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Acculturation, Biculturalism, And Familistic Cultural Values' Relationship With Latino Mental Health

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ACCULTURATION, BICULTURALISM, AND FAMILISTIC CULTURAL VALUES'
RELATIONSHIP WITH LATINO MENTAL HEALTH

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ACCULTURATION, BICULTURALISM, AND FAMILISTIC CULTURAL VALUES'
RELATIONSHIP WITH LATINO MENTAL HEALTH

by

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THESIS

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Abstract

As the Latino population increases in the United States, mental health professionals encounter mixed research findings on immigrant mental health. There seems to be an epidemiological paradox in relation to Latino mental health and the effect that acculturation has on anxiety and depression symptoms among this minority population. One discernible research limitation in the existing literature is that researchers measure acculturation as a unidimensional, rather than multidimensional, construct. The present study examined not only acculturation, but also biculturalism, as correlates of depression and anxiety symptoms in a Latino population. Additionally, the present study identified potential Latino cultural buffers against depressive and anxious symptoms. Specifically, the present study assessed the Latino cultural value of *familismo* as a moderator between acculturation and levels of depression in Latinos. Lastly, an evaluation of Latinos' endorsement of the broader Latino ideology, collectivism, was conducted to determine its relationship with biculturalism and mental health symptoms. The present study found bicultural individuals report lower self-reported depressive symptomology. Although no relationship was found between acculturation, *familismo*, and mental health outcomes, Latinos did endorse more collectivistic values towards family than friends and colleagues. Specifically, biculturalism was found to effect the degree an individual endorses familistic collectivism values, resulting in lower self-reported stress symptoms. Such findings set a foundation to further probe such Latino cultural values and what components of each core values have positive or negative effects on Latino mental health.

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Chapter 1: Introduction

When individuals make the decision to migrate to a new country, it is often to pursue a better life that is not attainable in their native country. The many stresses that come with such an important life decision lead many to conclude that mental health symptoms are prominent entering the new host country. Surprisingly, the opposite holds true: U.S.- born Latinos exhibit worse psychological adjustment compared to immigrant Latinos, and psychological functioning worsens among Latinos who immigrated to the United States before the age of 13 or after the age of 35 (Alegria et al., 2008; Driscoll & Torres, 2013). The prevalence of depression and anxiety disorders is alarming worldwide, and oftentimes fleeting depressive symptoms can become prolonged symptoms throughout a lifetime. Major depressive disorder was ranked fourth among all medical illnesses in terms of its disabling impact on the world population by the watershed Global Burden of Disease study (Murray, Lopez, & World Health Organization, 1996; Hirschfeld, 2001). Depression and anxiety have repeatedly been linked to greater impairment in work functioning, psychosocial functioning, higher severity of illness, and increased rate of suicide attempts (Hirschfeld, 2001, Rios-Ellis, 2005). With this being the case, clinicians should identify early depressive symptoms, for early therapeutic intervention, to help patients avoid reaching the diagnostic criteria for major depressive disorder (i.e., five or more symptoms, during the same two-week period, including depressed mood or loss of interest/pleasure as a symptom) (American Psychiatric Association, 2013). Additionally, it is imperative for mental health researchers to investigate what may be influencing this epidemiological trend due to depressive symptoms frequently having an early onset, usually before the age of 25 (Rios-Ellis, 2005).

Among the many stressors immigrants endure, acculturative stress has been identified as one of the biggest contributors to depression. Acculturative stress is characterized as a type of psychological stressor that originates from changes endured throughout the process of acquiring new cultural norms and values (Katiria Perez & Cruess, 2014). Acculturative stress is most impactful when the cultural norms and values of the two fusing cultures conflict (Berry, 2005; Katiria Perez & Cruess, 2014). For example, the Latino culture emphasizes family cohesion and placing the family's needs and wants before one's own. In contrast, the U.S. American culture originates from individualistic ideology, placing the individuals needs and wants first. Leaving for college to a university far away from one's family may not be as easy of a decision for a Latino American as a non-Latino U.S. American. Previous research has often attempted to assess what may help combat acculturative stress. A 2014 study found that bicultural competence in Latinos may help buffer against acculturative stress and such a buffer may lead to decreased rates of negative mental health symptoms (Carrera & Wei, 2014).

Bicultural competence has been proposed as an important factor positively affecting immigrants' mental health. A bicultural competent individual can live productively and adequately within two cultural groups without jeopardizing his cultural identity (Carrera & Wei, 2014). Particularly, immigrants who can navigate effectively between two cultures (i.e. biculturalism), may show lower rates of depressive symptoms than those who are monocultural (Carrera & Wei, 2014; LamFromboise, Coleman, & Gerton, 1993). The basis of being a bicultural individual involves having positive attitudes towards both cultural identities and being able to easily role switch between cultures when appropriate. Bicultural competence also entails being knowledgeable of specific cultural norms of both cultures and weighing their importance,

not only to the individual but to his family and friends. This is noteworthy due to family conflict contributing to acculturative stress and influencing increased rates of depression.

Familismo is a Latino cultural norm that is highly valued and seems to lower levels of family conflict and levels of mental health symptoms in Latino individuals. *Familismo* reflects an importance on maintaining close family relationships and originates from a more collectivist ideology versus individualistic ideology. (Knight, Basilio, Carlo, & Jacobson, 2014). Cultures that are collectivistic in nature emphasize goals and interests of the group over those of individual members, especially interests of their family over themselves (Fulgini, Teseng, & La, 1999). Because acculturation is proposed to be negatively associated with *familismo* and a collectivist attitude, it is proposed biculturalism is positively associated with *familismo* and collectivism. An individual who identifies himself or herself as a bicultural individual is suggested to consider his native cultural values in high regard, and this includes *familismo*. Most importantly, demonstrating high familial values have been reported to predict resilience in an individual and predicts their ability to overcome adversity (Morgan Consoli & Llamas, 2013). Such resilience may lead to lower depressive symptomology in an individual.

The existing literature was reviewed prior to the design of the present study and will be discussed in more detail in the following section. First, mental health prevalence in the U.S.-Latino population and the epidemiological paradox will be discussed. Secondly, the relationship between acculturation, biculturalism, and mental health symptoms will be reviewed. Finally, the importance of Latino cultural values (i.e., *familismo* and collectivism) and their potential buffering effect on Latino mental health will be described.

The present study examined four research aims. The first aim was to assess the relationship between acculturation, biculturalism, and depressive symptoms. Specifically, it was

hypothesized that higher biculturalism scores reported by an individual will be associated with lower rates of self-reported depression symptomology, and higher acculturation scores will be associated with higher scores of self-reported depressive symptomology. The second aim served to assess the role of *familismo* as a moderator between acculturation and mental health symptoms such as depression and anxiety. The present study hypothesized *familismo* will moderate the effect acculturation has on symptoms of depression serving as a protective factor against depressive symptomology. The third study aim served to examine whether Latinos' endorsement of collectivist values significantly differ between three different interpersonal groups (i.e. Family, Close Friends, and Colleagues). The present study hypothesized, due to the importance of family in the Latino culture, participants will show significantly higher collectivism scores in the family group, followed by close friends, and colleagues being last. Lastly, the fourth study aim sought to determine whether biculturalism mediates the relationship between 'family' collectivism and depression scores in Latinos. The present study hypothesized biculturalism levels effect the degree an individual endorses 'family' collectivistic values, resulting in lower or higher symptoms of depression.

Chapter 2: Literature Review

Latino Mental Health and the Epidemiological Paradox

As the Latino population steadily grows, it is imperative for social scientists to further merge cultural and psychiatric research in the United States to identify potential mental health buffers for ethnic/racial minority groups. It is projected that Latinos will constitute 28.6 percent of the United States population by the year 2060 (U.S. Census Bureau, 2016). Although the majority of the literature focuses on adolescent immigrants' mental health symptoms, it is important to review literature on how immigrants' mental health fares throughout the lifespan.

In 2007, a team of researchers sought to document the relationship between age of arrival and time spent in the United States on the risk of onset of psychiatric disorders using a nationally representative sample of 2,554 Latinos (Alegria, Sribney, Woo, Torres, & Gurarnaccia, 2007). Alegria and colleagues separated the sample into four subgroups: (1) U.S. born Latinos; (2) Latino immigrants who arrived in the U.S. between the ages of 0 to 6; (3) Latinos who immigrated between the ages of 7 through 17 years; and (4) immigrants who arrived after the age of 18 years old or later. U.S. born Latinos and immigrants who arrived between the ages of 0 and 6 years old, showed higher rates for lifetime depressive disorder and anxiety disorder than the two subgroups who arrived after the age of 6. Generally, immigrants who arrived at the age of 7 or older reported lower risk of psychiatric disorders throughout their lives compared to U.S. born Latinos. As such, later age of immigration to the U.S. may be related to later onset of psychiatric disorders (Alegria et al., 2007). Researchers propose that the longer Latinos reside in their country of origin the longer they are protected against the onset of psychiatric disorders, but once they arrive in the U.S. the risk of psychiatric disorders begin to approach those of their U.S.-born counterparts.

Although the literature on Latino mental health is growing, there remain many gaps. More importantly, there seems to be an epidemiological paradox that is perplexing public health researchers and explaining it has proved difficult. A researcher may predict that immigrants who typically come from low socioeconomic backgrounds and are exposed to stressful conditions during and after their migration would show poor mental health when compared to their U.S.-born Latino counterparts (Perreria et al., 2015). However, this is not the case; the opposite has repeatedly been reported and many have begun to theorize why. The leading two theories explaining this phenomenon are that the longer an immigrant's stay in the U.S. lengthens she/he may be changing and adopting to less "healthy" U.S. American behavioral and cultural norms. Such behaviors may be focusing solely on economic growth through work, isolating themselves from family and support networks. Secondly, as an immigrant begins adopting U.S. American norms, she/he may be losing some of the protective social and cultural resources that help buffer them from harmful and stressful conditions in their new home, such as work-stress (Abraido-Lanza, Chao, & Florez, 2005; Cook, Alegria, Lin, & Guo, 2009; Vega and Amaro, 1994; Perreira et al., 2015). The two main constructs that are thought to explain the epidemiological paradox are 'acculturation' and 'enculturation.'

Acculturation & Biculturalism

Acculturative stress relates to the effect of adapting and adjusting to a new culture. As an individual acculturates, the individual acquires "culturally-based behavioral and cognitive skill sets not associated with an individual's culture of origin, specifically acculturative stress happens when expressed cultural behaviors constitute a poor "fit" with the social environment in which an individual is embedded" (Driscoll & Torres, 2013). For example, in the Latino culture, the husband is the head of the household and his role is to solely focus on economically supporting

the family, whereas the wife is expected to support her husband through the maintenance of the home and children (Bermudez, Kirkpatrick, Heckerm & Torres-Robles, 2010). Many times, in social settings such as dinner parties, the husbands are served first, by their wives, and the wives do not join to eat until the husbands have begun eating and are satisfied. A U.S. acculturated Latino woman may be judged by their Latino friends and family if such a custom is not practiced and an unacculturated Latino woman may be judged by their U.S. American friends if such a custom is practiced in a setting with solely U.S. American friends.

Acquiring a new culture is not the only stressful part of acculturation, attempting to retain and continue cultural norms and values from the culture of origin, while simultaneously adopting the majority's culture, in this case U.S. American, is thought to be where the tension derives. For many years, acculturation was described as a one-dimensional process in which the U.S. culture becomes the dominant culture in an immigrant's life and their Latino culture slowly dissipates (Huq, Stein, & Gonzalez, 2016). This model did not explain how some immigrants are able to adapt to the U.S. culture while still retaining their ethnic culture, thus a multidimensional model was proposed. Multidimensional acculturation theory proposes that Latino immigrants can acculturate while simultaneously learning and engaging in the Latino culture's values and practices (Cabassa, 2003; Lorenzo-Blanco et al., 2012; Schwartz et al., 2010). The latter is termed enculturation. The process of enculturation has vastly been described as a protective factor against mental health symptoms and has led to a shift in focus towards the study of biculturalism (Lorenzo-Blanco et al., 2012).

