g., Barrett and

Berman, 2001). Goh, Starkey, Skovholt, & Jennings (2007) identified that expert multicultural therapists made frequent use of self-disclosure to minimize power differences and enhance relationships. However, as this study lacks direct measurements of therapists' behavior, it is difficult to conclude how therapists' behaviors differed. Similar difficulties exist with interpreting the fact that therapists' behavioral CQ moderated the effect of time through client readiness for therapy, rather than directly. One could speculate, for example, that client readiness for change may have allowed therapists to exhibit a greater range of behavior, but there exist innumerable possibilities to explain this result. Further research is warranted to identify the specific pathways in which therapists' behavioral CQ produces these effects.

The results from the present study are also consistent with those found in other studies of cultural intelligence, principally from within the business world. For example, Ang et al. (2007) found that cultural intelligence predicted cultural judgment and decision-making. Other studies have demonstrated relationships between CQ and performance in cross-cultural negotiation tasks (Imai & Gelfand, 2010) and the work performance of Philippine laborers in Taiwan (Chen, Lin, & Sawangpattanakul, 2011). Further, CQ has been found to moderate the relationships between cultural adjustment, cultural effectiveness, and expatriate performance (Lee and Sukoco, 2010). Reported results for the effects of CQ on performance tend to yield similar effect sizes to those reported in the current study. However, research on the effects of cultural intelligence on performance has begun only recently and the literature remains relatively small.

In summary, caution must be exercised when interpreting the positive, moderating

effect of Motivational CQ on treatment efficacy over time and the positive, moderating effect of Behavioral CQ on the relationship between client readiness and outcome for several reasons. First, as the present study found discrepant results in these relationships across the full and reduced samples. Further, the results are inconsistent with both natural and analogue studies using other measures of multicultural counseling competence. Additionally, the relative nascence of the literature demonstrating a link between CQ and performance in cross-cultural interactions suggests that more research is warranted. Finally, this is the first study evaluating CQ in the context of psychotherapy outcome. Nevertheless, the positive results suggest some promise that future study may establish the predictive validity of therapist cultural intelligence with psychotherapy outcome, something which cannot be said of any other measure of multicultural counseling competence examined to date.

### *Limitations*

The first significant limitation of the present study is the host of threats to internal validity present due to the methodological realities of conducting naturalistic research. A naturalistic design translates to a lack of control over potentially confounding variables. Of particular relevance is the inability to randomly assign clients to therapists, along with the lack of control groups or control conditions. Because clients were not randomly assigned, the possibility exists that there are significant differences among therapists' caseloads. Further, because approximately 40% of the variance in therapy is due to client and extra-therapeutic factors (Duncan, Miller, Wampold, & Hubble, 2009), these differences could have a significant effect on the estimates of individual therapists'

effectiveness. Further, inability to randomly assign clients led to differences in clients' diagnoses and presenting problems across therapists' case loads. This is compounded by the fact that information regarding diagnosis / presenting concern was not available, precluding statistical controls. Finally, the naturalistic study resulted in therapists choosing and applying potentially unique approaches to treatment. Although this freedom may have allowed therapists to express their expertise, it also means that no control was exerted over a significant source of variance in therapy outcomes, treatment approach.

An additional threat to the internal validity of the study is the time lag between when therapist participants completed the CQ measurement and when the therapy was conducted; because the dataset employed in the present study is archival, all therapists completed the CQ after, and in some cases years after, the sessions were conducted. This issue is further complicated by the fact that, in order to achieve a sufficient sample, former therapists (both staff psychologists and trainees) were recruited from the counseling center. In the intervening time between when therapists completed their sessions and when they completed the CQ, some therapists clearly would have grown in their cultural intelligence, especially considering that many of these therapists are doctoral students who receive regular training in multicultural counseling. Needless to say, this maturation effect is a significant limitation of the present study, introducing error into the measurements of a therapist's cultural intelligence. It is worth noting that the study would suffer from a similar maturation effect if therapists completed the CQ prior to beginning their therapeutic work at the center over a similar time period. A significant change in the study design, either incorporating multiple measurements of CQ over time

or a much smaller time frame for therapy would be necessary in order to address this issue.

Additionally, there are limitations to the external validity of this study. Although therapy was completed in a natural setting and we can be reasonably certain that the treatment clients received is roughly equivalent to that of a typical psychotherapy client, real differences exist between clients of university counseling centers and other mental health agencies (nonprofit agencies, private practices, etc.). As such, we cannot generalize the results of the present study beyond university counseling centers. Additionally, because therapy was completed in only one counseling center, we must exercise caution in generalizing these results to other centers, as there may be something unique about the center used in the present study. Additionally, because all clients included in the present study were college students at the time of therapy, these results need to be carefully considered with respect to client populations. Although limited demographic information was available for the current sample, key differences likely existed between this sample and a typically community mental health sample in terms of client age, socio-economic status, and severity of symptoms.

#### *Recommendations for Future Research*

Future research with CQ and outcome would first benefit by addressing some of the methodological limitations of the current study. In order to replicate findings and address threats to internal validity, future research should utilize a longitudinal design beginning with gathering data about therapists. If data collection continues over a significant period of time, reassessing therapist CQ is recommended. Expanding the

current study to include more therapists across multiple sites would allow researchers to estimate any treatment effects due to agency and to increase power. Furthermore, including a large sample with greater ethnic diversity among therapists would allow for a more thorough examination of the effects of client ethnicity and ethnic matching on clinical outcomes.

Additionally, the present study was unable to include client perspectives on therapist cultural intelligence, relying solely upon therapist self-report. Numerous researchers have raised concerns about the validity of self-reports of multicultural competence (e.g., Owen, Leach, Wampold, & Rodolfa, 2011) and several studies have demonstrated that self-reported multicultural competence is positively related to measures of social desirability (Constantine & Ladany, 2000). However, the CQ has been shown to be uncorrelated with measures of social desirability (Ang et al., 2007), though this finding has yet to be confirmed with the population of psychotherapists. Dunn, Smith, and Montoya (2006) articulate the necessity of including clients' perspective when evaluating therapist competence, stating that of the 137 studies quantitatively assessing multicultural competence included in their review, only 4 studies included ratings from actual psychotherapy clients. Including clients' perspectives will allow researchers to make better estimates of therapists' true cultural intelligence, make comparisons between therapist- and client-reported CQ, and develop more sophisticated models.

With respect to hypotheses of ethnic matching, it is recommended that future studies shift focus from conceptualizations of ethnic matching based upon agreement between therapists' and clients' self-reported ethnicity as defined by census categories.

Ethnicity is a complex and personal identity and is influenced by a number of factors, including acculturation, stage of identity development, and lived experience.

Furthermore, an individual's ethnic identity is easily misconstrued by simply employing visual cues, and current conceptualizations fail to include data regarding whether therapist and clients explicitly discuss or reveal their respective ethnic identities. For this reason, it is recommended that at a minimum, future research in this area assess ethnic matching from the perspective of clients. Additionally, Zane et al. (2005) argued that researchers move away from the distal metric of ethnic matching and toward more proximal measures such as cognitive match.

Additionally, despite the difficulties inherent in conducting research with community-based samples, future research with CQ and outcomes should be conducted in these settings. As Dunn, Smith, and Montoya (2006) note, far too many studies of the effects of multicultural counseling on outcome have been conducted with college students. As a consequence, as a field we are limiting our understanding of the nature of multicultural counseling competence to its effects on college students, typically when treated by graduate students in mental health programs. While this is a good start, future research efforts should be directed toward exploring these relationships within other communities.

Finally, future researchers exploring the effects of CQ on therapeutic outcomes should begin to consider and include intervening variables, such as therapist behaviors and characteristics, between CQ and outcomes. As outlined in the nomological network of CQ, it is theorized that CQ does not influence outcomes directly. One possible

construct to include would be inclusive cultural empathy (Pedersen, Crethar, & Carlson, 2008). Recognizing that empathy is culturally defined, Pedersen, Crethar, and Carlson set out to broaden traditional conceptualizations of empathy to accommodate collectivist cultural groups, incorporating a social perspective to complement an individual perspective when appropriate. The authors articulate a set of integral microskills in the expression of inclusive cultural empathy, which consists of four broad categories: mistakes and recoveries, articulating the problem from the client's perspective, recognizing client resistance, and overcoming defensiveness. These categories, comprised of behavioral techniques and markers, could be used to develop a protocol for evaluating therapists' skill in making empathic responses in cross-cultural therapy.

