

THE INFLUENCE OF CAREGIVER-CHILD ACCULTURATION GAP ON  
MEXICAN AMERICAN ADOLESCENTS' DEPRESSION AND SUICIDALITY

A Dissertation

by

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## ABSTRACT

Latino adolescents are at an elevated risk of depression and suicidality when compared to their European American and African American counterparts. The purpose of this dissertation is to examine cultural and familial risk and protective processes in Latino adolescents' lives that impact depression and suicidality. In the first part of the dissertation, an enhanced conceptual model of the acculturation gap hypothesis is presented that builds upon previous research. Specifically, the modified conceptual model highlights the importance of examining: acculturation multidimensionally (i.e., cognitively, behaviorally and affectively); the impact of this gap on both female and male caregiver relationships; acknowledging the reality of the familial composition of many Latino youth's lives which include broadening the acculturation gap hypothesis to include primary caregivers regardless of biological relation; the role of positive and negative caregiver-child relationships on depression and suicidality; and the possible moderating effect that ethnic group membership and gender may play on this model.

Based on the enhanced acculturation gap model, the second part of this dissertation tests a resiliency model that investigates the impact caregiver-child acculturation gaps have on caregiver-child connectedness and conflict, depression and suicidality for Mexican American adolescents. Data was collected on 524 Mexican American adolescents (46.9% male; 53.1% female) ranging from 14 to 20 years ( $M = 16.23$  years;  $SD = 1.10$  years) who attended high school in a mid-sized south Texas city. The hypothesized model had acceptable model fit [ $\chi^2(59, 524) = 66.50, p > .05; \chi^2/df$

=1.13; CFI = .97; TLI = .96; & RMSEA = .02] and did not vary by gender. Direct and indirect paths indicated that there is support for the acculturation gap hypothesis when considering the effect of the cognitive acculturation dimensions of familismo and gender role beliefs on the caregiver-child relationship, depression and suicidality for Mexican American adolescents. The results are discussed based on their application to future research, as well as suicide and depression intervention and prevention programming.

## DEDICATION

This dissertation is dedicated to the loving memory of my beloved grandparents: Larry J. Ralston, Dorothy May Ralston, Mateo “Max” Piña, Sr., and Mary Louise Piña. I love each of you dearly. I am grateful for the portion of my life journey that you were a part of and for the lessons I have learned from our time together. Your deep and unwavering love and compassion for me has helped me develop the resiliency to face each of life’s obstacles, including this dissertation. I wish you were physically here with me each and every day. Since you cannot be, I am given strength by knowing you are here with me in spirit. Everywhere I am, there you will be...now and forever.

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## CHAPTER I

### INTRODUCTION

Latino adolescents have consistently shown higher levels of depressive symptoms and suicidality when compared to their European American and African American peers (Roberts & Chen, 1995; Roberts, Roberts, & Chen, 1997; YRBSS 2010). Latina girls are at a particularly high risk when compared to girls from other ethnic groups and their Latino male counterparts (Saluja et al., 2004; YRBSS, 2010). This mental health disparity has been the focus of much research in an effort to understand and treat Latino youth in a culturally competent manner (Roberts & Chen, 1995; Roberts et al., 1997; Roberts & Sobhan, 1992). For Latinos, the experience of acculturation and the stress that accompanies this process can have mental health implications (Buchanan & Smokowski, 2009). One stressful part of the acculturative process concerns intergenerational differences that are present between an acculturating child and their caregiver.

According to the acculturation gap hypothesis, parents and children acculturate to the mainstream U.S. society at different rates. Since parents often have lower levels of acculturation than their children, conflict occurs which leads to distress for the youth (Lee, Choe, Kim, & Ngo, V., 2000). Specifically, it is hypothesized that the larger this gap is the more strain and conflict it places on the relationship, which in turn negatively impacts the mental health of the adolescent (Birman, 2006).

The purpose of this dissertation is to examine cultural and familial risk and

protective processes in Latino adolescents' lives that impact depression and suicidality. The dissertation will be conducted in two manuscripts. Manuscript 1 will propose an enhanced conceptual model of the acculturation gap hypothesis to explain the elevated vulnerability of Latino adolescents in the areas of depression and suicidality.

Specifically, the modified conceptual model will highlight the importance of examining: acculturation multidimensionally (i.e., cognitively, behaviorally and affectively; Schwartz et al., 2010); the impact of this gap on both female and male caregiver relationships; acknowledging the reality of the familial composition of many Latino youth's lives which include broadening the acculturation gap hypothesis to include primary caregivers regardless of biological relation; and the possible moderating effect that ethnic group membership and gender may play on this model.

Based on the enhanced acculturation gap model, Manuscript 2 will test a resiliency model that investigates the impact the caregiver-child acculturation gaps may have on caregiver-child connectedness and conflict, which in turn may have an impact on the depression and suicidality for Mexican American adolescents. In the course of testing the proposed model, the principle investigator will seek to answer the following research questions: 1) Do gender differences exist on the measured variables of this study?; 2) Do various domains of the acculturation gap (i.e., cognitive, affective and behavioral) impact the caregiver-child relationship?; 3) Does the caregiver-child relationship have an impact on depression and suicidality?; 4) Does the caregiver-child relationship serve as a mediator between the acculturation gap and mental health outcomes?; and 5) Does gender moderate the hypothesized model? Finally, this

manuscript will discuss the implications of the research study for future research, intervention and prevention programming with Mexican American adolescents and families.

## CHAPTER II

### MANUSCRIPT 1: A CONCEPTUAL MODEL OF LATINO ADOLESCENT DEPRESSION AND SUICIDALITY

For adolescents ages 10 to 24 in the United States (U.S.), suicide is the third leading cause of death with an estimated 1 million who attempting suicide each year (National Adolescent Health Information Center (NAHIC), 2006). Of increasing concern over the past decade have been the suicidal ideation, plans and attempt rates of Latino<sup>1</sup> adolescents. According to the national Youth Risk Behavior Surveillance System survey (YRBSS, 2010), when asked about feelings of subjective hopelessness and sadness (depressive symptoms), 41.4% of Latina girls and 24.4% Latino boys reported having these feelings compared to 31.4% of African American girls and 18% of boys answered “yes” to these questions. When gender is taken into account, national data on Latino adolescents clearly shows a difference in the rates of ideation (21.0% girls vs. 12.6% boys), plans (17.6% girls vs. 11.1% boys) and attempts (13.5% girls vs. 6.9% boys) for Latino teens. However, compared with Latinas, Latino boys are more likely to be successful in their attempts (Wagner, 2009). The purpose of the present manuscript is to present the acculturation gap hypothesis (Birman, 2006) within the cultural-ecological-transactional model of resilience (Kuperminc et al., 2009) and make recommendations to enhance this model to reflect the complexities in the lives of Latino adolescents. This

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<sup>1</sup> Latinos are an ethnic group that is comprised of individuals that are decedents from Latin American countries. population in U.S can trace to 19 distinct Latin American and Caribbean Countries (Cofresi & Gorman, 2004; Cofresi, 2002)

enhanced model that is presented in the present manuscript will then guide the empirical study presented in Manuscript #2.

As illustrated by the YRBSS (2010) data, suicidal ideation is associated with increases in planning and attempts. This data illustrates that over 83% of Latina adolescents who reported thinking about suicide make a plan, and nearly 65% of those who think about it actually make an attempt. For Latino boys, nearly 90% of those who say they have had serious suicidal ideations make plans and 55% attempt. For both Latino girls and boys, most who think about suicide within the last year go on to develop plans and make attempts on their lives within the same year period. In addition, although it is true that every Latino teen who is depressed does not think about, plan and/or attempt suicide, the relation between the two are high (Roberts & Chen, 1995; Swanson, Linkskey, Quintero-Salinas, Pumariega, & Holzer 1992).

Previous research has shown many risk and protective factors associated with Latino adolescent suicide. The role cultural and familial factors on suicide rates have been of increasing interests to prevention scholars. From a primary prevention perspective, an understanding of factors that could exacerbate the risk as well as serve protective functions could help place these disparities into context and provide culturally relevant considerations for depression and suicide prevention programs. Using a cultural resiliency framework to understand risk and protective processes, the present manuscript focuses on proposing a conceptual model that may help explain the phenomenon of suicidality for Latino youth. Through taking a closer look at the cultural contexts and identifying gaps in the existing literature, the conceptual model laid forth (Figure 1) will



propose suggestions for enhancing the acculturation gap hypothesis as a means of gaining further understanding of its role in the depression and suicidality of Latino adolescents. The model will be proposed as a guide to future research, intervention and prevention efforts.

### **Risk and Resiliency Framework**

Resiliency models account for both risk and protective processes. These models explain positive outcomes for youth, despite being faced with adversity (Luthar, Cicchetti, & Becker, 2000). According to resiliency theory risk processes increase the probability or severity of mental health issues (Kuperminc et al., 2009; Coie et al., 1993). For Latino adolescents, some risk factors have been identified that contribute to higher levels of suicidality and depression. These include, but are not limited to, acculturative stress (Hovey, 1998; Tortolero & Roberts, 2001), intergenerational acculturation differences (Tortolero & Roberts, 2001), immigration status (Ng, 1996), mixed ethnicity (Whaley & Francis, 2006), past physical or sexual abuse, family history of suicide, previous suicide attempts, family conflict and disruption, inadequate social connectedness and other cultural factors (Rew et al., 2000).

Resiliency models suggest that protective processes decrease the probability or severity of mental health issues and may interrupt the negative relational link between a risk factor and the mental health outcome (Kuperminc et al., 2009; Coie et al., 1993). In regards to Latino adolescent suicidality and depression, some protective factors that have been identified in the literature are religion (Roberts, Roberts & Xing, 2007) and familial

factors such as feeling connected and cared for by caregivers (Garcia, Skay, Sieving, Naughtington & Bearinger, 2008).

One theory that is often used as a means of organizing risk and protective processes is the ecological-transactional perspective (Bronfenbrenner, 1979). Within this theory, there is explicit acknowledgement of the role that various layers of an individual's environment can have on their development and functioning.

Bronfenbrenner (1979) lays out an organizing system which includes an ontological (individual) level, microsystem, mesosystem, and macrosystem levels. The individual and microsystem levels are considered to have proximal, or direct, influence on the development of the individual.

The ontological level includes factors that are a product of individuals within them self, such as gender and ethnicity. An example of how the individual level impacts suicidal ideation can be seen in Roberts and Chen's work (1995). In their study, Mexican Americans were twice as likely as European Americans to report suicidal ideation. Additionally, they found that Being Mexican American placed the adolescents at higher risk of reporting depressive symptoms than European Americans. Another example can be found in relation to gender. According to the CDC (2006), Latina girls report suicide attempts as a rate of 2:1 compared to Latino boys.

The microsystem encompasses the environment that the youth is immediately engaged in which includes their family and peers. Previous research has demonstrated the impact that the family microsystem can have on suicidality and depression of Latino youth. Garcia and colleagues (2008) found that when these Latino teens perceived less

caring, less connectedness, and more difficulty communicating with their parents, the odds of reporting suicidal ideation and making a suicide attempt were dramatically increased. Additionally, Céspedes and Huey (2008) found a similar pattern with depressive symptoms. They found that Latino youth that reported higher family conflict and lower family cohesion had higher levels of depression.

The other systems within the adolescent's environment are thought to have a distal, or indirect, influence on their development and functioning. The mesosystem includes the interactions that occur between those that comprise their microsystem (i.e., parent-peer and parent-school interactions). An example of how this system can have implications on the mental health of Latino adolescents is demonstrated in a recent study by Piña-Watson, Castillo, Rodriguez and Ray (2014). In their study with Latina adolescents, it was found that when parents show an interest in the academic area of their child's life, the youth was less likely to report suicidal ideation. This is an example of how the family and school microsystems interact to form a mesosystem that has an impact on mental health.

Finally, the macrosystem focuses on the values and beliefs of the culture (Bronfenbrenner, 1988). In Latino culture, familismo is a cultural value in which individuals place the family and the collective needs over their own. Latinos identity is closely aligned with that of the family and often there is an obligation to family over the self (Steidel & Contreras, 2003). Peña and colleagues (2011) provided evidence of this Latino cultural value as a protective factor when they found familismo values increased the odds that the youth would be embedded within a tight-knit family (high cohesion and

low conflict). These researchers concluded that these results suggest that familismo values may protect against suicide behavior among Latinos through the impact that it has on the family environment.

Within Bronfenbrenner's model, there are clear delineations about what is considered to directly and indirectly influence an adolescent's functioning. Kuperminc and colleagues (2009) have critiqued Bronfenbrenner's model through highlighting its limitations in the applicability for more interdependent ethnic minority groups, such as Latinos (Kuperminc, et al., 2009). Kuperminc and colleagues (2009) stated that the original social-ecological model does not take into account the dynamics that occur for the interdependent Latino culture. These authors noted that Bronfenbrenner's model suggest sociocultural factors play an indirect role in the lives of Latino adolescents. They assert that when studying the resilience of Latino youth, sociocultural factors do not merely play an indirect role, and instead, are in constant interaction with the individual level, thus playing a proximal role. They also note the limitation of separating the structures instead of placing focus on the direct influence system interactions can have for Latino youth. Based on these limitations noted by Kuperminc and colleagues (2009) noted about the original ecological model, the *cultural-ecological-transactional perspective of resilience* was developed to take into account the interdependence and transactions that occur at multiple environmental levels of Latino adolescents' lives.

Through the use of this model, cultural processes that Latino youth experience can be taken into account in a way that acknowledges the dynamic and proximal relation between systems. For example, the original ecological-transactional model would

classify cultural values and beliefs as being part of the greater societal system and would describe these values as placing an indirect, or distal, role in the lives of Latinos.

Kuperminc and colleagues (2009), argue, however, that these cultural values have a direct impact. They argue that the macrosystem transacts with the individual to manifest a value system, or “lens” through which the individual views the world. This lens then directly impacts the way the individual organizes and interacts with his/her environment.

This is of particular importance for the present model. The acculturation gap hypothesis theory is used for the base of the present manuscript’s conceptual model. The factors that make up the model include the acculturation of caregivers and adolescents and familial relational processes which are indicative of the transactions that occur between systems. The next section of this manuscript will describe this hypothesis within the cultural-ecological-transactional resiliency perspective, provide an explanation of past findings, and recommendations that will culminate in a new proposed conceptual model for use in research and practice.

### **Acculturation Gap Hypothesis**

Cultural adaptation includes the processes of modifying an individual’s beliefs, values, behaviors and affect about cultures that come into contact with one another. Two parallel processes occur on these cognitive, affective and behavioral levels: acculturation and enculturation. Acculturation, or mainstream cultural acquisition, is the process of acquiring the majority group’s cultural values, beliefs, and behaviors (Berry, 2003). In the case of Latinos in the United States, the dominant group would be European Americans. Enculturation, or heritage culture retention, refers to maintaining

one's heritage culture's beliefs, values and behaviors while living within another culture (Dumka, Gonzales, Bonds, & Milsap, 2008; Gonzales, Knight, Morgan-Lopez, Saenz, & Sirolli, 2002). Often times the term acculturation is used to encompass both of the processes that make up the cultural adaptation process. For clarity and consistency in the present manuscript, the term acculturation will be used to denote the dynamic and parallel processes of acquiring parts of the mainstream culture and maintaining certain aspects of one's heritage culture.

Many studies that look at the impact of acculturation and enculturation on mental health only take into account the acculturation levels of the adolescent and fail to consider the family's acculturation dynamics that come into play. The degree of similarity and/or differences between the values, beliefs and behaviors of parents and children can often impact their relationship. According to the acculturation gap hypothesis because parents and children acculturate to the mainstream society at different rates, with parents often having lower levels of acculturation than their children, the relationship between the child and the parent is affected and leads to distress for the youth (Lee, Choe, Kim, & Ngo, V., 2000). In particular, this gap, or intergenerational acculturation difference, can lead to ruptures in the relationship and can lead to conflict.

Within the acculturation gap hypothesis, one can come to recognize many of the cultural-transactions that are occurring within Latino adolescents' environment. When considering the acculturation level of the adolescents, it is clear that there is an element of individual variation and manifestation which would be consistent with the oncological

development of the youth. However, when examining the acculturation process that occurs for youth, the delineation of which system acculturation occurs in is more complex. Since acculturation includes three domains (cognitive, behavioral and affective), is impacted broadly by two cultures norms and values, and is a result of interactions of the individual with persons and systems outside one's self, these transactions should be acknowledged and accounted for in understanding risk and resiliency for Latino adolescent's mental health. Therefore, the first component of the acculturation gap hypothesis, acculturation gaps, represent transactions that are occurring between the individual (adolescent), microsystem (caregivers acculturation levels), and the macrosystem (values, norms and beliefs of these two cultures). The next component is the caregiver-child relationship. This component represents an interaction between the individual (adolescent) and the microsystem (caregivers). Keeping in mind the transactions that occur at various levels of Latino youth's environment is necessary to understand the complexity of the world they are embedded within.

### **The Acculturation Gap as a Form of Acculturative Stress**

When a person of one culture comes in contact with a group from another culture, both cultures, and more specifically individuals, begin to make certain changes due to this interaction. Acculturative stress includes the psychological, somatic, and social difficulties that may be a result of the acculturation processes (Berry, 2006). High levels of acculturative stress have been associated with high levels of depression and suicidal ideation and attempts (Hovey, 1998; Tortolero & Roberts, 2001). Latino

adolescents will vary on their levels of acculturation and enculturation as will their parents.

Their level on acculturation and enculturation maybe related, but are not mutually dependent upon one another. These levels will also vary from adolescent to adolescent and between adolescents and caregivers. The difference between the adolescent's levels on both dimensions with their parent's levels can cause conflict within the caregiver-child relationship. These intergenerational conflicts are a form of stress associated with the acculturation process (Tortolero & Roberts, 2001). There are varying reasons why this discrepancy may occur including the role of identity development and interaction with peers outside of their culture of origin.

