

CULTURALLY TRANSCENDENT, DEVELOPMENTAL MODEL OF
MULTICULTURAL COUNSELING COMPETENCE:
AN INTEGRATION OF THEORIES

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In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

by

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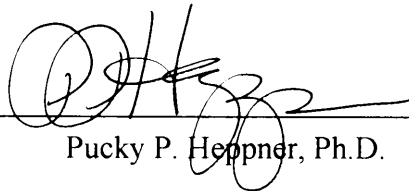
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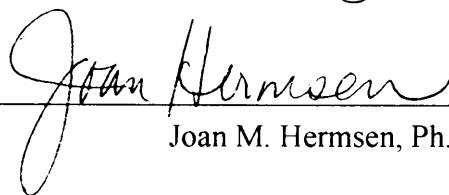
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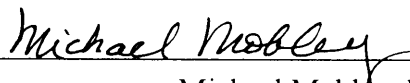
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DEDICATION

I dedicate my dissertation to those who have the courage to pursue their journey to become multiculturally competent and better our world with their commitment to bring equality to all.

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The completion of my dissertation would not have been possible without the tremendous amount of support and encouragement I have received from many incredible people in my life. I would like to take this opportunity to express my deepest gratitude to a number of people whom I have met and interacted during this journey.

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CULTURALLY TRANSCENDENT, DEVELOPMENTAL MODEL OF
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ABSTRACT

This study proposed and empirically examined a developmental model of multicultural counseling competence among mental health service trainees based on an integration of the Cognitive and Cultural Flex Theory of Personality, Contact Theory, and Theory of Multicultural Counseling and Therapy. The model incorporated four culturally transcendent variables: (a) multicultural experiences, (b) cognitive flexibility, (c) cultural flexibility, and (d) multicultural personality. Based on the proposed model, it was hypothesized that multicultural experiences, cognitive flexibility, cultural flexibility, and multicultural personality would predict multicultural counseling competence. Results provided support for the utility of the model. Specifically, multicultural experiences predicted cognitive and cultural flexibility. These two variables, in turn, predicted multicultural personality, which was positively related to multicultural counseling competence. Implications of the study and suggestions for future research are discussed.

Culturally Transcendent, Developmental Model of Multicultural Counseling Competence: An Integration of Theories

According to Bernstein & Edwards (2008), racial/ethnic minorities comprise approximately one-third of the U.S. population and are expected to become the majority in 2042. Given this increased diversification, the U.S. will experience its highest rate of culturally diverse clients seeking treatment from mental health providers. Constantine and Sue (2005) argue that mental health service providers are obligated to examine culturally sensitive issues in clinical practice as well as to demonstrate multicultural counseling competence (MCC) to work effectively with racial/ethnic minorities. Yet, current mental health practices continue to be characterized by disparities among racial/ethnic minorities as they continue to have less access and are less likely to receive needed mental health services.

The U.S. Department of Health and Human Services (USDHHS; 2001) reported such disparities among the four main racial/ethnic minority groups (i.e., African American, Asian American/Pacific Islanders, Latinos/Hispanic American, and Native American Indians). More specifically, when compared with European American, African Americans are 50% less likely to receive needed care, and a similar trend can be found among Latino/Hispanic Americans. Among Hispanic Americans with a mental disorder, fewer than 9% contact mental health specialists, and fewer than 5% Hispanic immigrants with mental disorders use services from mental health specialists. For Asian Americans/Pacific Islanders, only 17% of those experiencing mental or psychological problems seek mental health services. Lastly, among Native American Indian, only 20% utilize services that are located mainly on reservations. Data related to the use of mental

health services among Native American Indians outside reservations is currently nonexistent.

Racial/ethnic minorities who do seek services often receive poor quality mental health care. For example, according to the USDHHS (2001), Asian American/Pacific Islanders tend to have poorer short-term outcomes and are less satisfied with individual psychotherapy than European Americans. Furthermore, African Americans tend to be diagnosed more frequently with schizophrenia and less frequently with affective disorders when compared to European Americans. It was also found that African Americans are about 17% more likely than European Americans to be prescribed with antidepressant medication. Similarly, only 24% of Latino/Hispanic American received appropriate care with depression and anxiety disorders when compared to 34% of European Americans. Moreover, Sue and Sue (2003) reported that racial/ethnic minorities are approximately 20% more likely than European Americans to terminate counseling/therapy after only one contact with a mental health services provider.

Over the past few decades, scholars have identified barriers that may contribute to the mental health services disparities among racial/ethnic minorities. Many of these barriers operate for all people regardless of their cultural backgrounds including: financial difficulty, limited availability of mental health services, fragmentation of services, and societal stigma toward mental illness (Abe-Kim & Takeuchi, 1996). Additional barriers such as mistrust and fear of treatment, racism and discrimination, and differences in communication style also can significantly affect racial/ethnic minorities (S. Sue, McKinney, Allen, & Hall, 1974; D. W. Sue & Sue, 1977; USDHHS, 2001). To minimize these barriers, some scholars proposed that mental health services providers

and clients must come from the same racial/ethnic background for the services to be effective (Ridley & Kleiner, 2003).

Although racial/ethnic background matching can potentially have a bearing on the ability of a mental health services provider to form a therapeutic alliance with a client (Atkinson & Lowe, 1995; Ridley & Kleiner, 2003), a shortage of racial/ethnic minority mental health services professionals remains problematic. According to the USDHHS (2001), African Americans account for only 2% of psychiatrists, 2% of psychologists, and 4% of social workers in the United States. Likewise, there are only 29 Hispanic, 70 Asian American, and 101 Native American Indian in comparison to 173 European American mental health professionals available for every 100,000 individuals per each racial/ethnic group. As a result, during the past 40 years, the underrepresentation of racial/ethnic minorities in psychology has received increasing attention. According to (Maton, Kohout, Wicherski, Leary, & Vinokurov, 2006), there was a significant increase in the percentage of minority students receiving bachelor's degrees from 1989 (13.6%) to 2000 (24.3%). From 1989 to 2002, there was also a substantial increase in the number of master's degree awarded to racial/ethnic minorities (10.6%-21.5%). Nevertheless, there has been no growth in the percentage of minority students receiving doctoral degree in psychology since 1999. Evidently, the feasibility of matching race/ethnicity between mental health services providers and clients is extremely limited.

Consequently, many scholars have asserted that multicultural counseling competence (MCC) is a critical component of training among all mental health services providers (Ridley & Kleiner, 2003), regardless of their cultural background. Despite the extensive literature on MCC, multicultural scholars have not reached a consensus for one

definition of MCC (Holcomb-McCoy, 2000; Pope-Davis, Reynolds, Dings, & Nielson, 1995b). For the purpose of this study, MCC was defined as the counselor's acquisition of awareness, knowledge, and skills needed to function effectively in a pluralistic democratic society, and on an organizational/societal level, advocating effectively developing new theories, practices, policies, and organizational structures that are more responsive to all groups (D. W. Sue & Torino, 2005).

For the past 3 decades, researchers have identified several components and predictors of MCC (Ridley & Kleiner, 2003). For example, multicultural counseling relationships (Sodowsky, Taffe, Gutkin, & Wise, 1994), racial identity development (Holcomb-McCoy, 2000; Holcomb-McCoy & Myers, 1999), White racial identity development (Neville, Heppner, Thompson, Brooks, & Baker, 1996; Ottavi, Pope-Davis, & Dings, 1994; Richardson & Molinaro, 1996), cultural empathy (Beckett, Dungee-Anderson, Cox, & Daly, 1996; Constantine, 2000; Ridley & Lingle, 1996), and several other components have been suggested as being an important predictors of MCC. According to Ponterotto (2008), most of the previous researches related to MCC were operated from emic (cultural specific) instead of etic (culturally transcendent) models. Emic models are limited because of their ability to generalize and capture the experience of a broad base of individuals. In addition, because etic models are culturally transcendent, the potential application and implication of researches utilizing etic models are considered to be greater. Based on a review of literature, little is known in regards to the developmental process of MCC with how one develops MCC. This gap in the literature is unfortunate given that such understanding can potentially make a significant impact on the current pedagogy of multicultural training among mental health trainees

and increase the quality of mental health services in the increasingly diverse society (APA, 2003). Consequently, the purpose of this study was to propose and empirically test a culturally transcendent, developmental model of MCC based on an integration of the Cognitive and Cultural Flex Theory of Personality (CCFTP), Contact Theory and Theory of Multicultural Counseling and Therapy (MCT).

Cognitive and Cultural Flex Theory of Personality

Ramirez (1991) proposed the Cognitive and Cultural Flex Theory of Personality (CCFTP) that describes a developmental process of personality formation among individuals that is conducive to functioning in a culturally diverse society. According to this theory, socialization and cultural experiences (multicultural experiences) can significantly impact an individual's ability to develop cultural and cognitive flexibility as well as multicultural personality. Figure 1 summarizes this process.

Ramirez (1991) defines multicultural personality as “a synthesis and amalgamation of the resources learned from different people and cultures to create multicultural coping styles, thinking styles, perceptions of the world (worldviews) and multicultural identities” (p. 26). In addition to Ramirez's (1991) works on multicultural personality, van der Zee and van Oudenhoven conducted a series of studies examining multicultural effectiveness in the global business environment. These authors defined multicultural effectiveness “as success in the fields of professional effectiveness, personal adjustment and intercultural interactions” (van der Zee & van Oudenhoven, 2001, p. 293). van der Zee and van Oudenhoven (2001) extensively examined multicultural personality and presented a five-factor structure as best representing the multicultural personality. The five factors includes: (a) *Cultural Empathy*, which is the ability to

empathize with the thoughts, behaviors, and feeling of culturally diverse individuals; (b) *Open-Mindedness*, which refers to an unprejudiced and open attitude toward cultural differences; (c) *Emotional Stability*, which reflects the ability to stay calm under stressful and novel situations; (d) *Social Initiative*, which is a tendency to actively approach social situations and exhibit initiatives in these interactions; and (e) *Flexibility*, which refers to the ability to conceptualize novel situations as a positive challenge and to adapt accordingly. Prior researches on the multicultural personality were based on samples of English-speaking, university students or international workers and expatriates living in various countries in Europe (Ponterotto, 2008). To date, there are two studies (i.e., Margavio, Hignite, Moses, & Margavio, 2005; Ponterotto, et al., 2007) that examined the multicultural personality in the United States focusing on college student sample.

One of the most significant components of the CCFTP (Ramirez, 1991) is the construct of cultural flexibility. According to Ramirez (1991), cultural flexibility can be described as traditionalism-modernism dimension. Modernism reflects modern life styles and beliefs systems that encourage separation from family and community early in life. In addition, people who are on the modernism side of the traditionalism-modernism continuum tend to emphasize individual competition, and science in life. On the other hand, people who consider themselves to be on the traditionalism side are more likely to accentuate close ties to family and community throughout life. Furthermore they tend to emphasize cooperation and give spiritualism a high priority in their life. Unfortunately, based on a literature review, Ramirez's operationalization of culturally flexibility has not had sufficient empirical support.

Another construct that theoretically and conceptually represents cultural flexibility is the universal-diverse orientation (UDO). UDO was introduced to the field of psychology by Miville et al. (1999), who identified the construct as follows:

An attitude toward all other persons that is inclusive yet differentiating in that similarities and differences are both recognized and accepted; the shared experience of being human results in a sense of connectedness with people and is associated with a plurality of diversity of interactions with others. (p. 292)

UDO consists of three components including cognitive, behavioral, and emotional components. Relativistic Appreciation of Oneself and Others reflects the cognitive component of UDO, which involves the “recognition and acceptance of the similarities and differences among people.” The behavioral component is portrayed in Diversity of Contact that captures “previous and intended behaviors relevant to interpersonal contact with people of different backgrounds (e.g., race, gender, religion, etc.).” Lastly, the emotional component, titled Sense of Connection, taps into “the emotional bond one feels toward others, reflected in the statement ‘We are all in the same boat’” (Miville, et al., 1999, p. 293).

Another important component of the Cognitive and Cultural Flex Theory of Personality (CCFTP) is cognitive flexibility. Ramirez (1991) proposed that a person’s unique self is made up of field independent and field sensitive styles, which reflect on the following domains of personality characteristics: (a) communications, (b) interpersonal relationships, (c) motivation, and (d) teaching, parenting, supervisory, and counseling relationships. Similar to the operationalization of cultural flexibility, a review of literature revealed very limited empirical support of Ramirez’s (1991) cognitive flexibility.

Other researchers (e.g., Jackson & Thompson, 1971; Martin & Rubin, 1995; Whiteley, Sprinthall, Mosher, & Donaghy, 1967) have also considered cognitive flexibility to be an important aspect in a person's ability to communicate and relate to other people. Cognitive flexibility was defined by Martin and Rubin (1995) as a person's (a) awareness that in any given situation there are options and alternatives available, (b) willingness to be flexible and adapt to the situation, and (c) degree of self-efficacy in being flexible. In other words, people who can acknowledge possible adjustments based on situational factors are more cognitively flexible than those who see only one proper or correct behavioral response. Researchers have reported that cognitive flexibility is significantly related to aggressive communication traits (Martin, Anderson, & Thweatt, 1998), decision-making collaboration (Dunleavy & Martin, 2006), acculturation (Kim & Omizo, 2006), and adherence to European American values (Kim & Omizo, 2005).

Contact Theory

In addition to the CCFTP, contact theory provides theoretical support for the links between multicultural experiences, cognitive flexibility, cultural flexibility and multicultural personality. According to Allport (1954), contact between individuals of different groups can lead to positive outcomes (e.g., lower prejudice, openness, empathy, etc.). This hypothesis supports the claim in the CCFTP (Ramirez, 1991) that multicultural experiences or contacts would lead to the development of multicultural personality. Nevertheless, multicultural experience or contacts itself may not be enough to allow a person's development of multicultural personality. In fact, according to Wright and Bougie (2007), simply bringing members of different groups together may be just as likely to produce negative interaction and confirm existing negative stereotypes,

which is counterproductive to the development of multicultural personality. Therefore, the emphasis has been shifted to determining the conditions (e.g., power differential among groups, need to cooperate, common goals, etc.) that may be necessary to prevent these negative effects.

Furthermore, although Allport's (1954) early model has contributed significantly to the literature, its assumption that attitudes and behaviors are causally connected has been heavily criticized (e.g., Clark, 1992; Farley & Frey, 1994; Hanssen, 2001). In other words, it was assumed that if attitudes were changed through the increased contacts, behavior changes would follow. To broaden the scope and application, contact theory should expand its focus to behavior (Emerson, Kimbro, & Yancey, 2002). Consequently, recent research have begun to emphasize the emotional changes such as warmth, liking, empathy, values, and respect for the out-group members as the more powerful process that produces positive contact effects (e.g., Tropp & Pettigrew, 2005; van Dick, et al., 2004). Based on these research findings, we proposed that multicultural contact or experiences might not have the direct effect to the development of multicultural personality. Rather, multicultural experiences (contacts) would directly affect the development of cultural flexibility (UDO) that has cognitive, behavioral, and emotional components. Cultural flexibility would then have a direct effect on the developmental of multicultural personality.

In addition, we proposed that individual characteristic such as cognitive flexibility would play a similar role to the cultural flexibility (UDO) in the relationship between multicultural experiences (contacts) and multicultural personality. This hypothesis was based on contact theory's most recent reformulation by Pettigrew (1998), which argued

that individual characteristics (e.g., prejudices, values, anxiety, and emotions) must be considered in conjunction with characteristics of the contact setting. This argument was supported in prior research that found individual characteristics, such as socioeconomic status, ethnicity, and academic orientations, associated with adolescents' likelihood to nominate a cross-ethnic peer as a friend (Hamm, Bradford Brown, & Heck, 2005).

Figure 2 summarizes the proposed model pertaining relationships between multicultural experiences (contact), cognitive flexibility, cultural flexibility (UDO), and multicultural personality.

Theory of Multicultural Counseling and Therapy

In order to provide theoretical support for the linkage between multicultural personality and multicultural counseling competence, we turn to the Theory of Multicultural Counseling and Therapy (MCT) by Sue, Ivey, and Pederson (1996). MCT theory was created as a means to counteract the existing culture-bound, Eurocentric nature of traditional theories, which are often opposed to the values, and experiences of culturally diverse groups. There are a total of 6 propositions underlying MCT theory. The description of these propositions is presented in Table 1.

The MCT theory and its propositions are based on the assumption that current theories of counseling and psychotherapy are not completely suitable for the richness and complexity of culturally diverse population. Sue, Ivey, and Pederson (1996) are concerned that mental-health professionals may not be prepared to provide culturally appropriate mental-health services for clients from culturally diverse backgrounds. The propositions presented in Table 1 represent changes mental-health professionals should incorporate and integrate into their practices. In this study, we suggested that these

propositions are consistent with the definition and components of multicultural personality presented by Ramirez (1991) and van der Zee and van Oudenhoven (2001). More specifically, we proposed that multicultural personality might be a significant precursor to multicultural counseling competence. Figure 3 summarizes the proposed model pertaining relationships between multicultural experiences (contact), cognitive flexibility, cultural flexibility (UDO), multicultural personality, and multicultural counseling competence based on the integration of the Cognitive and Cultural Flex Theory of Personality, Contact Theory, and Theory of Multicultural Counseling Psychology. (See Appendix A for extended literature review)

Purpose of the Study & Hypotheses

The purpose of this study was to propose and empirically examine a developmental model of multicultural counseling competence that is culturally transcendent among mental health practitioner trainees based on an integration of the Cognitive and Cultural Flex Theory of Personality, Contact Theory, and Theory of Multicultural Counseling and Therapy. Based on these theories, the following hypotheses were proposed (see Figure 3):

Hypothesis 1. The data would demonstrate good fit to the hypothesized model based on the integration of the Cognitive and Cultural Flex Theory of Personality, Contact Theory, and Theory of Multicultural Counseling and Psychotherapy.

Hypothesis 2. Trainees who have had higher overall multicultural experiences would exhibit higher level of cognitive flexibility and cultural flexibility (UDO) than those who have limited experiences.

Hypothesis 3. Trainees who have higher level of cognitive flexibility would be more likely to display multicultural personality than those who are tend to be cognitively rigid.

Hypothesis 4. Trainees who have higher level of cultural flexibility (UDO) would be more likely to display multicultural personality than those who have lesser level of cultural flexibility.

Hypothesis 5. Trainees who display higher degree of multicultural personality would also exhibit higher level of multicultural counseling competence than who have limited multicultural personality.

Method

This method section is divided into three sections. First, the characteristics of the participants will be described. Second, the psychometric properties of each instrument will be presented. The background information questionnaire was developed for this study to gain basic information about participants' characteristics. The adapted Multicultural Experiences Inventory (MEI) was used to measure degree of multicultural experiences. The Miville-Guzman Universality-Diversity Scale-Short (M-GUDS-S) and Cognitive Flexibility Scale (CFS) were used to measure cultural and cognitive flexibility, respectively. The Multicultural Personality Questionnaire (MPQ) measured multicultural personality. Furthermore, the California Brief Multicultural Competence Scale (CBMCS) assessed multicultural counseling competence. Lastly, procedures of data collection process will be explained.

Participants

The 316 participants included 262 (82.9%) females and 54 (17.1%) males. Age of participants ranged from 21-53 years of age ($M = 28.27$, $SD = 5.33$). The majority of participants (86.4%, $n = 273$) self identified as heterosexual. Twelve (3.8%) participants identified as gay men, 8 (2.5%) participants identified as lesbian women, 18 (5.7%) participants identified as bisexual men ($n = 3$) and women ($n = 15$), 3 (0.9%) identified as queer, and 2 (0.6%) participants identified as other without any specification. The participants' overall income per year was as follows: 24 (7.6%) earned less than \$10,000; 49 (15.5%) earned between \$10,000-\$14,999; 105 (33.2%) earned between \$15,000-\$24,999; 49 (15.5%) earned between \$25,000-\$34,999; 33 (10.4%) earned between \$35,000-\$49,999; 29 (9.2%) earned \$50,000-\$74,999, 17 (5.4%) earned between

\$75,000-\$99,999, and 10 (3.2%) earned over \$100,000. In regards to spirituality, 22 (7.0%) participants reported having affiliation with Christianity, 66 (20.9%) with Catholic denomination, 57 (18.0%) with Protestant denomination, 20 (6.3) with Judaism, 8 (2.5%) with Buddhism, 4 (1.3%) with Agnosticism, 4 (1.3%) with Atheism, 4 (1.3) with Mormonism, 3 (0.9%) with Hinduism, 1 (0.3%) with Muslimism, 106 (33.5%) reported having no affiliation with any religion, and 21 (6.6%) reported having other spiritual belief. Only 15 (4.7%) participants reported having one or more disability.

Self-reported racial/ethnic and international nationality background of the sample were as follows: 215 (69.0%) were European American, 14 (4.4%) were African American, 14 (4.4%) were Latino/Latina American, 13 (4.1%) were Asian American, 3 (0.9%) were Native American, 1 (0.3%) was Arab American, 16 (5.1%) were bi-racial/mixed, 30 (9.5%) were international trainees in the U.S. from 14 different countries (e.g., Brazil, China, Germany, Lebanon, Malaysia, Taiwan, Ukraine, etc.), and 7 (2.2%) identified themselves as other without any specification. The average number of years in the U.S. among the international trainees was 5.8 years ($SD = 4.96$).

Of the participants, there were 59.8% ($n = 189$) trainees from Clinical Psychology programs and 40.2% ($n = 127$) trainees from Counseling Psychology programs. The majority of these trainees are currently seeking a Ph.D. degree (52.5%; $n = 166$). There were 90 (28.5%) trainees seeking Psy.D., and 60 (19.0%) trainees are seeking master's degree. The average year in program of the trainees is 4.10 years ($SD = 2.67$). One hundred eleven participants (35.1%) reported that they had served as a facilitator for a multicultural/diversity workshop with an average of 3.59 workshops ($SD = 18.85$). One hundred forty nine participants (47.2%) reported that they had participated in

multicultural/diversity research with an average of 1.5 projects ($SD = 3.04$). In regards to multicultural course exposure, 16 (5.1%) participants reported that they had never taken a multicultural course, 140 (44.3%) reported that they have taken at least one course in multicultural issues, 116 (36.7%) reported that they have taken two or more multicultural courses, and 44 (13.9%) participants reported that they have taken other courses that covered the topic of multiculturalism. The reported range of multicultural workshops attended by the participants was 0 to 51 ($M = 3.69$; $SD = 5.76$).