## Tables

Table 1.

*Comparison of Clients' Identity Across Full and Reduced Samples.*

Identity	Full Sample		Reduced Sample	
	N	Percentage	N	Percentage
White	1128	69.6	595	70.0
Asian American	230	14.2	120	14.1
African American	49	3.0	26	3.1
Native American	11	0.7	6	0.7
Latino/a	39	2.4	30	2.0
Multi-racial	58	3.6	30	3.5
Other	102	6.3	56	6.6
Female	1023	63.1	540	63.5
Male	598	36.9	310	36.5
International	171	10.55	83	9.8

Table 2.

*Full Sample Mean, Standard Deviation, Minimum and Maximum Values for Variables in Main Analyses.*

Variable Name	N	Mean	SD	Minimum	Maximum
<i>Level 1</i>					
Session	8635	5.83	4.83	1.00	20.00
GMH	8635	2.74	0.60	0.26	4.00
<i>Level 2</i>					
Risk	1608	2.28	0.60	0.00	4.00
Ethnic Minority*	1608	-0.39	0.92	-1.00	1.00
<i>Level 3</i>					
MC	28	5.73	0.59	4.50	6.75
COG	28	4.51	0.90	2.67	6.00
MOT	28	5.62	0.64	4.00	6.60
BEH	28	5.29	0.85	3.60	7.00
Counselor Ethnicity*	28	0.00	1.02	-1.00	1.00
EXP	28	8.50	8.09	0.00	38.00
ABROAD**	28	0.68	0.48	0.00	1.00

*Note:*

\*Ethnicity coded -1 for White/Caucasian/European American and 1 for all other ethnic identities

\*\*ABROAD coded 0 = lived only in country of origin, 1 = lived outside country of origin

GMH = Global Mental Health; Risk = Psychotherapy Risk Scale; MC = Metacognitive CQ; COG = Cognitive CQ; MOT = Motivational CQ; BEH = Behavioral CQ

Table 3.

*Intercorrelations among Level 1 Variables: Session Number, Global Mental Health, and Therapeutic Bond..*

	1	2	3
1. Session	--	.18	.22
2. GMH		--	.26
3. Bond			--

*Note:* All correlations significant at  $p < .001$ . GMH = Global Mental Health; Bond = Therapeutic Bond Scale

Table 4.  
*Intercorrelations among Level-2 Variables: Total Session, Global Mental Health, Therapeutic Bond, Psychotherapy Risk, and Ethnic Minority Status.*

	1	2	3	4	5	6
1. Total Session	--	.22**	.07	.13**	-.02	.05
2. GMH Change		--	.13**	.11**	.11**	.01
3. Bond Mean			--	-.15**	.18**	-.01
4. Bond Change				--	-.03	.03
5. Risk					--	.05
6. Ethnic Minority						--

Note: \*  $p < .05$ ; \*\*  $p < .01$

GMH = Global Mental Health; Bond = Therapeutic Bond Scale; Risk = Psychotherapy Risk Scale.  
 Ethnicity coded -1 for White/Caucasian/European American and 1 for all other ethnic identities

Table 5.

*Intercorrelations among Level 3 Variables: Therapist Cultural Intelligence, Global Mental Health, Therapeutic Bond, Multicultural Counseling Experience, Language Fluency, and Experience Living Abroad.*

	1	2	3	4	5	6	7	8	9	10
1. MC	--	.36	.24	.48*	-.25	.16	.18	.28	.16	-.04
2. COG		--	.50**	.41*	-.17	.00	.00	-.02	-.18	.08
3. MOT			--	.55**	.13	-.34	-.00	-.15	.04	-.03
4. BEH				--	.08	.02	-.12	.11	-.11	-.26
5. GMH Change					--	.09	.05	.02	-.30	-.55**
6. Bond Mean						--	-.09	.00	-.04	-.21
7. Bond Change							--	-.04	.18	.01
8. Experience								--	-.23	-.33
9. Languages									--	.67**
10. Abroad										--

Note: \*  $p < .05$ ; \*\*  $p < .01$

MC = Metacognitive CQ; COG = Cognitive CQ; MOT = Motivational CQ; BEH = Behavioral CQ; GMH = Global Mental Health; Bond = Therapeutic Bond Scale; Experience = number of years of multicultural counseling experience

Table 6a.

*Full Sample HLM Model for Level 1 predictors of Global Mental Health.*

---

Level 1 Model

$$\text{GMHSCORE}_{ijk} = \pi_{0jk} + \pi_{1jk} * (\text{SESSION}_{ijk}) + e_{ijk}$$

Level-2 Model

$$\begin{aligned} \pi_{0jk} &= \beta_{00k} + r_{0jk} \\ \pi_{1jk} &= \beta_{10k} + r_{1jk} \end{aligned}$$

Level 3 Model

$$\begin{aligned} \beta_{00k} &= \gamma_{000} + u_{00k} \\ \beta_{10k} &= \gamma_{100} \end{aligned}$$


---

*Note:* GMHSCORE = Global Mental Health

Table 6b.

*Full Sample HLM Results for Level 1 predictors of Global Mental Health.*

Fixed Effect	Coefficient	Standard error	t-ratio	d.f.	p-value	Cohen's D
For INTERCEPT1, $\pi_0$						
For INTERCEPT2, $\beta_{00}$						
INTERCEPT3, $\gamma_{000}$	2.60	0.02	145.78	27	<0.001	
For SESSION slope, $\pi_1$						
For INTERCEPT2, $\beta_{10}$						
INTERCEPT3, $\gamma_{100}$	0.049	0.002	20.40	1579	<0.001	1.03

Table 7a.

*Full Sample HLM Model for Level-2 predictors of Global Mental Health.*

---

Level 1 Model

$$GMHSCORE_{ijk} = \pi_{0jk} + \pi_{1jk} * (SESSION_{ijk}) + e_{ijk}$$

Level-2 Model

$$\begin{aligned} \pi_{0jk} &= \beta_{00k} + \beta_{01k} * (RISK_{jk}) + \beta_{02k} * (ETHNICMI_{jk}) + r_{0jk} \\ \pi_{1jk} &= \beta_{10k} + \beta_{11k} * (RISK_{jk}) + \beta_{12k} * (ETHNICMI_{jk}) + r_{1jk} \end{aligned}$$

Level 3 Model

$$\begin{aligned} \beta_{00k} &= \gamma_{000} + u_{00k} \\ \beta_{01k} &= \gamma_{010} \\ \beta_{02k} &= \gamma_{020} \\ \beta_{10k} &= \gamma_{100} \\ \beta_{11k} &= \gamma_{110} \\ \beta_{12k} &= \gamma_{120} \end{aligned}$$

---

*Note:* GMHSCORE = Global Mental Health; RISK = Psychotherapy Risk Scale; ETHNICMI = client's ethnic minority status, coded -1 for White, 1 for all other ethnic identities

Table 7b.

*Full Sample HLM Results for Level-2 predictors of Global Mental Health.*

Fixed Effect	Coefficient	Standard error	<i>t</i> -ratio	<i>d.f.</i>	<i>p</i> -value	Cohen's D
For INTERCEPT1, $\pi_0$						
For INTERCEPT2, $\beta_{00}$						
INTERCEPT3, $\gamma_{000}$	2.660	0.023	114.76	27	<0.001	
For RISK, $\beta_{01}$						
INTERCEPT3, $\gamma_{010}$	0.169	0.034	4.92	817	<0.001	
For ETHNICMI, $\beta_{02}$						
INTERCEPT3, $\gamma_{020}$	-0.036	0.022	-1.62	817	0.106	
For SESSION slope, $\pi_1$						
For INTERCEPT2, $\beta_{10}$						
INTERCEPT3, $\gamma_{100}$	0.028	0.003	9.74	817	<0.001	0.68
For RISK, $\beta_{11}$						
INTERCEPT3, $\gamma_{110}$	0.012	0.004	2.68	817	<0.01	0.19
For ETHNICMI, $\beta_{12}$						
INTERCEPT3, $\gamma_{120}$	-0.004	0.003	-1.191	817	0.234	

*Note:* RISK = Psychotherapy Risk Scale; ETHNICMI = client's ethnic minority status, coded -1 for White, 1 for all other ethnic identities

Table 8a.

