

2013

Bicultural competence as a mediator and moderator of acculturative family distancing and psychological outcomes

Stephanie Carrera
Iowa State University

Follow this and additional works at: <https://lib.dr.iastate.edu/etd>

 Part of the [Counseling Psychology Commons](#)

Recommended Citation

Carrera, Stephanie, "Bicultural competence as a mediator and moderator of acculturative family distancing and psychological outcomes" (2013). *Graduate Theses and Dissertations*. 13144.
<https://lib.dr.iastate.edu/etd/13144>

This Thesis is brought to you for free and open access by the Iowa State University Capstones, Theses and Dissertations at Iowa State University Digital Repository. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.

Bicultural competence as a mediator and moderator of acculturative family distancing and psychological outcomes

by

Stephanie Gabriela Carrera

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Psychology

Program of Study Committee:
Meifen Wei, Major Professor
Frederick Lorenz
Karen Scheel

Iowa State University

Ames, Iowa

2013

Copyright © Stephanie Gabriela Carrera, 2013. All rights reserved.

TABLE OF CONTENTS

LIST OF TABLES	iii
LIST OF FIGURES	iv
ABSTRACT	v
CHAPTER 1. INTRODUCTION	1
CHAPTER 2. LITERATURE REVIEW	17
CHAPTER 3. MATERIALS AND METHODS	44
CHAPTER 4. RESULTS	56
CHAPTER 5. DISCUSSION	71
REFERENCES	82
ACKNOWLEDGEMENTS	91

LIST OF TABLES

Table 1.	Universities sampled	45
Table 2.	Means, standard deviations, and correlations	58
Table 3.	Comparisons among different alternative models	61
Table 4.	Bootstrap analysis of magnitude and statistical significance of indirect effects	63
Table 5.	Hierarchical multiple regression analyses testing moderating effects of AFD and bicultural competence on depression (T2)	69
Table 6.	Hierarchical multiple regression analyses testing moderating effects of AFD and bicultural competence on psychological wellbeing (T2)	70

LIST OF FIGURES

Figure 1.	The hypothesized conceptual model	13
Figure 2.	The hypothesized partial mediation model	14
Figure 3.	The hypothesized moderation model: Depression	15
Figure 4.	The hypothesized moderation model: Psychological wellbeing	16
Figure 5.	The final partially mediated model	65
Figure 6.	The final fully mediated model	66

ABSTRACT

The present study examined whether bicultural competence served as a mediator (i.e., an apparent causal mechanism) or a moderator (i.e., a variable that describes for whom or under what situation) for the relationship between Acculturative Family Distancing (AFD) and two psychological outcomes (i.e., depression and psychological wellbeing). A total of 258 Latino college students attending large, predominantly White public universities in the Midwest completed two online surveys in the fall 2012 and spring 2013 semesters. Data were analyzed using path analysis to test for mediation and hierarchical regression analyses to test for moderation. For mediation, results indicated that bicultural competence at Time 2 mediated the relations between AFD at Time 1 and depression at Time 2 and psychological wellbeing at Time 2 above and beyond the effects of depression, psychological wellbeing, acculturation, and enculturation at Time 1. Moreover, about 26% of the variance in bicultural competence at Time 2 was explained by AFD, enculturation, acculturation, and psychological wellbeing at Time 1; 23% of the variance in depression at Time 2 was explained by bicultural competence at Time 2, depression at Time 1, and psychological wellbeing at Time 1; and 32% of variance in psychological wellbeing at Time 2 was explained by bicultural competence at Time 2 and psychological wellbeing at Time 1. For moderation, results demonstrated a main effect of AFD on psychological wellbeing at Time 2 and a main effect of bicultural competence on both depression and psychological wellbeing at Time 2. The interaction of AFD and bicultural competence did not significantly predict depression at Time 2 or psychological wellbeing at Time 2 after the effects of depression, psychological wellbeing, acculturation, and enculturation at Time 1 were statistically controlled. Limitations, future research directions, and implications for counseling were discussed.

CHAPTER 1. INTRODUCTION

In the past twenty-five years, several studies in the literature on acculturation processes have provided evidence for the relationship between acculturative stress and psychological outcomes such as adjustment (Costigan & Dokis, 2006; Rogler, Cortes, & Malgady, 1991), depression (Crockett et al., 2007; Hovey & King, 1996; Potochnick & Perreira, 2010; Torres, 2010), and discrimination (Cook, Alegría, Lin, & Guo, 2009). Furthermore, the majority of studies that assess the psychological impact of acculturating to United States (U.S.) mainstream culture have been conducted with Asian and Latino populations (Yoon, Langrehr, & Ong, 2010). However, most multicultural researchers have investigated these associations without defining specific stressors (e.g., acculturation gaps) or taking into account contextual factors (e.g., family dynamics) that may affect individuals' co-occurring processes of adopting U.S. cultural practices while maintaining those of their heritage cultures (Rogler et al., 1991; Yoon et al., 2010). Specifically, few studies have explored the potential mediators and moderators of acculturative family distancing (AFD, [see details below]), a more proximal term to describe intergenerational family conflict among immigrant families, and psychological outcomes. Given that the Latino population is expected to represent more than 20% of the U.S. population by 2050 (U.S. Census Bureau, 2010), finding mediators and moderators among the aforementioned variables is imperative for current mental health professionals to more adequately treat Latino/a immigrant clients. Focusing on mediators and moderators (e.g., learning to navigate two cultures effectively) could enrich the field of Counseling Psychology with knowledge on how to alleviate depression and promote psychological wellbeing in clients from this population.

Acculturative Family Distancing (AFD)

When non-U.S. families immigrate to the U.S., they face a plethora of stressors that may take a negative toll on the mental health of the family's individual members (Hiott, Grzywacz, Arcury, & Quandt, 2006), including the children who either immigrated to the U.S. at a young age or were born in the U.S. to immigrant parents. Hwang (2006a) proposed an integrated theory of acculturative family distancing (AFD) to conceptualize parent-child acculturation-related challenges along two dimensions: communication breakdown and incongruent cultural values. Immigrant children are exposed to U.S. mainstream culture outside of their home (i.e., at school and among friends and teachers) more often than their parents. Thus, immigrant parents may not acculturate to U.S. mainstream culture as quickly as their children. According to the AFD model, differing acculturation rates between parents and children may lead to breakdowns in communication and incongruent cultural value conflicts. In other words, children may adopt individualist cultural values and become comfortable communicating in English at the expense of their knowledge and comfort with the language and cultural values of their heritage culture. As AFD increases, immigrant families are at greater risk for family conflict, individual psychopathology, and family dysfunction (Hwang, 2006a). Specifically, parent-child acculturation differences can become most salient for youth when they transition from adolescence to early adulthood; for example, if they attend college, children may physically and psychologically distance themselves from their parents. Despite the possible presence of an acculturation gap, however, Hwang (2006a) suggested that the negative psychological impact of AFD may be reduced by teaching immigrant families how to address cultural discrepancies. Based on Hwang's theoretical framework, the present study examined a possible mediator or

moderator (i.e., bicultural competence [see details below]) for the association between AFD and psychological outcomes among Latino college students.

Bicultural Competence

In the literature on biculturalism, LaFromboise, Coleman, and Gerton (1993) suggested that it is possible for individuals to know, understand, and assign equal status to two different cultures. They reviewed the literature to present different models of culture acquisition; of the five models they described, they argued that the psychological impact of the alternation model is such that individuals who can negotiate two cultures are less stressed and less anxious than those who acculturate or assimilate to the host culture (LaFromboise et al., 1993). Those who adopt the alternation model are biculturally competent along six dimensions: (a) knowledge of cultural beliefs and values, (b) positive attitudes toward both groups, (c) bicultural efficacy (i.e., the belief that individuals can function effectively in two cultural groups without compromising their cultural identity), (d) communication ability, (e) role repertoire (i.e., exhibiting appropriate behaviors in both cultural environments), and (f) social groundedness (i.e., establishing social networks in both cultural groups). Thus, LaFromboise et al. (1993) proposed that individuals who are *biculturally competent*, or “possess the ability to live effectively and satisfactorily within two groups without compromising their sense of cultural identity” (p. 402), may demonstrate higher cognitive functioning and may be mentally healthier than those who are mono-cultural (i.e., adhere to one cultural background).

Bicultural Competence, Depression, and Psychological Wellbeing

Since LaFromboise et al.’s (1993) article, numerous studies have focused on assessing the positive psychological impacts of bicultural competence on outcome variables such as cognitive functioning (Bénet-Martinez, Leu, Lee, & Morris, 2002; Haritatos & Bénet-Martinez,

2002), social development (Padilla, 2006), and adjustment (Lang, Muñoz, Bernal, & Sorensen, 1982; Lopez & Contreras, 2005). For example, psychologists who have studied bicultural individuals found that, when there are certain cultural cues (e.g., iconic images and cultural symbols) in their immediate environment, individuals engage in a process called “cultural frame switching,” whereby they access cultural value systems from their dual cultural backgrounds to react to said cultural cues (Hong, Morris, Chiu, & Bénénet-Martinez, 2000). Moreover, bicultural individuals exhibit higher levels of adjustment and openness to individuals from other cultures. Adolescents who learn and adopt bicultural skills tend to show adaptive patterns such as resiliency because of their ability to develop cultural ties, interact effectively in mainstream and ethnic contexts (Gonzales, Fabrett, & Knight, 2009), and to cope with discrimination and minority stress (Wei et al., 2010). In sum, according to the current literature on the advantages of bicultural practices, individuals who are mono-cultural living in a bi- or multicultural environment may improve their psychological functioning.

Latino individuals who decide to attend college at a large, public university may experience increased stress and family conflict when they live in two environments with differing cultural value systems (Miranda, Bilot, Peluso, Berman, & Van Meek, 2006). On the one hand, they may leave an environment that advocates Latino collectivist values (e.g., emphasizing the importance of familial duty, loyalty, and use of the Spanish language). While their time in school and among friends and teachers may have exposed them to U.S. mainstream culture, transitioning from living at home to living at college may mean that these individuals are responsible for juggling two cultures on their own (Yang, Byers, Salazar, & Salas, 2009; Zhou, 1997). Those who have had stronger ties to their heritage culture may strengthen said ties with their Latino peers; those with weaker ties may weaken their connection with their heritage

culture further (Hwang, 2006a), particularly if they attend a college in which they are a minority and must interact with both Latinos and non-Latinos. An increased sense of bicultural competence may ultimately allow them to function and engage in U.S. mainstream and their heritage cultures effectively, without risking threats to their psychological wellbeing (i.e., depression). Clearly, bicultural competence is relevant and important to Latino college students' mental health.

AFD, Bicultural Competence, and Psychological Outcomes

Current research on acculturation processes suggests that AFD can significantly contribute to negative mental health outcomes. For example, studies conducted with Chinese (Hwang, Wood, & Fujimoto, 2010), Korean (Park, Kim, Cheung, & Kim, 2010), and Asian American individuals (Hwang & Wood, 2009) have concluded that AFD can increase risk for symptoms of clinical depression. AFD is a more proximal framework that argues that intergenerational family conflict emerges as a result of a breakdown in communication ability and incongruent cultural values between children and their parents. Recently, researchers have attempted to their further knowledge of the relationship between AFD and psychological outcomes by exploring possible mediators or moderators related to family dynamics. To date, most studies include variables like family cohesion (Rivera et al., 2008) and family conflict (Hwang & Wood, 2009) as full or partial mediators or moderators of the relationship between AFD and depression. Hwang, Wood, and Fujimoto (2010) found that acculturation gaps between Chinese college students and their parents increased the likelihood that they would exhibit symptoms of depression because of the conflict they experienced. Other researchers argue that cultural conflict between parents and their children is associated with greater psychological distress for those that report low family cohesion (Rivera et al., 2008).

Despite the preliminary research done on the negative mental health outcomes associated with AFD, most studies that have used this framework have done so in the context of studying Asian and Asian American populations. To date, one study has sampled Latino college students. Hwang and Wood (2009) compared the populations stated above and found that family conflict mediated the relationship between AFD and psychological distress and clinical depression similarly for both Asian and Latino populations.

Given the influence the family can have on Latino individuals, it is ironic that few multicultural researchers have utilized the AFD model to inform their studies. *Familismo* (i.e., the strong identification, attachment, reciprocation, and feelings of loyalty and obligation among members of the same family) is a concept that can be especially salient for Latino children (Falicov, 2006; Gonzales et al., 2009; Sabogal, Marín, Otero-Sabogal, Marín, & Perez-Stable, 1987). For children, obligation to the family can include fulfilling one's role as a caregiver, leader, and transmitter of cultural customs to subsequent generations. However, when Latino immigrant children move to the U.S., they must integrate two sets of cultural norms, values, and languages at once. Growing fluency in English and understanding of U.S. cultural norms may allow them to communicate their needs at school and culturally relate to their non-Latino friends and teachers, but a decrease in native language fluency and cultural similarity with their parents can impede Latinos' ability to fulfill their familial duties and establish close relationships with their parents (Tseng & Fuligni, 2000). A lack of connection to their culture and their parents may make Latinos more susceptible to experiencing intergenerational family conflict in early adulthood (Dennis, Basañez, & Farahmand, 2010). Thus, protective mechanisms (e.g., family harmony, communication ability, and cultural connections Latino families attempt to maintain while living in the U.S.) may fade due to the distancing that occurs between children and their

parents. Such distancing can ultimately negatively affect Latinos' mental health when they attend college (Hwang & Wood, 2009).

Mediation

Combining the literatures on LaFromboise et al.'s (1993) bicultural competence and Hwang's (2006a) theoretical framework on AFD, I first proposed that bicultural competence might mediate the relationship between AFD and psychological outcomes (i.e., depression and psychological wellbeing). Current researchers are moving beyond examining the direct associations between intergenerational acculturation gaps and psychological outcomes to assess other possible mediation relationships. It is possible that the AFD individuals experience may contribute to their lack of bicultural competence, which in turn would be related to high depression and low psychological wellbeing. Conceptually, Santisteban, Kurtines, Perez-Vidal, and Hervis (1984) argued that Latino individuals greatly benefit from learning bicultural communication and cultural skills to effectively cope with acculturative stress and conflict they may face. Those who acculturate faster than their parents might not have the skills and flexibility necessary (i.e., bicultural competence) to avoid a breakdown in communication or dissimilar cultural values. Their frequent exposure to the English language and to a culture that emphasizes a sense of independence, the ability to set personal goals, and the value of individual achievement may weaken their capacity to balance their engagement in U.S. mainstream culture and in a more collectivistic culture like Latino culture.

Therefore, it was argued that those who experience AFD can improve their psychological wellbeing (e.g., lower depression and higher psychological wellbeing) by enhancing their bicultural competence. Unfortunately, my search of the literature could not locate any previous studies that examine bicultural competence as a mediator between AFD and psychological

outcomes. However, empirically, Hwang and Wood (2009) conducted a mediation study and found that family conflict was a mediator between acculturation gaps and depression. Based on the above conceptual argument and indirect empirical evidence, this study has continued to expand this line of research to examine whether bicultural competence mediated the association between AFD and psychological outcomes (i.e., depression and psychological wellbeing).

If the results demonstrate that bicultural competence serves as a mediator, mental health professionals may be able to create meaningful clinical interventions for Latino college student populations. That is, Latino individuals who experience AFD could learn how to increase their bicultural competence (e.g., to be better able to understand, appreciate, and effectively form stable social support networks with both cultural groups), which in turn might help decrease their psychological depression and increase their psychological wellbeing.

Moderation

Other existing research on cultural competence and psychological outcomes suggests that bicultural competence may act as a moderator between AFD and depression and AFD and psychological wellbeing. Specifically, for those with a lower level of bicultural competence, it was expected that AFD is positively associated with depression but negatively associated with psychological wellbeing. Based on LaFromboise et al.'s (1993) bicultural competence theory, the possible rationales for these hypotheses are the following. First, Latino college students with lower bicultural competence may demonstrate weaker *role repertoire*, or an inability to understand behaviors and roles that are culturally appropriate in Latino culture. Therefore, they are unlikely to have culturally appropriate tools that help them manage the AFD that exists between themselves and their parents. Second, if Latino college students only know how to socially engage and behave among non-Latino individuals, they may feel less comfortable self-

disclosing and sharing their experiences of living in a bicultural environment with their Latino parents and peers. To avoid feeling uncomfortable expressing themselves, they may only interact with individuals who primarily identify with U.S. mainstream culture and may not form stable social support networks with members of their heritage culture (e.g., their parents). Since they believe they cannot interact successfully among two groups, they may begin to identify more with their U.S. cultural identity at the expense of their Latino heritage identity. Thus, Latinos with low bicultural competence may lack certain tools needed to deal with AFD, which can make them vulnerable to feeling anxious (LaFromboise et al., 1993), stressed, and less confident in their ability to navigate U.S. mainstream culture and their Latino heritage culture. For Latino individuals who display low bicultural competence, I expected AFD to be strongly positively associated with depression and negatively associated with psychological wellbeing. Lower bicultural competence is likely to intensify the negative associations between AFD and depression or weaken the positive association between AFD and psychological wellbeing.

Conversely, for those with higher level of bicultural competence, it was expected that AFD has a close to zero association with depression and psychological wellbeing. The rationales for these hypotheses are the following. First, Latino individuals who display positive attitudes toward members of both cultural groups (e.g., their non-Latino peers and their Latino parents) may be more willing to understand and accept that cultural differences exist. They might understand that their parents value time to communicate and to bond with them through shared values and traditions. Second, greater knowledge and understanding of the differences between interacting with their non-Latino peers and their Latino parents may lead to less conflict and make the presence of acculturation gaps less salient. In this way, the bicultural competence skills stated above (i.e., positive attitudes towards both groups and greater knowledge of cultural

beliefs and values) might decrease the tension between two cultures Latinos initially feel because they experience AFD. Being biculturally competent would allow them to negotiate both cultures successfully without feeling like they must choose one or the other (Alegría, Mulvaney-Day, Woo, & Viruell-Fuentes, 2012). Empirically, Wei et al. (2010) found that among ethnic minority students, bicultural competence was a moderator for the association between minority stress and depression. While minority stress differs conceptually from AFD, in Wei et al.'s (2010) study, family difficulties was a part of minority stress. For the above reasons, it was expected that AFD would have close to zero associations with depression and psychological wellbeing for Latinos who display high bicultural competence.

The Present Study

In sum, limited attention has been devoted to the study of mediating and moderating variables in the acculturation literature, particularly pertaining to intergenerational acculturation disparity and its relation to family dysfunction in Latino families. Since the present study would be the first study to focus on both the AFD model (Hwang, 2006a) and bicultural competence (LaFromboise et al., 1993), it was important to explore whether bicultural competence serves as an (a) apparent causal mechanism (i.e., mediator) or (b) as a variable that alters the direction or strength of the association between (a) AFD and depression and (b) AFD and psychological wellbeing (i.e., moderator). Therefore, the present study tested two main sets of hypotheses. The first set of hypotheses examined whether bicultural competence significantly mediated the relationship between (a) AFD and depression and (b) AFD and psychological wellbeing (see Figure 1). Specifically, AFD was expected to be positively associated with depression but negatively associated with psychological wellbeing and bicultural competence. In addition, bicultural competence was expected to be negatively associated depression but positively

associated with psychological wellbeing (See Figure 2). The second set of hypotheses argued for a significant interaction (i.e., bicultural competence \times acculturative family distancing) that predicts depression and psychological wellbeing. Specifically, it was expected that the association between AFD and depression would be significantly positive for those with lower bicultural competence but would not be significant for those with higher bicultural competence (see Figure 3). In addition, it was expected that the association between AFD and psychological wellbeing would be significantly negative for those with lower bicultural competence but would not be significant for those with higher bicultural competence (see Figure 4). Finally, initial levels of depression and psychological wellbeing were used as covariates to account for their impact on depression and psychological wellbeing. The reason is that participants who exhibit higher depression at Time 2 may experience high depression at Time 1. Likewise, if participants do not exhibit high depression at Time 2, then perhaps they do not show symptoms of depression at Time 1.