In addition, the range of years that participants have provided direct contact hours was 0 to 20 ($M = 2.98$; $SD = 2.38$). In terms of overall direct contact hours, the proportion of racial/ethnic minority clients seen is as followed: 46 (14.5%) participants have served less than 5%, 41 (13.0%) have served 5-10%, 38 (12.0%) have served 10-20%, 48 (15.2%) have served 20-30%, 38 (12.0%) have served 30-40%, 30 (9.5%) have served 40-50%, 23 (7.3%) have served 50-60%, 18 (5.7%) have served 60-70%, and 34 (10.8%) have served more than 70%. The proportion of LGBTQ clients is as followed: 159 (50.3%) participants have served less than 5%, 73 (23.1%) have served 5-10%, 49 (15.5%) have served 10-20%, 22 (7.0%) have served 20-30%, 5 (1.6%) have served 30-40%, 3 (0.9%) have served 40-50%, 2 (0.6%) have served 50-60%, 1 (0.3%) has served 60-70%, and 2 (0.6%) have served more than 70%. The proportion of clients with disabilities is as followed: 157 (49.7%) participants have served less than 5%, 67 (21.2%) have served 5-10%, 33 (10.4%) have served 10-20%, 18 (5.7%) have served 20-30%, 11 (3.5%) have served 30-40%, 10 (3.2%) have served 40-50%, 7 (2.2%) have served 50-60%, 2 (0.6%) have served 60-70%, and 11 (3.5%) have served more than 70%. The proportion of clients with international background is as followed: 190 (60.1%)

participants have served less than 5%, 60 (19.0%) have served 5-10%, 36 (11.4%) have served 10-20%, 12 (3.8%) have served 20-30%, 5 (1.6%) have served 30-40%, 4 (1.3%) have served 40-50%, 6 (1.9%) have served 50-60%, none has served 60-70%, and 3 (0.9%) have served more than 70%. The proportion that addressed spiritual or religious issues with clients is as followed: 125 (39.6%) participants have served less than 5%, 70 (22.2%) have served 5-10%, 40 (12.7%) have served 10-20%, 31 (9.8%) have served 20-30%, 20 (6.3%) have served 30-40%, 17 (5.4%) have served 40-50%, 4 (1.3%) have served 50-60%, 4 (1.3%) have served 60-70%, and 5 (1.6%) have served more than 70%. Lastly, 30 (9.5%) participants indicated that issues relevant to multiculturalism was never addressed in their clinical supervision, 53 (16.8%) indicated that it was almost never address, 129 (40.8%) indicated that it was usually addressed, 77 (24.4%) indicated that it was almost always addressed, and 27 (8.5%) indicated that it was always addressed.

Instruments

Background Information Questionnaire. The background information questionnaire was developed for this study based on the Personal Dimensions of Identity model (PDI; Arredondo, et al., 1996) and previous empirical research related to MCC (e.g., Allison, Echemendia, Crawford, & Robinson, 1996; Bellini, 2002; Munley, Lidderdale, Thiagarajan, & Null, 2004; Ottavi, et al., 1994; Spanierman, Poteat, Wang, & Oh, 2008) as a framework. Basic participant PDI information (e.g., age, gender, race/ethnicity, sexual orientation, status of disability, religious affiliation, etc.) were requested along with information related to participants' graduate program and multicultural-oriented training (e.g., degree objective, year in program, number of year of direct, clinical experiences, multicultural course work, number of multicultural

workshops, etc.). A copy of the background information questionnaire can be found in Appendix B.

Multicultural Experiences. Participants' degree of multicultural experiences was measured by the Multicultural Experience Inventory (MEI; Ramirez, 1998). Originally designed for racial/ethnic minorities (Ramirez, 1991), the MEI has been modified so that it can be used with European Americans. Both versions of the MEI are a self-report instrument that assesses an individual's multicultural experiences that are related to his or her historical development pattern as well as current multicultural interactions. Each version of the MEI is composed of two types of items (i.e., Type A & B). For the purpose of this study, only Type A of MEI was used. In addition, some of the wording on the scale was slightly changed. These minor modifications were implemented based on the prior use of MEI in Karcher and Fischer (2004) in order to increase the feasibility of data collection across racial/ethnic minorities, international, and European American mental health services trainees. A copy of the modified MEI can be found in Appendix C.

The MEI Type A includes 17 items (e.g., The ethnic composition of the neighborhoods in which I lived before I started attending school was...) that are rated on a five-point Likert scale ranging from 1 (All members of my ethnic/racial group) to 5 (All members of other ethnic/racial groups than mine) that reflects respondents' historical development pattern and contemporary functioning of their multicultural experiences. The scale can be scored for a level of multicultural experiences (Ramirez, 1998) and multicultural exposure (Karcher & Fischer, 2004). The degree of participants' multicultural exposure can be calculated by summing responses to all items. High scores

indicated a greater degree of multicultural exposure. In order to obtain participants' multicultural experiences, items are scored so that a response of "All members of my ethnic/racial group" (1) or "All member of other ethnic/racial groups than mine" (5) receives one point; responses of either "Mostly of my own ethnic/racial group" (2) or "Mostly members of other ethnic/racial groups than mine" (4) receive two points; and responses of "Half of my own group and half of other groups)" (3) receive three points. A total multicultural experience is obtained by summing all scores. High scores indicate a greater level of multicultural experiences in an individual's past and present relationships.

The initial version of MEI was developed based on intensive interviews (i.e., 4-6 hours) of 8 Mexican American individuals who were identified as being multicultural persons (Ramirez, 1998). In addition to the interviews, the participants were unobtrusively observed over a period of a week for their behaviors. The items on the earlier version of MEI were generated from information obtained in these two approaches. To maximize reliability and validity of scores on this measure, the MEI was pilot-tested, reviewed by external consultants, and revised three times. According to Kim and Abreu (2001), the reliability coefficient of the initial version of MEI ranged from .68 to .79. Additional internal reliability obtained for the revised MEI were .86 (Lee & Davis, 2000) and .81 (Karcher & Fischer, 2004). In this study, the internal reliability was .96 for MEI. Furthermore, the MEI was found to be positively correlated with other group orientation (one of the four major identity dimensions of the Multigroup Ethnic Identity; Phinney, 1992) among Asian Americans ($r = .60$) and European American undergraduate students ($r = .50$; Lee & Davis, 2000), psychological sense of community

on campus, racial attitudes, cultural orientation to the majority White culture (Lee as cited in Lee & Davis 2000), greater skills in intergroup understanding (Karcher & Fischer, 2004), sociocultural competencies, multicultural participation, interethnic facilitation,, and leadership experiences (Dana, 1996).

Cultural Flexibility. Cultural flexibility is the degree to which a person is able to combine modern and traditional values and belief systems to arrive at multicultural values and worldviews (Ramirez, 1991). A construct that is closely related to cultural flexibility is universal-diverse orientation (UDO), which was introduced into the field of psychology by Miville and her colleagues (1999). UDO “reflects an attitude of awareness and acceptance of both the similarities and differences among people” and consists of cognitive, behavioral, and emotional components. Relativistic Appreciation of Oneself and Others reflects the cognitive component of UDO, which involved the “recognition and acceptance of the similarities and differences among people.” The behavioral component is portrayed in Diversity of Contact that captures “previous and intended behaviors relevant to interpersonal contact with people of different backgrounds (e.g., race, gender, religion, etc.).” Lastly, the emotional component, titled Sense of Connection, taps into “the emotional bond one feels toward others, reflected in the statement ‘We are all in the same boat’” (Miville, et al., 1999, pp. 292-293).

The Miville-Guzman Universality-Diversity Scale-Short (M-GUDS-S; Fuertes, Miville, Mohr, Sedlacek, & Gretchen, 2000) was used to measure UDO in this study. The M-GUDS-S includes 15 items on a six-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). The M-GUDS-S may be scored for total score and three subscales, which are Diversity of Contact (DC; 5 items; e.g., “I would like to join an

organization that emphasizes getting to know people from different countries.”), Relativistic Appreciation (RA; 5 items; “Persons with disabilities can teach me things I could not learn elsewhere.”), and Comfort with Differences (CD; reverse-scored 5 items; e.g., “Getting to know someone of another race is generally an uncomfortable experience for me.”). A total score is computed by summing response to all items, and the three subscales are computed by summing responses to items on each subscale. High scores indicate high levels of UDO. A copy of M-GUDS-S can be found in Appendix D.

The M-GUDS-S is a short form of the Miville-Guzman Universality-Diversity Scale (M-GUDS; Miville, et al., 1999). The M-GUDS was reported to have good content and construct validity, internal consistency, and test-retest reliability in numerous validation procedures (Miville, et al., 1999). Seven studies (i.e., Constantine & Arorash, 2001; Fuertes & Gelso, 1998; Fuertes, et al., 2000; Miville, et al., 1999; Thompson, Brossart, Carlozzi, & Miville, 2002; Yeh & Arora, 2003) reported internal reliability of M-GUDS ranging from .73 to .94, with a median of .91. The strong, positive correlation between the M-GUDS and M-GUDS-S ($r = .77$) provides support for construct validity of the M-GUDS-S (Fuertes, et al., 2000).

In addition, according to Fuertes et al. (2000), reliability coefficients for the subscales of the M-GUDS-S ranged from .59 to .92 in a large undergraduate sample. The internal reliability estimates were .80 for M-GUDS-S total score, .71 for M-GUDS-S Comfort with Differences, .75 with M-GUDS-S Diversity Contact, and .77 with M-GUDS-S Relativistic Appreciation among racial/ethnic minority and international graduate students (Chaichanasakul, 2008). Specifically to this study, the internal reliability was .75 for M-GUDS-S total, .70 for M-GUDS-S Comfort with Differences,

.71 with M-GUDS-S Diversity Contact, and .68 with M-GUDS-S Relativistic Appreciation. Furthermore, the UDO has been found to account for significant additional variance in multicultural competency (Chaichanasakul, 2008; Constantine & Arorash, 2001; Munley, et al., 2004), and has also been found to be related to empathy, emotional intelligence (Miville, Carlozzi, Gushue, Schara, & Ueda, 2006), independent and interdependent self-construal (Yeh & Arora, 2003), personality traits (Thompson, et al., 2002), cognitive flexibility (Chaichanasakul, 2008), counselor preferences, (Munley, Thiagarajan, Carney, Preacco, & Lidderdale, 2007), and advocacy activities (Wendler & Nilsson, 2009).

Cognitive Flexibility. Cognitive flexibility was defined by Martin and Rubin (1995) as a person's: (a) awareness that in any given situation there are options and alternatives available, (b) willingness to be flexible and adapt to the situation, and (c) degree of self-efficacy in being flexible. According to Martin and Rubin (1995), people who can acknowledge possible adjustments based on situational factors are more cognitively flexible than those who see only one proper or correct behavioral response. To assess cognitive flexibility, Martin and Rubin (1995) developed the Cognitive Flexibility Scale (CFS). The CFS includes 12 items (e.g., "I can communicate an idea in many different ways.") to which participants respond using a 6-point scale ranging from (6) *strongly agree* to (1) *strongly disagree*. A total score is computed by summing response to all items, where high scores reflect high level of cognitive flexibility. A copy of CFS can be found in Appendix E.

Initial findings by Martin and Rubin (1995) demonstrated adequate internal reliability and construct and concurrent validity for the CFS. Martin and Anderson

(1998) conducted a series of three studies that offered additional support for validity of the CFS. In the first study, the concurrent validity of the CFS was established by the positive correlation found between two other constructs of communication competence, assertiveness ($r = .49, p < .001$) and responsiveness ($r = .31, p < .001$). Further construct validity of the CFS was established by obtaining the coefficient alpha of .72 in both the participants' self-reports and the close friends' reports of cognitive flexibility (Martin & Anderson, 1998). Lastly, the criterion-related validity of the CFS was evidenced by the positive correlations found in five of the seven rating of self-efficacy in communication situations (Martin & Anderson, 1998). Additional reliability coefficients obtained for the CFS scores include: .82 in a combination of undergraduate and adult from the community sample (Martin, et al., 1998), .77 in an international sample (Kim & Omizo, 2006), and .77 in a sample of racial/ethnic minority and international psychology graduate students (Chaichanasakul, 2008). In this study, the internal reliability of CFS was .72.

Furthermore, the CFS was found to be significantly related to aggressive communication traits (Martin, et al., 1998), decision-making collaboration (Dunleavy & Martin, 2006), acculturation (Kim & Omizo, 2006), adherence to European American values (Kim & Omizo, 2005), universal-diverse orientation, and multicultural counseling competence (Chaichanasakul, 2008).

Multicultural Personality. van der Zee and van Oudenhoven (2000) initially identified seven components (i.e., cultural empathy, open-mindedness, emotional stability, orientation to action, adventurousness or curiosity, flexibility, and extraversion) of multicultural effectiveness based on an extensive literature review on intercultural effectiveness. These components were later operationalized in the development of the

Multicultural Personality Questionnaire (MPQ) in Netherlands with English-speaking samples of primarily Dutch university students (van der Zee & van Oudenhoven, 2000, 2001). Ponterotto and colleagues (2007) adapted the MPQ slightly for research with North American samples by changing wording to five MPQ items to make them more consistent with English language usage in the United States (versus the United Kingdom). This version of MPQ is a 91-item self-report instrument consisting of five factors: Cultural Empathy (18 items; e.g., “understands other people’s feelings”), Open-mindedness (18 items; e.g., “is interested in other cultures”), Social Initiative (17 items; e.g., “makes contacts easily”), Emotional Stability (20 reverse-scored items; e.g., “suffers from conflicts with others”), and Flexibility (18 reverse-scored items; e.g., “wants to know exactly what will happen”). Participants rate the degree to which each item applies to them by using the 5 point Likert responses ranging from “totally not applicable” (1) to “completely applicable” (5). Scale scores can be obtained by taking the unweighted mean of the item scores, after recording the items that are mirrored. High scores reflect superior degree of multicultural personality. In case of missing values it is recommended to compute the scale mean for the remaining items provided that answers have been obtained for at least half of the items (van der Zee & van Oudenhoven, 2000). A copy of MPQ can be found in Appendix F.

Although the five-factor MPQ model appears to be the most robust and most widely incorporated (Ponterotto, 2008), two studies (i.e., Ponterotto, et al., 2007; van der Zee, van Oudenhoven, & de Grijs, 2004) found a higher order three-factor model wherein Cultural Empathy and Open-Mindedness items loaded together on a combined factor labeled Openness; Emotional Stability and Flexibility items loaded together on a new

factor labeled Adaptation; and Social Initiative maintained its item structure.

Nevertheless, these factor analyses have not resulted in scale revision

Ponterotto (2008) provided a comprehensive review of the MPQ and concluded that the pattern of correlations between the MPQ factors and several criterion variables provides strong support that the multicultural personality is a salient and important construct in psychological research. A review of literature (e.g., Leone, van der Zee, van Oudenhoven, Perugini, & Ercolani, 2005; Luytjers, van der Zee, & Otten, 2006; Margavio, et al., 2005; Mol, van Oudenhoven, & van der Zee, 2001; Ponterotto, et al., 2007; van der Zee & van Oudenhoven, 2000) suggested that the internal reliability coefficient alphas of the MPQ are favorable: Cultural Empathy ranged from .76 to .93; Open-Mindedness ranged from .75 to .93; Emotional Stability ranged from .70 to .95; Social Initiative ranged from .85 to .94; and Flexibility ranged from .64 to .93. In this study, the internal reliability estimates were .94 for MPQ total, .89 for Cultural Empathy, .86 for Openmindedness, .85 for Emotional Stability, .88 for Social Initiatives, and .87 for Flexibility. Furthermore, the MPQ has been found to predict international self-efficacy, multicultural aspirations (van der Zee & van Oudenhoven, 2001), international orientation (Leone, et al., 2005), dual identity preference (Luytjers, et al., 2006), life satisfaction, physical health, psychological well-being, peer/mentor support (Mol, et al., 2001), and scales of psychological well-being (Ponterotto, et al., 2007).

Multicultural Counseling Competence. Although multicultural counseling competency instruments in general appear to be an efficient and carefully constructed instruments with evidence of strong psychometric properties (Ponterotto & Alexander, 1996; Ponterotto, Rieger, Barrett, & Sparks, 1994; Pope-Davis & Dings, 1995), there are

substantive limitations to all instruments as evidenced by the discrepancies in historical findings that may be attributed to the use of several independent instruments developed to measure the same constructs (Gamst, et al., 2004). To improve multicultural competence instrumentation, the California Brief Multicultural Competence Scale (CBMCS; Gamst, et al., 2004) was developed from the existing instruments by utilizing principle component analysis, item content validated by a panel of experts, and confirmatory factor analyses. As a result, the CBMCS has emerged as an efficient and effective tool for examining self-reported mental health practitioner cultural competency. According to Gamst and colleagues (2004), the CBMCS has advantages in comparison with other self-report measures because it is shorter in length, was developed from a strong theoretical foundation, and utilized a large number of practitioners from various ethnic backgrounds, educational levels, ages, and experience in the scale development study. Consequently, the CBMCS was chosen as an instrument to measure multicultural counseling competence in this study.

The CBMCS (Gamst, et al., 2004) consists of 21 self-report items that yield four subscales: (a) Awareness of Cultural Barriers (6 items; e.g., “I am aware that being born a minority in this society brings with it certain challenges that White people do not have to face.”), (b) Multicultural Knowledge (5 items; e.g., I have an excellent ability to identify the strengths and weaknesses of psychological tests in terms of their use with persons from different cultural, racial and/or ethnic background.”), (c) Sensitive to Consumers (3 items; e.g., “I am aware of how my own values might affect my client.”), and (d) Nonethnic Ability (7 items; e.g., “I have an excellent ability to assess, accurately, the mental health needs of persons with disabilities.”). The first three subscales are

conceptually consistent with the tripartite definition of multicultural competence (i.e., Beliefs/Attitudes, Knowledge, and Skills) by Sue (1991) that are emphasized in most scales (Constantine & Ladany, 2001). The Nonethnic Ability subscale uniquely assesses counselors' competencies to work with a broad range of client from culturally diverse backgrounds (e.g., women, men, person with disabilities, person from various socioeconomic status, lesbians and gay men, seniors, etc.). This distinctive subscale addresses one of the most important limitation of previous multicultural competence self-reports measures that have emphasized competence in dealing with racial/ethnic minority clients (Constantine & Ladany, 2000). CBMCS items are rated on a 4-point Likert scale, ranging from strongly disagree (1) to strongly agree (4). Scale scores are obtained by averaging items across subscales. A total multicultural competence score can also be obtained by adding the four subscales. High subscale scores indicate greater multicultural competence in each respective subscale areas. A copy of CBMCS can be found in Appendix G.

Given that the CBMCS was recently developed, there is limited psychometric information in the literature. Nevertheless, strong psychometric properties of the CBMCS were demonstrated in the scale development study (Gamst, et al., 2004). More specifically, reliability, as measured by Cronbach's alpha, for the scores of the CBMCS subscales ranged from .75 to .90. In this study, internal reliability estimates were .90 for CBMCS total, .76 for Awareness of Cultural Barriers, .77 for Multicultural Knowledge, .62 for Sensitive to Consumers, and .82 for Nonethnic Ability. The scale also appears to be carefully constructed as evidenced by the minimal social desirability effects. In addition, Gamst and colleagues (2004) provided criterion-related validity of the CBMCS

by demonstrating predictable correlations between CBMCS subscales and other prominent self-report multicultural counseling competence scale such as the Multicultural Counseling Inventory (MCI; Sadowsky, et al., 1994).

Procedures

An e-mail (see Appendix L) was sent to training directors of APA accredited Clinical Psychology programs, Counseling Psychology programs, and counseling center training agencies to request their assistance in identifying and forwarding the invitation to potential participants. The invitation (a) described the study and its potential benefits to the profession, (b) clearly stated that responses would be anonymous, (c) described what participation would entail, (d) requested the recipients' participation in the study, and (f) provided instruction for volunteer participants to logon to an online survey website that was created for this study. In addition, the invitation letter described an expression of appreciation and the incentive of a chance to win cash prizes in the amount of \$100, \$50, and \$50 for all participants who choose to enter a lottery. Prior to responding to online survey questions, participants reviewed an informed consent form (see Appendix I) electronically. The online survey included the background information questionnaire, the Multicultural Experience Inventory (MEI), the Miville-Guzman Universality-Diversity Scale-Short (M-GUDS-S), the Cognitive Flexibility Scale (CFS), the Multicultural Personality Questionnaire (MPQ), and the California Brief Multicultural Competence Scale (CBMCS). Upon completion of the survey, participants reviewed an online debriefing form (see Appendix J), which explained the purpose of this study and offered participants an opportunity to request results, once available, via e-mail.

Results

The results section presents the data analysis procedures used in the present study. First, the preliminary analyses including data screening and missing value analysis procedures will be explained along with the evaluation of the statistical assumptions necessary for conducting multivariate analysis of variance and structural equation modeling procedures. Second, the descriptive statistics among the variables will be described. Finally, a report of path analysis employed to examine the hypotheses in this study will be articulated.

Preliminary Analyses

Data screening and missing analysis procedures. Three hundred forty participants completed the on-line survey. As recommended by Schmidt (1997) and Worthington, Tan and Poulin (2002), we located duplicate surveys by identifying the date, time, and computer IP address as well as inspecting the survey data for identical responses. The results of this procedure indicated that there were no duplicated surveys. The Missing Value Analysis program from SPSS 17.0 was then used to assess missing values. Seventeen surveys were deleted because they contained more than 10% missing values. Given that the remaining missing data were small and demonstrated at random, values for the missing data were imputed using the expectation maximization (EM) method, which was recommended by Tabachnick and Fidell (2007), Kline (2005), and Byrne (2010). As a result, 323 surveys were included in further analyses.

Statistical assumptions. The data were screened for: (a) outliers, (b) multivariate normality, (c) linearity, and (d) multicollinearity. First, outliers were identified by examining the standardized z-scores of each scale score. Through this procedure, 7 cases

were deleted as their z-scores exceed ± 3.29 SD, which suggested that these cases were outliers (Tabachnic & Fidell, 2007; Field, 2005). To assess for multivariate normality, descriptive statistics were conducted to examine skewness and kurtosis. Values ≥ 1.96 for skewness and kurtosis indicate a violation of multivariate normality (Field, 2005). In addition, given the large sample in this study, the shape of the distributions was also visually inspected. The results indicated that none of the variables violated multivariate normality.

Linearity was then tested by inspection of bivariate scatterplots and no violation was indicated given the oval-shaped depiction (Tabachnic & Fidell, 2007; Meyers, Gamst, & Guarino, 2006). Lastly, assumptions of multicollinearity were tested using Variance Inflation Factor (VIF) and Tolerance values. According to Kline (2005) and Field (2005), VIF greater than 10 and Tolerance values below .10 indicate collinearity in the data. Based on these criteria, no collinearity exists among the variables of interest. To summarize, after the removal of 7 cases that represent outliers, 316 out of 323 cases remained for further analyses.

Descriptive Statistics

The mean, standard deviations, and correlations for each of the measured variables are presented in Table 4. Visual inspection of Table 4 allows for an initial understanding of the data suggesting that hypothesis 2, 3, 4, and 5 are highly possible given the significant, moderate correlations between: MEI and M-GUDS-S; CFS and MPQ; M-GUDS-S and MPQ; and MPQ and CBMCS with an exception of correlation between MEI and CFS.

