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The Role of Acculturation in Adolescent Mental Health and Academic Achievement: Mediational Pathways

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The Role of Acculturation in Adolescent Mental Health and Academic Achievement: Mediational Pathways

by

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Dedication

I dedicate this dissertation to my younger brother, Javan. You have always served as the inspiration for my work with children and families. Even now as an adolescent, you teach me how to teach others empathy, perspective taking, but mostly, patience. I look forward to the many years we will spend together and the many special gifts you will share along the way.

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Abstract

This study investigated the different pathways by which acculturation may influence Hispanic adolescents' psychological functioning and academic achievement. Proposed mediational pathways included adolescent perceptions of mothers' and fathers' parenting practices, acculturative stress, self-esteem, academic support, and academic motivation. Participants included 116 9th and 10th grade students recruited from high schools and a parent for each student. Parents completed a measure of acculturation and rated their adolescents' psychological symptomology. Adolescents completed measures of perceived parenting (mother and father), a self-report of psychological symptoms, a measure of acculturation and acculturative stress, as well as ratings of academic support and motivation. Mediation analysis was utilized to identify mediators of family acculturation in relation to adolescent mental health and academic achievement. Results showed that adolescent self-esteem partially mediated the relationship between parent biculturalism and adolescent withdrawn behavior. Correlational findings identified positive relationships between parent and adolescent preference for American culture to be related to increased likelihood of academic achievement and self-esteem, and decreased internalizing and externalizing behaviors. These findings suggest that biculturalism (preference for both Hispanic and American culture) at the familial and individual level may serve as a protective buffer against adolescent mental health symptoms and poor academic performance. Findings are discussed in terms of preventive interventions for Hispanic youth.

Introduction

Acculturation is defined historically as "those phenomena, which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original patterns of either or both groups" (Redfield, Linton, & Herskovits, 1936, p. 149). Forms of acculturation may include assimilation, integration, reactive, creative, and delayed (Berry, 1997). Assimilation is the most popularized form of acculturation and requires adaptation to the dominant culture by abandonment of the culture of origin. Delayed acculturation (cultural changes that appear in later years) is commonly experienced by elders. Still yet other forms of acculturation can be seen in society and contribute meaningfully to the evolving of mainstream culture. For example, integration (maintaining culture of origin while participating in activities of dominant group), reactive (change in both dominant and acculturating group), and creative (establishment of a new cultural form) forms of acculturation introduce diversity in schools, workplaces, and institutions.

Acculturation Framework

Berry (1997) was among the first to introduce a systematic and theoretical framework for the process of acculturation in groups and individuals (Figure 1). This framework is guided by cultural (group) and psychological (individual) phenomena. At the cultural level, the society of origin (including political context, economic situation, demographic factors) and society of settlement (e.g., multi-cultural ideology, ethnic attitudes, social support for larger society and ethnic society) work together to create the

group acculturation process with physical (e.g., population density), biological (e.g., new diet, exposure to new diseases), economic (e.g., financial loss or employment gain), social (e.g., friendships), and cultural (e.g., language and religion) factors impacting individuals. At the psychological level, there are moderating factors prior to and during acculturation. Demographic characteristics (e.g., age, gender, education, status), motivation, expectations, cultural distance (e.g., language, religion), and personality (e.g., flexibility, locus of control) represent factors that influence families prior to acculturation. Length of the acculturation process (i.e., time), attitudes and behaviors towards acculturation, coping strategies, social support, and experiences with prejudice and discrimination are factors that influence the ongoing acculturative process. Together, these moderating factors influence the level of acculturative stress that is experienced by individuals.

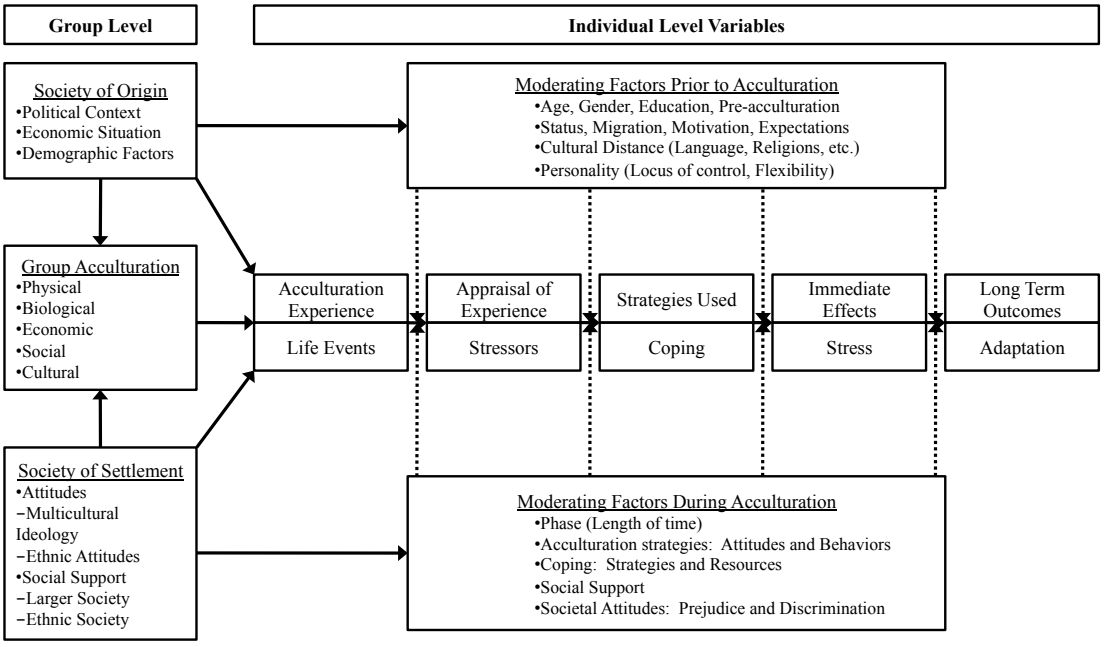

Figure 1. Berry's (1997) framework for acculturation research.

While the process of acculturation is behavioral, there are psychological challenges and outcomes that result from the act of acculturation. The psychosocial aspect of acculturation requires the acculturating group or individual to unlearn aspects of their culture of origin that opposes the dominant culture and acquire characteristics compatible with the new culture. When there is some difficulty in the process, acculturative stress occurs, with major incompatibilities contributing to psychopathology (Berry, 1997).

Acculturative stress. Whereas acculturation refers to cultural changes resulting from encounters with other groups, psychological acculturation and adaptation, also known as acculturative stress, refer to changes and outcomes occurring as a result of the acculturation process (Berry, 1997). Acculturative stress can be represented by transitional elements in Berry's model (Figure 1). Both cultural and psychological variables work to impact the level of acculturative stress. It is suggested that the demands from interacting with both groups (i.e., native and dominant) leads to the appraisal of experiences (and associated stressors) that evoke the use of coping strategies. If the demand is easily adaptable, there is no acculturative stress experienced. However, if the intercultural contact becomes conflictual, acculturative stress occurs because there is no easy way to adjust; thus, coping strategies may need to be initiated (i.e., problem-focused, emotion-focused, or avoidance-oriented). Active problem-solving coping styles such as positive planned action, talking with someone about problems, and drawing upon past experiences (Mena, Padilla, & Maldonado, 1987), are associated with the best outcomes (Torres & Rollock, 2007). However, if coping strategies are weak or ineffective, acculturative stress is experienced. The continued stress will lead to negative

long-term outcomes for the individual especially with respect to adaptation to the dominant culture and possible psychopathology. Although these issues are relevant for all minority groups, they are especially salient for the Hispanic population.

Acculturative Stress in Hispanics[1]

The Hispanic population holds a historical emigrative relationship with the United States (US). It is projected that by the year 2050 the Hispanic population in the US will triple in size (an 188% increase), while the non-Hispanic population is expected to decline (US Census Bureau, 2004a,b). Hispanics account for about one-half of the nation's growth and between 2000 – 2006, the Hispanic growth rate (24.3%) was three times the growth rate of the total population (6.1%), with an estimated 44.3 million Hispanics living in the US in 2006 (US Census Bureau, 2006). Results from the 2006 American Community Survey indicated 76.4% of Hispanics living in the US are of Mexican (64%), Puerto Rican (9%), or Cuban (3.4%) heritage, and 40% of Hispanics are born in foreign countries (US Census Bureau, 2006). Given these patterns, it is surprising that researchers have largely ignored Hispanic families until recently (McLoyd, Cauce, Takeuchi, & Wilson, 2000). Even less research has investigated how parenting in Hispanic families contributes to child outcomes (Carlson, Uppal, & Prosser, 2000). Therefore, the Hispanic population has been a target of investigation with an eye towards acculturation and acculturative stress.

It has been suggested that the most noteworthy aspect of acculturative stress in Hispanic families concerns the loss of social support – from families and close relationships (Smart & Smart, 1995). The loss may be related to actual separation or

[1] The term Hispanic will be used rather than Latino/a because it is the term endorsed by the US Census Bureau.

anticipated loss, and for many Hispanic families, the loss of family contributes to a loss of identity. Hispanic families also endure other forms of acculturative stress. Smart and Smart (1995) identified six characteristics that contribute to acculturative stress in Hispanics. Hispanic families may experience 1) discrimination based on skin color, 2) loss of social and families ties corresponding to a blurring of gender roles, 3) immigration stress (legal and illegal), 4) slowed acculturation due to geographical proximity, e.g., easy mobility between US and Hispanic countries, 5) history of armed conflict between the US and country of origin, and 6) language barriers for employment.