Moreover, David, Okazaki, and Saw (2009) found that level of acculturation (i.e., cultural socialization to mainstream culture) and enculturation (i.e., retention of or cultural socialization to one's culture of origin) were positively associated with bicultural competence. To fully understand the mediation and moderation effects of bicultural competence, it was important to control for the confounding variables of enculturation and acculturation. The reason is that participants who are socialized to the mainstream culture or their culture of origin (e.g., adhere to the values and beliefs of each culture) may or may not necessarily perceive themselves to be competent in two cultural environments as defined by LaFromboise et al.'s (1993) six dimensions of bicultural competence. Thus, the present study tested the two main sets of

hypotheses stated above after initial levels of acculturation, enculturation, depression, and psychological wellbeing had been accounted for.

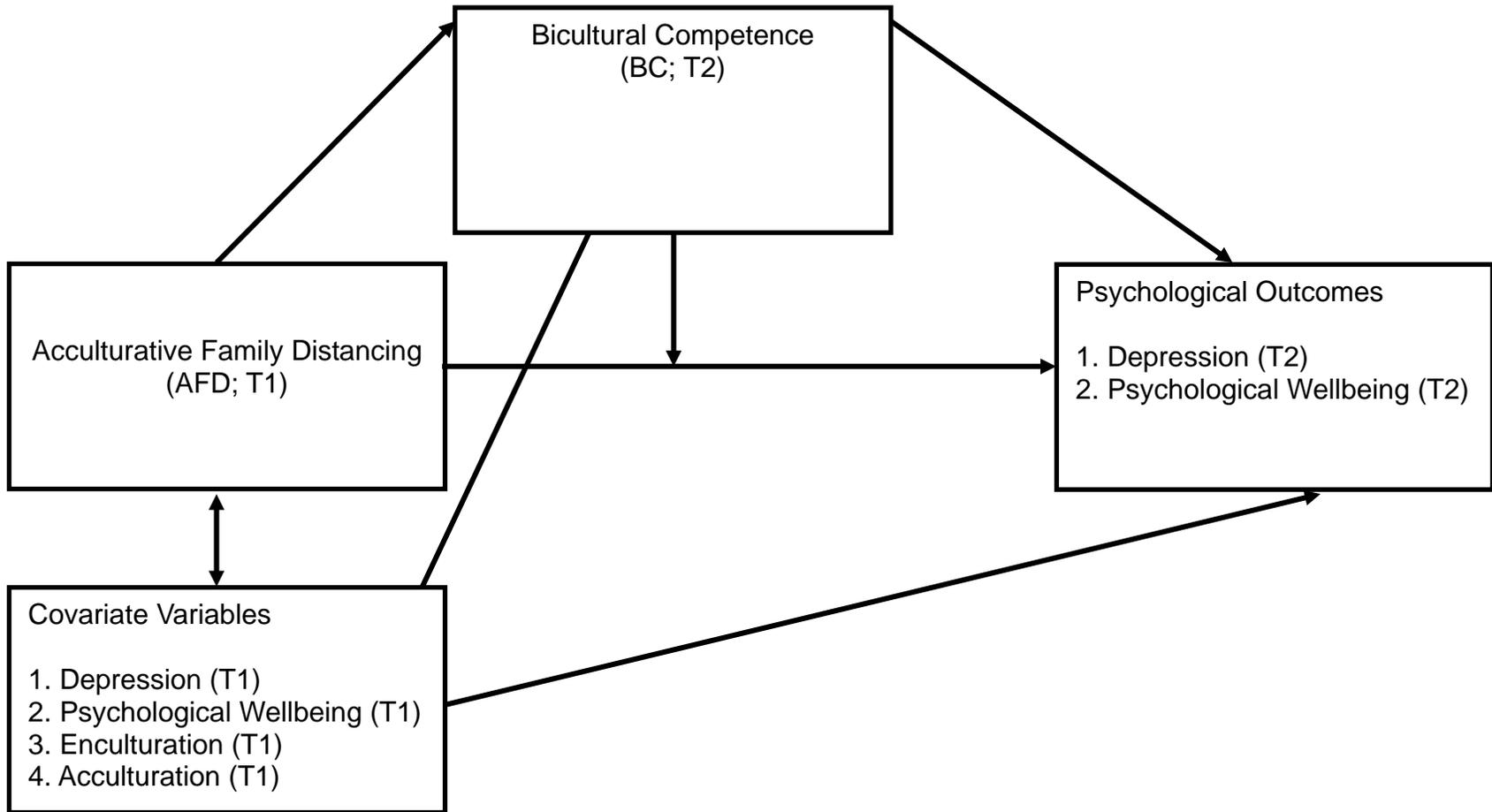


Figure 1. The Hypothesized Conceptual Model.

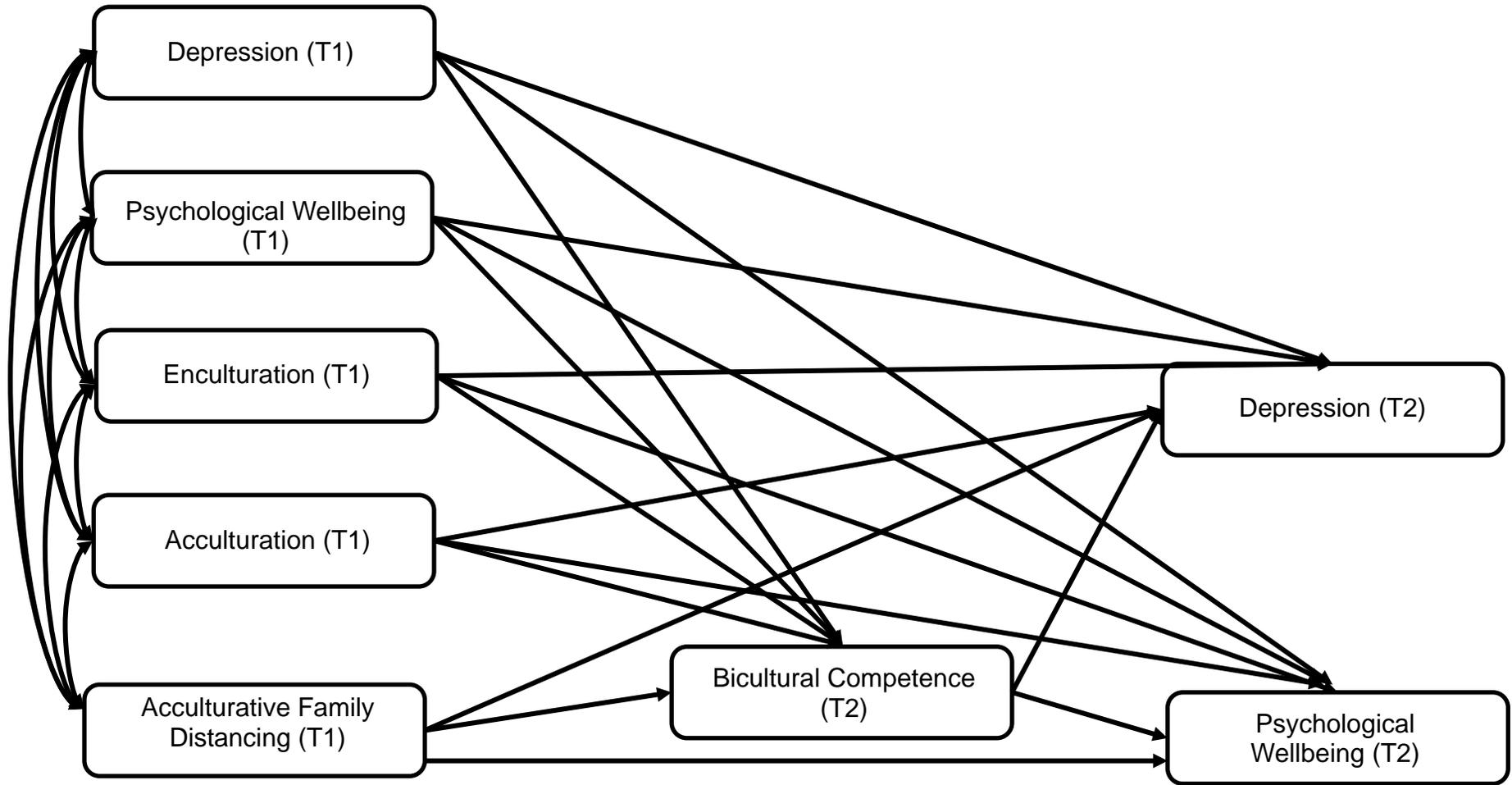


Figure 2. The Hypothesized Partial Mediation Model.

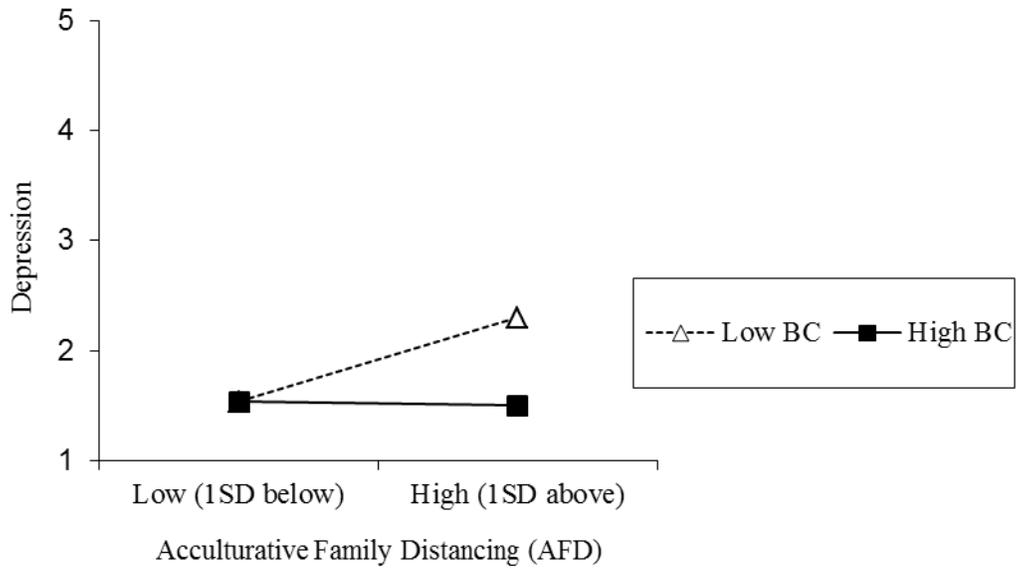


Figure 3. The Hypothesized Moderation Model: Depression. Interaction Effects of Acculturative Family Distancing on Depression for Those with Higher and Lower Levels of Bicultural Competence.

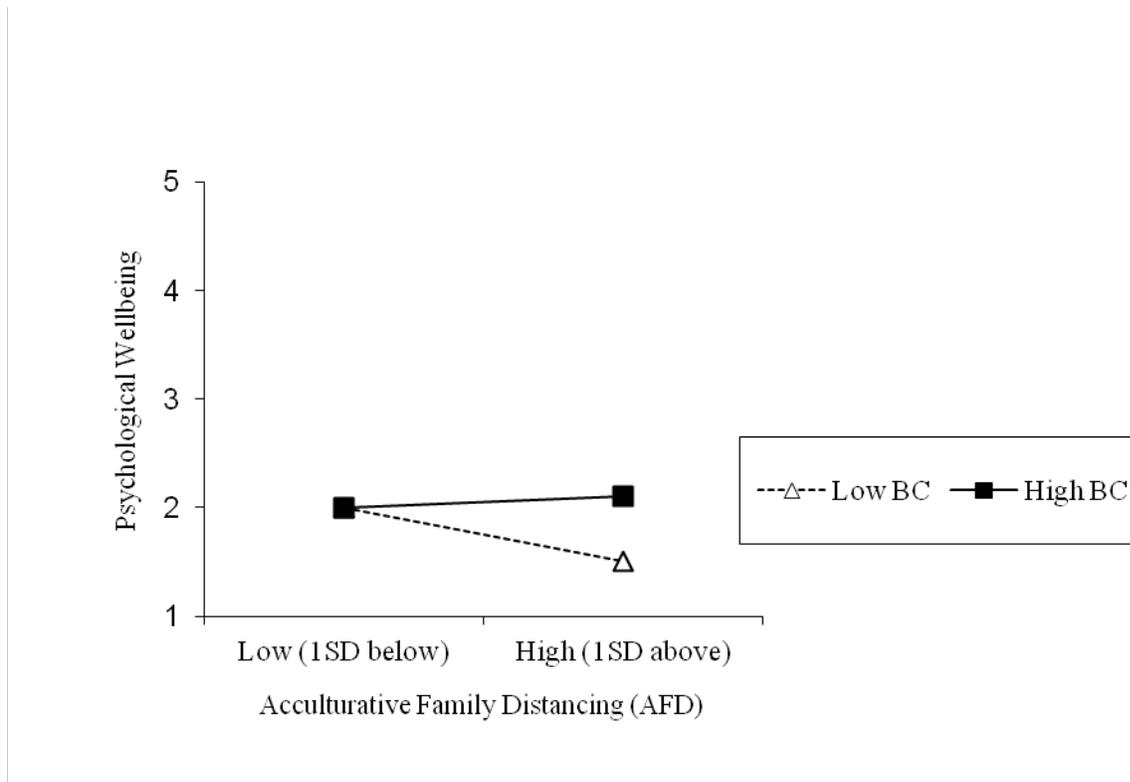


Figure 4. The Hypothesized Moderation Model: Psychological Wellbeing. Interaction Effects of Acculturative Family Distancing on Psychological Wellbeing for Those with Higher and Lower Levels of Bicultural Competence.

CHAPTER 2. LITERATURE REVIEW

I will use this literature review to first explore the theory of Acculturative Family Distancing (AFD), its background, concepts associated with this theoretical framework, and the AFD measure Hwang (2006b) created in accordance with his framework. Second, depression and psychological wellbeing as they relate to AFD will be discussed; I will also describe the theory's applicability to the Latino population. Third, I will provide background on the Theory of Bicultural Competence. Fourth, I will briefly review the literature that pertains to depression and psychological wellbeing as they relate to the Theory of Bicultural Competence; I will apply the theory to the population of interest and review the measure of bicultural competence I used in the present study. Fifth, I will explore the conceptual connections between the AFD and bicultural competence theories. I will include an all-encompassing discussion of how AFD, bicultural competence, and psychological outcomes have been linked in previous literature and how they are linked theoretically in the present study. Lastly, the chapter will conclude with an explanation for why initial level of depression, initial level of psychological wellbeing, and level of acculturation/enculturation were accounted for as control variables.

The Theory of Acculturative Family Distancing (AFD)

Foundations

When immigrant parents and children attempt to acculturate to U.S. mainstream culture, they may both experience a plethora of stressors that take tolls on their mental health (Hiott et al., 2006; Pumariega & Rothe, 2010). In particular, immigrant children or children born to immigrant parents in the U.S. may be at risk for negative psychological outcomes such as depression and anxiety (Diaz, Lizardi, & Rivera, 2008; Kearney & Trull, 2012; Potochnick & Perreira, 2010) that results from *acculturative stress*, or the perceived imbalance of cultural

demands and available resources to meet said demands (Berry, 2006). The term *acculturation*, however, has been criticized for its seemingly broad definition. A recent meta-analysis of the acculturation literature from 1988 to 2009 found that acculturation was the most common predictor variable examined by multicultural researchers (Yoon et al., 2010); in fact, studies concerning acculturation frequently assess the effects of “high” and “low” acculturation levels on psychological outcomes in Asian and Latino populations. Research in this area has primarily attempted to investigate acculturation concerns without defining specific stressors (e.g., acculturation gaps) or accounting for contextual factors (e.g., family dynamics) that affect immigrant parents’ and children’s acculturation and enculturation processes (Rogler et al., 1991).

In response to seemingly distal explanations for the link between living between cultures and poor mental health, Hwang (2006a) explained that different acculturation rates, or acculturation gaps, between parents and their children may lead immigrant families to experience difficulties communicating and culturally identifying with each other. While gaps in acculturation may not affect all immigrant families, children may be exposed to U.S. mainstream culture more often than their parents. Parents, in turn, may not acculturate to the host culture as quickly as their children while at school or among their peers. In Hwang’s theory of Acculturative Family Distancing (AFD), he argued that acculturation-related challenges parents and their children face are products of the psychological and emotional distancing that occurs along two dimensions: breakdowns in communication and incongruent cultural values. For the former, children’s increased use of and fluency in English may prevent them from effectively communicating with their parents. Their comfort with expressing their needs and engaging socially in English may come at the expense of their knowledge and comfort with the language of their heritage culture. An inability to discuss or share intimate experiences with one another

may make them prone to linguistic stress, verbal/non-verbal misunderstandings, and breakdowns in communication (Hwang, 2006a).

Similarly, living in two different cultural contexts (i.e., U.S. mainstream and their heritage cultures) may lead to differences in cultural values. When children attend school or interact with their peers, they may temporarily leave an environment (i.e., their home) in which parents may advocate collectivist values (e.g., obligation and loyalty to the family's wellbeing); in exchange, children may learn to adhere to the values of an environment that advocates personal achievement and self-sufficiency. What parents may expect from their children as members of their families may not be the same as what children are socialized to think about (e.g., independence) or to value for themselves. Cultural value incongruence may place immigrant families at greater risk for family conflict, dysfunction, and negative mental health outcomes (i.e., depression). Hwang (2006a) concluded that acculturation gaps may appear soon after parents and children acculturate to U.S. mainstream culture. However, parent-child acculturation differences can become most salient for youth when they transition from adolescence to early adulthood. As young adults, developmental changes and transitions (i.e., leaving for university) may increase the psychological and physical distance between themselves and their parents.

Intergenerational family conflict

Before Hwang's (2006a) AFD theory, scholars seemed to conceptualize acculturation gaps in immigrant families as products of intergenerational family conflict. *Intergenerational family conflict* has been defined as "conflict created by cultural differences in values and lifestyles between parents and their children" (Lee & Liu, 2001, p. 410). Kwak (2003) argued that to better understand the unique experience of immigrant families in the United States,

researchers must take into account the fact that families may exhibit greater difficulties and disagreements in family socialization. Acculturation to U.S. mainstream culture and maintaining allegiance to their heritage culture is an extensive negotiation process. On the one hand, family conflict may occur when a clash between cultural worlds ensues (Zhou, 1997); parents who have acculturated less to U.S. mainstream culture may expect their children to continue to follow the cultural values and traditions of their heritage culture. Parents may fear losing their children to a new culture while the latter acculturate at a faster rate, thus leading to feelings of separation and a rejection of the family and its values. Immigrant adolescents or adolescents born to immigrant parents may become troubled by the question of how and whether or not to adhere to the values of one culture more than the other. Phinney, Ong, and Madden (2000) explored developmental processes related to intergenerational value discrepancies in immigrant and non-immigrant families. Sampling from families of Armenian, Vietnamese, Mexican, and Caucasian descent, Phinney et al. (2000) found that among immigrant families, value discrepancies can increase with more time spent in the U.S. In essence, while the family can be a vital resource during the immigration process, families who are exposed to a language and set of cultural values different from their own may experience increased strain and higher risk for poor intergenerational relations.