As previously discussed, acculturation does not act in isolation—it is almost always accompanied by enculturation. Together these two constructs describe an individual's level of biculturalism. A bicultural individual is characterized as an individual who recognizes the

advantages of being a member of at least two cultures and navigates in both cultures comfortably and easily (Acevedo-Polakovich, Cousineau, Quirk, Gerhart, Bell, & Adomako, 2014; Berry, 2015; Carlo, Basilio, & Knight, 2016). Being bicultural is not a matter of just endorsing two different cultural values, it also includes being able to recognize relevant cues in the cultural context and being able to switch cultural frames accordingly (Verkuyten & Pouliasi, 2006; Carlo, Basilio, & Knight, 2016). Being able to frame-switch from one moment to another aids an individual's bicultural competence.

Due to the constant evaluation of the environment and role switching being done, a bicultural individual may also be more successful at identifying differences and perspective taking (Saad, Damian, Benet-Martinez, Moons, & Robins, 2013; Carlo, Basilio, & Knight, 2016). Due to the ability to navigate in two cultures effectively and interact with individuals from both cultures, bicultural individuals may have a larger in-group than individuals who consider themselves only part of one culture. Feeling a sense of connection and belonging to a broader range of people has been thought to increase individual's confidence and lead to greater well-being and positive adjustment (Carlo, Basilio, & Knight, 2016). Those individuals who are not able to navigate both cultures may choose to isolate themselves from one and acculturate completely towards the other and letting go of important cultural values.

The literature assessing acculturation in sample populations far removed from the U.S.-Mexico border is well established (Alegria, et al., 2007; Gonzalez, Haan, & Hinton, 2001; Chavez-Korell et al., 2013). Assessing acculturation in Latinos submerged in the U.S. American culture may be conducive in such a population but not conducive in sample population where the U.S. city is immersed in the Mexican culture. Such Latinos do not need to acculturate to the U.S. American culture to navigate efficiently and comfortably through everyday life. In such

instances, measuring Latino biculturalism may prove more effective and beneficial to fill in gaps in the literature.

‘Familismo’

The literature proposes that in regards to *la familia* (the family), acculturation has some detrimental effects. It is proposed that acculturation promotes a decline in family functioning due to the loss of certain important familial Latino cultural values speculated to endorse family cohesion and discourage family conflict (Gonzales, Deardorff, Formoso, Barr, & Barrera, 2006; Lorenzo-Blanco, Unger, Baezconde-Garbanati, Ritt-Olsen, & Soto, 2012; Zayas, Lester, Cabassa, & Fortuna, 2005). Latino youth who migrate to the U.S. early in life may experience a shift in their values, attitudes, practices, interpersonal relationships, and ethnic identifications (Cabassa, 2003; Lorenzo-Blanco et al., 2012; Shwartz et al., 2010).

When people experience adversity, there are many ways of coping. Some internalize stress, others eat or rely on substances such as alcohol. Arguably one of the most positive ways to cope is by seeking out social support to manage and alleviate stress. In Latino cultures, family is usually the primary source of support. *La familia* or *familismo* is a fundamental Latino cultural principle. *Familismo* is a multidimensional construct that is abundantly used in the literature to emphasize the importance of family and how family is prioritized in the Latino culture (Hernandez & Bamaca-Colert, 2016; Katiria Perez & Cruess, 2014). The early description researchers used for *la familia* included nuclear family and extended kin living within a multigenerational household (Garcia, 1993; Keefe, 1979; Landale & Oropesa, 2007; Katiria Perez & Cruess, 2014).

Familismo as a construct is composed of many different features, but across the literature there are a few constructs researchers agree upon. It has been found that individuals who see

themselves as highly ‘familistic,’ stress the importance of family honor, experience strong feelings of loyalty to members of their nuclear and extended family network, and usually rely on the family for advice regarding daily events and are instrumental for emotional support (Kapke, Grace, Gerdes, & Lawton, 2017; Marin & Marin, 1991; Katiria Perez & Cruess, 2014, Sabogal et al., 1987). Because extended family members, such as cousins, aunts, uncles, grandparents, and even godparents are traditionally viewed as part of the exclusive family network, researchers assume that socio-economic and acculturative factors impact the family structure leading to a smaller, nuclear system (Katiria Perez & Cruess, 2014). Parental cultural socialization is a protective factor to prevent this break down in the Latino family structure. Cultural socialization is defined as teaching children to be proud of their ethnic background, fortifying cultural values, and celebrating positive aspects of their ethnic background (Hughes et al., 2006, Hernandez & Bamaca-Colbert, 2016). The importance of *familismo* can be reinforced to Latino youth by visiting extended family frequently, prioritizing family events, and providing emotional support to family members (Hernandez & Bamaca-Colbert, 2016).

Reinforcing *familismo* has widely been discussed in the literature as beneficial for child development, leading to fewer behavioral problems and depressive symptoms (Ayon, Marsiglia, & Bermudez-Parsai, 2010; German, Gonzales, & Dumka, 2009; Kapke et al., 2017). Identifying potential cultural buffers, such as *familismo*, may help mental health clinicians better serve the growing Latino population when they seek mental health counseling. 2008 meta-analysis of 23 studies found that Latinos show significantly higher depressive symptoms than non-Latino Whites (Mendelson, Rehkopf, & Kubzansky, 2008). Above all, researchers have found that when comparing U.S. born Latinos to their immigrant counterparts, U.S. born Mexican Americans were twice as likely to report mental health symptoms (Vega et al., 1998). Specifically, it has

been found that the length of residency in the U.S. correlates with depressive symptomology reported by Latino immigrants. Compared to Latino immigrants who lived in the U.S. for fewer than 10 years, immigrants with 21 or more years in the U.S. demonstrated higher rates of depression (Rios-Ellis, 2005). Through cultural socialization, Latino parents can promote cultural values, such as *familismo*, buffering young Latinos from mental health symptoms.

‘Familismo’ and Acculturation. Due to the high prevalence of major depression and anxiety disorders affecting Latinos, it is imperative to assess *familismo* as a mediator for these mental health symptoms. In a 2004 national study, it was found that Latino youth had higher rates of depressive symptoms (22%) than Caucasian (18%), Asian-American (17%), and African-American (15%) youth (Potochnick & Perreira, 2010; Saluja et al., 2004). Recently *familismo* has been implicated as a Latino socio-cultural variable that should be retained during the acculturation process to buffer a Latino individual from developing depression and anxiety as their stay in the U.S. lengthen or becomes permanent.

A 2014 meta-analysis sought to clarify exactly what impact acculturation has on such a salient cultural value such as *familismo* (Katiria Perez & Cruess, 2014). The findings were mixed. Some dispute that as an individual acculturates to the new host country, they retain the more flexible components of *familismo* such as perceived support; and surrender the less flexible features such as perceived obligations (Katiria Perez & Cruess, 2014; Sabogal, Marin, Otero-Sabogal, Marin, & Perez-Stable, 1987). A second theory proposed was that *familismo* does not waver in highly acculturated or bicultural individuals but instead they may endorse the value more than they actually practice its different components (Flores, Hinton, Barker, Franz, & Velasquez, 2009; Katiria Perez & Cruess, 2014). In other words, the inconsistent findings in the

literature may be due to some researchers measuring only attitudinal dimensions of *familismo* and leaving out behavioral dimensions.

‘Familismo’ and Enculturation. Telzer and colleagues (2016) propose that acculturation gaps may not be as negative as once thought but that enculturation gaps may be more detrimental to family functioning, especially when a child is less enculturated than their parents. Family functioning and *familismo* has been previously associated with self-esteem and self-esteem is associated with mental health (Kapke, Grace, Gerdes, and Lawton, 2014). This suggests that maintaining values of one’s heritage culture may be key to an adolescent’s positive mental health. To support their hypothesis, Telzer and colleagues (2016) measured parent and child acculturation, enculturation, and cultural orientation, along with youth adjustment, family conflict, and family support. Telzer and colleagues’ (2016) hypothesis was supported in their findings. An adolescent’s preservation of their heritage culture, regardless of the parent’s cultural orientation, was more indicative of their positive family functioning and well-being, than an acculturation gap between parent and child (Telzer et al., 2016). More specifically, those adolescents who reported greater Mexican behavioral practices, more family obligation values, and better Spanish proficiency, reported better youth adjustment and family functioning. On the contrary, when parents endorsed higher family obligation values than their child, their child reported lower family support and more behavioral issues.

Similar findings were reported a few years earlier. Lorenzo-Blanco and colleagues (2012) found that U.S. cultural orientation but not Latino orientation (i.e., endorsing U.S. American cultural values and not Latino cultural values) was associated with higher levels of depressive symptoms, and this may be due to the loss of Latino cultural values such as *familismo* that may help buffer Latinos from such symptoms. They also found that Latino cultural

orientation, but not U.S. orientation, was positively associated with family cohesion and negatively associated with family conflict. More importantly, higher endorsements for family cohesion was associated with lower levels of depression, while higher levels of family conflict is related to higher levels of depression (Lorenzo-Blanco et al., 2012).

‘Familismo’ and Mental Health. In a 2014 study, Chavez and colleagues found that those who self-reported a higher endorsement for *familismo* also reported positive mental health outcomes (Chavez-Korell, Benson-Florez, Rendon, & Farias, 2014). To test *familismo* as a buffer for negative mental health symptoms, Kennedy and Ceballo (2013) asked ninth graders from a neighborhood with a high crime rate to recall times in which they were exposed to community violence. They then measured the adolescents’ depressive and posttraumatic stress symptoms along with their level of *familismo*. Not surprisingly, witnessing violence was significantly and positively related to depressive symptoms; the more the child witnessed violence, the more depressive symptoms they demonstrated. They also found that *familismo* was significantly and negatively related to depressive symptoms, meaning the higher endorsement of *familismo* the lower depressive rates they showed. Most importantly, they found a significant interaction between witnessing violence, *familismo*, and depressive symptoms. The interaction model accounted for 21 percent of the variance in depressive symptoms meaning for those adolescents who endorsed low levels of *familismo*, the stronger the relationship between witnessing violence and depression (Kennedy & Ceballo, 2013). It is hypothesized that those adolescents who have high degrees of *familismo* instilled in their household may experience a greater deal of family support, helping them process and cope with violence more effectively. It is not to say that those adolescents who showed a lower level of *familismo* share the same level

of endorsement as their family, as there may be other factors involved such as family functioning.

Researchers have reported that family functioning may be a predictor for *familismo* and global self-worth (i.e. self-esteem) (Kapke et al., 2014). Kapke and colleagues (2014) measured healthy family closeness, involvement, and healthy family roles and strategies in addressing family conflict and change. Multiple regression analyses suggest that balanced family functioning can be used as a predictor for levels of *familismo* and global self-worth in Latino adolescents. Specifically, adolescents who reported higher levels of family functioning expressed higher levels of *familismo* and global self-worth as well. The rate at which each member of the family acculturates or how well each member of the family responds to acculturation may play a critical part in balanced family functioning. If an adolescent acculturates and adapts at a much faster rate than their parents an acculturation gap may form and family conflict increases.

It has been shown that gaps in *familismo*- support were correlated with lower levels of accepting parenting and nurturing parenting (Toro, 2011). Secondly, gaps in *familismo*-obligations were shown to correlate with higher levels of passive/inconsistent parenting and nurturing parenting. These findings reveal the breakdown in family functioning and the resulting breakdown in a parent-child relationship, which may lead to negative mental health symptoms in adolescents. One may think that having high familial values and values shared by all cultures but, previous studies have shown Mexican-American young adults show significantly higher levels of *familismo* and more collectivist attitudes in relationship to their parents, than their Anglo-American counterparts (Freeberg & Stein, 1996).

Collectivism and ‘Familismo’

When a Latino person immigrates from a Latino culture to an U.S. American culture they submerge themselves in a culture that is very different than their culture of origin. One of the most drastic shifts in cultural values is going from a collectivist culture to an individualistic culture (Rinderle & Montoya, 2008). The dimension of individualism-collectivism is one of the most pertinent differences between an U.S. American culture and a Latino culture. It has been observed that collectivist values are generated in cultures with resource scarcity, large families, and an economy based on types of agriculture that require cooperation (Cho, Mallinckrodt, & Yune, 2010). In turn, individualistic values are generated in affluent cultures with high social and geographic mobility, cultural complexity, urban population centers, and economies that are structured to favor the individual business (Cho, Mallinckrodt, & Yune, 2010; Triandis et al., 1993). Latinos, especially those of Mexican descent, are commonly referred to as group-oriented whom emphasize obligations to in-groups and sacrificing personal interests for the good of the group of community (Rinderle & Montoya, 2004). Like *familismo*, a collectivistic orientation has been found to alleviate depressive symptoms in immigrants (Du, Li, Lin, & Tam, 2015). There is a vast amount of studies predicting this relationship in Asian cultures, but this relationship has not been explored in Latinos.