Acculturation, Acculturative Stress, and Mental Health

There is a growing body of literature suggesting that less acculturated Hispanic adults in the US experience greater psychological problems than those who are more acculturated (Organista, Organista, & Kurasaki, 2003). Similarly, Hispanic youth have been found to experience stressors related to immigration status, communication and language barriers, school and academic difficulties, and peer and family related conflicts (Cervantes & Cordova, 2011). Rogler and colleagues (1991) reasoned that poor mental health outcomes in less acculturated Hispanic adults may be due to a lack of a supportive social network, prejudiced attitudes towards Hispanics, and increased alcohol and drug use. However, level of acculturation has not been found to be predictive of psychological distress in Hispanic psychiatric patients (Thoman & Suris, 2004). Instead, acculturative stress has emerged as a significant predictor of psychological symptomology above and beyond demographic characteristics (Thoman & Suris, 2004). Socio-cultural and psychological predictors of acculturative stress in Hispanic adults include lesser degrees of acculturation, a preference for Spanish language, family cohesiveness, time in the US,

and coping skills deficits (Miranda & Matheny, 2000). Some researchers have speculated that biculturalism is associated with the best outcomes in Hispanic adults (Rogler, Cortes, & Malgady, 1991) and Hispanic families (Smokowski, Rose, & Bacallao, 2008); whereas other studies find that the *level* of biculturalism is important, such that low-levels of biculturalism are associated with psychological distress (Thoman & Suris, 2004).

Additionally, there is an increasing literature base addressing the connections between child and adolescent acculturation, acculturative stress, and mental health. When an adolescent's ethnic upbringing or background differs from that of the dominant culture, there may be pressure to assimilate to that culture, preserve the culture of origin, or both (Achenbach, Rescorla, & Ivanova, 2005). This internal struggle (i.e., acculturative stress) may contribute to mental health problems (Ryan-Arredondo & Sandoval, 2005). A study by Hawley, Chavez, and St. Romain (2007) found that Hispanic children demonstrated greater levels of acculturative stress and overall stress when compared to White children. Hispanic children who reported greater acculturative stress engaged in particular coping strategies to a greater extent than other Hispanic children. These strategies included seeking social support from family, peers, religion, or from professionals, solving family problems, being humorous, relaxing, being self-reliant and optimistic, and engaging in activity. Hovey and King (1996) found that a significant amount of Hispanic adolescents experiencing higher levels of acculturative stress reported suicidal ideation and clinical levels of depression.

Acculturative stress in children and adolescents. Whereas adults have more ease in identifying with a particular cultural group, young children may have more difficulty. Acculturation cannot occur until the child is able to identify with a cultural group and

differentiate it from others. This process is thought to occur when there is cognitive maturation (approx. 9 years of age) whereby children have some understanding of ethnic identity. Once children are able to categorize groups, children from acculturating groups may begin to engage in social comparisons and experience external pressures and stressors for adaptation (Chavez et al., 1997). It is also important to note that the level of acculturative stress may be a function of generational status and age. Perez and Padilla (2000) found that cultural orientation to family of origin decreased across three generations of Hispanic adolescents whereas cultural orientation towards the American culture increased linearly. These findings suggest that there is some, but not complete, acculturation to the dominant culture and later generations of Hispanic children and adolescents may develop biculturalism (i.e., incorporating mainstream values, while retaining core ethnic values).

Externalizing symptomology. Child and adolescent externalizing symptomology refers to disruptive (e.g., inattention, hyperactivity, aggression, defiance) and risk-taking (e.g., sexual behaviors drug and alcohol use) behaviors. Level of acculturation and associated acculturative stress has been related to child and adolescent externalizing behavior. Adolescents with greater acculturation have been found to engage in cigarette smoking, use alcohol, and have sexual intercourse to a greater degree than less acculturated Hispanic adolescents (Ebin, Sneed, Morisky, Rotheram-Borus, Magnusson, & Malotte, 2001). Gonzalez Wahl and McNulty Eitle (2010) further emphasize that immigration status may contribute to substance use, such that first generation immigrant Hispanic youth in their study were less likely to use alcohol and binge drink than third generation and above adolescents. The use of substances may be one way to cope with

the demands of adapting to a new culture. Guilamo-Ramos and colleagues (2004) found that recent immigrants to the US and acculturated Hispanic youth with previous experimentation with alcohol were more likely to binge drink than those with little or no prior alcohol use. These findings suggest that Hispanic adolescents experience acculturative stress either due to recent immigration or from previous experiences with discrimination and stressors; however, the use of alcohol as a coping strategy is related to previous use and not the act of acculturation. Likewise, peer alcohol use has risen as an early predictor of Hispanic adolescent alcohol use, such that peers are viewed as role models (Segura, Page, Neighbors, Nichols-Anderson, & Gillapsy, 2003), and newly acculturating adolescents may fall prey to peer pressure. Selective acculturation (or biculturalism) is also related to decreased alcohol use (Gonzalez Wahl & McNulty Eitle, 2010).

Acculturative stress, regardless of where children are in the acculturative process, has implications for behavioral problems as rated by parents and teachers (Vega, Khoury, Zimmerman, Gil, & Warheit, 1995). Children with lower levels of acculturation are more likely to show behavioral problems at home and school; however, the difficulties may be related to the stressors associated with communication as a result of language barriers (Vega et al., 1995). Additionally, the connection between level of acculturation and behavioral problems in acculturated children may be mediated by parental involvement in that *low* parental involvement accounts for the behavioral challenges (Dinh, Roosa, Tein, & Lopez, 2002).

Internalizing symptomology. Child and adolescent internalizing symptomology refers to emotional characteristics experienced such as depression, anxiety, and self-

esteem that may include cognitive and physiological components. To date, researchers have not made a concerted effort to consider the impact of acculturation and acculturative stress on the symptom expression of internalizing problems in youth, including Hispanic children (Anderson & Mayes, 2010). Yet, acculturative stress may be related to decreased self-esteem in children and adolescents. Schwartz, Zamboanga and Jarvis (2007) found that self-esteem in Hispanic adolescents mediated the relationship between ethnic identity and externalizing problems as well as academic achievement. Hispanic adolescents who perceive discrimination report low levels of self-esteem (Smokowski & Bacallao, 2007), and are more likely to internalize negative self-images as a result of their status and associated strain (Gil, Vega, Dimas, 1994). Additionally, children experiencing acculturative stress rate themselves as less physically attractive than White children (Hawley et al., 2007). One reason for children's body image concerns may be related to the US desire for thinness, which is less common in Hispanic cultures that value full-figured bodies. More acculturated children have been found to prefer thinner figures than less acculturated children, with females showing a stronger preference than males (Olvera, Suminski, & Power, 2005). This form of acculturative stress may be due in part to maternal acculturation. Olvera and colleagues (2005) found that mothers who were more acculturated preferred and rated thinner figures as more attractive than less acculturative mothers. Nieri and colleagues (2005) provide further evidence for the relationship between body image concerns in Hispanic youth. In their study, females reported more weight-related body image concerns and specific substance use (i.e., cigarette smoking), whereas males who disliked their looks were more likely to use substances in general. Contrary to previous literature, less acculturated Hispanic males

were most dissatisfied with their looks perhaps due to the devaluation of the Hispanic appearance and less internalization of the White thin ideal. However, acculturated Hispanic adolescents *with* corresponding poor body image concerns were more at risk for substance use and experienced greater acculturative stress to be thin.

Acculturative Stress and Academic Functioning

Finally, acculturative stress has the potential to impact the academic environment. A study by Lopez, Ehly, and Garcia-Vazquez (2002) with Mexican American high school students found that acculturative type was associated with academic achievement. Adolescents with high levels of biculturalism performed better in school, most likely because of the adaptation of mainstream values, beliefs and norms related to education. Other reasons for poorer academic performance at school for less acculturated students may lie in perceptions of institutional discrimination, lack of access to school resources, and less parental support for school related tasks (Martinez, DeGarmo, & Eddy, 2004). Taken together, low self-esteem from acculturative stress impacts academic achievement (Hawley et al., 2007). Adolescents who demonstrate biculturalism by maintaining high levels of Hispanic involvement show a protective element from internalizing problems (Smokowski & Bacallao, 2007) and academic difficulty (Lopez et al., 2002), especially when parents provide emotional support. Overall, parental behavior has been linked to child outcomes in a huge number of topics areas, but few studies have investigated the relation between parenting styles and acculturation in adolescents.