Two studies relating to other reasons why intergenerational family conflict may occur are worth noting. Tseng and Fuligni (2000) conducted a longitudinal study in which they examined whether the quality of relationships between immigrant parents and adolescents was a function of the language they spoke to each other. Six hundred and twenty adolescents with East Asian, Filipino, and Latin American backgrounds were asked to report the extent to which they used their native language and their perception of the degree of cohesion and conflict present in their

families. Tseng and Fuligni (2000) concluded that children who reported using their native language also reported the highest levels of cohesion and conversation ability. Those reporting greater use of English reported lower family cohesion and greater emotional distancing. In other words, growing fluency in English may allow children to communicate their needs outside of their home (e.g., school). However, lower proficiency in their native language may predict feelings of frustration, particularly when children are unable to express their needs to and further establish close relationships with their parents. In their study with Latino college students, Agliata and Renk (2009) found that young adults may be at higher risk for affective distress (i.e., depression, anxiety, and anger) if they cannot communicate or emotionally bond with their parents. A lack of communication between parents and children may lead to expectation discrepancies (e.g., the extent to which children excel academically and behave appropriately) and may also predict difficulty in sharing intimate experiences with one another. Instead, conflict ensues from the breakdown in communication and inability to share values; the emotional and psychological distance between immigrant parents and their children may leave the latter susceptible to feelings of detachment and loneliness.

Measuring AFD

In this way, Hwang's (2006a) AFD model presents a more proximal definition of intergenerational family conflict in which two possible reasons for parent-child conflicts can be examined. In accordance with his model, a review of the acculturation literature, and his clinical experiences with immigrant families, Hwang (2006b) compiled a scale to specifically assess (a) breakdowns in communication and (b) incongruent cultural values. Items for both dimensions were created with a multicultural team of 10 undergraduate and graduate student focus groups. A series of revisions to increase the clarity and face validity of the scale resulted in a 46-item

self-report measure with two subscales: Communication Breakdown (CB) and Incongruent Cultural Values (ICV). The CB subscale assesses the degree to which participants believe they can effectively communicate with their parents, how effectively their parents can communicate with them, and other dimensions (e.g., whether or not participants can communicate their personal needs). The ICV subscale examines the degree to which participants perceive differences in cultural values between themselves and their parents. Items include descriptions of differences in parenting style, social norms, work ethic, dating practices, and gender roles. Higher scores on both subscales indicate a greater degree of adequate communication and a higher number of shared cultural values. AFD measures for both parents and children have been designed and translated into languages such as English, Chinese, and Spanish (Hwang, 2006b). Previous studies using the AFD measure demonstrated good internal consistency for the two subscales (.90 and .94). Moderate to large associations with family conflict and subjective distress in a sample of Asian American and Latino college students have also indicated good concurrent validity (as cited in Hwang, Wood, & Fujimoto, 2010). I used this scale to remain consistent with the construct of interest (i.e., AFD).

AFD and Psychological Outcomes

While intergenerational family conflict has been found to negatively affect children's psychological wellbeing (Zhou, 1997), few studies in the acculturation literature have demonstrated the relation between AFD and negative mental health outcomes. Hwang and Wood (2009) sampled 186 Asian and Latino undergraduate students to investigate whether or not AFD was associated with family conflict and greater risk for depression. In support of their hypotheses, higher levels of AFD were related to higher levels of family conflict and greater risk for depression in participants from the aforementioned populations. Other studies using the AFD

framework have sampled from both children and parents to assess whether differences in acculturation rates are linked to negative mental health outcomes. Hwang, Wood, and Fujimoto (2010) used structural equation modeling with data from 105 Chinese American adolescents and their mothers to explore the effect of AFD on youth and maternal depression. Results also demonstrated a relation between AFD and higher risk for clinical depression. Family conflict was found to partially mediate the AFD-depression relation for Chinese American youth and to fully mediate the relation for their mothers. Asian mothers may be more prone to higher conflict with their children than fathers (E. Kim, 2011), particularly in the presence of large mother-youth heritage enculturation gaps (Hwang, Wood, & Fujimoto, 2010), low levels of family cohesion, and higher levels of anger suppression (Park et al., 2010). Thus, research that has specifically used the AFD model as a theoretical framework has been primarily conducted with Asian and Asian American populations in the U.S.

To date, one study has incorporated the AFD model that sampled from populations other than individuals from Asian and Asian American families. The aforementioned study by Hwang and Wood (2009) compared Asian American and Latino college students and found that family conflict mediated the relationship between AFD and depression similarly for both sets of participants. The number of studies exploring intergenerational family conflict among Latino college student populations is sparse. Dennis et al. (2010) assessed the ways in which intergenerational conflicts related to acculturation, family dynamics, and psychosocial functioning in 1st, 2nd, and 3rd or greater generation Latinos. Dennis et al. (2010) demonstrated that value conflicts and acculturation conflicts were experienced more by 1st and 2nd generation Latinos than 3rd generation Latinos and beyond. Among 1st and 2nd generation Latinos, participants aged 23 to 26 years of age reported more family conflicts related to differences in

acculturation rates than the younger participants sampled. The conflict that the 23-26 year old participants experienced, Dennis et al. (2010) argued, may become more salient in adulthood as a result of both developmental and cultural changes. Low cohesion and increased perceived family control may contribute to the amount of conflict they experience before and while they attend college, which can increase their risk for depressive symptoms. As such, very few researchers have focused on the effects of intergenerational family conflict and AFD on individuals whose mental health may depend on whether they can communicate and emotionally bond through values and customs they share with their parents (i.e., Latino college students).

The Latino Family

Given the influence the family can have on how Latino individuals experience the world (Pérez & Muñoz, 2008), it is ironic that few multicultural researchers have utilized the AFD model or focused more on understanding Latino individuals within the context of the family. Sabogal, Marín, Otero-Sabogal, Marín, and Perez-Stable (1987) identified three central components to *familismo*, or the strong identification, attachment, reciprocation, and feelings of loyalty and obligation among members of the same family: obligation, perceived support, and use of family members as referents. Obligation and support of one's family are concepts that can be especially salient for Latino children (Falicov, 2006; Gonzales et al., 2009; Sabogal et al., 1987), who often seek interpersonal relationships that are nurturing and loving enough to protect them from physical and emotional stress (G. Marín & B.V. Marín, 1991). For children, obligation to the family can include fulfilling one's role as a caregiver, leader, and a transmitter of language (Arrigada, 2005) and cultural customs to subsequent generations. Fuligni, Tseng, and Lam (1999) found that even within a society that emphasizes autonomy and independence (i.e., U.S. mainstream society), it is possible that some Latino and Asian American youth retain

their parents' family values. Nevertheless, when Latino immigrant children move to the U.S., they must integrate two sets of cultural norms, values, and languages at once. Growing fluency in English and understanding of U.S. cultural norms may allow them to communicate their needs at school and bond with their non-Latino friends and teachers through their shared understanding of U.S. mainstream culture; however, a decrease in native language fluency and cultural similarity with their parents can impede Latinos' ability to fulfill their familial duties and establish close relationships with their parents (Tseng & Fuligni, 2000). A lack of connection with their culture and their parents may make Latinos more susceptible to intergenerational family conflict in early adulthood (Chun, Balls-Organista, & Marín, 2003; Dennis et al., 2010). Protective mechanisms such as family support (Crockett et al., 2007), communication ability, and a sense of cohesion Latino families attempt to maintain while living in the U.S. may weaken due to the distancing that occurs between children and their parents. Such distancing can negatively affect Latinos' mental health when they attend college (Hwang & Wood, 2009).

The Theory of Bicultural Competence

Foundations

Despite the possible presence of acculturation gaps, Hwang (2006a) suggested that the negative psychological impact of AFD may be reduced by teaching individuals how to address cultural discrepancies. In the literature on biculturalism, LaFromboise, Coleman, and Gerton (1993) suggested that it is possible for individuals to know, understand, and assign equal status to two different cultures. They reviewed the literature to present five models of culture acquisition: assimilation, acculturation, multiculturalism, and fusion, and alternation.

Assimilation is a process whereby individuals develop a new cultural identity while they absorb the values and customs of the dominant culture. Throughout this process, said individuals likely

lose awareness of or loyalty to their cultures of origin. *Acculturation* is similar to assimilation in that individuals likely lose identification with their culture of origin; individuals who acculturate usually aspire to become full, competent members of the majority group culture but will always be identified by the dominant culture as a member of the minority culture. *Multiculturalism* and *Fusion* are models that address the notions of cultures co-existing simultaneously or combining to create a new culture. For the former, individuals are able to maintain membership in their culture of origin while concurrently developing a new cultural identity among other groups. The latter is associated with the “melting pot” theory, or the belief that “cultures sharing economic, political, and geographic space will fuse together to form a unique culture” (LaFromboise et al., 1993, p. 401).

Nevertheless, advocates of the *alternation* model have argued that, contrary to previous research, living between two cultures may be advantageous because individuals may learn how to negotiate two cultures. In other words, there is a bidirectional and orthogonal relationship between the host culture and individuals’ culture of origin. Individuals may be less stressed and less anxious than those who acculturate or assimilate to the dominant culture because they exhibit healthy coping patterns that allow them to alternate their behavior appropriately (LaFromboise et al., 1993). If they can alternate their behavior to suit two different environments, then they may be more likely to maintain strong relationships with both cultures. In this way, those who are *biculturally competent*, or “possess the ability to live effectively and satisfactorily within two groups without compromising their sense of cultural identity” (p. 402), may demonstrate higher cognitive functioning and improved mental health status than those who are mono-cultural. With reference to LaFromboise et al.’s (1993) Theory of Bicultural Competence, individuals who effectively alternate between two cultures are biculturally

competent along six dimensions: (a) knowledge of cultural beliefs and values, (b) positive attitudes toward majority and minority groups, (c) bicultural efficacy, (d) communication ability, (e) role repertoire, and (f) social groundedness. A brief description of each is given below.

Possessing *knowledge of cultural beliefs and values* includes an understanding of the nuances and expectations of a particular culture (e.g., gender roles, cultural practices, and sociocultural issues). If individuals know, appreciate, and internalize said knowledge, it is likely that they can strengthen their cultural competence. Holding *positive attitudes towards both cultural groups* demonstrates that they do not view their cultures along a hierarchical continuum. They approach each culture with an open, non-judgmental perspective rather than a negative or pessimistic outlook. A positive attitude toward both groups may facilitate the development of *bicultural efficacy*, or the belief that one can live effectively and satisfactorily among two groups without compromising one's identity. Level of bicultural efficacy may later determine the extent to which individuals can acquire adequate *communication abilities* in the languages of both cultures and understand the range of suitable behaviors and roles (i.e., *role repertoire*) to interact successfully. Individuals who are *socially grounded* are ultimately able to establish social networks with members of both cultures that help them cope with the pressures of living in two cultural environments.

Measuring bicultural competence

A few years after LaFromboise et al. (1993) formed their Theory of Bicultural Competence, David et al. (2009) created the Bicultural Self-Efficacy scale (BSES) to assess individuals' perceived bicultural competence in the host and their heritage cultures. Their review of the literature found that numerous measures related to acculturation were unidimensional in nature; said measures conceptualized acculturation as a process in which one adopts the values

and customs of one culture at the expense of weakening one's relations with another culture. David et al. (2009) argued that creating a measure which incorporated LaFromboise et al.'s alternation model was justified, given that the number of the bicultural individuals in the United States may continue to grow. Thus, in an effort to maintain the wellbeing of those who are exposed to different cultures, David et al. (2009) were the first to conduct exploratory factor analyses to assess each of LaFromboise et al.'s (1993) six dimensions for bicultural competence. Results from exploratory and confirmatory factor analyses yielded a six-factor model for a 26-item scale. Six subscales are included in the scale: twelve items (four each) measure the extent to which individuals have knowledge of cultural beliefs and values, whether individuals display positive attitudes toward both cultural groups, and communication ability. The other fourteen items measure role repertoire (three items), bicultural beliefs (four items), and the degree to which participants believe they are social grounded in their two cultural environments (seven items). Higher sub-scores indicate higher levels of each dimension, and higher total scores demonstrate a higher level of perceived bicultural competence. The BSES has been administered to a varied group of ethnic minority participants, including Asian American, African American, Latino, and multiracial samples. David et al. (2009) found good internal consistency for the total score ($\alpha = .94$) on the BSES and (a) positive associations with acculturation/enculturation, identity integration and collective self-esteem and (b) negative associations with depression and anxiety (i.e., psychological outcomes). In concordance with the Bicultural Competence framework, I used this scale to measure bicultural competence as a possible moderator or mediator [(see below)] for the relation between AFD and psychological outcomes.

Bicultural Competence and Psychological Outcomes

Since LaFromboise et al.'s (1993) article, numerous studies have focused on assessing the positive psychological impacts of bicultural competence on outcome variables such as cognitive functioning (Bénet-Martinez et al., 2002; Haritatos & Bénet-Martinez, 2002), social development (Padilla, 2006), and adjustment (Lang et al., 1982; Lopez & Contreras, 2005). For example, psychologists who have studied bicultural individuals found that, when there are certain cultural cues (e.g., iconic images and cultural symbols) in their immediate environment, individuals engage in a process called "cultural frame switching," whereby they access cultural value systems from their dual cultural backgrounds to react to said cultural cues (Hong et al., 2000). Biculturalism may thus be a suitable way for individuals to become more aware of what takes place in the two social environments to which they are exposed and how individuals from each environment interact with them.

Applying bicultural competence to Latinos

Bicultural Latino individuals may exhibit higher levels of adjustment and openness to individuals from other cultures (Lang et al., 1982). Lopez and Contreras (2005) studied the relation between language acculturation and biculturalism and their influence on Puerto Rican participants' psychological adjustment. After interviewing participants about their mental health status (i.e., depression, anxiety, and somatization symptoms), Lopez and Contreras (2005) found that biculturalism significantly predicted adjustment above and beyond mono-cultural involvement. Puerto Rican young mothers who reported high levels of involvement in both cultures tended to exhibit lower levels of symptomology. Moreover, adolescents and young adults who learn and adopt bicultural skills may show adaptive patterns such as resiliency because of (a) their ability to develop cultural ties, (b) to interact effectively in mainstream and

ethnic contexts (Berry, Phinney, Sam, & Vedder, 2006; Gonzales et al., 2009; Phinney, Horenczyk, Liebkind, & Vedder, 2001), and (c) to use appropriate strategies such as knowledge of cultural beliefs and values and social groundedness to cope with discrimination and minority stress (Padilla, 2006; Wei et al., 2010). Latino individuals who decide to attend college, for example, may experience increased stress and family conflict when they live in two environments with differing cultural value systems (Miranda et al., 2006). On the one hand, they may leave an environment that advocates Latino collectivist values and the use of the Spanish language. While their time in school and among friends and teachers may have exposed them to U.S. mainstream culture, transitioning from living at home to living at college may mean that these individuals are responsible for juggling two cultures on their own (Yang et al., 2009; Zhou, 1997). Conceptually, bicultural competence is relevant and important to Latino college students' mental health. An increased sense of bicultural competence may allow them to adequately adjust, function, and become more aware of how they engage in U.S. mainstream and their heritage cultures. Skills that integrate traditional cultural values with U.S. customs, preserve Latino heritage culture, and that assist them with meeting the demands of two different environments (e.g., self-efficacy and bilingualism) may be especially beneficial (Bacallao & Smokowski, 2009; Torres, 2009).

AFD, Bicultural Competence, and Psychological Outcomes

Hwang (2006a) argued that intervention and prevention efforts targeting acculturation gaps may not be detailed enough to construct specific treatment plans for immigrant families. Since the acculturation literature has measured "acculturation" as a construct in many ways (e.g., demographically, linguistically, and in terms of behaviors), current researchers may only have a broad understanding of why conflict related to acculturative processes occurs among members of

immigrant families. The AFD framework is a more refined, proximal measurement of acculturation gaps that may cause family conflicts in some immigrant families living in the U.S. Rather than attributing the cause of conflict solely to the presence of parent-child acculturation gaps, the model identifies two mechanisms mental health professionals can specifically address: communication breakdown and cultural value incongruence. Not all immigrant families, however, develop acculturation gaps; factors other than differing acculturation rates among parents and their children may place certain families more at risk than others. In an effort to better understand individuals of Latino families that are at risk for AFD, it was my intention to assess the possible effect of bicultural competence as either a mediator or a moderator of the relationship between AFD and psychological outcomes. More proximal explanations for why negative psychological outcomes occur (i.e., depression and anxiety) may ultimately allow researchers and clinicians to create interventions and culturally-sensitive treatments exclusively for Latino college populations.

Mediation

In combining the literatures on LaFromboise et al.'s (1993) Theory of Bicultural Competence and Hwang's (2006a) Acculturative Family Distancing framework, I first proposed that bicultural competence might mediate the relationship between AFD and psychological outcomes (i.e., depression and psychological wellbeing). Current researchers are moving beyond examining direct associations between acculturation gaps and psychological outcomes; however, research on mediator variables (i.e., causal mechanisms; Baron & Kenny, 1986; Frazier, Tix, & Barron, 2004) between AFD and intergenerational family conflict with psychological outcomes among Latinos is scarce.

Szapocznik, Santisteban, Kurtines, Perez-Vidal, and Hervis (1984) argued that Latino individuals greatly benefit from learning bicultural communication and cultural skills to effectively cope with acculturative stress and conflict they may face. If bicultural competence serves as a mediator, it may imply that AFD may contribute to bicultural competence, which in turn may decrease levels of depression and increase levels of psychological wellbeing. For instance, those who acculturate faster than their parents might not have the skills and flexibility necessary (i.e., bicultural competence) to avoid a breakdown in communication or dissimilar cultural values. Their frequent exposure to the English language and to a culture that emphasizes a sense of independence, the ability to set personal goals, and the value of individual achievement may not allow them to balance their engagement in U.S. mainstream culture and in Latino culture. Thus, without said skills and flexibility characteristic of bicultural competence, individuals may experience the detrimental effects of adapting to U.S. mainstream culture (i.e., increased risk for depression) while maintaining a connection to their heritage culture.

Negative psychological outcomes might be avoided if, for example, mental health professionals could teach Latino individuals how to become more biculturally effective, or better able to understand, appreciate, and effectively form stable social support networks with both cultural groups. An example of a bicultural intervention is the Bicultural Effectiveness Training (BET) program Szapocznik et al. (1984) developed for Cuban families. Their training program primarily teaches families how to alter their perspective on the challenges of living between two cultures. The goals of the BET program are to (a) reduce cultural value and behavioral conflicts and (b) bring about structural changes within the family system. Initially, families learn to address conflict by “detouring” and “reframing” sources of family conflict (e.g., incongruent values) as an issue caused by cultural conflict. Family members “reframe” conflict by learning

to emphasize cultural values and beliefs parents and children share and de-emphasizing those they do not share. Parents and children then learn to establish “crossed alliances” to increase awareness of, comfort with, and acceptance of positive aspects of parents’ and children’s cultural affiliations (i.e., U.S. mainstream or Latino heritage cultures; Hwang, 2006a). Therapists encourage parents to accept and understand certain aspects of American culture that their children uphold, and children are encouraged to do the same with aspects of Latino culture that their parents uphold. Mental health professionals may thus have one means of addressing the conflict that may occur in families where youth attempt to individuate and identify more with American culture at the expense of their connection with Latino culture.

Nevertheless, despite Szapocznik et al.’s (1984) detailed layout for their BET program, the authors admitted that the lesson plans they created for clinicians to run the program only provided general guidelines to work with immigrant families. Furthermore, original research conducted to create the program recruited Latino parents and children with conduct disorders. In accordance with the AFD model, one factor that has not been addressed and that might be a source of family conflict is a breakdown in parent-child communication. The training program mentioned above solely addresses differences in cultural values that may ensue as a result of intergenerational conflicts. If researchers can obtain empirically validated data showing that breakdowns in communication are also associated with AFD in immigrant families, mental health professionals may gain knowledge on how to strengthen or reconstruct communication patterns that can improve family relations. The primary purpose of the present study was to expand on previous research and provide empirical data on the potential benefits of bicultural competence. To my knowledge, no previous studies that examine bicultural competence as a mediator between AFD and psychological outcomes exist. The study by Hwang and Wood

(2009) mentioned above is one of few studies similar to the present one. They concluded that family conflict mediated the relation between AFD and depression similarly for Asian American and Latino college students. Thus, the ability to effectively navigate and negotiate two different cultures may assist families who are at greater risk for problem development (Hwang, 2006a).