Adolescence is an essential stage in developing one's identity. During adolescence, an individual goes through a process where he or she discovers and develops values important to the individual that in turn contributes to the choices made in life (Erikson, 1968). The processes of identity development can often be a catalyst for family discord and dysfunction due to the possible differing levels of acculturation between the parent and child. As a child, one tends to accept the values, beliefs and traditions of their family. However, as one matures and enters adolescence, he or she will begin to question these values and beliefs as they begin to develop relationships and explore the world with their peers of differing backgrounds (Phinney, 1992).

As an adolescent begins to develop and form their own identity, sometimes made up of different values and beliefs than those in older generations of their family, additional stress will be manifested between generations due to the acculturative and



identity development process. This is the crux of the acculturative gap hypothesis. As an adolescent moves more towards the dominant culture at an accelerated rate, and their parents stay more in line with traditional values, beliefs and behaviors the gap developed leads to ruptures in the relationship and can lead to conflict (Lee et al., 2000).

### **Exploration of the Acculturation Gap and the Caregiver-child Relationship**

Although there is a breadth of theoretical writings on the acculturation gap hypothesis, few studies have been done with Latinos. One such study was conducted examined how the acculturation gap between Latino adolescents and their parents concerning gender role values (a cognitive dimension of acculturation) impacted distress levels (Céspedes & Huey, 2008). This study found a negative relationship between enculturation discrepancy and parent cohesion. This means the less discrepancy there is between teens and their parents on the behaviors that are more in line with the Latino culture, the more cohesive the teen feels with their parents. Additionally, a positive relationship was found between the gender role discrepancy and parent conflict and a negative relationship with parent cohesion. This means that as the gap widens between what the adolescent believes and what their parent believes about gender roles, the Latino adolescent feels less connected with their parent and perceives more conflict with them as well.

Another study looked at the role of another cognitive acculturation domain: familismo (Baumann, Kuhlberg, & Zayas, 2010). In this study with Latina adolescents girls and their mothers, it was determined that gaps in familismo between the daughter and mother lead to lower levels of perceived mutuality. In other words, the wider the gap

in this cognitive domain, the less connected the two felt. The study also found that a low perception of mutuality was related to higher level of externalizing behaviors like suicide attempts.

### **Importance of Latino Caregiver-child Relationships on Mental Health Outcomes**

One of the most supported hypotheses in the acculturative gap hypothesis is that of the relationship of the caregiver-child relationship and mental health outcomes. In the Latino culture, family plays a central role in that the individual's sense of self. The family's wellbeing is often given priority over individual's wants and needs. This collectivistic value is embodied through familismo. Familismo is a core value system of Latinos which is centered on the family. Steidel and Contreras (2003) discuss four dimensions of familismo as: subjugation of one's personal needs to the needs of the family, family honor, reciprocity and family interconnectedness. This includes being cohesive and cooperating with those within their immediate and extended family networks as well as with close friends of the family (Marín & Triandis, 1985).

For Latino adolescents, depending on their gender socialization, the way this value is acted out can look very different. Through the traditional gender role values of marianismo and machismo, girls and boys are taught differing lessons about what a woman and man should be. For Latinas, the traditional gender role value of marianismo includes characteristics of being virtuous and chaste, the family pillar, spiritual pillar, self-sacrificing and self-silencing (Castillo, Perez, Castillo & Ghosheh, 2010). For Latinos, the traditional gender role value of machismo includes two dimensions,

traditional machismo and caballerismo. Machismo is comprised of the more negative aspects of masculinity (i.e., being dominating, aggressive, dismissive) whereas caballerismo is comprised of more positive characteristics (i.e., being chivalrous; Arciniega, Anderson, Tovar-Blank, & Tracey, 2008). An example of how this plays out is for Latina girls is that through the value of marianismo, they are often expected to carry this value by taking care of the family through cooking, cleaning, helping mom with chores (Raffaelli & Ontai, 2004). For Latino boys, their role of familismo may be played out much differently. They may leave the home to work to provide financial support or may physically protect the family (Raffaelli & Ontai, 2004). Regardless of how the value of familismo is actualized, it is still traditionally accepted among Latinos. There may be variation in how much one holds this value due to several functions including acculturation.

Research shows that family stressors are often a more important prediction of Latino adolescents' mental health than stress with their peers (Berne, 1983; Ng, 1996; Razin, O'Dowd, Nathan, Rodriguez, Goldfield, Martin, et al., 1991). The caregiver-child relationship has been shown to be influential in the adolescent's mental health and adjustment. For example, research has found that family connectedness, caring and communication are familial protective factors (Garcia, Skay, Sieving, Naughton, Bearinger, 2008; Hunter & Chandler, 1999; Blum, Beuhring, Shew, Bearinger, Sieving, & Resnick, 2000; Resnick, 2000; Resnick, Harris & Blum, 1993). Family connectedness has been conceptualized as the perceived extent to which a family member cares, understands, and communicates about issues important to the individual, such as school

and other interpersonal relationships (Garcia et al., 2008; Zayas, Bright, Alvarez-Sanchez, & Cabassa, 2009). Garcia and colleagues (2008) found that adolescents that perceive low levels of connectedness within the family unit are eleven times more at risk for suicide than those who perceive high levels of family connectedness. The same study found that Hispanic youth who felt that they could communicate with their parents about problems that they were having were ten times less likely to engage in suicidal behaviors. Finally, this study found that adolescents who perceived low levels of caring from their parents were ten times more likely than those who perceived the opposite to attempt suicide. Since the quality of the relationship between the teen and their parents is so important, further investigation is needed into the mechanisms that predict the quality of this relationship.

### **Recommendations for Research**

Although the acculturation gap hypothesis has received some attention in the Latino literature, there are some limitations to the way the model has been studied. In this section, suggestions for enhancements to the original acculturation gap hypothesis are set forth. The modified conceptual model presented in Figure 1, makes additions to the acculturation gap hypothesis in an attempt to provide more clarity into the complexity of the role of intergenerational acculturation gaps on depression and suicidality. Specifically, the enhanced model highlights this complexity through examining the following: acculturation in a multidimensional manner (i.e., cognitively, behaviorally and affectively; Castillo & Caver, 2009); the impact of this gap on both female and male caregiver relationships; acknowledging the reality of the familial

composition of many Latino youth's lives which include broadening the acculturation gap hypothesis to include primary caregivers regardless of biological relation; and the possible moderating effect that ethnic group membership and gender may play on this model.

### **Multidimensional Nature of Acculturation**

Acculturation is multidimensional construct (Schwartz, Unger, Zamboanga, & Szapocznik, 2010; Kim & Abreu, 2001). Behavioral aspects of acculturation consist of things you can actually see the person doing such as language use, traditions, food choice or other choices of daily living (i.e., T.V. programs, reading books, magazines, etc.). Cognitive acculturation encompasses the values that are internal to the individual. For Latinos, many values are traditionally part of the culture. Some examples of Latino values are: familismo, gender role values of marianismo and machismo, espiritualismo, personalismo and compadrazgo. These values are reflections of beliefs and attitudes that individuals have towards family, the role of men and women, spirituality and interpersonal relationships, respectively. Finally, the affective domain refers to the individual's personal cultural identity. This domain encompasses the feelings that the person has towards their culture as well as how much they choose to identify with or feel comfortable with their culture of origin and/or the dominant culture. By choosing only one domain to measure the acculturation gap between parent and child, much information is lost.

An example of how more than one acculturation domain has been examined in previous research can be seen in Céspedes & Huey's work (2008). In their study, the

acculturation gap hypothesis was tested to determine if the parent-child relationship mediated the relationship between cognitive and behavioral acculturation gaps for adolescent depression. The results of the study revealed that family dysfunction mediates for gender role discrepancies (cognitive acculturation gap) but not for behavioral acculturation gaps. This study highlights the importance of examining more than one domain of acculturation in mental health outcomes of Latino adolescents. It demonstrated that differing domains of acculturation could impact the relationship in a differing way. Vital information is lost or overlooked if acculturation and acculturation gap research does not take all of the domains into account. Therefore, the model presented for explaining the role of the acculturation gap on depression and suicidality takes into account all three thus expanding previous acculturation gap research.

### **Female and Male Caregiver Relationships**

Much of the research on the relationship between familial factors, depression and suicidality in Latino adolescence in the past has been focused on the female caregiver-child relationship (Zayas, Bright, Alvarez-Sánchez, & Cabassa, 2009; Zimmerman & Zayas, 1995; Baumann, Kulberg, & Zayas 2010). For example, Baumann and colleagues investigate the role that mother-daughter connection plays on the suicide attempts of Latina adolescents. They found that the more perceived connections between the mother and daughter, the lower the probability that the Latina adolescent will make a suicide attempt.

Male caregivers are important also play an important role in adolescent well-being (Flouri & Buchanan, 2003), thus attention should be given to the possible positive

effect their relationship can have on Mexican American youth's mental health (Gulbas et al., 2011; Formoso, Gonzales, & Aike, 2000; McLanahan, 1999). Many authors have noted the dearth of literature that exists for the male-caregiver-child relationships. For example, Gulbas and colleagues (2011) suggest that future research is warranted to determine the role that Latino fathers play in their daughters' development and suicidality.

One study took into account the presence of the mother and father in the lives of Latino adolescents. Garcia and colleagues (2008) investigated the role that absent mothers and fathers had on distress and suicidality for a sample of Latino adolescents. They found that when the mother or father was not present, Latina female teens were significantly more likely to report elevated levels of distress in the past 30 days. Additionally, Latino boys and girls who were missing their mothers and fathers were significantly more likely to make a suicide attempt in the last year. This study highlights the importance of both the mother and father relationship on the mental health of Latino adolescents. Thus, the acculturation gap model would be enhanced by acknowledging the differential and significant impact that both male and female caregiver relationships can have on depression and suicidality of Latino youth.

### **Acknowledging the Realities of Latino Family Composition**

The choice to examine the caregiver-child relationship, as opposed to merely the parent-child relationship, is a product of the reality that many Mexican American adolescents live in homes, where one or both of their biological parents are not present (Wagner, Ritt-Olsen, Chou, Pokhrel, Duan, Baezconde-Garbanati, Soto, & Unger,

2010). This recent research is supported by the current sample's demographics, 90.9% of the youth are cared for by their biological mother, and only 74.7% by their biological father. The choice to include youth with non-traditional family caregivers helps this study have greater generalizability to the reality of Latino youth in the U.S.

### **Possible Moderating Effect of Ethnic Group Membership and Gender**

Much research on Latinos tends to focus on them as a group rather which implies homogeneity and negates within ethnic group variability. Latino ethnic groups (i.e., Mexican, Cuban, Puerto Rican, etc.) have different immigration, history, educational attainment and traditions that have an impact on their mental health (Santiago-Rivera, Arredondo, & Gallardo-Cooper, 2002). Because of this, previous research has suggested that when doing research on the distress and suicidality of Latino youth, it may be necessary to determine if there is ethnic group variability in the way the acculturation gap impacts the parent child relationship and mental health outcome (Canino & Roberts, 2001; Ungemack & Guarnaccia, 1998; Duarte-Vélez & Bernal, 2007).

Umaña-Taylor and Fine (2001) conducted a study in which they investigated the possible negative methodological effects of studying Latino adolescents as one heterogeneous group. Their study highlighted the need to separate Latino ethnic groups when studying mental health outcomes. Additionally, in reference to the specific outcome of suicidality, recent researchers have made a call to look at Latino ethnic groups separately. Duarte-Vélez and Bernal (2007) stated that due to varied rates and correlates of suicide behavior (Canino & Roberts, 2001; Ungemack & Guarnaccia, 1998) the assessment of suicide risk and creation of prevention programming should be ethnic



group-specific rather than taking a generic approach for all Latino adolescents. Umaña-Taylor and Duarté-Vélez's work highlight the need to investigate the acculturation gap hypothesis separate by Latino ethnic group.

In terms of looking at the possible moderating effect of gender, Latino gender role scripts should be acknowledged. Within the Latino culture, through the role of motherhood Latina women transmit cultural values to future generations (Villenas, 2006). This is important in the socialization of Latina girls since one day they may take on the role of being a mother and transmitting values and beliefs to their offspring. This may place an additional amount of strain on Latinas to adhere more closely to traditional values due to their role in maintaining the culture. Additionally, Latina girls have more physical contact with their caregivers due to strict rules placed on them (Raffaelli & Ontai, 2004); thus, there are more opportunities for acculturation gaps to be noticed. The reality of the context in which Latina girls are raised and the expectations placed on them to transmit the culture to future generations, the impact of acculturation gaps between themselves and caregivers may hold more salience for their mental health than for boys.

Previous research has demonstrated that acculturation gaps can have differing impacts on the parent-child relationship for Latino girls and boys. For example, in Céspedes and Huey's study (2008), it was found that for girl, but not for boys, gender role acculturation gaps cause family dysfunction to increase. They also found that girls had higher levels of parent-child acculturation gaps than boys in the cognitive acculturation domains of male and female gender role values. Given the gendered

context that Latino adolescents live in along with findings from the previously mentioned study, the original acculturation gap hypothesis could be enhanced by testing the possible moderating role of gender. Doing so would account for these contextual realities by investigating the possible moderating role of gender in the acculturation gap hypothesis.

### **Recommendations for Practice**

When working with Latino youth, several recommendations can be made based on the conceptual model presented in this manuscript. First, using programs in the clinical settings, such as the Bicultural Effectiveness Training Program (Szapocznik, Santisteban, Kurtines, Ferez-Vidai, & Hervis, 1984) can be helpful to address intercultural acculturation differences and conflicts through being aware of the youth within a system. Through this program, it is suggested that the conflicts that occur between the generations are interpersonal in nature and should be treated as such. When working with youth and families who are struggling with distress and suicidality, practitioners should be aware of this interpersonal nature and not treat the youth in isolation.

Another recommendation is that when working with youth in distress, practitioners assess not only for the youths level of acculturation, but also their parents level across multiple domains. When practitioners look at the parent and child together, they can come to see if the gap in values, beliefs, affect and behaviors seem to precipitate conflict or cohesion within the family unit. Interventions can then be employed to help reconcile the effects of the intergenerational differences. For instance,

as demonstrated by previous research, since the acculturation discrepancy between the parent and the child can cause a breakdown in the child's ability to feel connected and cared for (Céspedes & Huey, 2008), interventions can target helping the caregiver communicate this care to their child despite having differences in acculturation levels.

Additionally, when working with Latino youth in a clinical setting it is prudent to ask about their family composition and the individuals who take on the male and female caregiver roles. Due to the reality of family composition for many Latino families, it is important to not limit assessment of family dynamics to biological parents (Wagner, Ritt-Olsen, Chou, Pokhrel, Duan, Baezconde-Garbanati, Soto, & Unger, 2010). Incorporating other family members who may have filled these roles in the absence of biological parents could give important information to the clinician treating the Latino adolescent. In conjunction with this recommendation, incorporation of both male and female caregivers into the treatment can have positive impacts. As previously stated, the presence of both a female and male caregiver can have implications for depression and suicidality (Garcia et al., 2008).

Finally, practitioners should be aware of the gender and ethnic group composition when working with distressed and suicidal youth. As stated in the previous sections, differing Latino ethnic groups in differing contexts could have an impact on how acculturation gaps impact mental health (Umaña-Taylor & Fine, 2001). For example, Mexican American youth who live on the Texas-Mexico border in cultural enclaves may have a differing effect than Puerto Ricans living in New York given geography and migration differences. Additionally, the way boys and girls are

socialized in the Latino culture could have impact on the way intergenerational differences impact the youth. Querying into the values that parents have communicated to their children about being a man or a woman can be important. It is important to assess how these differences may impact boys and girls differently within the family unit as well as how the gap may be more salient for girls given importance of maintaining harmony in the family through the value of marianismo.

### **Conclusion**

The conceptual model set forth (Figure 1) takes into account various contextual aspects in the lives of Latino youth to explain the relationship between the acculturation gap between parents and children, the caregiver-child relationship and mental health outcomes such as depression and suicidality. By including this model in future research and practice with Latino adolescents, the field has the potential to impact the mental health prevention and intervention in the areas of depression and suicidality.

### CHAPTER III

#### MANUSCRIPT 2: THE INFLUENCE OF THE CAREGIVER-CHILD ACCULTURATION GAP ON MEXICAN AMERICAN ADOLESCENTS' DEPRESSION AND SUICIDALITY

Suicide is the cause of 12% of the deaths in adolescents ages 10 through 24 in the United States (Grunbaum, Kann, Kinchen, Ross, Hawkins, Lowry, et al. 2004). Of increasing public health concern over the past decade has been the elevated levels of depression as well as suicidal ideation, plans and attempt rates of Latino<sup>2</sup> adolescents. It is estimated that in the past year 1 out of 5 Latino high school students will have made an attempt to kill themselves (Garcia et al., 2008). In one study of Mexican American adolescent boys and girls in South Texas, 23% admitted they had thought about suicide in the last week (Swanson et al., 1992). Latino adolescents have consistently been shown to have poor mental health outcomes, especially in the area of depression and suicidality<sup>3</sup> (YRBSS, 2010). There have been several risk processes that have been suggested to contribute to these statistics such as feeling low levels of connectedness with parents (Garcia et al., 2008; Zayas et al., 2009; Peña et al., 2011), low levels of communication with family members (Garcia et al., 2008), and conflict between

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<sup>2</sup> Although this study focuses on Mexican Americans, much of the published literature focuses on Latino youth as an aggregate for various reasons (i.e., too few in each ethnic group to conduct analyses and/or assumptions of homogeneity). In cases in which studies specify the analyses were performed using Mexican Americans only, this will be stated as such. Otherwise, the term “Latino” will be used to describe samples in which the researcher looked at the group in a homogeneous manner.

<sup>3</sup> In this study, “suicidality” encompasses suicidal ideation, plans and attempts.

generations (Céspedes & Huey, 2008; Rivera et al., 2008; Peña et al., 2011). One hypothesis that was developed to explain the strain on the family relationship due to intergenerational acculturation differences is the acculturation gap hypothesis. This hypothesis accounts for what impacts the parent-child relationship, thus impacts the mental health of Latino youth.