Parenting Styles

Early parenting theories were psychodynamic in nature (e.g., Freudian) or focused on behavioral social learning theories. Psychodynamic models placed emphasis on

psycho-social-sexual development; whereas, learning theories focused more on parental practices than attitudes, with both orientations being criticized because they did not offer complete conceptualizations of parenting (Darling & Steinberg, 1993). Baumrind's (1966) theoretical framework integrated emotional (e.g., parent beliefs) and behavioral (e.g., levels of control) aspects of parenting into three main categorizations of parenting: Authoritarian (i.e., harsh, strict, unresponsive, and controlling parenting), Permissive (i.e., lenient, indulgent, responsive parenting with minimal monitoring), and Authoritative (i.e., firm and structured parenting with monitoring and acceptance). Maccoby and Martin (1983) further refined Baumrind's categorizations by deconstructing permissive parenting into permissive-indulgent (i.e., high in responsiveness, but low in demandingness) and permissive-neglectful (i.e., low in responsiveness and demandingness). As a whole, Darling and Steinberg (1993) posited that parenting practices (e.g., physical punishment, affection, and school involvement) in addition to parenting styles work together to determine child socialization and adjustment. In essence, parenting styles can be thought of as composites of beliefs and attitudes that provide context and influence parental behaviors (Lee, Daniels, & Kissinger, 2006). Thus, parenting styles have an indirect influence on children's behaviors, whereas parental rearing behaviors have a direct influence on behavior (Darling & Steinberg, 1993).

Parenting Styles and Child/Adolescent Mental Health

The overall pattern of research findings suggests that authoritative parenting is most highly associated with healthier psychosocial adjustment in children (Lamborn, Mounts, Steinberg, & Dornbusch, 1991), a pattern that is maintained into adolescence

(Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994). Although, authoritative parenting is most commonly studied with White families, ethnic children also benefit from such parenting (Radziszewska, Richardson, Dent, & Flay, 1996; Steinberg et al., 1994; Steinberg, Mounts, Lamborn, & Dornbusch, 1991).

Externalizing symptomology. Steinberg and colleagues (1994) found children from authoritative households showed fewer behavioral problems at home and school compared to other children. Parents who endorsed permissive-indulgent parenting styles had children who had high self-esteem, but showed higher rates of school misconduct. Additionally, parents who held a permissive-neglectful parenting style had children who showed delinquency and alcohol and drug use in high school. Level of parental involvement (e.g., relationship quality, participation in activities), monitoring, and communicated expectations have been found to decrease the likelihood of sexual (Pearson, Muller, & Frisco, 2006), and smoking (Dick, Viken, Purcell, Kaprio, Pulkkinen, & Rose, 2007; Simons-Morton, 2004) initiation in adolescents. In Hispanic families, consistent parental monitoring is also associated with decreased risk of teenage pregnancy (Dogan-Ates & Carrion-Basham, 2007).

A comprehensive meta-analysis by Rothbaum and Weisz (1994) highlighted that externalizing behaviors are associated negatively with parental approval, guidance, motivational strategies, synchrony, and absence of coercive/hostile control. When underlying factors were examined, an acceptance-responsiveness construct emerged as a protective factor for children's externalizing behavior; where in contrast, rejecting and unresponsive parenting encouraged the development of socially *unacceptable* behavior. In addition, externalizing behaviors were more strongly associated with maternal versus

paternal rearing behaviors. This is most likely due to the fact that mothers serve as the primary caregiver in many families. Low maternal acceptance has also been associated with behavioral problems in males but not females (Bosco et al., 2003). On the other hand, high levels of paternal involvement in child rearing have been associated with fewer reports of externalizing behavior in children (e.g., aggression and delinquency; Culp et al., 2000).

Higher levels of parental physical discipline are associated with greater levels of child externalizing problems at home and school regardless of child gender (Polaha, Larzelere, Shapiro, & Pettit, 2004). Positive maternal affect has been found to predict less relational aggression, with negative maternal affect predicting greater relational aggression. For White mothers in particular, negative affect, over-reactivity to behavior, and laxness in parenting are predictive of relational aggression in children (Brown, Arnold, Dobbs, & Doctoroff, 2007).

Internalizing symptomology. In early childhood, parents who are over-involved, over-protective, and show lower levels of warmth are more likely to raise children who are anxious (e.g., dependent on parents, self-conscious, worries about mistakes; Bayer, Sanson, Hemphill, 2006). Likewise, mothers who are inconsistent in discipline have children who are fearful and irritable (Lengua & Kovacs, 2005). Steinberg and colleagues (1994) reported that authoritative parenting, when examined longitudinally, results in lower internalized distress and higher levels of adjustment in adolescents. In contrast, authoritarian parenting is predictive of increased internalized distress and lowered self-confidence as adolescents reach high school, perhaps due to continued exposure to psychologically overpowering parents.

Bosco, Renk, Dinger, Epstein, and Phares (2003) found that the combination of low maternal control, high paternal control, and low paternal acceptance was associated with internalizing problems in daughters. Similar findings were also reported by Culp, Schadle, Robinson, and Culp (2000), who found that higher father involvement was associated with less internalizing problems and greater acceptance by children. Monitoring by fathers in Hispanic families has also been associated higher levels of self-esteem in males (Bamaca, Umana-Taylor, Shin, & Alfaro, 2005).

Kaufmann and colleagues (2000) found maternal authoritativeness to be a robust predictor of children's healthy adjustment and it correlated negatively with emotional problems. The findings remained significant after demographic variables were controlled. Surprisingly, authoritative parenting promoted competence more than it mediated maladjustment, which suggests that authoritative parenting may serve more as a protective factor to prevent internalizing symptomology from developing. Taken together, when parents are authoritative, optimal child outcomes are reported (Baumrind, 1991). On the other hand, when parents deviate from an authoritative style, internalizing symptomology in children is apparent (Garber, Robinson, & Valentiner, 1997).

In summary, some parenting practices not only present difficulties for internalizing symptomology in children and adolescents, but externalizing problems as well. Although there are parental gender differences with respect to types of parental rearing behaviors, the overall findings suggest that low parental support and high psychological and behavioral control over children contributes to the development of disobedience, school misconduct, and later substance use and antisocial behavior (Galambos, Barker, & Almeida, 2003).

Parenting Styles, Academic Functioning, and Peer Relationships

There is a growing literature base identifying relationships between parental rearing behaviors and child and adolescent academic performance (Bean, Bush, McKenry, & Wilson, 2003; Bronstein, Ginsburg, & Herrera, 2005; Spera, 2005), and peer relationships (Mounts, 2007). Although there are direct parental connections to academic and peer relations through parental involvement and monitoring, parental rearing behaviors influence academic performance indirectly by their relationship to emotional and behavioral problems (Masten et al., 2005).

Academic functioning. Parental behaviors such as creating a home learning environment (e.g., availability of play materials, interactive play with children, assistance with homework, reading), encouragement of problems solving and reflection, academic expectations, and parental involvement in- and after- school are considered positive markers for child and adolescent success in academics (Taylor, Clayton, & Rowley, 2004). Research conducted with adolescents suggests that authoritative parenting styles are closely related to higher levels of academic achievement (Spear, 2005), although the effects may vary by ethnicity (Park & Bauer, 2002). Adolescents from permissive-indulgent and permissive-neglectful homes are more likely to experience a decline in academic work and general school orientation over time (Steinberg et al., 1994).

Bronstein, Ginsburg, and Herrera (2005) found that parents who reported greater external control (e.g., demands, punishments, criticisms) and inconsistent discipline had children who were less successful academically in 5th grade and maintained an extrinsic motivational orientation (e.g., dependence on others) in 7th grade. In contrast, children whose parents provided support and encouraged autonomy had higher academic

achievement, more confidence, and were motivated intrinsically (e.g., were independent and ambitious). These findings are supported by Bean and colleagues (2003), who found behavioral and psychological control to be predictive of poor academic outcomes in adolescents. It is important to note that although parental involvement declines in adolescence, parental communication of goals, values, and aspirations are seen as influential for motivation in high school and college (Spera, 2005).

Peer relationships. In middle childhood, Baumrind (1989) found that firm control by parents was associated with social assertiveness in males and social responsibility in females. Authoritarian parenting negatively influenced males' social assertiveness and general social competence, but positively influenced females' social assertiveness and social competence. More recent research supports these previous findings. In families where young males perceived family loneliness, higher paternal warmth was associated with greater peer acceptance, less peer rejection, and less disruptive social behavior; whereas, paternal power assertion was related to less peer acceptance (Hurt, Hoza, & Pelham, 2007). In contrast, when males perceived greater security and were satisfied with the family environment and associated relationships, they were more likely to practice social interactions with family members, thereby establishing prosocial friendship-making skills (Hurt et al., 2007).

Parents who endorse high levels of psychological control manage adolescent peer relationships though several strategies. Soenens and colleagues (2007) found that parents who endorsed a prohibiting and guiding form of management had adolescents who affiliated with deviant peers; whereas, parents with who were supportive of their adolescents' relationships were more likely to have adolescents who endorsed group

belongingness. Thus, when adolescents perceive parental management of their peer relations as intrusive and prohibiting, they are more likely to affiliate with undesirable crowds (Soenens, Vansteenkiste, Smits, Lowet, & Goossen, 2007). It may be that adolescent-parent communication regarding peer relationships is more consistent with authoritative parenting. Mounts (2007) conducted a study with adolescents and their mothers and found that when higher levels of *consulting* regarding peer relations occurred, adolescents showed less delinquent behavior; whereas higher levels of conflict regarding peer relationships were related to greater adolescent delinquent behavior, drug use, and lower GPA.