Additional correlation was conducted to assess for an effect of age, number of year in training program, number of multicultural course, number of multicultural facilitation, number of multicultural research and number of multicultural workshop attended by participants on the observed variables. The results suggested that: age was positively correlated to M-GUDS-S ($r = .16, p < .01$) and MPQ ($r = .18, p < .01$); number of year in training program was related to CFS ($r = .15, p < .01$), M-GUDS-S ($r = .14, p < .05$), MPQ ($r = .16, p < .01$), and CBMCS ($r = .26, p < .01$); number of multicultural course was correlated to MEI ($r = .13, p < .05$), M-GUDS-S ($r = .24, p < .01$), MPQ ($r = .18, p < .01$), and CBMCS ($r = .32, p < .01$); number of multicultural facilitation was mildly associated with CBMCS ($r = .11, p < .05$); number of multicultural research was related to M-GUDS-S ($r = .12, p < .05$), MPQ ($r = .16, p < .01$), and CBMCS ($r = .25, p < .01$); and number of multicultural workshop attended by participants was related to CFS ($r = .19, p < .01$), MPQ ($r = .19, p < .01$), and CBMCS ($r = .20, p < .01$). Specifically to international trainees, the number of year in the United States was not significantly correlated with any of the observed variables.

With regards to clinical experiences, further correlation analysis was conducted on number of year providing clinical services, proportion of racial/ethnic minority clients, proportion of LGBTQ clients, proportion of clients with disabilities, proportion of clients with international background, proportion that addressed spiritual or religious issues with clients and the extent to which clinical supervision addressed multicultural issues on the observed variables. The results suggested the following: number of year providing clinical services was related to M-GUDS-S ($r = .17, p < .01$), MPQ ($r = .13, p < .05$), and CBMCS ($r = .21, p < .01$); proportion of racial/ethnic minority clients had an association

with MEI ($r = .23, p < .01$), M-GUDS-S ($r = .17, p < .01$), and CBMCS ($r = .12, p < .05$); proportion of LGBTQ clients was related to CBMCS ($r = .23, p < .01$); proportion of client with disabilities was associated with CFS ($r = .12, p < .05$) and MPQ ($r = .12, p < .05$); proportion of clients with international background was related to MEI ($r = .12, p < .05$) and M-GUDS-S ($r = .12, p < .05$); proportion that addressed spiritual or religious issues with clients was related to M-GUDS-S ($r = .16, p < .01$), MPQ ($r = .14, p < .05$), and CBMCS ($r = .21, p < .01$); and the extent to which clinical supervision addressed multicultural issues was associated with M-GUDS-S ($r = .18, p < .01$), MPQ ($r = .16, p < .01$), and CBMCS ($r = .32, p < .01$).

Moreover, a multivariate analysis of variance (MANOVA) was conducted on the observed variables to assess for group differences across the following demographic variables: gender (male vs. female), racial/ethnic and international status (European American vs. racial/ethnic minority and international trainees), academic discipline (Clinical vs. Counseling Psychology), and program degree status (Ph.D. vs. Psy.D. vs. Master's). A Bonferroni adjusted alpha level of .05/5 or .01 was used in this analysis to minimize Type I error. The results of the MANOVA revealed no significant effects for gender, academic discipline, and program degree status: Wilks' $\lambda = .96, F(5,290) = 2.76, p = .02$; Wilks' $\lambda = .94, F(10,580) = 1.80, p = .06$; Wilks' $\lambda = .99, F(5,290) = .83, p = .53$, respectively. The only significant effect was on race/ethnicity: Wilks' $\lambda = .86, F(5, 290) = 9.50, p < .001, \eta^2 = .14$, solely on MEI, $F = 40.52, p < .001, \eta^2 = .12$, with European American scoring lower than racial/ethnic and international trainees on MEI ($M_s = 43.74$ and $56.75, SD_s = 9.84$ and 17.86 , respectively).

Main Analyses

Path analyses. A path analysis was conducted using AMOS 17.0 (see Figure 3). The maximum likelihood was used to test the model fit because of its validity with medium size and its frequent choice of estimation method when assumptions are not violated (Tabachnick & Fidell, 2007; Schumacker & Lomax, 2004). The fit of the data to the model was assessed by the following robust fit indices: chi square (χ^2), comparative fit index (CFI), and root-mean-square error of approximation (RMSEA). In addition, the ML fit indices were used for the goodness-of-fit index (GFI) and standardized root-mean-squared residual (SRMR). Good fit was determined by a non-significant χ^2 , CFI and GFI scores $\geq .90$, and RMSEA and SRMR $\leq .05$ (Loehlin, 1998). To further examine the adequacy of the model, Hu and Bentler (1999) recommended joint criteria to minimize the dual threats of rejecting model and retaining the wrong model. They suggested that a model should be retained if CFI $\geq .96$ and SRMR $\leq .09$ or the SRMR $\leq .09$ and RMSEA $\leq .06$.

The results of the path analysis (See Appendix L for the complete AMOS output) revealed a significant $\chi^2 (5, N = 316) = 56.10, p < .001$, which suggested a lack of good model fit. Other indices of model fit, namely, the CFI and GFI, were .86 and .94, respectively, indicated an inclusive result pertaining goodness-fit of the model. The RMSEA value was .18 (90% confidence interval = .14 to .22), which did not meet the criteria for good model fit. The SRMR score of .12 confirmed that the proposed model had an unsatisfactory model fit.

Given that the fit of the proposed model is less than satisfactory, the modification index (MI) was examined. According to Kline 2005, MI is based on a Lagrange

Multiplier (LM), which is expressed as a χ^2 statistic with a single degree of freedom. The value of an LM in the form of MI estimates the amount by which the overall model chi-square statistic would decrease if a particular fixed-to-zero path were freely estimated. The visual inspection of the MI provided by AMOS 17.0 (See Table 5) suggested that the maximum MI was associated with the covariance between the disturbance of M-GUDS-S and CFS. Specifically, the addition of this covariance would reduce the χ^2 value of the proposed model by 40.49. According to the Cognitive and Cultural Flex Theory of Personality (Ramirez, 1991), socialization and cultural experiences can significantly impact individual's ability to develop both cultural (i.e., M-GUDS-S) and cognitive flexibility (i.e., CFS); thus, the unobserved variables (i.e., disturbances) that may affect M-GUDS-S are likely to affect CFS as well. Therefore, the additional covariance between the disturbance of M-GUDS-S and CFS appears to be both empirically and theoretically driven.

After the covariance between the disturbance between M-GUDS-S and CFS was added, another path analysis was conducted. The results of the path analysis (See Appendix L for the complete AMOS output) revealed significant χ^2 (4, $N = 316$) = 12.76, $p < .05$, which suggested a lack of good model fit. While χ^2 is the original fit index for structural models, its validity has been questioned because of its tendency to produce a significant χ^2 with large sample sizes (Tanaka, 1993). Given that this study has a sample size of 316, the χ^2 result was interpreted with caution. Other indices of model fit, namely, the CFI and GFI, were .98 and .98, respectively, indicating good model fit. The RMSEA value was .08 (90% confidence interval = .04 to .14), which did not meet the criteria for good model fit. The SRMR score of .04, indicating a good model fit. These

values meet the aforementioned recommended criteria for model acceptance (Loehlin, 1998; Hu & Bentler, 1999) and confirmed hypothesis 1 of this study.

In order to further support the revised model, an alternative model was tested. Based on the MI provided by AMOS 17.0 (See Table 5), an addition a path from cognitive flexibility (i.e., CFS) to cultural flexibility/UDO (i.e., M-GUDS-S) would reduce the χ^2 value of the proposed model by 36.28. The graphic representation of this alternative model is presented in Figure 5. The results of the path analysis (See Appendix L for the complete AMOS output) revealed a significant $\chi^2 (4, N = 316) = 12.76, p < .05$, which suggested a lack of good model fit. Other indices of model fit, namely, the CFI and GFI, were .98 and .98, respectively, indicating good model fit. The RMSEA value was .08 (90% confidence interval = .04 to .14), which did not meet the criteria for good model fit. The SRMR score of .04, indicated a good model fit. These goodness-fit indexes are practically identical to the revised model. Given that the revised model is more parsimonious than the alternative model, it was selected as the final model to explain the developmental process of MCC.

Direct, indirect, and total effects. Three types of effects were examined: direct, indirect, and total effects. A direct effect implies that a variable is directly related to another variables while an indirect effect is the relation of one variable to another via a mediating variable. The addition of the direct and indirect effects is equivalent to the total effect.

As it was indicated in hypothesis 2, MEI (i.e., multicultural experiences) was positively related to M-GUDS-S (i.e., cultural flexibility; .32) and nearly was to CFS (i.e., cognitive flexibility; .10, $p = .08$). In addition MEI had an indirect effect on MPQ

(i.e., multicultural personality; .15) and CBMCS (i.e., multicultural counseling competence; .07). The total effect of MEI on the examined path variables was as follows: CFS (.10), M-GUDS-S (.32), MPQ (.15), and CBMCS (.07). Hypothesis 3 was also confirmed as CFS was significantly related to MPQ (.53). In addition, CFS had an indirect effect on CBMCS (.24). Similarly, hypothesis 4 was confirmed as M-GUDS-S was related to MPQ (.29). The indirect effect between M-GUDS-S and CBMCS was .14. Lastly, hypothesis 5 was confirmed as MPQ predicted CBMCS (.12). (See Figure 4).

Finally, the path analysis demonstrated that: (a) 10% of the variance in M-GUDS-S was accounted for by MEI; (b) 1% of the variance in CFS was accounted for by MEI; (c) 48% of the variance in MPQ was accounted for by M-GUDS-S and CFS; and (d) 21% of the variance in CBMCS was accounted by MPQ. (Also see Figure 4).

Discussion

This chapter will first discuss the findings of the analyses that examined the study's research question and hypotheses. Implication and recommendations for research and practice will be integrated throughout the discussion. In addition, limitations of the study will be articulated. The chapter will conclude with a summary of this study.

This study was the first to propose and empirically examine a developmental model of multicultural counseling competence (MCC) that is culturally transcendent among mental health practitioner trainees. Based on an integration of the Cognitive and Cultural Flex Theory of Personality (CCFTP), Contact Theory, and Theory of Multicultural Counseling and Therapy (MCT), the following culturally transcendent variables were included in the proposed model: multicultural experiences, cognitive flexibility, cultural flexibility (i.e., universal-diverse orientation), and multicultural personally. Given that the proposed model is grounded in an etic perspective and models, its potential applications and implications are greater than models that include cultural specific variables (Ponterotto, 2008). As hypothesized, the path analyses demonstrated that the proposed model of MCC provided a good fit of the data and explained a significant amount of variance (e.g., 21%) of trainees' perceived MCC. These findings serve as an initial support for the use of the proposed model in the pedagogy of multicultural training, education, and intervention.

More specifically, the proposed model can serve as a guide for improving current pedagogy to multicultural training. According to Vazquez and Garcia-Vazquez (2003), the majority of curricula in traditional multicultural training tend to focus on didactic activities aimed at increasing the knowledge base of minority populations such as U.S.

racial/ethnic groups (i.e., African Americans, Latino/Latina Americans, Native Americans, and Asian Americans). Often times, this type of training neglects the importance of experiential and self-reflective activities that, based on the proposed model, has a potential to increase trainees' cognitive flexibility, cultural flexibility, multicultural personality, and MCC. Furthermore, such pedagogy may be limited in the following ways: (a) difficulty in mastering specific cultural knowledge, (b) difficulty in translating knowledge to practice, (c) possibility of using cultural knowledge as stereotypes, and (d) difficulty in generalizing knowledge to capture the experience of a broad base of individuals (Ponterotto, 2008; Ridley, Chih, & Olivera, 2000). Therefore, in addition to the didactic activities that focus on the attainment of knowledge about specific cultural groups, training programs may consider expanding their curricula to include experiential activities that allow trainees to explore and reflect on cognitive, emotional, and behavioral aspects of becoming multicultural competent. For example, based on the proposed model, trainees' MCC may be increased by engaging in additional multicultural experiences (e.g., cross-cultural immersion activity, cultural exchange program) that include components such as process time and challenging questions, which have a potential to promote cognitive flexibility and cultural flexibility. The training program may also consider offering sufficient amount of these opportunities to foster trainees' multicultural personality and make a long-lasting impact on trainees' effectiveness in working with culturally diverse populations. The particular implication of the findings from this study seems to be consistent with recommendations to use self-reflective essays or journals for topics that are emotionally charged (Mio & Barker-Hackett, 2003), to prepare trainees to have difficult dialogues related to cultural issues

(Sanchez-Hucles & Jones, 2005), and to incorporate activities that allow trainees to sort through complex emotions in their journey to become culturally competent (Kim & Lyons, 2003).

Similarly, training program may consider incorporating multicultural experiences, cognitive flexibility, cultural flexibility, and multicultural personality into clinical supervisions. For example, it may be important for clinical supervisors to incorporate the Multicultural Experience Inventory (MEI; Ramirez, 1998), Cognitive Flexibility Scale (CFS; Martin & Rubin, 1995), Miville-Guzman Universality Diversity Scale-Short (M-GUDS-S; Fuertes et al., 2000), and Multicultural Personality Questionnaire (MPQ; van der Zee & van Oudenhoven, 2000) in their evaluations of trainees' counseling competencies. Alternatively, supervisors can review audio/video recording of trainees' counseling/psychotherapy sessions to directly assess their level of cognitive flexibility, cultural flexibility, and multicultural personality. Once assessed, supervisors can work with trainees to identify ways to increase their MCC. For instance, according to the proposed model, supervisors may encourage trainees to work with clients from culturally diverse background (i.e., multicultural experience) and use a safe and supportive environment in supervision to challenge trainees to recognize that in a given situation there are several options and alternative available (i.e., cognitive flexibility), accept similarities and differences between trainees and clients (i.e., cultural flexibility), and synthesize trainees' experiences both in counseling and personal life to create multicultural identity (i.e., multicultural personality).

According to Ramirez's (1991) CCFTP and the expansion of Allport's (1954) contact theory, early and current multicultural experiences can play a critical role in the

development of cognitive and cultural flexibility among trainees. As hypothesized, multicultural experiences had a positive relation and explained 10% of the variance in cultural flexibility. That is, more extensive exposure of multicultural experiences was related to the development of trainees' attitudes that similarities and differences are both recognized and accepted (Miville et al., 1999). As mentioned previously, this finding demonstrates the importance for trainees to receive additional exposure to multicultural situations. However, as the reformation of the contact theory suggested, exposure (e.g., showing video, reading a novel) itself may not be enough (Emerson, et al., 2002; Tropp & Pettigrew, 2005; van Dick, et al., 2004). Instead, training programs may consider providing activities that would make a significant impact on trainees' "recognition and acceptance of the similarities and differences among people" (i.e., cognitive component), "intended behaviors relevant to interpersonal contact with people of different background" (i.e., behavioral component), and "emotional bond one feels toward others" (i.e., emotional component) that are reflected in cultural flexibility (Miville, et al., 1999, p. 293). For example, training programs may develop a cross-cultural friendships program where trainees are required to develop a meaningful contact and deep-shared discussion with someone who is culturally different from them. Given the importance of cultural flexibility, future research may explore additional predictors (e.g., emotional intelligence) that would contribute to the variance of cultural flexibility.

While multicultural experience was related to cultural flexibility, it was not significantly related cognitive flexibility. In addition, multicultural experience only explained 1% of the variance of cognitive flexibility. One possible rationale for this finding is that trainees' cognitive flexibility may begin developing prior to the exposure

of multicultural situations. Some evidences of cognitive flexibility's early development can be found in neurological studies. For example, Leber, Turk-Browne, and Chun (2008) used fMRI to identify several regions of human brains (i.e., basal ganglia, anterior cingulate cortex, prefrontal cortex, and posterior parietal cortex) that could reliably predict cognitive flexibility suggesting that early development of human brains may be related to one's cognitive flexibility. Furthermore, it may be possible that there are other factors (e.g., personality, attachment style, temperament, parenting, etc.) that affect cognitive flexibility. Nevertheless, our review of literature revealed no empirical research pertaining the formation of cognitive flexibility, thus it seems important for future research to focus on this important area. For example, a longitudinal study that traces brain development related to cognitive functions before and after participants' first exposure of multicultural experience as well as factors contributing to such development can significantly add to the current literature.

Furthermore, multicultural experiences had an indirect effect on multicultural personality via cognitive flexibility and cultural flexibility, and MCC via multicultural personality. In other words, when trainees were exposed to extensive multicultural experiences, they developed a high level of cognitive flexibility and cultural flexibility that are important to the formation of their multicultural personality. This finding seems consistent with the expansion of the contact theory (Emerson, et al., 2002; Tropp & Pettigrew, 2005; van Dick, et al., 2004) previously described as well as previous research suggesting the importance of multicultural experiences in the development of cultural flexibility, cognitive flexibility, multicultural personality, and MCC. For example, Lee and Davis (2000) found that both Asian American and White students' past contact was

related to the development of an intrinsic appreciation of other culturally diverse groups. Similarly, Karcher and Fischer (2004) found that the development of intergroup understanding among adolescents was predicted by the exposure to other groups. In addition, multicultural experiences were found to be related to intercultural development and moral development among college students (Endicott, Bock, & Narvaez, 2003). As well, Kennedy, Jones, and Arita (2007) found that multicultural experiences play an important role in the effectiveness of new military psychologists. Again, the findings from this study along with previous research point to the importance of increasing multicultural experiences among mental health service trainees.

As hypothesized based on Ramirez's (1991) CCFTP, cognitive flexibility was significantly related to multicultural personality suggesting that trainees who has a high level of cognitive flexibility are likely to have characteristics of multicultural personality. In addition, an indirect effect was found between cognitive flexibility and MCC via multicultural personality. Previous researches seem to support such findings. For example, cognitive flexibility was found to be an important aspect in a person's ability to communicate and relate to other people (Jackson & Thompson, 1971; Ramirez, 1991; Whiteley et al. 1967). Kim and Omizo (2006) also linked cognitive flexibility with biculturalism and argued that cognitive flexibility can be an important indicator of one's ability to cope with and reconcile potential conflicts in multicultural society. Lastly, Chaichanasakul (2008) found cognitive flexibility to be a significant variable explaining variance in MCC of mental health services trainees.

Similarly, cultural flexibility significantly predicted multicultural personality. In addition, an indirect effect was found between cultural flexibility and MCC via

multicultural personality. Several supports of such findings existed in literature. For instance, UDO (i.e., cultural flexibility) was found to explain variance in empathy (Miville, et al., 2006) and one of the Big Five personality traits (i.e., Openness to Experience; Thompson, et al., 2002). It has also been found to be a significant variable explaining variance in MCC of mental health services trainees and practitioners (Chaichanasakul, 2008; Constantine, et al., 2001; Fuertes & Brobst, 2002; Munley, et al., 2004) as well as clients' expectations regarding effective multicultural counseling (Constantine & Arorash, 2001).

Collectively, the significant paths previously mentioned imply that multicultural experiences, cognitive flexibility and cultural flexibility are important components of multicultural personality as they explained a substantial amount of variance (i.e., 48%). This finding further stresses the importance for training programs to foster trainees' cognitive flexibility and cultural flexibility by providing the aforementioned training opportunities. On a personal level, trainees may also use the findings in this study to evaluate their current multicultural personality and further develop such useful characteristics. For example, trainees may consider seeking additional multicultural experiences (e.g., study abroad, cultural exchange program) and make development of cognitive flexibility and cultural flexibility a priority in their training. As they are experiencing additional multicultural situations, they may challenge themselves to be more accepting of both similarities and differences among people and develop increased flexibility to recognize that there are options and alternatives in any given situation. As for research implications, future studies may further investigate predictors that would

explain additional variance to multicultural personality such as cultural intelligence and emotional intelligence.

The last hypothesis was formulated based on the Theory of Multicultural Counseling and Therapy (MCT; Sue, Ivey, & Peterson, 1996), which suggested a possible link between multicultural personality and MCC. This hypothesis was confirmed, as multicultural personality was found to be positively related to MCC. The study by Margavio et al. (2005) that found significant relationship between multicultural personality and multicultural effectiveness supports this finding. Given the strong relation between multicultural personality and MCC, it may be important for training programs to consider setting the development of trainees' multicultural personality a priority. For example, training programs may set one of the trainings goals to developing a trainee who, according to Ponterotto (2006):

is emotionally stable; is secure in her or his racial, ethnic, and other identities; embraces diversity in her or his personal life and makes active attempts to learn about other cultures and interact with culturally different people (e.g., friends, colleges); has a spiritual essence with some sense of connectedness to all persons; has wide-reaching empathic ability in multiple contexts; is self-reflective and cognitively flexible; has a sense of humor; effectively negotiates and copes within multiple roles and cultural contexts; possesses the ability to live and work effectively among different groups and types of people; understands the biases inherent in his or her own worldview and actively learns about alternate worldviews; understands the impact of internalized racism (and homophobia) and unearned privilege in her or her personal life; and is a social activist, empowered

to speak out against all forms of social injustice (e.g., racism, homophobia, sexism, ageism, domestic violence, religious stereotyping). (p. 130)

Training programs may also consider requesting trainees to demonstrate such characteristics during their comprehensive examination, oral examination or doctoral portfolio to ensure that they have achieved characteristics necessary to work with culturally diverse populations.

As the U.S. population continues to diversify, the findings and their implications described can potentially benefit other populations (e.g., college students, parents, teachers, businesspeople, government agencies, etc.). Therefore, future research may consider expanding this research beyond mental health service trainees. For example, future research can replicate this study on sample of licensed psychologists. Future research can also adapt the proposed model and validate it on college student populations with a different outcome measure (e.g., Motivation to Control Prejudice Reactions, Dunton & Fazio, 1997; Lesbian, Gay, and Bisexual Knowledge and Attitude Scale for Heterosexuals, Worthington et al., 2005; Situational Attitude Scale, Sedlacek & Brooks, 1970) to examine predictors of intercultural skills. Similarly, the proposed model can be validated on teachers using a different outcome measure (e.g., Teacher Multicultural Attitude Survey, Ponterotto et al., 1998; Multicultural Awareness-Knowledge-Skills Survey for Teachers, D' Andrea, Daniels, & Noonan, 2003) to assess predictors of multicultural teaching competencies. If the proposed model were to be validated in such populations, eminent applications and implications can be made on important areas such as counseling/psychotherapy, multicultural teaching competence, classroom instruction, and parenting. More specifically, it may be important for licensed psychologists to

increase their MCC by continuously seeking multicultural experiences, workshops, training, and consultation to assess and identify ways to increase their cognitive flexibility, cultural flexibility, and multicultural personality. For teachers, they may be able to utilize the implications of the proposed model in their two important roles. First, they may personally attempt to increase their own multicultural teaching competence by engaging in activities (e.g., diversity training, teaching abroad, etc.) and challenge themselves to increase cognitive flexibility, cultural flexibility, and multicultural personality. Second, they may incorporate implications from the proposed model to modify their classroom instruction such that students would have more opportunities to increase their multicultural experiences. They may also consider giving assignments (e.g., reflection papers) that challenge students to recognize options and alternative available in a given situation (i.e., cognitive flexibility). In addition, they can model accepting attitude of similarities and differences between all people (i.e., cultural flexibility) to students and help them develop multicultural personality early on in life. Along the same line, parents have a potential to play a crucial role in encouraging children and adolescent to increase their exposure to multicultural experiences and help foster their cognitive flexibility, cultural flexibility, and multicultural personality.