Although collectivism and *familismo* are usually measured separately, *familismo* is a collectivist trait, and they are both usually exhibited together in Latinos (Rinderle & Montoya, 2004). In a 1997 study exploring different cultural values in different ethnicities, it was found that individualism, collectivism, and *familismo* represent three distinct cultural value orientations but beliefs of these values varied as a function of individuals’ ethnicity, with Latinos scoring significantly higher on both collectivism and *familismo* than did Anglos (Gaines et al., 1997).

Being that Mexican-Americans put such great emphasis on family, it is proposed that they will report higher collectivistic tendencies towards their family than any other interpersonal relationship. This is assumed due to a big component of *familismo* being perceived family obligation. Family obligation has been characterized as the rights and duties that accompany kinship roles (Freeberg & Stein, 1996). Freeberg and Stein vaguely tested such an assumption when they reported that Mexican-American young adults reported significantly higher levels of *familismo*, more collectivist attitudes, and more helping behavior in relationships with parents than Anglo-Americans; while Anglo-American respondents reported having more contact with social systems outside the family system than Mexican-American family members (Freeberg & Stein, 1996).

Interestingly, there was no significant difference between Mexican-Americans and Anglo-Americans on their perceptions of individualism as a cultural attitude (Freeberg & Stein, 1996). This may depict the extent to which the sample used, Mexican-American young adults, absorbed the values of the mainstream U.S. American culture, while still maintaining values of the Mexican culture. The sample endorsing traditional Mexican family values as well as the mainstream American attitudes is a pattern consistent with the concept of biculturalism. In a Chinese sample, cultural self-efficacy significantly mediated the relationship between a collectivistic orientation and depression (Du et al., 2015). Cultural self-efficacy in the described study measured factors related to biculturalism in an Asian culture. Although there has been extensive research of the effects collectivism has on Asian participants' mental health, there is a gap in the literature in regards to the effects collectivism has on Latinos' mental health.

Summary

With the Latino population steadily growing in the United States, there is a need to assess potential buffers for mental health symptoms in the Latino population. Researchers should shift cultural research from assessing acculturation to assessing biculturalism. Assessing acculturation turns a blind eye on an integral part of how Latinos adjust and navigate in a different environment other than their country of origin. By measuring biculturalism, researchers are measuring to what extent Latinos retain their cultural values from their country of origin and what impact that may have on their mental health. Additionally, by assessing specific Latino cultural ideologies and values, such as collectivism and *familismo*, researchers can explore potential cultural buffers of depression/ anxiety symptomology. Such findings can then help inform and aid mental health clinicians in better serving an exponentially growing population.

Study Aims

The first study aim sought to examine the relationship between levels of biculturalism and self-reported mental health symptoms (i.e., depression, anxiety, and stress), and acculturation and self-reported mental health symptoms. It was hypothesized the more a Latino is biculturally oriented, the lower levels of depression/anxiety symptomology they will report. It was also hypothesized the more a Latino is acculturated to the U.S. American culture, the higher levels of depression/anxiety symptomology they will report.

The second study aim was to assess the role of *familismo* as a moderator between acculturation and self-reported depression/anxiety symptomology. It was hypothesized *familismo* will moderate the negative effect acculturation has on depression/anxiety serving as a protective factor against mental health symptoms. If such relationships are found in the first and/or second study aims, mental health clinicians will want to be made aware of the positive effect retaining

aspects of the Latino culture has on their Latino clients and may suggest involving their client's families in the therapeutic process.

The third and fourth study aims were to examine Latinos' endorsement of collectivistic values between three different interpersonal groups (i.e., Family, Close Friends, and Colleagues) and the relationship between collectivism and mental health symptoms in a Latino population. The third study aim was to examine whether Latinos' endorsement of collectivistic values significantly differ between Family, Close Friends, and Colleagues. Due to the high importance of family in the Latino population, it was hypothesized Latinos will demonstrate a higher level of a collectivistic ideology towards Family, followed by Friends, and Colleagues being last. The fourth, and final, study aim was to assess whether biculturalism mediated the relationship between 'family' collectivism and self-reported depression symptoms in Latinos. It was hypothesized levels of biculturalism will affect the extent an individual endorses 'family' collectivism, resulting in lower or higher symptoms of depression/anxiety. Collectivism and its relationship with mental health symptoms has previously been assessed in Asian populations but there is a gap in the literature assessing the construct in a Latino population. The third study aim served to fill in the gap in the literature and establish the ground work for further assessment of collectivism and its relationship with mental health symptoms in Latinos. The fourth study aim served to establish a path, explaining how familistic collectivism affects depression/anxiety symptoms in Latinos.

Chapter 3: Method

Participants

Due to the purpose of the study and the study aims, the study participants were 258 young Latina/os (193 females, 65 males) residing in the El Paso, Texas/ Juarez, Chihuahua border region. Participants ranged in age from 18 to 56 ($M= 21.57$, $SD= 5.109$). This allowed for the assessment of acculturation and biculturalism levels within one of the largest Mexican/American border cities in the United States and among one of the largest Latino populations in the United States. For feasibility, participants were recruited from the undergraduate student population of the University of Texas at El Paso (UTEP). Recruitment took place via the undergraduate psychology pool through the SONA System. The SONA System is an online portal that allows researchers from the psychology department to advertise and post studies and for psychology undergraduates to sign-up for. In order to have an 80% probability of detecting a small to medium effect with an alpha set to .05, a minimum of 198 participants were needed for this study. Three-hundred forty-one participant units were recorded, after deletion of unfinished questionnaires and outliers, 258 participant units remained. Participants were compensated with 1 course credit to go towards their Introductory to Psychology course requirement.

Most participants (60.1%) were second generation (U.S. born, with at least one parent born in Mexico or other Latin American country), 21.3% of participants were fourth generation (both the participant and parents were born in the U.S., with at least one grandparent born in Mexico or other Latin American country), 10.5% of participants were third generation (both the participant and parents were born in the U.S., with all four grandparents born in Mexico or other Latin American country), and 8.1% of participants were first generation (born in Mexico or other Latin American country). The majority (91.5%) of participants were born in the U.S. ($n =236$),

7.8% ($n = 20$) of participants were born in Mexico, 0.4% ($n = 1$) was born in Puerto Rico, and 0.4% ($n = 1$) was born in Cuba. About half (53.5%) of participants' mothers were born in Mexico ($n = 138$), 43.4% ($n = 112$) were born in the U.S., 2.3% ($n = 6$) were born in other Latin American countries, and .8% ($n = 2$) were marked as unknown. Nearly half (51.9%) of participants' fathers were born in Mexico ($n = 134$), 44.6% ($n = 115$) were born in the U.S., 1.6% ($n = 4$) were born in other Latin American countries, and 1.9% ($n = 5$) were marked as unknown. Other Latin American countries in which participants' mothers and fathers were born are Puerto Rico, Cuba, Brazil and El Salvador ($n \leq 7$). The majority (96.5%) of participants live in the U.S. ($n = 250$) and 3.1% ($n = 8$) of participants live in Mexico. Participants reported living in a home ranging from 1 to 8 ($M = 3.88$, $SD = 1.27$) habitants, including themselves. Participants also reported an average 3.32 of those cohabitants are family members ($SD = 1.62$).

Procedures

Participants completed the study materials online through an online survey using Qualtrics. The online survey consisted of the following sections: study information sheet, demographics, and questionnaires assessing the constructs of interest. To maintain confidentiality and avoid the student being linked to any of their questionnaires, participants did not sign a conventional consent form. Instead, the participant was presented with a study information sheet as the opening page of the survey, which explained the purpose of the study, the potential benefits, and potential harm for participating in the study, and the principal investigator's contact information. After reading the information sheet, the participant specified if s/he wanted to continue with the study by answering the following statement: "I have read the study information sheet and understand the potential harms and benefits from my participation in the study. I now consent to participate in this study." If the participant agreed to participate, the

consent form was followed by the demographic questionnaire. If the participant declined to participate in the study, a closing page, thanking the student for her/his time and consideration, followed the consent form. There was no penalty for a student who decided not to participate in the present study. Due to the sensitive questions asked regarding the students' mental health, the student was provided with contact information to the University Counseling Center at UTEP at the beginning and end of the survey.

As previously stated, once the participants provided consent, the participants were presented with a brief demographic questionnaire as shown in Appendix A. Following the demographic questionnaire, six measures were administered in counterbalanced order to control for order effects and avoid confounding results (measures are described in more detail in the following section). Participants were given instruction to complete all questions with the best of their ability and instructed that if they feel uncomfortable answering any question they may choose to leave it blank. They were also instructed that they were free to exclude themselves from the study at any point. All measurements took about 40 minutes to complete. Once the participant completed all questionnaires, the student was thanked for their participation and informed that the study has officially been completed. The closing page contained the contact information to the University Counseling Center at UTEP and advised students to contact the center if they are experiencing symptoms of anxiety or depression.

Measures

Depression Anxiety and Stress Scale (DASS). Depression, anxiety, and stress were assessed using the Depression Anxiety and Stress Scale (DASS) (Lovibond & Lovibond, 1993). The DASS contains 14 Likert-style questions for each subscale (i.e., depression, anxiety, and stress). Participants rated the degree they have experienced each symptom over the past week, on

a 4-point Likert severity/frequency scale. The DASS was developed on the intention to create an anxiety scale that can provide maximum discrimination from the Beck Depression Inventory and other inventories of depression. The DASS Depression scale represents a respondent's loss of self-esteem and incentive and is related with a low perceived probability of attaining life goals significance to the responder (Lovibond & Lovibond, 1993). The DASS Anxiety scale is characterized by linking the relatively enduring state of anxiety and the acute response of fear through somatic and subjective symptoms. The DASS Stress scale measures a state of persistent arousal and tension with a low threshold for becoming frustrated or upset.

Initial items of the DASS were collected from pre-existing scales, narrowed down through factor analysis using responses from an outpatient sample. Initial principal components factor analysis revealed three factors accounting for 41.3% of the item variance (Lovibond & Lovibond, 1993). The correlations between factors were as follows: Depression-Anxiety $r = 0.42$; Anxiety-Stress $r = .46$; and Depression-Stress $r = .39$. The DASS Anxiety scale and the Beck Anxiety Inventory resulted to be highly correlated ($r = .81$) and the DASS Depression scale and the Beck Depression Inventory were also highly correlated ($r = .74$). Antony and colleagues (1998) tested the psychometric properties of the DASS using a nonclinical volunteers and patients with DSM-IV diagnoses of panic disorders. The reliability coefficients were: DASS Depression $\alpha = .97$; DASS Anxiety $\alpha = .92$; DASS Stress $\alpha = .95$ (Antony, Bieling, Cox, Enns, & Swinson, 1998). Almost identical reliability coefficients were observed in the present study: DASS Depression $\alpha = .96$; DASS Anxiety $\alpha = .93$; DASS Stress $\alpha = .94$.

Bicultural Self-Efficacy Scale (BSES). Participants' level of biculturalism was measured using the Bicultural Self-Efficacy Scale (David, Okazaki, & Saw, 2009). Dr. Sumie Okazaki, developed the items for the scale following LaFromboise and colleagues theoretical

framework (David et al., 2009). LaFromboise defined bicultural competence using the alternation model. The alternation model presumes that an individual is able to grasp and comprehend two different culture's behaviors and interactions. It also assumes that an individual can shift his behavior depending on the cultural social context that they are in (LaFromboise, Coleman, & Gerton, 1993).

The measure is comprised of 6 Likert-style subscales following the proposed six dimensions of bicultural competence by LaFromboise, Coleman, and Gerton (1993): Social Groundedness, Communication Ability, Positive Attitudes Towards Both Groups, Knowledge of Cultural Beliefs and Values, Role Repertoire, and Bicultural Beliefs. In total, the scale contains 26 items rated on a 9- point partially anchored scale, from 1 (*strongly disagree*), 3 (*disagree*), 5 (*neutral*), 7 (*agree*), 9 (*strongly agree*). The 'Social Groundedness' subscale ($\alpha = .91$) focuses on the scope to which an individual has initiated social networks in both cultural groups (David et al., 2009). The 'Communication Ability' subscale ($\alpha = .79$) contains questions regarding the individual's ability to communicate verbally or nonverbally with others in both cultural groups. The 'Positive Attitudes Towards Both Groups' subscale ($\alpha = .89$) measures the extent to which an individual perceives the two cultural groups to be positive. The 'Knowledge of Cultural Beliefs and Values' subscale ($\alpha = .80$) estimates the capacity to which an individual is cognizant of the history, rituals, institutions, and everyday practices of both cultures. The 'Role Repertoire' subscale ($\alpha = .69$) evaluates the scope of culturally appropriate behaviors or roles an individual possesses or is willing to learn/perform. Lastly, the 'Bicultural Belief' subscale ($\alpha = .77$) measures an individual's belief that someone can function effectively within two cultural groups without jeopardizing his/her cultural identity. The measure as a whole produced an alpha of .91 (David et al., 2009). In the present study, the total BSES presents an alpha reliability of $\alpha = .93$.