In summary, it appears that parental monitoring, involvement, and supportiveness emerge as key factors for the healthy development of peer relationships and academic success throughout childhood and adolescence. Although there may be variations across parent gender and ethnicity, the prevailing findings suggest that positive parenting practices are associated with positive child and adolescent outcomes.

Parenting Styles and Ethnicity

The overwhelming amount of research in parenting has focused primarily on middle-class White families (Kaufmann et al., 2000). Baumrind's parenting typologies were derived from research on White families, but there are critics of her work who argue that standard typologies are not representative of parental rearing styles in ethnic families (Cardona, Nicholson, & Fox, 2000). In general, the extant literature suggests that there are some, but few differences among parental practices between White, Hispanic, African American, and Asian American families (Julian, McKenry, & McKelvey, 1994). Julian and colleagues (1994) reported that parents, regardless of race and ethnicity, place

importance on self-control and academic performance. Asian-American parents place less value on child autonomy and peer relationships; whereas, Hispanic and African American parents place more value on independence, obeying commands, getting along with others, and succeeding in athletics.

Comparisons of parenting practices across studies reveal some consistent ethnic differences. Steinberg and colleagues (1994) identified that parental authoritarianism was not as harmful to the well-being of minority children as White children, suggesting that authoritarian parenting, characterized by high control, may be moderated by cultural context and serve as a protective factor for youth from economically disadvantaged homes. Varela and colleagues (2004) found that although both mothers and fathers were more authoritative than authoritarian, Hispanic parents were more authoritarian than White parents when compared against each other.

Hispanic mothers report egalitarian forms of parenting (Pesquera, 1993), where Hispanic fathers are very involved in the parenting of their children (McLoyd, Cauce, Takeuchi, & Wilson, 2000). Hispanic fathers hold more responsibilities than do White fathers, and are rated as less controlling, but as emotionally warm with their children as White fathers (Hofferth, 2003). Hispanic fathers are more likely to reside in the same home as their biological children, are in frequent contact with them, and have stable father-child relationships (Cabrera & Garcia Coll, 2004; Casper & Bianchi, 2002; Hofferth, 2003; Toth & Xu, 1999). Hispanic fathers place a large emphasis on the well-being of the family (*familismo;* Harwood, Leyendecker, Carlson, Asencio, & Miller, 2002) and are viewed as being accepting and supportive (Cabrera & Garcia Coll, 2004).

Similarly, Hispanic mothers have been identified as endorsing authoritative and highly positive parenting practices (Calzada & Eyberg, 2002). However, there is conflicting research suggesting that Hispanic mothers are less nurturing and discipline their children more frequently than White mothers (Cardona, Nicholson, & Fox, 2000). In their study of parenting styles, similar findings were reported Varela and colleagues (2004), who found that Mexican American mothers were more authoritarian than White mothers. Although Hispanic mothers may be more likely to show higher levels of control (Finkelstein, Donenberg, & Martinovich, 2001), level of acculturation may moderate parenting practices. Hill, Bush, and Roosa (2003) found that Mexican American mothers reported greater maternal hostile control and inconsistent discipline than White mothers; however, for Spanish speaking mothers, hostile control correlated positively with parental acceptance. Relatedly, acculturation was associated positively with maternal warmth and involvement in a sample of Puerto Rican mothers (Calzada & Eyberg, 2002). Hispanic maternal warmth has also been identified as mediating the relationship between family and neighborhood influences on adolescent externalizing symptomology (Gonzales et al., 2010). Overall, it appears that Hispanic parents share similar parenting characteristics as White families, who serve as the standard of comparison. When differences do occur, acculturative factors may serve as a possible explanation.

Parenting and acculturation. Differing rates of acculturation adaptation in the family can contribute to acculturative stress. When the parents' culture-of-origin involvement is high and adolescent involvement in the mainstream culture is low, there is greater family cohesion, adaptability, and familism in Hispanic families (Smokowski et al., 2008). In contrast, research has suggested when Hispanic children acculturate to a

greater degree than parents, parent-child relational problems may occur (Paniagua, 2000). These problems may be the result of greater parental monitoring on the part of Hispanic parents, which is often stricter than Caucasian parenting (Achenbach et al., 2005). Relatedly, language barriers between acculturated children and their parents may add additional stressors (Dinh et al., 2002). Differential parent and adolescent acculturation has been related to Hispanic adolescent substance use, but the relationship is mediated by acculturative stress and ineffective parenting practices (Martinez, 2006). Acculturative stress in the family influences communication patterns, problem solving, and positive parenting practices; in turn, leading to greater acculturation gaps that perpetuate ineffective parenting and adolescent substance use (Martinez, 2006). Loss of parental involvement is disconcerting because of its relationship with academic support. Plunkett and Bamaca-Gomez (2003) found that maternal and paternal involvement at home (e.g., ability to help with homework, monitoring, and support) was positively correlated with academic motivation in Hispanic adolescents. Furthermore, academic support by Hispanic parents may be influenced by both parent and adolescent gender, such that academic support is only positively related to academic motivation in same-sex parent-adolescent dyads (Alfaro, Umana-Taylor, & Bamaca, 2006). Academic motivation subsequently influences academic achievement; thus, precursors to academic motivation are important to examine.

The reverse has also been found whereby the mismatch between parent and child acculturation levels may result in mental health problems when parents acculturate more quickly than their children. This acculturation gap contributes to parent-adolescent conflict and emerges as a facilitator of acculturative stress. Adolescents that exhibit

strong ties to Hispanic culture but are in conflict with their parents, show higher levels of internalizing problems than their acculturated counterparts (Smokowski & Bacallao, 2007). A study by Lau and colleagues (2005) found that Hispanic parents who were more acculturated to the dominant culture had children with greater functional impairment (i.e., conduct problems, aggression, and antisocial behavior). These researchers speculated that decreases in parental monitoring and involvement as a result of acculturation may instead contribute to the onset of youth conduct problems. Likewise, low levels of family functioning (e.g., perceptions of support) have predicted acculturative stress in adolescents, suggesting that emotional warmth and reciprocal familial interactions are protective factors against adolescent psychopathology (Hovey & King, 1996).

Family acculturation can also occur at relatively consistent rates. Whereas previous research would suggest intuitively that this form of family acculturation is optimal, one cannot ignore the presence of acculturative stress in the family. Gonzales and colleagues (2006) conducted a study examining family acculturation and adolescent mental health outcomes. Although maternal and adolescent acculturation was comparable, the latent construct of family acculturation (i.e., maternal and adolescent acculturation) predicted family conflict. In turn, family conflict mediated the relationship between family acculturation and adolescent internalizing and externalizing behavior. Similar findings were reported by Smokowski and Bacallao (2006), who found that less acculturation in both adolescents and parents was predictive of parent-adolescent conflict, suggesting possible conflicts over autonomy. Additionally, even after controlling for family conflict (a factor of acculturative stress), family acculturation was identified to

influence depressive symptoms perhaps related to less maternal support and greater situational demands (Gonzales, Deardorff, Formoso, Barr, & Barrera, 2006). Overall, behaviors within the family associated with mainstream culture (e.g., change in traditional roles, greater child autonomy, parental stress, assertiveness and individualism) may create tension in the family as roles become renegotiated.

It is also important to note briefly that not all forms of acculturation are negative. A study on mainland Puerto Rican mothers and their young children found that mothers with greater acculturation were more verbal and encouraging of their children than unacculturated mothers, who were more likely to use nonverbal and directive interactions with their child (Teichman & Contreras-Grau, 2006). Likewise, acculturation in mothers did not result in inconsistent discipline or less maternal supportive parenting with children (Gonzales et al., 2006). Overall, when adolescents integrate both cultures (biculturalism), have strong social ties, and positive parental involvement, positive outcomes and nominal acculturative stress are experienced.

Present Study

The present study investigated the different pathways by which acculturation may influence Hispanic adolescents' psychological functioning and academic achievement. Although acculturation can occur in any race or ethnicity, the Hispanic population was selected as the target of interest due to their history and growing presence in the US, the heterogeneous nature of Hispanics, and the fact that almost 40% of Hispanics are under 20 years of age (Ramirez & de la Cruz, 2003). Previous research has documented connections between adolescent/parental acculturation and subsequent psychological and academic functioning, but as of yet, this research has failed to identify the mediating

factors contributing to adolescent impairment. Guided by Berry's (1997) theoretical framework, the present study sought to provide a unique contribution to the literature by examining the individual level factors such as acculturative stress, self-esteem, motivation, support, and parental rearing that result during the acculturative process and impact mental health and achievement. Unlike previous research, the present study examined family acculturation as opposed to parent- or adolescent-only acculturation, assessed for adolescent perceptions of both mothers' and fathers' parental rearing and academic support instead of focusing on mothers only, and utilized a bidimensional model of acculturation as opposed to relying on simplistic, undimensional models.