In addition to the results of the main analyses, the relationships between demographic and training variables seem important to highlight. First, trainees who are older tend to have higher-level of cultural flexibility and multicultural personality than younger trainees. Similarly, trainees who have been in the training program longer tend to have higher-level of cognitive flexibility, cultural flexibility, multicultural personality, and MCC. Such findings suggest that the observed variables in this study can be changed

over time, thus it is possible for multicultural training, education, and intervention to increase trainees' cultural flexibility, cognitive flexibility, multicultural personality, and MCC. Contrary to conventional wisdom, trainees who are older and have been in training program longer did not have more multicultural experiences. This finding offers support for training programs to encourage trainees of all ages and years in training program to seek additional exposure to multicultural situations.

One question remains unanswered: "Which other factors can significantly impact cultural flexibility, cognitive flexibility, multicultural personality and MCC over time?" The correlations between training variables and observed variables provide initial answers to this question. First, trainees who have taken more multicultural courses appear to have higher multicultural experiences, cultural flexibility, multicultural personality, and MCC than those who have taken fewer courses. Second, trainees who have had more experience in facilitating multicultural workshops, trainings, or courses tend to report higher MCC than those with limited experiences. In addition, trainees who have had conducted or participated in more research projects related to multicultural issues seem to have higher cultural flexibility, multicultural personality, and MCC than those with limited multicultural research experience. Trainees who have participated in more multicultural workshop also seem to have higher cognitive flexibility, cultural flexibility, and MCC than others. With regards to clinical experiences, the correlations between variables seem consistent with the training variables described. In general, trainees who have had more clinical experience, especially with multicultural issues (e.g., racial/ethnic minority, LGBTQ, spirituality, etc.), tend to have higher cognitive

flexibility, cultural flexibility, multicultural personality, and MCC than those with limited multicultural clinical experience.

Although the correlational analyses from this study provide an important understanding of the relationships between the variables described, causation cannot be implied. Therefore, it is important for future research to further investigate potential predictors of cultural flexibility, cognitive flexibility, multicultural personality, and MCC. For example, longitudinal study that follows trainees through their training years and tracks changes in their level of multicultural experience, cognitive flexibility, cultural flexibility, multicultural personality, and MCC as well as the influences of those changes can significantly contribute to the current literature. A qualitative study (e.g., grounded theory, consensual qualitative research) that explores development of trainees' MCC is also needed.

Limitations

There are some limitations in this study that should be considered, and the results should be interpreted in light of these cautions. First, given that this study was correlational in nature, causation should not be implied. Researchers may assess for causal links between the variables by applying a longitudinal or experimental methodology. Second, it should be noted that the proposed model was slightly modified by adding the covariance between disturbances of cognitive flexibility and cultural flexibility. Although such modification is driven by both empirical and theoretical support, further validation of the model with other samples may be important in future research. Third, a few multifaceted constructs (i.e., cultural flexibility, multicultural personality, and MCC) were used as a unidimensional in this study. Certain dimensions (e.g., behavioral,

emotional, and cognitive component of cultural flexibility) of these constructs might have been neglected in the analyses. Future studies could use the findings from this study as a foundation to further develop a model of MCC that includes all facets of interested variables. Specific to multicultural experiences, it should be noted that the measure chosen for this study did not include trainees' current multicultural experiences in their training program. Future research should investigate how environmental factors in a training program affect trainees' MCC development. Moreover, based on the review of literature, although cultural flexibility and UDO seem to be conceptually related, they are not completely synonymous constructs. Therefore, additional investigation is warranted to confirm the use of M-GUDS-S as a proxy measure of cultural flexibility. A study that develops a scale measuring cultural flexibility that can demonstrate strong psychometric properties also has potential to contribute significantly to the literature.

With regard to sampling, participants were voluntarily self-selected instead of randomly selected as they were recruited via the request for assistance from training directors. Therefore, some trainees may not have received an equal opportunity to participate in this study. In addition, it was impossible to accurately establish a response rate via e-mail recruitment method and unknown total number of trainees in training programs. The sample of participants was also a relatively homogenous with relatively small percentage of racial/ethnic minorities; males; LGBTQ; persons with disabilities; and religious affiliation (e.g., Buddhism, Muslim, Hinduism, etc.). Future research may consider employing a sampling method that: (a) gives the targeted population an equal chance to participant, (b) can establish response rate, and (c) is more inclusive of all potential participants. Another important limitation in this study relates to the use of self-

report measures, which may be sensitive to participants' social desirable responses. Therefore, future research should account for such limitation by including social desirable scale and/or incorporate objective approaches in measuring the observed variables.

Summary

Despite the limitations, this study represents the first study to propose and empirically test the developmental model of multicultural counseling competence among mental health services trainees. This particular model has strong theoretical implications as it integrated three prominent theories in psychology: (a) the Cognitive and Cultural Flex Theory of Personality (CCFTP), (b) the contact theory, and (c) the Theory of Multicultural Counseling Psychology (MCT). Moreover, by incorporating culturally transcendent variables (e.g., multicultural experiences, cognitive flexibility, cultural flexibility, and multicultural personality), the proposed model is grounded in an etic perspective and models and is considered to have greater potential applications and implications (Ponterotto, 2008).

In general, the findings support the validity of the proposed model among mental health service trainees. Specifically, multicultural experiences had a significant positive relation to cultural flexibility, multicultural personality and multicultural counseling competence, but not cognitive flexibility. Cognitive flexibility and cultural flexibility were also positively related to multicultural personality, which is related to multicultural counseling competence. These findings demonstrate the importance of training programs to provide additional training opportunities for trainees that can potentially increase their multicultural experience, cognitive flexibility, cultural flexibility, and multicultural

personality. Ultimately, this study offers the substantial influence that the culturally transcendent variables in the proposed model have on the development of multicultural counseling competence among mental health service trainees.

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Table 1.

Descriptions of Propositions Underlying MCT Theory

Proposition 1	MCT is a metatheory of counseling and psychotherapy
Proposition 2	Both counselor and client identities are formed and embedded in multiple levels of experiences (individual, group, and universal) contexts (individual, family, and cultural milieu). The totality and interrelationships of experiences and contexts must be the focus of treatment.
Proposition 3	Development of cultural identity is a major determinant of counselor and client attitudes toward the self, others of the same group, others of different group, and the dominant group. These attitudes are strongly influenced not only by cultural variables but also by the dynamics of a dominant-subordinate relationship among culturally different groups.
Proposition 4	The effective of MCT theory is most likely enhanced when the counselor uses modalities and defines goals consistent with the life experiences/cultural values of the client.
Proposition 5	MCT theory stresses the importance of multiple helping roles developed by many culturally different groups and societies. Besides the one-on-one encounter aimed at remediation in the individual, these roles often involve larger social units, systems intervention, and prevention.
Proposition 6	The liberation of consciousness is a basic goal of MCT theory. MCT theory emphasizes the importance of expanding personal, family, group, and organizational consciousness of the place of self-in-relation, family-in-relation and organization-in-relation. This results in therapy that is not only ultimately contextual in orientation, but also draws on traditional methods of healing from many cultures.

Adapted from Sue, Ivey, and Pederson (1996).

Table 2.

Descriptions of Traditionalism-Modernism (T.M.) Domains

Domains of T.M.	Descriptions
1. Gender role definition	Traditional environments tend to emphasize strict distinctions between gender roles, whereas modern environments encourage more flexible boundaries between these roles.
2. Family identity	Traditional environments foster strong family identities; modern environments emphasize individual identities.
3. Sense of community	Traditional cultural styles encourage a strong sense of community while modern environments emphasize individualism.
4. Family identification	Family loyalty and identification are emphasized in traditional communities while individual identities are more values in modern societies.
5. Time orientation	People reared in traditional communities have a stronger past and present time orientation while people who are more modernistic are oriented towards the future.
6. Age status	Traditional societies associate increasing age with increasing wisdom, whereas modern societies value the vitality of youth.
7. Importance of tradition	Traditional environments value traditional ceremonies as a reinforcement of history, whereas modern value orientations tend to view tradition as a potential barrier to progress.
8. Subservience to convention and authority	In traditional societies people are socialized to follow norms and conventions and to respect authority; in modern societies people are encouraged to question authority.
9. Spirituality and religion	Traditional societies emphasize the importance of spirituality and religion in life events; modern societies are characterized by an emphasis on science and secularism.

Adapted from Ramirez (1991).

Table 3.

Descriptions of Personality Characteristics of Field Sensitive and Field Independent Individuals

Domain	Field Sensitive	Field Independent
Communications	<ol style="list-style-type: none"> 1. Tends to personalize communications by referring to own life experiences, interests and feelings. 2. Tends to focus more on non-verbal than on verbal communication. 	<ol style="list-style-type: none"> 1. Tends to be impersonal and to-the-point in communications. 2. Tends to focus more on verbal than on non-verbal communication.
Interpersonal Relationships	<ol style="list-style-type: none"> 1. Open and outgoing in social settings. 2. Presents as warm and informal. 	<ol style="list-style-type: none"> 1. Reserved and cautious in social settings. 2. Presents as distant and formal.
Motivation	<ol style="list-style-type: none"> 1. Values social rewards which strengthen relationships with important others. 2. Motivation is related to achievement for others (family, team, ethnic/racial group etc.) 	<ol style="list-style-type: none"> 1. Seeks non-social rewards. 2. Motivation is related to self-advancement.
Teaching, Parenting, Supervisory, and Counseling Relationships	<ol style="list-style-type: none"> 1. Focuses on relationship with student, child, supervisee, or client. 2. Is informal and self-disclosing. 	<ol style="list-style-type: none"> 1. Focuses on task or goal. 2. Is formal and private.

Adapted from Ramirez (1991).

Table 4 Summary of Means, Standard Deviations, Reliability Coefficients, and Intercorrelations for Scores on MEI, CFS, M-GUDS-S, MPQ, and CBMCS

Variable	<i>M</i>	<i>SD</i>	α	1	2	3	4	5
1. MEI	47.77	14.19	.96	--				
2. CFS	59.84	5.04	.72	.10	--			
3. M-GUDS-S	70.93	7.19	.75	.32**	.37**	--		
4. MPQ	326.72	30.36	.94	.11	.64**	.49**	--	
5. CBMCS	65.39	7.66	.90	.12*	.35**	.36**	.46**	--

Note. *N* = 316. MEI = Multicultural Experience Inventory; CFS = Cognitive Flexibility Scale; M-GUDS-S = Miville-Guzman Universality-Diversity Scale-Short; MPQ = Multicultural Personality Questionnaire; CBMCS = California Brief Multicultural Competence Scale
 * $p < .05$. ** $p < .01$.

Table 5 Modification Index (MI) provided by AMOS 17.0

	M.I.	Par Change
Covariances:		
D1 <--> D2	40.487	12.207
D4 <--> D1	6.032	6.395
Variances:		
None	--	--
Regression Weights:		
CFStotal <--- UDOtotal	36.280	.237
M-GUDS-Stotal <-- CFStotal	40.093	.482
CBMCStotal <--- UDOtotal	7.641	.147

Note. CFS = Cognitive Flexibility Scale; M-GUDS-S = Miville-Guzman Universality-Diversity Scale-Short; CBMCS = California Brief Multicultural Competence Scale

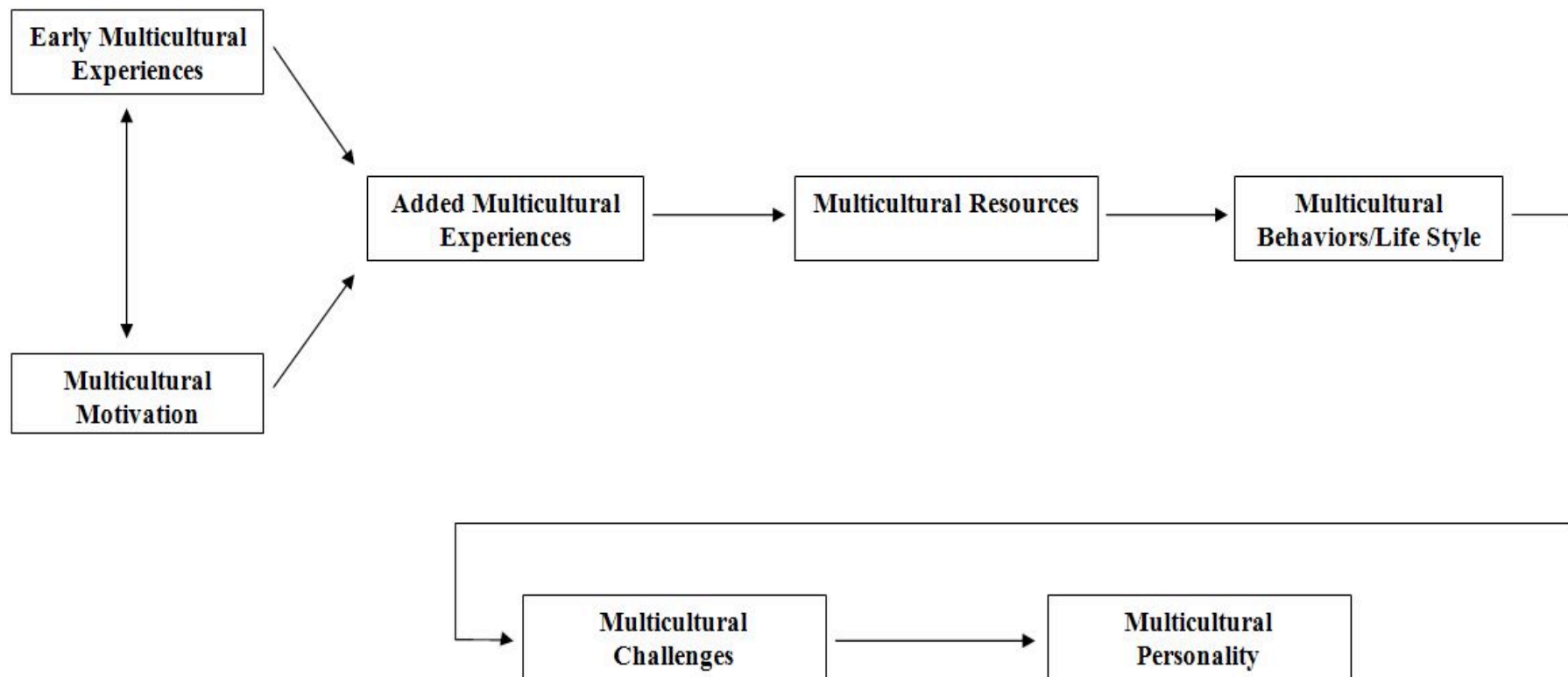


Figure 1: Model of Multicultural Personality Development, adapted from Ramirez (1991)

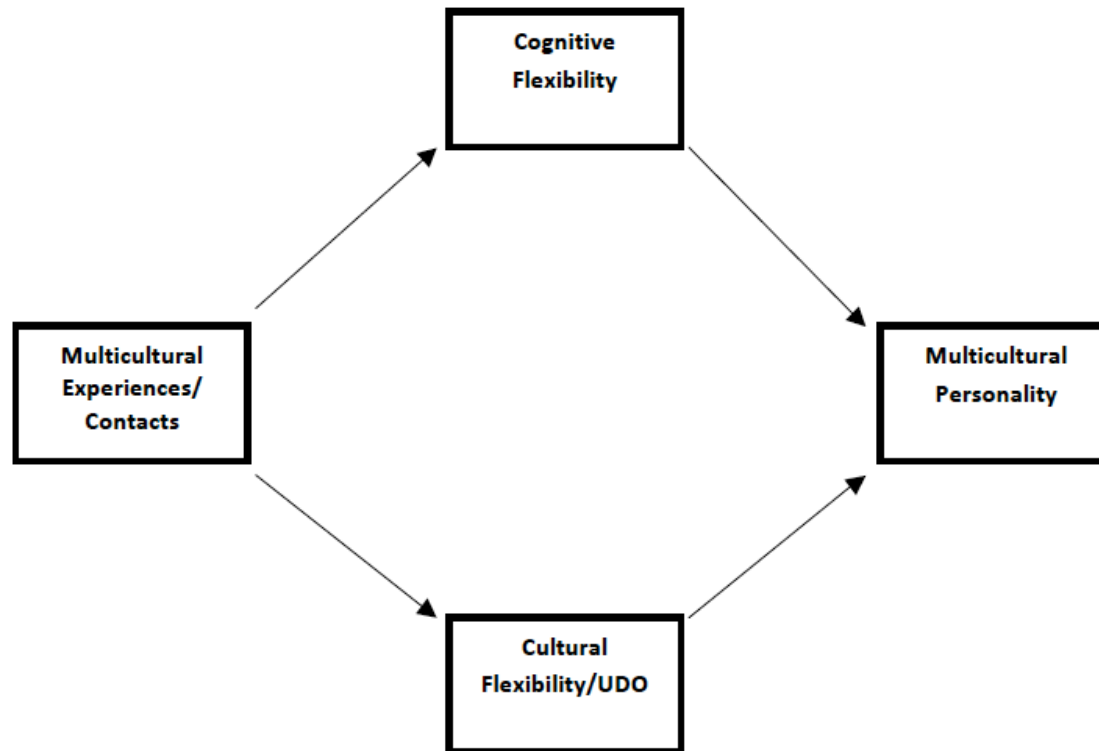


Figure 2: Model of the Proposed Multicultural Personality Development based on the CCFTP and Contact Theory.

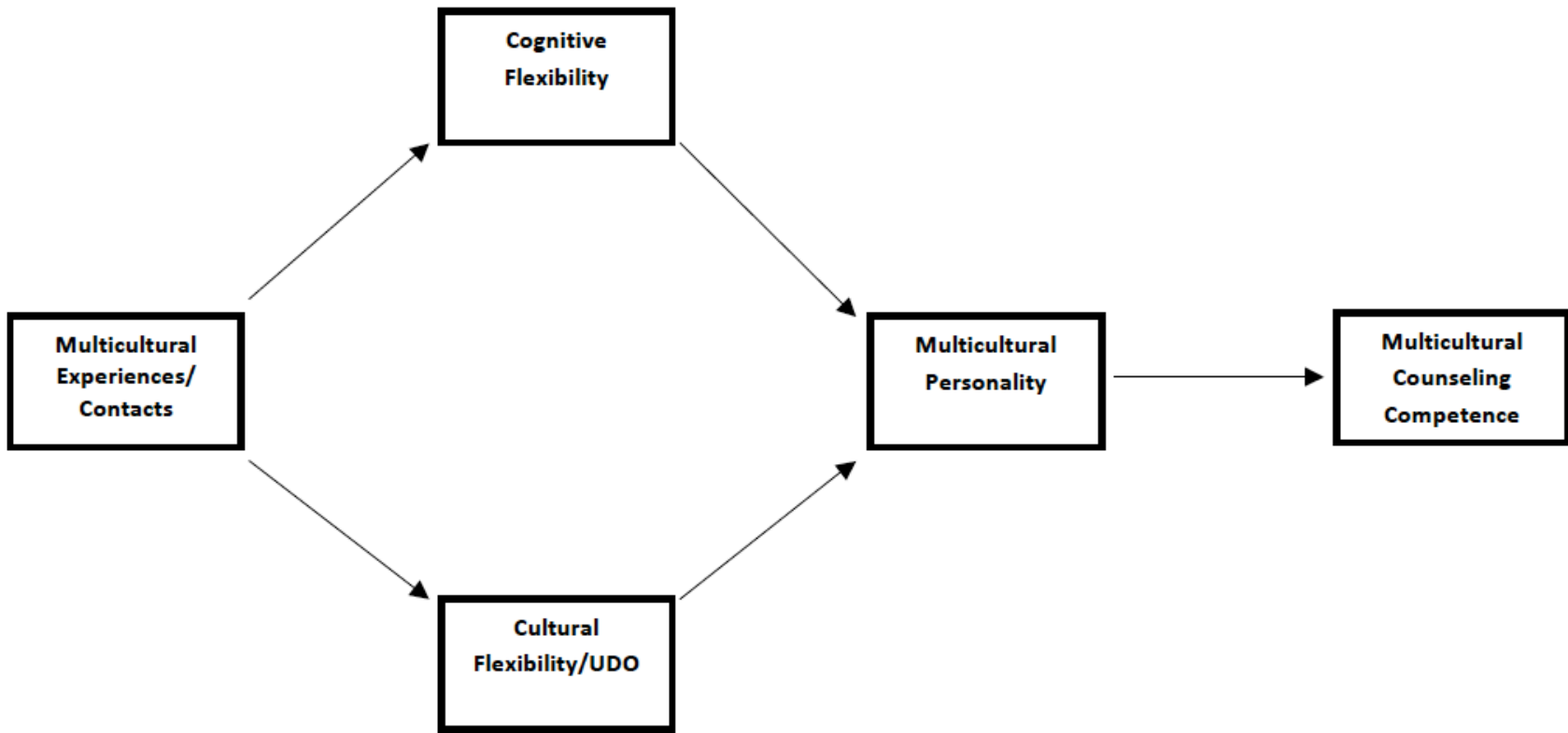


Figure 3. Proposed model predicting developmental process of multicultural counseling competence among mental health practitioner trainees based the integration of the Cognitive and Cultural Flex Theory of Personality, Contact Theory, and Theory of Multicultural Counseling and Psychotherapy.

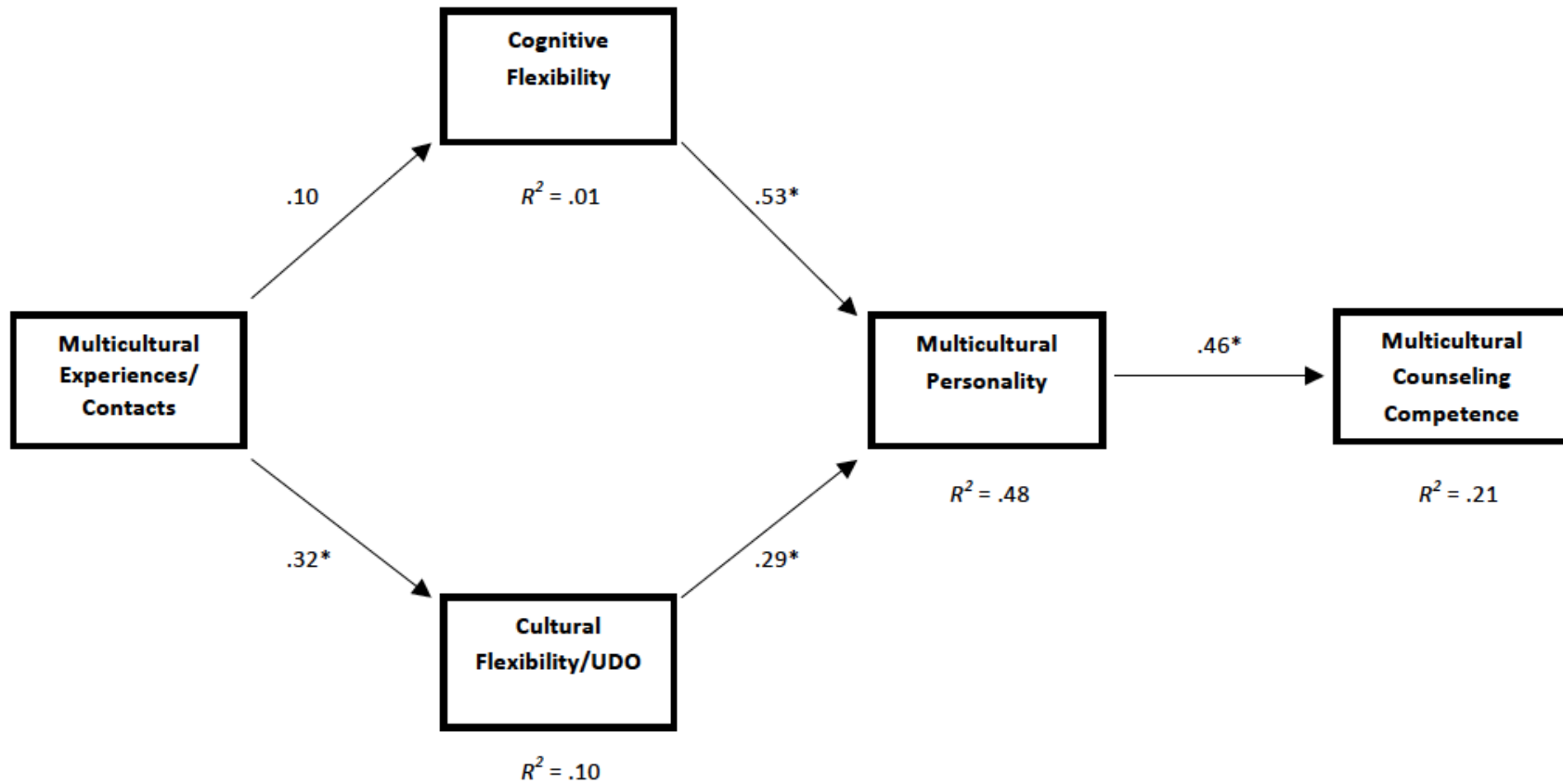


Figure 4. Tested model predicting developmental process of multicultural counseling competence among mental health practitioner trainees based the integration of the Cognitive and Cultural Flex Theory of Personality, Contact Theory, and Theory of Multicultural Counseling and Psychotherapy.