*Full Sample HLM Model for Level 3 predictors of Global Mental Health.*

---

Level 1 Model

$$GMHSCORE_{ijk} = \pi_{0jk} + \pi_{1jk}*(SESSION_{ijk}) + e_{ijk}$$

Level-2 Model

$$\begin{aligned}\pi_{0jk} &= \beta_{00k} + \beta_{01k}*(RISK_{jk}) + \beta_{02k}*(ETHNICMI_{jk}) + r_{0jk} \\ \pi_{1jk} &= \beta_{10k} + \beta_{11k}*(RISK_{jk}) + \beta_{12k}*(ETHNICMI_{jk}) + r_{1jk}\end{aligned}$$

Level 3 Model

$$\begin{aligned}\beta_{00k} &= \gamma_{000} + \gamma_{001}(MC_k) + \gamma_{002}(COG_k) + \gamma_{003}(MOT_k) + \gamma_{004}(BEH_k) + \gamma_{005}(EXP_k) + \gamma_{006}(ABR_k) + \\ &\gamma_{007}(ETH_k) + u_{00k} \\ \beta_{01k} &= \gamma_{010} + \gamma_{011}(MC_k) + \gamma_{012}(COG_k) + \gamma_{013}(MOT_k) + \gamma_{014}(BEH_k) + \gamma_{015}(EXP_k) + \gamma_{016}(ABR_k) + \\ &\gamma_{017}(ETH_k) \\ \beta_{02k} &= \gamma_{020} + \gamma_{021}(MC_k) + \gamma_{022}(COG_k) + \gamma_{023}(MOT_k) + \gamma_{024}(BEH_k) + \gamma_{025}(EXP_k) + \gamma_{026}(ABR_k) + \\ &\gamma_{027}(ETH_k) \\ \beta_{10k} &= \gamma_{100} + \gamma_{101}(MC_k) + \gamma_{102}(COG_k) + \gamma_{103}(MOT_k) + \gamma_{104}(BEH_k) + \gamma_{105}(EXP_k) + \gamma_{106}(ABR_k) + \\ &\gamma_{107}(ETH_k) \\ \beta_{11k} &= \gamma_{110} + \gamma_{111}(MC_k) + \gamma_{112}(COG_k) + \gamma_{113}(MOT_k) + \gamma_{114}(BEH_k) + \gamma_{115}(EXP_k) + \gamma_{116}(ABR_k) + \\ &\gamma_{117}(ETH_k) \\ \beta_{12k} &= \gamma_{120} + \gamma_{121}(MC_k) + \gamma_{122}(COG_k) + \gamma_{123}(MOT_k) + \gamma_{124}(BEH_k) + \gamma_{125}(EXP_k) + \gamma_{126}(ABR_k) + \\ &\gamma_{127}(ETH_k)\end{aligned}$$

---

*Note:* GMHSCORE = Global Mental Health; RISK = Psychotherapy Risk Scale; ETHNICMI = client's ethnic minority status, coded -1 for White, 1 for all other ethnic identities; MC = Metacognitive CQ; COG = Cognitive CQ; MOT = Motivational CQ; BEH = Behavioral CQ; EXP = years of multicultural counseling experience; ABR = experience of living abroad, coded 0 for no, 1 for yes; ETH = counselor ethnic minority status, coded -1 for White, 1 for all other ethnic identities

Table 8b.

*Full Sample HLM Model for Level 1 predictors of Global Mental Health.*

Fixed Effect	Coefficient	Standard error	t-ratio	d.f.	p-value	Cohen's D
For SESSION slope, $\pi_1$						
For INTERCEPT2, $\beta_{10}$						
INTERCEPT3, $\gamma_{100}$	0.041	0.007	5.72	1540	<0.001	0.29
MC, $\gamma_{101}$	0.000	0.002	0.24	1540	0.812	
COG, $\gamma_{102}$	0.000	0.001	0.22	1540	0.826	
MOT, $\gamma_{103}$	0.002	0.001	1.26	1540	0.208	
BEH, $\gamma_{104}$	-0.001	0.001	-1.35	1540	0.178	
EXP, $\gamma_{105}$	0.000	0.000	0.67	1540	0.506	
ABR, $\gamma_{106}$	0.005	0.009	0.58	1540	0.560	
ETH, $\gamma_{107}$	0.002	0.003	0.66	1540	0.511	
For RISK, $\beta_{11}$						
INTERCEPT3, $\gamma_{110}$	0.018	0.011	1.52	1540	0.129	
MC, $\gamma_{111}$	-0.002	0.003	-0.70	1540	0.486	
COG, $\gamma_{112}$	-0.000	0.001	-0.39	1540	0.697	
MOT, $\gamma_{113}$	-0.002	0.002	-0.85	1540	0.394	
BEH, $\gamma_{114}$	0.001	0.001	0.92	1540	0.359	
EXP, $\gamma_{115}$	-0.001	0.001	-1.59	1540	0.112	
ABR, $\gamma_{116}$	-0.000	0.014	-0.03	1540	0.980	
ETH, $\gamma_{117}$	-0.003	0.005	-0.74	1540	0.461	
For ETHNICMI, $\beta_{12}$						
INTERCEPT3, $\gamma_{120}$	0.006	0.007	0.79	1540	0.431	
MC, $\gamma_{121}$	-0.001	0.002	-0.65	1540	0.519	
COG, $\gamma_{122}$	0.000	0.001	0.01	1540	0.991	
MOT, $\gamma_{123}$	0.000	0.001	0.34	1540	0.735	
BEH, $\gamma_{124}$	-0.000	0.001	-0.27	1540	0.787	
EXP, $\gamma_{125}$	-0.000	0.000	-0.19	1540	0.847	
ABR, $\gamma_{126}$	-0.009	0.009	-1.04	1540	0.296	
ETH, $\gamma_{127}$	-0.003	0.004	-0.75	1540	0.456	

*Note:* RISK = Psychotherapy Risk Scale; *ETHNICMI* = client's ethnic minority status, coded -1 for White, 1 for all other ethnic identities; MC = Metacognitive CQ; COG = Cognitive CQ; MOT = Motivational CQ; BEH = Behavioral CQ; EXP = years of multicultural counseling experience; ABR = experience of living abroad, coded 0 for no, 1 for yes; ETH = counselor ethnic minority status, coded -1 for White, 1 for all other ethnic identities

Table 9.

*Reduced Sample Mean, Standard Deviation, Minimum and Maximum Values for Variables in Main Analyses.*

Variable Name	N	Mean	SD	Minimum	Maximum
<i>Level 1</i>					
Session	4387	7.44	4.80	2.00	20.00
GMH	4387	2.82	0.57	0.79	4.00
Bond	4387	3.40	0.61	0.00	4.00
<i>Level 2</i>					
Risk	850	2.31	0.59	0.20	4.00
Ethnic Minority*	850	-0.40	0.92	-1.00	1.00
<i>Level 3</i>					
MC	28	23.04	2.35	18.00	27.00
COG	28	27.11	5.47	16.00	36.00
MOT	28	28.11	3.24	20.00	33.00
BEH	28	26.64	4.21	18.00	35.00
Counselor Ethnicity*	28	0.00	1.02	-1.00	1.00
EXP	28	8.50	8.09	0.00	38.00
ABR**	28	0.68	0.48	0.00	1.00

\*Ethnicity coded -1 for White/Caucasian/European American and 1 for all other ethnic identities

\*\*ABR coded 0 = born outside the US, 1 = born in the US.