Measuring acculturation. Early researchers examined acculturation from a unidimensional perspective whereby the process of acculturation fell along a continuum from reliance on the culture of origin to reliance on the dominant or host culture (Cabassa, 2003). This perspective has been criticized because of difficulties with measurement (validity), failure to consider multiple domains of culture, and lack of consideration of multi- or bicultural identity (Felix-Ortiz, Newcomb, & Myers, 1994). In his review of the literature, Cabassa (2003) identified that popular unidimensional measures focus on behavioral, cognitive, and attitudinal domains to understand where individuals fall along the acculturation continuum, but force respondents to make a choice between two cultures and leave no room for the existence of bi-culture perspectives. As a result, contemporary researchers have acknowledged and created multidimensional and bidimensional measures of acculturation whereby the acculturation process is theorized to occur through adherence to the dominant culture while maintaining core ethnic values and practices (Cabassa, 2003). According to Cabassa

(2003), bidimensional measurement allows the individual to retain or neglect the culture of origin while adapting to the dominant culture thereby facilitating the assessment of the acculturation process.

Following best practices, acculturation was assessed using bidimensional measurement[2]. Parenting styles were assessed through adolescents' perceptions of mothers' and fathers' involvement, psychological autonomy, and strictness/supervision. Consistent with contemporary research (Calzada & Eyberg, 2002; Galambos et al., 2003; Lengua & Kovacs, 2005), parenting behaviors were explored as continuous variables rather than splitting parents into formal categories such as authoritative, authoritarian, and permissive. In addition, parenting styles were examined independently as opposed to aggregating the variables because specific parenting styles are suggested to relate to outcomes differently (Bean et al., 2003). However, categorizations of parenting were included for descriptive purposes. Adolescent's psychological well-being was explored in terms of externalizing (e.g., attention problems, hyperactivity, defiance) and internalizing (e.g., anxiety, depression, withdrawal) problems.

Hypotheses

Based on previous research, the following hypotheses were investigated in the present study:

1. Acculturative stress will mediate the relationship between family acculturation and adolescent mental health.
2. Perceived parenting styles will mediate the relationship between family acculturation and adolescent mental health and academic achievement.

[2] Hereafter, "acculturation" will be used interchangeably with "biculturalism" or "bicultural" as the model of measurement of acculturation in the present study is bidimensional.

3. Perceptions of academic support will mediate the relationship between family acculturation and academic achievement.
4. Adolescent academic motivation will mediate the relationship between family acculturation and academic achievement.
5. Adolescent self-esteem will mediate the relationship between family acculturation and adolescent mental health and academic achievement.
6. Exploratory analyses will be conducted to determine the differential mediational pathways for perceptions of mothers' versus fathers' academic support and parenting style.

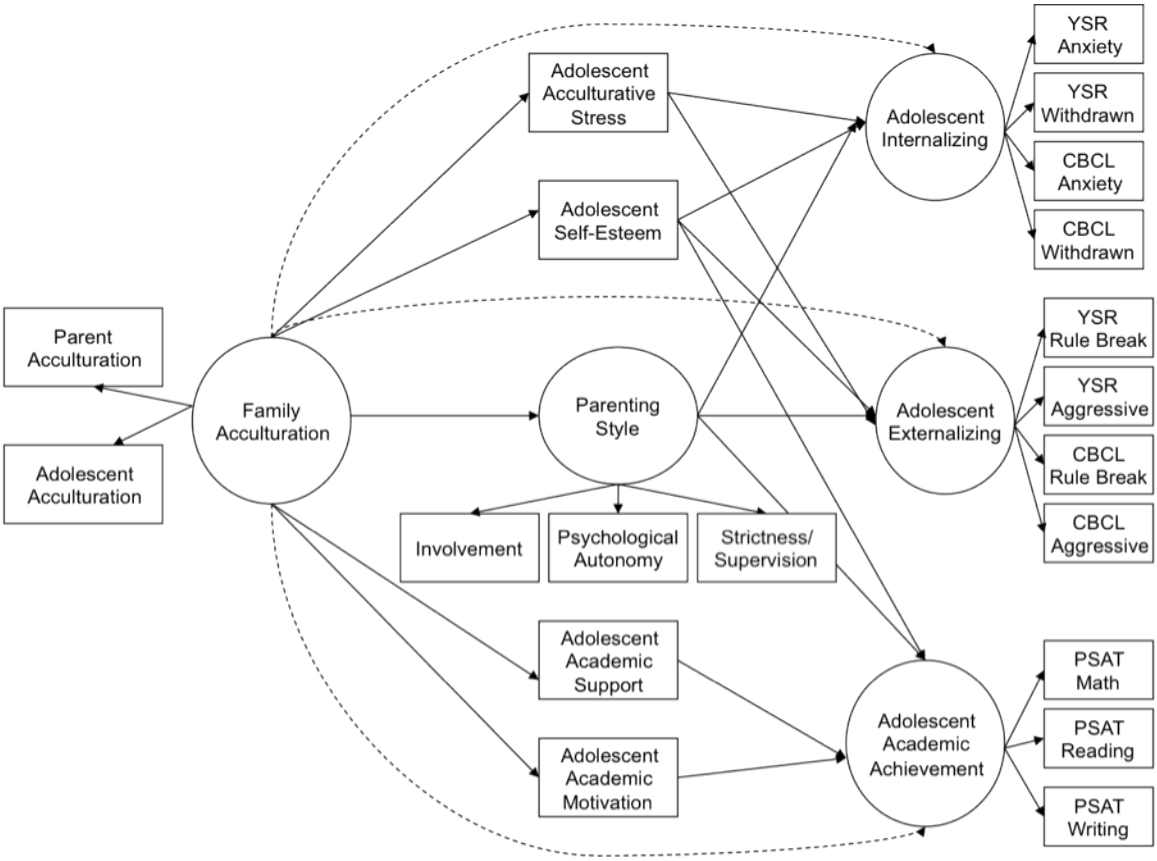

Figure 2. Proposed mediational model for the role of acculturation in adolescent functioning. (Significant paths are represented by solid lines and nonsignificant paths by dotted lines)

Method

Participants

Participants for the present study included a total of 116 high school students and a parent for each student recruited from public schools in the School District of Hillsborough County, Florida. An a priori power analysis for structural equation modeling suggested that a model with power set at .80, alpha at .05, and an RMSEA value between .05 and .09 would require a sample of at least 100 participants. For post-hoc multiple regression analyses, an a priori power analysis with power set at .80, alpha at .05, and a medium effect size (Cohen's $f^2 = .15$) would require a sample of at least 68 participants (Faul, Erdfelder, Buchnr, & Lang, 2009). Consent letters were mailed to 3, 415 families; 180 families returned consent forms and 191 letters were returned undeliverable resulting in a 5.6% response rate. An initial sample of 132 dyads was recruited and 47 parents and 1 adolescent declined participation; however, 5 dyads were excluded because the child was either non-Hispanic (i.e., incorrectly identified by the school system) or because the adolescent participant was unable to read due to mental or psychological deficit (e.g., intellectually disabled or severely emotionally disturbed). A total of 11 dyads were dropped from the analyses due to incomplete data (i.e., parent measures were never returned or there were no standardized testing scores available due to absence). Due to the nature of the family constellations, the analyses herein contain different sample sizes for mother versus father variables. In the model containing mother variables, 114 participants are included (i.e., 2 adolescents did not report on mother). For

the model containing father variables, 95 participants were included (i.e., 21 adolescents did not report on father). Descriptive analyses for adolescent or parent data (i.e., acculturation and child behavior rating scales) are presented for the entire sample of 116 dyads.

An equal number of male and female adolescents (50% male; 50% female) participated and they had a mean age of 14.95 years (*SD* = 0.84). Adolescent participants were either in 9th (n=67) or 10th (n=49) grade and were primarily of White race, Hispanic ethnicity (74.1%). The distribution of Hispanic Heritage in the adolescent sample is included in Table 1. The majority of the adolescent sample (72.4%)was born in the US. In addition, over half the sample lived with both biological parents (50.9%), with the remaining adolescents living with their mother and having contact with their father (17.2%), living with their father and having contact with their mother (3.4%), living with mother and no contact with father (20.7%), or having an alternative living arrangement (7.8%).

Demographic data and parental acculturation measures were more often completed by mothers (n=95) than fathers and other caregivers (n=21). Mothers were between the ages of 31-56 years (*M*=41.43, *SD*=6.11) and were primarily of White race (97.6%) and Hispanic ethnicity (96.5%). However, the majority of mothers were born outside of the US (53.4%) and preferred to speak the Spanish language (58.3%). Fathers were between the ages of 32 and 70 years (*M*=44.96, *SD*=7.28) and were primarily of White race (93.7%) and Hispanic ethnicity (92.2%). Half of fathers (50.0%) were born outside of the US, with the majority of fathers preferring the Spanish language (57.0%).

Table 1.