* $p < .001$

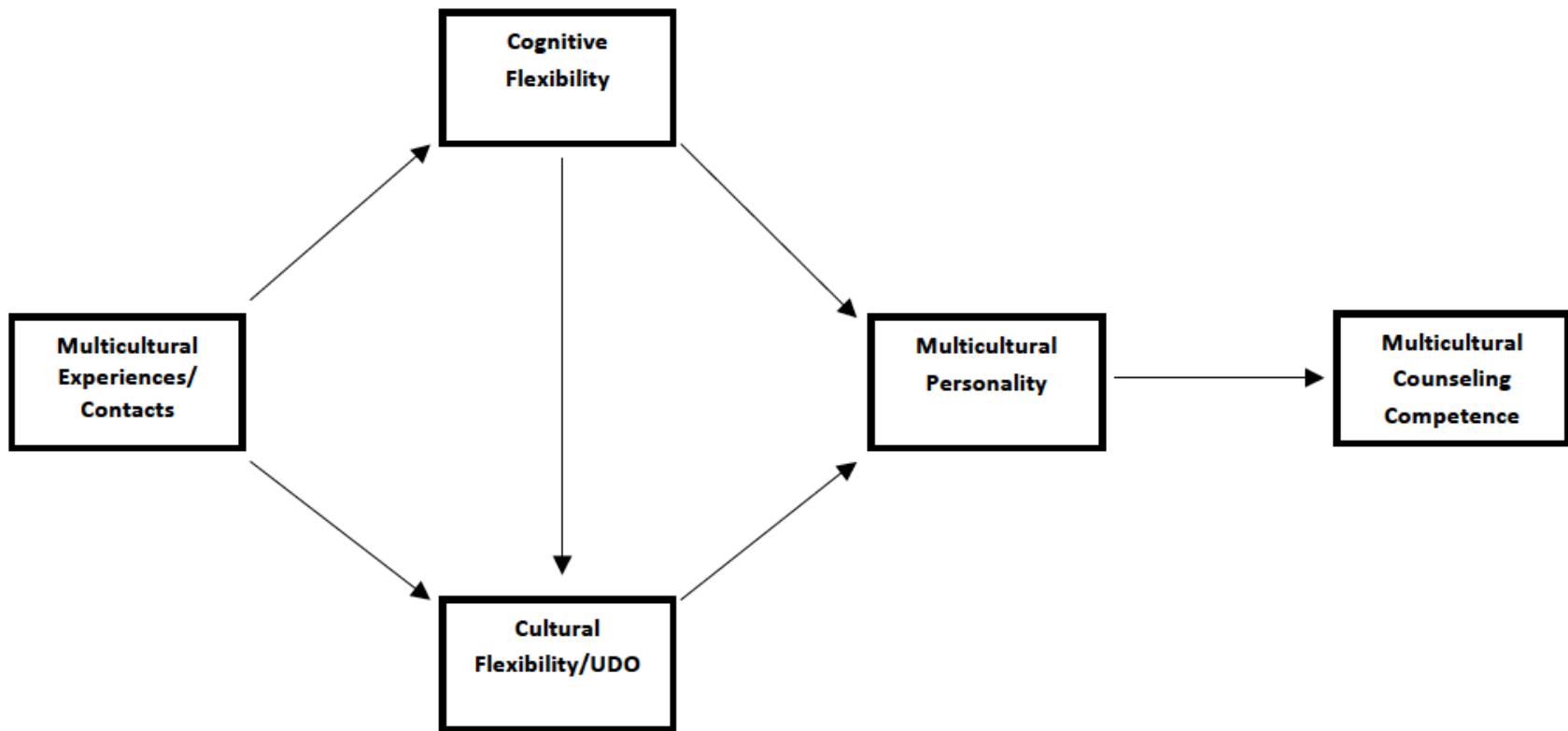


Figure 5. Alternative model predicting the developmental process of multicultural counseling competence among mental health practitioner trainees based the integration of the Cognitive and Cultural Flex Theory of Personality, Contact Theory, and Theory of Multicultural Counseling and Psychotherapy.

Appendix A

Extended Literature Review

The purpose of this chapter is to provide an extended review of literature pertaining to the Cognitive and Cultural Flex Theory of Personality (CCFTP), Contact Theory and Theory of Multicultural Counseling and Therapy (MCT). In doing so, a review of the research findings pertaining to the relevant constructs from these theories will be highlighted and their relations to Multicultural Counseling Competence (MCC) will be discussed. The aim of the review is to propose a culturally transcendent, developmental model of MCC among mental health services trainees.

Multicultural Counseling Competence (MCC)

According to Ridley and Kleiner (2003), multicultural counseling competence (MCC) has emerged as one of the most important and widely discussed topics in the mental health services professions. The historical development of MCC can be traced back to the Vail Conference of 1973, which began an important discussion regarding cultural diversity in mental health practices. Since then, a substantial amount of literature related to MCC has been generated. For the purpose of this study, the review of literature on MCC will be organized into three distinct parts: (a) needs for MCC, (c) definition of MCC, and (c) components and predictors of MCC.

Needs for MCC

According to the Bernstein & Edwards (2008), racial/ethnic minorities comprise approximately one-third of the U.S. population and are expected to become the majority in 2042. Given this expected rapid increase in diversification, the U.S. will experience its highest rate of culturally diverse clients seeking treatment from mental health providers.

As the demand of mental health services increases among racial/ethnic minorities, Constantine and Sue (2005) argued that mental health service providers are now facing with an obligation to examine culturally sensitive issues in clinical practice as well as to demonstrate multicultural counseling competence (MCC). Yet, current mental health practices continue to be characterized by disparities among racial/ethnic minorities as they continue to have less access and are less likely to receive needed mental health services. The U.S. Department of Health and Human Services (USDHHS; 2001) reported such disparities among the main racial/ethnic minorities (i.e., African American, Asian American/Pacific Islanders, Latinos/Hispanic American, and Native American Indians). More specifically, when compared with European American, African American is 50% less likely to receive needed care. Similar trend can be found among Latino/Hispanic Americans. Among Hispanic Americans with a mental disorder, fewer than 9% contact mental health specialists, and fewer than 5% Hispanic immigrants with mental disorders use services from mental health specialists. For Asian Americans/Pacific Islanders, only 17% of those experiencing mental or psychological problems seek mental health services. Lastly, among Native American Indians, only 20% utilize services that are located mainly on reservations. Data related to the use of mental health services among Native American Indians outside reservations is currently nonexistent.

In addition, racial/ethnic minorities who seek services often receive a poorer quality of mental health care than European Americans. For example, according to the USDHHS (2001), Asian American/Pacific Islanders tend to have poorer short-term outcomes and less satisfaction with individual psychotherapy than European Americans.

Furthermore, African Americans tend to be diagnosed more frequently with schizophrenia and less frequently with affective disorders when compared to European Americans. It was also found that African Americans are about 17% more likely than European Americans to be prescribed with antidepressant medication. Similarly, only 24% of Latino/Hispanic American received appropriate care with depression and anxiety disorders when compared to 34% of European Americans. Specifically to Native American Indians, it is unfortunately that representative studies have not been published. Moreover, Sue and Sue (2003) found some years back that racial/ethnic minorities are approximately 20% more likely than European Americans to terminate counseling/therapy after only one contact with a mental health services provider.

Over the past few decades, several scholars have identified barriers related to utilization rates and mental health services disparities among racial/ethnic minorities. Many of these barriers operate for all people regardless of their cultural backgrounds: financial difficulty, limited availability of mental health services, fragmentation of services, and societal stigma toward mental illness (Abe-Kim & Takeuchi, 1996). However, additional barriers such as mistrust and fear of treatment, racism and discrimination, and differences in communication style can significantly affect racial/ethnic minorities (D. W. Sue & Sue, 1977; S. Sue, et al., 1974; USDHHS, 2001). To minimize these barriers, some scholars proposed that mental health services providers and clients must come from the same racial/ethnic background for the services to be effective (Ridley & Kleiner, 2003).

Although racial/ethnic background matching can potentially have a bearing on the ability of a mental health services provider to form a therapeutic alliance with a client

(Atkinson & Lowe, 1995; Ridley & Kleiner, 2003), a shortage of racial/ethnic minority mental health services professionals remains problematic. According to the USDHHS (2001), African Americans account for only 2% of psychiatrists, 2% of psychologists, and 4% of social workers in the United States. Likewise, there are only 29 Hispanic, 70 Asian American, and 101 Native American Indian in comparison to 173 European American mental health professionals available for every 100,000 individuals per each racial/ethnic group. As a result, during the past 40 years, the underrepresentation of racial/ethnic minorities in psychology has received increasing attention in higher education. According to Maton, Kohout, Wicherski, Leary, and Vinokurov (2006), there was a significant increase in the percentage of minority students receiving bachelor's degrees from 1989 (13.6%) to 2000 (24.3%). From 1989 to 2002, there was also a substantial increase in the number of master's degree awarded to racial/ethnic minorities (10.6%-21.5%). Nevertheless, there has been no growth in the percentage of minority students receiving doctoral degree in psychology since 1999. Evidently, the feasibility of matching race/ethnicity between mental health services providers and clients is extremely limited. Consequently, many scholars have asserted multicultural counseling competence (MCC) as a critical component of trainings among mental health services provides (Ridley & Kleiner, 2003).

Definition of MCC

According to Ridley and Kleiner (2003), multicultural counseling competence (MCC) has become one of the most important and widely discussed topics in the helping and human service professions. Despite the extensive literature on MCC, multicultural scholars have not reached a consensus on one definition that most reflect the construct

(Holcomb-McCoy, 2000; Pope-Davis, Reynolds, Dings, & Nielson, 1995a). For the purpose of this study, we offer the definition by Sue and Torino (2005). They suggested that multicultural counseling competence is defined as the counselor's acquisition of awareness, knowledge, and skills needed to function effectively in a pluralistic democratic society, and on an organizational/societal level, advocating effectively developing new theories, practices, policies, and organizational structures that are more responsive to all groups. This definition reflects the original conceptualized MCC offered by Sue and colleagues, which is consist of three components: beliefs and attitudes, knowledge, and skills (D. W. Sue, Arredondo, & McDavis, 1992; D. W. Sue, et al., 1982). Beliefs and attitudes refers to the mind-set of counselors about ethnic and racial minorities, as well as the responsibility counselors have to check their biases and stereotype, develop a positive orientation toward multicultural perspectives, and recognize ways in which personal biases and values can affect cross-cultural counseling relationships. Knowledge is the understanding counselors have of their own worldview, their specific knowledge of cultural groups, and their understanding of sociopolitical influences on cross-cultural relationships. Finally, skills refers to the specific abilities that are necessary to work with racial and ethnic minorities (D. W. Sue, et al., 1992; D. W. Sue, et al., 1982).

Components and Predictors of MCC

For past 3 decades, researchers have identified several components and predictors of MCC (Ridley & Kleiner, 2003). Based on a review of literature, individual characteristics such as personality and demographic variables, as well as educational and professional experiences have been found to be related to the level of MCC among

mental health services providers. Specifically related to educational and professional experiences, several empirical studies have shown positive relationships between self-reported MCC and (a) multicultural curriculum, (b) research experience on multicultural topics, (c) direct clinical experience with minority clients, (d) a supervision hours spent on multicultural issues, and (f) exposure to various multicultural events (Ladany, Inman, Constantine, & Hofheinz, 1997; Neville, et al., 1996; Ottavi, et al., 1994; Pope-Davis & Dings, 1995; Pope-Davis, et al., 1995a; Sadowsky, Kuo-Jackson, Richardson, & Corey, 1998). It should be mentioned that the results of the aforementioned studies may have limited generalizability given that a majority of samples (i.e., 97% - 63%) in these studies were European American. Chaichanasakul (2008) addressed such limitation by purposefully recruiting racial/ethnic minorities and international mental health services trainees in their study, and found no relationship between self-reported MCC and multicultural curriculum. One possible explanation for this finding may be related to the culturally-specific, nature of current pedagogy of multicultural counseling training as it may not be sufficient to promote MCC (Ridley & Kleiner, 2003).

With regards to individual characteristics, the findings are equivocal. Several studies (e.g., Chaichanasakul, 2008; Ottavi, et al., 1994; Pope-Davis, Eliason, & Ottavi, 1994) found no gender differences in self-reported MCC, while other studies found women scored significantly higher than men on self-reported MCC (Constantine, 2000; Middleton, et al., 2005; Spanierman, et al., 2008). Findings on race and ethnicity and MCC are also inconclusive. More specifically, studies by Pope-Davis and colleagues (Pope-Davis, et al., 1994; Pope-Davis, et al., 1995a) found that ethnic minority counselors tend to score higher on self-reported multicultural competencies than do

European American counselors, though other studies (i.e., Ottavi, et al., 1994; Pope-Davis, et al., 1994) did not reveal similar results. Therefore, researchers have begun to shift their focus from ethnic group membership to ethnic and racial identity constructs given that ethnic group membership is not equated with cultural diverse life experiences (Ruelas, 2003). In general, researchers have found a consistent and significant positive relationship between racial/ethnic identity development and self-reported multicultural counseling competence (Ruelas, 2003). For example, higher levels of racial consciousness in White racial identity development were found to be positively related to self-perceived MCC (Burkard, Ponterotto, Reynolds, & Alfonso, 1999; Neville, et al., 1996; Ottavi, et al., 1994). Similar findings were also found in racial identity development among racial/ethnic minority psychologists (Ladany, Brittan-Powell, & Pannu, 1997; Ladany, Inman, et al., 1997).

Although research on racial/ethnic identity have generated significant contributions to the understanding of MCC, most of these researches operated from emic (cultural specific) instead of etic (culturally transcendent) models. According to Ponterotto (2008), emic models are limited because of their ability to generalize and capture the experience of a broad base of individuals. In addition, because etic models are culturally transcendent, the potential application and implication of researches utilizing etic models are considered to be greater. Therefore, it seems important for researchers to identify addition culturally transcendent predictors of MCC. Furthermore, based on an overall review of literature, little is known in regards to the developmental process of MCC with how one develops MCC. These gaps in the literature are unfortunate given that such understanding can potentially make a significant impact on

the current pedagogy of multicultural training among mental health trainees and increase the quality of mental health services in the increasing diverse society (APA, 2003).

Consequently, the main purpose of this study is to propose and empirically test a culturally transcendent, developmental model of MCC.

In order to propose a culturally transcendent, developmental model of MCC, the literature on the Cognitive and Cultural Flex Theory of Personality (CCFTP), Contact Theory, and Theory of Multicultural Counseling Therapy (MCT) will be reviewed and integrated. A review on the CCFTP and Contact Theory will be introduced first in order to propose a developmental process of multicultural personality, which is the first part of the overall proposed model. The theory of MCT will then be introduced as a conceptual link between the multicultural personality and MCC.

Cognitive and Cultural Flex Theory of Personality

The Cognitive and Cultural Flex Theory of Personality (CCFTP) was first developed by Ramirez (1991) to capture an understanding of multicultural personality development and functioning. According to Ramirez (1991), the socialization and cultural experiences (multicultural experiences) of an individual can significantly impact his or her ability to develop cultural and cognitive flexibility as well as a multicultural personality. Multicultural personality, cultural flexibility and cognitive flexibility are the three most essential components of the theory; below, these constructs will be introduced along with empirical findings related to each construct in the literature. A model of multicultural personality development as was proposed by Ramirez (1991) will be then summarized and presented.

Multicultural Personality

As the United States becomes increasingly culturally diverse, it seems important for people to adjust their way of life and become culturally competent in order to function in the increasingly diverse society. Ramirez (1991) suggested that people who have developed multicultural personality are more likely to succeed in adjusting to the increasingly diverse cultural contexts. Similarly, Ponterotto (2008) suggests that multicultural personality should relate to any situation where individuals with diverse worldviews come together. Ramirez (1991) defines multicultural personality as “a synthesis and amalgamation of the resources learned from different people and cultures to create multicultural coping styles, thinking styles, perceptions of the world (worldviews) and multicultural identities” (p. 26).

In addition to Ramirez’s (1991) empirical works on multicultural personality, van der Zee and van Oudenhoven conducted a series of investigations examining multicultural effectiveness in the global business environment. These authors defined multicultural effectiveness “as success in the fields of professional effectiveness, personal adjustment and intercultural interactions” (van der Zee & van Oudenhoven, 2001, p. 293) and posited that the multicultural personality traits would better predict international career success and personal adjustment than would the Big Five (Costa & McCrae, 1992), which are considered to be the five broad, global traits of personality. Based on an extensive review of literature on intercultural effectiveness, they identified seven components of multicultural effectiveness: (1) cultural empathy, (2) open-mindedness, (3) emotional stability, (4) orientation to action, (5) adventurousness or curiosity, (6) flexibility, and (7) extraversion. van der Zee and van Oudenhoven (2001) continued examining multicultural personality by using factor analysis and settled on a five-factor

structure as best representing the multicultural personality. The five factors includes: (a) Cultural Empathy, which is the ability to empathize with the thoughts, behaviors, and feeling of culturally diverse individuals; (b) Open-Mindedness, which refers to an unprejudiced and open attitude toward cultural differences; (c) Emotional Stability, which reflects the ability to stay calm under stressful and novel situations; (d) Social Initiative, which is a tendency to actively approach social situations and exhibit initiatives in these interactions; and (e) Flexibility, which refers to the ability to conceptualize novel situations as a positive challenge and to adapt accordingly.

Most of the extant empirical knowledge on the multicultural personality initially stemmed from international research with samples of high school students, undergraduate students, and adult workers from Netherland, Italy, Taiwan, and England. In a series of studies by van der Zee and colleagues (i.e., Barker, van der Zee, & van Oudenhoven, 2006; Leone, et al., 2005; Luijters, et al., 2006; Mol, et al., 2001; van der Zee, Atsma, & Brodbeck, 2004; van der Zee & van Oudenhoven, 2000, 2001; van der Zee, van Oudenhoven, et al., 2004; van der Zee, Zaal, & Piekstra, 2003; van Oudenhoven, Mol, & van der Zee, 2003; van Oudenhoven & van der Zee, 2002), the following correlates of the multicultural personality dispositions were found: (a) *Cultural Empathy* has been positively related with cultural identity preference, extraversion, agreeableness, life satisfaction, job performance ratings, and socially oriented vocational interests, and negatively correlated with hostility; (b) *Open-mindedness* has been positively correlated with extraversion, agreeableness, conscientiousness, openness to experience, multicultural activity, need for change, job performance, and psychological health and negatively correlated with neuroticism and hostility; (c) *Emotional Stability* has been

positively related with extraversion, agreeableness, conscientiousness, life-satisfaction, physical and psychological health, and social adjustment and negatively correlated with social anxiety, rigidity, hostility, and feelings of inadequacy; (d) *Social Initiative* has been positively correlated with measures of extraversion, agreeableness, conscientiousness, openness to experience, need for change, multicultural activity, socially oriented vocational interests, strength and determinedness, and psychological health and negatively correlated with measures of neuroticism, social anxiety, rigidity, and inadequacy; and (e) *Flexibility* has been positively correlated with extraversion, need for change, international career aspirations and an international orientation, artistic interests in vocational pursuits, dominance, job satisfaction, social adjustment and effective assimilation strategy, and negatively correlated with rigidity and neuroticism. Furthermore, multicultural personality was found to predict variance in participants' physical health, mental health, subjective well-being, academic achievement, perceived peers support, multicultural activity, international orientation, international self-efficacy, behavioral competence, various career interests, and job satisfaction. Some demographic group differences were also found. For example, three studies using adult samples found that men scored higher than women on *Emotional Stability*, and women scored higher than men on *Cultural Empathy*. With regard to age differences, the findings were less conclusive as one study found that older participants scored higher on *Emotional Stability* while two other studies found no group differences.

Besides research by van der Zee and colleagues, Leong (2007) conducted a study examining the predictive validity of multicultural personality on socio-psychological adaptation. A longitudinal research design was implemented in this study with two

comparative samples of Singaporean undergraduate students. One of the groups attended an international exchange program, while the control group did not. The results of the study revealed *Social Initiative* as a predictor of a reduction in behavioral and psychological difficulties. Moreover, when compared to the control group, the exchange sample reported higher rating on most intercultural dimensions as well as an increase in a degree of multicultural personality.

In addition to these initial studies on multicultural personality, which were conducted in Europe and Asia, a review of literature revealed two studies that were conducted in the United States. One study was designed to assess the multicultural effectiveness levels of a group of students enrolled in Information Systems courses at a large mid-western university (Margavio, et al., 2005). About 52% of these students were traditional age (i.e., 17-22) undergraduate students, while 48% were 23 years old or older. The majority of the sample in this study is male (70%) with a GPA equal to or greater than 3.0 (69%). Researchers discovered that: (a) students who were more involved in social activities scored higher on *Emotional Stability* and *Social Initiative*; (b) students who expressed a desire to work internationally scored higher on *Open-Mindedness* and *Flexibility*; (c) students who had completed international coursework scored higher on *Cultural Empathy*; and (d) students who reported more multicultural experiences scored higher on *Open-Mindedness*, *Social Initiative*, and *Flexibility*. Another pioneering work on the multicultural personality in the United States was conducted by Ponterotto and his colleagues (2007) where they investigated the relationship between the multicultural personality and dimensions of psychological well-being among undergraduate and graduate students from two universities in the Northeast region. The results from this

study revealed positive correlations between the multicultural personality and psychological well-being. Based on these findings, Ponterotto and colleagues (2007) proposed that the multicultural personality should be a relevant focus of counseling and positive psychology research in the United States given that there's an increasing need for its population to adapt to life in a multicultural society.