Note: GMH = Global Mental Health; Risk = Psychotherapy Risk Scale; MC = Metacognitive CQ; COG = Cognitive CQ; MOT = Motivational CQ; BEH = Behavioral CQ

Table 10a.

*Reduced Sample HLM Model for Level 1 Predictors of GMH.*

## Level 1 Model

$$\text{GMHSCORE}_{ijk} = \pi_{0jk} + \pi_{1jk} * (\text{SESSION}_{ijk}) + \pi_{2jk} * (\text{BOND}_{ijk}) + e_{ijk}$$

## Level-2 Model

$$\pi_{0jk} = \beta_{00k} + r_{0jk}$$

$$\pi_{1jk} = \beta_{10k} + r_{1jk}$$

$$\pi_{2jk} = \beta_{20k} + r_{2jk}$$

## Level 3 Model

$$\beta_{00k} = \gamma_{000} + u_{00k}$$

$$\beta_{10k} = \gamma_{100}$$

$$\beta_{20k} = \gamma_{200}$$

---

*Note:* GMHSCORE = Global Mental Health; BOND = Therapeutic Bond Scale

Table 10b.

*Reduced Sample HLM Results for Level 1 Predictors of GMH.*

Fixed Effect	Coefficient	Standard error	t-ratio	df.	p-value	Cohen's D
For INTERCEPT1, $\pi_0$						
For INTERCEPT2, $\beta_{00}$						
INTERCEPT3, $\gamma_{000}$	2.76	0.020	139.64	27	<0.001	
For SESSION slope, $\pi_1$						
For INTERCEPT2, $\beta_{10}$						
INTERCEPT3, $\gamma_{100}$	0.024	0.003	9.30	820	<0.001	0.65
For BOND slope, $\pi_2$						
For INTERCEPT2, $\beta_{20}$						
INTERCEPT3, $\gamma_{200}$	0.175	0.019	9.41	820	<0.001	0.66

*Note:* BOND = Therapeutic Bond Scale

Table 11a.

*Reduced Sample HLM Model for Level-2 Predictors of GMH.*

## Level 1 Model

$$\text{GMHSCORE}_{ijk} = \pi_{0jk} + \pi_{1jk} * (\text{SESSION}_{ijk}) + \pi_{2jk} * (\text{BOND}_{ijk}) + e_{ijk}$$

## Level-2 Model

$$\begin{aligned} \pi_{0jk} &= \beta_{00k} + \beta_{01k} * (\text{RISK}_{jk}) + \beta_{02k} * (\text{ETHNICMI}_{jk}) + r_{0jk} \\ \pi_{1jk} &= \beta_{10k} + \beta_{11k} * (\text{RISK}_{jk}) + \beta_{12k} * (\text{ETHNICMI}_{jk}) + r_{1jk} \\ \pi_{2jk} &= \beta_{20k} + \beta_{21k} * (\text{RISK}_{jk}) + \beta_{22k} * (\text{ETHNICMI}_{jk}) + r_{2jk} \end{aligned}$$

## Level 3 Model

$$\begin{aligned} \beta_{00k} &= \gamma_{000} + u_{00k} \\ \beta_{01k} &= \gamma_{010} \\ \beta_{02k} &= \gamma_{020} \\ \beta_{10k} &= \gamma_{100} \\ \beta_{11k} &= \gamma_{110} \\ \beta_{12k} &= \gamma_{120} \\ \beta_{20k} &= \gamma_{200} \\ \beta_{21k} &= \gamma_{210} \\ \beta_{22k} &= \gamma_{220} \end{aligned}$$

*Note:* GMHSCORE = Global Mental Health; BOND = Psychotherapy Bond Scale; RISK = Psychotherapy Risk Scale; ETHNICMI = client's ethnic minority status, coded -1 for White, 1 for all other ethnic identities

Table 11b.

*Reduced Sample HLM Results for Level-2 Predictors of GMH.*

Fixed Effect	Coefficient	Standard error	t-ratio	d.f.	p-value	Cohen's D
For INTERCEPT1, $\pi_0$						
For INTERCEPT2, $\beta_{00}$						
INTERCEPT3, $\gamma_{000}$	2.736	0.021	128.58	27	<0.001	
For RISK, $\beta_{01}$						
INTERCEPT3, $\gamma_{010}$	0.169	0.031	5.48	814	<0.001	
For ETHNICMI, $\beta_{02}$						
INTERCEPT3, $\gamma_{020}$	-0.042	0.020	-2.15	814	<0.05	
For SESSION slope, $\pi_1$						
For INTERCEPT2, $\beta_{10}$						
INTERCEPT3, $\gamma_{100}$	0.023	0.003	8.31	814	<0.001	0.58
For RISK, $\beta_{11}$						
INTERCEPT3, $\gamma_{110}$	0.011	0.004	2.53	814	<0.01	0.18
For ETHNICMI, $\beta_{12}$						
INTERCEPT3, $\gamma_{120}$	-0.003	0.003	-1.11	814	0.27	
For BOND slope, $\pi_2$						
For INTERCEPT2, $\beta_{20}$						
INTERCEPT3, $\gamma_{200}$	0.164	0.020	8.09	814	<0.001	0.57
For RISK, $\beta_{21}$						
INTERCEPT3, $\gamma_{210}$	0.040	0.030	1.34	814	0.18	
For ETHNICMI, $\beta_{22}$						
INTERCEPT3, $\gamma_{220}$	-0.006	0.021	-0.31	814	0.76	

*Note:* RISK = Psychotherapy Risk Scale; BOND = Therapeutic Bond Scale; ETHNICMI = client's ethnic minority status, coded -1 for White, 1 for all other ethnic identities

Table 12a.

*Reduced Sample HLM Model for Level 3 Predictors of GMH.*

## Level 1 Model

$$\text{GMHSCORE}_{ijk} = \pi_{0jk} + \pi_{1jk} * (\text{SESSION}_{ijk}) + \pi_{2jk} * (\text{BOND}_{ijk}) + e_{ijk}$$

## Level-2 Model

$$\begin{aligned} \pi_{0jk} &= \beta_{00k} + \beta_{01k} * (\text{RISK}_{jk}) + \beta_{02k} * (\text{ETHNICMI}_{jk}) + r_{0jk} \\ \pi_{1jk} &= \beta_{10k} + \beta_{11k} * (\text{RISK}_{jk}) + \beta_{12k} * (\text{ETHNICMI}_{jk}) + r_{1jk} \\ \pi_{2jk} &= \beta_{20k} + \beta_{21k} * (\text{RISK}_{jk}) + \beta_{22k} * (\text{ETHNICMI}_{jk}) + r_{2jk} \end{aligned}$$