Alpha reliabilities for the six subscales are as follows: Social Groundedness Scale, .89; Communication Ability Scale, .89; Positive Attitudes Towards Both Groups Scale, .83; Knowledge of Cultural Beliefs and Values Scale, .68; Role Repertoire Scale, .50; Bicultural Belief Scale, .68.

The authors of the BSES tested model fit and the six-factor model fit was considered acceptable. According to model fit indices' heuristics, the comparative fit index (CFI) was acceptable at CFI= 0.90, the RMSEA was acceptable at RMSEA= 0.07 (.07, .09), and the χ^2 statistic was acceptable $\chi^2(244, n= 164) = 1.92$ (David et al., 2009). To test the scale's concurrent validity David and colleagues (2009) used the VIA. The VIA measures an individual's acculturation levels to the prevailing new culture and their heritage culture, through two subscales. The six factors of the Bicultural Self-Efficacy Scale resulted to have a positive relationship with both the mainstream and heritage subscale of the VIA. As such, high-perceived bicultural self-efficacy is correlated to higher levels of acculturation and enculturation (David et al., 2009).

Attitudinal Familism Scale. Participants' level of *familismo* was measured using the 4-factor *Familismo Scale* ($\alpha = .83$) (Steidel & Contreras, 2003). The measure is an 18-item attitudinal scale measuring 'familial support,' 'family interconnectedness,' 'familial honor,' and 'subjugation of self for family.' Each subscale is rated on a 10-point Likert-style fashion (i.e. 1- *strongly disagree* to 10- *strongly agree*). According to the authors, the purpose of such a wide range is due to Latinos' tendency of extreme responses. 'Familial support' ($\alpha = .72$) measures an individual's belief that family members have an obligation to offer financial and emotional support to other family members regardless of the circumstances. 'Familial interconnectedness' ($\alpha = .69$) measures an individual's belief that family members must keep both emotional and

physical closeness with other family members in accordance with the structure set by the family hierarchy. ‘Familial Honor’ ($\alpha = .68$) measures the belief that it is an individual’s duty as a family member to uphold the family name. ‘Subjugation of self for family’ ($\alpha = .56$) measures the belief that an individual must be submissive and yield to the family. In the present study, the *Attitudinal Familism Scale* presented an overall alpha reliability of $\alpha = .88$. Alpha reliabilities for the four subscales are as follows: Familial Support Scale, .76; Familial Interconnectedness, .75; Familial Honor, .64; Subjugation of Self for Family, .73.

To confirm that the higher order construct of *familismo* is composed of the 4 factors (familial support, familial interconnectedness, familial honor, and subjugation of self for family) the authors conducted a principal components factor analysis with oblimin rotation. The analysis resulted in four theoretically distinct factors with eigenvalues greater than 1.0. The four factors accounted for 51.23% of the variance on the 18 items. To demonstrate construct validity the authors performed a variety of correlations on related Latino measures. A correlation of each subscale of *familismo* was computed on different related scales: Latino Orientation Scale (LOS), Anglo Orientation Scale (AOS), ARSMA-II (acculturation scale), generational status, and a combined score of demographic indicators of exposure to U.S. culture (i.e. years of education in the U.S. and years living in the U.S.). Correlation coefficients for overall *familismo* scores on the different scales are as follows: LOS $r = 0.17, p < .10$; AOS, $r = -0.23, p < .05$; ARSMA-II $r = -0.26, p < .01$; generational status $r = -0.24, p < .05$; ‘exposure to U.S. culture’ $r = -0.22, p = -0.22$. The ‘Familial Interconnectedness’ and ‘Familial Honor’ subscales correlated at least at a $p < .10$ with every related scale. The ‘Familial Support’ and ‘Subjugation of Self for Family’ subscales did not correlate with any related scale except the variable generational status. Overall

validity analyses supported that the scale is a valid indicator of the higher order construct of *familismo*.

Acculturation Rating Scale for Mexican Americans-II. Participant acculturation level was measured using the orthogonal *Acculturation Rating Scale for Mexican Americans-II (ARMSA-II)* (Cuellar, Arnold, & Magdonado, 1995). The ARMSA-II is designed to assess three fundamental factors of acculturation: language, ethnic interaction, and ethnic identity. The ARMSA-II is composed of two scales. Scale 1 evaluates Anglo orientation (AOS) ($\alpha = .83$) and Mexican orientation (MOS) ($\alpha = .88$), 13 and 17 items respectively. In the current study, the AOS Scale presents an alpha reliability coefficient of .77 and the MOS Scale presents an alpha reliability coefficient of .91. The subscale is a 30-item scale measuring four factors: language use and preference; ethnic identity and classification; cultural heritage and ethnic behaviors; and ethnic interaction. For both subscales, the items are scored in 5-point Likert style fashion (1-*not at all* to 5-*extremely often or almost always*). To assess ethnic orientation a mean score for each participant's AOS and each participant's MOS was computed. The MOS mean were then subtracted from the AOS mean to obtain an acculturation score that distinguishes the participant's score along a continuum from very Mexican oriented to very Anglo oriented (Jimenez, Gray, Cucciare, Kumbhani, & Gallagher-Thompson, 2010). Low scores indicate a Mexican orientation while high scores indicate an Anglo orientation. Scale two measures separation and marginalization but is deemed experimental by the authors. Since the two scales are independent, Scale 2 was not needed or used in this experiment.

Individualism-Collectivism Interpersonal Assessment Inventory (ICIAI). Participant level of collectivism was measured using the *Individualism-Collectivism Interpersonal Assessment Inventory (ICIAI)*. The ICIAI was originally created meeting the measurement

criteria of Triandis (1995), Hui (1988), and Shwartz (1990). They proposed individualism-collectivism items should measure (a) interpersonal interactions and (b) should describe common values related to specific relationships (e.g., obedience to authority, social responsibility, sacrifice, and loyalty) (Matsumoto et al., 1997). With this framework in mind 25 items were created, which were then cut down to a final 19 items after eight principal components factor analyses were performed. Matsumoto and colleagues (1997) then selected four different social groups in which individuals interact with in their everyday lives: (a) family, (b) close friends, (c) colleagues, and (d) strangers.

Participants rated the importance of the 19 value items in relation to only three of the four different social groups (Family Members, Close Friends, and Colleagues) due to their importance for the present study aims. The items are anchored on a 0 to 6 scale *Not at All Important* (0) to *Very Important* (6). The measure's 19 items are distributed between 4 factors: (a) Social Harmony (i.e. *Respect and honor their traditions and customs* and *Compromise your wishes to act in unison with them*), (b) Social Identification (i.e. *Be like or similar to them* and *Follow norms established by them*), (c) Self- Control (i.e. *Exhibit "proper" manners and etiquette, regardless of how you really feel, toward them*) and (d) Social Sharing of Recognition (*Share credit for their accomplishments* and *Sacrifice your goals for them*).

Matsumoto and colleagues (1997) report the four chosen factors show good to excellent internal consistency reliability for the Family group and moderate to good for the Friends and Colleagues groups. Each factor's standardized item Cronbach alphas for the *Values* scale are as follows: Social Harmony: Family $\alpha = .91$, Friends $\alpha = .83$, Colleague $\alpha = .84$; Social Identification: Family $\alpha = .72$, Friends $\alpha = .66$, Colleague $\alpha = .69$; Self-Control Family $\alpha = .66$; Friends $\alpha = .52$, Colleague $\alpha = .50$; Social Sharing of Recognition: Family $\alpha = .72$, Friends $\alpha =$

.65, Colleague $\alpha = .64$. The *Values* scale overall standardized item alpha is $\alpha = .91$ for Family, $\alpha = .88$ for Friends, and $\alpha = .86$ for Colleagues. Test-retest correlations for the three groups were significant at a $p < .01$ level; Friends $r = .88$, Family $r = .78$, and Colleagues $r = .77$.

In the present study, the total alpha reliability for the three groups showing good to excellent internal consistency reliability are as follows: Family, .86; Friends, .84; Colleagues, .86. Additionally, each factor's standardized item Cronbach alphas for the *Values* scale are as follows: Social Harmony: Family $\alpha = .89$, Friends $\alpha = .85$, Colleague $\alpha = .83$; Social Identification: Family $\alpha = .59$, Friends $\alpha = .53$, Colleague $\alpha = .57$; Self-Control Family $\alpha = .66$; Friends $\alpha = .54$, Colleague $\alpha = .52$; Social Sharing of Recognition: Family $\alpha = .65$, Friends $\alpha = .68$, Colleague $\alpha = .69$.

Social, Attitudinal, Familial, and Environmental Acculturative Stress Scale

(S.A.F.E)- Short. Due to the robust literature linking acculturative stress to immigrant psychological well-being, participant acculturative stress was assessed using the short version Social, Attitudinal, Familial, and Environment Acculturative Stress Scale (S.A.F.E) (Mena, Padilla & Maldonado, 1987). The original S.A.F.E scale was a 60-item scale and throughout time has been cut down to shorter versions. The Short S.A.F.E scale is an 18 Likert-style scale assessing four domains of acculturative stress: familial, attitudinal, social, and environmental. Different sources and experiences of acculturative stress that are measured are: feeling of social isolation, experiences of racism, conflicts arising from different values and beliefs from the surrounding culture, and conflicts between the individual's values or goals and the expectations of their family (Suh et al., 2015). Participants were asked to rate each item regarding their level of perceived stress for each item on a 1 to 5 Likert-type scale ranging from *Not stressful* (1) to *Extremely stressful* (5).

To test the short version's psychometric properties, Mena and colleagues (1987), assessed the S.A.F.E in a sample of 214 multicultural college undergraduates, divided into four generational status groups depending on age of immigration (early: immigrated before 12 years old; late: immigrated after age 12). The S.A.F.E short version produced an excellent Cronbach Alpha of $\alpha = .89$. The present study replicated Mena and colleague's reliability coefficient with a Cronbach Alpha of $\alpha = .89$. The S.A.F.E has been previously reported to be a reliable and valid measure of acculturation stress of Hispanic college students, leading to the use of the S.A.F.E in the current study (Fuertes & Westbrook, 1996).

Data Cleaning

Three-hundred forty-one ($n=341$) students signed up and began the study, after analysis of the data, 258 valid participant data were retained for analyses. Deletion of data was done for the following reasons: 26 participants began the study but were marked as unfinished, 11 participants skipped a scale in entirety established to be caused by mobile compatibility errors, and 16 missed two, or more, out of the 4 attention checks and were established as invalid data after assessment of responses. Demographic data established that 18 participants did not meet the criteria of being of Latino descent.

Second, an outlier analysis using boxplots and mahalanobis distance was done to identify multivariate outliers (Penny, 1996). Outliers above three times the interquartile range (extreme outliers) were removed, resulting in 12 participant units being removed. Lastly, 11 participants skipped up to 4 questions, thus Little's (1998) Missing Completely at Random analysis was done to establish if missingness is due to the variables in the data set (Little, 1998). Little's MCAR test was not statistically significant with a chi-square= 3205.09, ($df= 3205.09$, $p < .06$), resulting in failing to reject the null hypothesis. This means the data are in fact missing at random. Due to

the data missing completely at random, the expectation maximization technique was used to impute the missing data.