Demographics

Demographic Category	Distribution
Gender	
Male	58 (50%)
Female	58 (50%)
Age (in years)	
13	1 (0.9%)
14	36 (31%)
15	52 (44.8%)
16	22 (19%)
17	5 (4.3%)
School Grade	
9^{th}	67 (57.8%)
10^{th}	49 (42.2%)
Free or Reduced Lunch	
Yes	77 (66.4%)
No	37 (31.9%)
Unknown	2 (1.7%)
Race	
White	86 (74.1)
Black	3 (2.6%)
Not reported	27 (23.3%)
Hispanic Heritage	
Puerto Rican	31 (26.7%)
Mexican	13 (11.2%)
Cuban	12 (10.3%)
Colombian	10 (8.6%)
Honduran	6 (5.2%)
Dominican	3 (2.6%)
Venezuelan	2 (1.7)
Uruguayan	2 (1.7%)
Costa Rican	2 (1.7%)
Nicaraguan	2 (1.7%)
Peruvian	1 (0.9%)
Spaniard	1 (0.9%)
Chilean	1 (0.9%)
El Salvadorian	1 (0.9%)
Guatemalan	1 (0.9%)
Multiple Hispanic Heritages	26 (22.4%)
Specific Heritage Unknown	2 (1.7%)

The parent participant self-reported the current occupation and years of education for him/herself and the adolescent's other parent. This information was utilized to calculate the socioeconomic status (SES) level according to Hollingshead's (1975) criteria. Maternal and paternal SES was first calculated respectively and then averaged to develop a family SES value. In the event that one parent was unemployed, only the employed parent's SES was used (per Hollingshead instructions). Although reports of SES may have varied as a result of parental marriage status, parental SES was averaged to generate an approximate index of the adolescent participant's SES level regardless of his/her's living arrangements. In the event both parents were unemployed, no SES was calculated (n=21 families). Family SES ranged from 8 to 63 (M = 38.76, SD = 13.18) on the Hollingshead (1975) index. The mean for family SES fell into the social strata of skilled craftsmen, clerical, and sales workers (Hollingshead, 1975). In addition, school lunch status was obtained as another proxy for SES. In the sample, 66.4% of adolescents were receiving free or reduced school lunch.

Measures

All participants were provided with the opportunity of completing measures in English or Spanish. Unless otherwise noted, translated measures used in previous research were obtained from the original authors. The acculturative stress, self-esteem, parenting style (i.e., How I was Raised), academic support, academic motivation, and demographics measures were translated into Spanish for the purposes of this study. This process was guided by recommendations set forth by Brislin (1970) and Cha, Kim, and Erlen (2007). The measures were provided to a doctoral level advanced graduate student in clinical psychology who was fluent in speaking, reading, and writing Spanish who translated the measures and maintained the nuanced terminology relevant in the

measures. These translations were reviewed by the author for comprehensiveness and flow. A research associate who was blind to the original measures and who held a bachelor's in Psychology and was fluent in speaking, reading, and writing Spanish back-translated the measures into English. The author reviewed the original and back-translated versions to ensure similar wording and semantics and was the authority on correcting discrepancies. Finally, an individual who was blind to the purposes of the study, who spoke, read, and wrote in Spanish and who held a bachelor's degree in a discipline other than Psychology, read the final Spanish language measures for clarity, ease, and flow.

Acculturation. Parent and adolescent levels of acculturation (i.e., orientation to American and Hispanic culture) were assessed with the Bicultural Involvement Questionnaire (BIQ; Szapocznik, Kurtines, & Fernandez, 1980; Appendix A). The BIQ is a bidimensional measure of acculturation that asks participants to identify their level of comfort, enjoyment, and utilization of cultural practices. The 40-item measure evaluates Americanism (e.g., "I enjoy American music.") and Hispanicism (e.g., "I would want food to be Hispanic.") separately on a five-point likert type scale (0 = strongly disagree to 4 = strongly agree). Two types of scores are derived from the BIQ. The total score represents cultural involvement, with higher scores reflecting greater cultural involvement and lower scores representing cultural marginality (i.e., lack of involvement in either culture). The biculturalism score is computed by subtracting the Hispanicism score from the Americanism score with scores closer to zero representing biculturalism and scores deviating from zero reflecting monoculturalism in the Hispanicism (- scores) or Americanism (+ scores). The BIQ has excellent internal consistency for both the

Hispanic (α = .91 - 93) and American (α = .89 - .92) subscales and has been utilized in many studies (Coatsworth, Maldonado-Molina, Pantin, & Szapocznik, 2005; Sullivan, Schwartz, Prado, Huang, Pantin, & Szapocznik, 2007; Szapocznik et al., 1980). Consistent with previous findings, the internal consistency coefficients in this sample were high for the Total BIQ (α = .85), Hispanicism (α = .92), and Americanism (α = .93) subscales completed by parents. Likewise, the adolescent version displayed similar scores in this sample: Total ABIQ (α = .88), Hispanicism (α = .94), and Americanism (α = .92).

Acculturative stress. Adolescent acculturative stress was evaluated using the Acculturative Stress Inventory for Children (ASIC; Suarez-Morales, Dillon, & Szapocznik, 2007; Appendix B). The ASIC is an empirically derived measurement tool developed from the Societal, Attitudinal, Familial, and Environmental Acculturative Stress Scale for Children (SAFE-C; Chavez, Moran, Reid, & Lopez, 1997). The SAFE-C is an adapted version of the SAFE for adults (Mena, Padilla, & Maldonado, 1987) based on Berry's theoretical framework of acculturative stress (e.g., Williams & Berry, 1991). Thus, the ASIC is based on theoretical and empirical research. The ASIC is a 12-item self-report inventory of acculturative stress in Hispanic children. Adolescents responded to questions regarding stressors (e.g., "I think a lot about my group and its culture") using a six-point scale (0 = doesn't apply to 5 = bothers me a lot). Higher scores reflect higher levels of perceived acculturative stress. The ASIC demonstrates strong internal consistency (α = .82) and two-week test-retest reliability (r = .84). When compared with other races/ethnicities such as African Americans and European Americans, the ASIC

was able to assess culturally related experiences of acculturative stress unique to Hispanic children. In the current study, internal consistency was adequate (α = .72).

Self-esteem. Adolescent self-esteem was measured with the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1989; Appendix C). The RSES is one of the most widely used measures of self-esteem and is designed to evaluate general feelings about oneself on a 4-point scale (1-strongly disagree to 4-strongly agree). Higher scores are indicative of higher self-esteem. The 10 items have high reliability and validity as reported in the test manual and past studies (Blascovich & Tomaka, 1993; Rosenberg, 1989; Silber & Tippett, 1965). Internal consistency in the current study was strong (α = .81).

Psychological symptomology. Adolescent mental health was measured using the Child Behavior Checklist for youth 6-18 years (CBCL/6-18) and the Youth Self Report (YSR; Achenbach & Rescorla, 2001; Appendix D). The CBCL/6-18 and YSR are a part of the Achenbach System of Empirically Based Assessment (ASEBA) and are two of the most widely researched and utilized rating scales in both clinical and research settings. Parents completed the CBCL/6-18 whereas adolescents completed the YRS to assess for adolescent behavior and emotional problems. Each version asked participants to rate adolescent's behavior on a three-point scale (0 = not true to 2 = very true). The CBCL/6-18 contains 113 items and the YSR contains 112 items. Higher scores indicate greater problems.

The ASEBA forms have excellent psychometric properties. One-week test-retest reliabilities and internal consistency analyses for the internalizing broadband score were strong for both the CBCL (r = .91, α = .90) and YSR (r = .80, α = .90). Similarly, scores

on the externalizing broadband score were strong for the CBCL (r = .92, α = .94) and YSR (r = .89, α = .90). Additionally, the CBCL and YSR internalizing and externalizing broadband scores have demonstrated the ability to discriminate between clinical and non-clinical samples.

Parenting style. Adolescent perceptions of parenting style were assessed with the Parenting Style Index (PSI; Steinberg, Elmen, & Mounts, 1989; Steinberg et al., 1994; Appendix E). The PSI was derived from the Children's Report of Behavior Inventory-Revised (Schafer, 1965) and adapted to conform to Baumrind's categorization of parental rearing styles. Three domains of parenting style were obtained: involvement, psychological autonomy, and strictness/supervision. The involvement subscale refers to the perception of parents as loving, responsive, and involved. The psychological autonomy subscale is designed to assess perceptions of parents as democratic, non-coercive, and encouraging of individuality. The strictness/supervision subscale evaluates perceptions of parental behavioral control and monitoring. The 22-item survey asked participants to indicate the degree to which parents are characteristic of the statement on a four-point likert type scale (1 = strong disagree to 4 = strong agree). In the development of the PSI, perceptions of mothers' and fathers' parenting were averaged to create one score for parents based on research suggesting high convergence between mother and father ratings (Baumrind, 1991; Steinberg et al., 1992). However, in the present study, adolescents rated mothers and fathers separately in order to determine the differential influence of each parent. Reported internal consistencies for the PSI involvement (α = .72), psychological autonomy (α = .82), and strictness/supervision (α = .76) subscales were satisfactory. For the present study, internal consistency was as follows: Mother

scales - Involvement (α = .69), Psychological Autonomy (α = .74), and Strictness/supervision (α = .78); Father – Involvement (α = .80), Psychological Autonomy (α = .69), and Strictness/supervision (α = .86).

In order to assess for parenting elements that are valued in Hispanic culture, adolescents were asked to rate their parents using the How I was Raised (HIR; Alvarez, 2007; Appendix F) inventory. The HIR is composed of 32 items designed to assess parenting style in a culturally sensitive format for Hispanic youth. Adolescents rated on a 3-point scale (0 = not at all true to 2 = very true) the extent to which statements were true. The inventory maintains 7 subscales: Respecto, Familismo, Emotional Attachment, Knowledge/Supervision, Discipline, Decision-Making, and Proper Demeanor. Only the Respecto and Familismo subscales were utilized for the present study. In the current study, psychometric properties for the HIR subscales were poor (Respecto α = .61; Familismo α = .61); as a result, HIR items were not included in subsequent analyses and will not be discussed further.