The acculturation gap hypothesis has been proposed by scholars to explain the relationships between intergenerational differences in acculturation levels, caregiver-child relationship and distress. Specifically, it states because parents and children acculturate to the mainstream society at different rates, with parents often having lower levels of acculturation than their children, the relationship between the child and the parent is affected and leads to distress for the youth (Lee et al., 2000). In particular, this gap can often lead to decreasing the quality of the relationship between the caregiver and the child. The purpose of this study is to examine the role of the caregiver-child acculturation gap across three dimensions of acculturation (i.e., cognitive, behavioral and affective) on depression and suicidality through the parent child relational variables of connectedness and conflict using path modeling and mediation analyses.

### **Latinos as a Heterogeneous Group**

Previous research has suggested that looking at Latinos as a heterogeneous group can miss variation as a result of within group differences. It has been suggested that research should avoid clumping Latino ethnic groups into general categories (i.e., Hispanics or Latinos) and focus on group-specific findings which can have prevention

and treatment implications for certain ethnic group populations (Canino & Roberts, 2001; Umaña-Taylor & Fine, 2001; Hovey & King, 1997).

Most studies that examine the mental health and suicidality of Latinos look at the group as a whole. Caution should be taken when attempting to generalize results from these studies to all Latino ethnic groups (Canino & Roberts, 2001; Smedley & Smedley, 2005) since they have differing experiences (e.g., geography, migration history, socioeconomic status) that could impact their mental health.

Drawing on this suggestion, the present study will examine a specific group of Latino adolescents: Mexican Americans. Mexican Americans are the largest Latino ethnic group in the United States comprising over 63% of this population (U.S. Census Bureau, 2010). Additionally, they have a unique migration history comprised of various waves and political reasons for immigration that are distinct from other Latino ethnic groups (Castillo & Cano, 2007; Griswold del Castillo, 1990; Garcia, 1980, 1997). Mexican Americans general close proximity to their country of origin can also have implications for ties with their culture and ethnic identity that are not present for other Latino ethnic groups who are further away from their home country (Guarnaccia & Martinez, 2005).

### **Mexican American Adolescent Depression and Suicidality**

There is a strong association between depression and suicidality for Mexican American adolescents (Rew et al., 2001; Hovey & King, 1996; O'Donnell, O'Donnell, Wardlaw, Stueve, 2004). For example, in a study with Mexican American adolescents, participants who show higher rates of depressive symptoms were at a much higher

likelihood to be at risk for having suicidal ideation (OR = 15.2; Roberts, Roberts, & Chen, 1995). In the same study, 80% of those adolescents who reported that they have suicidal ideation also demonstrated symptoms of depression.

### **Depression Rates**

Mexican American adolescents report elevated levels of depressive symptomology than youth from European American and African American ethnic groups (Blazer, Kessler, McGonagle, & Schwartz, 1994; Roberts, Roberts & Chen, 1997; Siegel et al., 1998; Canino & Roberts, 2001; Lester & Anderson, 1992; Roberts & Sobhan, 1992; Knight, Virdin, Ocampo & Roosa, 1994; Twenge & Nolen-Hoeksema, 2002). For example, the high prevalence rate can be demonstrated through a study that was conducted with Mexican American teens in three cities on the Texas-Mexico border. In this sample, 48% were at clinical levels of depressive symptoms (Swanson et al., 1992). In another study, 25% of Mexican immigrant adolescent boys and girls met criteria for critical levels of depressive symptoms. This is compared to the 12% rate in the standard administration of the instrument (Hovey, 1998).

Another notable finding in the area of Mexican American adolescent depression is that girls are at much higher risk for depressive symptoms (Céspedes & Huey, 2008; Rivera, Guanaccia, Mulvaney-Day, Lin, Torres, & Alegria, 2009). For example, Mexican American middle school girls report higher levels of depressive symptomology than their male counterparts (Roberts & Chen, 1995). In this study, their overall prevalence for mild depression was 52.8% whereas Mexican boys had a rate of 41.6%. Similarly, the girls met criteria for moderate depression 34.2% and severe depression in



21.6% of the cases. This is much higher than the boys' rates of 24.8% and 14.1%, respectively. Additionally, in a study with Latino high school students, Latina girls were twice as likely as Latino boys to report elevated distress levels in the past 30 days (Garcia et al., 2008).

### **Suicidality Rates**

For clarity purposes, defining suicide, suicidal ideation, suicide plans and suicide attempts is important. Suicide is a death that comes from some act that a person has purposefully brought upon himself or herself with intent of killing himself or herself (Wagner, 2009). Suicidal ideation is any thoughts of participating in acts of ending one's life. A suicide plan is a method that was created or proposed by the individual. This plan is both self-inflicted and injuries are intended to lead to death. A suicide attempt is a non-fatal suicide behavior that an individual commits an act aimed at oneself with the intent to end one's life in which one does not actually die. Intent has to be at some non-zero level (Wagner, 2009). In this study, "suicidality" encompasses suicidal ideation, plans and attempts.

Latino adolescents report higher crude levels of suicidal ideation, plans and attempts than their European American and African American counterparts (Lester & Anderson, 1992; Rew et al., 2001). When comparing Latina girls to Latino boys, as well as to White and African American boys and girls, this Latina girls have the highest rates of self-reported suicidal ideation, plans and attempts. The latest YRBSS data (2011) shows that when asked about the occurrence in the previous 12 months, 21.0% of Latino adolescents say they have seriously thought about suicide, 17.6% have made a suicide

plan, and 13.5% have made at least one suicide attempt. White and African American adolescents reported lower rates of ideation (18.4% and 17.4%, respectively), plans (13.7% and 13.9%, respectively) and attempts (7.9% and 8.8%, respectively) than Latina adolescents.

Gender differences also exist with Latina girls having higher rates of suicidal ideation, plans and attempts than Latino boys (Roberts, Roberts & Chen, 1995; Garcia et al., 2008; Rew et al., 2001). According to the YRBSS, data clearly shows a gender difference in the rates of ideation (21.0% girls vs. 12.6% boys), plans (17.6% girls vs. 11.1% boys) and attempts (13.5% girls vs. 6.9% boys) for Latino teens. Although girls are more likely to engage in suicidal thoughts and behaviors, Latino boys are more likely to successfully complete suicides (Duarté-Vélez & Bernal, 2007).

Based on these statistics, Mexican American youth are at high risk for depressive symptoms and suicidality. The current study seeks to understand familial and acculturative processes that can occur that may help shed light on this phenomenon. Specifically, these processes will be examined through the creation of a model that takes into account the complexity of the familial environment in which these youth are embedded. Perhaps some of the explanation of these gender differences in depression and suicidality can be understood within the context of gender role socialization of Mexican American adolescents.

### **Gender Socialization and Mental Health**

Differential gender socialization often leads to different emotional and behavioral reactions to stress (Hoffmann, Powlishta, & White, 2004; Buchanan & Smokowski,

2009). In Mexican American culture, gender role scripts are clearly defined between *machismo* for boys and *marianismo* for girls (Castillo & Cano, 2007). *Machismo* has traditionally been characterized by values of aggressiveness, competitiveness, independence, and dominance over women; while the positive aspects of this gender role are embodied through *caballerismo*. A *caballero* possesses qualities such as chivalry, being well-mannered, protecting and defending family honor (Arciniega et al., 2008). *Marianismo* includes being the family and spiritual pillar, virtuous and chaste, subordinate to men, self-sacrificing and silencing in order to maintain harmony in relationships (Castillo et al., 2010).

Differing expectations placed on Mexican American boys and girls can have differing effects on mental health outcomes. For example, traditional expectations for Mexican American girls encourage self-silencing and sacrifice for the well-being of those around them. This leads to dismissing personal needs for the sake of others including parents, siblings, and partners (Castillo & Cano, 2007). Additionally, certain emotions are less acceptable for Mexican American girls, such as the display of anger or dissatisfaction. These emotions disrupt the harmony of those around them, which they are traditionally taught not to do (Castillo et al., 2010). Additionally, girls are not encouraged to be as assertive as boys (Nolen-Hoeksema & Girgus, 1994), thus may feel restricted in their ability to react externally to stressors. This is related to lower self-esteem, less dominance, control, and instrumental coping strategies (Nolen-Hoeksema & Girgus, 1994).

Varying expectations can also have an impact on Mexican American boys'

mental health. Compared to females, it is more acceptable for boys to react externally when coping with stressors (Beaver, Gold, & Prisco, 1992; Mosher & Sirkin, 1984). Additionally, for boys anger is traditionally an acceptable emotion, while sadness is looked down upon (Pollack & Levant, 1998). Gender socialization theory suggests that socialization of Latino boys and girls could explain differences in emotional expression in response to stressors; thus, leading to differential depressive symptoms and suicidality rates.

### **Theoretical Underpinnings of the Study**

Two theoretical models will be used to frame the present study. First, the cultural-ecological-transactional theory of resilience will be used to frame the various contexts in which Mexican American youth live within (Kuperminc et al., 2009). This model takes into account the direct relationship that socio-cultural variables such as acculturation play on the development of these youth. Next, the acculturation gap hypothesis (Birman, 2006; Lee et al., 2000) will be presented and discussed within the cultural-ecological-transactional theory of resilience.

### **Cultural-ecological-transactional Theory of Resilience**

The ecological-transactional perspective is often used as a means of organizing risk and protective processes (Bronfenbrenner, 1979). This model takes into account the role that various layers of an individual's environment can have on their development and functioning. It organizes an individual's environment into various systems which include the individual, microsystem, mesosystem, and macrosystem levels. The individual and microsystem levels are considered to have proximal, or direct, influence

on the development of the individual. The individual level includes factors such as gender, age and ethnicity. The microsystem is the environment that the adolescent is immediately engaged in. This includes family, peers, neighborhoods and schools, for example. Within this theory, the systems outside of the microsystem are thought to have an indirect influence on their development and functioning. The mesosystem includes interactions between elements of the microsystem. Finally, the macrosystem focuses on the values and beliefs of the culture (Bronfenbrenner, 1988).

Kuperminc and colleagues (2009) have proposed that when studying resilience of Latino adolescents, sociocultural factors exert a direct role on the lives of youth. With this in mind, they created the cultural-ecological-transactional perspective of resilience which builds upon the original ecological-transactional model to take into account the interdependence of environmental levels. Through the use of this model, cultural processes that Mexican American youth experience can be taken into account in a way that acknowledges the dynamic and proximal relation between systems. For example, the original ecological-transactional model would classify cultural values and beliefs as being part of the greater societal system and would describe these values as placing an indirect, or distal, role in the lives of Mexican American youth. Kuperminc and colleagues (2009) argue that these cultural values have a direct impact. They suggest that the macrosystem transacts with the individual to manifest a value system, or “lens” through which the individual views the world. This lens then directly impacts the way the individual organizes and interacts with his/her environment.

## **Acculturative Gap Hypothesis**

Acculturation is defined as the process of acquiring the dominant group's values, beliefs, and behaviors (Berry, 2003). On the other hand, enculturation refers to the retention or re-socialization of one's heritage culture while living within another culture (Dumka, Gonzales, Bonds, & Milsap, 2008; Gonzales, Knight, Morgan-Lopez, Saenz, & Sirolli, 2002). In the literature, the term acculturation is used to encompass both of the acculturation and enculturation processes. Thus, for clarity the present manuscript will use the term acculturation to denote the dynamic and parallel processes of acquiring parts of the mainstream culture and one's heritage culture.

According to the acculturation gap hypothesis, parents and children acculturate at different rates, with caregivers often having lower levels of acculturation than their children. This acculturation gap can lead to conflict, which in turn can lead the adolescent to become distressed (Lee, Choe, Kim, & Ngo, V., 2000). Within the acculturation gap hypothesis, one can come to recognize many of the cultural transactions that occur within Mexican American adolescents' environment. The first component of the acculturation gap hypothesis, acculturation gaps, represent transactions that occur between the individual (adolescent), microsystem (caregivers' acculturation levels), and the macrosystem (values, norms and beliefs of the heritage and mainstream cultures). The next component is the caregiver-child relationship. This component represents an interaction between the individual (adolescent) and the microsystem (caregivers). Keeping in mind the transactions that occur at various levels of Mexican

American youth's environment is necessary to understand the complexity of the world they are embedded within.

**The acculturation gap hypothesis in previous literature.** Research on the link between Mexican American adolescents' depression and suicidality has moved toward a more holistic understanding that incorporates the ecodevelopmental (e.g., caregiver-child acculturation gaps on behavioral, affective and cognitive domains; caregiver-child conflict; caregiver-child; and female/male caregiver connectedness) and gender-role socialization processes that influence this phenomenon (Duarté-Vélez & Bernal, 2007). Mexican American adolescents shift in and out of two contexts during their daily interactions: their culture of origin and the dominant, U.S. (European American) culture. As a teenager who has to negotiate two often conflicting systems, Mexican Americans risk negative effects such as marginalization by either, or both, groups (Abrams, Marques, Brown, & Henson, 2000; Castillo, Cano, Chen, Blucker, & Olds, V. 2008). When they become marginalized, negative mental health outcomes can arise such as depression (Kim, Gonzalez, Stroh & Wang, 2006). It has been suggested that acculturation may play a role in prevalence rates of symptoms of depression and suicidal ideation (Roberts & Chen, 1995).

Often parents and children will have differing ideas of these values of family and gender roles. This can often lead to a stressful encounter between parent and child. According to the acculturation gap hypothesis, because parents and children acculturate to the mainstream society at different rates, with parents often having lower levels of acculturation than their children, the relationship between the child and the parent is

affected and leads to distress for the youth (Lee et al., 2000). In particular, this gap can often lead to decreasing the quality of the relationship between the parent and the child. In line with this hypothesis, the current study seeks to look at the gap as a predictor of depression and suicidality. Previous research suggests that children's perceptions of their parents' behaviors and values are what matters and is more influential (Céspedes & Huey, 2008; Rohner, 2004; Rohner, Kahleque & Cournoyer, 2005). Thus, in this study, we use the child's perceptions of their parent's acculturation level in various domains.

**The acculturation gap's relation to family relationships.** Acculturation is a multi-dimensional change process that an individual goes through as a result of the interaction with a new culture. As a result, the individual will begin to change values, beliefs, and behaviors (Kim & Abreu, 2001). Within the context of Latino adolescents, through their interactions with the U.S. culture, they come to acculturate to those attitudes, beliefs, cognitions and behaviors that are highly valued by the dominant group. In the area of suicidality and depression research, much of the focus is on the behavioral dimensions of acculturation. However, this provides limited information such as language usage and daily living habits, instead of taking into account other domains of acculturation.

The three dimensions of acculturation are: behavioral, cognitive, and affective (Schwartz et al., 2010; Castillo & Carver, 2009). Behavioral aspects of acculturation include language use, traditions, food choice or other choices of daily living. Cognitive acculturation encompasses the values (e.g., familismo, marianismo, machismo and caballerismo) that are internal to the individual. Finally, affective acculturation refers to



the individual's personal cultural identity, or in other words, their feelings of belonging and emotional attachment to ethnic group as well as the dominant cultural group (Tropp et al., 1999).

Few studies have been conducted using the acculturation gap hypothesis for Latinos. In one study, Céspedes and Huey (2008) looked at the effect of behavioral and cognitive acculturation dissonance between parents and their children. This study found that there was a negative relationship between Mexican behavioral acculturation orientation (MOS) and parent cohesion. This means the less discrepancy there is between teens and their parents on behavioral enculturation, the more cohesive the teen feels with their parents. The other domain that was measured in the previously mentioned study was gender role discrepancies between the adolescent and their parents. A positive relationship was found between the discrepancy score and parent conflict. Reversely, a negative relationship was found between the discrepancy and parent cohesion. This implies that as the gap gets wider, the Latino adolescent feels less connected with their parent and perceives more conflict with them as well. In conjunction with looking at correlations, this study also tested the mediating role of parent child relationship dysfunction on the relationship between the acculturation gaps and adolescent depression.

The study revealed that family dysfunction mediates for gender role discrepancies (cognitive acculturation) but not for behavioral acculturation. There are some issues with this study however. First, the scale used to measure gender role acculturation was validated on a sample of predominately European American women.

It lacks cultural validity and relevance. To remediate this issue in the present study, the Marianismo Beliefs Scale will be used (Castillo et al., 2010). This scale was validated with Latinas and is culturally relevant to the traditional gender role of marianismo. Secondly, this study collapsed caregiver-child cohesion and conflict into a dummy variable (family dysfunction). The current study will keep caregiver-child connectedness and conflict separated to determine if there are differential effects.

In Mexican American culture, a high value is placed on family interactions and is embodied in the common Latino value of *familismo* (Santiago-Rivera, 2003). Decisions are generally made with the interest of the whole group in mind with decision-making powers generally deferred to parents and other elders. One study examined the role of the cognitive acculturation variable: familismo (Baumann, Kuhlberg, & Zayas, 2010). In this study, which included Latina adolescents and their mothers, it was determined that gaps in familismo between the daughter and mother lead to lower levels of perceived mutuality, or reciprocal connection, with their mother. In addition, low mother daughter mutuality was related to higher level of externalizing behaviors (i.e., suicide attempts).

Greater understanding is still needed in the specific domains of acculturation that have the most impact on the caregiver-child relationship and distress. This study aims to fill this gap in the literature with a better understating of various components that could have differential impacts.

**Family relationship's connection to mental health outcomes.** The most supported paths, by previous literature, are those between the caregiver-child relationship variables (i.e., conflict and connectedness) and the mental health outcomes

of depression and suicidality (Céspedes & Huey, 2008; Hovey & King, 1996; Rivera, 2007; Vega, Kolody, Valle, & Weir, 1991; Cohen & Willis, 1985; Rivera et al., 2009; Garcia et al., 2008). Most of the literature focuses on the relationship between the mother and daughter. When the relationship with the male caregiver is asked about, the aggregate score is taken and reported as parent or family relationship quality. In this study, we will look at the relationship with the caregivers separately for female and male caregivers by male and female adolescent. This will allow us to see the impact of connection with the female and male caregiver for both sons and daughters.