Chapter 4: Analysis & Results

Preliminary Analyses

The current study's data were analyzed using SPSS-25. To address the aims of the study, a series of Pearson product-moment correlations, ordinary least squares hierarchical regressions, and an analysis of variance (ANOVA) was conducted. First, an assessment of the demographic variables such as gender, generational status, 1 (1st generation) to 4 (4th generation), country born in, country of residence, number of occupants in their home, and number of family members living in their home was done to see if any variables have a significant effect on acculturation, biculturalism, and depression symptoms. Individuals who were born in Mexico were classified as first generation and given a code of 1. Individuals who were born in the U.S. and have at least one parent who was born in Mexico were classified as second generation and given a code of 2. Individuals who were born in the U.S., along with both parents, but whose grandparents (all grandparents) were born in Mexico were classified as third generation and given a code of 3. Individuals who were born in the U.S., along with both parents, but who has at least one grandparent born in Mexico were classified as fourth generation and given a code of 4. Gender was also coded as follows: 0= *male* and 1=*female*. The following table shows demographics and overall scores of each measure for the total sample population used.

Table 1

Mean and Standard Deviations for Variables of Interest

	min	max	<i>M</i>	<i>SD</i>
Age	17	56	21.57	5.11
Gen_Status	1.00	4.00	2.45	.92
BSES	4.00	9.00	7.23	1.07

AFS	1.33	9.22	6.65	1.17
ARMSA-II	-2.48	2.63	.11	1.02
DASS_Stress	.00	3.00	1.05	.73
DASS_Depression	.00	3.00	.56	.69
DASS_Anxiety	.00	3.00	.70	.66
S.A.F.E	1.00	4.56	2.36	.77
ICIAI_Family	2.26	7.00	5.63	.81
ICIAI_Friend	2.05	6.68	4.99	.81
ICIAI_Colleagues	1.32	6.47	4.29	.91

Note. Gen_Status= Generational Status; BSES= Bicultural Self Efficacy Scale; AFS= Attitudinal Familism Scale; ARMSA-II; Acculturation Rating Scale for Mexican Americans; DASS= Depression Anxiety Stress Scale; S.A.F.E.= Social, Attitudinal, Familial, and Environmental Acculturative Stress Scale (S.A.F.E)- Short; ICIAI= Individualism-Collectivism Interpersonal Assessment Inventory

A series of independent samples *t*-tests were performed to assess significant mean difference effects of gender on acculturation, biculturalism or depression symptoms. Reports did not indicate significant mean differences between male and female levels of acculturation, biculturalism, or depression symptoms (see Table 2.).

Table 2.

Sample Descriptives Using t-test for Equality of Means

	Male		Female		<i>t</i>	<i>p</i>
	M	SD	M	SD		
Acculturation	.18	1.02	.08	1.03	.70	.49
Biculturalism	7.23	1.06	7.24	1.07	-.08	.94
Depression	.60	.75	.54	.67	.57	.57

Note. Equal variances not assumed

N= 258 (M=65, FM=193)

To assess correlation patterns among generational status, country born in, country of residence, and the outcome variable (i.e. depression), a series of Pearson product-moment correlation analyses was conducted. Generational status and depression symptoms were not correlated, $r(258) = .00, p = .99$, country born in and depressive symptoms were not correlated, $r(258) = .04, p = .51$, and country of residence and depression symptoms were not correlated, $r(258) = .11, p = .08$.

Correlation analyses were also conducted to examine the relationship between the predictor variables (i.e. acculturation and biculturalism) and the outcome variables (i.e. depression and anxiety). Biculturalism and depression symptomology were significantly negatively correlated, $r(258) = -.22, p < .00$, meaning as a participants' biculturalism level increases, participants' self-reported depression symptomology level decreases. On the contrary, biculturalism and anxious symptomology was not significantly correlated, $r(258) = -.11, p = .65$. An exploratory analysis correlating biculturalism with a depression and anxiety covariate, stress symptomology, did result in a significant negative correlation between stress and biculturalism, $r(258) = -.24, p < .00$, meaning as participants' biculturalism levels increase self-reported stress symptomology decrease. Acculturation was not significantly correlated with depression symptomology, $r(258) = .04, p = .49$, anxious symptomology, $r(258) = -.07, p = .25$, or stress symptomology, $r(258) = .07, p = .27$. 'Appendix H' displays a correlation matrix of all variables.

Main Analyses

Research Question # 1: Do differences in acculturation and biculturalism levels predict differences in depression levels? Before running a hierarchical regression analysis, a simultaneous regression analysis in SPSS was used to establish the best model possible by assessing R Square Changes. Anxiety symptomology was entered into the model first by SPSS,

producing the largest $\Delta R^2 = .37$, resulting in a significant $\Delta F(1,256), p < .00$. The second variable entered into the model was Biculturalism, producing a $\Delta R^2 = .03$, resulting in a significant $\Delta F(1,255), p < .00$. The third variable entered into the model was Acculturative Stress, producing a $\Delta R^2 = .01$, resulting in a significant $\Delta F(1,254), p = .02$. The fourth, variable entered into the model was Participant Gender, producing a $\Delta R^2 = .01$, resulting in a significant $\Delta F(1,253), p = .01$. The fifth, and final, variable entered into the model was Participant Age, producing a $\Delta R^2 = .01$, resulting in a significant $\Delta F(1, 252), p = .03$. Due to gender and age not being significantly correlated with any of the variables of interest in the preliminary analysis, gender and age were left out of the hierarchical regression analysis model.

Assumptions of the linear regression model were also tested, a Normal Probability Plot of standardized residuals reported that the normality assumption of linear regression was not symmetric enough to establish the assumption of normality to be met and the assumption of homoscedasticity could not be established, due to residuals not being normally distributed. To remedy this, skewness of all variables was assessed and all variables (depression, anxiety, acculturative stress) except biculturalism were skewed, thus a transformation of depression, anxiety and acculturative stress scores was done with a square root transformation (Gregorie, Lin, Boudreau, & Nelson, 2008). After the square root transformation was done the normality distribution was met. Multicollinearity also did not appear to be an issue with $VIF < 1.2$ for all variables. Heteroskedasticity still appeared to be present in the model according to the standardized residuals' scatterplot. To assure the regression model is able to predict the dependent variable (depression scores) consistently across all values of depression scores, Hayes and Cai's (2007) HCRED custom dialog for SPSS was used to run the model with

heteroskedastic-consistent standard errors. The model was still statistically significant, $R^2 = .42$, $F(3,254) = 68.91$, $p = .00$.

Due to the results in the stepwise regression analysis, it was established that acculturative stress and anxiety should be controlled for. An ordinary least squares hierarchical regression analysis was then conducted, adjusting for participant self-reported anxious symptomology and self-reported acculturative stress. In the first step, we entered the anxiety variable into the model. Anxiety produced a $\Delta R^2 = .37$, resulting in a significant $F(1,256) = 149.11$, $p < .00$ ($\beta = .61$, $p < .00$). At the second step, acculturative stress was entered into the model. Acculturative stress produced a $\Delta R^2 = .02$, resulting in a significant $F(1,255) = 79.94$, $p < .00$ ($\beta = .14$, $p < .00$). Lastly, the biculturalism variable was entered into the model. Biculturalism produced a $\Delta R^2 = .03$, resulting in a significant $F(1,254) = 60.21$, $p < .00$ ($\beta = -.17$, $p < .00$). The resulting Beta Weights when all the variables are in the model are as follows: Anxiety, $\beta = .54$, $p < .00$; Acculturative Stress, $\beta = .13$, $p = .02$; Biculturalism, $\beta = -.18$, $p < .00$. Thus, one can establish that adding Acculturative Stress into the model increases the model's predictive capacity of predicting overall self-reported depressive symptomology in a statistically significant way and it increasing the percentage of variance by 3%. Most importantly, the hypothesis stating differences in biculturalism levels does predict differences in depression symptomology levels in the participants holds true. With a $\Delta R^2 = .03$, adding Biculturalism to the model increased the model's predictive capacity of predicting overall self-reported depressive symptomology in a statistically significant way, $F(1,254) = 13.14$, $p < .00$, increasing the percentage of variance accounted for by 3%. Due to the model being statistically significant, the hypothesis stating higher biculturalism scores in an individual predicts lower levels of depression symptoms was accepted. Due to acculturation levels not being correlated with depression scores, the hypothesis

stating higher acculturation scores in an individual predicts higher levels of depression symptoms was rejected.

Research Question #2: Does *familismo* moderate the relationship between acculturation and level of depression in an individual? The second hypothesis predicted that the relationship between acculturation and self-reported depressive symptomology would be moderated by level of *familismo*, resulting in a decrease in depressive symptoms. According to the preliminary correlation analysis, acculturation was not correlated with either *familismo* or depression. Thus, a moderation analysis was not conducted, and the hypothesis was rejected.

Research Question #3: Does Latinos' endorsements of collectivist values differ between three different interpersonal groups (i.e. Family, Close Friends, and Colleagues)? A Within-Subjects One-Way ANOVA test was conducted to compare the effect of interpersonal group on collectivism endorsement, family, friends, and colleagues. The independent variable consisted of the type of relationship-specific ICIAI (i.e. Family, Close Friends, and Colleagues). The dependent variable consisted of the scores obtained on each collectivism subscale. An analysis of variance showed that there was a significant effect of interpersonal group on collectivism endorsement, $F(1.63, 419.95) = 354.25, p < .00, \eta_p^2 = .58$. Three paired samples *t*-tests were used to make post hoc comparisons between conditions. The first paired samples *t*-test indicated that there was a significant difference in the scores for family collectivism endorsement condition ($M = 5.63, SD = .81$) and the friends collectivism endorsement condition ($M = 4.99, SD = .81$); $t = 14.79, p < .00$. The second paired samples *t*-test indicated that there was a significant difference in the scores for family collectivism endorsement condition ($M = 5.63, SD = .81$) and the colleagues collectivism endorsement condition ($M = 4.29, SD = .91$); $t = 21.93, p < .00$. The third paired samples *t*-test indicated that there was a significant difference in the

scores for friends collectivism endorsement condition ($M = 4.99, SD = .81$) and colleagues collectivism endorsement condition ($M = 4.29, SD = .91$); $t = 15.64, p < .00$. Thus, the significant differences found between the three ICIAs indicate that Latinos' range in collectivism depended upon the interpersonal group resulting to accepting the third hypothesis.

Research Question #4: Does biculturalism level mediate the relationship between familistic collectivism and levels of depression? The fourth hypothesis stating familistic collectivism ideology indirectly effects depression symptomology in Latinos through the mediating source of being a bicultural individual cannot be accepted due to the preliminary analysis reporting self-reported depressive symptomology is not significantly correlated to familistic collectivism, $r(258) = -.10, p = .11$. This may be due to depressive symptoms being serious symptoms of psychopathology.

During the preliminary analysis it was reported that familistic collectivism was not significantly correlated with depressive symptomology. However, familistic collectivism was significantly correlated with stress symptomology, $r(258) = -.13, p = .05$. Stress symptomology is a less severe symptom related to mental health compared to depressive symptoms. Due to the population sampled, undergraduate university students, stress symptomology may be more easily detected than depressive symptomology. Thus, stress symptomology may be a variable more of interest in the current model.

Research Question #4 post hoc test. The mediation analysis previously proposed was conducted replacing depressive symptomology with stress symptomology. Baron & Kenny's (1984) Causal Steps Approach analysis was conducted. The analysis began by running multiple regression analyses. In the first step, stress scores were regressed on collectivism (family) scores to establish if familistic collectivism is related to depression scores, this is the *c path*. The

regression analysis reported familistic collectivism significantly predicted stress scores, $\beta = -.14$, $t = -2.26$, $p = .03$. Familistic collectivism also explained a significant proportion of variance in stress scores, $R^2 = .02$, $F(1,256) = 5.09$, $p = .03$. In the second step, biculturalism scores were regressed on collectivism (family) scores to establish if familistic collectivism is related to biculturalism, this is the *a path*. The regression analysis reported biculturalism significantly predicted familistic collectivism scores, $\beta = .29$, $t = 4.93$, $p < .00$. Biculturalism also explained a significant proportion of variance in familistic collectivism scores, $R^2 = .09$, $F(1,256) = 24.26$, $p < .00$. Lastly, to run the mediation model, stress scores were regressed on the mediator (biculturalism) and independent variable (collectivism), this is the *c' path*. In order to establish mediation, the *c path* should be statistically significant but the *c' path* should not be statistically significant. The mediated regressions analysis did report that adding biculturalism into the model as a mediator reduced the significance of the *c path*, $\beta = -.14$, $t = -2.26$, $p = .03$, to a non-significant *c' path*, $\beta = -.08$, $t = -1.18$, $p = .24$. This suggests biculturalism levels do mediate the relationship between familistic collectivism and stress scores, $R^2 = .06$, $F(2,255) = 8.75$, $p < .00$. This means the relationship between familistic collectivism and stress symptomology is at least in part, associated with the individual's biculturalism level. See mediation analysis figure on the next page (Figure 1).