Academic support. Adolescent perceptions of academic support were measured using the Significant Other Academic Support Scale (SOASS; Sands & Plunkett, 2005; Appendix G). The SOASS is a six-item scale designed to measure perceptions of academic support by significant others (i.e., mothers, fathers, teachers, and friends). Adolescents rated how much significant others assisted in their education using a 4-point likert-type scale (1 = strongly disagree to 4 = strongly agree). For the purposes of this study, only the father and mother scales were utilized. Higher scores signify greater support. Internal consistency for the mother and father academic support subscales are strong based on Mexican (α = .92 - .93) and Central American (α = .90 - .95) immigrant

families. In the current study, internal consistency was high for both the mother (α = .87) and father (α = .90) support subscales.

Academic motivation. Adolescent academic motivation was evaluated using the Academic Motivation Scale (AMS; Plunkett & Bamaca-Gomez, 2003; Appendix H). The AMS is a five-item scale assessing adolescents' self-motivation regarding education (e.g., I try hard in school). Adolescents rated on a 4-point likert-type scale (1 = strongly disagree to 4 = strongly agree) their effort exerted in school, importance of grades and education, completing homework, and liking school. Higher scores reflect higher motivation. Good internal consistency (α = .71 - .78) has been demonstrated in Hispanic samples (Plunkett & Bamaca-Gomez, 2003; Sands & Plunkett, 2005). In the current study, internal consistency was adequate (α = .76).

Academic achievement. The Preliminary SAT/National Merit Scholarship Qualifying Test (PSAT/NMSQT) was used to measure adolescent academic achievement. In the School District of Hillsborough County, all 9th and 10th grade students are administered the examination free of charge. The PSAT is a standardized test that measures critical reading, mathematics, and writing skills and is recognized nationally to prepare students for the SAT Reasoning Test. The PSAT generates scores between 20-80 for each domain. Higher scores suggest higher mastery of subject areas. According to the College Board (2011), the national average in 2010 for 10th graders was as follows: Critical Reading (43), Mathematics (44), and Writing Skills (40).

Demographics. Parents provided demographic information about their family (Appendix I). Questions asked about family ethnicity, educational attainment,

occupation, and language preference. Socioeconomic status using Hollingshead's (1975) criteria was calculated using parental education and occupational level.

Procedure

Prior to beginning the present study, the University of South Florida's Institutional Review Board and the School District of Hillsborough County, Florida reviewed the protocol of this study and provided formal approval. Of 35 public high schools available in Hillsborough County, 26 were contacted for participation[3]. A total of 11 high schools agreed to participate (see Table 2). Parents who had an adolescent identified as Hispanic in the school records were mailed an invitation letter containing information about the USF **F**amily **A**cculturation and **M**ental Health **i**n **L**atino **Y**outh (FAMILY) study, as well as parent and individual consent (Appendix J). The informed consent outlined objectives of the study, procedures for self and adolescent, incentives, and researcher information. Parents were provided information in both English and Spanish format. Parents returned consent forms via an enclosed business reply envelope.

Table 2.

Participation by Grade and High School

High School	9th Grade n = 67	10th Grade n = 49	Total N=116
Bloomingdale	4	4	8
Brandon	4	5	9
Gaither	4	0	4
Hillsborough	7	3	10
Jefferson	6	4	10
Lennard	6	3	9
Riverview	4	2	6
Sickles	6	4	10
Steinbrenner	5	4	9
Tampa Bay Technical	9	8	17
Wharton	12	12	24

[3] Nine schools were not approached due to their restricted special education status.

After the documents were received, parents who consented were mailed the demographic questionnaire, CBCL, and BIQ in the preferred language and returned via a business reply envelope. Parents who returned consent forms were entered into a parent raffle for a chance to win a cash prize of $100. The raffle has already been completed and the prize has been distributed. Once parental consents were obtained, adolescent participants were tested in small group sessions at their respective school. Adolescents were provided with study information and asked to provide written assent (Appendix K). The author and/or assistants were available to assist students as necessary, and there was at least one research assistant available at each session who was bilingual (English/Spanish). All research assistants were trained by the author in depression and suicide risk assessment. Adolescents were able to complete study measures in English or Spanish. Questionnaires were administered in the following format: PSI, HIR, YSR, RSES, BIQ, ASIC, SOASS, and AMS.

Following participation, questionnaires were reviewed for completion and critical depression and suicide items were checked. If an adolescent screened as having suicidal ideation or significant depressive symptoms, a research assistant privately reminded them of the limits of confidentiality and formally screened for risk. All adolescents with verified risk were referred to the guidance office for counseling and the school psychologist was contacted immediately. There were 10 students who were screened for risk (three for depression and seven for suicide) and seven of them were referred to the guidance office for further intervention. The majority of these students were already receiving psychological services. All adolescents were entered into a drawing to win an iPod or movie tickets. The raffle has already been completed and the prizes have been

distributed. For the purposes of this study, adolescents were asked to complete the parenting measures on the parents with whom they spent the most time (regardless of whether the parent was a biological-, step-, or adoptive-parent).

Results

Diagnostics

Prior to running the main analyses, data were screened for violations of univariate and multivariate normality by examining univariate box plots for each variable and screening for the presence of skewness[4] and kurtosis[5]. Evidence of skewness is suggested by values greater than 1.0; kurtosis is suggested by values greater than 2.0. Additionally, data were screened for the presence of outliers by calculating Mahalanobis Distance (D_i^2) for each observation. Extreme D_i^2 scores indicate outliers.

Independence. The data obtained from the present study are considered independent as they were collected individually and no participants had influence over one another during the data collection process. Research assistants and/or the author were present for all administrations and to ensure to the students that confidentiality was upheld.

Normality. Data were analyzed for the presence of normality by examining univariate box and stem-and-leaf plots, skewness, and kurtosis for each variable. The following variables displayed non-normal data: PSI mother strictness/supervision (skewness = -1.39, kurtosis = 2.5); SOASS mother (skewness = -1.67, kurtosis = 2.11); and SOASS father (skewness = -1.81, kurtosis = 3.74). The measures were skewed toward greater supervision and academic support from parents. Visual inspection of box and stem-and-leaf plots suggested ceiling effects for the SOASS measure; thus, the

[4] Skewness refers to lack of symmetry in the distribution of scores. When data are normal, skewness is 0.
[5] Kurtosis refers to the shape (peak) of the distribution of scores. When data are normal, kurtosis is 0.

SOASS was removed from the main analyses. The PSI mother strictness/supervision subscale was retained due to less non-normality and better variability.

Data were also screened for the presence of multivariate normality. Due to the separate models for mother and father, multivariate normality was conducted for each model respectively. An examination of skewness and kurtosis suggested that there was significant skewness and kurtosis for both the mother ($b_{1,p}$ = 122.03, χ^2 (1330) = 2385.73, p<.01; $b_{2,p}$ = 459.99, z_{upper} = 11.53, z_{lower} = -1.69) and father ($b_{1,p}$ = 128.17, χ^2 (1330) = 2099.96, p<.01; $b_{2,p}$ = 439.95, z_{upper} = 7.06, z_{lower} = -7.39) models. It is not uncommon to have a sample that is univariate normal but multivariate non-normal; however, it may present a problem for estimation and may decrease the chance of obtaining significant results and a model with adequate fit indices. Lastly, the data were screened for the presence of outliers. The outlier analysis was conducted by calculating Mahalonbois Distance (D_i^2) for each observation. Using this analysis, outliers were detected in both the mother and father models. However, because the outliers were assumed to be true data points and were confirmed to not be due to data entry errors and because the act of removing them would have resulted in a reduction of sample size, the outliers were retained in both models. Although these data were multivariate non-normal, estimation using the Maximum Likelihood Method was carried out as planned due to the robust nature of Structural Equation Modeling.

Descriptive Statistics

Generational status is presented in Table 3 and descriptive statistics for the study variables are presented in Tables 4, 5, 7, 8, and 9. Adolescent generational status was assigned to one of three categories: First generation (immigrant status), Second

generation, and Third generation or higher. First generation status was considered when the adolescent was born outside of the US[6]. Second generation status was indicated when the adolescent was born in the US and one or both parents were born outside of the US. Third generation or higher was designated when the adolescent and both parents were born in the US. Table 3 provides the distribution of generational status in the sample.

Table 3.

Generational Status

Generation Status	N = 116
First generation/Immigrant	32 (27.6%)
Second generation	41 (35.3%)
Third generation or higher	43 (37.1%)

Both parent and adolescent participants were provided with the opportunity to complete study measures in English and Spanish. A greater percentage of adolescent participants preferred to completed the study measures in English (90.5%) as opposed to parent participants who were only slightly more preferring of the English language (62.1%). More biological mothers (81.9%) than biological fathers (12.9%) and other legal caregivers (5.1%) completed the parent portion of study, which consisted of the demographic questionnaire, acculturation measure (parent completing the study), and the CBCL.