A recent example of this connection shows that perceived levels of parental connectedness and caring of Latino families is associated with associated suicidality. Garcia et al. (2008) found that adolescents that perceived low levels of connectedness within the family were eleven times more at risk for suicide than those who perceived high levels of family connectedness. Further, Latino youth who felt that they could communicate with their parents about problems that they were having were ten times less likely to engage in suicidal behaviors. Finally, this study found that adolescents who perceived low levels of caring from their parents were ten times more likely than those who perceived the opposite to attempt suicide. This study highlights the importance of an adolescent's perception of connection, communication and caring when it comes to preventing Latino suicide.

Further, a study by Zayas, Bright, Alvarez-Sanchez and Cabassa (2009), highlights the importance of the relationship Latina girls have with their mothers. This connection, which is termed *mother-daughter mutuality*, has been shown to have

implications for Latina suicidality. Mother-daughter mutuality refers to the degree to which mothers and daughters perceive that bidirectional feelings, thoughts, and activities between them reflect an ability of the mother to be caring, inspiring mentors (Genero, Miller, Surrey, & Baldwin, 1992). This study found that Latina adolescents who had attempted suicide were more likely than those who had not attempted to report lower levels of perceived mother-daughter mutuality. This lack of perception of a connection with their mothers can have grave implications for these girls. Thus, we hypothesize that an increased level of perceived connectedness that the teenage Latino has between themselves and their female caregiver would serve as a protective factor against suicidality.

**Acculturation gap hypothesis and gender socialization of Latino adolescents.**

The hypothesis of this study is that the acculturation gap between caregivers and their child will have a greater impact on Mexican American girls' perception of the caregiver-child relationship. Additionally, it is hypothesized that the caregiver-child relationship quality will be less impactful on the mental health outcomes of depression and suicidality for Mexican American boys. A previous study supports the hypothesis that there will be gender differences in the acculturation gap model. In a study by Céspedes and Huey (2008) which looked at the acculturation gap hypothesis with Latino adolescent boys and girls, it was found that for Latina girls, gender role discrepancy between the child and the parent, leads to family conflict and lowered cohesion. This was not the case for the boys. In addition, this study shows that Latina girls reported higher levels of discrepancy from their parents than did the boys. Differences that occur

in depressive and suicidality between boys and girls could be rooted in the differing gender socialization process that occurs for boys and girls in the Latino community.

Another layer to the context in which Mexican American adolescents develop has to do with gender role socialization. That is, socialization towards answering the following questions: “What should a woman be?” and “What should a man be?” During adolescents, it is suggested that the gender socialization process intensifies (Hill & Lynch, 1983). Within the Mexican American culture, this stage can bring more conflict for girls than for boys due to the roles and expectations that Latina’s have in the family and in their position in the culture.

As previously mentioned *marianismo* is the traditional female gender role value for Latina women and is characterized as a cultural script that dictates an idealized Latina who emulates the Virgin Mary by being virtuous, humble, sexually pure, and self-sacrificing for the sake of the family (Gil & Vasquez, 1996). For men, the traditional gender role value is embodied in machismo and caballerismo. *Machismo* is traditionally the more negative aspect of Latino male gender role. It describes characteristics of a Latino man as being controlling, possessive, sexist and dominant (Arciniega et al., 2008; Santiago-Rivera, 2003). The more positive side of masculinity for Latinos is *caballerismo*. These are characteristics refer to a code of ethics the man should follow (Arciniega et al., 2008).

Because of the gender roles and values ascribes to boys and girls, they often have a much different experience with their parents growing up. Latina girls are often treated much differently than boys surrounding their peer and romantic relationships (Comas-

Diaz, 1987; Reid, Haritos, Kelly & Hooland, 1995). Because of the expectation that Latina girls have to remain a virgin and be pure, parents are often more strict with them (Hovell et al., 1994; Raffaelli & Ontai, 2004; Raffaelli & Ontai, 2001). Parents tend to require the girl to do activities in the home to help out around the house with chores and with younger children. This requirement could lead to more opportunity for conflicts to occur, or for the relationships between the Latina and the parent to affect her mental health and functioning. The differing rules and boundaries could also in themselves cause strain on the caregiver-child relationship.

### **Study Purpose and Research Questions**

The present study's purpose is to determine the relationship between cultural, familial and mental health outcomes (i.e., depression and suicidality) for Mexican American adolescents. In Manuscript #1, suggestions were laid forth to enhance the original acculturation gap hypothesis. Specifically, it was suggested that the acculturation gap model 1) take into account various dimensions of acculturation gaps (i.e., cognitive, behavioral, and affective domains), 2) expand the focus on caregiver relationships as opposed to just parent-child relationships given the realities of modern family composition, 3) account for both male and female caregiver relationships, 4) test the model separated for various Latino ethnic groups, and 5) test for the possible moderating effect of gender. Through the use of this enhanced acculturation gap model (Birman, 2006; Lee et al., 2000) in a cultural-ecological-transactional framework (Kuperminc et al., 2009), a model has been developed that takes into account the complex nature of risk and resiliency that could contribute to depression and suicidality

for Mexican American adolescence. The specific hypotheses of the proposed path model (Figure 2) are embodied in the following five research questions:

1. Do gender differences exist on the measured variables of this study?
2. Do various domains of the acculturation gap (i.e., cognitive, affective and behavioral) impact the caregiver-child relationship?
3. Does the caregiver-child relationship have an impact on depression and suicidality?
4. Does the caregiver-child relationship serve as a mediator between the acculturation gap and mental health outcomes?
5. Does gender moderate the hypothesized model?

For descriptive and clarity purposes, please refer to Figure 2 for the hypothesized directionality and valence of relationships between model variables.

## **Methods**

### **Participants**

Before collecting data, a Monte Carlo analysis using MPlus, was conducted. It was determined that a minimum of 100 participants per group (boys and girls) is needed for sufficient power for the hypothesized model. Data was collected on 524 Mexican American adolescents (46.9% male; 53.1% female) who attended high school in a midsized city in South Texas. Participant's ages ranged from 14 to 20 years ( $M = 16.23$  years;  $SD = 1.10$  years). The majority of participants were second-generation immigrants and seniors (12<sup>th</sup> grade). See Table 1 for full breakdown of demographic data by gender.

## **Instruments**

**Demographics questionnaire.** A questionnaire was used to gather demographic information about age, generation level and ethnic background. Students were asked to self-report their age. To assess generation status, the student was asked if they are 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, or 5<sup>th</sup> generation Latinos. A brief description of the generation status groups was given beside each option. For example, for 1<sup>st</sup> generation, the description was “you were born in Latin America” and for 2<sup>nd</sup> generation the description was “you were born in the US, either parent born in Latin America.” If the adolescent indicates they are a first generation Latino, they were asked the age at which they immigrated to the U.S. To gather information about their ethnic background, the participants were asked to select from Hispanic, White (non-Hispanic), African American, Asian American, Native American, Biracial/Multiracial (asked to specify) or Other (also asked to specify). If the individual indicated that they were Hispanic, there were additional options available in which they specified their country of origin (i.e., Mexican American, Spanish American, Cuban American, etc.) Only participants who marked they were Mexican American, or some combination of Mexican American and another ethnicity, were included in the study. Additional information was gathered concerning their family of origin, including the living location of both their female and male caregiver, the relationship they have with their female and male caregiver (i.e., biological parent, stepparent, sibling, aunt, uncle, etc.).

**Behavioral acculturation and enculturation.** A revised version of the Acculturation Rating Scale for Mexican Americans (ARSMA-II; Cuellar et al., 1995;



Bauman, 2005) was used as a measure of behavioral acculturation and enculturation. This is a 12-item scale, which contains two subscales: a 6 item Mexican Oriented Scale (MOS) and a 6 item Anglo Oriented Scale (AOS). The MOS was used as a measure behavioral enculturation, and the AOS was used as a measure of behavioral acculturation. The responses were on a Likert-type scale ranging from 1 (*not at all*) to 5 (*almost always/extremely often*). Sample MOS and AOS items include: “My thinking is done in the Spanish language,” and “My thinking is done in the English language,” respectively. For each subscale, mean scores are computed. Higher scores on each scale indicate the individual has a higher level of behavioral acculturation (AOS) or enculturation (MOS).

Bauman (2005) found that this scale was both valid and reliable. In this 2005 study, two samples were surveyed with this scale and obtained the following coefficient alphas: for Sample 1, on the MOS scale,  $\alpha = .93$ ; for the AOS scale,  $\alpha = .69$ ; for Sample 2,  $\alpha = .84$  for the MOS scale and  $\alpha = .75$  for the AOS scale. The ARSMA-II was found to be correlated with the original ARSMA ( $r = .89$ ; Cuéllar, Arnold & Maldonado 1995). For the current study, acceptable alphas were produced overall and for each gender. For all participants,  $\alpha = .66$  (AOS) and  $\alpha = .93$  (MOS); females,  $\alpha = .66$  (AOS) and  $\alpha = .93$  (MOS); and for males,  $\alpha = .67$  (AOS) and  $\alpha = .94$  (MOS). Both subscales of the ARSMA-II were reworded to measure the adolescent’s perception of how their parents would answer the questions. This allows for cultural discrepancy scores to be computed (see data analysis section). In this edited form, for the current study, acceptable alphas were produced overall and for each gender. For all participants,  $\alpha = .91$  (C-AOS) and  $\alpha$

= .92 (MOS); females,  $\alpha = .92$  (C-AOS) and  $\alpha = .92$  (C-MOS); and for males  $\alpha = .89$  (C-AOS) and  $\alpha = .92$  (C-MOS).

**Affective acculturation.** The Psychological Acculturation Scales (PAS) was used to measure the adolescents' feelings of belonging and emotional attachment to the Latino ethnic group (Tropp, Erkut, Coll, Alarcon, & Garcia, 1999). This scale consists of 10-items that are measured using a 9-point Likert-type scale. The participant selects a response based on a scale ranging from *only Hispanic/Latino* (1) to *only Anglo/American* (9), with a bicultural orientation defining its midpoint (5). Sample items include: "With which group(s) of people do you feel you share most of your beliefs and values?" "With which group(s) of people do you feel you have the most in common?" and "In your opinion, which group(s) of people do you understand best?" The scores are then summed, and will range from 10 to 90. Higher scores indicate the individual has higher affective acculturation to Anglo cultural group than those with lower scores.

The PAS has been previously used in a study with Latino immigrant youth and has produced acceptable internal consistency was produced ( $\alpha = .91$ ; Potocnick & Perreira, 2010). For the current study, acceptable alphas were produced overall and for each gender. For all participants,  $\alpha = .92$ ; females,  $\alpha = .93$ ; and for males,  $\alpha = .92$ . The PAS was also reworded to measure the adolescent's perception of how their parents would answer the questions. This allows for cultural discrepancy scores to be computed (see data analysis section). In this edited form, for the current study, acceptable alphas were produced overall and for each gender. For all participants,  $\alpha = .97$  (C-PAS); females,  $\alpha = .97$  (C-PAS); and for males,  $\alpha = .96$  (C-PAS).

**Familismo.** The Familism Scale (Steidel & Contreras, 2003) was used to measure attitudinal familism. This scale consists of 18-items that are measured using a 10-point Likert-type scale to measure four dimensions of attitudinal familism. This scale includes four dimensions related to beliefs about familial support, familial interconnectedness, familial honor, and subjugation of self for family. The participant selects a response based on a scale ranging from *strongly disagree* (1) to *strongly agree* (10). Sample items include: “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 and so forth,” “a person should rely on his or her family if the need arises” and “children should obey their parents without question even if they believe they are wrong.” A mean score was derived for this scale with higher scores indicating the individual adheres more closely with the attitudinal familismo.

This scale has been previously used in a study with Latino youth and produced acceptable levels of internal consistency ( $\alpha = .97$ ) with evidence of good model fit with a CFA (Peña, Kuhlberg, Zayas, Baumann, Gulbas, Hausmann-Stabile, & Nolle, 2011). For the current study, acceptable alphas were produced overall and for each gender. For all participants,  $\alpha = .90$ ; females,  $\alpha = .89$ ; and for males,  $\alpha = .90$ . The Familism Scale was also reworded to measure the adolescent’s perception of how their parents would answer the questions. This allows for cultural discrepancy scores to be computed (see data analysis section). In this edited form, for the current study, acceptable alphas were produced overall and for each gender. For all participants,  $\alpha = .91$  (C-Familismo); females,  $\alpha = .90$  (C-Familismo); and for males,  $\alpha = .93$  (C-Familismo).

**Machismo.** The 20-item Machismo Scale consists of 2 subscales that were used to measure traditional machismo and caballerismo (Arciniega et al., 2008). The Traditional Machismo Subscale is used to measure the individual's adherence to machismo gender role values which include items such as "Men are superior to women," "In a family a father's wish is law," and "It is necessary to fight when challenged." A mean was derived from the 10-items and higher a participant means indicate the individual is more in agreement with traditional machismo. The Caballerismo Subscale is used to measure the individual's adherence to the more positive dimensions of machismo gender role values that include items such as "Men must display good manners in public," "Men should be affectionate with their children," and "Men should respect their elders." The scale also uses a 4-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree). A mean was derived from the 10-items and higher a participant means indicate the individual is more in agreement with caballerismo.

Although to date this measure has not been used with adolescents, a previous study that used this with Mexican American men demonstrated acceptable levels of internal consistency for each subscale ( $\alpha = .84$  for the traditional machismo subscale and  $\alpha = .71$  for the caballerismo subscale; Arciniega et al., 2008). For the current study, acceptable alphas were produced overall and for each gender. For all participants,  $\alpha = .80$  (Machismo) and  $\alpha = .72$  (Caballerismo); females,  $\alpha = .72$  (Machismo) and  $\alpha = .66$  (Caballerismo); and for males,  $\alpha = .80$  (Machismo) and  $\alpha = .77$  (Caballerismo). The Traditional Machismo and Caballerismo Scales were also reworded to measure the

adolescent's perception of how their parents would answer the questions. This allows for cultural discrepancy scores to be computed (see data analysis section). In this edited form, for the current study, acceptable alphas were produced overall and for each gender. For all participants,  $\alpha = .86$  (C-Machismo) and  $\alpha = .84$  (C-Caballerismo); females,  $\alpha = .85$  (C-Machismo) and  $\alpha = .80$  (C-Caballerismo); and for males,  $\alpha = .85$  (C-Machismo) and  $\alpha = .86$  (C-Caballerismo).

**Marianismo.** The Marianismo Beliefs Scale (MBS) was used to measure the degree to which a Latina believes she should incorporate and sustain the value systems learned from the Mexican gender role construct known as marianismo (Castillo et al., 2010). This scale consists of 24-items that are measured using a 4-point Likert-type scale. The participant selects a response based on the extent to which they agree and disagree with each of the statements presented in the scale. The responses to each item range from *strongly disagree* (1) to *strongly agree* (4). Sample items include: "A Latina must be a source of strength for her family," "is responsible for the spiritual growth of the family," and "should feel guilty about telling people what she needs." All items were summed to compute an overall marianismo beliefs score. A higher overall score indicates the individual has higher levels of traditional marianismo beliefs.

Although the scale has not been used with younger adolescents, the MBS has demonstrated acceptable reliability as well as convergent and discriminant validity in a previous study with Latina college students (Castillo et al., 2010). In Castillo et al.'s study (2010), evidence for the factor structure and internal consistency for this scale was achieved. For the current study, acceptable alphas were produced overall and for each

gender. For all participants,  $\alpha = .87$ ; females,  $\alpha = .88$ ; and for males,  $\alpha = .85$ . The MBS was also reworded to measure the adolescent's perception of how their parents would answer the questions. This allows for cultural discrepancy scores to be computed (see data analysis section). In this edited form, for the current study, acceptable alphas were produced overall and for each gender. For all participants,  $\alpha = .90$  (C-Marianismo); females,  $\alpha = .90$  (C-Marianismo); and for males,  $\alpha = .90$  (C-Marianismo).

**Caregiver-child conflict.** The Parental Conflict Likelihood Scale was used to measure the amount of caregiver-child conflict that the individual perceives (Lee et al., 2000). This parental conflict scale consists of 10-items that are measured using a 5-point Likert-type scale. The participant must consider how frequently the types of situations described in the scale occur in their family. The parental conflict scale contains responses ranging from *almost never* (1) to *almost always* (5). Sample items from this scale include "Your parents tell you what to do with your life, but you want to make your own decisions," "Your parents always compare you to others, but you want them to accept you for being yourself," and "You want to state your opinion, but your parents consider it to be disrespectful to talk back." A mean score is computed from these 10 items. An individual demonstrates a higher probability of having experienced these types of conflicts with their family when they have a higher mean score on this scale. In addition, should the individual score significantly lower on the scale, it is less likely they are enduring these types of issues with their parents.

The scale has demonstrated both convergent and discriminant construct validity and internal consistency (Lee et al., 2000). Although to date this measure has not been

used with Latino adolescents, a previous study that uses this scale with Latino college students produced a coefficient alpha = .95 (Castillo, Cano, Chen, Blucker & Olds, 2008). For the current study, acceptable alphas were produced overall and for each gender. For all participants,  $\alpha = .87$ ; females,  $\alpha = .88$ ; and for males,  $\alpha = .85$ .

**Caregiver connectedness.** Female and male caregiver connectedness was measured using questions derived from the Add Health Study (Sieving, McNeely & Blum, 2000). This scale measures how close the adolescent feels with each of their caregivers. Responses were based on 5-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (5). Sample items are “I feel close to my mother/female caregiver,” and “I believe my mother/female caregiver cares about me.” Each question is asked in reference to the father/male caregiver. A mean score is derived for the female (Connectedness-F) and male caregiver (Connectedness-M) with higher scores being indicative of having higher levels of connection with that caregiver.

This scale has been used to measure mother connectedness with adolescents through the Add Health study and produced acceptable internal consistency ( $\alpha = .84$ ; Sieving, McNeely & Blum, 2000). For all participants,  $\alpha = .92$  (FCC) and  $\alpha = .96$  (MCC); females,  $\alpha = .90$  (FCC) and  $\alpha = .96$  (MCC); and for males,  $\alpha = .95$  (FCC) and  $\alpha = .97$  (MCC).