## Level 3 Model

$$\begin{aligned} \beta_{00k} &= \gamma_{000} + \gamma_{001}(\text{MC}_k) + \gamma_{002}(\text{COG}_k) + \gamma_{003}(\text{MOT}_k) + \gamma_{004}(\text{BEH}_k) + \gamma_{005}(\text{EXP}_k) + \gamma_{006}(\text{ABR}_k) + \\ &\gamma_{007}(\text{ETH}_k) + u_{00k} \\ \beta_{01k} &= \gamma_{010} + \gamma_{011}(\text{MC}_k) + \gamma_{012}(\text{COG}_k) + \gamma_{013}(\text{MOT}_k) + \gamma_{014}(\text{BEH}_k) + \gamma_{015}(\text{EXP}_k) + \gamma_{016}(\text{ABR}_k) + \\ &\gamma_{017}(\text{ETH}_k) \\ \beta_{02k} &= \gamma_{020} + \gamma_{021}(\text{MC}_k) + \gamma_{022}(\text{COG}_k) + \gamma_{023}(\text{MOT}_k) + \gamma_{024}(\text{BEH}_k) + \gamma_{025}(\text{EXP}_k) + \gamma_{026}(\text{ABR}_k) + \\ &\gamma_{027}(\text{ETH}_k) \\ \beta_{10k} &= \gamma_{100} + \gamma_{101}(\text{MC}_k) + \gamma_{102}(\text{COG}_k) + \gamma_{103}(\text{MOT}_k) + \gamma_{104}(\text{BEH}_k) + \gamma_{105}(\text{EXP}_k) + \gamma_{106}(\text{ABR}_k) + \\ &\gamma_{107}(\text{ETH}_k) \\ \beta_{11k} &= \gamma_{110} + \gamma_{111}(\text{MC}_k) + \gamma_{112}(\text{COG}_k) + \gamma_{113}(\text{MOT}_k) + \gamma_{114}(\text{BEH}_k) + \gamma_{115}(\text{EXP}_k) + \gamma_{116}(\text{ABR}_k) + \\ &\gamma_{117}(\text{ETH}_k) \\ \beta_{12k} &= \gamma_{120} + \gamma_{121}(\text{MC}_k) + \gamma_{122}(\text{COG}_k) + \gamma_{123}(\text{MOT}_k) + \gamma_{124}(\text{BEH}_k) + \gamma_{125}(\text{EXP}_k) + \gamma_{126}(\text{ABR}_k) + \\ &\gamma_{127}(\text{ETH}_k) \\ \beta_{20k} &= \gamma_{200} + \gamma_{201}(\text{MC}_k) + \gamma_{202}(\text{COG}_k) + \gamma_{203}(\text{MOT}_k) + \gamma_{204}(\text{BEH}_k) + \gamma_{205}(\text{EXP}_k) + \gamma_{206}(\text{ABR}_k) + \\ &\gamma_{207}(\text{ETH}_k) \\ \beta_{21k} &= \gamma_{210} + \gamma_{211}(\text{MC}_k) + \gamma_{212}(\text{COG}_k) + \gamma_{213}(\text{MOT}_k) + \gamma_{214}(\text{BEH}_k) + \gamma_{215}(\text{EXP}_k) + \gamma_{216}(\text{ABR}_k) + \\ &\gamma_{217}(\text{ETH}_k) \\ \beta_{22k} &= \gamma_{220} + \gamma_{221}(\text{MC}_k) + \gamma_{222}(\text{COG}_k) + \gamma_{223}(\text{MOT}_k) + \gamma_{224}(\text{BEH}_k) + \gamma_{225}(\text{EXP}_k) + \gamma_{226}(\text{ABR}_k) + \\ &\gamma_{227}(\text{ETH}_k) \end{aligned}$$

*Note:* GMHSCORE = Global Mental Health; BOND = Therapeutic Bond Scale; RISK = Psychotherapy Risk Scale; *ETHNICMI* = client's ethnic minority status, coded -1 for White, 1 for all other ethnic identities; MC = Metacognitive CQ; COG = Cognitive CQ; MOT = Motivational CQ; BEH = Behavioral CQ; EXP = years of multicultural counseling experience; ABR = experience of living abroad, coded 0 for no, 1 for yes; ETH = counselor ethnic minority status, coded -1 for White, 1 for all other ethnic identities

Table 12b.

*Reduced Sample Level 3 Session Slopes and Interactions for GMH Scores.*

Fixed Effect	Coefficient	Standard error	t-ratio	d.f.	p-value	Cohen's D
For SESSION slope, $\pi_1$						
For INTERCEPT2, $\beta_{10}$						
INTERCEPT3, $\gamma_{100}$	0.021	0.008	2.66	758	<0.01	0.19
MC, $\gamma_{101}$	-0.000	0.002	-0.34	758	0.74	
COG, $\gamma_{102}$	-0.001	0.001	-1.62	758	0.11	
MOT, $\gamma_{103}$	0.004	0.002	2.35	758	<0.05	0.17
BEH, $\gamma_{104}$	-0.001	0.001	-0.78	758	0.43	
EXP, $\gamma_{105}$	0.000	0.000	1.02	758	0.31	
ABR, $\gamma_{106}$	-0.001	0.001	-0.12	758	0.90	
ETH, $\gamma_{107}$	0.003	0.004	0.82	758	0.41	
For RISK, $\beta_{11}$						
INTERCEPT3, $\gamma_{110}$	0.008	0.013	0.67	758	0.50	
MC, $\gamma_{111}$	-0.005	0.003	-1.62	758	0.11	
COG, $\gamma_{112}$	-0.001	0.001	-0.68	758	0.50	
MOT, $\gamma_{113}$	-0.001	0.002	-0.23	758	0.82	
BEH, $\gamma_{114}$	0.003	0.001	1.95	758	<0.05	0.14
EXP, $\gamma_{115}$	-0.003	0.001	-0.47	758	0.64	
ABR, $\gamma_{116}$	0.010	0.015	0.64	758	0.52	
ETH, $\gamma_{117}$	0.004	0.005	0.67	758	0.50	
For ETHNICMI, $\beta_{12}$						
INTERCEPT3, $\gamma_{120}$	0.001	0.008	0.08	758	0.94	
MC, $\gamma_{121}$	-0.003	0.002	-1.42	758	0.16	
COG, $\gamma_{122}$	0.001	0.001	0.95	758	0.34	
MOT, $\gamma_{123}$	0.003	0.002	1.67	758	0.09	
BEH, $\gamma_{124}$	-0.001	0.001	-0.69	758	0.50	
EXP, $\gamma_{125}$	0.001	0.000	1.17	758	0.24	
ABR, $\gamma_{126}$	-0.009	0.010	-0.93	758	0.35	
ETH, $\gamma_{127}$	-0.003	0.004	-0.63	758	0.53	

*Note:* GMHSCORE = Global Mental Health; BOND = Therapeutic Bond Scale; RISK = Psychotherapy Risk Scale; *ETHNICMI* = client's ethnic minority status; MC = Metacognitive CQ; COG = Cognitive CQ; MOT = Motivational CQ; BEH = Behavioral CQ; EXP = years of multicultural counseling experience; ABR = experience of living abroad, coded 0 for no, 1 for yes; ETH = counselor ethnic minority status

Table 12c.

*Reduced Sample Level 3 HLM Bond Slopes and Interactions for GMH Scores.*

Fixed Effect	Coefficient	Standard error	t-ratio	d.f.	p-value	Cohen's D
For BOND slope, $\pi_2$						
For INTERCEPT2, $\beta_{20}$						
INTERCEPT3, $\gamma_{200}$	0.184	0.055	3.34	758	<0.001	0.24
MC, $\gamma_{201}$	0.000	0.015	0.03	758	0.98	
COG, $\gamma_{202}$	-0.001	0.006	-0.18	758	0.86	
MOT, $\gamma_{203}$	-0.012	0.011	-1.12	758	0.27	
BEH, $\gamma_{204}$	0.005	0.007	0.65	758	0.52	
EXP, $\gamma_{205}$	0.002	0.003	0.68	758	0.50	
ABR, $\gamma_{206}$	-0.037	0.066	-0.57	758	0.57	
ETH, $\gamma_{207}$	-0.001	0.027	-0.05	758	0.96	
For RISK, $\beta_{21}$						
INTERCEPT3, $\gamma_{210}$	0.045	0.088	0.52	758	0.61	
MC, $\gamma_{211}$	0.019	0.024	0.79	758	0.43	
COG, $\gamma_{212}$	0.014	0.009	1.58	758	0.12	
MOT, $\gamma_{213}$	-0.010	0.016	-0.61	758	0.54	
BEH, $\gamma_{214}$	-0.003	0.010	-0.35	758	0.72	
EXP, $\gamma_{215}$	-0.001	0.004	-0.29	758	0.77	
ABR, $\gamma_{216}$	-0.007	0.103	-0.06	758	0.95	
ETH, $\gamma_{217}$	-0.005	0.038	-0.13	758	0.90	
For ETHNICMI, $\beta_{22}$						
INTERCEPT3, $\gamma_{220}$	0.014	0.056	0.26	758	0.80	
MC, $\gamma_{221}$	-0.003	0.015	-0.18	758	0.86	
COG, $\gamma_{222}$	-0.010	0.006	-1.76	758	0.08	
MOT, $\gamma_{223}$	-0.001	0.011	-0.10	758	0.92	
BEH, $\gamma_{224}$	0.007	0.007	1.10	758	0.27	
EXP, $\gamma_{225}$	-0.003	0.003	-0.77	758	0.44	
ABR, $\gamma_{226}$	-0.007	0.067	-0.11	758	0.91	
ETH, $\gamma_{227}$	0.017	0.027	0.64	758	0.52	