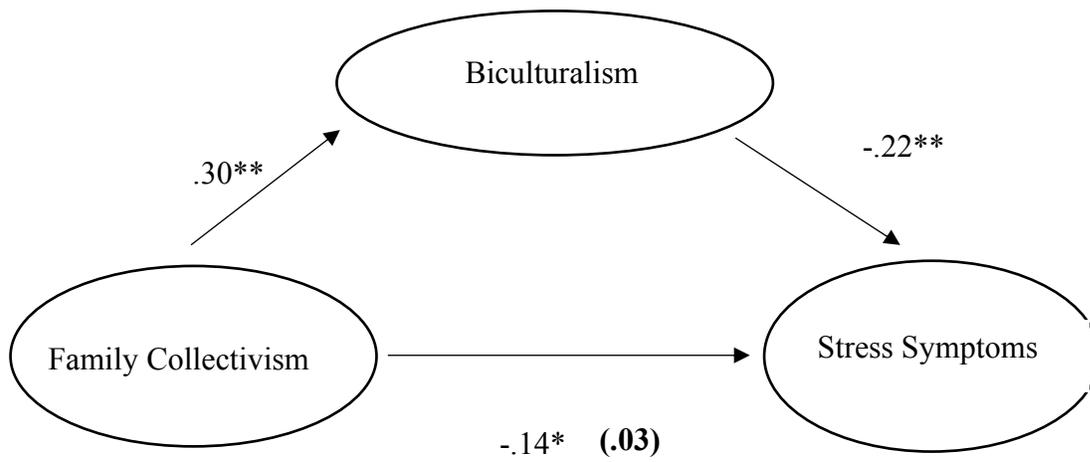


Figure 1. Standardized regression coefficients for the relationship between Family Collectivism and Stress symptomology as mediated by Biculturalism levels. The standardized regression coefficient between Family Collectivism and Stress Symptomology, controlling for Biculturalism, is in parentheses.
 $*p < .05$ $**p < .01$

Chapter 5: Discussion

Bicultural competence allows people to “live effectively and satisfactorily within two groups without compromising their sense of cultural identity” (LaFramboise et al., 1993, p.402). When Latinos maintain core Latino cultural values and ideologies, such as *familismo* and collectivism, Latino mental health outcomes fare better than when Latinos completely acculturate to the U.S. American culture (Lorenzo-Blanco et al., 2012). The positive effect bicultural competence, and different Latino cultural values, have on Latino mental health have scarcely been investigated, and the present study serves to add to the present literature (Carrera & Wei, 2014). In the present study, it was found that bicultural individuals reported lower self-reported depressive symptomology than individuals scoring low in biculturalism. Although the present study did not find *familismo* to buffer acculturated Latinos from experiencing depressive symptomology, the present study does report important findings in regards to a familistic collectivism. It was reported that Latinos endorse more of a collectivistic ideology toward family than friends and colleagues, and when bicultural individuals endorse high familistic collectivism, stress symptomology is reduced. These key findings, and their implications for research and practice, will be discussed next.

Findings

Bicultural individuals report lower self-reported depressive symptomology. The first part of Hypothesis 1, the more a Latino is biculturally oriented, the lower levels of depression/anxiety symptomology they will report, was supported as a correlation between biculturalism and depression scores was found, thus biculturalism is related to lower levels of depression symptoms. The present study’s findings are consistent with those of (Telzer et al., 2016), who found that adolescents who reported greater Mexican behavioral practices and better

Spanish proficiency indicated better youth adjustment. Nguyen & Benet-Martinez's (2013) meta-analysis of 83 studies also found that biculturalism shows a significantly strong positive association with both psychological and sociocultural adjustment.

Cultural research has shifted from measuring acculturation unidimensionally to measuring it bidimensionally through the measurement of biculturalism. As immigrants adjust, they are not simply attaining new cultural values but they may also be preserving their ethnic cultural values. In the current sample used, the location in which the Latino undergraduate students live is highly bicultural. Students can be heard speaking both English and Spanish on campus. Students may also present more American cultural values at the University and when they go home to their families they may present more Latino cultural values. For example, at the University, Latino students may be more outspoken in what they believe and may challenge others they do not agree with. In a Latino home, it is customary to exhibit more agreeable interactions towards elders as a sign of respect, even if they do not agree (Matsumoto et al., 1997). This demonstrates the students' ability to enculturate while they acculturate and such cultural role switching may lead to positive self-esteem by being able to navigate both cultures effectively. Enculturation has, as of recent, emerged as a construct of interests, Telzer and colleagues (2015) reported adolescents who maintain their overall heritage culture was predictive of their positive well-being. This means when a Latino enculturates (i.e., maintains their Latino culture and values), while learning and practicing their new home's U.S.-American culture, they show lower mental health symptoms. This may be due to less enculturation gaps between family members, reducing family conflict/dysfunction.

The second part of Hypothesis 1, stating acculturation is related to higher depression symptomology in Latinos, was unsupported due to the lack of a relationship between depressive

symptoms and acculturation. This may be due to the present sample population's unique location as well as acculturation's lack of taking enculturation into account. As previously stated, an individual can exhibit both U.S.-American cultural values, along with Latino cultural values. Latino mental health research has consistently been conducted in areas away from the U.S./Mexico border, such as North Carolina or states in the Midwest (Carrera & Wei, 2014; Huq, Stein, & Gonzalez, 2016; Potochnick & Perreira, 2010). It can be argued measuring acculturation in a city on the U.S.-Mexico border, where the city is immersed in the Mexican culture, serves little purpose due to the Latino residents not having to acculturate to a U.S.-American culture to navigate efficiently and comfortably through everyday life. A Latino sample from a population far removed from the Mexican border may be suited for the measurement of acculturation, but biculturalism may be better suited for a Latino sample population on the U.S./Mexico border.

***Familismo* does not buffer acculturated Latinos from depressive symptomology.** The second hypothesis, stating that *familismo* moderates the relationship between acculturation and level of self-reported depressive symptomology, was not supported due to acculturation not being related to *familismo* or depression symptoms. Thus, a moderation analysis could not be conducted. The relationship between acculturation and *familismo* may not have been found because of the highly bicultural environments the present population experience every day. A Latino residing in El Paso, TX may work in a U.S.- American cultural environment but may go home to a Latino cultural environment. Additionally, the population sampled may have family members still residing in Juarez, Mexico in which they go visit regularly leading to a promotion of bicultural competence decreasing acculturative stress. Past studies have found a positive relationship between *familismo* and psychological well-being and a negative relationship with depressive symptoms (Rangel, 2013; Chavez-Korell, 2014). Kennedy and Cebello (2013)

reported an impactful finding stating *familismo* moderates the positive relationship between violence exposer and depressive symptoms in adolescents. Such a finding demonstrates the positive buffering effect *familismo* has on trauma or stress. Due to the robust literature establishing a relationship between *familismo* and mental health, and the established relationship between biculturalism and decreased self-reported depressive symptomology in this study, it is imperative to continue to assess this cultural construct (Kennedy & Cebello, 2013; Katiria Perez & Curess, 2014; Kapke et al., 2017). The present sample used may not have allowed for the relationship between acculturation and depressive symptoms to be reported and without such a relationship *familismo* cannot act as a buffer.

Additionally, *familismo* may also have a negative effect on mental health. There may be specific parts of *familismo* that are most important and positive, such as family cohesion, and some parts that may be related to stress, such as ‘subjugation of self’, for the family. Family cohesion may promote positive family relationships and increase support for a Latino individual. ‘Subjugation of self’ may lead a Latino to give up or postpone life goals, such as leaving for college, in order to help the family through hard times or to avoid conflict within the family. The second highest rated item in the acculturative stress scale in the current sample was, “It bothers me that family members I am close to do not understand my new values”. This may demonstrate an enculturate gap between the participant and their family. The University of Texas at El Paso is a Hispanic Serving Institution where many of the students are the first in their family to attain a college education and with continued education Latino students may begin to shift from a collectivistic ideology to an individualistic ideology in order to further advance onto a graduate program without guilt. Such examples illustrate how *familismo* as a cultural value can be related to mental health positively or negatively.

Latinos show significantly higher collectivism scores for family, than for friends and family. Hypothesis three, stating Latinos will demonstrate a higher level of a collectivistic ideology towards Family, followed by Friends, and Colleagues being last, was fully supported. Individuals in collectivistic cultures are empathetic on how others view them, emphasize family, social, and emotional bonds and prefer shared goals above individual ones (Comaz-Diaz, 2006). Finding Latino's endorse more collectivistic principles toward family, than friends and colleagues, solidifies the great importance family means to Latinos, and to some extent the lengths they are willing to go to maintain harmony among the members of the family, tolerate their views, value connectedness, and try to minimize conflicts (Comaz-Diaz, 2006). Additionally, the population sample used in the current study, young adults in college, may adopt more collectivistic attitudes towards family but more individualistic attitudes towards friends and peers. The highest rated items in the family group of the ICIAI were related to respect and loyalty to the family, the highest rated items in the friends group was related to maintaining verbal communication with their friends, but the lowest rated item was related to sacrificing their goals for their friends. This may mean that even though they seek more communication with their friends, they are more willing to put their families before themselves but not their friends before themselves. Lastly, the highest rated items in the colleagues group of the ICIAI were related to maintaining self-control and cooperation with their colleagues. This may demonstrate that the current population values keeping a positive environment in the workplace or classroom but are not willing to sacrifice their goals for them [colleagues] (lowest rated item). This demonstrates how the bicultural population sampled demonstrates both collectivistic and individualistic values to different interpersonal groups. The next finding further explains how such a value in a Latino can affect mental health.

An additional finding that should be noted is familistic collectivism and friends collectivism were also negatively correlated with acculturation. This may mean as an individual acculturates, their collectivistic ideology towards friends and family decreases, and as previously stated, they may demonstrate more individualistic values towards friends and colleagues than family. This is important due to collectivism being an ideology held by Latino cultures but not the U.S. American culture. Collectivism is associated by “giving priority to the goals of the in-group [family and friends] and shaping behavior primarily on the basis of in-group norms” (Triandis, 2001, p.909). Researchers have suggested that *familismo* reflects a collectivistic ideology and have previously reported the correlation of *familismo* to Triandis’s (1993) ‘vertical collectivism’ and interdependence was stronger in Hispanics than for non- Hispanic Blacks (Shwartz, Montgomery, & Briones, 2006; Triandis et al., 1993; Shwartz, 2007). The interdependence towards family members could mean more support for the individual. Triandis’s ‘vertical collectivism’ measures the degree individuals value the groups to which they belong (e.g. family) and respect the decision of the group (Triandis et al., 1993). Respecting the decision of the group is illustrated when Latinos agree with family decisions even though as an individual they may not agree but according to the present data a Latino would be more likely to challenge a group decision in a group of friends or colleagues. Due to the established connection of *familismo* to psychological well-being it is of interest for researchers to also look at collectivism as a potential protective buffer to mental health symptoms.

Biculturalism effects endorsement of familistic collectivism values, resulting in lower self-reported stress symptoms. The present study’s fourth hypothesis, stating levels of biculturalism will affect the extent an individual endorses ‘family’ collectivism, resulting in lower or higher symptoms of depression/anxiety, was not supported due to familistic

collectivism not being related with self-reported depressive symptoms. However, in the preliminary analysis, it was discovered that familistic collectivism was related with self-reported stress symptoms. Such a finding allowed for the replacement of depressive symptomology for stress symptomology in the mediation model, resulting in finding that the relationship between familistic collectivism and stress symptomology is explained by the individual's biculturalism level. For instance, a highly bicultural individual will endorse high values of familistic collectivism resulting in lower levels of stress symptomology. A low bicultural individual would not endorse values of familistic collectivism resulting in higher levels of stress symptomology. Such a relationship may be explained by Latino's seeking social support through their in-group, specifically family members.