Specifically, I used the results of this study to enrich the select studies that have been conducted with Latino college students. Given that the Latino population in the U.S. is expected to increase five percent by 2050 (U.S. Census Bureau, 2010) and that AFD may manifest itself when youth transition from adolescence to early adulthood, it is important that multicultural researchers find support for Latino individuals who pursue higher education at U.S. institutions. If the present study finds that Latino students experience negative psychological outcomes in college because they experience AFD, then future researchers and clinicians may tailor their efforts to address communication barriers as well as cultural value incongruence. Efforts such as the BET program may be expanded to work done with Latino college students at university counseling centers according to Hwang's (2006a) AFD framework and LaFromboise et al.'s (1993) definition of bicultural competence. Latino individuals who experience AFD could learn how to increase their bicultural competence (e.g., to be better able to understand and appreciate their dual cultural identities, as well as strengthen their belief that they can live effectively among both cultural groups), which in turn might help decrease their depression and increase their psychological wellbeing. I ultimately hypothesized that the relation between AFD and psychological outcomes might be mediated by bicultural competence.

Moderation

Other existing research on cultural competence and psychological outcomes has provided indirect support to also hypothesize that bicultural competence may act as a moderator (i.e., a

variable that may delineate “for whom” and “when”; Baron & Kenny, 1986; Frazier et al., 2004) between (a) AFD and depression and (b) AFD and psychological wellbeing. Castillo, Cano, Chen, Blucker, and Olds (2008) indicated that research on Latino *familismo* and its relation to cultural understanding among family members may buffer the effects of negative psychological outcomes Latino college students may experience. In the case of the present study, “cultural understanding among family members” can align with LaFromboise et al.’s (1993) definition of bicultural competence. That is, some Latino individuals who experience AFD may be more susceptible to or protected from higher levels of depression or lower psychological wellbeing because they display a particular level of bicultural competence (i.e., low or high, [see below]) and understanding of their two cultures. The rationales for why bicultural competence may moderate the relation between AFD and psychological outcomes are given below.

For example, Latino college students with low bicultural competence may have weaker *role repertoire*, which may indirectly affect the degree to which they perceive themselves as *socially grounded*. Previously mentioned in my explanation of LaFromboise et al.’s (1993) Theory of Bicultural Competence, *role repertoire* refers to the “range of culturally or situationally appropriate behaviors or roles an individual has developed” (LaFromboise et al., 1993, p. 406) when they live in bicultural environments. Latinos with low bicultural competence may not have an extensive range of behaviors or roles they can and are willing to adopt. In the face of an acculturation gap between themselves and their parents, they may not understand that, as children of Latino parents, they may be expected to take on the roles of caregiver, loyal family member, and/or transmitter of language and cultural customs. Rather than spending time with their parents and fulfilling their duty to maintain their Latino heritage, they may be more concerned with adopting a more individualist outlook on how to interact with their family. In

other words, Latino young adults low on this dimension of bicultural competence may not assist their parents with maintaining their connection with Latino culture while living in the U.S. Instead, their understanding of how to act and socially engage with others may be limited to their interactions with non-Latinos, who may or may not advocate a bicultural orientation.

If Latinos only know how to interact with non-Latino individuals, the extent to which lowly biculturally competent Latinos are *socially grounded* may be weaker. Socially grounded individuals are able to form stable social networks with members of the two cultures to which they are exposed. In the case of the Latino students studying at predominantly White institutions, they may be less socially grounded if their social networks primarily consist of individuals who identify with U.S. mainstream culture. LaFromboise et al. (1993) argued that the importance of social groundedness lies in the fact that sources of social support from two groups may strengthen individuals' abilities to cope with the stress of living in two cultural environments. Latino young adults who only have the support of their non-Latino peers, however, may not have the opportunity to disclose the pressure they may feel to negotiate two cultures successfully. They may feel that they must limit their interactions with this group to conversations about their participation in U.S. mainstream customs and upholding individualist values (e.g., independence and personal goals). In fact, a lack of connection to a Latino social support network may not allow them to express their desire to also remain connected with a culture that promotes interdependence among family members. Their identification with their Latino heritage culture may thus weaken over time and may leave Latinos no choice but to abandon their Latino cultural identity and continue to distance themselves from their parents. Latinos attending institutions in which they are the minority may ultimately experience higher levels of anxiety and stress if they are isolated from the Latino community because they only

know how to engage with non-Latino individuals. For the reasons stated above, I expected AFD to be strongly positively associated with depression and negatively associated with psychological wellbeing when Latino individuals display low bicultural competence.

If Latino individuals exhibit high bicultural competence, however, the associations between AFD and depression and psychological wellbeing may be close to zero. In accordance with LaFromboise et al.'s (1993) theory, two dimensions characteristic of high bicultural competence may be Latinos' *positive attitudes* towards Latino and non-Latino groups and their *knowledge of cultural beliefs and values*. Initially, breakdowns in communication and an inability to culturally bond with their parents might discourage Latino young adults from continuing to engage with their heritage culture. Latinos may prefer to express themselves in English and engage in U.S. mainstream cultural customs because they do hold a positive attitude toward the Spanish language or the cultural values and traditions of their heritage culture. Those who are high on biculturally competence, however, are more likely to understand and accept that cultural differences (e.g., language, customs, and worldview) in their social environments exist. Among their peers outside of their home, Latinos may appreciate the opportunity to celebrate U.S. mainstream holidays or learn how to rely on themselves to achieve their goals. Among their family members or Latino peers, Latinos may equally enjoy how their parents communicate on a more intimate level and engage in certain traditions characteristic of Latino culture with their families. If Latino individuals can show that they are committed to supporting their family as much as they aspire to thrive in an individualist environment (i.e., at a large, public university in the U.S.), perhaps they will experience an increase in their level of psychological wellbeing. Holding a positive outlook on communicating and identifying with their parents on a cultural

level may ultimately eliminate family conflict and the distress that may ensue from their and their parent's attempts to live among two cultures effectively.

Furthermore, a greater willingness to highlight the advantages of living between U.S. mainstream and Latino culture may be indicative of the knowledge highly biculturally competent Latinos possess about each culture. If Latino college students are knowledgeable of the cultural beliefs and values of their two cultures, they are most likely "aware of and knowledgeable about the history, institutions, rituals, and everyday practices of a given culture" (LaFromboise et al., 1993). Similar to *role repertoire*, highly biculturally competent Latinos not only know and appreciate the beliefs and values of their cultural groups, but they also might internalize the roles and practices members of each cultural group expect them to fulfill. Highly biculturally competent Latinos might better understand that, at school and among friends, they are expected to obey one's personal space and be willing to do certain activities on their own; when among their parents or their Latino friends, they understand that expressing their needs and openly sharing their experiences with everyone is encouraged. In this way, Latino young adults may use their awareness of cultural differences to know when and how to successfully switch roles when they interact in their cultural groups. Conflict that may ensue from acculturation gaps may not be as salient for highly biculturally competent Latinos because they know what members of each culture value and know how to interact or express themselves in the two different groups. Communication difficulty and cultural value incongruence may thus not associate with cultural tension or negative psychological outcomes for Latinos who display high bicultural competence. They know and accept the beliefs and values that make up each of their cultures; their positive outlook on each is indicative of their initiative to juggle both cultures successfully without choosing one group over the other.

To my knowledge, few studies have assessed cultural competence as a moderator among Latino young adults. In terms of low bicultural competence, Torres and Rollock (2007) sampled 96 Hispanic adults to assess the roles of acculturation, coping, and intercultural competence in predicting depression. Their results demonstrated that, regardless of acculturation level (i.e., high or low), depression scores were higher for those with low intercultural competence. Torres and Rollock (2007) did not include AFD in their definition of acculturation, nor did they measure intercultural competence according to the six dimensions of bicultural competence proposed by LaFromboise et al. (1993). Yet, the negative psychological impact of a breakdown in communication ability or incongruent cultural values may not predict negative psychological outcomes when Latino individuals perceive themselves as culturally competent. Wei et al. (2010) examined the relationship between minority stress and depression symptoms with bicultural competence as a potential moderator of this relationship (as defined by LaFromboise et al., [1993]). Among 167 African, Asian, and Latino American college students, results indicated that (a) bicultural competence still buffered this relation after level of general stress had been accounted for; (b) minority stress was unrelated to depression when students exhibited high bicultural competence; and that (c) two dimensions of bicultural competence (i.e., social groundedness and knowledge of cultural beliefs and values) were two important components of bicultural competence as a moderator in the relationship between minority stress and depression. Minority stress differs conceptually from AFD, but Wei et al. (2010) included possible family difficulties when they defined minority stress. AFD is a stressor that may uniquely affect family members of minority groups (i.e., Latino immigrants), and a review of recent literature shows preliminary evidence to suggest that bicultural competence can decrease risk for negative psychological outcomes. Thus, based on the conceptual arguments and the

empirical evidence that most closely aligns with the present study I conducted, I expected that AFD would have close to zero associations with depression and psychological wellbeing for Latinos who display high bicultural competence.

Control Variables

Controlling for initial levels of depression, psychological wellbeing, acculturation, and enculturation was warranted to rule out possible confounding variables.

Initial level of depression and psychological wellbeing

Since I collected data at two time points, it was possible that participants who exhibit higher depression at Time 2 may already exhibit high depression at Time 1. Likewise, if participants do not exhibit high depression at Time 2, then perhaps they do not show symptoms of depression at Time 1.

The Depression subscale of the Depression, Anxiety, and Stress Scales-Short form (DASS; S.H. Lovibond & P.F. Lovibond, 1995a) was administered to measure the index of depression at Time 1 and Time 2 of the study. The DASS is a self-report survey that covers a full range of core symptoms of anxiety and depression. In comparison to the Beck Depression Inventory (BDI) and the Beck Anxiety Inventory (BAI), the DASS better discriminates between depression and other affective states (S.H. Lovibond & P.F. Lovibond, 1995a) and possesses high reliability (i.e., .88 for Depression) (Henry & Crawford, 2003; S.H. Lovibond & P.F. Lovibond, 1995a). The scale is suitable for screening non-clinical samples of adolescents and adults and has been used with a variety of populations, including college student populations (P.F. Lovibond, 2010). Likewise, the Psychology Wellbeing scale (PWBS; 18-items) was administered at Time 1 and Time 2 to effectively control for initial level of psychological wellbeing. The PWBS was constructed to measure psychological wellbeing along six

dimensions: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Results from Ryff and Keyes's (1995) study found support for a 6-factor model used with a nationally representative sample of young, middle-age, and older adults. The short form of the PWBS (i.e., 3 items for each of the six dimensions) was created to accommodate for time and cost constraints to administer the survey. Internal consistencies for the six dimensions on the short form of the PWBS range from .33 to .56 in the populations mentioned above (Ryff, 1989b). No studies have used the short form of the PWBS with Latino individuals, but internal consistency coefficients for Latino/a adults who took the original PWBS have ranged from .70 to .85 (Diaz et al., 2008; Gloria, Castellanos, Scull, & Villegas, 2009; Bowman, 2010; Landa, Martos, & Lopez-Zafra, 2010).

Acculturation and enculturation

In their review of the literature on acculturation processes, Yoon et al. (2010) found that most studies have begun to conceptualize acculturation (i.e., cultural socialization to mainstream society) and enculturation (i.e., cultural socialization to the country of origin; B.S.K. Kim, 2006; Kim & Abreu, 2001) as bilinear processes. That is, individuals can simultaneously identify with the host and heritage cultures to which they are exposed. When Latino young adults move to the U.S. or pursue higher education at American institutions, they may acculturate to U.S. mainstream culture at the same time that they may continue to identify with Latino heritage culture (i.e., enculturate). Both processes are multidimensional in that they can occur on behavioral (e.g., language and food), affective (e.g., emotions and identity), and cognitive (e.g., knowledge and beliefs) levels (Cuéllar, Arnold, & Maldonado, 1995; Kim & Abreu, 2001).

With reference to the present study, LaFromboise et al. (1993) conceptually argued that level of acculturation and enculturation is positively associated with bicultural competence.

Later, David et al. (2009) empirically found associations between acculturation and enculturation with bicultural competence. Therefore, the confounding variables of acculturation and enculturation were controlled for. Controlling for these variables makes sense because participants who are socialized to the mainstream culture or their culture or origin (e.g., adhere to the values and beliefs of each culture) may or may not necessarily perceive themselves to be competent (i.e., as defined by LaFromboise et al.'s [1993] six dimensions of bicultural competence) in two cultural environments.

To effectively control for these variables, I used the U.S. Cultural Identity and Ethnic Identity subscales from Zea, Asner-Self, Birman, and Buki's (2003) Abbreviated Multidimensional Acculturation Scale (AMAS-ZABB). Zea et al.'s (2003) model for cultural competence assumes that acculturation is a reciprocal, multidimensional process by which individuals may adopt U.S. mainstream cultural values and those of their heritage culture. The AMAS-ZABB is a bilinear measure that asks individuals to reflect on their experience of acculturating to U.S. mainstream or their heritage culture in terms of their cultural identity, language competence, and cultural competence. This scale has been validated with college and community samples of Latino individuals aged 18 to 71 years and has demonstrated good internal reliability ($\alpha = .93$ for both subscales; Moradi & Risco, 2006). According to the AFD framework, breakdowns in communication and cultural value incongruence reflect acculturation and enculturation processes on an affective (i.e., emotions and identity) level. The more Latino individuals have acculturated to U.S. mainstream culture, the less likely they may be able to identify with and emotionally connect to their less acculturated parents (i.e., leading to greater AFD). Moreover, the more Latino individuals are enculturated, the more likely they may be able to culturally identify with and share intimate experiences via a shared language with their Latino

parents; acculturation gaps and conflict with their parents may not be salient for highly enculturated Latinos as compared to those who cannot communicate and emotionally connect with their parents. I specifically used the U.S. Cultural Identity and Ethnic Identity subscales because acculturation and enculturation in terms of behaviors (e.g., language proficiency) and cognitions (e.g., knowledge of cultural figures) are unlikely to lead to acculturation gaps and family conflicts that have been present in Latino families for a period of time. Acculturation gaps and family conflicts maintained over time may associate more with affective acculturation rather than behavioral acculturation, which can occur faster than the former among college students (Kim, Atkinson, & Yang, 1999). Therefore, because of the potential overlap among acculturation and enculturation, AFD, and bicultural competence, it was important to control for the affective aspect of acculturation and enculturation to understand the unique effect AFD may have on psychological outcomes when bicultural competence mediates or moderates this relationship. Participants completed both subscales at Time 1.

Conclusion

The brief literature review presented suggests that bicultural competence could either serve as a mediator or moderator in the relationship between (a) AFD and depression and (b) AFD and psychological wellbeing. Therefore, the goals of the present study were to demonstrate the following: 1) whether or not bicultural competence mediates the relationships between (a) AFD and depression and (b) AFD and psychological wellbeing, and 2) whether or not bicultural competence moderates the relationship between AFD and depression and psychological wellbeing. In both sets of hypotheses, initial level of depression, initial level of psychological wellbeing, and level of acculturation and enculturation were accounted for in my analyses (see Figure 1).

CHAPTER 3. MATERIALS AND METHODS

Path Model Analysis

Mediation

To obtain an adequate number of participants for a path model, Hatcher (1994) suggested that “there should be a ratio of at least 5 subjects for each parameter to be estimated” (p. 149). A path model can be viewed as one observed variable for a latent variable. The factor loading for each path will be fixed to be one and the path for the error term will be fixed to be zero. In the model for the present study (see Figure 2), there were eight variables (i.e., depression at Times 1 and 2, psychological wellbeing at Times 1 and 2, acculturation level at Time 1, enculturation level at Time 1, acculturative family distancing at Time 1, and bicultural competence at Time 2). Therefore, the parameters to be estimated would include variance for each of the eight latent variables (i.e., eight variances for eight latent variables) and paths among the latent variables (i.e., 28 paths among 8 latent variables). Based on this calculation, there were a maximum of $28 + 8 = 36$ parameters to be estimated in the path model. Since 5 observations per parameter should be used to estimate the number of participants needed from the Latino college population, the sample size for this study was to be at least 180 (i.e., $36 \times 5 = 180$). Moreover, since I collected data across two time points, I accounted for a 30% to 50% attrition rate that may result from collecting data at multiple time points. Considering the above factors, I expected to have approximately 500 participants at Time 1 and 250 participants at Time 2.

Moderation

A power analysis was completed using the power and precision program (Rothstein, Borenstein, Cohen, & Pollack, 1990) to estimate the number of participants needed to obtain a small to medium effect size. Power in a quantitative study is a function of effect size, sample

size, and alpha level. Effect size can be expressed by R^2 , or a standardized regression coefficient used to convey the correlation among or between variables. The power was calculated using the power precision program and R^2 for regression analyses. To determine sample size requirements, J. Cohen and P. Cohen (1983) recommended that each predictor variable (i.e., AFD and bicultural competence) be assigned an effect size of either $R^2 = .01, .09, \text{ or } .25$ (i.e., $r = .10, .30, \text{ or } .50$ for small, medium, or large effect sizes, respectively) in relation to the criterion variables (i.e., depression and psychological wellbeing). Subsequent calculations resulted in five sets of possible effect size combinations: $.01 / .01, .01 / .09, .09 / .09, .09 / .25, \text{ and } .25 / .25$. These combinations indicated that sample sizes of 470, 90, 47, 22, or 14, respectively, were needed for a power of .80 or higher at $p < .05$. Based on the calculations performed above, a sample size between 470 and 90 participants was chosen for a small to medium effect size.

Participants

The sample of this 2-time point study included 608 Latino college students (Time 1 [fall semester; $N = 608$] and Time 2 [spring semester; $N = 258$]) from large, public, predominately White universities in the Midwest (see Table 1 for a list of universities sampled).

Table 1
Universities Sampled

	<i>N</i>	<i>%</i>
University of Illinois-UC	87	35.0
Northern Illinois University	52	20.9
Iowa State University	43	17.3
Michigan State University	16	6.4
University of Illinois-Chicago	20	8.0
Wichita State University	20	8.0
Other	11	4.4

Note. $N = 258$. Nine participants did not indicate which university they currently attend. “University of Illinois-UC” = University of Illinois at Urbana-Champaign. The category “Other” includes University of Michigan at Ann-Arbor, University of Michigan-Twin Cities, Barnard College of Columbia University, and Long Island University.

In addition to ISU (43; 16.7%), participants were primarily recruited from the University of Illinois at Urbana-Champaign (87; 33.7%) and Northern Illinois University (52; [20.2%]; see Table 1 for a list of the other universities sampled). Approximately two-thirds of the participants were female (i.e., 173; 67.1%), while 73 participants (28.3%) were male (12 did not answer this question). Participants' ages ranged from 18 to 48 ($M = 20.42$, $SD = 17.62$). Of the 258 participants who completed both time points, 63 (24.4%) were first-year students, 49 (19.0%) were second-year students, 56 (21.7%) were third-year students, and 78 (30.2%) were fourth-year students and above (12 did not answer this question). Over sixty percent of the participants were 2nd generation Latino individuals (i.e., 161; 62.4%), while 27 (10.5%) identified as 1.5 generation, 17 (6.6%) as 3rd generation, 17 (6.6%) as 4th generation, 17 (6.6%) as 5th generation, and 6 (2.3%) as 1st generation (13 did not answer this question). Over two-thirds of participants who were not international students identified as Mexican-American (i.e., 180; 70.0%), while 17 (6.7%) identified as Puerto-Rican American, 20 (7.8%) as South American (e.g., Columbian, Ecuadorian), 10 (3.9%) as Central American (e.g., Guatemalan, Salvadorian), and 14 (5.4%) as "Other" (i.e., Cuban, Dominican, Panamanian, and Spanish; 17 did not answer this question). Of the 19 international students, 14 (70.0%) were from Mexico, 4 (20.0%) from Puerto Rico, and 1 (5.3%) from Ecuador.