*Note:* GMHSCORE = Global Mental Health; BOND = Therapeutic Bond Scale; RISK = Psychotherapy Risk Scale; *ETHNICMI* = client's ethnic minority status; MC = Metacognitive CQ; COG = Cognitive CQ; MOT = Motivational CQ; BEH = Behavioral CQ; EXP = years of multicultural counseling experience; ABR = experience of living abroad; ETH = counselor ethnic minority status

Table 13a.  
*Mean, Standard Deviation, Minimum and Maximum Values for Variables in HLM  
 Analysis for White Therapists and Their Clients.*

Variable Name	N	Mean	SD	Minimum	Maximum
<i>Level 1</i>					
Session	4572	5.20	4.96	1.00	20.00
GMH	4572	2.76	0.62	0.55	4.00
<i>Level 2</i>					
Risk	767	2.25	0.61	0.00	4.00
Ethnic Match*	767	0.73	0.45	0.00	1.00
<i>Level 3</i>					
MC	14	5.84	0.58	4.75	6.75
COG	14	4.56	0.96	2.67	6.00
MOT	14	5.63	0.58	4.80	6.60
BEH	14	5.41	1.01	3.60	7.00
EXP	14	10.64	10.29	3.00	38.00
ABR**	14	1.00	0.00	1.00	1.00

*Note:*

\*Match coded 1 for White/Caucasian/European American clients and 0 for clients with all other ethnic identities

\*\*ABR coded 0 = born outside the US, 1 = born in the US.

GMH = Global Mental Health; Risk = Psychotherapy Risk Scale; MC = Metacognitive CQ; COG = Cognitive CQ; MOT = Motivational CQ; BEH = Behavioral CQ; ABR = Therapists' ABR

Table 13b.

*Level-2 HLM Model Estimating Effects of Ethnic Matching with White Therapists and Their Clients on GMH.*

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Level 1 Model

$$\text{GMHSCORE}_{ijk} = \pi_{0jk} + \pi_{1jk} * (\text{SESSION}_{ijk}) + e_{ijk}$$

Level-2 Model

$$\begin{aligned} \pi_{0jk} &= \beta_{00k} + \beta_{01k} * (\text{ETHNICMA}_{jk}) + r_{0jk} \\ \pi_{1jk} &= \beta_{10k} + \beta_{11k} * (\text{ETHNICMA}_{jk}) + r_{1jk} \end{aligned}$$

Level 3 Model

$$\begin{aligned} \beta_{00k} &= \gamma_{000} + u_{00k} \\ \beta_{01k} &= \gamma_{010} \\ \beta_{10k} &= \gamma_{100} \\ \beta_{11k} &= \gamma_{110} \end{aligned}$$


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*Note:* GMHSCORE = Global Mental Health; ETHNICMA = Ethnic Match, coded 0 = no match, 1 = match

Table 13c.

*Level-2 HLM Results Estimating Effects of Ethnic Matching with White Therapists and Their Clients.*

Fixed Effect	Coefficient	Standard error	<i>t</i> -ratio	<i>d.f.</i>	<i>p</i> -value	Cohen's D
For INTERCEPT1, $\pi_0$						
For INTERCEPT2, $\beta_{00}$						
INTERCEPT3, $\gamma_{000}$	2.58	0.045	57.56	13	<0.001	
For ETHNICMA, $\beta_{01}$						
INTERCEPT3, $\gamma_{010}$	0.02	0.045	0.49	750	0.62	
For SESSION slope, $\pi_1$						
For INTERCEPT2, $\beta_{10}$						
INTERCEPT3, $\gamma_{100}$	0.045	0.006	7.5	750	<0.001	0.55
For ETHNICMA, $\beta_{11}$						
INTERCEPT3, $\gamma_{110}$	0.005	0.007	0.68	750	0.49	

*Note:* ETHNICMA = Ethnic Match, coded 0 = no match, 1 = match

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## Appendix A

## The Cultural Intelligence Scale (CQS)

## Metacognitive CQ

1. I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.
2. I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.
3. I am conscious of the cultural knowledge I apply to cross-cultural interactions.
4. I check the accuracy of my cultural knowledge as I interact with people from different cultures.

## Cognitive CQ

5. I know the legal and economic systems of other cultures.
6. I know the rules (e.g., vocabulary, grammar) of other languages.
7. I know the cultural values and religious beliefs of other cultures.
8. I know the marriage systems of other cultures.
9. I know the arts and crafts of other cultures.
10. I know the rules for expressing nonverbal behaviors in other cultures.

## Motivational CQ

11. I enjoy interacting with people from different cultures.
12. I am confident that I can socialize with locals in a culture that is unfamiliar to me.
13. I am sure I can deal with the stresses of adjusting to a culture that is new to me.
14. I enjoy living in cultures that are unfamiliar to me.
15. I am confident that I can get accustomed to the shopping conditions in a different culture.

## Behavioral CQ

16. I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.
17. I use pause and silence differently to suit different cross-cultural situations.
18. I vary the rate of my speaking when a cross-cultural situation requires it.
19. I change my nonverbal behavior when a cross-cultural situation requires it.
20. I alter my facial expressions when a cross-cultural interaction requires it.

*Adapted from Ang and Van Dyne (2008)*

## Appendix B

### The 20-item, Four Factor Cultural Intelligence Scale (CQS) - Therapist Version

**Instructions:** Circle the response that best describes your capabilities. Select the answer that BEST describes you AS YOU REALLY ARE (1=strongly disagree; 7=strongly agree).

I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.	1	2	3	4	5	6	7
I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.	1	2	3	4	5	6	7
I am conscious of the cultural knowledge I apply to cross-cultural interactions.	1	2	3	4	5	6	7
I check the accuracy of my cultural knowledge as I interact with people from different cultures.	1	2	3	4	5	6	7
I know the communication styles of individuals from other cultures.	1	2	3	4	5	6	7
I know the beliefs about mental illness held by individuals from other cultures.	1	2	3	4	5	6	7
I know the cultural values and religious beliefs of other cultures.	1	2	3	4	5	6	7
I know the cultural history shared by individuals from other cultures.	1	2	3	4	5	6	7
I know the indigenous helping systems used by individuals from other cultures.	1	2	3	4	5	6	7
I know the rules for expressing non-verbal behaviors in other cultures.	1	2	3	4	5	6	7
I enjoy interacting with people from different cultures.	1	2	3	4	5	6	7
I am confident that I can socialize with locals in a culture that is unfamiliar to me.	1	2	3	4	5	6	7
I am sure I can deal with the stresses of adjusting to a culture that is new to me.	1	2	3	4	5	6	7
I enjoy living in cultures that are unfamiliar to me.	1	2	3	4	5	6	7
I am confident that I can learn how to help a person from a culture that is new to me.	1	2	3	4	5	6	7
I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.	1	2	3	4	5	6	7
I use pause and silence differently to suit different cross-cultural situations.	1	2	3	4	5	6	7
I vary the rate of my speaking when a cross-cultural situation requires it.	1	2	3	4	5	6	7
I change my non-verbal behavior when a cross-cultural interaction requires it.	1	2	3	4	5	6	7
I alter my facial expressions when a cross-cultural interaction requires it.	1	2	3	4	5	6	7

## Appendix C

## Cultural Intelligence Multitrait-Multimethod Matrix

Multitrait-Multimethod Matrix of Cultural Intelligence (n = 142)