Social support has been significant in explaining improved quality of life and seeking help for psychological distress, and family is widely observed as an important social support resource for Latino Americans (Taylor, 2011; Chang, 2015). A qualitative study performed using Latino American focus groups found Latino Americans were explicitly encouraged by their parents to solicit support and a noticeable feature of what constitutes emotional support for Latinos is the value placed on turning to family, as opposed to friends, neighbors, and coworkers, for that social support (Chang, 2015; Keefe, 1979; Miranda, Bilot, Peluso, Berman, & Van Meek, 2006). The relationship between a collectivistic orientation and decreased depression has been reported in Chinese migrants through reducing acculturative stress, but this is the first reported study that has observed a relationship between family collectivism and stress symptomology in a Latino population. In the present day, being a college student, many times means managing the demands from school, work, and personal relationships, which many times are related to stress. Being a bicultural individual may encourage a student to lean on their family

for support or advice affecting the student's stress levels. Additionally, in a collectivistic culture when one member of the family accomplishes something great, such as a college degree, the entire family accomplished attaining that college degree (Matsumoto et al., 1997). A family may support and push the student through stressful academic situations to further the entire family's goal of attaining that college degree. Finding biculturalism leads to higher endorsement of family collectivism, resulting in lower levels of stress symptomology is important because it supports the argument that biculturalism and the maintenance of the Latino culture is positively related with psychological wellbeing. This may be through the perceived support a Latino gets from their family during stressful times.

Limitations

The limitations of this study are important to note. First, the sample was taken from an undergraduate university student population. The lack of relationship between familistic collectivism and self-reported depressive symptoms may be due to the sample used, as undergraduate students are more likely to experience stress than they are depressive symptoms, when compared to a clinical sample (Andrews & Wilding, 2004; Chernomas & Shapiro, 2013). Depressive symptomology is a more serious form of psychopathology than stress and using a non-clinical sample may have resulted in the lack of correlation. Such a sample also makes it difficult to generalize the findings to the general population. This sample is also unique in that participants' education level may be higher than their parents or grandparents; higher education may make it easier for them to navigate through a foreign culture, making them less prone to depressive symptoms. However, UTEP is a Hispanic serving institution, with many students being the first in their family to attain a higher education. Assessing acculturation and bicultural

competence in this population is a good first step in understanding mental health symptoms in Latinos.

A second limitation is that the participants were predominantly Mexican American, limiting the generalization of the findings to a Mexican American population. The present research findings cannot be used to generalize to other Latino subgroups such as Puerto Rican, Dominican, or Cuban. Future studies should include other Latino subgroups. Such research can help psychologists understand the differences in depression levels among the different subgroups and understand what cultural values are endorsed in some Latino subgroups and not others.

A third limitation is that the study used a cross-sectional research design, so causal relationships among the variables cannot be concluded. For future studies, repeated measures from the time a Latin immigrant enters the U.S. over several, especially formative years is warranted to establish more certainty with regard to these relationships in a temporal manner.

Conclusions and Future Directions

Despite the limitations listed, the present study sets the groundwork for future researchers to deconstruct which Latino cultural values may buffer mental health symptoms. *Familismo* is a construct with many components, and some components may have a positive effect on Latino mental health, while others may have a negative effect on Latino mental health (Katiria Perez & Curess, 2014). For example, familial support and family interconnectedness may promote positive mental health outcomes due to relieving stress but familial honor and subjugation of self for family may have negative effects on Latino mental health due to the pressure of not wanting to dishonor the family through actions that may be judged or for choosing to put that wants and needs of the individual before the family's (Sabogal et al., 1987; Rangel, 2013). Future research

should examine what components of *familismo* leads to positive mental health outcomes in Latinos and which lead to negative outcomes.

Secondly, replicating this study in another city with close proximity to the Mexico border, but with a different political climate that is not as tolerant of a bicultural environment (i.e., Arizona), could help researchers assess how Latinos in such an environment fare. Latinos in such an environment may be afraid of demonstrating their ethnic background due to fear of being persecuted or judged. Acculturative stress may be more prominent in such a population and the moderation analysis that was not supported in the present study may be supported. Assessing how such a political climate effects biculturalism levels in Latinos living with fear of persecution should be of interest for future research. Such research can also solidify the finding in the present research establishing a relationship between biculturalism and depressive symptomology.

Since this is the first reported study establishing a relationship between collectivism and mental health symptoms in a predominantly Mexican American culture, future research should further assess collectivism in other Latino populations and begin deconstructing the construct to see what part of collectivism (i.e., Social Harmony, Social Identification, Self-Control, or Social Sharing Recognition) is most important in terms of mental health outcomes. Social Harmony may be associated with stress in an acculturated Latino when they begin to deviate from traditions and customs, whereas, social identification may lead to positive mental health outcomes in a bicultural Latino due to feeling part of two big in-groups, Latinos and U.S.-Americans. For example, it would be interesting to see how Social Identification fares in Puerto Ricans who are both U.S. American citizens and Latinos. Structural equation modeling with constructs such as *familismo* and collectivism may help future research to address such study aims.

Continuous probing of Latino cultural values in research can inform clinical mental health therapists on how to approach therapy with Latino populations. The language of mainstream psychotherapy is instilled with values that promote individualistic developmental stages, such as separation from family of origin through differentiation and individuation (Comas-Diaz, 2006). Such language may not be conducive in therapy with a Latino who maintains a collectivistic ideology. If *familismo* and collectivistic family values help buffer Latinos from depressive symptoms, therapists may want to endorse such values and even may consider a Systemic Approach to therapy involving family members. The use of the unique population in the present study and the findings reported can help direct researchers towards other Latino cultural values that promote positive mental health and help direct clinicians towards therapeutic approaches better suited for Latinos.

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Appendix A

Demographic Questionnaire

Gender: Female/ Male

Age: _____

Where were you born?

Mexico United States Other: _____

Where were your following family member born? (If unknown, please specify as unknown)

Mother _____ Grandmother (mother's side) _____

Grandfather (mother's side) _____

Father _____ Grandmother (father's side) _____

Grandfather (father's side) _____

Where do you currently live?

U.S or Mexico

Number of individuals living in your home/place of residents (include yourself).

How many of these individuals are family members?

How old were you when you immigrated to the U.S?

Appendix B

Depression Anxiety Stress Scale (DASS)

Please read each statement and select a number 0, 1, 2 or 3 that indicates how much the statement applied to you over the past week. There are no right or wrong answers.

The rating scale is as follows:

- 0 Did not apply to me at all
- 1 Applied to me to some degree, or some of the time
- 2 Applied to me to a considerable degree, or a good part of time
- 3 Applied to me very much, or most of the time

DASS Stress

	Not at all		All the time	
1. I found myself getting upset by quite trivial things.	0	1	2	3
2. I found myself getting upset rather easily.	0	1	2	3
3. I found that I was very irritable.	0	1	2	3
4. I found myself getting agitated.	0	1	2	3
5. I felt I was rather touchy.	0	1	2	3
6. I was intolerant of anything that kept me from getting on with what I was doing.	0	1	2	3
7. I tended to over-react to situations.	0	1	2	3
8. I found myself getting impatient when delayed in any way (e.g., lifts, traffic lights, being kept waiting).	0	1	2	3
9. I found it difficult to relax.	0	1	2	3
10. I found it hard to calm down after something upset me.	0	1	2	3
11. I found it difficult to tolerate interruptions to what I was doing.	0	1	2	3
12. I felt that I was using a lot of nervous energy.	0	1	2	3
13. I found it hard to wind down.	0	1	2	3
14. I was in a state of nervous tension.	0	1	2	3

DASS Depression

	Not at all		All the time	
1. I could see nothing to be hopeful about.	0	1	2	3
2. I felt that life was meaningless.	0	1	2	3
3. I felt that I had nothing to look forward to.	0	1	2	3
4. I felt I was pretty worthless.	0	1	2	3

5. I felt that life wasn't worthwhile.	0	1	2	3
6. I was unable to become enthusiastic about anything.	0	1	2	3
7. I felt I wasn't worth much as a person.	0	1	2	3
8. I felt I had lost interest in just about everything.	0	1	2	3
9. I couldn't seem to experience any positive feeling at all.	0	1	2	3
10. I felt down-hearted and blue.	0	1	2	3
11. I couldn't seem to get any employment out of the things I did.	0	1	2	3
12. I felt sad and depressed.	0	1	2	3
13. I found it difficult to work up the initiative to do things.	0	1	2	3
14. I just couldn't seem to get going.	0	1	2	3

DASS Anxiety

	Not at all		All the time	
1. I experienced trembling.	0	1	2	3
2. I had a feeling of shakiness (e.g., legs going to give away).	0	1	2	3
3. I had a feeling of faintness.	0	1	2	3
4. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the nascence of physical exertion.	0	1	2	3
5. I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat).	0	1	2	3
6. I felt I was close to panic.	0	1	2	3
7. I had difficulty in swallowing.	0	1	2	3
8. I felt scared without any good reason.	0	1	2	3
9. I felt terrified.	0	1	2	3
10. I was worried about situations in which I might panic and make a fool of myself.	0	1	2	3
11. I was aware of dryness of mouth.	0	1	2	3
12. I found myself in situations which made me so anxious I was most relieved when they ended.	0	1	2	3
13. I perspired noticeably in the absence of high temperatures or physical exertion.	0	1	2	3
14. I feared that I would be "thrown" by some trivial but unfamiliar task.	0	1	2	3

Appendix C

Social, Attitudinal, Familial, Environmental Acculturative Stress Scale

The following statements indicate how you perceive cultural stress. For each statement below, please check (☐) only one box.

1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5= Strongly Disagree

Circle a number between 1 – 5 next to each item that best applies.

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	I feel uncomfortable when others make jokes about or put down people of my ethnic background.	1	2	3	4	5
2.	I have more barriers to overcome than most people.	1	2	3	4	5
3.	It bothers me that family members I am close to do not understand my new values.	1	2	3	4	5
4.	Close family members and I have conflicting expectations about my future.	1	2	3	4	5
5.	It is hard to express to my friends how I really feel.	1	2	3	4	5
6.	My family does not want me to move away but I would like to.	1	2	3	4	5
7.	It bothers me to think that so many people use drugs.	1	2	3	4	5
8.	In looking for a good job, I sometimes feel that my ethnicity is a limitation.	1	2	3	4	5
9.	It bothers me that I cannot be with my family.	1	2	3	4	5
10.	I don't have any close friends.	1	2	3	4	5
11.	Many people have stereotypes about me culture or ethnic group and treat me as if they are true.	1	2	3	4	5
12.	I don't feel at home.	1	2	3	4	5
13.	People think I am unsociable when in fact I have trouble communication in English.	1	2	3	4	5
14.	I often feel that people actively try to stop me from advancing.	1	2	3	4	5

15.	It bothers me when people pressure me to assimilate.	1	2	3	4	5
16.	I often feel ignored by people who are supposed to assist me.	1	2	3	4	5
17.	Because I am different I do not get enough credit for the work I do.	1	2	3	4	5
18.	It bother me that I have accent.	1	2	3	4	5

Appendix D

Bicultural Self-Efficacy Scale

Please indicate how much you agree/ disagree with the following items by circling the corresponding number (1 – 9) that best applies. Please answer as honestly as possible.