These prior research studies serve as empirical evidences in regard to the significance of including multicultural personality in the proposed developmental model of MCC in this study. More specifically, the findings described above offer a conceptual relationship between multicultural personality and MCC. In other words, it seems highly possible that an individual who has a higher degree of multicultural personality may be able to develop a higher level of MCC than others with lower level of multicultural personality.

Cultural Flexibility

In addition to the multicultural personality, cultural flexibility is another important construct in the CCFTP (Ramirez, 1991). According to Ramirez (1991), cultural flexibility can be described as existing on a traditionalism-modernism continuum. Modernism reflects modern life styles and beliefs systems that encourage separation from family and community early in life. In addition, people who are on the modernism side of the traditionalism-modernism continuum tend to emphasize individual competition, and science in life. On the other hand, people who consider themselves to be on the traditionalism side of the continuum are more likely to accentuate close ties to family and community throughout life. Furthermore they tend to emphasize cooperation and give spiritualism a high priority in their life. Ramirez (1991) proposed 9 domains

within the traditionalism-modernism dimension, which are: (a) gender role definition, (b) family identity, (c) sense of community, (d) family identification, (e) time orientation, (f) age status, (g) importance of tradition, (h) subservience to convention and authority, and (i) spirituality and religion. The description of these domains is presented in Table 2.

Based on the 9 domains of traditionalism-modernism orientation to life, Ramirez (1991) identified four components of cultural flexibility: (a) subscribing to values and belief systems which are representative of both traditional and modern cultures, groups, and families; (b) being able to shuttle between traditional and modern groups and situations or activities; (c) being able to combine traditional and modern values and belief systems in order to evolve new multicultural styles; and (d) feeling identified with both traditional and modern families, cultures, and institutions. According to Ramirez (1991), there is a strong positive correlation between the extent to which a person has been exposed to multicultural experiences and his or her degree of cultural flexibility.

Another construct that theoretically and conceptually represents cultural flexibility is the universal-diverse orientation (UDO). UDO was based on several writings of Vontress (1979, 1988, 1996), which proposed that on some level there are both similarities and differences among people. According to Vontress, this awareness is an essential ingredient for one individual to effectively interact with others. In addition to the writings of Vontress, Miville and her colleagues (1999) relied on Jung's works on archetypes and collective unconsciousness, Yalom's notion on psychological process of universality in the development of therapy groups, and other literature on multicultural counseling (Ponterotto, 2008). Based on these conceptual supports, Miville and her colleagues (1999) defined UDO as follows:

An attitude toward all other persons that is inclusive yet differentiating in that similarities and differences are both recognized and accepted; the shared experience of being human results in a sense of connectedness with people and is associated with a plurality of diversity of interactions with others. (p. 292)

UDO consists of three components including cognitive, behavioral, and emotional components. *Relativistic Appreciation of Oneself and Others* reflects the cognitive component of UDO, which involved the “recognition and acceptance of the similarities and differences among people.” The behavioral component is portrayed in *Diversity of Contact* that captures “previous and intended behaviors relevant to interpersonal contact with people of different backgrounds (e.g., race, gender, religion, etc.).” Lastly, the emotional component, titled *Sense of Connection* assesses “the emotional bond one feels toward others, reflected in the statement ‘We are all in the same boat’” (Miville, et al., 1999, p. 293).

Specifically to mental health services practitioners, one of the most crucial tasks is to effectively build a strong therapeutic relationship with their clients. According to Ponterotto (2008), UDO has a strong potential to increase practitioners’ level of empathic response as well as their flexibility in conceptualizing presenting concerns of each client based on his or her culturally diverse backgrounds. Based on a review of literature, UDO has been found to explain variance in empathy (Miville, et al., 2006) and one of the Big Five personality traits (Openness to Experience; Thompson, et al., 2002) among a sample predominantly European American, female students in graduate level counseling programs from five academic programs throughout the southwestern United States. UDO has also been found to be a significant variable explaining variance in MCC of mental

health services trainees and practitioners (Chaichanasakul, 2008; Constantine, et al., 2001; Fuertes & Brobst, 2002; Munley, et al., 2004) as well as clients' expectations regarding effective multicultural counseling (Constantine & Arorash, 2001). Moreover, significant correlates were found between UDO, prior multicultural workshops and interdependent self-construal in a sample of predominantly European American, female, school counselors from across the U.S. who were attending a national conference on school counseling (Yeh & Arora, 2003).

In addition, empirical studies on UDO have been conducted with undergraduate students. For example, UDO has been found to account for significant variance in psychological hardiness and psychological functioning after controlling for participants' differences in age and race/ethnicity (Brummett, Wade, Ponterotto, Thombs, & Lewis, 2007). Other studies also found UDO to be significantly related to academic self-concept, attitudes toward help seeking and diversity (Fuertes, et al., 2000), general self-efficacy, social self-efficacy, problem-focused coping, and collective self-esteem (Miville, Romans, Johnson, & Lone, 2004), openness to change, self-transcendence, self-enhancement (Sawyer, Strauss, & Yan, 2005), agreeableness, openness, degree of exposure to diversity (Strauss & Connerley, 2003), advocacy activities (Wendler & Nilsson, 2009), and preference for counselor who has different cultural background (Munley, et al., 2007) in the expected directions. Lastly, Singley and Sedlacek (2004) conducted a research on the relationship between UDO and perceived academic success and discovered that students who had higher class ranks were more likely to have a greater UDO than those who had lower class ranks.

The empirical findings described above suggest that UDO has a similar operationalization to that provided for cultural flexibility (Ramirez, 1991). They also offer supports for the inclusion of UDO in the proposed developmental model of MCC in this study. More specifically, based on the literature review, it is likely that UDO would significantly predict a high level of multicultural personality, which would then lead to a superior degree of MCC. In other words, UDO would have an indirect effect on MCC.

Cognitive Flexibility

Another important component of the Cognitive and Cultural Flex Theory of Personality (CCFTP) is cognitive flexibility. Ramirez (1991) proposed that a person's unique self is made up of field independent and field sensitive styles, which reflect on the following domains of personality characteristics: (a) communications, (b) interpersonal relationships, (c) motivation, and (d) teaching, parenting, supervisory, and counseling relationships. The description of these domains in relationship to people with tendency to be field sensitive and field independent is presented in Table 3.

According to Ramirez (1991), cognitive flexibility consists of three components: (a) the maximum development of all domains of field sensitive and field independent cognitive styles; (b) the ability to shuttle between the field sensitive and field independent styles to meet different environmental demands; and (c) the ability to combine elements of both field sensitive and field independent styles to develop new multicultural cognitive styles. Ramirez (1991) provided empirical support for the importance of cognitive flexibility in his research related to academic success among children and college students. In this study, he reported that successful children and college students tended to have more cognitive flexibility when compared to their less successful peers. In other

words, children and college students who tended to be more academically successful tended to have the ability to shuttle between their cognitive styles. Based on this discovery, and other unpublished research on life history and family community research, Ramirez (1991) proposed that a person's degree of cognitive flexibility is influenced by cultures, communities, families whose life styles and institutions represented a mixture of traditional values.

In addition to Ramirez (1991), other researchers (e.g., Jackson & Thompson, 1971; Martin & Rubin, 1995; Whiteley, et al., 1967) have also considered cognitive flexibility to be an important aspect in a person's ability to communicate and relate to other people. Similarly, in an empirical research on a sample of Asian American college students at a West Coast university, Kim and Omizo (2006) linked cognitive flexibility with biculturalism and argued that cognitive flexibility can be an important indicator of one's ability to cope with and reconcile potential conflicts as he or she tries to function in two different cultural norms. Cognitive flexibility was defined by Martin and Rubin (1995) as a person's (a) awareness that in any given situation there are options and alternatives available, (b) willingness to be flexible and adapt to the situation, and (c) degree of self-efficacy in being flexible. The underlying assumption of this operationalization of cognitive flexibility is that before individuals can decide to adapt their behavior in a given situation, they have to undergo processes of social cognition in which they become aware of choices and alternatives. They also need to have reason and motivation, which would lead to their willingness to adapt or change as well as a strong sense of self-efficacy to behave effectively.

Early research on undergraduate students found cognitive flexibility to be positively correlated to interaction involvement, self-monitoring, and interpersonal communication competence and negatively related to rigidity and unwillingness to communicate (Martin & Rubin, 1995; Rubin & Martin, 1994). Martin and Anderson (1998) later conducted a series of three studies related to cognitive flexibility. In the first study, positive correlations between cognitive flexibility and two other constructs of communication competence, assertiveness and responsiveness were found among both undergraduate students and adults recruited from the community. The next study, which was conducted with participants who are students in a Midwestern community, revealed a strong positive correlation between participants rating of their cognitive flexibility and their friends' ratings of the participants' cognitive flexibility. Lastly, in the third study, cognitive flexibility was positively related to five of the seven rating of self-efficacy in communications situations among undergraduate students.

In regards to gender and age differences, findings are mixed. More specifically, while Martin and Rubin (1995) did not find a gender or age difference on cognitive flexibility, Martin and Anderson (1996) reported a interaction effect between age and gender such that males 21 and under, and females 55 and older tend to have lower cognitive flexibility than other groups. In addition, Katz and Walsh's (1991) study on factors related to children's willingness to perform gender-nontraditional tasks revealed that girls exhibited more cognitive flexibility than boys. They also discovered that older children were more cognitive flexible than younger children. Specifically to mental health services practitioners, Passons and Olsen (1969) found that cognitive flexibility is positively correlated with empathic sensitivity among counseling trainees.

Chaichanasakul (2008) also found cognitive flexibility as significant variance to the MCC among racial/ethnic minorities and international mental health services trainees.

Another important theme in the literature related to cognitive flexibility involves its important role in cultural adjustment. For example, Harrison, Wilson, Pine, Chan, and Burriel (1990) used an ecological framework to explore the relation between ecologies of ethnic minority families, adaptive strategies, socialization goals and developmental outcomes for ethnic minority children, and observed that increased cognitive flexibility is one of the benefits experienced by children who grow up in ethnic minority families in the United States given that they had to learn to negotiate the demands of the two cultural systems. In addition, Kim and Omizo (2005; 2006) examined a role of cognitive flexibility among Asian American college students, and found that acculturation and adherence to European American values were positive related to cognitive flexibility. Similarly, a study by Yakhnich and Ben-Zur (2008) implemented a structural equation modeling analysis to reveal that cognitive flexibility contributed positively to control appraisals, task-orientated coping, and level of distress among new immigrants from the Former Soviet Union who immigrated to Israel three year or less before the study was conducted.

Furthermore, Martin and his colleagues (1998) investigated cognitive flexibility among college students and found that cognitive flexibility is positively related to argumentativeness and tolerance of disagreement. They also found negative correlation between cognitive flexibility and aggressive communication traits. Similarly, Dunleavy and Martin (2006) found cognitive flexibility to be positively related to the decision-making collaboration and two of the five subscales of cognitive communication

competence (i.e., modeling cognitions and presence cognitions). Lastly, in a neurological study related to cognitive flexibility by Leber, Turk-Browne, and Chun (2008), cognitive flexibility was found to fluctuate from moment to moment and that such fluctuations can be predicted from neural activity preceding knowledge of the upcoming tasks. By using fMRI, the researchers were able to identify several regions of human brains, including the basal ganglia, anterior cingulate cortex, prefrontal cortex, and posterior parietal cortex, which could reliably predict cognitive flexibility. Vilkki (1992), and Grattan, Bloomer, Archambault and Eslinger (1994) also found cognitive flexibility to be associated to frontal lobe lesions.

The empirical findings described above offer support for the inclusion of cognitive flexibility in the proposed developmental model of MCC in this study. Based on these findings, it is predicted that cognitive flexibility would significantly predict a high level of multicultural personality, which in turn influences MCC. In other words, cognitive flexibility would have an indirect effect on MCC. As mentioned previously, three of the most essential components of the CCFTP are multicultural personality, cultural flexibility (UDO), and cognitive flexibility. These components collectively serve as a foundation to the CCFTP, which captures an understanding of multicultural personality development that emphasize how multicultural experiences significantly influence a person's cognitive and cultural flexibility. In the next section, an overall model of multicultural personality development as was proposed by Ramirez (1991) will be summarized and presented.

Model of Multicultural Personality Development

The CCFTP consists of five important components: (a) life history, (b) motivation, (c) availability of resources for development and coping, (d) multicultural patterns of behavior, and (e) development of multicultural identities. Ramirez (1991) began developing the CCFTP based on his prior research related to life history in 1978. In this research, he discovered that people who scored high in both the cultural and cognitive flex domains tend to have socialization and life experiences that were related to the development of personality flex. Specifically to socialization, they had parents and other socialization agents (e.g., teachers, employers, coaches, peers, and neighbors) whose attitudes toward diversity had been positive. Additionally, they tended to be members of different ethnic, racial, religious, regional, and socioeconomic groups. In regards to their life experiences, the level of exposure to diversity challenges, or situations in which the person had to adjust or adapt things that were accustomed to them (e.g., language, ways of relating to others, problem solving strategies, etc.), seemed to be most important in developing multicultural personality. Furthermore, people who had lived in many different cultures, communities, regions, and/or had attended schools with a diverse composition of student body and staff tended to be more flexible than those with limited exposure to these experiences. The number and type of positive and negative experiences with diversity also significantly influenced the development of flexibility. For instance, a person who had always been accepted by others different from him or herself is more likely to develop flexibility in his/her personality than a person who had been rejected or discriminated against.

The second component of CCFTP is motivation, which has a direct relationship to the life history component. According to Ramirez (1991), people who are attracted to

diversity and willing to learn from diversity when the opportunities are presented tend to have the most flexibility. Consequently, the motivation component of CCFTP seems to be reflected in a person's degree of willingness to take risks in diversity challenges. This claim was evidenced by Ramirez's prior research in 1977 that found that the person whose early history had provided him or her with positive attitudes toward diversity and with a basic foundation for multicultural development, was also the one most likely to seek diversity challenges and to benefit from these experiences.

Another important component of CCFTP is related to the nature of the availability of resources for personality development and for coping with the demands of life. Availability of resources depends on the degree of diversity (e.g., the ethnic, racial, religious, age-related, regional, socioeconomic, sexual orientation, and a few other mix) a person has come in contact. Ramirez (1991) proposed that "the more experience individuals had had with different peoples, cultures, groups...and the greater the variety of diversity challenges they had taken, the greater the size and heterogeneity of their personality resource pool" (p.25).

The fourth major component of CCFTP is concerned with patterns of behavior of individuals. More specifically, Ramirez (1991) argued that once a person had enough experiences around diversity, he or she is likely to behave like a multicultural person and to possess cultural and cognitive flexibility. Since early phases of personality development rely heavily on the person's cultural, socioeconomic, sexual, racial, religious, political, and geographical contexts in which he or she was in, adaptation to new cultural environments and situations is an important precursor to the development of multicultural personality. The adaptation one makes in new cultural environments

encourages him or her to reorganize and synthesize the resources and elements in his or her pool of resources. As a result, coping techniques and orientations to life of the person tends to become more pluralistic. This claim was supported by the research on leader behavior in ethnically mixed groups by Garza, Romero, Cox, and Ramirez (1982), who discovered that in order to achieve consensus in a group whose members are diverse, the leader must arrive at a pluralistic leadership style and a pluralistic perspective on problems which are representative of the diversity which exists in that group.

The last component of CCFTP is the development of multicultural identities. Being exposed to diversity and challenges for multicultural adaptation, a person continuously modified his or her self-picture and philosophy of life (identity), and eventually, makes a definite commitment to growth by continuing to seek such challenges. The strong commitment from this person is a reflection of his or her multicultural identity development (Ramirez, 1991). In other word, he or she no longer sees him or herself as products of any one particular culture or group. Instead, he or she expresses a strong, life-long commitment to the well-being of all people, cultures, and groups.

In applying the CCFTP to the developmental process of multicultural personality among mental health services trainees, the context in which trainees have been exposed in their lives should be emphasized. More specifically, trainees who have had more multicultural experiences early in life (e.g., had multicultural socialization agents, lived in diverse areas, etc.) are more likely to develop cognitive and cultural flexibility. In addition, they would tend to have more motivation to learn from experiences that may not be consistent with their cultural backgrounds. With strong motivation, trainees' degree of

willingness to take risks in diversity challenges would increase significantly, which would add to the trainees' overall multicultural resources that they can draw on when they encounter situations where they face with diversity challenges (i.e., providing counseling services for a client who has different cultural background from the trainees). The increasing experiences in the trainees would equate to the increase the frequency of multicultural behaviors or life style. For example, trainees would become more confident and motivated to see client from diverse backgrounds. Eventually, the identity of trainees would be transformed to be more multicultural. They would be more likely to be committed to providing mental health services that are culturally sensitive and address inequalities in the society. Later in this process, trainees would develop a strong multicultural personality that combines their multicultural resources learned from their multicultural experiences, cognitive flexibility, cultural flexibility, broader worldviews, and multicultural identities. Figure 1 summarizes this process.

Although the CCFTP (Ramirez, 1991) provides essential theoretical support for the links between multicultural experiences, cognitive flexibility, cultural flexibility and multicultural personality, it may not sufficient due to two apparent reasons. Firstly, there is very limited empirical validation of the theory. In addition, the proposed relationships between each component in the theory are somewhat ambiguous. Specifically, based on the theory, it is unclear in regards to when and how multicultural experiences may influence cognitive and cultural flexibility. Given these limitations, contact theory will be presented in order to provide additional theoretical support and clarify the relationships between multicultural experiences, cognitive flexibility, cultural flexibility and multicultural personality.

Contact Theory

The development of Contact Theory can be traced back to the time after World War II. One of the first researchers to propose the contact theory is Allport (1954). His specification of the conditions under which intergroup contact is likely to reduce has been one of the most influential approaches in social psychology for understanding the nature of intergroup relations (Molina & Wittig, 2006). According to Allport (1954), contact between individuals of different groups can lead to positive outcomes (e.g., lower prejudice, openness, empathy, etc.). This hypothesis supports a claim in the CCFTP of Ramirez (1991) that multicultural experiences or contacts would lead to the development of multicultural personality.

Nevertheless, multicultural experience or contacts itself may not be enough to allow a person's development of multicultural personality. In fact, according to Wright and Bougie (2007), simply bringing members of different groups together may be just as likely to produce negative interaction and confirm existing negative stereotypes, which is counterproductive to the development of multicultural personality. Therefore, the emphasis has been shifted to determining the conditions that may be necessary to prevent these negative effects. For example, even in the earliest articulation of the Contact Theory, Allport's (1954) initial model proposed four such conditions: (a) the members of the two groups should hold equal status within the contact situation regardless of the actual distribution of power in the wider social context, (b) contact participants would need to cooperate with each other, (c) in an effort to achieve a shared goal, and (d) the contact should be supported by local authorities, customs, and/or norms.

Although Allport's (1954) early model has contributed significantly to the literature, its assumption that attitudes and behaviors are causally connected has been heavily criticized (e.g., Clark, 1992; Farley & Frey, 1994; Hanssen, 2001). In other words, it was assumed that if attitudes were changed through the increased in contacts, behaviors changes would follow. To broaden the scope and application, contact theory should expand its focus to behavior (Emerson, et al., 2002). Similarly, recent research have begun to emphasize the emotional changes such as warmth, liking, empathy, values, and respect for the out-group members as the more powerful process that produces positive contact effects (e.g., Tropp & Pettigrew, 2005; van Dick, et al., 2004).

Based on these research findings, we propose that multicultural contact or experiences may not have the direct effect to the development of multicultural personality. Rather, multicultural experiences (Contacts) would directly affect the development of cultural flexibility (UDO) that has cognitive, behavioral, and emotional components. Cultural flexibility would then have a direct effect on the developmental of multicultural personality. In addition, we propose that cognitive flexibility would play a similar role to the cultural flexibility (UDO) in the relationship between multicultural experiences (Contacts) and multicultural personality. This hypothesis was based on the Contact Theory's most recent reformation by Pettigrew (1998). In this reformation, Pettigrew (1998) argued that individual characteristics must be considered in conjunction with characteristics of the contact setting. This argument was supported by an empirical research on student and school factors in adolescents' cross-ethnic friend nomination (Hamm, et al., 2005). Figure 2 summarizes the first part of the overall proposed model pertaining relationships between multicultural experiences (contact), cognitive flexibility,

cultural flexibility (UDO), and multicultural personality based on the CCFTP and Contact Theory.

The second part of the overall proposed model is concerning the relationship between multicultural personality and MCC. Although multicultural personality seems to be conceptually related to MCC, this relationship has not been empirically investigated. In order to provide theoretical support for the linkage between multicultural personality and MCC, the Theory of Multicultural Counseling and Therapy (MCT) will be used.

Theory of Multicultural Counseling and Therapy

The Theory of Multicultural Counseling and Therapy (MCT) was created by Sue, Ivey, and Pederson (1996) as a means to counteract the existing culture-bound, Eurocentric nature of traditional theories which are often opposed to the values and experiences of culturally diverse groups. There are a total of 6 propositions underlying MCT theory. The description of these propositions is presented in Table 1.

The MCT theory and its propositions are based on the assumption that current theories of counseling and psychotherapy are not completely suitable for the richness and complexity of culturally diverse population. Accordingly, Sue, Ivey, and Pederson (1996) are concerned that mental-health professionals may not be prepared to provide culturally appropriate mental-health services for clients from culturally diverse backgrounds. The propositions presented in Table 1 represent changes mental-health professionals should incorporate and integrate into their practices. We propose that these propositions are consistent with the definition and components of multicultural personality presented by Ramirez (1991) and van der Zee and van Oudenhoven (2001). For example, in order for a mental health practitioner to recognize that both theories of

counseling and psychotherapy developed in the Western world and those helping models indigenous to non-Western cultures are neither inherently right or wrong, good or bad (Proposition 1), he or she must have: (a) the ability to understand thoughts, behaviors, and feeling of clients who may prefer indigenous models of helping (Cultural Empathy); (b) an unprejudiced and open attitude toward indigenous form mental health services (Open-Mindedness component), (c) the ability to stay calm when client request, report, or demonstrate indigenous approaches, (d) a tendency to engage in situations where he or she can learn more about indigenous healing (Social Initiative), and (e) the ability to conceptualize indigenous approach of helping and adapt a treatment plan accordingly (Flexibility). Similar relationship can be demonstrated among other propositions of MCT theory and components of multicultural personality. Therefore, we propose that multicultural personality may be a significant precursor to multicultural counseling competence.

To summarize, this chapter has offered an extensive literature on the Multicultural Counseling Competence (MCC), the Cognitive and Cultural Flex Theory of Personality (CCFTP), Contact Theory, and Theory of Multicultural Counseling and Therapy (MCT). A review of literature on MCC revealed an importance of identifying a culturally transcendent, developmental model of MCC in order to improve multicultural training among mental health services trainees. From the CCFTP, four culturally transcendent constructs were identified: (a) multicultural experiences, (b) cultural flexibility (UDO), (c) cognitive flexibility, and (d) multicultural personality. These four constructs were placed into a developmental model leading to MCC based on the integration among the CCFTP, Contact Theory, and MCT. Figure 3 summarizes the overall proposed model

pertaining relationships between multicultural experiences (contacts), cognitive flexibility, cultural flexibility (UDO), multicultural personality, and MCC.