**Depressive symptoms.** The 20-item Center for Epidemiological Studies Depression Scale (CES-D) was used measure depressive symptoms (Randloff, 1977). This study will use the modified version of the questions based on the Add Health study due to its developmental appropriateness and validity with Mexican American

adolescents (Crockett, Randall, Shen, Russell & Driscoll, 2005). The most pronounced modification was changing the wording to reflect a second-person style (i.e., changing “I” to “you”). Responses were based on a 4-point Likert scale ranging from *rarely or none of the time/less than one day* (1) to *all of the time/5-7 days* (4). The adolescents were asked “How often was each of these things true during the past week?” Sample items include “You were bothered by things that usually don’t bother you,” “trouble falling asleep,” and “frequent crying.”

A previous validation study with Latino adolescents found that the factor structure for the CES-D held up with Mexican American adolescents and produced consistently acceptable internal consistency across subscales, ranging from .84 to .87 (Crockett et al., 2005). For the current study, acceptable alphas were produced overall and for each gender. For all participants,  $\alpha = .86$ ; females,  $\alpha = .88$ ; and for males,  $\alpha = .85$ .

**Level of suicidality.** Three questions were asked to gauge the level of suicidality that the individual would be categorized in. The questions were: “In the last 12 months, have you seriously thought about committing suicide?” “In the last 12 months, have you made a suicide plan?” and “In the last 12 months, have you attempted suicide?” If the adolescent indicates they have made an attempt in the last 12 months, they are also prompted to indicate the number of attempts they have made in the last 12 months. A suicidality level 0 indicates the individual denied suicidal ideation, plans and attempts in the last 12 months. A suicidality level 1 indicates the individual admitted suicidal ideation; however, they denied making a plan or attempts in the last 12 months. Level 2



is indicative of a person who admits to suicidal ideation and creating a suicide plan in the last 12 months; however denies actually making and attempt. Individuals in level 3 indicate that they have had suicidal ideation, made a plan and attempted a single time in the year. The final level included those youth who have made more than one attempt in the last 12 months (level 4). A breakdown of the endorsement of suicidal ideal, plans and attempts is present in Table 1 for the overall sample and by gender.

### **Procedure**

Participants were recruited from a public high school in south Texas. Adolescents in participating classes were given consent forms to take to their parents to be signed and returned. If the student was 18 or older, they did not have to have parent permission to participate and were able to consent and assent for participation themselves. The students were asked to return the forms to their teachers. A pizza party was given as an incentive to the class who returned in the highest percentage of consent/assent forms, regardless of the number of students who will actually be participating in the study. An additional incentive was given to the students who participated. Each student who participated in the study was put in a drawing to receive one of ten \$25 gift-cards to a local cinema.

Only students who returned the form signed by their parents (unless over the age of 18) were allowed to participate. Students were pulled out of their elective classes to take the questionnaire that consisted of the below-mentioned measures. Each participant was given an assent form before they begin taking the questionnaire. All materials, including the questionnaire were given using paper-and-pencil format and were in

English. The questionnaire was anonymous and included self-report measures that were meant to gauge the adolescent's perceptions, values and experiences. Seven of the scales were replicated and asked the adolescent to report how they believe the parent they were closest with would respond (AOS, MOS, PAS, Familism Scale, Traditional Machismo and Caballerismo Scale and MBS). The consent procedure and questionnaire administration took approximately 50 minutes to complete out of their 90-minute class period. Participation was completely voluntary and anonymous. The students were given the option to decline participation at any time.

After all the adolescents in each class period completed their questionnaires, they were de-briefed by giving the adolescents information about depression and suicidality, as well as resources to obtain help if it is needed for themselves, friends or family members (i.e., counseling and hotline numbers). This information was provided through a resource packet. Parents of the adolescents that participated were also mailed a copy of the debriefing packet.

## **Results**

### **Data Analysis Plan**

**Computation of discrepancy scores.** This study used a method previously published in research concerning Latino adolescent depression and caregiver-child cultural discrepancy (Céspedes & Huey, 2008). By using a standardized approach (Reynolds, 1985), this method subtracts the standardized youth reported youth score from the standardized youth reported parent score. This difference is then divided by the standard error of the difference, resulting in a standardized discrepancy score

(Discrepancy =  $[(Z_{\text{parent}} - Z_{\text{youth}})/((1 - \alpha_{\text{parent}}) + (1 - \alpha_{\text{youth}}))^{1/2}]$ ). In the present study, these variables are indicated with the word “GAP” in front of the variable name to indicate the variable was computed to represent the gap between the caregiver and child’s acculturation level (i.e., GAP-AOS, GAP-MOS, GAP-PAS, etc.).

**Preliminary analyses.** To prepare data for analysis, the data was checked to determine if it meets statistical assumptions for multivariate normality, linearity, and multicollinearity. The data was checked for missing data on the outcome variable: suicidality level. Since responses to this item cannot be estimated, those without scores on this item were removed from the dataset. Full information maximum likelihood method was employed in MPlus to account for missing data on the remainder of the variables. Finally, based on recommendations for reporting data, Pearson correlations, means and standard deviations were conducted for each of the continuous variables used in the study (Kline, 2005). For variables that are dichotomous (i.e., gender, suicidal ideation, plans, attempts and level of suicidality), point biserial correlations ( $r_{pb}$ ) between these nominal variables and the other continuous variables were provided. In addition, for nominal variables, frequencies were reported. T-test were employed to test the difference between boys and girls reporting of the continuous variables. Chi-squared tests were employed to test gender differences in demographic composition and the reporting of nominal variables (Pallant, 2010).

**Main analysis.** To test the path model in Figure 1, full maximum likelihood procedures were used with MPlus software (Version 7). This program gave information about the fit of the model to the data with gender as a moderator. Initially, fully

constrained and fully unconstrained models were tested to determine if gender differences exist in the model. Based on previous recommendations for model fit, the following criteria was used to evaluate model fit: a chi-squared ( $\chi^2$ ) that is not statistically significant at the  $p < .05$  level, a chi-square to degrees of freedom ratio ( $\chi^2/df$ )  $< 3.0$ , comparative fit index (CFI)  $\geq .95$ , a goodness-of-fit index (GFI)  $\geq .95$ , and a root mean squared error of approximation (RMSEA)  $< .06$  (Kline, 2005; Loehlin, 1998; Hu & Bentler, 1999; Weston & Gore, 2006). The individual paths were analyzed by looking at the  $p$ -values. Values of  $p < .05$  were determined to be statistically significant.

**Mediation effects.** A multiple mediation test were used to test possible mediations in the model and will be conducted in Mplus (Muthén & Muthén, 2007; Preacher & Hayes, 2008). This method was chosen due to previous recommendations to do bootstrapping to test for mediations its effectiveness in controlling for Type I error (Preacher & Hayes, 2008; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Preacher et al., 2007). This recommendation is made with the rationale that bootstrapping is a powerful and reasonable method that allows the researcher to obtain confidence limits for specific indirect effects in various conditions (Preacher & Hayes, 2008). The bootstrapping analysis takes the specified number of samples from the entire sample and derives an indirect effect for each of the samples pulled. From the specified number of samples, the bootstrapping analysis then constructs confidence intervals for the indirect effect. Statistically significant indirect effects are those that have a values of  $p < .05$  and the confidence intervals do not cross zero. For the present study, 5000

samples were specified for the bootstrap analysis.

### **Preliminary Analyses**

The data met statistical assumptions for multivariate normality, linearity, and multicollinearity. Each of the measured variables in this study had acceptable skewness and kurtosis based on suggested cutoff criteria (the absolute value of the Skewness Index  $\leq 3$  and the absolute value of the Kurtosis Index being  $\leq 8$ ; Curran, West, & Finch, 1996; Kline, 2005). The statistics for each variable are presented in Table 2, which indicates all variables are normally distributed. Listwise deletion procedures were used to omit seventeen cases with missing data on the categorical outcome variable (Level of Suicidality) since this variable cannot be estimated accurately with other missing data replacement procedures. Therefore, only 507 of the original 524 participants were included in the main analysis.

**Demographic group differences.** In order to determine heterogeneity between boys and girls, Pearson chi-squared tests were employed (see Table 1). Results of these tests indicated that the adolescent boys and girls sampled were similar in ethnicity, generation status, and grade level. Additionally in reference to the living arrangement of their male and female caregivers, boys and girls were similar in reporting both mother and father presence in their home. The endorsement of the individual who fulfilled the male caregiver role was also similar for boys and girls. Differences existed in the percentage of biological mothers ( $\chi^2 = 7.46$ ,  $df = 1$ ,  $p = .009$ ) and aunts ( $\chi^2 = 8.72$ ,  $df = 1$ ,  $p = .004$ ) who fulfill the primary female caregiving role for boys and girls. Females report a higher percentage than boys of biological mothers assuming the primary female

caregiving role (94.2% for females vs. 87.2% for males) and boys reported a higher percentage of aunts fulfilling the primary female caregiver role than girls (.4% for females vs. 4.1% for males). Additionally, there was a difference in the reporting of which caregiver was the closest to male and females ( $\chi^2 = 32.60$ ,  $df = 2$ ,  $p = .000$ ). Girls reported their female caregiver as being their closest caregiver at a higher rate than boys (87.2% for females vs. 65.9% for males); while the opposite was true for boys with more of them reporting their male caregiver was their closest caregiver (12.8% for females vs. 34.1% for males).

**Suicidality group differences.** To determine if significant differences exist in the reporting of suicidal ideation, plans and attempts in the last year, Pearson chi-squared tests were employed (see Table 1). Based on these analyses, girls report significantly higher rates of suicidal ideation (28.7% for females vs. 11.9% for males;  $\chi^2 = 21.42$ ,  $df = 1$ ,  $p = .000$ ), plans (16.2% for females vs. 6.0% for males;  $\chi^2 = 13.00$ ,  $df = 1$ ,  $p = .000$ ) and attempts (9.9% for females vs. 4.3% for males;  $\chi^2 = 5.99$ ,  $df = 1$ ,  $p = .01$ ) when compared with boys.

**Means, standard deviations, and mean group differences.** Mean values for each of the variables used, both in the computation of caregiver-child acculturation gap and in the main analysis, were computed as an aggregate sample and by gender (see Table 3). The means for boys and girls were compared using independent sample t-tests. These t-tests indicate that females report higher levels of behavioral enculturation (MOS), caregiver familismo (C-Familismo), caregiver machismo (C-Machismo), and depressive symptoms than boys. Boys, on the other hand, report significantly higher

levels of psychological acculturation (PAS), machismo, marianismo, caregiver psychological acculturation (C-PAS) and caregiver machismo (C-Machismo). Boys are also reporting larger gaps from their caregivers in the areas of behavioral acculturation, familismo, machismo, caballerismo and marianismo beliefs. No gender differences exist for the following variables: behavioral acculturation (AOS), familismo, caballerismo, caregiver behavioral acculturation (C-AOS), caregiver behavioral enculturation (C-MOS), caregiver marianismo (C-Marianismo), behavioral acculturation gap (GAP-AOS), psychological acculturation gap (GAP-PAS), caregiver conflict, female caregiver connectedness and male caregiver connectedness.

### **Main Analyses**

**Model fit.** To test the path model in Figure 2, full maximum likelihood procedures were employed using Mplus software (Version 7). The initial model ran, was fully constrained to determine if the model held for both genders, and if there were gender differences that existed in paths. For the fully constrained, multi-group model, the following fit indices were given:  $\chi^2(59, 524) = 66.50, p > .05; \chi^2/df = 1.13; CFI = .97; TLI = .96; \& RMSEA = .02$ . This provided evidence that the fully constrained model, where all paths were held to be equal across groups, had good model fit. This indicates that although the initial path model held for the sample, gender is not a moderator.

**Direct effects.** Figure 3 represents the significant paths visually with bolded lines. The coefficients, standard errors, p-values and 95% Confidence Intervals for each hypothesized path is presented in Table 4. The first part of the model connected the

caregiver-child acculturation gap with caregiver child relationship variables. First, the caregiver-child acculturation gap and caregiver connectedness variables accounted for 7% of the variance in caregiver conflict for girls and 8% for boys. The familismo caregiver-child acculturation gap and female caregiver connectedness were the only variables with statistically significant paths to caregiver conflict. Familismo acculturation gap positively predicts caregiver conflict ( $B = .07$ ;  $S.E. = .08$ ,  $p = .03$ ) and female caregiver connectedness negatively predicts caregiver conflict ( $B = -.20$ ;  $S.E. = .04$ ,  $p = .000$ ). Second, for female caregiver connectedness, the caregiver-child acculturation gap variables accounted for 6% of the variance for both girls and boys. The familismo caregiver-child acculturation gap significantly and negatively predicts female caregiver connectedness ( $B = -.08$ ;  $S.E. = .02$ ,  $p = .000$ ). This was the only acculturation gap variable to significantly predict female caregiver connectedness. Additionally, the caregiver-child acculturation gap variables accounted for 7% of the variance for girls and 8% of the variance boys' male caregiver connectedness. As with the other two care-giver child relationship variables, familismo acculturation gap significantly and negatively predicts male caregiver connectedness. ( $B = -.13$ ;  $S.E. = .03$ ,  $p = .000$ ). The machismo caregiver-child acculturation gaps positively predicts ( $B = .11$ ;  $S.E. = .04$ ,  $p = .01$ ) and the marianismo caregiver-child acculturation gap negatively predicts ( $B = -.06$ ;  $S.E. = .03$ ,  $p = .05$ ) male caregiver connectedness. Finally, the errors between female and male connectedness was significant and positive ( $B = .38$ ;  $S.E. = .05$ ,  $p = .000$ ).



In reference to the mental health variables, 12% of the variance for girls' and 16% of the variance for boys' depressive symptoms was accounted for by the caregiver-child relationship variables. Caregiver conflict significantly and positively predicts ( $B = 1.84$ ;  $S.E. = .39$ ,  $p = .000$ ), whereas female and male caregiver connectedness significantly and negatively predict depressive symptoms ( $B = -2.77$ ;  $S.E. = .45$ ,  $p = .000$  and  $B = -.91$ ;  $S.E. = .27$ ,  $p = .000$ , respectively). For the level of suicidality, 18% of the variance was accounted for girls and 17% for boys. Depressive symptoms significantly and positively predict the level of suicidality ( $B = -.03$ ;  $S.E. = .020$ ,  $p = .000$ ). Female caregiver connectedness was the only caregiver-child relationship variable to significantly predict the level of the adolescents' suicidality, with a negative predictive value ( $B = -.17$ ;  $S.E. = .06$ ,  $p = .000$ ). Based on modification indices, no direct effects were present from the acculturation gap measures and the mental health outcomes.

**Indirect effects.** After the hypothesized model was run, a multiple mediation test through bootstrapping to test for mediations (Muthén & Muthén, 2007; Preacher & Hayes, 2008). First, the researcher identified mediations through identifying paths that had 1) significant path to the mediator variable 2) the mediator variable had a significant path to the outcome variable and 3) the independent variable and dependent variable were correlated with one another. Using these criteria, nine possible mediations were identified and then were subsequently tested. Through bootstrapping, it was determined that five of the indirect effects were significant. First, the familismo acculturation gap was found to have a positive indirect effect on depressive symptoms through female caregiver connectedness ( $B = .22$ ,  $S.E. = .07$ ;  $p = .000$ ; 95% C.I. = .11 through .38).

Additionally, the familismo acculturation gap positively and indirectly predicts depressive symptoms through male caregiver connectedness ( $B = .12$ ,  $S.E. = .06$ ;  $p = .04$ ; 95% C.I. = .03 through .26). Female caregiver connectedness was found to negatively and indirectly predict depressive symptoms through caregiver-child conflict ( $B = -.35$ ,  $S.E. = .15$ ;  $p = .02$ ; 95% C.I. = -.73 through -.11). Finally, both female and male connectedness were found to negatively and indirectly predict the level of suicidality through depressive symptoms ( $B = -.09$ ,  $S.E. = .03$ ;  $p = .000$ ; 95% C.I. = -.15 through -.05;  $B = -.03$ ,  $S.E. = .01$ ;  $p = .03$ ; 95% C.I. = -.06 through -.01, respectively). A complete reporting of the bootstrapping mediation estimates and confidence intervals is presented in Table 5.

## **Discussion**

The purpose of the present study was to investigate the relationship between cultural, familial and mental health outcomes (i.e., depression and suicidality) for Mexican American adolescents. Through the use of the acculturation gap hypothesis (Birman, 2006; Lee et al., 2000) in a cultural-ecological-transactional framework (Kuperminc et al., 2009), a hypothesized model (Figure 2) was developed and tested to address the complex nature of the role of intergenerational acculturation differences on depression and suicidality risk and resiliency for Mexican American adolescents. The results of this study are reviewed below in the context of the specific research questions that were initially proposed in the introduction of this manuscript.

### **Research Question 1: Are There Gender Differences on Measured Variables?**

**Acculturation differences.** Findings have been mixed concerning the levels of acculturation levels of Latino boys and girls. The present study found that on certain dimensions of acculturation, there are significant gender differences in the self-reported levels of behavioral, cognitive, and affective acculturation. In the present study, each of these domains were measured as forms of primary analyses. For behavioral acculturation, which comprises behavioral acts such as English language use, eating “American foods,” and listening to English music, there were no gender differences in reporting levels. However, when considering behavioral enculturation, which comprises heritage cultural retention behaviors such as speaking Spanish, eating Mexican food, and engaging in Mexican cultural practice, girls in this study reported statistically significantly higher levels than boys.