With respect to language exposure, 40 (15.5%) reported having learned only English at home, 65 (25.2%) learned primarily English with some Spanish, 68 (26.4%) learned English and Spanish equally, 52 (20.2%) learned primarily Spanish with some English, 21 (8.1%) learned Spanish only, and 3 (1.2%) reported "Other" (e.g., languages other than English or Spanish or English/Spanish and another language; 9 did not answer this question). Approximately one third of the participants had two siblings (84; 32.6%), while 56 (21.7%) had one sibling, 48 (18.6%)

had three siblings, 17 (6.6%) had four siblings, and 13 (5.0%) had five siblings or more. Fifteen participants (5.8%) were only children (25 people did not answer this question). Lastly, approximately one third of participants' mothers completed high school or their GED (85; 32.9%), 58 less than high school (22.5%), 46 (17.8%) earned a two-year college degree, 37 (14.3%) a four-year college degree, 18 (7.0%) a Masters or Doctoral degree, and 5 (1.9%) answered "Not applicable" (e.g., perhaps they are from a single-parent family or do not know their mother's education level; 9 did not answer this question). In terms of participants' fathers, 81 (31.4%) completed less than high school, 76 (29.5%) high school or GED, 20 (7.8%) earned a two-year college degree, 31 (12.0%) a four-year college degree, 27 (10.5%) a Masters or Doctoral degree, and 10 (3.88%) answered "Not applicable" (13 did not answer this question).

Measures

Acculturative family distancing (AFD)

Acculturative Family Distancing scale (AFD; Hwang, 2006b). The AFD scale is a 46-item self-report measure that assesses two dimensions of acculturative family distancing: communication breakdown and incongruent cultural values. Hwang (2006b) theoretically constructed the aforementioned dimensions based on his review of the literature on acculturation and clinical experiences with immigrant families. Items Hwang (2006b) created were then revised by a multicultural team of 10 undergraduate and graduate students in focus groups. The wording of the questions was changed to increase clarity and several items were dropped or added to increase the construct's face validity. The Communication Breakdown subscale assesses the degree to which participants believe they can effectively communicate with their parents (e.g., "I can communicate effectively with my parent(s)), how effectively their parents can communicate with them (e.g., "My parent(s) can communicate effectively with me), and

other dimensions (i.e., how successful their communication is, how much they disclose, whether they communicate personal needs, and the degree to which language barriers hinder communication lines). The Incongruent Cultural Values subscale examines the degree to which participants and their parents tackle incongruent cultural values from the former's perspective. The scale includes items on parenting style (e.g., "My parent(s) and I disagree on how they should parent me"), social norms (e.g., "My parent(s) and I are equally concerned with how we appear before others"), work ethic (e.g., "My parent(s) and I agree on the relative importance of school/work"), moral values (e.g., "My parent(s) and I agree that family needs always come before individual needs"), dating practices (e.g., "My parent(s) and I agree on when someone should begin dating"), and gender roles (e.g., "My parent(s) and I disagree on the roles that men and women should have"). Participants rate items on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores on the two dimensions reflect more shared cultural values and adequate communication (i.e., lower levels of AFD). Both dimensions demonstrated strong internal consistency reliability ($\alpha = .94$ for Communication Breakdown and $\alpha = .90$ for Incongruent Cultural Values). In the current study, coefficient alpha was .94 for the total AFD score. Concurrent validity in a study with Latino and Asian American college students revealed evidence of a positive link between AFD, family conflict, and subjective distress (Hwang & Wood, 2009).

Bicultural competence

Bicultural Self-Efficacy Scale (BSES; David et al., 2009). The Bicultural Self-Efficacy scale is a 26-item self-report measure that assesses individuals' perceived bicultural competence in both the host and their heritage culture. There are six subscales: Knowledge of Cultural Beliefs and Values (four items; e.g., "I am knowledgeable about the values important to

mainstream Americans as well as to my cultural group”), Positive Attitudes Toward Both Groups (four items; e.g., “I take pride in both the mainstream American culture and my heritage culture”), Bicultural beliefs (four items; e.g., “It is acceptable for a mainstream American individual to participate in two different cultures”), Communication ability (four items; e.g., “I am proficient in both standard English and the language of my heritage culture [e.g., urban street talk, Spanish, etc.]”), Role Repertoire (three items; e.g., “I choose the degree and manner by which I affiliate with each culture”), and Social Groundedness (seven items; e.g., “I feel like I fit in when I am with mainstream Americans as well as people from the same heritage culture as myself”). Participants rate items on a 9-point partially anchored Likert scale from 1 (*strongly disagree*), 3 (*disagree*), 5 (*neutral*), 7 (*agree*), to 9 (*strongly agree*). Total scores on the scale range from 26 to 234; higher scores indicate that individuals perceive a higher level of bicultural self-efficacy. The coefficient alpha reported by David et al. (2009) was $\alpha = .94$ for the total score among ethnic minority college students. For each subscale, the coefficient alphas reported by David et al. (2009) were .86 for Knowledge of Cultural Beliefs and Values, .84 for Positive Attitudes toward Both Groups, .71 for Bicultural Beliefs, .78 for Communication Ability, .63 for Role Repertoire, and .89 for Social Groundedness. Alpha for the total score in this study was .94. Positive associations with ethnic identity, identity integration, and collective self-esteem among ethnic minority college students provide evidence of construct validity (David et al., 2009).

Depression

Depression and Anxiety Stress Scales-Depression (DASS-D; S.H. Lovibond & P.F. Lovibond, 1995a). Originally a 42-item self-report measure, the DASS-21 is a 21-item version of the DASS that measures depression (seven items; e.g., “I felt downhearted and blue”), anxiety (seven items; e.g., “I felt I was close to panic”), and stress (7 items; e.g., “I found it hard to wind

down”). The Depression subscale measures dysphoric mood states (e.g., hopelessness) (S.H. Lovibond & P.F. Lovibond, 1995b). The Anxiety subscale assesses arousal states such as muscular tension and anxious affect. Lastly, the stress subscale measures emotional liability to stressors and general tension individuals feel. In the current study, only the depression subscale was used. S.H. Lovibond and P.F. Lovibond (1995b) reported that the factor structure and performance of the items is similar and appropriate for use in clinical and non-clinical samples. Individuals rate each symptom on a 4-point scale ranging from 0 (*did not apply at all*) to 3 (*applied to me very much or most of the time*) using “Over the past week, including today” as a reference point. Higher scores indicate more depression. Subscale scores are obtained by computing a mean score for each of the items on the subscale. For the purposes of this study and its main hypotheses, only a total score for the depression subscale was computed. Internal consistency was .88 for the depression subscale in non-clinical samples of adolescents and adults (Henry & Crawford, 2005). Coefficient alpha for a Spanish version of the DASS-21 used with bilingual Spanish adults was .93 for the depression subscale (Daza, Novy, Stanley, & Averill, 2002). In the present study, coefficient alpha was .84. With regard to convergent and discriminant validity, the DASS has been correlated with commonly used measures of depression, anxiety, worry, and negative affect (Beck & Steer, 1990; Watson, Clark, & Tellegen, 1988) among clinical and non-clinical adult samples (Antony, Bieling, Cox, Enns, & Swinson, 1998; Brown, Chorpita, Korotitsch, & Barlow, 1997; Crawford & Henry, 2003; S.H. Lovibond & P.F. Lovibond, 1995b). Validity evidence was provided by a positive association with depression and anxiety among Hispanic bilingual male and female adults (Daza, 2002).

Psychological wellbeing

Psychological Wellbeing Scale (PWBS; Ryff, 1989b). The original Psychological Wellbeing Scale is a 120-item self-report instrument developed to measure six dimensions of psychological wellbeing: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Each dimension is measured with 20-item indices in which participants rate their agreement with the items on a 6-point scale from 1 (*strongly disagree*) to 6 (*strongly agree*) using “Over the past week, including today” as a reference point. For the purpose of this study and its main hypotheses, the 18-item version of this scale was used (i.e., 3-item scales for each of the six dimensions). A higher total score indicates higher psychological wellbeing along the six dimensions denoted by Ryff (1989b) (Ryff & Keyes, 1995). Sample questions from each of the dimensions include “I tend to be influenced by people with strong opinions” (Autonomy), “In general, I feel I am in charge of the situation in which I live” (Environmental Mastery), “I think it is important to have new experiences that challenge how you think about yourself and the world” (Personal Growth), “Maintaining close relationships has been difficult and frustrating for me” (Positive Relations with Others), “I live my life one day at a time and don’t really think about the future” (Purpose in Life), and “When I look at the story of my life, I am pleased with how things have turned out” (Self-Acceptance).

Internal consistency coefficients for each of the six dimensions in the short form of the PWBS ranged from .33 to .56. While no studies have used the short form of the PWBS with Latino individuals, internal consistency coefficients for Latino/a adults who took the original PWBS range from .70 to .85 (Diaz et al., 2008; Gloria et al., 2009; Bowman, 2010; Landa et al., 2010). The test-retest reliability coefficients for each of the dimensions in Latino adult samples

(in the order presented above) were .85, .83, .88, .81, .82, and .81, respectively. With regard to validity, the PWBS correlates positively with measures of positive functioning (i.e., life satisfaction, affect balance, self-esteem, internal control, and morale) with coefficients ranging from .25 to .73, and negatively with measures of negative functioning (i.e., powerful others, chance control, and depression) with coefficients ranging from -.30 to -.60 for young (*mean age* = 19.53), middle (*mean age* = 49.85), and older adults (*mean age* = 74.96) (Ryff, 1989b). The reliabilities for each of the subscales in Van Dierendonck et al.'s (2008) study were .71, .68, .71, .78, .82, and .79 respectively, for autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Coefficient alpha for the total score of the scale for the present study was .84. Validity evidence was provided by Van Dierendonck, Díaz, Rodríguez-Carvajal, Blanco, and Moreno-Jiménez (2008) to confirm Ryff's (1989b) six factor model among Spanish and Columbian adults.

Acculturation and enculturation to U.S. mainstream and Latino/a cultures

U.S. Cultural Identity subscale and Ethnic Identity subscale (12 items total) from the Abbreviated Multidimensional Acculturation Scale (AMAS-ZABB; Zea, Asner-Self, Birman, & Buki, 2003). The AMAS-ZABB is a 42-item self-report instrument that was originally developed and evaluated with Latino/a individuals from diverse ethnic backgrounds. The instrument assesses acculturation to U.S. mainstream and Latino/a culture in terms of cultural identification (i.e., U.S. cultural identity and ethnic identity), language proficiency, and cultural knowledge. For the purposes of this study and its main hypotheses, only the U.S. cultural identity and ethnic identity subscales were used. Sample items on each subscale include "I think of myself as being a U.S. American" and "I feel that I am part of _____ culture (culture of origin)." Individuals rate items on a 4-point scale ranging from 1 (*Strongly disagree*) to 4 (*Strongly agree*), and

separate Latino/a and U.S. acculturation scores are obtained by averaging the item ratings. Across multiple samples, Zea et al. (2003) reported Cronbach's alphas in the high .80s and .90s for U.S. American acculturation and Latino/a scores, respectively. The AMAS-ZABB has been used with Latino/a American individuals (e.g., Cuban, Puerto Rican, Columbian, and other South American) ranging from 18 to 71 years to assess possible mediated relations among perceived discrimination and mental health ($\alpha = .93$ for both subscales; Moradi & Risco, 2006). Coefficient alphas in this study were .92 and .91 for the U.S. Cultural Identity and Ethnic Identity subscales, respectively. In reference to the scales' validity, Zea et al. (2003) concluded that scores on U.S. acculturation correlated positively with and scores on Latino/a acculturation correlated negatively with the number of years individuals resided in the United States.

Demographic information

Participants completed a 10-item questionnaire for information on their age, gender, education level, generation status, primary language learned at home, ethnicity, and their parents' educational backgrounds.

Procedure

Prior to administering questionnaires via an online survey site, I obtained approval from the Institutional Review Board (IRB) at Iowa State University to conduct my study with Latino college students. Participants at Iowa State University signed up via two methods: through the SONA Research system hosted by the Department of Psychology or through an invitation email/invitation over phone. Those recruited via the SONA Research system read a description for the study that invited them to participate in a study examining factors related to acculturation and psychological outcomes. For participants who did not participate in the SONA Research

system, I obtained a list of names and email addresses from the Office of the Registrar. I emailed and/or called students who self-identify as Latino/a inviting them to participate

In addition, I contacted the Institutional Review Board (IRB) at the other universities to find out whether or not IRB approval was needed (see Appendix G). All other universities did not consider their institution to be involved in my research and thus confirmed that I did not need approval. I then contacted the Office of the Registrar, Student Enrollment, or Student Records at each university for a list of names and emails for students that self-identified as Latino/a or emails for Latino student organizations. I emailed students on the list given by each office using the same email template I used to recruit participants at Iowa State University.

First time point

When each participant signed up for the study, they were guided to the survey via a website hosted through qualtrics.com. Participants had the option to take the survey in English or in Spanish. The scales in Spanish that were not already translated by the original authors (i.e., the BSES) were translated following a 3-step procedure (Brislin, 1970, 1980). First, two individuals who were bilingual in English and Spanish and unaffiliated with the present study translated the measures from English to Spanish. Second, two different bilingual individuals who were blind to the study and unfamiliar with the measures performed back translations of the measures from Spanish to English. Last, two native English speakers who were also blind to the purpose of this study compared the original items written in English with the back-translated items for their semantic equivalency and accuracy.

After participants clicked on the link to the survey, they first read through an informed consent page that explained the nature of the study, the risks and benefits, and their rights as participants (see Appendix H). Once participants confirmed that they were over the age of 18

and consented to continue with the study, they were forwarded to the actual survey. The survey included two validity check items (e.g., “A week has 7 days”) to help filter responses that were submitted randomly. Students at Iowa State University enrolled in the SONA Research system completed one version of the survey that was linked to another website that recorded their participation. Once their participation was recorded, they received one research credit for their participation. All other students completed another version of the survey. At the end of the survey, the participants were thanked for their participation at the first point of data collection, read a debriefing form, and given my contact information for their reference.

Second time point

I kept a record of participants’ contact information to contact participants again in the spring 2013 semester (i.e., after three to five months). At Time 2, participants were contacted via email to complete a shorter version of the survey on the same website. Participants completed the AFD, BSES, DASS-Depression, and PWBS scales. The Time 2 survey included four validity check items (e.g., “Please choose Strongly Agree here”) to help filter responses that were submitted randomly. All participants completed the survey linked to another survey in which they could submit their contact information (i.e., name, phone number, and email address) to be entered into a random drawing for one of ten \$25 VISA gift cards. Once participants finished the survey at Time 2, they were thanked for their participation, debriefed on the nature of the study, and given the researcher’s contact information. I maintained participant confidentiality by storing participants’ contact information separately (i.e., separate from the survey data). Moreover, contact information was only reviewed at the end of the project for those that entered the drawing.

CHAPTER 4. RESULTS

Preliminary Analyses

Several preliminary analyses were conducted before analyzing the main hypotheses. First, an independent samples t-test was conducted to examine whether all eight variables (i.e., depression at Times 1 and 2, psychological wellbeing at Times 1 and 2, acculturation level at Time 1, enculturation level at Time 1, acculturative family distancing at Time 1, and bicultural competence at Time 2) varied between Latino college students who participated in Time 1 and students who participated at both time points. Results indicated that there were no significant differences among participants completing Time 1 and those completing Time 1 and Time 2, $t(536) = -.36, p = .06$ for Bicultural Competence at Time 2 to $t(569) = -1.89, p = .72$ for Psychological Wellbeing at Time 1. Thus, all eight variables did not vary significantly between Latino college students who participated at Time 1 compared with those who participated at both time points.

Second, with regards to Latino students at ISU who participated, I examined whether the sample ($N = 43$) was representative of the population of Latino students at ISU ($N = 804$) with regards to their gender. No significant differences were reported, $\chi^2(1, N = 43) = 3.78, p = .06$, indicating that this sample was relatively representative of the ISU Latino population with respect to gender.

Third, I examined the missing data. Data from 612 Latino college students were collected at Time 1. Four participants were removed because they answered more than three of the six validity questions incorrectly (e.g., “One week has seven days”; i.e., $N = 608$ for Time 1). At Time 2, data from 259 Latino college students were collected. One participant was removed because he/she answered more than three of the six validity questions incorrectly (i.e., $N = 258$

for Time 2). With regards to ISU participants, at Time 1, 84 (of 608; 14%) Latino students completed the survey. At Time 2, 43 Latino students completed the second survey (of 258; 17%).

Missing data was from 0.00% for measures such as depression at Time 1, psychological wellbeing at Time 1, acculturation at Time 1, AFD at Time 1, and bicultural competence at Time 2, to 0.80% for the measure of psychological wellbeing at Time 2. The result from the Little's Missing Completing at Random (MCAR) test was not found to be significant, $\chi^2(20, N = 258) = 7.37, p = 1.00$. Therefore, this finding suggests that missing cases were not significantly different from non-missing cases. Based on Schlomer, Bauman, and Card's (2010) recommendation, the full information maximum-likelihood (FIML) estimation method was used in the analyses through Mplus.

Means, standard deviations, and zero-order correlations among the variables are presented in Table 2. The strongest correlations were shown between the outcome variables at Time 1 and Time 2. Depression at Time 1 was significantly negatively associated with psychological wellbeing at Time 1 and significantly positively associated with depression at Time 2. Psychological wellbeing at Time 1 was also significantly negatively associated with depression at Time 2 and significantly positively associated with psychological wellbeing at Time 2. Depression at Time 1 and 2 were significantly negatively associated with psychological wellbeing at Time 2. In terms of the mediator/moderator variable in question, acculturation level at Time 1 and psychological wellbeing at Times 1 and 2 were significantly positively associated with bicultural competence at Time 2. Depression at Time 2 was significantly negatively associated with bicultural competence at Time 2. For AFD, enculturation level at Time 1, bicultural competence at Time 2, and psychological wellbeing at Times 1 and 2 were

significantly positively associated with AFD at Time 1. Depression at Times 1 and 2 were significantly negatively associated with AFD at Time 1.

Table 2
Means, Standard Deviations, and Zero-Order Correlations

	1	2	3	4	5	6	7	8
1. U.S. Cultural Identity (T1)	-----							
2. Ethnic Identity (T1)	.07	-----						
3. AFD (T1)	.12	.19**	-----					
4. Bicultural Competence (T2)	.17**	.44**	.31**	-----				
5. Depression (T1)	-.10	-.08	-.36**	-.13*	-----			
6. Psychological Wellbeing (T1)	.05	.12	.44**	.26**	-.58**	-----		
7. Depression (T2)	-.13*	-.13*	-.31**	-.30**	.49**	-.48**	-----	
8. Psychological Wellbeing (T2)	.07	.14*	.38**	.33**	-.31**	.66**	-.54**	-----
Mean	3.33	3.32	5.13	6.85	3.64	4.63	2.41	4.82
SD	0.75	0.70	0.95	1.17	3.88	0.57	0.47	0.64

Note. $N = 258$. AFD = Acculturative Family Distancing (higher scores reflect more shared cultural values and adequate communication).