Appendix B

Background Information Questionnaire

Instructions: Please answer the questions below.

1. Gender:
 - a. Male
 - b. Female
 - c. Male to Female
 - d. Female to Male

2. Age: _____

3. Major:
 - a. Clinical Psychology
 - b. Counseling Psychology
 - c. Other (please specify): _____

4. Current Degree Seeking:
 - a. M.A.
 - b. M.S.
 - c. M.Ed
 - d. Ph.D.
 - e. Psy.D.
 - f. Other (please specify): _____

5. Years in program:
 - a. 1st
 - b. 2nd
 - c. 3rd
 - d. 4th
 - e. 5th
 - f. 6th
 - g. Internship year
 - h. Other (please specify): _____

6. U.S. Racial/Ethnicity or International Status:
 - a. European American
 - b. African American
 - c. Native American
 - d. Asian American
 - e. Latino/Latina American
 - f. Mixed, Bi-Racial/Ethnicity
 - g. International

- h. Other (please specify): _____
7. If you are an international student, please specify your country of origin: _____
8. How many years have you been in the U.S.? _____
9. Do you have any status of disability?
- a. Yes
 - b. No
10. Religion
- a. Buddhist
 - b. Protestant
 - c. Catholic
 - d. Hindu/Sikh
 - e. Jehovah's Witness
 - f. Jewish
 - g. Mormon/Latter-day Saints
 - h. Muslim
 - i. No religion
 - j. Other (please specify) _____
11. Sexual Orientation
- a. Heterosexual
 - b. Gay man
 - c. Lesbian woman
 - d. Bisexual
 - e. Transgender
 - f. Other (please specify): _____
12. Overall income per year from all sources of support (e.g., grants, parents, assistantships, jobs, etc.)
- a. Below \$10,000
 - b. \$10,000-\$14,999
 - c. \$15,000-\$24,999
 - d. \$25,000-\$34,999
 - e. \$35,000-\$49,999
 - f. \$50,000-\$74,999
 - g. \$75,000-\$99,999
 - h. \$100,000 Plus
13. Have you ever served as a presenter/facilitator/guest lecturer for a multicultural/diversity workshop/seminar/training/class?
- a. Yes
 - b. No

14. If yes, please estimate the number of times you have served as a presenter/facilitator/guest lecturer for a multicultural/diversity workshop/seminar/training/class: _____
15. Have you ever served as a member of multicultural/diversity research team or conducted an independent research project related to multicultural/diversity issues?
- Yes
 - No
16. If yes, please estimate the number of projects you have served as a member of multicultural/diversity research team or conducted an independent research project related to multicultural/diversity issues: _____
17. Which option reflects your overall course experience in the area of multicultural/diversity issues in counseling?
- Have never taken a course
 - Topic of multiculturalism covered in other classes
 - Have taken at least one course in multicultural issues
 - Have taken two or more multicultural courses during training
 - Other (please specify): _____
18. Please estimate the number of multicultural/diversity workshop/trainings you have attended: _____
19. Please indicate the number of years you have had direct, clinical experiences (e.g., practicum, field placement, private practices, etc.): _____
20. Please estimate proportion of racial/ethnic minority (e.g., African American, Latino/Latina American, Native American, and Asian American) clients in your overall clinical caseloads:
- Less than 5%
 - 5%-10%
 - 10%-20%
 - 20%-30%
 - 30%-40%
 - 40%-50%
 - 50%-60%
 - 60%-70%
 - More than 70%
21. Please estimate proportion of Lesbian, Gay, Bisexual, or Transgender clients in your overall clinical caseloads:
- Less than 5%
 - 5%-10%
 - 10%-20%

- d. 20%-30%
- e. 30%-40%
- f. 40%-50%
- g. 50%-60%
- h. 60%-70%
- i. More than 70%

22. Please estimate proportion of clients with disabilities in your overall clinical caseloads:

- a. Less than 5%
- b. 5%-10%
- c. 10%-20%
- d. 20%-30%
- e. 30%-40%
- f. 40%-50%
- g. 50%-60%
- h. 60%-70%
- i. More than 70%

23. Please estimate proportion of international clients (e.g., Taiwanese, Korean, Chinese, Japanese, Southeast Asians, African, etc.) in your overall clinical caseloads:

- a. Less than 5%
- b. 5%-10%
- c. 10%-20%
- d. 20%-30%
- e. 30%-40%
- f. 40%-50%
- g. 50%-60%
- h. 60%-70%
- i. More than 70%

24. Please estimate proportion of your clinical experiences (e.g., practicum, field placement, private practices, etc.) in which you addressed spiritual or religious issues with clients:

- a. Less than 5%
- b. 5%-10%
- c. 10%-20%
- d. 20%-30%
- e. 30%-40%
- f. 40%-50%
- g. 50%-60%
- h. 60%-70%
- i. More than 70%

25. Please indicate the extent to which your clinical supervision addressed issues relevant to providing services to clients from culturally diverse backgrounds:

- a. Never addressed
- b. Almost never addressed
- c. Usually addressed
- d. Almost always addressed
- e. Always addressed

26. How did you find out about this survey?

- a. Letter from researcher
- b. E-mail from researcher
- c. Department listserv
- d. Professional organization listserv
- e. Other (please specify): _____

27. Please provide us with your e-mail or U.S. mailing address, if you're willing to participate in a follow-up of this study:

28. Please provide any comments or feedbacks for the researchers:

Appendix C

Multicultural Experience Inventory (MEI; adapted)

Instructions: Please choose the number of the response that best describe your past and present behaviors:

- 1= All members of my ethnic/racial group
- 2= Mostly of my own ethnic/racial group
- 3= Half of my own and half of other groups
- 4= Mostly members of other ethnic/racial groups than mine
- 5= All members of other ethnic/racial groups than mine

1. The ethnic composition of the neighborhoods in which I lived
 - (a) before I started attending school...
 - (b) while I attended elementary school...
 - (c) while I attended middle school...
 - (d) while I attended high school...
2. My childhood friends who visited my home and related well to my parents were...
3. The teachers and counselors with whom I have had the closest relationships have been...
4. The people who have most influenced me in my education have been...
5. In high school, my close friends were...
6. The ethnic backgrounds of the people I have dated have been...
7. In the job(s) I have had, my close friends have been...
8. The people with whom I have established close, meaningful relationships have been...
9. At present, my close friends are...
10. My close friends at work are (were)...
11. I enjoy going to gathering at which the people are...
12. When I study or work on a project with others, I am usually with persons who are...
13. When I am involved in group discussions where I am expected to participate, I prefer a group of people who are...
14. I am active in organizations or social groups in which the majority of the members are...

15. When I am with my friends, I usually attend functions where the people are...
16. When I discuss personal problems or issues, I discuss them with people who are...
17. I most often spend time with people who are...

Appendix D

Miville-Guzman Universality-Diversity Scale-Short (M-GUDS-S)

The following items are made up of statements using several terms, which are defined below for you. Please refer to them throughout the rest of the questionnaire.

Culture refers to the beliefs, values, traditions, ways of behaving, and language of any social group. A social group may be racial, ethnic, religious, etc.

Race or racial background refers to specific social groups sharing possessing common physical or genetic characteristics. Examples include White, Black, and American Indian.

Ethnicity or ethnic group refers to specific social groups sharing a unique cultural heritage (i.e., customs, beliefs, language, etc.). Two people can be of the same race (e.g., White), but be from different ethnic groups (e.g., Irish-American, Italian American).

Country refers to groups that have been politically defined; people from these groups belong to the same government (e.g., France, Ethiopia, United States). People of different races (White, Black, Asian) or ethnicities (Italian, Japanese) can be from the same country (United States).

Instructions: Please indicate how descriptive each statement is of you by **selecting a number** corresponding to your response. This is not a test, so there are no right or wrong, good or bad answers.

- 1= Strongly disagree
- 2= Disagree
- 3= Disagree a little bit
- 4= Agree a little bit
- 5= Agree
- 6= Strongly agree

1. I would like to join an organization that emphasizes getting to know people from different countries.
2. Persons with disabilities can teach me things I could not learn elsewhere.
3. Getting to know someone of another race is generally an uncomfortable experience for me.
4. I would like to go to dances that feature music from other countries.
5. I can best understand someone after I get to know how he/she is both similar and different from me.
6. I am only at ease with people of my race.

7. I often listen to music of other cultures.
8. Knowing how a person differs from me greatly enhances our friendship.
9. It's really hard for me to feel close to a person from another race.
10. I am interested in learning about the many cultures that have existed in this world.
11. In getting to know someone, I like knowing both how he/she differs from me and is similar to me.
12. It is very important that a friend agrees with me on most issues.
13. I attend events where I might get to know people from different racial backgrounds.
14. Knowing about the different experiences of other people helps me understand my own problems better.
15. I often feel irritated by persons of a different race.

Appendix E

Cognitive Flexibility Scale (CFS)

Instructions: The following statements deal with your beliefs and feelings about your own behavior. Read each statement and respond by **selecting the number** that best represents your agreement with each statement.

- 1= Strongly disagree
- 2= Disagree
- 3= Disagree a little bit
- 4= Agree a little bit
- 5= Agree
- 6= Strongly agree

1. I can communicate an idea in many different ways.
2. I avoid new and unusual situations.
3. I feel like I never get to make decisions.
4. I can find workable solutions to seemingly unsolvable problems.
5. I seldom have choices when deciding how to behave.
6. I am willing to work at creative solutions to problems.
7. In any given situations, I am able to act appropriately.
8. My behavior is a result of conscious decisions that I make.
9. I have many possible ways of behaving in any given situation.
10. I have difficulty using my knowledge on a given topic in real life situations.
11. I am willing to listen and consider alternatives for handling a problem.
12. I have the self-confidence necessary to try different ways of behaving.

Appendix F

Multicultural Personality Questionnaire (MPQ)

Adapted for U.S. Administration

Instructions: Please circle the answer that is most applicable to you.

To what extent do the following statements apply to you?

- 1= Totally not applicable
- 2= Hardly applicable
- 3= Moderately applicable
- 4= Largely applicable
- 5= Completely applicable

1. Doesn't mind minimal accommodations when vacationing
2. Takes initiatives
3. Is nervous
4. Makes contacts easily
5. Is not easily hurt
6. Suffers from conflicts with others
7. Finds it difficult to make contacts
8. Understands other people's feelings
9. Is reserved
10. Is interested in other cultures
11. Shies away from adventure
12. Changes easily from one activity to another
13. Is fascinated by other people's opinions

14. Tries to understand other people's behavior
15. Is afraid to fail
16. Avoids surprises
17. Takes other people's habits into consideration
18. Is inclined to speak out
19. Likes to work on his/her own
20. Is looking for new ways to attain his/her goal
21. Dislikes travelling
22. Wants to know exactly what will happen
23. Keeps calm when things don't go well
24. Leaves the initiative to others to make contacts
25. Takes the lead
26. Is a slow starter
27. Is curious
28. Takes it for granted that things will turn out right
29. Is always busy
30. Is easy-going among groups
31. Finds it hard to empathize with others
32. Functions best in a familiar setting
33. Has a calming influence on others
34. Easily approaches other people

35. Finds other religions interesting
36. Considers problems solvable
37. Works mostly according to a strict scheme
38. Is timid
39. Knows how to act in social settings
40. Likes to speak in public
41. Tends to wait and see
42. Feels uncomfortable in a different culture
43. Works according to plan
44. Is under pressure
45. Sympathizes with others
46. Has problems assessing relationships
47. Likes action
48. Is often the driving force behind things
49. Leaves things as they are
50. Likes routine
51. Is attentive to facial expressions
52. Can put setbacks in a perspective
53. Is sensitive to criticism
54. Tries out various approaches
55. Has ups and downs

56. Has fixed habits
57. Forgets setbacks easily
58. Is intrigued by differences
59. Starts a new life easily
60. Asks personal questions
61. Enjoys other people's stories
62. Gets involved in other cultures
63. Remembers what other people have told
64. Is able to voice other people's thoughts
65. Is self-confident
66. Has a feeling for what is appropriate in a specific culture
67. Gets upset easily
68. Is a good listener
69. Worries
70. Notices when someone is in trouble
71. Has an insight into human nature
72. Is apt to feel lonely
73. Seeks contact with people from a different background
74. Has a broad range of interests
75. Is insecure
76. Has a solution for every problem

77. Puts his or her own culture in a perspective
78. Is open to new ideas
79. Is fascinated by new technological developments
80. Senses when others get irritated
81. Likes to imagine solutions for problems
82. Sets others at ease
83. Works according to strict rules
84. Is a trendsetter in societal developments
85. Has a need for change
86. Pays attention to the emotions of others
87. Reads a lot
88. Seeks challenges
89. Enjoys getting to know others profoundly
90. Enjoys unfamiliar experiences
91. Looks for regularity in life

Appendix G

California Brief Multicultural Competence Scale (CBMCS)

Instructions: Below is a list of statements dealing with multicultural issues within a mental health context. Please indicate the degree to which you agree with each statement by circling the appropriate number.

1= Strongly disagree

2= Disagree

3= Agree

4= Strongly agree

1. I am aware that being born a minority in this society brings with it certain challenges that White people do not have to face.
2. I am aware of how my own values might affect my client.
3. I have an excellent ability to assess, accurately, the mental health needs of persons with disabilities.
4. I am aware of institutional barriers that affect the client.
5. I have an excellent ability to assess, accurately, the mental health needs of lesbians.
6. I have an excellent ability to assess, accurately, the mental health needs of older adults.
7. I have an excellent ability to identify the strengths and weaknesses of psychological tests in terms of their use with persons from different cultural, racial and/or ethnic backgrounds.
8. I am aware that counselors frequently impose their own cultural values upon minority clients.
9. My communication skills are appropriate for my clients.
10. I am aware that being born a White person in this society carries with it certain advantages.
11. I am aware of how my cultural background and experiences have influenced my attitudes about psychological processes.
12. I have an excellent ability to critique multicultural research.
13. I have an excellent ability to assess, accurately, the mental health needs of men.

14. I am aware of institutional barriers that may inhibit minorities from using mental health services.
15. I can discuss, within a group, the differences among ethnic groups (e.g. low socioeconomic status (SES), Puerto Rican client vs. high SES Puerto Rican client).
16. I can identify my reactions that are based on stereotypical beliefs about different ethnic groups.
17. I can discuss research regarding mental health issues and culturally different populations.
18. I have an excellent ability to assess, accurately, the mental health needs of gay men.
19. I am knowledgeable of acculturation models for various ethnic minority groups.
20. I have an excellent ability to assess, accurately, the mental health needs of women.
21. I have an excellent ability to assess, accurately, the mental health needs of persons who come from very poor socioeconomic backgrounds.

Appendix H

Invitation Letter

Dear Fellow Graduate Student,

My name is Adipat (Andy) Chaichanasakul, a trainee at the University of Missouri-Columbia. You may already know that very little attention has been paid in understanding multicultural counseling/therapy readiness among psychological trainees. I am specifically contacting you because so often our voices and experiences are not represented in research. I am seeking your support and help to include the voices and experiences of psychological trainees.

How can you help? Under the supervision of Dr. Lisa Flores, I am conducting an online survey designed specifically for psychological trainees. My university has already approved this study. Please visit [web address] for more information and consider participating in this study at your earliest convenience. You can withdraw from the study at any time. No personally identifying information will be requested. As an incentive to participate, there will be a random drawing of those who submit e-mail addresses upon the online prompt: first, second and third place winners will receive cash prizes of respectively, \$100, \$50, and \$50.

I would like to take this opportunity to thank you for your help and support. I sincerely appreciate your time and consideration. If you would like to discuss any aspect of this study, especially if you have any hesitation in participating, please feel free to contact me directly by e-mail at ac34c@mizzou.edu.

Best Regards,

Adipat (Andy) Chaichanasakul
Psychological Trainee
University of Missouri-Columbia

Appendix I

Informed Consent Form

This research study focuses on multicultural counseling/therapy readiness among psychological trainees. The purpose of this study is to examine factors that may influence multicultural counseling competence. To this end, we wish for you to genuinely respond to the questions we ask in this study.

This process consists of responding to several questions on a survey. It will take approximately 30-45 minutes to complete this process. As an incentive to participate, there will be a random drawing of those who submit e-mail addresses upon the online prompt: first, second and third place winners will receive cash prizes of respectively, \$100, \$50, and \$50.

Prior to assisting us with this study, it is important that you read and understand the following statements:

- Your participation in this research is VOLUNTARY. You are not required to answer every question that might be asked. This means that you are **free to stop participating at any point** without penalty or loss of privilege, except for benefits directly related to your participation in this study.
- All participant responses will be completely ANONYMOUS. In order to assure anonymity, please **do not put your name (or any other identifying information) anywhere on the accompanying questionnaires**. It is our hope that a guarantee of ANONYMITY will increase your willingness to respond to the questionnaire in a frank and forthcoming manner.
- Because this research is ANONYMOUS, you will not be identified in any presentation or publication of this research. All information you provide will be combined with the data from other respondents and reported as aggregated data.
- In order to assure ANONYMITY, while at the same time facilitating efforts to obtain an accurate, high quality data set, the following procedures have been developed:
 - There are no codes or any other information contained on the questionnaire or any other materials associated with it that identifies you as an individual respondent to this survey.
 - If you wish to participate in the drawing for cash prizes, the email address you submit after completing the questionnaires will not be linked to your individual questionnaire responses. The email address will be combined with others in a separate and secure composite list, from which the winners will be randomly selected.

- In order to ensure that our data does not include duplications or multiple submissions from the same individual, we will retrieve and record the IP address of each computer from which data is submitted, along with a time/date stamp that records when the data was submitted. The IP address and time/date stamp information will serve only to identify duplicate or multiple submissions. Although it is conceivable that the IP address could be used to gain access to the identity of individual respondents, the information WILL NOT be used in this way. In addition, this is a highly unlikely scenario, and one that is not intended by the research investigators.

- You have the right to be informed of all potential risks associated with your participation in this research. The questions in this research do not pose any immediate risk or harm to you as a participant. You may benefit from participating in this study by learning more about your multicultural counseling competence and factors related to it. To insure that your responses to this study are not viewed by another person, please do the following:
 - There is a possibility that your responses could be viewed by an outside party if you do not EXIT/CLOSE your Internet browser (e.g., Netscape Navigator, Internet Explorer, etc.) as soon as you finish responding to the questionnaire because your responses might be visible if you (or someone else) click the BACK button on the browser. In order to ELIMINATE this possibility, you should EXIT/CLOSE the browser as soon as you finish responding to the survey and have submitted your responses.
 - There is a possibility that your responses could be viewed by an outside party if you leave your browser on and leave the computer terminal before finishing the questionnaire (e.g., answer the phone, leave the computer unattended, etc.). In order to avoid inadvertent access to your responses by a third party, do not leave the terminal or stop responding to the questionnaire until you have completely finished and closed the browser.

You have the right to have any questions about the research answered. Please direct any questions to the following individuals:

Adipat (Andy) Chaichanasakul, M.A.

ac34c@mizzou.edu
Department of Educational and Counseling Psychology
16 Hill Hall
University of Missouri-Columbia
Columbia, MO 65211

Lisa Y. Flores, Ph.D.
floresly@missouri.edu
Department of Educational and Counseling Psychology
16 Hill Hall
University of Missouri-Columbia
Columbia, MO 65211

For additional information regarding human participation in research, please feel free to contact the UMC Campus IRB Office at 573-882-9585.

I have read and understood the information above, and agree to participate.

Appendix J

Debriefing Form

Thank you for your conscientious participation in today's study. All the information we collected in today's study will be completely confidential, and there will be no way of identifying your responses in the data archive. We are not interested in any one individual's responses; rather, we want to look at the general patterns that emerge when the data are aggregated together.

Your participation today will help psychologists discover the relationship between the multicultural experiences and competence level of psychological trainees. We ask that you do not discuss the nature of this experiment with others who may later participate in it, as this could affect the validity of our research conclusions.

Please feel free to contact us, if you have any questions about this process. Furthermore, you may request a summary of the results at the end of this process by sending an e-mail to ac34c@mizzou.edu. We also hope to publish this research and use it to guide efforts to enhance multicultural counseling training. Your willingness to participate has been an invaluable contribution to this effort. Again, thank you.

Researcher Contact Information:

Adipat (Andy) Chaichanasakul, M.A.
ac34c@mizzou.edu
Department of Educational and Counseling Psychology
16 Hill Hall
University of Missouri-Columbia
Columbia, MO 65211

Lisa Y. Flores, Ph.D.
floresly@missouri.edu
Department of Educational and Counseling Psychology
16 Hill Hall
University of Missouri-Columbia
Columbia, MO 65211

Appendix K

E-mail Invitation

Dear [name of training director or listserv moderator],

My name is Adipat (Andy) Chaichanasakul, a psychological trainee at the University of Missouri-Columbia. You may already know that very little attention has been paid in understanding multicultural counseling/therapy readiness among psychological trainees. I am seeking your support and help to include the voices and experiences of masters and doctoral level psychological trainees.

Under the supervision of Dr. Lisa Flores, I am conducting an online survey designed specifically for psychological trainees. My university has already approved this study. At your earliest convenience, could you please forward this email along with the attachment document to masters and doctoral level trainees in your program?

I would like to take this opportunity to thank you for your help and support. I sincerely appreciate your time and consideration. If you would like to discuss any aspect of this study, especially if you have any hesitation in participating, please feel free to contact me directly by e-mail at ac34c@mizzou.edu.

Best Regards,

Adipat (Andy) Chaichanasakul
Psychological Trainee
University of Missouri-Columbia

Appendix L

AMOS Outputs

Proposed Model:

Notes for Group (Group number 1)

The model is recursive.