	MN	SD	1	2	3	4	5	6	7	8	9	10
<b>Self-Rated</b>												
1. Metacognitive CQ	5.11	1.04	(.79)									
2. Cognitive CQ	4.14	1.53	<i>.76**</i>	(.95)								
3. Motivational CQ	5.29	1.29	<i>.55**</i>	<i>.56*</i>	(.92)							
4. Behavioral CQ	4.98	1.19	<i>.61**</i>	<i>.54**</i>	<i>.42**</i>	(.85)						
5. Interactional Adjustment	5.59	0.94	<i>.21*</i>	<i>.09</i>	<i>.16</i>	<i>.19*</i>	(.91)					
<b>Peer-Rated</b>												
6. Metacognitive CQ	5.11	0.94	<i>.41**</i>	<i>.33**</i>	<i>.35**</i>	<i>.40**</i>	<i>.18</i>	(.88)				
7. Cognitive CQ	4.81	1.13	<i>.40**</i>	<i>.54**</i>	<i>.49**</i>	<i>.44**</i>	<i>.11</i>	<i>.49**</i>	(.94)			
8. Motivational CQ	5.17	1.13	<i>.37**</i>	<i>.48**</i>	<i>.50**</i>	<i>.36**</i>	<i>.14</i>	<i>.53**</i>	<i>.61**</i>	(.92)		
9. Behavioral CQ	4.83	1.05	<i>.35**</i>	<i>.32**</i>	<i>.24**</i>	<i>.45**</i>	<i>.27**</i>	<i>.71**</i>	<i>.54**</i>	<i>.45**</i>	(.90)	
10. Interactional Adjustment	5.87	0.80	<i>.26**</i>	<i>.23**</i>	<i>.31**</i>	<i>.34**</i>	<i>.37**</i>	<i>.33**</i>	<i>.22*</i>	<i>.35**</i>	<i>.30**</i>	(.91)

The two methods are self-rating and peer-rating.

The numbers on the diagonal are the coefficient alphas.

Italic numbers are in the heterotrait-monomethod analyses.

Underlined numbers are in the heterotrait-heteromethod analyses.

Bold numbers are the results of the monotrait-heteromethod analyses.

Numbers in solid triangles are heterotrait-monomethod correlations.

Numbers in dotted triangles are heterotrait-heteromethod correlations.

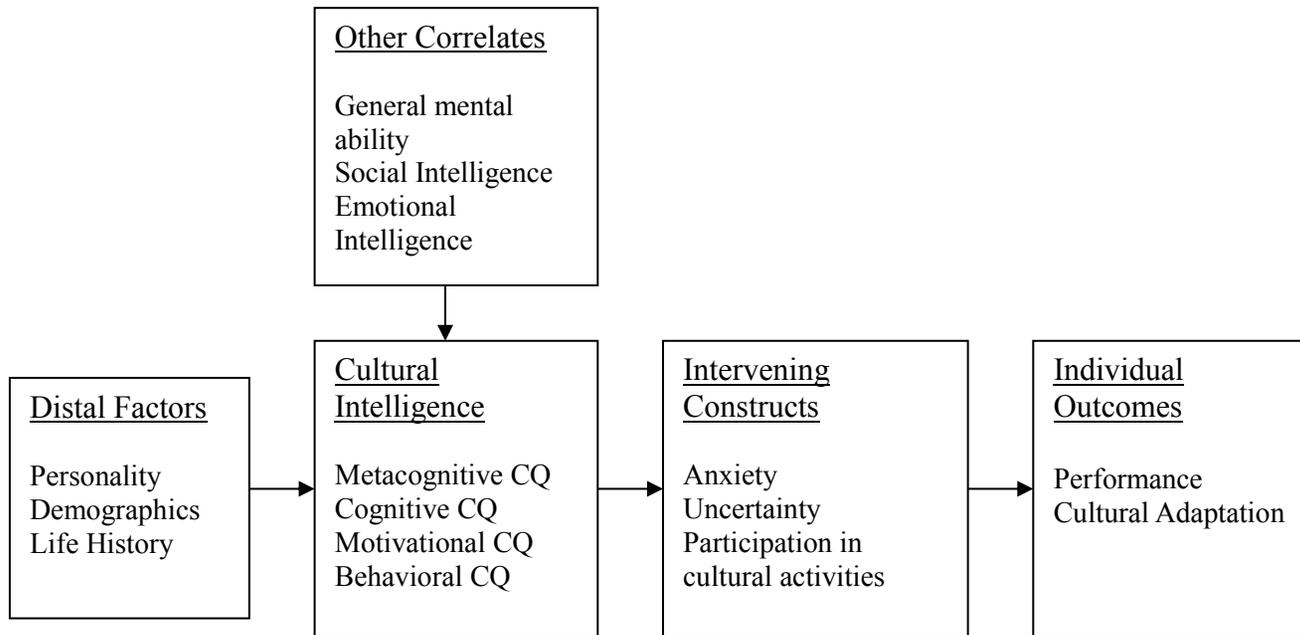
\* $p < .05$

\*\* $p < .01$

*Adapted from Ang and Van Dyne (2008)*

## Appendix D

### Nomological Network of Cultural Intelligence



## Appendix E

## Behavioral Health Measure – 20 and 43

**Behavioral Health Measure—20® (BHM-20®)**

Please answer these questions as they relate to the past two weeks.

**1. How distressed have you been?**

- |                         |     |
|-------------------------|-----|
| Extremely distressed    | (0) |
| Very distressed         | (1) |
| Moderately distressed   | (2) |
| A little bit distressed | (3) |
| Not at all distressed   | (4) |

**2. How satisfied have you been with your life?**

- |                      |     |
|----------------------|-----|
| Not satisfied at all | (0) |
| Mildly satisfied     | (1) |
| Somewhat satisfied   | (2) |
| Satisfied            | (3) |
| Very satisfied       | (4) |

**3. How energetic and motivated have you been feeling?**

- |                                      |     |
|--------------------------------------|-----|
| Not at all energetic and motivated   | (0) |
| A little bit energetic and motivated | (1) |
| Somewhat energetic and motivated     | (2) |
| Energetic and motivated              | (3) |
| Very energetic and motivated         | (4) |

Please use the following rating scale:

- 0 Almost Always**
- 1 Often**
- 2 Sometimes**
- 3 A Little Bit**
- 4 Never**

In the past two weeks how much have you been distressed by:

- |  |                     |
|--|---------------------|
| 4. Feeling fearful, scared.  | (0) (1) (2) (3) (4) |
| 5. Alcohol/drug use interfering with your performance at school or work.             | (0) (1) (2) (3) (4) |
| 6. Wanting to harm someone.  | (0) (1) (2) (3) (4) |
| 7. Not liking yourself.  | (0) (1) (2) (3) (4) |
| 8. Difficulty concentrating.   | (0) (1) (2) (3) (4) |
| 9. Eating problem interfering with relationships (family or friends).                | (0) (1) (2) (3) (4) |
| 10. Thoughts of ending your life.  | (0) (1) (2) (3) (4) |
| 11. Feeling sad most of the time.  | (0) (1) (2) (3) (4) |
| 12. Feeling hopeless about the future.   | (0) (1) (2) (3) (4) |
| 13. Powerful, intense mood swings (highs and lows).                                  | (0) (1) (2) (3) (4) |
| 14. Alcohol/drug use interfering with your relationships with family and/or friends. | (0) (1) (2) (3) (4) |
| 15. Feeling nervous.   | (0) (1) (2) (3) (4) |
| 16. Heart pounding or racing.  | (0) (1) (2) (3) (4) |

Please use the following rating scale:

- |   |                  |
|---|------------------|
| 0 | <b>Terrible</b>  |
| 1 | <b>Poorly</b>    |
| 2 | <b>Fair</b>      |
| 3 | <b>Well</b>      |
| 4 | <b>Very well</b> |

**How have you been getting along in the following areas of your life over the past two weeks?**  
*Leave blank if the item does not apply.*

- |  |                     |
|--|---------------------|
| 17. Nonfamily Social Relationships/Friends (for example, communication, closeness, level of activity). | (0) (1) (2) (3) (4) |
| 18. Life Enjoyment (for example, recreation, life appreciation, leisure activities).                   | (0) (1) (2) (3) (4) |
| 19. Work/School (for example, performance, attendance).  | (0) (1) (2) (3) (4) |
| 20. Intimate Relationships (for example, support, communication, closeness).                           | (0) (1) (2) (3) (4) |