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

Test for Mediation: Path Analysis

The statistical package Mplus Version 6.0 program (Muthén & Muthén, 2010) was used to test the path model through the full information maximum-likelihood method. A multivariate normality test developed by Mardia (see Bollen, 1989) was used to examine whether the data met the multivariate normality assumption that underlies the maximum-likelihood method. The significant result, $\chi^2(2, N = 258) = 357.00, p < .001$, indicated non-multivariate normality.

Therefore, the scaled chi-square statistic developed by Satorra and Bentler (1988) was used to adjust the impact of non-normality on the results. Also, the Satorra-Bentler (SB) scaled chi-square difference test (Satorra & Bentler, 2001) was used to compare the nested models.

However, the hypothetical partially mediated model was a fully recursive model (i.e., all possible paths were estimated). The chi-square was zero and the number of degrees of freedom was zero. A scaled chi-square cannot be computed if the chi-square is zero. Therefore, the standard, rather than the scaled, chi-square was used to compare the nested models. Three goodness of fit indices were used to evaluate the model fit (Hu & Bentler, 1999). The first is the comparative fit index (CFI), in which values of .95 or higher indicates that the model is a good fit for the data. The second is the standardized root-mean-square residual (SRMR) in which values of .08 or less suggest the model fits the data adequately. Lastly, the third fit index used was the root-mean-square-error approximation (RMSEA) where values of .06 or lower demonstrate that the model fits the data well.

Next, the partially mediated model was compared with the fully mediated model. The hypothetical partially mediated model was to estimate the two direct paths (i.e., the direct paths from AFD to depression and from AFD to psychological wellbeing). Conversely, the alternative fully mediated model was to constrain these above two direct paths to zero. If the difference in

chi-square between the partially mediated model and the fully mediated model was not significant, it indicated that the direct paths did not contribute significantly to the model. Then, these paths would not need to be included in the model, thus indicating that the fully mediated model is a better model. This would in turn allow me to conclude that the associations between AFD at Time 1 and depression at Time 2 and between AFD at Time 1 and psychological wellbeing at Time 2 were fully mediated by bicultural competence at Time 2. Conversely, if the difference in chi-square between the fully mediated model and the partially mediated model was significant, it would indicate that these direct paths did contribute significantly to the model. So, these paths would need to be included in the model, thus indicating that the partially mediated model would be a better model. In such case, it can be concluded that the associations between AFD at Time 1 and depression at Time 2 and AFD at Time 1 and psychological wellbeing at Time 2 are partially mediated by bicultural competence at Time 2.

Since the hypothetical partially mediated model is a fully recursive model (i.e., estimating all possible paths), the fit is always a perfect fit. That is, $\chi^2(0, N = 258) = 0.00, p < .001$; CFI = 1.00, RMSEA = .00, and SRMR = .00 (see Figure 5). However, the results for the fully mediated model were $\chi^2(2, N = 258) = 1.28, p = .53$; CFI = 1.00, RMSEA = .00 (Confidence Interval: .00 to .11), and SRMR = .01 (see Figure 6). When these two models were compared, the non-significant chi-square difference, $\Delta\chi^2(2, N = 258) = 1.28, p = .53$, indicated that the two direct paths did not contribute significantly to the model. Thus, based on the parsimony principle, the fully mediated model was the best model (see Table 3), which was used to test the significance of the indirect or mediation effects.

Table 3

Comparisons Among Different Alternative Models

Model	χ^2	df	CFI	RMSEA	CI for RMSEA	SRMR	$\Delta\chi^2$
Partially Mediated Model (Model A)	0.00	0	1.00	.00	.00, .00	.00	
Fully Mediated Model (Model B)	1.28***	2	1.00	.00	.00, .11	.01	A vs. B: 1.28 (2)

Note. $N = 258$. *df* = degrees of freedom; CI = Confidence interval; CFI = Comparative fit index; RMSEA = Root-mean-square error of approximation; SRMR = Standardized root-mean-square-residual; Model A = the proposed hypothetical partially mediated model (see Figure 5); Model B = the fully mediated model; the direct paths from AFD to depression and AFD to psychological wellbeing were constrained to zero. Model in **bold** indicates best-fit model.

*** $p < .001$.

Testing the Significance of the Indirect Effects

The bootstrap procedure was used to test the significance of indirect effects (e.g., MacKinnon, Lockwood, & Williams, 2004; Mallinckrodt, Abraham, Wei, & Russell, 2006; Shrout & Bolger, 2002) for the final fully mediated model (see Figure 6). Bootstrap procedures are typically used to empirically and repeatedly examine the variability of estimates (Efron & Tibshirani, 1993). A total of 1,000 bootstrap samples were requested. The two indirect effects (the predictor [i.e., AFD at Time 1] → the mediator [i.e., bicultural competence at Time 2] → psychological outcomes [i.e., depression at Time 2 and psychological wellbeing at Time 2]) were reported in Table 4. MacKinnon et al. (2004) indicated that the bootstrap confidence interval (CI) adjusted for bias showed the highest levels of statistical power. Thus, a 95 % bias-corrected bootstrap confidence interval (CI) for the indirect effects was reported in this study. If the 95% CI does not include zero, the indirect effect is considered significant at the .05 level. Table 4 showed that both indirect effects were significant.

Table 4

Bootstrap Analysis of Magnitude and Statistical Significance of Indirect Effects

Indirect Effect				β (standardized path coefficient and product)	Mean Indirect Effect (b) ^a	SE of Mean ^a	95% CI of bootstrap with bias correction for Mean Indirect Effect ^a (Lower, Upper)	
1. AFD	→	BC	→	Depression	$(.19) \times (-.16) = -.03$	-.003	.001	-.006, -.001*
2. AFD	→	BC	→	PWB	$(.19) \times (.17) = .03$.01	.005	.002, .022*

Note. $N = 258$. AFD = Acculturative Family Distancing. BC = Bicultural Competence. PWB = Psychological Wellbeing. CI = Confidence Interval.

^aThese values are based on the unstandardized path coefficients.

* $p < .05$ (95 % Confidence Interval does not include zero).

In the final model (see Figure 6), among the significant paths, the magnitudes of the standardized paths coefficients between AFD at Time 1, bicultural competence at Time 2, and the two outcome variables at Time 2 were small ([AFD → bicultural competence = .19], [bicultural competence → depression = -.16], and [bicultural competence → psychological wellbeing = .17]). Moreover, about 26% of the variance in bicultural competence at Time 2 was explained by AFD, enculturation, acculturation, and psychological wellbeing at Time 1; 23% of the variance in depression at Time 2 was explained by bicultural competence at Time 2, depression at Time 1, and psychological wellbeing at Time 1; and 32% of variance in psychological wellbeing at Time 2 was explained by bicultural competence at Time 2 and psychological wellbeing at Time 1.

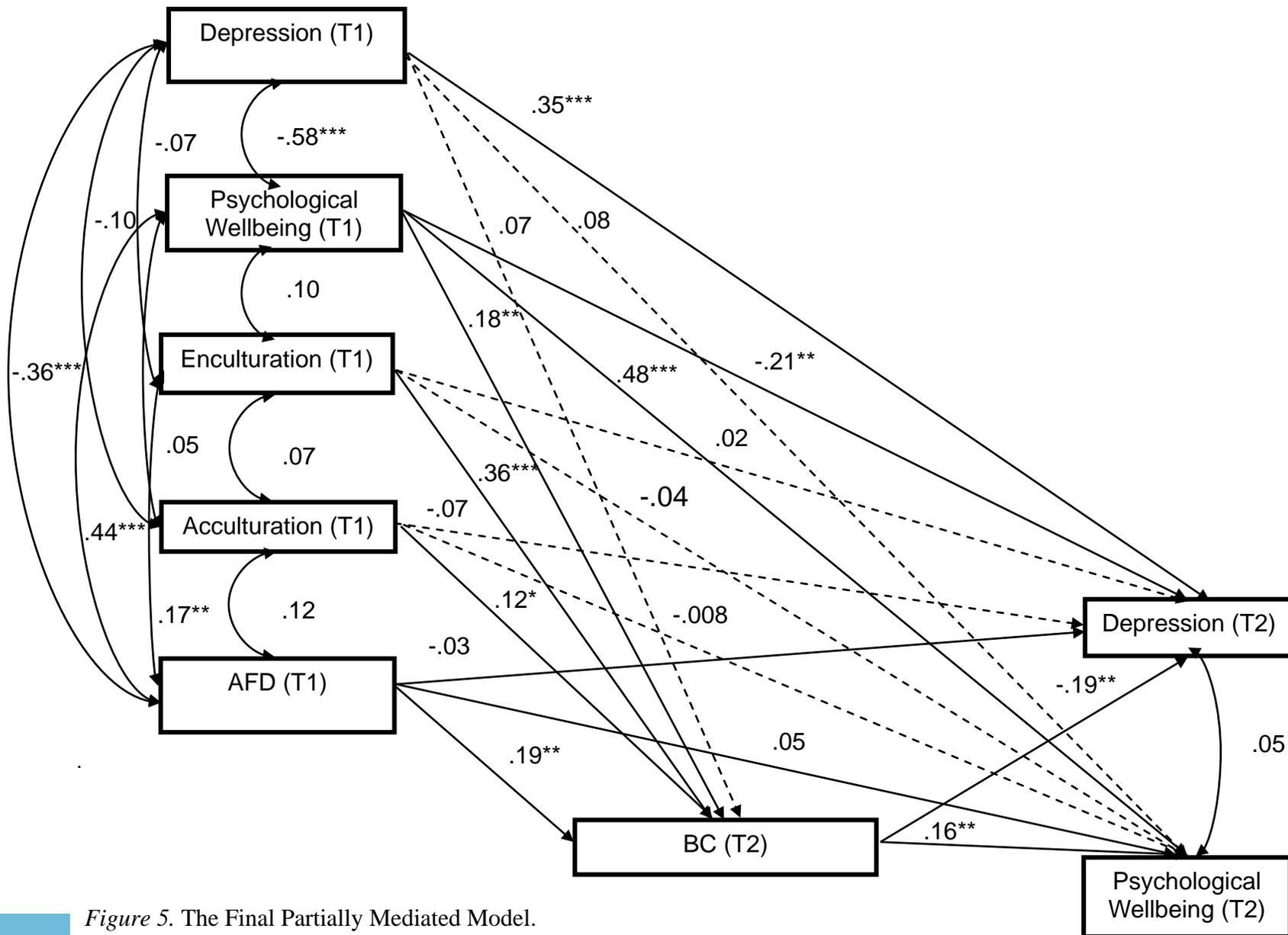


Figure 5. The Final Partially Mediated Model.

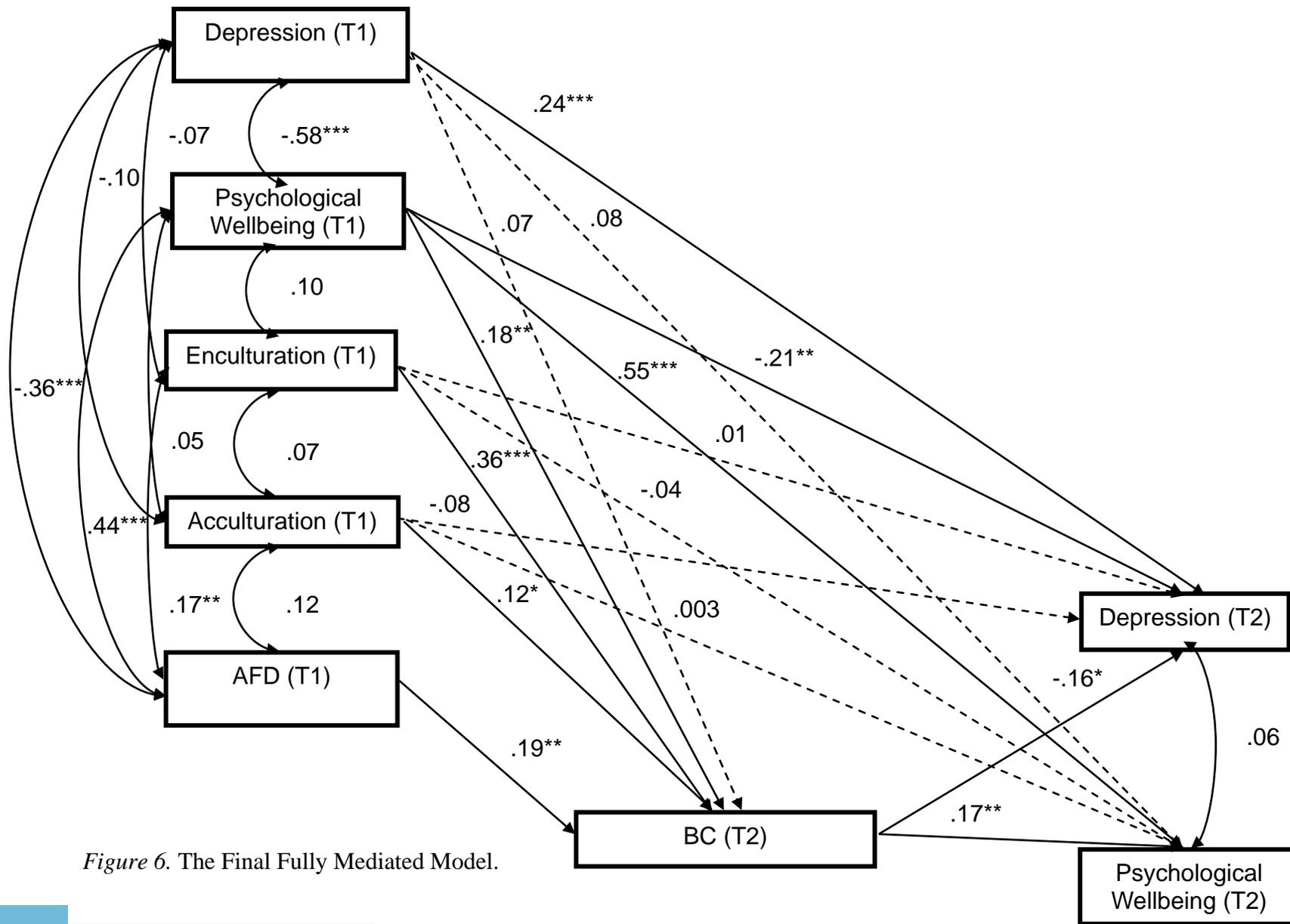


Figure 6. The Final Fully Mediated Model.

Moreover, I tested the significance of the indirect effects of the main set of hypotheses after removing items from the communication subscale of the BSES due to their possible similarity with the items on the communication breakdown subscale of the AFD scale. A 95% CI demonstrated that, even after removing these items, both indirect effects were still significant, 95% CI [-.006, -0.001] for AFD at Time 1 → bicultural competence at Time 2 → depression at Time 2; 95% CI [.001, 0.019] for AFD at Time 1 → bicultural competence at Time 2 → psychological wellbeing at Time 2.

Test for Moderation

A hierarchical regression (Baron & Kenny, 1986) was used to test for moderation using SPSS 20. Before running a moderation analysis, I standardized all predictor variables (i.e., depression at Time 1, psychological wellbeing at Time 1, acculturation at Time 1, enculturation at Time 1, AFD at Time 1, and bicultural competence at Time 2) before computing the interaction terms to reduce possible issues of multi-collinearity (Aiken & West, 1991; Frazier et al., 2004). Next, I created the interaction term by calculating the product of acculturative family distancing (i.e., predictor variable) and bicultural competence (i.e., moderator variable). In other words, the interaction term was acculturative family distancing × bicultural competence. Third, I entered the variables into the regression model in the following order: In Step 1, the covariate variables (i.e., depression at Time 1, psychological wellbeing at Time 1, acculturation at Time 1, and enculturation at Time 1) were entered into the first block of the regression equations. In Step 2, the standardized predictor (i.e., acculturative family distancing at Time 1) was entered into the second block of the regression equations. In Step 3, the moderating variable (i.e., bicultural competence at Time 2) was entered into the third block of the regression. In Step 4, the interaction variable (i.e., acculturative family distancing [Time 1] × bicultural competence [Time

2]) was entered into the fourth block of the regression to examine a possible moderating effect. If the paths from the interaction variable to psychological outcomes (i.e., depression and psychological wellbeing) are significant (i.e., there is a significant increment in R^2 for Step 4), then there is evidence for a moderating effect.

Depression (Time 2)

The regression results indicated that in Step 1, depression at Time 1, psychological wellbeing at Time 1, enculturation at Time 1, and acculturation at Time 1 accounted for 31% of the variance in predicting depression at Time 2 (see Table 5). Specifically, depression and psychological wellbeing at Time 1 were significant predictors of depression at Time 2. In Step 2, AFD did not significantly predict depression ($p = .26$). In Step 3, bicultural competence at Time 2 significantly predicted depression at Time 2 ($p = .003$), indicating a main effect of bicultural competence at Time 2. In Step 4, the incremental effect of the two-way interaction (i.e., AFD at Time 1 \times bicultural competence at Time 2) was not statistically significant, $\Delta R^2 = .00$ and $p = .95$.

Psychological wellbeing (Time 2)

The regression results indicated that in Step 1, depression at Time 1, psychological wellbeing at Time 1, acculturation level, and enculturation level accounted for 46% of the variance in predicting psychological wellbeing at Time 2 (see Table 6). Specifically, depression and psychological wellbeing at Time 1 were significant predictors of psychological wellbeing at Time 2 ($p = .03$ and $p < .001$, respectively). In Step 2, AFD at Time 1 significantly predicted psychological wellbeing, indicating a main effect of AFD at Time 1. In Step 3, bicultural competence at Time 2 significantly predicted psychological wellbeing, indicating a main effect of bicultural competence at Time 2. In Step 4, the incremental effect of the two-way interaction

(i.e., AFD at Time 1 \times bicultural competence at Time 2) was not statistically significant, $\Delta R^2 = .00$ and $p = .29$.

Table 5

Hierarchical Multiple Regression Analyses Testing Moderating Effects of AFD and Bicultural Competence on Depression (T2)

	<i>B</i>	<i>SE b</i>	β	ΔR^2	ΔF
Step 1 (covariates)				.31***	27.13
Depression (T1)	1.00	.21	.31***		
Psychological Wellbeing (T1)	-.92	.21	-.28***		
Enculturation (T1)	-.23	.18	-.07		
Acculturation (T1)	-.27	.17	-.08		
Step 2 (predictor)				.004	1.26
Depression (T1)	.97	.21	.30***		
Psychological Wellbeing (T1)	-.85	.22	-.26***		
Enculturation (T1)	-.20	.18	-.06		
Acculturation (T1)	-.25	.18	-.08		
Acculturative Family Distancing (AFD) (T1)	-.22	.20	-.07		
Step 3 (moderator)				.03**	9.14
Depression (T1)	1.02	.21	.31***		
Psychological Wellbeing (T1)	-.74	.22	-.23**		
Enculturation (T1)	.04	.19	.01		
Acculturation (T1)	-.18	.17	-.06		
AFD (T1)	-.12	.20	-.04		
Bicultural Competence (BC) (T2)	-.61	.20	-.19**		
Step 4 (interaction)				.00	.01
Depression (T1)	1.01	.21	.31***		
Psychological Wellbeing (T1)	-.74	.22	-.23**		
Enculturation (T1)	.04	.19	.01		
Acculturation (T1)	-.18	.18	-.06		
AFD (T1)	-.12	.20	-.04		
BC (T2)	-.61	.21	-.19**		
AFD \times BC	.01	.15	.004		

Note. $N = 252$. T = Time.