<i>Strongly disagree</i>	<i>Quite disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Neutral</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Quite agree</i>	<i>Strongly agree</i>
1	2	3	4	5	6	7	8	9

1.	I am proficient in both standard English and Spanish.	1	2	3	4	5	6	7	8	9
2.	It is possible for an individual to have a sense of belonging in two cultures without compromising his or her sense of cultural identity.	1	2	3	4	5	6	7	8	9
3.	I am knowledgeable about the gender roles and expectations of both mainstream Americans and my Mexican culture.	1	2	3	4	5	6	7	8	9
4.	Being bicultural does not mean I have to compromise my sense of cultural identity.	1	2	3	4	5	6	7	8	9
5.	I am knowledgeable about the holidays celebrated both by mainstream Americans and by people from my Mexican culture.	1	2	3	4	5	6	7	8	9
6.	I feel comfortable attending a gathering of mostly mainstream Americans as well as a gathering of mostly people from my Mexican culture.	1	2	3	4	5	6	7	8	9
7.	It is acceptable for a mainstream American individual to participate in two different cultures.	1	2	3	4	5	6	7	8	9
8.	An individual can alter his or her behavior to fit a particular social context.	1	2	3	4	5	6	7	8	9
9.	I take pride in both the mainstream American culture and my Mexican culture.	1	2	3	4	5	6	7	8	9

10.	I have an extensive network of mainstream Americans as well as an extensive network of people from my Mexican culture.	1	2	3	4	5	6	7	8	9
11.	I can communicate my feelings effectively to both mainstream Americans and people from my Mexican culture.	1	2	3	4	5	6	7	8	9
12.	I have strong ties with mainstream Americans as well as people from my Mexican culture.	1	2	3	4	5	6	7	8	9
13.	I am confident that I can learn new aspects of both the mainstream American culture and my Mexican culture.	1	2	3	4	5	6	7	8	9
14.	I am knowledgeable about the values important to mainstream Americans as well as to my people from my Mexican culture.	1	2	3	4	5	6	7	8	9
15.	I can develop new relationships with both mainstream Americans as well as people from my Mexican culture.	1	2	3	4	5	6	7	8	9
16.	I can choose the degree and manner by which I affiliate with each culture.	1	2	3	4	5	6	7	8	9
17.	I can communicate my ideas effectively to both mainstream Americans and people from my Mexican culture.	1	2	3	4	5	6	7	8	9
18.	I feel like I fit in when I am with mainstream Americans as well as people from my Mexican culture.	1	2	3	4	5	6	7	8	9
19.	It is acceptable for an individual from my Mexican culture to participate in two different cultures.	1	2	3	4	5	6	7	8	9
20.	I have a generally positive attitude toward both mainstream Americans and people from my cultural group.	1	2	3	4	5	6	7	8	9
21.	I am knowledgeable about the history of both the United States and Mexico.	1	2	3	4	5	6	7	8	9
22.	I can count on both mainstream Americans and people from my Mexican culture.	1	2	3	4	5	6	7	8	9
23.	I have respect for both mainstream American culture and my Mexican culture.	1	2	3	4	5	6	7	8	9
24.	I feel at ease around both mainstream Americans and people from my Mexican culture.	1	2	3	4	5	6	7	8	9

25.	I can switch easily between standard English and Spanish.	1	2	3	4	5	6	7	8	9
26.	I have generally positive feelings about both my Mexican culture and mainstream American culture.	1	2	3	4	5	6	7	8	9

Appendix E

Attitudinal Familism Scale (AFS)

Please indicate how much you agree/ disagree with the following items by circling the corresponding number (1 – 10) that best applies. Please answer as honestly as possible.

1. A person should help his or her elderly parents in times of need, for example, help financially or share a house.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

2. A person should always support members of the extended family, for example, aunts, uncles and in laws, if they are in need, even if it is a big sacrifice.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

3. Children should live with their parents until they get married.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

4. A person should respect his or her older brothers and sister regardless of their differences in views.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

5. A person should cherish the time they spend with his or her relatives.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

6. Children should help out around the house without expecting an allowance.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

7. Children should obey their parents without question even if they believe that they are wrong.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

8. The family should control the behavior of children under the age of 18.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

9. Children should always help their parents with the support of younger brothers and sisters, for example, help them with homework, help the parents take care of the children, etc.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

10. A person should feel ashamed if something he or she does dishonor the family name.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

11. A person should live near his or her parents and spend time with them on a regular basis.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

12. A person should often do activities with his or her immediate and extended families, for example eat meals, play games, or go somewhere together.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

13. Children below 18 should give almost all their earnings to their parents.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

14. A person should always be expected to defend his/her family's honor no matter what the cost.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

15. A person should be a good person for the sake of his/her family.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

16. A person should rely on his or her family if the need arises.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

17. Parents and grandparents should be treated with great respect regardless of their differences in views.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

18. Aging parents should live with their relatives.

1	2	3	4	5	6	7	8	9	10
strongly disagree		disagree		somewhat disagree	somewhat agree		agree		strongly agree

Appendix F

English Acculturation Rating Scale for Mexican-Americans-II

SCALE 1

Circle a number between 1 – 5 next to each item that best applies.

		1	2	3	4	5
		Not at all	Very little or not very often	Moderately	Much or Very often	Extremely Often or Almost Always
1.	I speak Spanish	1	2	3	4	5
2.	I speak English	1	2	3	4	5
3.	I enjoy speaking Spanish	1	2	3	4	5
4.	I associate with Anglos	1	2	3	4	5
5.	I associate with Mexicans and/or Mexican Americans	1	2	3	4	5
6.	I enjoy listening to Spanish language music	1	2	3	4	5
7.	I enjoy listening to English language music	1	2	3	4	5
8.	I enjoy Spanish language TV	1	2	3	4	5
9.	I enjoy English language TV	1	2	3	4	5
10.	I enjoy English language movies	1	2	3	4	5
11.	I enjoy Spanish language movies	1	2	3	4	5
12.	I enjoy reading (e.g. books in Spanish)	1	2	3	4	5
13.	I enjoy reading (e.g. books in English)	1	2	3	4	5
14.	I write (e.g. letters in Spanish)	1	2	3	4	5
15.	I write (e.g. letters in English)	1	2	3	4	5
16.	My thinking is done in the English language	1	2	3	4	5

17.	My thinking is done in the Spanish language	1	2	3	4	5
18.	My contact with Mexico has been	1	2	3	4	5
19.	My contact with the USA has been	1	2	3	4	5
20.	My father identifies or identified himself as 'Mexicano'	1	2	3	4	5
21.	My mother identifies or identified herself as 'Mexicana'	1	2	3	4	5
22.	My friends, while I was growing up, were of Mexican origin	1	2	3	4	5
23.	My friends, while I was growing up, were of Anglo origin	1	2	3	4	5
24.	My family cooks Mexican foods	1	2	3	4	5
25.	My friends now are of Anglo origin	1	2	3	4	5
26.	My friends now are of Mexican origin	1	2	3	4	5
27.	I like to identify myself as an Anglo American	1	2	3	4	5
28.	I like to identify myself as a Mexican American	1	2	3	4	5
29.	I like to identify myself as a Mexican	1	2	3	4	5
30.	I like to identify myself as an American	1	2	3	4	5

Appendix G

The Individualism-Collectivism Interpersonal Assessment Inventory (ICIAI)

Instructions

This is a questionnaire about your values and behaviors when interacting with others. We would like to ask you about your values and behaviors when interacting with people in four different types of relationships: (1) Your Family; (2) Close Friends; (3) Colleagues; and (4) Strangers. For the purposes of this questionnaire, we define each of these relationships as follows:

YOUR FAMILY: By "family," we mean only the core, nuclear family that was present during your growing years, such as your mother, father, and any brothers or sisters. Do not consider other relatives such as aunts, uncles, grandparents, cousins, etc., as your "family" here unless they actually lived with you while you were growing up.

CLOSE FRIENDS: By "close friends," we mean those individuals whom you consider "close;" i.e., with whom you spend a lot of time and/or have known for a long time. Do not consider people who are "just" acquaintances, colleagues, or others whom you would not consider as your close friends. Also, do not consider intimate partners (e.g., boyfriend, girlfriend) here, either.

COLLEAGUES: By "colleagues," we mean those people with whom you interact on a regular basis, but with whom you may not be particularly close (for example, people at work, school, or a social group). Do not consider close friends on the one hand, or total strangers on the other.

We know that your values and behaviors may differ within each of these groups, depending on with whom you are interacting. Try not to be too concerned with specific individuals, but rather, try to respond to what you believe about each of these groups as general categories of social relationships.

Also, don't be concerned at all about how your responses compare to each other. There is no right or wrong, good or bad. Don't worry about whether your responses are consistent. Just tell us how you truly feel about each group on its own merits.

In this section, tell us about the values you have when interacting with people in the four relationship groups. Values are concepts or beliefs about desirable end states or behaviors that guide our selection of behaviors and evaluation of events. Use the following rating scale to tell us how important each of the following is as a value to you. Write the appropriate number in the space provided for each of the four social groups:

Not at All Important							Very Important		
0	1	2	3	4	5	6			
							Family		
							Close Friends		
							Colleagues		
1. Maintain self-control toward them.							_____	_____	_____
2. Share credit for their accomplishments.							_____	_____	_____
3. Share blame for their failures.							_____	_____	_____
4. Respect and honor their traditions and customs.							_____	_____	_____
5. Be loyal to them.							_____	_____	_____
6. Sacrifice your goals for them.							_____	_____	_____
7. Sacrifice your possessions for them.							_____	_____	_____
8. Respect them.							_____	_____	_____
9. Compromise your wishes to act in unison with them.							_____	_____	_____
10. Maintain harmonious relationships with them.							_____	_____	_____
11. Nurture or help them.							_____	_____	_____
12. Maintain a stable environment (e.g., maintain the status quo) with them.							_____	_____	_____
13. Exhibit "proper" manners and etiquette, regardless of how you really feel, toward them.							_____	_____	_____
14. Be like or similar to them.							_____	_____	_____
15. Accept awards, benefits, or recognition based only on age or position rather than merit from them.							_____	_____	_____
16. Cooperate with them.							_____	_____	_____
17. Communicate verbally with them.							_____	_____	_____
18. "Save face" for them.							_____	_____	_____
19. Follow norms established by them.							_____	_____	_____

Appendix H

Table 3

Pearson Correlations between Variables

Variable	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Age	PB	GS	LVS	NLV	NLVF	BIC	FAM	ACC	STR	DEP	ANX	ACST	CFAM	CFRD	COL
1 GND	-.22**	-.03	.09	.00	.03	.02	.01	.07	-.04	.04	-.04	.10	.13*	.14	.06	.01
2 Age		.04	-.00	-.04	-.26**	-.25**	-.14*	-.07	.07	.00	-.10	-.08	-.07	-.03	-.05	.07
3 PB			-.45**	.09	-.01	-.02	-.04	-.13*	-.24**	.05	.04	.09	.07	-.10	-.10	-.02
4 GS				-.14*	-.09	-.09	-.24**	.00	.56**	.05	.00	-.06	-.11	-.10	-.10	-.06
5 LVS					.02	.07	.04	.04	-.20**	.07	.11	.11	.05	.07	.01	-.02
6 NLV						.85**	.06	.06	-.11	-.10	-.01	.03	-.00	.02	.02	.01
7 NLVF							.09	.11	-.08	-.13*	-.06	-.06	-.06	.02	-.01	.01
8 BIC								.24**	-.29**	-.24**	-.22**	-.11	-.12	.30**	.23**	.11
9 FAM									-.09	-.07	-.02	-.02	.10	.49**	.30**	.25**
10 ACC										.07	.04	-.07	-.22**	-.26**	-.21**	-.11
11 STR											.58**	.62**	.37**	-.13*	-.14*	-.16*
12 DEP												.66**	.35**	-.10	-.02	-.07
13 ANX													.38**	-.09	-.07	-.03
14 ACST														.10	.14*	.09
15 CFAM															.63**	.35**
16 CFRD																.65**

Note. 1. GND= Gender (Male/Female); 2. Age; 3. PB= Participant Born (U.S./MX); 4. GS= Generational Status; 5. LVS= Participant lives (U.S./MX); 6. NLV= Number of habitans in home; 7. NLVF= Number of habitans in home that are family; 8. BIC= Bicultural Self-efficacy Scale; 9. FAM= Attitudinal Familism Scale; 10. ACC= English Acculturation Rating Scale for Mexican-Americans-II; 11. STR= DASS Stress subscale; 12. DEP= DASS Depression subscale; 13. ANX= DASS Anxiety subscale; 14. ACST= Social, Attitudinal, Familial, Environmental Acculturative Stress Scale; 15. CFAM= The Individualism-Collectivism Interpersonal Assessment Inventory- Family; 16. CFRD= The Individualism-Collectivism Interpersonal Assessment Inventory- Friends; 17. COL= The Individualism-Collectivism Interpersonal Assessment Inventory-Colleagues
 N= 258 for each correlation *p< .05, **p< .01.

Curriculum Vita

Nathalie Gonzalez received her Bachelor of Arts in Psychology with a minor in forensic psychology from Texas State University in San Marcos, Texas, in 2014. During her undergraduate program she was chosen to intern at Hays County Juvenile Probation (JPD). Through her time with JPD she discovered her interest in Latino adolescent mental health and working with at risk teens. This led her to pursue her Master of Arts in Clinical Psychology at the University of Texas El Paso (UTEP). During her time in the program she focused her research on Latino mental health, leading to her master's thesis, "Acculturation, Enculturation, & *Familismo*'s Impact on Latino Mental Health". For her clinical internship she completed 150 clinical hours at PEAK Behavioral Hospital. She held various positions at UTEP through her M.A. program including a Graduate Assistant position at the Center for Civic Engagement (CCE), Undergraduate Advisor in the Department of Psychology, and Graduate Research Assistant at the Graduate School where she was part of the Professional Development Team. She will pursue a master's in OT and she aspires to work in a psychiatric setting providing occupational therapy services.

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