These findings can be understood within the gendered context that these youth are embedded. For example, as part of the traditional gender role value of *marianismo*, Mexican American girls/women are charged with being the family pillar. This is often played out through their role as mothers. With this role, Latina women transmit cultural values and traditions within the family unit (Villenas, 2006). Often mothers will look to their daughters to help with acts such as cooking. One qualitative study demonstrated the salience of food in the transmission of Mexican culture to children (Umaña-Taylor & Yazedjian, 2006). Since much of the Mexican culture is tied in with food and Mexican daughters are encouraged to do household duties such as cook with their mothers (Raffaelli & Ontai, 2004), often times this can be a means of mothers passing on the

culture to their daughters. In addition to food practices, within the Mexican American culture, girls often serve as cultural and language brokers for their parents who may be less acculturated or not speak English (Buriel, Love & De Ment, 2006). The act of language brokering, or translating for parents, helps to maintain both the Spanish and English languages. Through the maintenance of the Spanish language through acts such as brokering, parents may indirectly fostering their heritage culture orientation, or enculturation for their daughters as opposed to their sons who are often not expected to fulfill this role (Buriel, Love, & De Ment, 2006).

In reference to affective acculturation, the feelings that youth have towards their culture of origin and the host culture, is also important to account for. Previous literature has demonstrated differences in levels of affective acculturation for Latino boys and Latina girls. For example, in a longitudinal study published in 2009, Umaña-Taylor, Gonzales-Backen and Guimond found that over a four-year period, Latina adolescent girls experiences statistically significant growth in ethnic identity exploration and resolution (affective enculturation constructs); however, this was not the case for Latino boys. For the current study, affective acculturation was measured by asking the youth to report which culture they feel most connected to or aligned with in various domains. Lower scores indicate the youth is more affectively enculturated and more has more positive feelings toward the Mexican culture; whereas higher scores indicate the youth feels more closely aligned with the mainstream, or European American culture (more acculturated). For the current study, it was determined that there was a statistically significant difference between the genders. Girls' mean scores were significantly lower

than boys, which indicates that they are more affectively enculturated. In other words, these Mexican American females reported feeling more connected and aligned with the Mexican culture than boys. This is consistent with their levels of behavioral enculturation as well as previous literature that demonstrate that during high school, Latina girls have higher levels of affective enculturation than boys (Umaña-Taylor et al., 2009).

The results of the present study could also partially be explained through looking at the results through a gendered context. As a product of traditional gender socialization of Mexican American youth, girls often have more restrictions placed on them which require them to spend a lot of their time in the home increasing interactions with their parents, especially the mother (Raffaelli & Ontai, 2004). As previously mentioned, Mexican American girls learn about their heritage culture through interactions with their mothers (Villenas, 2006). Thus, girls may be more exposed to their culture of origin, including many practices that go along with this culture. Boys on the other hand, are allowed more autonomy and independence to engage in activities outside the home where they can be influenced by many factors outside of their parent's control (Raffaelli & Ontai, 2004). This increased exposure to cultures outside of their heritage culture, in conjunction with less pressure to learn and pass on their heritage culture, could explain why boys may not feel as connected with their heritage culture as girls.

Although Mexican American girls demonstrated higher levels of enculturation on the behavioral and affective dimensions, this is not necessarily the case for the cognitive

enculturation dimensions of familismo, machismo, caballerismo and marianismo values. In the present study, Mexican American boys and girls did not differ on their levels of endorsement of familismo beliefs. In other words, both gender groups held statistically similar levels of the belief that family is central to the self and that the individual is secondary to the needs of the family unit. Although familismo may manifest itself differently for boys and girls based on gender role expectations, the value still has particular salience. For example, through the traditional female gender role of self-silencing, a Latina girl may enact her value of familismo through silencing some of her needs and frustrations for the sake of maintaining the harmony within the family unit. Conversely, through traditional gender role expectations for Latino boys, they may show their familismo values more through acts of physical dominance in order to assert their strength and physically protect their families; perhaps sacrificing their physical well-being for their family (Castillo et al., 2010).

When looking at gender role values, however, gender differences do begin to arise in levels of endorsement. For the current study, both the boys and girls were asked about their levels of endorsement of traditional machismo, caballerismo, and marianismo beliefs. It is interesting to note that the two constructs in which there were gender differences encompass values that may work towards the disempowerment of women. For example, Latina girls endorsed significantly lower levels of machismo values than boys. Within this gender role value, values are endorsed that place men in a dominant position over women (Arciniega et al., 2008). Another component of machismo values is that the use of aggression is acceptable in order to maintain the status quo. Additionally,

certain traditional marianismo beliefs dictate that a Latina should be self-sacrificing, self-silencing and subordinate to others (see Castillo et al., 2010). Perhaps this sample of girls, through the sociopolitical context in which they are embedded, have come to desire a different set of expectations for themselves; a more empowering set of roles that does not fall in line with these traditional beliefs. Boys on the other hand, through both of these gender role scripts, enjoy much power and privilege. It may be to their benefit to hold higher beliefs in these domains in order to continue to enjoy this power position within the Latino culture. The male gender role value of *caballerismo* did not have gender role differences for this sample; in other words, boys and girls equally endorsed the value that men should be being respectful and chivalrous.

**Caregiver-child relationship differences.** During adolescence, although peer relationships begin to become more salient for Latino youth as they move towards acquiring more autonomy, since *familismo* values are central to the self, parent-child interactions continue to play an important role (Zayas & Pilat, 2008). In the current study, Latina girls were more likely to report that their closest caregiver was female; conversely, boys were more likely to report their male caregiver was closest. Research shows that female caregivers spend more time with female children; whereas male caregivers spend more time with male children (McHale, Crouter & Tucker, 1999). Additionally, Raffaelli and Ontain (2004) found that caregivers of the same gender as the adolescent are more directly involved in the gender socialization of that adolescent. Perhaps because gender socialization and identity are important during this developmental stage, the youth feels more connected with the same gendered caretaker

who has more similar experiences around gender socialization and whom they spend the most time with. In this case, adolescents may feel that the same gender parent may be the one who will understand them more during this period of exploration and identity formation.

Research has provided evidence that often time's gender role socialization messages often come from the parent of the same gender. For example, in a study of Latino gender role socialization, it was discovered that the same-sex parent, as opposed to the cross-sexed parent, was the parent that was more active in teaching traditional gender role behaviors (Raffaelli & Ontai, 2004; Raffaelli & Ontai, 2001). Specifically, it was Latina mothers who would encourage stereotypical feminine behaviors for girls and Latino fathers would do the same for their sons. This pattern is also consistent with gender socialization patterns in families of other ethnic groups (McHale, Crouter, & Whiteman, 2003). Additionally, it has been found that the same-sex parents often engage in more activities and monitoring of the same-sex child than of the opposite sex (McHale, Crouter, & Tucker, 1999).

**Depressive and suicidality differences.** In the current sample, girls report higher levels of depressive symptoms than boys. This is consistent with previous literature with Mexican American adolescents (Robert & Chen, 1995). In addition to displaying higher levels of depressive symptoms, the girls in this sample are reporting a higher prevalence of suicidal ideation, plans and attempts within the last year than boys. Again, this is consistent with the last few decades of suicidality reporting. For example, for over a decade, the YRBSS (2010) has shown that Latina female adolescents report



almost twice the rate of self-reported ideation, plan and attempts than their male counterparts. Additionally, studies that look at rates for Mexican origin adolescents are also consistent. For example, in a study that compared Mexican American middle school boys and girls, girls reported the higher prevalence rates of suicidal ideation than boys (Roberts & Chen, 1995)

### **Research Question 2: Do Various Domains of the Acculturation Gap Impact the Caregiver-child Relationship?**

According to the acculturation gap hypothesis, acculturation differences between children and their parents has a negative impact on the relationship between parents and children. As a consequence of this negative relational impact, it is hypothesized that this then leads to negative mental health outcomes for ethnic minority youth (Lee et al., 2000). In the current study, this theory has been expanded to examine multiple dimensions of acculturation in addition to understand both the positive and negative impacts these gaps can have on the relationship between Mexican American youth and their primary male and female caregivers. Specifically, behavioral, affective and cognitive dimensions of acculturation gaps were investigated to determine if they had differential impacts on Mexican American boys and girls relationships with their caregivers. The impact that both positive and negative relationships could have on the depression and suicidality of these youth was then tested.

The choice to examine the caregiver-child relationship, as opposed to merely the parent-child relationship, is a product of the reality that many Mexican American adolescents live in homes, where one or both of their biological parents are not present

(Wagner, Ritt-Olsen, Chou, Pokhrel, Duan, Baezconde-Garbanati, Soto, & Unger, 2010). This recent research is supported by the current sample's demographics, 90.9% of the youth are cared for by their biological mother, and only 74.7% by their biological father. The choice to include youth with non-traditional family caregivers helps this study have greater generalizability to the reality of Latino youth in the U.S.

**Behavioral and affective acculturation gaps.** Although it was hypothesized that all dimensions of acculturation would significantly predict caregiver-child relations, behavioral and affective acculturation gaps were not statistically significant predictors of any of the caregiver-child relationship variables tested in the hypothesized model. These findings highlight the necessity of separating and investigating the three dimensions of acculturation gaps when testing the acculturation gap hypothesis. Why may these dimensions not matter so much for the relationship? Perhaps the lack of statistically significant findings lies in the context of which the participants were embedded. The south Texas city in which the data was collected is located on the Texas-Mexico border. The proximity to the border promotes bilingualism across generations. In the current study, the measure of behavioral acculturation was strongly tied to language use. The questions that were asked in the survey were directed at the language use that the adolescent and parent prefers to use. Since the environment in which these youth are embedded demands for them to shift in and out of both languages, perhaps this is the reason this type of gap does not have an impact on the caregiver-child relationships. This may partially explain why behavioral acculturation gaps may not necessarily negatively impact the parent-caregiver relationship. Future research is needed that

examines the impact of behavioral acculturation in other areas that Mexican American youth live in the U.S. in order to determine if the context of this study is indeed the cause of the lack of findings.

In reference to the lack of support for the affective acculturation link to caregiver-child relationship, perhaps the ethnic identity developmental process could partially explain these findings. Identity development is an important task during adolescence (Erikson, 1968). Part of this process involves the youth becoming comfortable and developing feelings toward their ethnic group (Bernal & Knight, 1993; Phinney, 1992; Tajfel, 1981). In the present study, affective acculturation was assessed by which culture the youth feels more connected to in various contexts (Tropp et al., 1999). The feelings that youth have toward their developing ethnic identity is an internal and individual process. Due to the nature of the affective dimension, perhaps these youth are not communicating their preference or feelings to their parents; thus it does not impact their relationship. When it could possibly become problematic is when the adolescent communicates feeling less connected to the culture of origin than their parents. However, this evaluation cannot be made since the present study did not measure the communication of this affect. Future research should examine this nuance to determine if communication concerning this gap could have impact on the caregiver-child relationship.

**Cognitive acculturation gaps: Values matter.** Two cognitive acculturation variables that are consistently found across Latino ethnic groups are familismo and gender role values (Santiago-Rivera et al., 2002). For Latinos, it has been noted that

attitudinal familism is stable construct across generations, language use and country of origin (Villareal, Blozis, & Widaman, 2005). Additionally, studies on gender role socialization have shown that the socialization of gender is critical in the Latino culture because it clearly delineates the roles and expectations that are to be followed in order to uphold other values within the culture such as respeto, simpatia and familismo (Castillo et al., 2010).

As previously mentioned, although the value of familismo is salient for both Mexican American boys and girls, the core value is often manifested in different ways (Castillo et al., 2010). Additionally, often times when the traditional gender role values of machismo, caballerismo and marianismo are studied, they are done so with the gender in which the roles directly affect. Gender role socialization occurs in a reciprocal process. In other words when a girl learns how a girl “should be” she is also learning this within the context of “what a girl should be relative to a boy.” The Latino gender role schemas can be thought of mirrors of one another and for one schema to exist, the other must be present (Stevens, 1973).

These two value sets hold particular salience for upholding the traditional Latino cultural structure and practices. For the present study, acculturation gaps in the cognitive domains have statistically significant effects on the caregiver-child relationship. Specifically, it was found that gaps in familismo values impacted caregiver child conflict, female caregiver connectedness, and male caregiver connectedness. Gaps between the adolescent and caregivers on machismo and marianismo values impacted the connection the youth perceived with their male caregiver. The findings of the

present study highlight this salience and the recognition that Latino parents have of the importance of value adherence to the maintenance of the Latino culture in the face of their children acculturating to the U.S. Although as demonstrated in this study, the caregiver-child relationship does not seem to be impacted by the acculturation gaps on the behavioral and affective dimensions, this is not the case for the cognitive dimension. The cognitive dimensions seems to be the dimension that affects how much Mexican American children feel connected to their caregivers and also impacts the level of conflict that occurs between the generations. Values matter.

*Familismo.* Of the two sets of values, familismo was the only value that consistently predicted all caregiver-child relationship variables. Specifically, as reported by the adolescents, the greater the acculturation gap between their caregiver and their own values related to family, the more conflict that would occur in the caregiver-child dyad. Conversely, the less intergenerational difference that occurred between the child and caregiver, the more the adolescent reported feeling connected with both their male and female caregiver. These findings highlight the importance of maintaining the familismo values for both Mexican American male and female caregivers.

These findings are consistent with previous research and theory that supports the salience of familismo in Latino families. For example, In a study of Latina girls from New York, higher levels of familismo values increased the odds of being in a tight-knit family (high cohesion and low conflict) versus a loose-knit family (Peña et al., 2011). The authors of this study go on to explain their findings within a developmental context. During adolescence Latina girls struggle between the need for autonomy and

connectedness. This struggle can develop an incongruence between cultural values of family interconnectedness and a search to become more autonomous. They contend that this sets the stage for higher conflict or lower cohesion within the family environment if intergenerational acculturation gaps exist in familismo beliefs. Their interpretation of their findings are consistent with the acculturation gap hypothesis and the findings of the present study.

*Gender role values.* Gender role values within the Latino culture are important for Mexican American youth who are going through the identity development process. In conjunction with their ethnic identity development, they are also being socialized into and are developing their identity around their gender (Steensma, Kreukels, de Vries, & Cohen-Kettenis, 2013). During this developmental time Mexican American boys and girls are beginning to ask themselves “what does it mean to be a Latino boy/girl” and “what do I believe a Latino boy/girl should be like.” Questions and answers surrounding the issue of their gender are influenced by many factors including family, peer and societal interactions. For Latino youth, the transaction that occurs between these groups are complex and embedded within the acculturation process. With successive generations and exposure to mainstream culture, Mexican American youth may have a different conceptualization of that it means to be a Latino or Latina (i.e., the cognitive acculturation gap is widening between adolescents and caregivers). This can have implications for the caregiver-child relationship given that ethnic minority caregivers are often concerned with the preservation of their culture and the transmission to later generations. When, during the gender development process, an adolescent holds values

that are different from their caregivers, negative affects to their relationship could occur via intergenerational conflict (Lee et al., 2000).

In the present study, it was hypothesized that greater cognitive acculturation gaps on the dimensions of machismo, caballerismo and marianismo gender role beliefs would lead to more conflict and less connectedness between caregivers and their adolescent. Within this study, however, each of these hypotheses were not supported. The path model indicated that only the acculturation gap for machismo and marianismo had an impact on the caregiver-child relationship. Specifically, it was only the level of connectedness that the youth felt with their *male* caregiver that was shown to be statistically significant, not their female caregiver.

The gap between marianismo values of the caregiver and the child was related to the youth's feelings of connectedness with their male caregiver. As hypothesized, the relationship was negative, meaning that as the intergenerational gap widened, the level of connectedness to the male caregiver decreased. Within the Latino culture, men often enjoy the privilege of power over women in many domains (Raffaelli & Ontai, 2004; Stevens, 1973; Giraldo, 1972; Arciniega et al., 2008; Castillo et al., 2010). For this status quo to continue in subsequent generations, it is necessary that youth endorse the reciprocal gender role of marianismo. This traditional female gender role, in many respects, serves to maintain the established power hierarchy in the Latino culture through women being subordinate and self-silencing (Stevens, 1973). This may help explain why the gap had a negative impact on the youth's connectedness with their father, but not their mother. For the mother, the maintenance of this power differential may not be as

salient since through traditional marianismo gender roles, they are often kept in a subordinate position.

The results for the machismo gender role gap, although significant, were contrary to the hypothesized effect. For this study, as the gap in machismo beliefs between the caregivers and adolescents increased, so did the level of connectedness that the youth felt with their father. In order to explain these findings, the explanation may lie in that this study asked about the *perceptions* youth have about their connection with their parents. As part of the traditional machismo gender role, men are often emotionally restrictive as a way to avoid being perceived as weak (Torres, Solberg, & Carlstrom, 2002; Mirandé, 1997). When a child feels that men do not have to be restrictive in this manner, they may be more inclined to engage in activities with their father's that help them feel more connected. Additionally, the children may be more likely to interpret their father's actions in a manner that leads them to feel more connected. Future research should further investigate this dynamic. Perhaps other mechanisms are at play that may mediate or moderate this paradoxical relationship.

### **Research Question 3: Does the Caregiver-child Relationship Have an Impact on Depression and Suicidality?**

The third aim of this study was to understand if the caregiver-child relationship has an impact on the mental health of Mexican American adolescents. It was hypothesized that the connectedness variables would be negatively related to depression and suicidality; whereas the family conflict variable would be positively related. The majority of the hypothesized paths were found to be statistically significant, which adds



increasing support to the salience of the caregiver-child relationship during adolescence in Mexican American families.

The ability to feel connected with a caregiver is a process that develops over time and is less amenable to a single event (Lezin, Rolleri, Bean, & Taylor, 2004). Based on the more stable nature of connectedness with caregivers, this study hypothesized that when the adolescent feels more connected with their caregivers, they will experience less conflict with them (which is more acute and reactive to a situation). The results indicate that this hypothesis is supported for the relationship between female caregiver connectedness and conflict, but not for male caregiver connectedness. Specifically, as the youth feels more connected with their female caregiver, they are less likely to report family conflict.

**Caregiver-child relationship's impact on depressive symptoms.** In relation to the direct impact that the caregiver-child relationship has on depressive symptoms, all hypotheses were supported. Specifically, it was found that as levels of family conflict increased, so did depression symptoms. Alternatively, as the levels of connectedness with both male and female caregivers increased, the levels of depressive symptoms decreased. This is consistent with previous research with Latinos that have connected these variables (Céspedes & Huey, 2008; Hovey & King, 1996; Garcia et al., 2008). For example, Céspedes and Huey found that for Latinos, increased in family conflict and decreases in family cohesion were correlated with depressive symptoms.