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

Table 6

Hierarchical Multiple Regression Analyses Testing Moderating Effects of AFD and Bicultural Competence on Psychological Wellbeing (T2)

	<i>B</i>	<i>SE b</i>	β	ΔR^2	ΔF
Step 1 (covariates)				.46***	53.10
Depression (T1)	1.47	.65	.13*		
Psychological Wellbeing (T1)	8.35	.66	.73***		
Enculturation (T1)	.72	.54	.06		
Acculturation (T1)	.51	.53	.04		
Step 2 (predictor)				.01*	5.18
Depression (T1)	1.66	.65	.15**		
Psychological Wellbeing (T1)	7.90	.68	.69***		
Enculturation (T1)	.53	.54	.05		
Acculturation (T1)	.40	.53	.03		
Acculturative Family Distancing (AFD) (T1)	1.37	.60	.13*		
Step 3 (moderator)				.02**	8.01
Depression (T1)	1.54	.65	.14*		
Psychological Wellbeing (T1)	7.60	.68	.67***		
Enculturation (T1)	-.14	.58	-.01		
Acculturation (T1)	.20	.53	.02		
AFD (T1)	1.07	.60	.09		
Bicultural Competence (BC) (T2)	1.73	.61	.15**		
Step 4 (interaction)				.00	1.11
Depression (T1)	1.54	.65	.14*		
Psychological Wellbeing (T1)	7.61	.68	.67***		
Enculturation (T1)	-.12	.58	-.01		
Acculturation (T1)	.23	.53	.02		
AFD (T1)	1.04	.60	.09		
BC (T2)	1.61	.62	.14*		
AFD × BC	-.48	.46	-.05		

Note. *N* = 256. T = Time.

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

CHAPTER 5. DISCUSSION

Recent studies in the literature on acculturation processes have provided evidence for the relationship between acculturation stress and psychological outcomes such as depression (Crockett et al., 2007; Hovey & King, 1996; Potochnick & Perreira, 2010; Torres, 2010) and adjustment (Costigan & Dokis, 2006; Rogler et al., 1991). However, most multicultural researchers have investigated these associations without defining specific stressors or taking into account contextual factors that may affect individuals' co-occurring processes of adopting U.S. cultural practices while maintaining those of their heritage cultures (Rogler, Cortes, & Malgady, 1991; Yoon et al., 2010). The findings of the current empirical study support and expand on past literature [see details below] by examining bicultural competence as a potential mediator or a moderator between acculturative family distancing (AFD), a proximal term to describe intergenerational family conflict among immigrant families (i.e., a contextual factor), and depression and psychological wellbeing (i.e., psychological outcomes) in a sample of Latino college students attending large, predominantly White public universities in the Midwest.

Mediation

With reference to the mediation hypotheses, the present study examined whether bicultural competence at Time 2 was an apparent causal mechanism for the relations between AFD at Time 1 and psychological outcomes (i.e., depression and psychological wellbeing) at Time 2. Both mediation hypotheses controlled for depression, psychological wellbeing, enculturation, and acculturation levels at Time 1. Results supported the mediation hypotheses that bicultural competence at Time 2 fully mediated the relations between AFD at Time 1 and depression at Time 2 as well as between AFD at Time 1 and psychological wellbeing at Time 2 (see Figure 5). It is important to note here that higher scores on the AFD scale refer to more

shared cultural values and adequate communication. In other words, when Latino college students experience more shared cultural values and adequate communication with their parents, these students will have a higher level of bicultural competence, which in turn can be related to lower levels of depression and higher levels of psychological wellbeing. As addressed earlier, previous studies have only examined the direct association between AFD and clinical depression (Hwang & Wood, 2009). The current results advance the literature to demonstrate that future bicultural competence mediated the relation between acculturative family distancing (i.e., higher scores refer to more shared cultural values and adequate communication) and future depression and future psychological wellbeing. It is also important to highlight that these mediation effects occurred after controlling for the initial levels of depression and psychological wellbeing as well as acculturation and enculturation level as possible confounding variables.

Moderation

In terms of moderation, the present study also examined for whom (i.e., when Latino college students who had high or low bicultural competence) the associations between AFD and depression or psychological wellbeing would change or not. While no interaction effects were found (see below), main effects of bicultural competence at Time 2 and AFD at Time 1 were found. Bicultural competence significantly predicted depression and psychological wellbeing at Time 2 after controlling for the effect of depression, psychological wellbeing, enculturation, acculturation, and AFD at Time 1. In other words, Latino college students who exhibit higher levels of bicultural competence during an academic semester may also exhibit lower levels of depression and higher levels of psychological wellbeing. These results confirm David et al.'s (2009) findings that students' belief in their ability to navigate two cultures effectively relates to lower depressive symptoms, higher psychological wellbeing, and higher mental health. Thus,

their ability to be biculturally competent (no matter how high or low) may still protect them from depressive symptoms and enhance their psychological wellbeing.

Furthermore, AFD significantly predicted psychological wellbeing at Time 2. Latino college students who score higher on the AFD scale (i.e., indicating more adequate communication with their parents and congruent cultural values) may also demonstrate higher levels of psychological wellbeing after controlling for the effects of initial depression, psychological wellbeing, enculturation, and acculturation levels. Previous studies exploring acculturative family distancing among Latino college students have primarily tested for mediation and have not corroborated this finding. Nevertheless, the connection between higher scores on the AFD scale and psychological wellbeing make sense. The reason is that Latinos who are better able to communicate and emotionally bond with their parents may feel a stronger sense of familismo (i.e., stronger sense of identification and attachment to the family; Sabogal et al., 1987) and therefore may feel nurtured, loved, and protected from emotional stress (G. Marín & B.V. Marín, 1991), which contributes positively to their psychological wellbeing.

Contrary to my hypotheses, no interaction effects of AFD at Time 1 and bicultural competence at Time 2 were found on psychological outcomes (i.e., depression and psychological wellbeing) at Time 2 after initial levels of depression, psychological wellbeing, acculturation, and enculturation were statistically controlled. In other words, there was not a significant difference in the extent to which AFD related to depression or psychological wellbeing at Time 2 between those who exhibit high or low bicultural competence. Two possible explanations for these non-significant moderation results follow. First, Latino college students with a lower level of bicultural competence may still have some culturally appropriate tools that help them manage a breakdown in communication or cultural value differences between themselves and their

parents. For example, college students who only know how to socially interact with non-Latino individuals may still feel comfortable self-disclosing and sharing their experiences in a bicultural environment with their Latino parents and peers. They may or may not believe they can interact successfully among two groups. Second, Latino college students with a higher level of bicultural competence may be willing to understand and accept that cultural differences exist between themselves and their parents, but their positive attitude toward both cultures also does not influence the degree to which AFD influences their psychological outcomes. These results are contrary to Torres and Rollock's (2007) findings that intercultural competence was a moderator for the association between acculturation level, coping, and depression. Three possible reasons for this difference in findings are (a) that intercultural competence was not measured according to LaFromboise et al.'s (1993) six dimensions of bicultural competence; (b) acculturation level and coping strategies are conceptually different from AFD, even if they may predict depression; and (c) the results of this study originated from longitudinal rather than cross-sectional data.

Contribution to Acculturation Literature

Current research in the acculturation literature has begun moving beyond assessing direct associations between acculturation and psychological outcomes to explore possible mediators and moderators that pertain to intergenerational disparity in a growing U.S. minority population (i.e., Latino families). Thus, the present study made at least three important contributions to the acculturation literature.

First, the current study identified a specific stressor (i.e., AFD) that can affect Latino immigrant parents' and their children (i.e., Latino college students) as they undergo acculturation and enculturation processes. Yoon et al.'s (2010) meta-analysis of the acculturation literature from 1988 to 2009 found that multicultural research has primarily attempted to investigate

acculturation concerns by assessing the effects of “high” and “low” acculturation levels on psychological outcomes, rather than unique stressors or contextual factors that specifically impact Latino families. Moreover, few researchers have focused on the effects of intergenerational family conflict and AFD on Latino individuals’ mental health status, which may depend on whether they can communicate and emotionally bond with their parents. As such, Hwang (2006a) argued that current interventions and psycho-education that addresses acculturation gaps may not be detailed enough to construct specific treatment plans for immigrant families (e.g., Latino families). Instead, current researchers may only have a broad understanding of why conflict related to acculturation gaps occurs. By applying the AFD framework to this population of interest, the current study has introduced a specific contextual factor (i.e., bicultural competence) that may help future researchers explore AFD and other proximal explanations for why psychological outcomes occur.

Next, my results advance the literature by highlighting the relevance of combining both Hwang’s (2006a) AFD theory and LaFromboise et al.’s (1993) bicultural competence theory. The present findings found that above and beyond acculturation and enculturation level (i.e., two variables correlated with bicultural competence; LaFromboise et al., 1993), bicultural competence serves as a mediator between AFD and psychological outcomes in Latino college students. The fact that bicultural competence serves as a mediator between AFD and depression and AFD and psychological wellbeing adds depth to the acculturation literature; making this specific distinction between the possible roles bicultural competence could play in the AFD-psychological outcomes link in a growing population (i.e., Latinos) is important because this study was the first to focus on both the AFD model and the bicultural competence framework.

Finally, the current study provides longitudinal data to support the notion that bicultural competence is an apparent causal mechanism in the AFD-psychological outcomes link, as opposed to a moderator. Nguyen and Benet-Martinez (2013) argued that an important limitation of the acculturation field in general is that researchers rely heavily on cross-sectional data. One way to begin addressing this limitation is to conduct longitudinal studies. The present study answered Nguyen and Benet-Martinez's call for non-traditional research methods (i.e., longitudinal studies) by obtaining data at two different time points. In this way, researchers can move beyond inferring relationships among variables based on correlational, cross-sectional data and begin to make causal inferences about the results obtained. For example, this study provides evidence that bicultural competence serves as an apparent causal mechanism, rather than a variable that describes for whom and when (i.e., a moderator) two psychological outcomes (i.e., depression and psychological wellbeing) occur, for members of a specific population (i.e., Latino college students).

Limitations

The contributions of this study to the acculturation literature should be viewed in light of its limitations. First, the majority of participants in the sample obtained identified as Mexican American and second generation Latino college students. Furthermore, participants attended predominantly White Midwestern universities, which limits the extent of the study's generalizability to other Latino subgroups. Future studies may benefit from sampling specific ethnic groups (e.g., Puerto Ricans, Cubans) in other areas of the U.S., as well as from first and third generation and above to confirm or disconfirm the findings of the present study.

Second, the study may be subject to a self-selection bias. Participants who were (a) interested in the topic of bicultural competence and acculturation and (b) who were comfortable

disclosing their experiences with their parents and their levels of depression and psychological wellbeing via an online survey may have also been more likely to participate. Future researchers may advertise their studies in such a way that increases interest among a larger population of Latino college students (e.g., providing psycho-education on the study's topic before sampling and providing multiple means of participation [e.g., paper format, online format, in-person interview, etc.]).

Finally, the means by which the data were collected poses as a limitation. The use of an online, self-report questionnaire to gather longitudinal data assumes that participants will accurately report on the amount of distancing that occurs between themselves and their parents due to a breakdown in communication and incongruent cultural values. Moreover, the study's results rely on the truthfulness and the ability of the participant to reflect on their level of bicultural competence and current psychological state (i.e., distress and psychological wellbeing) at two time points. Future studies may benefit from obtaining (a) parents' reports of the distancing between themselves and their children and their children's bicultural competence; and (b) live observation data collected by researchers or third-party collaborators on each of the study's variables. Data obtained in either manner may be analyzed in combination with or separate from self-report data.

Future Research Directions

Despite the aforementioned limitations, the current study presents at least three directions for future studies. First, the researcher in the present study defined psychological outcomes as measured by the DASS-D (i.e., for depression; Lovibond & Lovibond, 1995a) and the PWB (i.e., for psychological wellbeing; Ryff, 1989). Future studies may choose to define psychological outcomes with different scales (e.g., the Center for Epidemiological Studies-Depression or the

20-item Hopkins Symptom Checklist) or with different constructs (e.g., self-esteem, self-efficacy, or life satisfaction) to increase the robustness of the current study's findings.

Second, while this study found that bicultural competence serves as an apparent causal mechanism for the AFD-psychological outcomes link, the results found were gathered an academic semester apart from each other. Future studies may benefit from collecting longitudinal data across a longer time period or at multiple time points to draw causal inferences about the relationship among AFD, bicultural competence, and psychological outcomes. For instance, data may be collected when participants are first-year students and when participants are in their last year of college to capture the possible long-term increase or decrease in bicultural competence that may influence their depression and psychological wellbeing. Longitudinal designs can also be combined with experimental designs or intervention studies that test for causal effects (i.e., by enhancing participants' level of bicultural competence).

Lastly, the researcher's primary variable of interest was that of bicultural competence and its possible effect on the relationship between AFD and psychological outcomes in Latino college students. Nevertheless, Nguyen and Benet-Martinez (2013) recent meta-analysis on the biculturalism and adjustment literature demonstrated the importance of exploring other possible moderating variables that may influence Latinos' psychological wellbeing. One variable of interest that may apply to this study is socio-economic status (SES). Specifically, since bicultural competence was not a significant moderator in this study, SES may serve as a moderator for the AFD-outcomes relations, whereby (a) the relationship between AFD and depression is stronger for those with low SES backgrounds and (b) the relationship between AFD and psychological wellbeing is weaker for those with mid or high SES backgrounds.

Implications for Counseling

Given that the Latino population is expected to represent more than 20% of the U.S. population by 2050 (U.S. Census Bureau, 2010), the results obtained suggest at least three implications applicable to mental health professionals working with Latino college students studying at predominantly White universities. First, counselors may increase their awareness of the idea that Latino college students may present with depressive symptoms because of the distance that may exist between themselves and their parents (i.e., they may experience AFD) and a lack of bicultural competence. In other words, counselors should obtain more information and greater understanding of college students' ability to communicate and share cultural values with their parents.

Next, once counselors have learned about their clients' experiences of acculturative family distancing, counselors can find ways to enhance their clients' bicultural competence to decrease depression and increase psychological wellbeing. Clinical interventions based off of Szapocznik et al.'s (1984) Bicultural Effectiveness Training program (BET) or extended from this program may be created specifically for Latino students who experience AFD. For example, Latino individuals may greatly benefit from enhancing their bicultural competence to reconstruct current communication patterns and cultural skills that help improve family relations to effectively cope with acculturative stress and conflict they may face (Santisteban et al., 1984). Ways in which students may better understand, appreciate and form stable social support networks with members of both cultural groups may decrease their depressive symptoms and improve their psychological wellbeing. Yoon et al.'s (2013) most recent meta-analysis of the acculturation and enculturation literatures affirmed the favorable relationship that exists between

biculturalism and mental health; therefore, it is imperative that counselors assist these individuals to develop and increase their bicultural competence.

Finally, said interventions and means to increase bicultural competence may be used in conjunction with psycho-educational workshops or orientations that includes both Latino college students and their parents. Counselors may use the knowledge of this study to inform and psycho-educate parents and their children on possible sources of their children's depression and psychological wellbeing (i.e., AFD and bicultural competence). For example, parents and children may realize that frequent exposure to the English language and to a culture that emphasizes a sense of independence, the ability to set personal goals, and the value of individual achievement may weaken Latino children's capacity to balance their engagement in U.S. mainstream culture and in their parents' more collectivistic culture (i.e., Latino culture). Overall, mental health professionals can help to facilitate discussion on the mental health implications communication breakdowns and incongruent cultural values has on both parties while children transition to college. Granting the opportunity for students to enhance their bicultural competence given their situation at home may ultimately be critical to keep depression symptoms low and psychological wellbeing high.

In conclusion, the current empirical study examined bicultural competence as a mediator or a moderator between (a) Acculturative Family Distancing (AFD) and future depression and (b) AFD and future psychological wellbeing. For mediation, results suggested that after the effects of initial levels of depression, psychological wellbeing, enculturation, and acculturation were controlled, bicultural competence served as mediator in the relationship between AFD and future psychological outcomes (i.e., depression and psychological wellbeing at Time 2). For moderation, no effect of the interaction between bicultural competence and AFD moderated the

AFD-psychological outcomes (i.e., depression and psychological wellbeing) link after the effect of initial levels of depression, psychological wellbeing, acculturation, and enculturation were statistically controlled. However, main effects of (a) bicultural competence at Time 2 for both depression and psychological wellbeing at Time 2 and (b) AFD at Time 1 for psychological wellbeing at Time 2 were found. The findings of this study contribute to the growing yet limited literature on intergenerational acculturation disparity and its relation to family dysfunction specifically in Latino families. Implications of the study's conclusions suggest that Latino college students who experience communication breakdown or cultural value incongruence with their parents may keep depressive symptoms low and psychological wellbeing high by learning how to enhance their bicultural competence to navigate two cultures effectively.

REFERENCES

- Agliata, A.K., & Renk, K. (2009). College students' affective distress: The role of expectation discrepancies and communication. *Journal of Child and Family Studies, 18*, 396-411. doi: 10.1007/s10826-008-9244-8
- Aiken, L.S., & West, S.G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage Publications, Inc.
- Alegría, M., Mulvaney-Day, N., Woo, M., & Viruell-Fuentes, E.A. (2012). Psychology of Latino adults: Challenges and an agenda for action. In E.C. Chang & C.A. Downey (Eds.), *Handbook of race and development in mental health* (pp. 279-306). Ann Arbor, MI: Springer.
- Antony, M.M., Bieling, P. J., Cox, B. J., Enns, M.W., & Swinson, R. P. (1998). Psychometric properties of the 42-item and 21-item versions of the depression anxiety stress scales in clinical groups and a community sample. *Psychological Assessment, 10*, 176-181. doi: 10.1037/1040-3590.10.2.176
- Arrigada, P.A. (2005). Family context and Spanish-language use: A study of Latino children in the United States. *Social Science Quarterly, 86*, 599-619.
- Bacallao, M.L., & Smokowski, P.R. (2009). Entre dos mundos/between two worlds: Bicultural development in context. *Journal of Primary Prevention, 30*, 421-451. doi: 10.1007/s10935-009-0176-x
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182. doi: 10.1037/0022-3514.51.6.1173
- Beck, A.T., & Steer, R.A. (1990). *Manual for the Beck Anxiety Inventory*. San Antonio, TX: The Psychological Corporation.
- Bénet-Martínez, V., Leu, J., Lee, F., & Morris, M.W. (2002). Negotiating biculturalism: Cultural frame switching in biculturals with oppositional versus compatible cultural identities. *Journal of Cross-Cultural Psychology, 33*, 492-516. doi: 10.1177/0022022102033005005
- Berry, J.W. (2006). Acculturative stress. In P.T. P. Wong & L.C.J. Wong (Eds.), *Handbook of multicultural perspectives on stress and coping* (pp. 287-298). Dallas, TX: Spring Publications. doi: 10.1007/0-387-26238-5_12
- Berry, J.W., Phinney, J.S., Sam, D.L., & Vedder, P. (2006). Immigrant youth: Acculturation, identity, and adaptation. *Applied Psychology: An International Review, 55*, 303-332. doi: 10.1111/j.1464-0597.2006.00256.x

- Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.
- Bowman, N.A. (2010). The development of psychological well-being among first-year college students. *Journal of College Student Development, 51*, 180-200. doi: 10.1353/csd.0.0118
- Brislin, R.W. (1970). Back translation for cross-cultural research. *Journal of Cross-Cultural Psychology, 1*, 185-216. doi: 10.1177/135910457000100301
- Brislin, R.W. (1980). Translation and content analysis of oral and written materials. In H.C. Triandis & J.W. Berry (Eds.), *Field methods in cross-cultural research* (pp. 137-164). Beverly Hills, CA: Sage Publications, Inc.
- Brown, T. A., Chorpita, B. F., Korotitsch, W., & Barlow, D. H. (1997). Psychometric properties of the depression anxiety stress scales (DASS) in clinical samples. *Behaviour Research and Therapy, 35*, 79-89. doi: 10.1016/S0005-7967(96)00068-X
- Castillo, L.G., Cano, M.A., Chen, S.W., Blucker, R.T., & Olds, T.S. (2008). Family conflict and intragroup marginalization as predictors of acculturative stress in Latino college students. *International Journal of Stress Management, 15*, 43-52. doi: 10.1037/1072-5245.15.1.43
- Chun, K.M., Balls-Organista, P., & Marín, G. (2003). *Acculturation: Advances in theory, measurement, and applied research*. Washington, DC: American Psychological Association.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum Associates Publishers.
- Cook, B., Alegría, M., Lin, J.Y., & Guo, J. (2009). Pathways and correlates connecting Latinos' mental health with exposure to the United States. *American Journal of Public Health, 99*, 2247-2254. doi: 10.2105/AJPH.2008.137091
- Costigan, C.L., & Dokis, D.P. (2006). Relations between parent-child acculturation differences and adjustment within immigrant Chinese families. *Child Development, 77*, 1252-1267. doi: 10.1111/j.1467-8624.2006.00932.x
- Crawford, J. R., & Henry, J.D. (2003). The Depression anxiety stress scales (DASS): Normative data and latent structure in a large non-clinical sample. *British Journal of Clinical Psychology, 42*, 111-131. doi: 10.1348/014466503321903544
- Crockett, L.J., Iturbide, M.I., Torres Stone, R.A., McGinley, M., Raffaelli, M., & Carlo, G. (2007). Acculturative stress, social support, and coping: Relations to psychological adjustment among Mexican American college students. *Cultural Diversity and Ethnic Minority Psychology, 13*, 347-255. doi: 10.1037/1099-9809.13.4.347

- Cuéllar, I., Arnold, B., & Maldonado, R. (1995). Acculturation rating scale for Mexican Americans-II: A revision of the original ARSMA scale. *Hispanic Journal of Behavioral Sciences, 17*, 275-304. doi: 10.1177/07399863950173001
- David, E.J.R., Okazaki, S., & Saw, A. (2009). Bicultural self-efficacy among college students: Initial scale development and mental health correlates. *Journal of Counseling Psychology, 56*, 211-226. doi: 10.1037/a0015419
- Daza, P. (2002). *The depression anxiety stress scale-21: Spanish translation and validation with a Hispanic sample*. (Doctoral dissertation, University of Houston). Retrieved from Dissertation Abstracts International. (2002-95010-223)
- Daza, P., Novy, D.M., Stanley, M.A., & Averill, P. (2002). The Depression anxiety stress scale-21: Spanish translation and validation with a Hispanic sample. *Journal of Psychopathology and behavioral assessment, 24*, 195-205. doi: 10.1023/A:1016014818163
- Dennis, J., Basañez, T., & Farahmand, A. (2010). Intergenerational conflicts among Latinos in early adulthood: Separating values conflicts with parents from acculturation conflicts. *Hispanic Journal of Behavioral Sciences, 32*, 118-135. doi: 10.1177/0739986309352986
- Diaz, N., Lizardi, H., & Rivera, E.C. (2008). The relationship between parental bonding and a lifetime history of major depressive disorder in Latino college students. *Journal of Ethnic & Cultural Diversity in Social Work, 17*, 21-36. doi: 10.1080/10926770802344885
- Efron, B., & Tibshirani, R. J. (1993). *An Introduction to the Bootstrap*. New York, NY: Chapman and Hall.
- Falicov, C.J. (2006). Family organization: The safety net of close and extended kin. In R.L. Smith & R.E. Montilla (Eds.), *Counseling and family therapy with Latino populations: Strategies that work* (pp. 41-62). New York, NY: Taylor & Francis Group, LLC.
- Frazier, P.A., Tix, A.P., & Barron, K.E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology, 51*, 115-134. doi: 10.1037/0022-0167.51.1.115
- Fulgini, A.J., Tseng, V., & Lam, M. (1999). Attitudes toward family obligations among American adolescents with Asian, Latin American, and European backgrounds. *Child Development, 70*, 1030-1044. doi: 10.1111/1467-8624.00075
- Gloria, A.M., Castellanos, J., Scull, N.C., & Villegas, F.J. (2009). Psychological coping and well-being of male Latino undergraduates. *Hispanic Journal of Behavioral Sciences, 31*, 317-339. doi: 10.1177/0739986309336845

- Gonzales, N.A., Fabrett, F.C., & Knight, G.P. (2009). Acculturation, enculturation, and the psychosocial adaptation of Latino youth. In F.A. Villarruel, J.M. Grau, M. Azmitia, N.J. Cabrera, & T.J. Chahin (Eds.), *Handbook of U.S. Latino psychology: Developmental and community-based perspectives* (pp. 115-134). Los Angeles, CA: Sage Publications, Inc.
- Haritatos, J., & Benet-Martinez, V. (2002). Bicultural identities: The interface of cultural, personality, and socio-cognitive processes. *Journal of Research in Personality*, *36*, 598-606. doi: 10.1016/S0092-6566(02)00510-X
- Hatcher, L. (1994). *A step-by step approach to using the SAS system for factor analysis and structural equation modeling*. Cary, NC: SAS Institute Inc.
- Henry, J.D., & Crawford, J.R. (2005). The short-form version of the depression anxiety stress scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, *44*, 227-239. doi: 10.1348/014466505X29657
- Hiott, A., Grzywacz, J.G., Arcury, T.A., & Quandt, S.A. (2006). Gender differences in anxiety and depression among immigrant Latinos. *Families, Systems, & Health*, *24*, 137-146. doi: 10.1037/1091-7527.24.2.137
- Hong, Y-Y., Morris, M.W., Chiu, C-Y., & Benet-Martinez, V. (2000). Multicultural minds: A dynamic constructivist approach to culture and cognition. *American Psychologist*, *55*, 709-720. doi: 10.1037/0003-066X.55.7.709
- Hovey, J.D., & King, C.A. (1996). Acculturative stress, depression, and suicidal ideation among immigrant and second-generation Latino adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, *35*, 1186-1192. doi: 10.1097/00004583-199609000-00016
- Hu, L-T., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*, 1-55.
- Hwang, W. (2006a). Acculturative family distancing: Theory, research, and clinical practice. *Psychotherapy: Theory, Research, Practice, Training*, *43*, 397-409. doi: 10.1037/0033-3204.43.4.397
- Hwang, W. (2006b). *Acculturative Family Distancing Measure: Parent (PR) and youth (YR) reports* (English, Chinese, and Spanish versions). Unpublished copyrighted questionnaire.
- Hwang, W., & Wood, J.J. (2009). Acculturative family distancing (AFD) in immigrant families: A structural model of linkages with mental health outcomes among young adults. *Child Psychiatry and Human Development*, *40*, 123-138. doi: 10.1007/s10578-008-0115-8

- Hwang, W., Wood, J.J., & Fujimoto, K. (2010). Acculturative family distancing (AFD) and depression in Chinese American families. *Journal of Consulting and Clinical Psychology, 78*, 655-667. doi: 10.1037/a0020542
- Kearney, C.A., & Trull, T.J. (2012). *Abnormal psychology and life: A dimensional approach*. Belmont, CA: Cengage Learning-Wadsworth.
- Kim, B. S. K. (2006). Acculturation and enculturation. In F. T. L. Leong, A. Ebreo, & L. Kinoshita (Eds.), *Handbook of Asian American Psychology* (2nd ed.) (pp. 141-158). Thousand Oaks, CA: Sage Publications, Inc.
- Kim, B. S. K., & Abreu, J. M. (2001). Acculturation measurement: Theory, current instruments, and future directions. In J.G. Ponterotto, J. Casas, L.A. Suzuki, & C.M. Alexander (Eds.), *Handbook of multicultural counseling* (2nd ed.) (pp. 394-424). Thousand Oaks, CA: Sage Publications, Inc.
- Kim, B.S.K., Atkinson, D.R., & Yang, P.H. (1999). The Asian values scale: Development, factor analysis, validation and reliability. *Journal of Counseling Psychology, 46*, 342-352. doi: 10.1037/0022-0167.46.3.342
- Kim, E. (2011). Intergenerational acculturation conflict and Korean American parents' depression symptoms. *Issues in Mental Health Nursing, 32*, 687-695. doi: 10.3109/01612840.2011.597017
- Kwak, K. (2003). Adolescents and their parents: A review of intergenerational family relations for immigrant and non-immigrant families. *Human Development, 46*, 115-136. doi: 10.1159/000068581
- LaFromboise, T., Coleman, H.L.K., & Gerton, J. (1993). Psychological impact of biculturalism: Evidence and theory. *Psychological Bulletin, 114*, 395-412.
- Landa, J.M.A., Martos, M.P., & López-Zafra, E. (2010). Emotional intelligence and personality traits as predictors of psychological well-being in Spanish undergraduates. *Social Behavior and Personality, 38*, 783-794. doi: 10.2224/sbp.2010.38.6.783
- Lang, J.G., Muñoz, R.F., Bernal, G., & Sorensen, J.L. (1982). Quality of life and psychological well-being in a bicultural Latino community. *Hispanic Journal of Behavioral Sciences, 4*, 433-450. doi: 10.1177/07399863820044002
- Lee, R.M., & Liu, H-T.T. (2001). Coping with intergenerational family conflict: Comparison of Asian American, Hispanic, and European American college students. *Journal of Counseling Psychology, 48*, 410-419. doi: 10.1037/0022-0167.48.4.410
- López, I.R., & Contreras, J.M. (2005). The best of both worlds: Biculturalism, acculturation, and adjustment among young mainland Puerto Rican mothers. *Journal of Cross-Cultural Psychology, 36*, 192-208. doi: 10.1177/0022022104272901

- Lovibond, S. H., & Lovibond, P. F. (1995a). *Manual for the Depression Anxiety and Stress scales*. Sydney, AU: Psychological Foundation Australia.
- Lovibond, S.H., & Lovibond, P.F. (1995b). The structure of negative emotional states: Comparison of the depression anxiety stress scales (DASS) with the beck depression and anxiety inventories. *Behavior Research and Therapy*, 33, 335-343. doi: 10.1016/0005-7967(94)00075-U
- Lovibond, P. F. (2010). Depression Anxiety Stress Scales (DASS). Translations. Accessed January 12, 2012. Retrieved from <http://www2.psy.unsw.edu.au/groups/dass//translations.htm>
- MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, 39, 99-128. doi:10.1207/s15327906mbr3901_4
- Mallinckrodt, B., Abraham, T. W., Wei, M., & Russell, D. W. (2006). Advance in testing statistical significance of mediation effects. *Journal of Counseling Psychology*, 53, 372-378. doi:10.1037/0022-0167.53.3.372
- Marín, G., & Marín, B.V. (1991). *Research with Hispanic populations*. Newbury Park, CA: Sage Publications, Inc.
- Miranda, A.O., Bilot, J.M., Peluso, P.R., Berman, K., & Van Meek, L.G. (2006). Latino families: The relevance of the connection among acculturation, family dynamics, and health for family counseling research and practice. *The Family Journal*, 14, 268-273. doi: 10.1177/1066480706287805
- Moradi, B., & Risco, C. (2006). Perceived discrimination experiences and mental health of Latino/a American persons. *Journal of Counseling Psychology*, 53, 411-421. doi: 10.1037/0022-0167.53.4.411
- Muthén, L. K., & Muthén, B. O. (2010). *Mplus user's guide* (6th ed.). Los Angeles: Muthén & Muthén.
- Nguyen, A-M. D., & Benet-Martinez, V. (2013). Biculturalism and adjustment: A meta-analysis. *Journal of Cross Cultural Psychology*, 44, 122-159.
- Padilla, A.M. (2006). Bicultural social development. *Hispanic Journal of Behavioral Sciences*, 28, 467-497. doi: 10.1177/0739986306294255
- Park, I.J.K., Kim, P.Y., Cheung, R.Y.M., & Kim, M. (2010). The role of culture, family processes, and anger regulation in Korean American adolescents' adjustment problems. *American Journal of Orthopsychiatry*, 80, 258-266. doi: 10.1111/j.1939-0025.2010.01029.x

- Pérez, J.E., & Muñoz, J. (2008). Prevention of depression in Latinos. In S.A. Aguilar-Gaxiola & T.P. Gullotta (Eds.), *Depression in Latinos: Assessment, treatment, and prevention* (pp. 117-140). Sacramento, CA: Springer.
- Phinney, J.S., Horenczyk, G., Liebkind, K., & Vedder, P. (2001). Ethnic identity, immigration, and well-being: An interactional perspective. *Journal of Social Issues, 57*, 493-510. doi: 10.1111/0022-4537.00225
- Phinney, J.S., Ong, A., & Madden, T. (2000). Cultural values and intergenerational value discrepancies in immigrant and non-immigrant families. *Child Development, 71*, 528-539. doi: 10.1111/1467-8624.00162
- Potochnick, S.R., & Perreira, K.M. (2010). Depression and anxiety among first-generation immigrant Latino youth. *Journal of nervous and mental disease, 198*, 470-477. doi: 10.1097/NMD.0b013e3181e4ce24
- Pumariega, A.J., & Rothe, E. (2010). Leaving no children or families outside: The challenges of immigration. *American Journal of Orthopsychiatry, 80*, 505-515. doi: 10.1111/j.1939-0025.2010.01053.x
- Rivera, F.I., Guarnaccia, P.J., Mulvaney-Day, N., Lin, J.Y., Torres, M., & Alegría, M. (2008). Family cohesion and its relationship to psychological distress among Latino groups. *Hispanic Journal of Behavioral Sciences, 30*, 357-378. doi: 10.1177/0739986308318713
- Rogler, L.H., Cortes, D.E., & Malgady, R.G. (1991). Acculturation and mental health status among Hispanics: Convergence and new directions for research. *American Psychologist, 46*, 585-597. doi: 10.1037/0003-066X.46.6.585
- Rothstein, H.R., Borenstein, M., Cohen, J., & Pollack, S. (1990). Statistical power analysis for multiple regression/correlation: A computer program. *Educational and Psychological Measurement, 50*, 819-830. doi: 10.1177/0013164490504009
- Ryff, C.D. (1989b). Happiness is everything, or is it? Explorations on the meaning of psychological wellbeing. *Journal of Personality and Social Psychology, 57*, 1069-1081. doi: 10.1037/0022-3514.57.6.1069
- Ryff, C.D., & Keyes, L.M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*, 719-727. doi: 10.1037/0022-3514.69.4.719
- Sabogal, F., Marín, G., Otero-Sabogal, R., Marín, B., & Perez-Stable, E. (1987). Hispanic familism and acculturation: What changes and what doesn't? *Hispanic Journal of Behavioral Sciences, 9*, 397-412. doi: 10.1177/07399863870094003
- Satorra, A., & Bentler, P.M. (1988). Scaling corrections for chi-square statistics in covariance structure analysis. *Proceedings of the American Statistical Association, 308*-313.

- Satorra, A., & Bentler, P.M. (2001). A scaled difference chi-square test statistic for moment structure analysis. *Psychometrika*, *66*, 507-514.
- Schlomer, G.L., Bauman, S., & Card, N.A. (2010). Best practices for missing data management in counseling psychology. *Journal of Counseling Psychology*, *57*, 1-10. doi: 10.1037/a0018082
- Shrout, P.E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, *7*, 422-445. doi: 10.1037/1082-989X.7.4.422
- Szapocznik, J., Santisteban, D., Kurtines, W., Perez-Vidal, A., & Hervis, O. (1984). Bicultural effectiveness training (BET): A treatment intervention for enhancing intercultural adjustment in Cuban American families. *Hispanic Journal of Behavioral Sciences*, *6*, 317-344.
- Torres, L. (2009). Latino definitions of success: A cultural model of intercultural competence. *Hispanic Journal of Behavioral Sciences*, *31*, 576-594. doi: 10.1177/0739986309349186
- Torres, L. (2010). Predicting levels of Latino depression: Acculturation, acculturative stress, and coping. *Cultural Diversity and Ethnic Minority Psychology*, *16*, 256-263. doi: 10.1037/a0017357
- Torres, L., & Rollock, D. (2007). Acculturation and depression among Hispanics: The moderation effect of intercultural competence. *Cultural Diversity and Ethnic Minority Psychology*, *13*, 10-17. doi: 10.1037/1099-9809.13.1.10
- Tseng, V., & Fuligni, A.J. (2000). Parent-adolescent language use and relationships among immigrant families with East Asian, Filipino, and Latin American backgrounds. *Journal of Marriage and Family*, *62*, 465-476. doi: 10.1111/j.1741-3737.2000.00465.x
- U.S. Census Bureau. (2010). *The Hispanic population: 2010—2010 Census Briefs*. Released May, 2011, from <http://2010.census.gov/2010census/data/>
- Van Dierendonck, D., Díaz, D., Rodríguez-Carvajal, R., Blanco, A., & Moreno-Jiménez, B. (2008). Ryff's six-factor model of psychological well-being, a Spanish exploration. *Social Indicators Research*, *87*, 473-479. doi: 10.1007/s11205-007-9174-7
- Watson, D., Clark, L., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063-1070. doi: 10.1037/0022-3514.54.6.1063
- Wei, M., Liao, K.Y., Chao, R.C., Mallinckrodt, B., Tsai, P-C., & Botello-Zamarron, R. (2010). Minority stress, perceived bicultural competence, and depressive symptoms among ethnic minority college students. *Journal of Counseling Psychology*, *57*, 411-422. doi: 10.1037/a0020790

- Yang, R.K., Byers, S.R., Salazar, G., & Salas, R. (2009). Cultural adaptation to a university campus: The case of Latino students. *Journal of Hispanic Higher Education*, 8, 115-129. doi: 10.1177/1538192709331975
- Yoon, E., Chang, C-T., Kim, S., Clawson, A., Cleary, S.E., Hansen, M.,...Gomes, A.M. (2013). A meta-analysis of acculturation/enculturation and mental health. *Journal of Counseling Psychology*, 60, 15-30. doi: 10.1037/a0030652
- Yoon, E., Langrehr, K., & Ong, L.Z. (2010). Content analysis of acculturation research in counseling and counseling psychology: A 22-year review. *Journal of Counseling Psychology*, 58, 83-96. doi: 10.1037/a0021128
- Zea, M.C., Asner-Self, K. K., Birman, D., & Buki, L. P. (2003). The abbreviated multidimensional acculturation scale: Empirical validation with two Latino/Latina samples. *Cultural Diversity and Ethnic Minority Psychology*, 9, 107-126. doi: 10.1037/1099-9809.9.2.107
- Zhou, M. (1997). Growing up American: The challenge confronting immigrant children and children of immigrants. *Annual Review of Sociology*, 23, 63-95. doi: 10.1146/annurev.soc.23.1.63

ACKNOWLEDGEMENTS

I would like to take this opportunity to demonstrate my gratitude and deepest appreciation to the following individuals who have supported me throughout this project. First, I would like to thank my parents for believing in my potential and providing me with resources for my success in graduate school. I have made it thus far in my career because of their love and support. Second, I would like to thank Erika, Katie, Emily, and Emma for their willingness to help with the recruitment process. Furthermore, I would like to thank Clemencia, Marco, Rachel, and Chelsea for their expertise in the translation process. I am forever grateful for the contributions you made to the success of this project. Third, I would like to express my gratitude to Dr. Karen Scheel and Dr. Frederick Lorenz for their support and guidance as members of my Thesis Committee. Lastly, I would like to thank Dr. Meifen Wei for giving me the opportunity to work alongside as her advisee and mentee. Dr. Wei, thank you for believing in, challenging, and supporting me when I needed it most. I will forever cherish remember your patience, optimism, and determination that has inspired me to continue working to my highest potential.