21. If you answered 0-3 on #10 above, please check below to indicate your overall risk of suicide.

- |                     |           |
|---------------------|-----------|
| Extremely high risk | _____ (0) |
| High risk           | _____ (1) |
| Moderate risk       | _____ (2) |
| Low risk            | _____ (3) |
| No risk             | _____ (4) |

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### **Behavioral Health Measure-43 (BHM-43®)**

**Please answer these questions as they relate to the past two weeks.**

**1. How distressed have you been with your life?**

- |                         |     |
|-------------------------|-----|
| Extremely distressed    | (0) |
| Very distressed         | (1) |
| Moderately distressed   | (2) |
| A little bit distressed | (3) |
| Not at all distressed   | (4) |

**2. How have you been doing emotionally?**

- |  |     |
|--|-----|
| Terribly, I can barely manage.         | (0) |
| Poorly, I'm managing with much effort. | (1) |
| Fair, I'm managing with some effort.   | (2) |
| Well, I'm feeling good.                | (3) |
| Very well, I'm doing great.            | (4) |

**3. How satisfied have you been with your life?**

- |                      |     |
|----------------------|-----|
| Not satisfied at all | (0) |
| Mildly satisfied     | (1) |
| Somewhat satisfied   | (2) |
| Satisfied            | (3) |

Very satisfied (4)

**4. How energetic and motivated have you been feeling?**

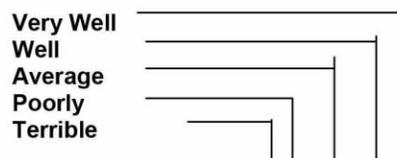
Not at all energetic (0)  
 A little bit energetic (1)  
 Somewhat energetic (2)  
 Energetic (3)  
 Very energetic (4)

**In the past two weeks how much have you been distressed by:**

Almost Always  
 Often  
 Sometimes  
 A Little Bit  
 Never

- |   |                     |
|---|---------------------|
| 5. Feeling fearful scared   | (0) (1) (2) (3) (4) |
| 6. Headaches  | (0) (1) (2) (3) (4) |
| 7. Feeling irritable, angry.  | (0) (1) (2) (3) (4) |
| 8. Muscular aches   | (0) (1) (2) (3) (4) |
| 9. Not liking yourself  | (0) (1) (2) (3) (4) |
| 10. Difficulty concentrating  | (0) (1) (2) (3) (4) |
| 11. Alcohol/drug use interfering with your relationships with family and/or friends | (0) (1) (2) (3) (4) |
| 12. Getting into frequent arguments   | (0) (1) (2) (3) (4) |
| 13. Hearing voices or seeing things that others do not hear or see                  | (0) (1) (2) (3) (4) |
| 14. Having no energy, everything is an effort                                       | (0) (1) (2) (3) (4) |
| 15. Nausea or upset stomach   | (0) (1) (2) (3) (4) |
| 16. Dizziness   | (0) (1) (2) (3) (4) |
| 17. Alcohol/drug use interfering with your performance at school or work            | (0) (1) (2) (3) (4) |
| 18. Feeling sad most of the time  | (0) (1) (2) (3) (4) |
| 19. Difficulty falling asleep   | (0) (1) (2) (3) (4) |
| 20. Afraid of/avoiding certain normal situations                                    | (0) (1) (2) (3) (4) |
| 21. Wanting to harm someone   | (0) (1) (2) (3) (4) |
| 22. Feeling hopeless about the future   | (0) (1) (2) (3) (4) |
| 23. Repeated behaviors that interfere with you accomplishing things                 | (0) (1) (2) (3) (4) |
| 24. Eating problem interfering with your relationships with family or friends       | (0) (1) (2) (3) (4) |
| 25. Powerful, intense mood swings (highs and lows)                                  | (0) (1) (2) (3) (4) |
| 26. Having no interest in usual activity  | (0) (1) (2) (3) (4) |
| 27. Repeated, unwanted thoughts that you can't stop                                 | (0) (1) (2) (3) (4) |
| 28. Thoughts of ending your life  | (0) (1) (2) (3) (4) |
| 29. Difficulty making decisions   | (0) (1) (2) (3) (4) |
| 30. Feeling nervous   | (0) (1) (2) (3) (4) |
| 31. Heart pounding or racing  | (0) (1) (2) (3) (4) |
| 32. Difficulty returning to sleep   | (0) (1) (2) (3) (4) |
| 33. Experiencing strange or disturbing thoughts or beliefs                          | (0) (1) (2) (3) (4) |

How have you been getting along in the following areas of your life over the past 2 weeks? Leave blank if the item does not apply.



34. **Self Management** (for example personal planning, setting personal goals, establishing direction in your life) (0) (1) (2) (3) (4)
35. **Sexual Functioning** (for example enjoyment, fulfillment) (0) (1) (2) (3) (4)
36. **Life Enjoyment** (for example recreation, life appreciation, leisure activities) (0) (1) (2) (3) (4)
37. **Physical Health** (for example physical activities, diet, physical wellness) (0) (1) (2) (3) (4)
38. **Nonfamily Social Relationships** (for example, communication, closeness, support, level of activity) (0) (1) (2) (3) (4)
39. **Money Management** (for example budgeting, saving) (0) (1) (2) (3) (4)
40. **Work** (for example performance, attendance) (0) (1) (2) (3) (4)
41. **School** (for example budgeting, saving) (0) (1) (2) (3) (4)
42. **Intimate Relationships** (for example support, communication, closeness) (0) (1) (2) (3) (4)
43. **Relationships with Your Children** (for example, communication, closeness, discipline) (0) (1) (2) (3) (4)

44. If you answered 0-3 on #28 above, please check below to indicate your overall risk of suicide.

- Extremely high risk \_\_\_\_\_ (0)
- High risk \_\_\_\_\_ (1)
- Moderate risk \_\_\_\_\_ (2)
- Low risk \_\_\_\_\_ (3)
- No risk \_\_\_\_\_ (4)

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## Appendix F

## Psychotherapy Risk Scale

**Psychotherapy Risk Scale**

Complete this scale *ONLY* if this session is your *FIRST*.

1. **How much do you need to be in psychotherapy or counseling now?**

Not at all.	(0)
A little bit.	(1)
I could use it.	(2)
I really need it.	(3)
It's essential.	(4)
  
2. **How long have you been experiencing the problems for which you are entering psychotherapy or counseling?**

More than two years	(0)
One to two years	(1)
Six months to one year	(2)
Three to six months	(3)
Less than three months	(4)
  
3. **How much counseling or psychotherapy have you experienced in the past?**

More than one year	(0)
Six months to one year	(1)
Three to six months	(2)
Less than three months	(3)
None	(4)
  
4. **How confident are you that you can eventually overcome your problems and have a satisfying life?**

Not at all	(0)
Slightly confident	(1)
Somewhat confident	(2)
Very confident	(3)
Extremely confident	(4)
  
5. **How confident are you that psychotherapy or counseling will help you with your problems?**

Not at all	(0)
Slightly confident	(1)
Somewhat confident	(2)
Very confident	(3)
Extremely confident	(4)

## Appendix G

## Therapeutic Bond Scale

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**Therapeutic Bond Scale**

Please use the following rating scale:

- |          |                       |
|----------|-----------------------|
| <b>0</b> | <b>Not at All</b>     |
| <b>1</b> | <b>Slightly Agree</b> |
| <b>2</b> | <b>Somewhat Agree</b> |
| <b>3</b> | <b>Agree</b>          |
| <b>4</b> | <b>Strongly Agree</b> |

How much do you agree with the following questions about your therapist:

- |  |                     |
|--|---------------------|
| 1. My therapist is interested in what I'm saying.  | (0) (1) (2) (3) (4) |
| 2. My therapist understands me.  | (0) (1) (2) (3) (4) |
| 3. My therapist is confident in treating me.   | (0) (1) (2) (3) (4) |
| 4. My therapist is accepting of me.  | (0) (1) (2) (3) (4) |
| 5. My therapist is helping me.   | (0) (1) (2) (3) (4) |
| 6. I would recommend my therapist to a friend who needs help for problems similar to mine. | (0) (1) (2) (3) (4) |