Much of the research that investigates the relationship between caregivers and children focus on the mother. This study expands this literature to demonstrate the

importance of the relationship with caregivers in general, and specifically adds to the dearth of literature examining the male caregiver relationship. For depressive symptoms, the relationship that a youth has with both their male and female caregiver is salient.

**Caregiver-child relationship's impact on suicidality.** As was the case with depressive symptoms, it was hypothesized that family conflict would have a positive relationship the level of suicidality; whereas, female and male caregiver connectedness would have a negative relationship. Only one of these direct effects was supported in this model. The level of connectedness that the adolescent reported with their female caregiver was the only family relationship variable directly related to the level of suicidality for these youth. In other words, as the level of connectedness with the female caregiver increased, the level of suicidality decreased.

This finding contributes to the existing literature which connects the Latina female-caregiver and child relationship to suicidality outcomes. For example, the studies by Zayas et al. (2009) and Baumann et al. (2010) that connected mother-daughter mutuality with suicidality. The current study extends these findings to include the relationship with any female primary caregiver, not just the mother.

Finally, although family conflict and the male caregiver relationship with the adolescent did not show direct effects to suicidality, an examination of the indirect effects in this model gives the field a greater understanding of the mechanisms through which the acculturation gap hypothesis operates for Mexican American adolescence.

#### **Research Question 4: Does the Caregiver-child Relationship Serve as a Mediator between the Acculturation Gap and Mental Health Outcomes?**

As stated by the acculturation gap hypothesis, intergenerational acculturation gaps between ethnic minority children and their parents lead to negative mental health outcomes indirectly through the impact that they have on the parent-child relationship (Birman, 2006; Lee et al., 2000). This dissertation sought to test this hypothesis through a modified version of this model which takes into account various domains of acculturation, the protective and risk relationship qualities of Mexican American caregiver-child dyads with both the male and female caregivers. The acculturation gap hypothesis was supported for one dimension of acculturation: the cognitive dimension. Specifically, the hypothesis was fully supported for familismo acculturation gaps, but not gender role gaps.

To begin, we will look at the mediating role of female and male caregiver connectedness to the relationship between the familismo gap and the mental health outcomes. Female and male caregiver connectedness both significantly and fully mediates the relationship between the caregiver-child familismo gap and depressive symptoms. Additionally, depressive symptoms in turn partially mediate the relationship between female and male caregiver connectedness and the level of suicidality. Taken together this illustrates that as the gap in familismo widens between child and caregiver, depressive symptoms increase because of the negative impact that this gap has on the level of connectedness that youth feel with both their male and female caregivers. Additionally, a decreased level of connectedness due to the familismo acculturation gap,

indirectly leads to higher levels of suicidality due to the increase in depressive symptoms that it leads to.

This adds to the original acculturative gap hypothesis because it highlights the protective role that feeling connected with both the male and female caregiver can have for mental health outcomes. Originally the acculturation gap hypothesis focused on how the gap can lead to conflict, thus negative outcomes. Although this study highlights the role that family conflict can have on depressive symptoms through direct effects, it seems as if it is not as salient in depression and suicidality of Mexican American adolescents. The model illustrates that conflict is a mediator to the relationships between female caregiver connectedness and depression. In other words, smaller familism gaps lead to more connectedness to the female caregiver. This elevated level of connectedness then leads to less conflict, which in turn will decrease the level of depressive symptoms.

In addition to adding support to the acculturation gap hypothesis, this study highlights the protective role that can come from a smaller gap through the promotion of the youth feeling more connected with their caregiver, which in turn works to decrease the likelihood of depressive symptoms and suicidality. By taking into account nuances that are present in the acculturation gap, as well as in the caregiver-child relationship, this study helps shed light into how this hypothesis operates for Mexican American youth.

### **Research Question 5: Does Gender Moderate the Hypothesized Model?**

Based on the rationale that women within the Latino culture transmit cultural traditions and values to future generations through childrearing (Villenas, 2006), and that Latina girls have more physical contact with their caregivers due to strict rules placed on them (Raffaelli & Ontai, 2004; Raffaelli & Ontai, 2001) there are thus more opportunity for acculturation gaps to be noticed, it was hypothesized that the gaps would affect Mexican American boys and girls to differing degrees. This hypothesis was not supported, however. Model fit indices supported the fully constrained model, meaning that for boys and girls, the path estimates were not statistically different. Thus the full model and path coefficients are valid for both groups and no gender differences are present in the model. There are possible explanations for this finding; however these explanations will need to be further investigated with future research to test their plausibility. These possibilities will be discussed in the future research section.

### **Limitations and Future Directions**

Before moving forward to discuss the implications of this study, several limitations should be noted. First, since the data was collected cross-sectional, inferences about causality are not possible, only predictive relationships. Future research could benefit from testing this model in a longitudinal design in which they measure the effects of various dimensions of the acculturation gap over time. Certain dimensions may hold particular salience during different stages of development.

Secondly, certain threats are present in this study for generalizability. Since the questionnaires were given to students who were attending school, it may not be

representative to the larger Latino population. Since Latino adolescents at high risk of dropping out of school (Fry, 2003), the findings of this study are limited to those adolescents who are still in the education system. Additionally, since the data was collected with adolescents who live in a south Texas town, where the majority of the population is of Mexican origin, this may also affect generalizability to other Latino ethnic groups in differing contexts. It may be important to consider context when interpreting the findings of this study. These findings may hold for Mexican American youth in cultural enclaves; however, future research should test this model to determine if it also holds validity for Mexican American youth who are not living in “minority majority” contexts (Umaña-Taylor, 2004).

Next, our data is limited in that information was collected only from the adolescent. Even though previous research has supported the validity of the adolescents subjective experience (Céspedes & Huey, 2008; Rohner, 2004; Rohner, Kahleque & Cournoyer, 2005), cross referencing with the parents “true scores” on the measures used to derive discrepancies could provide additional value to this line of research.

Finally, future research could benefit from taking this model a step further to look at the congruence between cognitive beliefs and behaviors. For example, we could ask, “are youth that are reporting various levels of familismo and gender role beliefs enacting these beliefs in a congruent or incongruent manner?” It is possible to hold beliefs different from parents; however, choose to act in a manner that is congruent with what your parent believes in order to avoid conflict or to remain connected with them. This ability for cognitions and behaviors to be incongruent adds another layer to future

research. The question of cognitive and behavioral congruency/incongruency could explain the lack of gender differences for this model. Perhaps since Mexican American girls are often in close proximity with their caregivers in their daily life (Raffaelli & Ontai, 2004), they have learned how to match their behaviors with their parent's expectations to avoid negative implications to their relationships. The gender differences in this model may lie beyond the beliefs, and may lie in the behavioral manifestations. Investigating the mechanisms through which this is unfolding would be a fruitful direction for future studies.

### **Implications**

In terms of research implications, this study highlights the necessity of those who are studying the acculturation gap hypothesis to take into account various nuances in the model when studying Latino populations. Before making statements of the validity of this hypothesis for minority youth, consideration of the multiple dimensions of acculturation are needed. This research highlights the importance of the caregiver-child relationship and also provides support for the contention that it is not only the biological parent relationship that has an impact on the mental health of Mexican American adolescents. Acknowledgement of the complexity of the make-up of the Latino family is necessary as future research in this area grows. When mental health practitioners are attempting to assess youth with depressive and suicidality symptoms, it is important to explore not only the biological parental relationships, but also the relationship that exists between them and the individual that they consider to be their primary female and male caregivers.

The results of this study also have the potential to impact the mental health prevention and intervention work. Through the acknowledgement of a resiliency framework, understanding both risk and protective resources for Mexican youth can help mitigate the mental health risks Latino youth face. Counselors should consider cultural processes when working towards understanding the mental health outcomes for Mexican American youth. Scholars have noted a cultural deficit perspective is often taken when working with Latino youth (Santiago-Rivera et al., 2002; Bernal Saenz & Knight, 1991; Villalba, 2007). Through this perspective, researchers and practitioners often miss out on the strengths within the Latino community that could be protective resources. As highlighted through the findings of the present manuscript, *familismo* values are one of those strengths. For mental health practitioners working with Latino adolescents, considering the intergenerational cultural congruency of *familismo* can be of particular importance.

This study suggests that there are multiple intervention points for mental health practitioners working with Mexican American youth. It is important to first acknowledge that these adolescents are faced with a challenge that youth from the mainstream culture are not necessarily facing: acculturation. Within this process these youth undergo, one must acknowledge the stresses that can come out of this process, which include intergenerational gaps in behaviors, affect and cognitions. Mental health practitioners should be aware that for many Latinos, the value of *familismo* is central and, as this study highlights, can cause conflict or connectedness depending on how closely youth's values align with their parents. Intervention and prevention programming



aimed at improving the well-being of Mexican American youth should take into consideration this value. The incorporation of parents and the acknowledgement that this could be a source of stress for these families is essential. Scholars such as Villalba (2007) have made a call to the counseling profession to encourage the use of immediate and extended family as an asset in helping overcome social challenges and barriers. It is suggested that Latino youth be encouraged to look within their family unit for support and strength. Instead of viewing the child's value of family connectedness as dependency, or some other pathology, counselors and educators should view this value as an asset for Mexican adolescents. Incorporating families into school activities and interventions could help facilitate motivation and engagement in academics. For example, Torres-Rivera (2004) has suggested that finding ways to bring family members into the counseling process can be beneficial for Latino youth in developing resiliency. Through doing this the counselor is demonstrating an understanding of the value that family has in the life of Latino adolescents.

Working with parents and children to resolve value discrepancies can have positive effects in improving the relationship quality, and in turn decreasing depressive symptoms and suicidality. In an effort to avoid making assumptions that great value discrepancies exist, when conducting counseling with Mexican American youth, a practitioner can inquire about perceived value discrepancies between the adolescent and their primary caregivers. For example, when working with a Mexican American female struggling with depressive symptoms and suicidality, one may wish to ask about the youths perceptions of differences in familismo and gender role values. Further

exploration into the role that these discrepancies can have both on the male and female caregiver relationship can give the practitioner rich information as to build treatment planning off of.

Another important consideration is trying to figure out ways in which male caregivers can be incorporated into this programming. This study highlights that the relationship with the male caregiver is also an important part of preventing depression and suicidality. Much of the research in the past has been focused on the female caregiver-child relationship (Zayas, Bright, Alvarez-Sánchez, & Cabassa, 2009; Zimmerman & Zayas, 1995; Baumann, Kulberg, & Zayas 2010). Fathers are important also play an important role in adolescent well-being (Flouri & Buchanan, 2003), thus attention should be given to the effect of their relationship on Mexican American youth's mental health (Gulbas et al., 2011; Formoso, Gonzales, & Aike, 2000; McLanahan, 1999). Prevention efforts that incorporate many of the components this study investigates could help reduce the depression and suicidality for these youth; thus, may lower the costs for the U.S. population as well as the emotional toll that these issues can take on the Latino community. The knowledge gained from this study can be of particular use to those in the fields of psychology, psychiatry, public health, social work and education.

## CHAPTER IV

### SUMMARY AND CONCLUSIONS

#### **Summary**

The purpose of this dissertation was to examine cultural and familial risk and protective processes in Latino adolescents' lives that impact depression and suicidality. This was a two manuscript journal article formatted dissertation.

The first manuscript proposed an enhanced conceptual model of the acculturation gap hypothesis to explain the elevated vulnerability of Latino adolescents in the areas of depression and suicidality. Specifically, the modified conceptual model highlighted the importance of examining: acculturation multidimensionally (i.e., cognitively, behaviorally and affectively; Castillo & Caver, 2009); the impact of this gap on both female and male caregiver relationships; acknowledging the reality of the familial composition of many Latino youth's lives which include broadening the acculturation gap hypothesis to include primary caregivers regardless of biological relation; and the possible moderating effect that ethnic group membership and gender may play on this model.

The second manuscript was based off of the enhanced conceptual model presented in Manuscript 1. A resiliency model was created to investigate the impact caregiver-child acculturation, caregiver-child connectedness and conflict, and the mental health outcomes of depression and suicidality for Mexican American adolescents.

## **Conclusions**

The purpose of the empirical study in Manuscript #2 was to test a model of Mexican American adolescent depression and suicidality based on an enhanced acculturation gap hypothesis model which was presented in Manuscript #1. It was found that the cognitive acculturation gap variables of familismo, marianismo and machismo had an impact on the relationship the adolescent had with their caregiver. Specifically, greater gaps in familismo values were predictive of higher levels of caregiver-child conflict and lower levels of connectedness with the male and female caregiver. In terms of marianismo values, the larger the acculturation gap between the child and caregiver, the less connected the adolescent reported feeling with their male caregiver. For machismo gender role values, the larger the gap between the adolescent and caregiver, the closer they felt with their male caregiver. The acculturation gap model that was tested had acceptable model fit giving support to the acculturative gap hypothesis with cognitive acculturation variables. No gender differences were found in the tested model.

Several limitations existed in this study. First, since the data was collected cross-sectional, inferences about causality are not possible, only predictive relationships. Second, threats to generalizability were present given the specific context in which the data was collected. This data was collected in a south Texas city on the Texas-Mexico border in a high school setting. Given there are Mexican American populations that do not live in this context, caution should be taken before attempting to generalize these findings to groups outside of those studied. Finally, this data is limited in that information was collected only from the adolescent. Even though previous research has

supported the validity of the adolescents subjective experience (Céspedes & Huey, 2008; Rohner, 2004; Rohner, Kahleque & Cournoyer, 2005), cross referencing with the parents “true scores” on the measures used to derive discrepancies could provide additional value to this line of research.

This research highlights the importance of the caregiver-child relationship and also provides support for the contention that it is not only the biological parent relationship that has an impact on the mental health of Mexican American adolescents. Acknowledgement of the complexity of the make-up of the Latino family is necessary as future research in this area grows. The results of this study also have the potential to impact the mental health prevention and intervention work. Through the acknowledgement of a resiliency framework, understanding both risk and protective resources for Mexican American youth can help mitigate the mental health risks these youth face.

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APPENDIX  
FIGURES AND TABLES

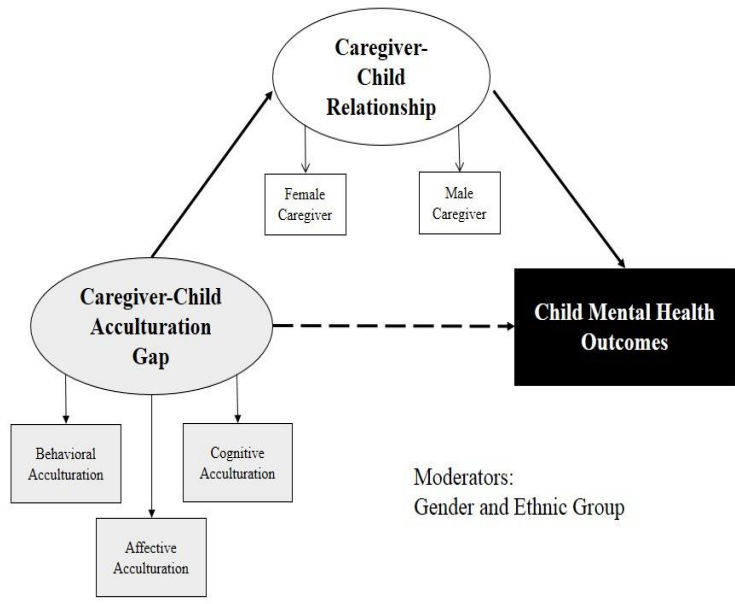


Figure 1. Conceptual Model

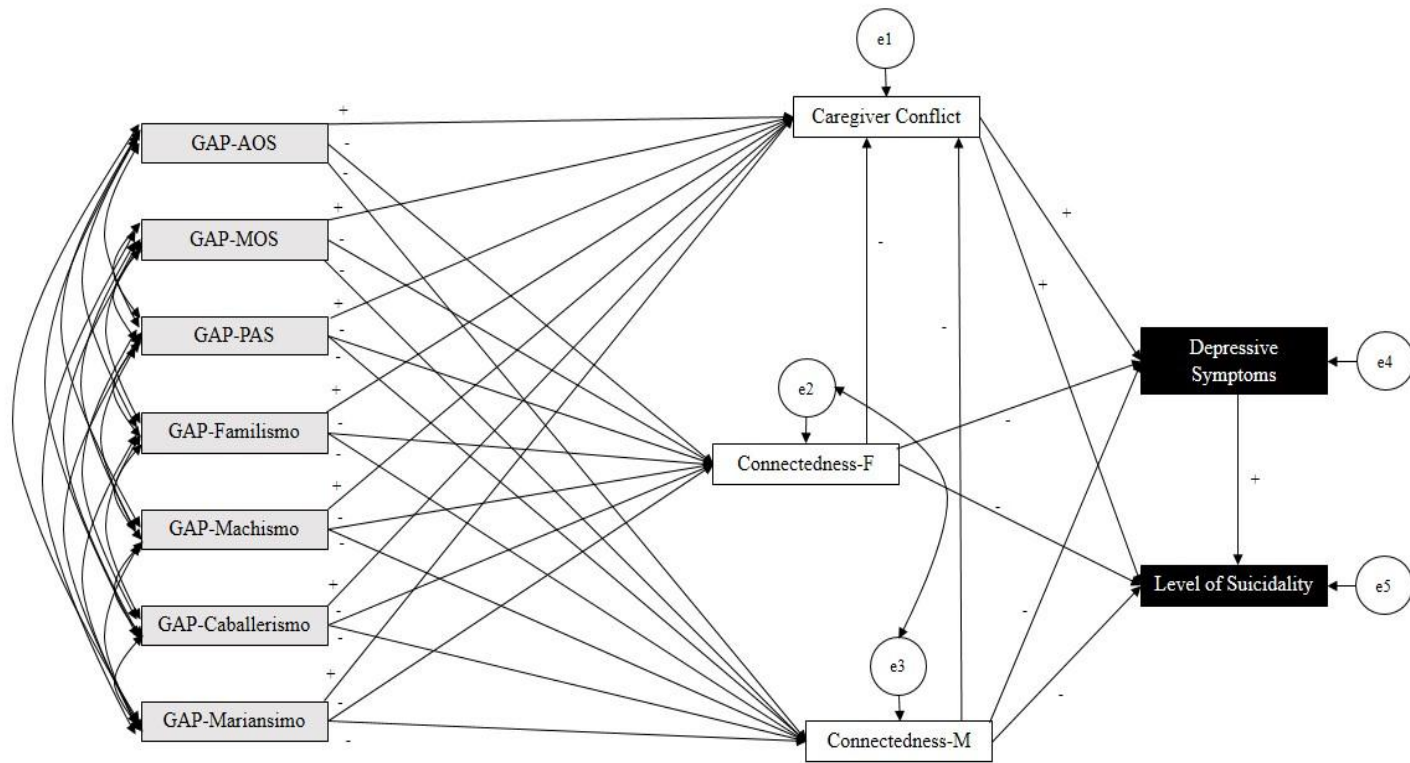


Figure 2. Hypothesized Path Model with Hypothesized Valences

*Note.* - = negative hypothesized valence; + = positive hypothesized valence; This model is hypothesized to be moderated by gender.