Sample size = 316

Variable Summary (Group number 1)

Your model contains the following variables (Group number 1)

Observed, endogenous variables

CBMCStotal

MPQTotal

UDOtotal

CFStotal

Observed, exogenous variables

MEItotal

Unobserved, exogenous variables

D4

D1

D2

D3

Variable counts (Group number 1)

Number of variables in your model: 9

Number of observed variables: 5

Number of unobserved variables: 4

Number of exogenous variables: 5

Number of endogenous variables: 4

Parameter summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	4	0	0	0	0	4
Labeled	0	0	0	0	0	0
Unlabeled	5	0	5	0	0	10
Total	9	0	5	0	0	14

Sample Moments (Group number 1)

Sample Covariances (Group number 1)

	MEItotal	CFStotal	UDOtotal	MPQTotal	CBMCStotal
MEItotal	200.610				
CFStotal	7.032	25.347			
UDOtotal	32.778	13.356	51.547		

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MPQTotal	47.184	97.665	106.407	918.533	
CBMCStotal	12.861	13.464	19.925	106.366	58.548

Condition number = 65.739
Eigenvalues
958.836 201.772 47.627 31.765 14.585
Determinant of sample covariance matrix = 4268969929.260

Sample Correlations (Group number 1)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	1.000				
CFStotal	.099	1.000			
UDOttotal	.322	.370	1.000		
MPQTotal	.110	.640	.489	1.000	
CBMCStotal	.119	.350	.363	.459	1.000

Condition number = 7.348
Eigenvalues
2.421 1.027 .676 .547 .329

Models

Default model (Default model)

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 15
Number of distinct parameters to be estimated: 10
Degrees of freedom (15 - 10): 5

Result (Default model)

Minimum was achieved
Chi-square = 56.098
Degrees of freedom = 5
Probability level = .000

Group number 1 (Group number 1 - Default model)

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P Label
UDOttotal	<--- MEItotal	.163	.027	6.043	***
CFStotal	<--- MEItotal	.035	.020	1.759	.079

		Estimate	S.E.	C.R.	P Label
MPQTotal	<--- UDOtotal	1.234	.171	7.218	***
MPQTotal	<--- CFStotal	3.203	.244	13.132	***
CBMCStotal	<--- MPQTotal	.116	.013	8.666	***

Standardized Regression Weights: (Group number 1 - Default model)

		Estimate
UDOtotal	<--- MEItotal	.322
CFStotal	<--- MEItotal	.099
MPQTotal	<--- UDOtotal	.309
MPQTotal	<--- CFStotal	.562
CBMCStotal	<--- MPQTotal	.439

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P Label
MEItotal	200.610	15.985	12.550	***
D1	46.191	3.681	12.550	***
D2	25.101	2.000	12.550	***
D3	474.393	37.801	12.550	***
D4	46.231	3.684	12.550	***

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
CFStotal	.010
UDOtotal	.104
MPQTotal	.423
CBMCStotal	.193

Matrices (Group number 1 - Default model)

Implied (for all variables) Covariances (Group number 1 - Default model)

	MEItotal	CFStotal	UDOtotal	MPQTotal	CBMCStotal
MEItotal	200.610				
CFStotal	7.032	25.347			
UDOtotal	32.778	1.149	51.547		
MPQTotal	62.985	82.596	67.311	822.010	
CBMCStotal	7.294	9.565	7.795	95.189	57.253

Implied (for all variables) Correlations (Group number 1 - Default model)

	MEItotal	CFStotal	UDOtotal	MPQTotal	CBMCStotal
MEItotal	1.000				
CFStotal	.099	1.000			

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
UDOttotal	.322	.032	1.000		
MPQTotal	.155	.572	.327	1.000	
CBMCStotal	.068	.251	.143	.439	1.000

Implied Covariances (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	200.610				
CFStotal	7.032	25.347			
UDOttotal	32.778	1.149	51.547		
MPQTotal	62.985	82.596	67.311	822.010	
CBMCStotal	7.294	9.565	7.795	95.189	57.253

Implied Correlations (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	1.000				
CFStotal	.099	1.000			
UDOttotal	.322	.032	1.000		
MPQTotal	.155	.572	.327	1.000	
CBMCStotal	.068	.251	.143	.439	1.000

Residual Covariances (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	.000				
CFStotal	.000	.000			
UDOttotal	.000	12.207	.000		
MPQTotal	-15.801	15.069	39.096	96.523	
CBMCStotal	5.567	3.900	12.130	11.177	1.294

Standardized Residual Covariances (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	.000				
CFStotal	.000	.000			
UDOttotal	.000	5.991	.000		
MPQTotal	-.682	1.608	3.204	1.474	
CBMCStotal	.920	1.762	3.923	.837	.284

Total Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal
CFStotal	.035	.000	.000	.000
UDOttotal	.163	.000	.000	.000
MPQTotal	.314	3.203	1.234	.000

	MEItotal	CFStotal	UDOtotal	MPQTotal
CBMCStotal	.036	.371	.143	.116

Standardized Total Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOtotal	MPQTotal
CFStotal	.099	.000	.000	.000
UDOtotal	.322	.000	.000	.000
MPQTotal	.155	.562	.309	.000
CBMCStotal	.068	.247	.136	.439

Direct Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOtotal	MPQTotal
CFStotal	.035	.000	.000	.000
UDOtotal	.163	.000	.000	.000
MPQTotal	.000	3.203	1.234	.000
CBMCStotal	.000	.000	.000	.116

Standardized Direct Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOtotal	MPQTotal
CFStotal	.099	.000	.000	.000
UDOtotal	.322	.000	.000	.000
MPQTotal	.000	.562	.309	.000
CBMCStotal	.000	.000	.000	.439

Indirect Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOtotal	MPQTotal
CFStotal	.000	.000	.000	.000
UDOtotal	.000	.000	.000	.000
MPQTotal	.314	.000	.000	.000
CBMCStotal	.036	.371	.143	.000

Standardized Indirect Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOtotal	MPQTotal
CFStotal	.000	.000	.000	.000
UDOtotal	.000	.000	.000	.000
MPQTotal	.155	.000	.000	.000
CBMCStotal	.068	.247	.136	.000

Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

	M.I.	Par Change
D1 <--> D2	40.487	12.207

M.I. Par Change
D4 <--> D1 6.032 6.395

Variances: (Group number 1 - Default model)

M.I. Par Change

Regression Weights: (Group number 1 - Default model)

M.I. Par Change

CFStotal <--- UDOtotal 36.280 .237
UDOtotal <--- CFStotal 40.093 .482
CBMCStotal <--- UDOtotal 7.641 .147

Minimization History (Default model)

Iteration	Negative eigenvalues	Condition #	Smallest eigenvalue	Diameter	F	NTries	Ratio
0 e	0	124.876		9999.000	267.799	0	9999.000
1 e	0	73.872		.814	218.025	6	.000
2 e	0	15.474		.795	154.770	1	.450
3 e	0	7.081		.213	75.526	1	1.215
4 e	0	5.532		.136	58.122	1	1.177
5 e	0	5.309		.067	56.148	1	1.094
6 e	0	5.356		.013	56.098	1	1.021
7 e	0	5.343		.000	56.098	1	1.001

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	10	56.098	5	.000	11.220
Saturated model	15	.000	0		
Independence model	5	376.269	10	.000	37.627

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	28.037	.936	.807	.312
Saturated model	.000	1.000		
Independence model	49.293	.643	.464	.429

Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	.851	.702	.862	.721	.860
Saturated model	1.000		1.000		1.000

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.500	.425	.430
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	51.098	30.630	79.019
Saturated model	.000	.000	.000
Independence model	366.269	306.545	433.411

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.178	.162	.097	.251
Saturated model	.000	.000	.000	.000
Independence model	1.195	1.163	.973	1.376

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.180	.139	.224	.000
Independence model	.341	.312	.371	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	76.098	76.486	113.655	123.655
Saturated model	30.000	30.583	86.336	101.336
Independence model	386.269	386.464	405.048	410.048

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.242	.177	.330	.243
Saturated model	.095	.095	.095	.097
Independence model	1.226	1.037	1.439	1.227

HOELTER

Model	HOELTER	HOELTER
Default model	.05	.01
Default model	63	85

	HOELTER	HOELTER
Model	.05	.01
Independence model	16	20

Revised Model:

Notes for Group (Group number 1)

The model is recursive.

Sample size = 316

Variable Summary (Group number 1)

Your model contains the following variables (Group number 1)

Observed, endogenous variables

CBMCStotal

MPQTotal

UDOtotal

CFStotal

Observed, exogenous variables

MEItotal

Unobserved, exogenous variables

D4

D1

D2

D3

Variable counts (Group number 1)

Number of variables in your model: 9

Number of observed variables: 5

Number of unobserved variables: 4

Number of exogenous variables: 5

Number of endogenous variables: 4

Parameter summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	4	0	0	0	0	4
Labeled	0	0	0	0	0	0
Unlabeled	5	1	5	0	0	11
Total	9	1	5	0	0	15

Sample Moments (Group number 1)

Sample Covariances (Group number 1)

	MEItotal	CFStotal	UDOtotal	MPQTotal	CBMCStotal
MEItotal	200.610				
CFStotal	7.032	25.347			

	MEItotal	CFStotal	UDOtotal	MPQTotal	CBMCStotal
UDOtotal	32.778	13.356	51.547		
MPQTotal	47.184	97.665	106.407	918.533	
CBMCStotal	12.861	13.464	19.925	106.366	58.548

Condition number = 65.739
Eigenvalues
958.836 201.772 47.627 31.765 14.585
Determinant of sample covariance matrix = 4268969929.260

Sample Correlations (Group number 1)

	MEItotal	CFStotal	UDOtotal	MPQTotal	CBMCStotal
MEItotal	1.000				
CFStotal	.099	1.000			
UDOtotal	.322	.370	1.000		
MPQTotal	.110	.640	.489	1.000	
CBMCStotal	.119	.350	.363	.459	1.000

Condition number = 7.348
Eigenvalues
2.421 1.027 .676 .547 .329

Models

Default model (Default model)

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 15
Number of distinct parameters to be estimated: 11
Degrees of freedom (15 - 11): 4

Result (Default model)

Minimum was achieved
Chi-square = 12.763
Degrees of freedom = 4
Probability level = .012

Group number 1 (Group number 1 - Default model)

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P Label
UDOtotal	<--- MEItotal	.163	.027	6.043	***

		Estimate	S.E.	C.R.	P Label
CFStotal	<--- MEItotal	.035	.020	1.759	.079
MPQTotal	<--- UDOtotal	1.234	.184	6.711	***
MPQTotal	<--- CFStotal	3.203	.262	12.209	***
CBMCStotal	<--- MPQTotal	.116	.013	9.161	***

Standardized Regression Weights: (Group number 1 - Default model)

		Estimate
UDOtotal	<--- MEItotal	.322
CFStotal	<--- MEItotal	.099
MPQTotal	<--- UDOtotal	.292
MPQTotal	<--- CFStotal	.532
CBMCStotal	<--- MPQTotal	.459

Covariances: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P Label
D1 <--> D2		12.207	2.038	5.990	***

Correlations: (Group number 1 - Default model)

		Estimate
D1 <--> D2		.359

Variances: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P Label
MEItotal		200.610	15.985	12.550	***
D1		46.191	3.681	12.550	***
D2		25.101	2.000	12.550	***
D3		474.393	37.801	12.550	***
D4		46.231	3.684	12.550	***

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
CFStotal	.010
UDOtotal	.104
MPQTotal	.484
CBMCStotal	.210

Matrices (Group number 1 - Default model)

Implied (for all variables) Covariances (Group number 1 - Default model)

	MEItotal	CFStotal	UDOtotal	MPQTotal	CBMCStotal
MEItotal	200.610				
CFStotal	7.032	25.347			

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
UDOttotal	32.778	13.356	51.547		
MPQTotal	62.985	97.665	106.407	918.533	
CBMCStotal	7.294	11.310	12.322	106.366	58.548

Implied (for all variables) Correlations (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	1.000				
CFStotal	.099	1.000			
UDOttotal	.322	.370	1.000		
MPQTotal	.147	.640	.489	1.000	
CBMCStotal	.067	.294	.224	.459	1.000

Implied Covariances (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	200.610				
CFStotal	7.032	25.347			
UDOttotal	32.778	13.356	51.547		
MPQTotal	62.985	97.665	106.407	918.533	
CBMCStotal	7.294	11.310	12.322	106.366	58.548

Implied Correlations (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	1.000				
CFStotal	.099	1.000			
UDOttotal	.322	.370	1.000		
MPQTotal	.147	.640	.489	1.000	
CBMCStotal	.067	.294	.224	.459	1.000

Residual Covariances (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	.000				
CFStotal	.000	.000			
UDOttotal	.000	.000	.000		
MPQTotal	-15.801	.000	.000	.000	
CBMCStotal	5.567	2.155	7.603	.000	.000

Standardized Residual Covariances (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	.000				
CFStotal	.000	.000			
UDOttotal	.000	.000	.000		

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MPQTotal	-.646	.000	.000	.000	
CBMCStotal	.910	.953	2.397	.000	.000

Total Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal
CFStotal	.035	.000	.000	.000
UDOttotal	.163	.000	.000	.000
MPQTotal	.314	3.203	1.234	.000
CBMCStotal	.036	.371	.143	.116

Standardized Total Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal
CFStotal	.099	.000	.000	.000
UDOttotal	.322	.000	.000	.000
MPQTotal	.147	.532	.292	.000
CBMCStotal	.067	.244	.134	.459

Direct Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal
CFStotal	.035	.000	.000	.000
UDOttotal	.163	.000	.000	.000
MPQTotal	.000	3.203	1.234	.000
CBMCStotal	.000	.000	.000	.116

Standardized Direct Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal
CFStotal	.099	.000	.000	.000
UDOttotal	.322	.000	.000	.000
MPQTotal	.000	.532	.292	.000
CBMCStotal	.000	.000	.000	.459

Indirect Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal
CFStotal	.000	.000	.000	.000
UDOttotal	.000	.000	.000	.000
MPQTotal	.314	.000	.000	.000
CBMCStotal	.036	.371	.143	.000

Standardized Indirect Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal
CFStotal	.000	.000	.000	.000

	MEItotal	CFStotal	UDOttotal	MPQTotal
UDOttotal	.000	.000	.000	.000
MPQTotal	.147	.000	.000	.000
CBMCStotal	.067	.244	.134	.000

Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

M.I. Par Change

D4 <--> D1 5.070 5.473

Variances: (Group number 1 - Default model)

M.I. Par Change

Regression Weights: (Group number 1 - Default model)

M.I. Par Change

CBMCStotal <--- UDOtotal 7.641 .147

Minimization History (Default model)

Iteration	Negative eigenvalues	Condition #	Smallest eigenvalue	Diameter	F	NTries	Ratio
0 e	0	119.437		9999.000	267.799	0	9999.000
1 e	0	97.416		.816	209.286	6	.000
2 e	0	40.805		.662	159.537	2	.000
3 e	0	16.493		.230	48.931	1	1.239
4 e	0	9.533		.134	18.005	1	1.205
5 e	0	6.935		.069	12.998	1	1.125
6 e	0	6.820		.019	12.764	1	1.039
7 e	0	6.929		.001	12.763	1	1.003
8 e	0	6.833		.000	12.763	1	1.000

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	11	12.763	4	.012	3.191
Saturated model	15	.000	0		
Independence model	5	376.269	10	.000	37.627

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	4.783	.984	.941	.262
Saturated model	.000	1.000		
Independence model	49.293	.643	.464	.429

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.966	.915	.976	.940	.976
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.400	.386	.390
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	8.763	1.518	23.568
Saturated model	.000	.000	.000
Independence model	366.269	306.545	433.411

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.041	.028	.005	.075
Saturated model	.000	.000	.000	.000
Independence model	1.195	1.163	.973	1.376

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.083	.035	.137	.114
Independence model	.341	.312	.371	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	34.763	35.190	76.076	87.076
Saturated model	30.000	30.583	86.336	101.336
Independence model	386.269	386.464	405.048	410.048

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.110	.087	.157	.112
Saturated model	.095	.095	.095	.097
Independence model	1.226	1.037	1.439	1.227

HOELTER

Model	HOELTER	HOELTER
	.05	.01
Default model	235	328
Independence model	16	20

Alternative Model:

Group number 1 (Group number 1)

Notes for Group (Group number 1)

The model is recursive.

Sample size = 316

Variable Summary (Group number 1)

Your model contains the following variables (Group number 1)

Observed, endogenous variables

CBMCStotal

MPQTotal

UDOtotal

CFStotal

Observed, exogenous variables

MEItotal

Unobserved, exogenous variables

D4

D1

D2

D3

Variable counts (Group number 1)

Number of variables in your model: 9

Number of observed variables: 5

Number of unobserved variables: 4

Number of exogenous variables: 5

Number of endogenous variables: 4

Parameter summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	4	0	0	0	0	4
Labeled	0	0	0	0	0	0
Unlabeled	6	0	5	0	0	11
Total	10	0	5	0	0	15

Sample Moments (Group number 1)

Sample Covariances (Group number 1)

	MEItotal	CFStotal	UDOfotal	MPQTotal	CBMCStotal
MEItotal	200.610				
CFStotal	7.032	25.347			
UDOfotal	32.778	13.356	51.547		
MPQTotal	47.184	97.665	106.407	918.533	
CBMCStotal	12.861	13.464	19.925	106.366	58.548

Condition number = 65.739
 Eigenvalues
 958.836 201.772 47.627 31.765 14.585
 Determinant of sample covariance matrix = 4268969929.260

Sample Correlations (Group number 1)

	MEItotal	CFStotal	UDOfotal	MPQTotal	CBMCStotal
MEItotal	1.000				
CFStotal	.099	1.000			
UDOfotal	.322	.370	1.000		
MPQTotal	.110	.640	.489	1.000	
CBMCStotal	.119	.350	.363	.459	1.000

Condition number = 7.348
 Eigenvalues
 2.421 1.027 .676 .547 .329

Models**Default model (Default model)****Notes for Model (Default model)****Computation of degrees of freedom (Default model)**

Number of distinct sample moments: 15
 Number of distinct parameters to be estimated: 11
 Degrees of freedom (15 - 11): 4

Result (Default model)

Minimum was achieved
 Chi-square = 12.763
 Degrees of freedom = 4
 Probability level = .012

Group number 1 (Group number 1 - Default model)**Estimates (Group number 1 - Default model)****Scalar Estimates (Group number 1 - Default model)****Maximum Likelihood Estimates****Regression Weights: (Group number 1 - Default model)**

		Estimate	S.E.	C.R.	P Label
CFStotal	<--- MEItotal	.035	.020	1.759	.079
UDOtotal	<--- MEItotal	.146	.025	5.770	***
UDOtotal	<--- CFStotal	.486	.071	6.816	***
MPQTotal	<--- UDOtotal	1.234	.184	6.711	***
MPQTotal	<--- CFStotal	3.203	.262	12.209	***
CBMCStotal	<--- MPQTotal	.116	.013	9.161	***

Standardized Regression Weights: (Group number 1 - Default model)

		Estimate
CFStotal	<--- MEItotal	.099
UDOtotal	<--- MEItotal	.289
UDOtotal	<--- CFStotal	.341
MPQTotal	<--- UDOtotal	.292
MPQTotal	<--- CFStotal	.532
CBMCStotal	<--- MPQTotal	.459

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P Label
MEItotal	200.610	15.985	12.550	***
D2	25.101	2.000	12.550	***
D1	40.254	3.208	12.550	***
D3	474.393	37.801	12.550	***
D4	46.231	3.684	12.550	***

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
CFStotal	.010
UDOtotal	.219
MPQTotal	.484
CBMCStotal	.210

Matrices (Group number 1 - Default model)

Implied (for all variables) Covariances (Group number 1 - Default model)

	MEItotal	CFStotal	UDOtotal	MPQTotal	CBMCStotal
MEItotal	200.610				
CFStotal	7.032	25.347			
UDOtotal	32.778	13.356	51.547		
MPQTotal	62.985	97.665	106.407	918.533	
CBMCStotal	7.294	11.310	12.322	106.366	58.548

Implied (for all variables) Correlations (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	1.000				
CFStotal	.099	1.000			
UDOttotal	.322	.370	1.000		
MPQTotal	.147	.640	.489	1.000	
CBMCStotal	.067	.294	.224	.459	1.000

Implied Covariances (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	200.610				
CFStotal	7.032	25.347			
UDOttotal	32.778	13.356	51.547		
MPQTotal	62.985	97.665	106.407	918.533	
CBMCStotal	7.294	11.310	12.322	106.366	58.548

Implied Correlations (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	1.000				
CFStotal	.099	1.000			
UDOttotal	.322	.370	1.000		
MPQTotal	.147	.640	.489	1.000	
CBMCStotal	.067	.294	.224	.459	1.000

Residual Covariances (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	.000				
CFStotal	.000	.000			
UDOttotal	.000	.000	.000		
MPQTotal	-15.801	.000	.000	.000	
CBMCStotal	5.567	2.155	7.603	.000	.000

Standardized Residual Covariances (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal	CBMCStotal
MEItotal	.000				
CFStotal	.000	.000			
UDOttotal	.000	.000	.000		
MPQTotal	-.646	.000	.000	.000	
CBMCStotal	.910	.953	2.397	.000	.000

Total Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOttotal	MPQTotal
CFStotal	.035	.000	.000	.000

	MEItotal	CFStotal	UDOtotal	MPQTotal
UDOtotal	.163	.486	.000	.000
MPQTotal	.314	3.803	1.234	.000
CBMCStotal	.036	.440	.143	.116

Standardized Total Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOtotal	MPQTotal
CFStotal	.099	.000	.000	.000
UDOtotal	.322	.341	.000	.000
MPQTotal	.147	.632	.292	.000
CBMCStotal	.067	.290	.134	.459

Direct Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOtotal	MPQTotal
CFStotal	.035	.000	.000	.000
UDOtotal	.146	.486	.000	.000
MPQTotal	.000	3.203	1.234	.000
CBMCStotal	.000	.000	.000	.116

Standardized Direct Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOtotal	MPQTotal
CFStotal	.099	.000	.000	.000
UDOtotal	.289	.341	.000	.000
MPQTotal	.000	.532	.292	.000
CBMCStotal	.000	.000	.000	.459

Indirect Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOtotal	MPQTotal
CFStotal	.000	.000	.000	.000
UDOtotal	.017	.000	.000	.000
MPQTotal	.314	.600	.000	.000
CBMCStotal	.036	.440	.143	.000

Standardized Indirect Effects (Group number 1 - Default model)

	MEItotal	CFStotal	UDOtotal	MPQTotal
CFStotal	.000	.000	.000	.000
UDOtotal	.034	.000	.000	.000
MPQTotal	.147	.100	.000	.000
CBMCStotal	.067	.290	.134	.000

Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

M.I. Par Change
D4 <--> D1 5.070 5.473

Variances: (Group number 1 - Default model)

M.I. Par Change

Regression Weights: (Group number 1 - Default model)

M.I. Par Change

CBMCStotal <--- UDOtotal 7.641 .147

Minimization History (Default model)

Iteration	Negative eigenvalues	Condition #	Smallest eigenvalue	Diameter	F	N Tries	Ratio
0 e	0	122.732		9999.000	248.291	0	9999.000
1 e	0	75.817		.814	195.988	6	.000
2 e	0	15.268		.989	167.471	1	.162
3 e	0	7.089		.259	43.884	1	1.219
4 e	0	5.596		.177	16.016	1	1.179
5 e	0	5.410		.086	12.839	1	1.092
6 e	0	5.388		.016	12.763	1	1.020
7 e	0	5.311		.001	12.763	1	1.001

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	11	12.763	4	.012	3.191
Saturated model	15	.000	0		
Independence model	5	376.269	10	.000	37.627

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	4.783	.984	.941	.262
Saturated model	.000	1.000		
Independence model	49.293	.643	.464	.429

Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	.966	.915	.976	.940	.976
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.400	.386	.390
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HOELTER

Model	HOELTER	HOELTER
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Default model	235	328
Independence model	16	20

Vita

Adipat (Andy) Chaichanasakul was born in Bangkok, Thailand on May 23, 1982. At the age of 15, he immigrated to the United States of American to pursue his education. He graduated from the California State Polytechnic University, Pomona, CA with a Bachelor of Arts in Psychology in 2005. He earned a Master's Degree in Counseling Psychology from the University of Missouri in 2008 and is currently a doctoral candidate in the Counseling Psychology program at the University of Missouri.