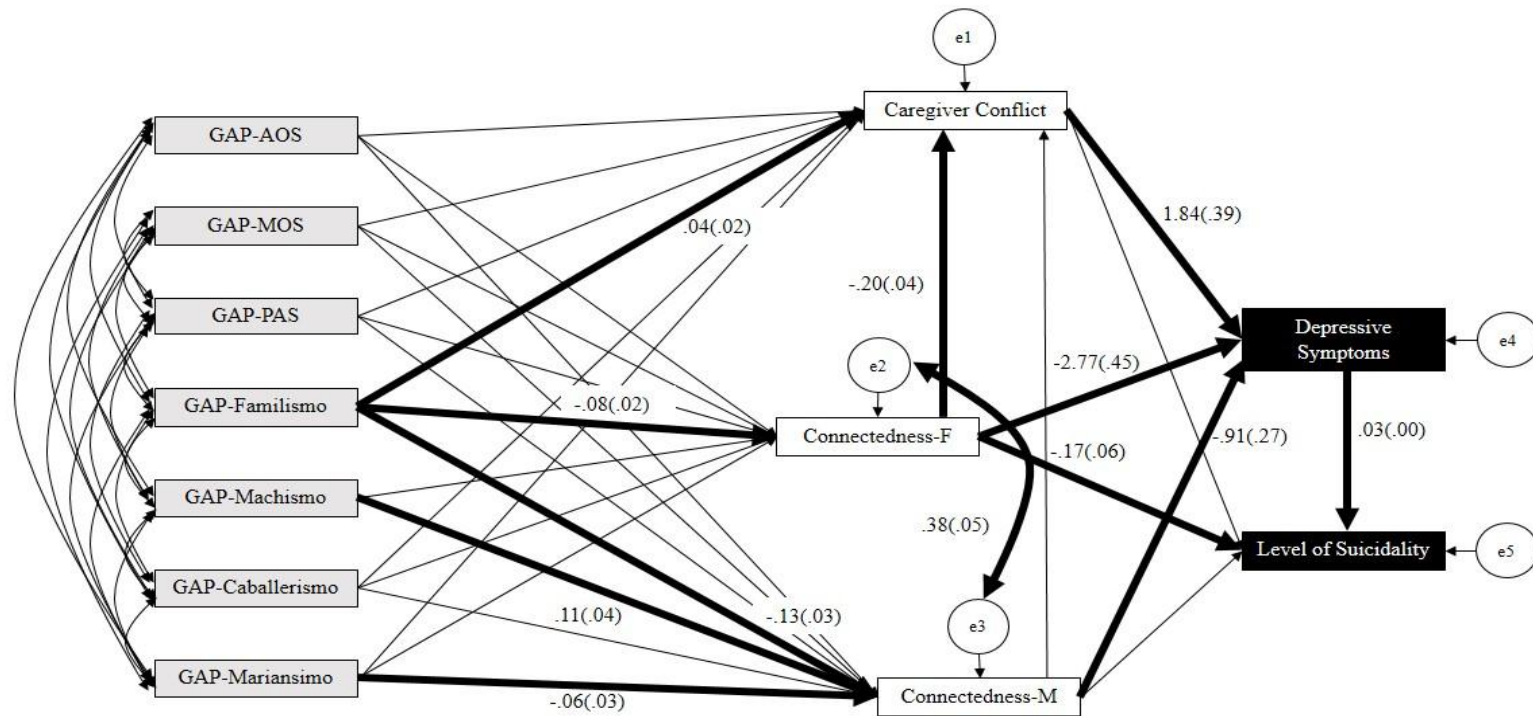


Figure 3. Final Model with Significant Paths Indicated

Note: Estimates with standard error of significant paths reported; Full reporting of unstandardized estimates with standard errors reported in Table 4; statistically significant direct effects indicated with solid bold line; non-bolded solid lines indicate the effect was not statistically significant at  $p < .05$  level; Overall, good model fit indicated by the hypothesized model with all paths constrained to be equal across gender:  $\chi^2 (59, 524) = 66.50, p > .05; \chi^2/df = 1.13; CFI = .97; TLI = .96; \& RMSEA = .02.$

Table 1  
*Sample Characteristics*

	<b>Total Sample (n = 524)</b>	<b>Females (n = 278)</b>	<b>Males (n = 246)</b>
	<b>%</b>	<b>%</b>	<b>%</b>
<b>Ethnicity</b>			
<i>Mexican American, only</i>	91.2	90.6	91.9
<i>Mexican American, bi-ethnic</i>	8.8	9.4	8.1
<b>Generation Status</b>			
<i>1<sup>st</sup> generation</i>	8.4	8.4	8.4
<i>2<sup>nd</sup> generation</i>	40.7	39.2	42.4
<i>3<sup>rd</sup> generation</i>	14.1	13.2	15.1
<i>4<sup>th</sup> generation</i>	19.6	21.2	17.6
<i>5<sup>th</sup> generation</i>	17.2	17.9	16.4
<b>Grade</b>			
<i>Freshman (9<sup>th</sup>)</i>	6.9	7.2	6.5
<i>Sophomore (10<sup>th</sup>)</i>	27.8	30.3	24.9
<i>Junior (11<sup>th</sup>)</i>	26.6	24.9	28.6
<i>Senior (12<sup>th</sup>)</i>	38.7	37.5	40.0
<b>Caregiver(s) in Home</b>			
<i>Female</i>	94.2	93.7	94.8
<i>Male</i>	78.6	76.1	81.6
<b>Female Caregiver</b>			
<i>Biological Mother</i>	90.9	94.2**	87.2**
<i>Stepmother</i>	1.4	1.5	1.2
<i>Grandmother</i>	4.4	3.3	5.8
<i>Aunt</i>	2.1	.4**	4.1**
<i>Other</i>	1.0	.7	1.2
<i>Does not have female caregiver</i>	.2	.0	.4
<b>Male Caregiver</b>			
<i>Biological Father</i>	74.7	77.5	71.6
<i>Stepfather</i>	9.5	9.1	9.9
<i>Grandfather</i>	3.5	2.9	4.1
<i>Uncle</i>	3.5	2.5	4.5
<i>Other</i>	2.5	3.6	1.2
<i>Does not have male caregiver</i>	6.4	4.4	8.6
<b>Closest Caregiver</b>			
<i>Female Caregiver</i>	77.3	87.2***	65.9***
<i>Male Caregiver</i>	22.7	12.8***	34.1***
<b>Suicidality Endorsement</b>			
<i>Ideation</i>	20.9	28.7***	11.9***
<i>Plan</i>	11.4	16.2***	6.0***
<i>Attempt</i>	7.3	9.9**	4.3**

*Note:* Pearson  $\chi^2$  tests were performed to determine if statistically significant difference exist between male and female groups (Pallant, 2010); \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table 2  
Skewness and Kurtosis for Measured Variables

	Skewness		Kurtosis	
	<i>Index</i>	<i>S.E.</i>	<i>Index</i>	<i>S.E.</i>
<b>Child Acculturation Levels</b>				
<i>AOS</i>	-1.09	.11	1.78	.21
<i>MOS</i>	.47	.11	-1.04	.21
<i>PAS</i>	-.18	.11	-.53	.21
<i>Familismo</i>	-.24	.11	.96	.21
<i>Machismo</i>	.30	.11	-.22	.21
<i>Caballerismo</i>	-1.53	.11	4.98	.21
<i>Marianismo</i>	.38	.11	.95	.21
<b>Caregiver Acculturation Levels</b>				
<i>C-AOS</i>	-.67	.11	-.84	.21
<i>C-MOS</i>	-.46	.11	-.94	.21
<i>C-PAS</i>	.24	.11	-.97	.21
<i>C-Familismo</i>	-.52	.11	.29	.21
<i>C-Machismo</i>	.34	.11	-.19	.21
<i>C-Caballerismo</i>	-1.38	.11	2.99	.21
<i>C-Marianismo</i>	.27	.11	.60	.21
<b>Caregiver-Child Acculturation Gaps</b>				
<i>GAP-AOS</i>	.07	.11	1.04	.21
<i>GAP-MOS</i>	-.35	.11	1.67	.21
<i>GAP-PAS</i>	-.65	.11	1.11	.21
<i>GAP-Familismo</i>	.51	.11	5.68	.21
<i>GAP-Machismo</i>	.12	.11	1.86	.21
<i>GAP-Caballerismo</i>	-.28	.11	5.28	.21
<i>GAP-Marianismo</i>	.36	.11	3.67	.21
<b>Other Variables</b>				
<i>Caregiver Conflict</i>	.23	.11	-.76	.21
<i>Connectedness-F</i>	-1.68	.11	3.28	.21
<i>Connectedness-M</i>	-1.08	.11	.20	.21
<i>Depressive Symptoms</i>	.92	.11	.53	.21
<i>Suicidality Level</i>	2.47	.11	5.15	.22

*Note:* All variables are normally distributed based on the following criteria: Skewness Index with an absolute value  $\leq 3$  and Kurtosis Index with an absolute value  $\leq 8$  (Curran, West, & Finch, 1995; Kline, 2005).

Table 3  
Means, Standard Deviations, and Group Mean Comparisons

	All Participants		Females		Males	
	Mean	SD	Mean	SD	Mean	SD
<b>Child Acculturation Levels</b>						
<i>AOS</i>	4.03	.57	4.05	.55	4.00	.60
<i>MOS</i>	2.63	1.21	2.76 <sup>***</sup>	1.23	2.48 <sup>***</sup>	1.16
<i>PAS</i>	3.89	1.56	3.72 <sup>**</sup>	1.58	4.09 <sup>**</sup>	1.52
<i>Familismo</i>	3.65	.62	3.68	.60	3.61	.64
<i>Machismo</i>	2.24	.55	2.02 <sup>***</sup>	.48	2.48 <sup>***</sup>	.54
<i>Caballerismo</i>	3.48	.38	3.49	.36	3.47	.41
<i>Marianismo</i>	2.63	.43	2.59 <sup>*</sup>	.43	2.68 <sup>*</sup>	.41
<b>Caregiver Acculturation Levels</b>						
<i>C-AOS</i>	3.40	1.17	3.31	1.25	3.50	1.08
<i>C-MOS</i>	3.56	1.17	3.69	1.18	3.49	1.16
<i>C-PAS</i>	3.12	1.77	2.85 <sup>*</sup>	1.74	3.42 <sup>*</sup>	1.76
<i>C-Familismo</i>	3.99	.65	4.08 <sup>***</sup>	.60	3.88 <sup>***</sup>	.69
<i>C-Machismo</i>	2.32	.65	2.17 <sup>***</sup>	.65	2.49 <sup>***</sup>	.62
<i>C-Caballerismo</i>	3.33	.53	3.40 <sup>**</sup>	.49	3.25 <sup>**</sup>	.56
<i>C-Marianismo</i>	2.82	.48	2.81	.48	2.83	.48
<b>Caregiver-Child Acculturation Gaps</b>						
<i>GAP-AOS</i>	-.003	1.70	-.18 <sup>*</sup>	1.64	.20 <sup>*</sup>	1.74
<i>GAP-MOS</i>	.005	2.40	-.09	2.40	.11	2.40
<i>GAP-PAS</i>	-.009	2.87	-.11	2.90	.10	2.82
<i>GAP-Familismo</i>	.001	2.40	.20 <sup>*</sup>	2.43	-.23 <sup>*</sup>	2.34
<i>GAP-Machismo</i>	-.001	1.52	.26 <sup>***</sup>	1.38	-.30 <sup>***</sup>	1.62
<i>GAP-Caballerismo</i>	.003	1.51	.17 <sup>**</sup>	1.35	-.19 <sup>**</sup>	1.66
<i>GAP-Marianismo</i>	.004	2.02	.17 <sup>*</sup>	1.89	-.19 <sup>*</sup>	2.15
<b>Other Variables</b>						
<i>Caregiver Conflict</i>	2.67	.98	2.66	1.03	2.69	.91
<i>Connectedness-F</i>	4.31	.90	4.33	.84	4.30	.96
<i>Connectedness-M</i>	3.67	1.44	3.62	1.42	3.74	1.45
<i>Depressive Symptoms</i>	17.15	10.55	18.03	10.92 <sup>*</sup>	16.15 <sup>*</sup>	10.05

Note: Independent sample t-tests were performed to test mean group differences: Statistically significant differences between males and females: <sup>\*</sup>  $p < .05$ , <sup>\*\*</sup>  $p < .01$ , <sup>\*\*\*</sup>  $p < .001$ ; AOS = behavioral acculturation; MOS = behavioral enculturation; PAS = psychological acculturation; Connectedness-F = female caregiver connectedness; Connectedness-M = male caregiver connectedness; scales annotated with “C” are the caregiver scales; scales annotated with “GAP” were computed using the formula:  $GAP = [(Z_{parent} - Z_{youth}) / ((1 - \alpha_{parent}) + (1 - \alpha_{youth}))^{1/2}]$ .



Table 4

*Unstandardized Direct Path Estimates, Standard Errors, and R<sup>2</sup>*

	<i>B</i>	<i>S.E.</i>	<i>p-value</i>	<i>R<sup>2</sup></i>	
				<i>Females</i>	<i>Males</i>
<b>Caregiver Conflict</b>				.07	.08
GAP-AOS → Conflict	-.04	.03	.28		
GAP-MOS → Conflict	.01	.02	.52		
GAP-PAS → Conflict	.03	.02	.13		
GAP-Familismo → Conflict*	.04	.02	.03		
GAP-Machismo → Conflict	.06	.03	.08		
GAP-Caballerismo → Conflict	-.04	.04	.30		
GAP-Marianismo → Conflict	-.02	.02	.29		
Connectedness-F → Conflict*	-.20	.04	.00		
Connectedness-M → Conflict	-.04	.03	.18		
<b>Connectedness-F</b>				.06	.06
GAP-AOS → Connectedness-F	-.04	.03	.16		
GAP-MOS → Connectedness-F	.02	.02	.27		
GAP-PAS → Connectedness-F	.01	.02	.76		
GAP-Familismo → Connectedness-F*	-.08	.02	.00		
GAP-Machismo → Connectedness-F	.02	.03	.53		
GAP-Caballerismo → Connectedness-F	-.02	.03	.56		
GAP-Marianismo → Connectedness-F	-.03	.02	.14		
<b>Connectedness-M</b>				.07	.08
GAP-AOS → Connectedness-M	-.07	.05	.12		
GAP-MOS → Connectedness-M	.02	.03	.59		
GAP-PAS → Connectedness-M	-.02	.03	.34		
GAP-Familismo → Connectedness-M*	-.13	.03	.00		
GAP-Machismo → Connectedness-M*	.11	.04	.01		
GAP-Caballerismo → Connectedness-M	.06	.04	.17		
GAP-Marianismo → Connectedness-M*	-.06	.03	.05		
<b>Depressive Symptoms</b>				.12	.16
Conflict → Depressive Symptoms*	1.84	.39	.00		
Connectedness-F → Depressive Symptoms*	-	.45	.00		
Connectedness-M → Depressive Symptoms*	-	.45	.00		
Conflict → Level of Suicidality	.09	.06	.11		
<b>Level of Suicidality</b>				.18	.17
Connectedness-F → Level of Suicidality*	-.17	.06	.00		
Connectedness-M → Level of Suicidality	-.02	.04	.67		
Depressive Symptoms → Level of Suicidality*	.03	.00	.00		
e2 (Connect-F error) ↔ e3 (Connect-M error)*	.38	.05	.00		

*Note:* \* Indicates significant paths at the  $p < .05$  level; A visual representation of this model is available in Figure 3.

Table 5

*Bootstrapping Mediation Estimates and Confidence Intervals*

	<i>B</i>	<i>S.E.</i>	<i>p-value</i>	95 % Confidence Intervals	
				<i>Lower</i>	<i>Upper</i>
<b>Indirect Effects</b>					
GAP-Familismo → Conflict → Depress	.05	.04	.21	-.01	.14
GAP-Familismo → Connect-F → Depress*	.22	.07	.00	.11	.38
GAP-Familismo → Connect-M → Depress.*	.12	.06	.04	.03	.26
GAP-Familismo → Connect-F → Level of Suicidality	.01	.01	.28	.00	.02
GAP-Machismo → Connect-M → Depress.	-.08	.05	.13	-.23	-.01
GAP-Marianismo → Connect-M → Depress.	.13	.08	.11	.00	.32
Connect-F → Conflict → Depress.*	-.35	.15	.02	-.73	-.11
Connect-F → Depress → Level of Suicidality*	-.09	.03	.00	-.15	-.05
Connect-M → Depress → Level of Suicidality*	-.03	.01	.03	-.06	-.01

Note: Connect-F = female caregiver connectedness; Connect-M = male caregiver connectedness; Depress. = Depressive Symptoms; \* Indirect effects with  $p < .05$  and 95% Confidence Intervals that do not cross zero are considered significant indirect, or mediation, effects (Preacher & Hayes, 2008).