Acculturation. The acculturation measure included Americanism, Hispanicism, and Biculturalism subscales. The Biculturalism subscale was calculated by subtracting the Hispanicism score from the Americanism score. Higher scores on the Americanism and Hispanicism subscales reflect greater preference for that culture. Higher positive scores on the Biculturalism score suggest preference for American culture, higher

[6]Participants born in Puerto Rico were considered US born as natives of Puerto Rico are US citizens.

negative scores indicate preference for Hispanic culture, and scores closer to zero suggest equal preference for both cultures. Subscale scores could range from 0-80; Biculturalism score could range from -80 to 80.

Table 4.

Means and Standard Deviations for the Bicultural Involvement Questionnaire

Subscale	N	Mean
Parent BIQ		
Americanism	116	52.05 (14.29)
Hispanicism	116	53.21 (13.58)
Biculturalism	116	-1.15 (22.21)
Adolescent ABIQ		
Americanism	116	60.20 (10.72)
Hispanicism	116	51.21 (14.53)
Biculturalism	116	8.99 (19.66)

Note. Standard deviation in parenthesis. BIQ=Bicultural Involvement Questionnaire; ABIQ=Adolescent Bicultural Involvement Questionnaire

There were no differences between mothers' and fathers' reports of Hispanicism, Americanism, or Biculturalism ($t(108) = .81$, ns; $t(108) = 1.08$, ns; $t(108) = .20$, ns, respectively). Likewise, there were no differences between male and female adolescent reports of Hispanicism, Americanism, or Biculturalism ($t(114) = -1.28$, ns; $t(114) = 1.20$, ns; $t(114) = 1.60$, ns, respectively). Paired sample *t*-tests were conducted to investigate each parent-adolescent dyad's relative level of acculturation. On average, parents reported less preference for the American culture than did their own child ($t(115) = -5.78$, $p < .001$). However, the same was not true for preference for the Hispanic culture. Within the parent-adolescent dyads, parents and their adolescent did not differ significantly in their preference for Hispanic culture ($t(115) = 1.32$, *ns*). Comparison of Biculturalism within the dyads suggested a significant discrepancy between parents and their child, such that on average, adolescents were less bicultural than their parents and preferred the American culture ($t(115) = -4.68$, $p < .001$).

Adolescent biculturalism was investigated in terms of generational status. A one-way Analysis of Variance (ANOVA) was conducted with the three levels of generation as the independent variable and scores on the ABIQ as the dependent variable. The overall test was significant, $F(2, 113) = 8.32$, $p < .001$. Post-hoc analyses using Tukey HSD indicated that the mean of first generation adolescents ($M = -2.09$, $SD = 15.33$) was significantly lower than those of second ($M = 15.06$, $SD = 20.86$) and third ($M = 11.45$, $SD = 18.27$) generation adolescents, who were not significantly different from each other. This finding suggests that first generation adolescents are more likely to show preference for biculturalism or lean toward preference for the culture of origin, whereas second and third generation adolescents show a greater propensity for American culture.

Acculturative stress. The acculturative stress scale ranged in point value from 0-60, with higher scores reflecting greater experience of acculturative stress. Adolescents' scores ranged from 0 to 39 (M=19.65, $SD = 9.25$), suggesting moderate levels of acculturative stress. There were no differences between males' and females' reports of acculturative stress ($t(114) = .17$, ns). Likewise, there were no differences in the expression of acculturative stress among first, second, and third generation adolescents, $F(2, 113) = 1.46$, ns.

Self-esteem. The self-esteem measure can range in value from 10-40, with adolescents in the current study endorsing scores from 19-40 (M =32.82, $SD = 4.49$) indicating that the participants held relatively good levels of self-esteem. There were no differences in report of self-esteem by male and female adolescents, $t(114) = .44$, ns. Moreover, there were no differences in self-esteem among the generational groups, $F(2, 113) = 1.02$, ns.

Academic motivation. The academic motivation scale can range from 5 to 20. Scores in the present study ranged from 9 to 20 (M = 16.46, SD = 2.56) and reflect overall good motivation to excel in school. There was no significant difference in the academic motivation of adolescent males and females in the sample, $t(114) = -.14$, ns. There were no differences in responses to academic motivation among first, second, and third generation adolescents, $F(2, 113) = 1.00$, ns.

Table 5.

Means and Standard Deviations for the ASIC, RSES, and AMS

Measure	N	Mean
Acculturative Stress Inventory for Children	116	19.65 (9.25)
Rosenberg Self-Esteem Scale	116	32.82 (4.49)
Academic Motivation Scale	116	16.46 (2.56)

Note. Standard deviation in parenthesis.

Parenting style. Due to the variability in constellations of families (see Table 6), adolescent participants were asked to report on the mother- or father-figure with whom they spend the majority of their time. The clear majority of adolescents reported on their biological mother (98.2%) and father (84.0%). Means and standard deviations on the PSI are provided in Table 7. Higher scores on the PSI indicate that the behavior is more reflective of the parent's behavior as perceived by the adolescent. Total scores on the Involvement and Psychological Autonomy range from 9-36, and 0-12 for Strictness/Supervision. The means obtained from this measure suggest that adolescents perceived their mothers and fathers to be high in involvement, moderate in psychological autonomy, and moderate to high in strictness and supervision. However, paired sample t-tests revealed some differences among adolescent perceptions of their mother's and father's rearing style. On average, adolescents rated their own mother and father as displaying a similar level of psychological autonomy ($t(92) = .24$, *ns*), but perceived their

mother as being more involved in their well being ($t(92) = 3.97$, $p < .001$) and providing more supervision and limitations ($t(97) = 5.66$, $p < .001$) than their father. A multivariate analysis of Variance (MANOVA) was conducted to assess for the influence of generational status on perceptions of parenting for mother and father independently. Two MANOVAs were conducted with generation status as the independent variable and the parenting subscales as the dependent variables, mother and father respectively. The MANOVAs for father ($\lambda = .94$, $F(6, 218) = 1.09$, ns) and mother ($\lambda = .94$, $F(6, 180) = .95$, ns) parenting were not significant, indicating no differences among perceptions of parenting among first, second, and third generation adolescents.

Table 6.

Living Arrangements with Biological Parents

Adolescent Living Arrangement	N
Mother and Father	59 (50.9%)
Mother, but visits Father	20 (17.2%)
Father, but visits Mother	4 (3.4%)
Mother only (never sees Father)	24 (20.7%)
Father only (never sees Mother)	0 (0%)
Other arrangement[7]	9 (7.8%)

Table 7.

Means and Standard Deviations for the Parenting Style Index

Subscale	N	Mean
Mother		
Involvement	114	29.22 (4.01)
Psychological Autonomy	114	23.33 (5.00)
Strictness/Supervision	115	9.61 (2.40)
Father		
Involvement	95	27.65 (5.37)
Psychological Autonomy	95	23.57 (4.79)
Strictness/Supervision	99	7.86 (3.46)

Note. Standard deviation in parenthesis.

[7] E.g., Adolescent lives with biological parent and a step-parent with no visitation of other parent, a biological parent is deceased, or adolescent lives with legal guardian.

Mental health. Adolescent mental health was assessed using self- and parent-report. Raw scores for the CBCL and YSR were entered into ASEBA software for scoring and standardized scores were generated. Each adolescent's raw score was converted into a *T*-score that is normed to the adolescent's gender and age. *T*-scores maintain a mean of 50 and a standard deviation of 10. *T*-scores between 65 and 69 are considered in the borderline clinical range and *T*-scores 70 and above are considered to be in the clinical range. Means and standard deviations are presented in Table 8. There were no differences between adolescent male or females on both externalizing and internalizing variables as rated by both parent and adolescent; thus, results will be presented in combined gender format. Only the withdrawn behavior subscale was significantly different between parent and adolescent report ($t(115) = 3.51$, $p<.05$); however, the 2.38 mean difference in the scores is not clinically significant.

Table 8.

Means, Standard Deviations, and Clinical Ranges for the CBCL and YSR

Subscale	CBCL Mean	Borderline/ Clinical	YSR Mean	Borderline/ Clinical	CBCL vs YSR
Anxiety	54.05	5.2%	53.65	5.2%	ns
	(6.66)	6.0%	(5.49)	1.7%	
Withdrawn	56.83	7.8%	54.45	7.8%	$t(115) =$
	(8.23)	9.5%	(5.11)	0%	$3.51, p<.05$
Rule Breaking	53.61	2.6%	54.53	2.6%	ns
	(5.08)	2.6%	(5.34)	2.6%	
Aggressive Behavior	54.27	6.0%	54.60	6.9%	ns
	(7.53)	5.2%	(6.87)	3.4%	

Note. Standard deviation in parenthesis.

A series of four MANOVAs were computed to examine generational status on CBCL and YSR internalizing and externalizing subscales, respectively. There were no significant differences found for generational status on CBCL and YRS scores. On

average, the internalizing and externalizing subscales of the CBCL and YSR fell within the normal range. These results are consistent of what would be expected from a community sample.

Academic achievement. The scores for the PSAT domains can range from 20 to 80, with higher scores noting greater academic achievement in that domain. In the current sample (see Table 9), scores ranged between 20-57 for critical reading (M = 38.32, SD = 8.99) 20-67 for mathematics (M = 40.09, SD = 9.46), and 20-57 for writing skills (M = 36.47, SD = 8.72). There were no differences between males and females on reading ($t(114) = -1.67$, ns), mathematics ($t(114) = 1.90$, ns), and writing ($t(114) = .15$, ns) scores. Moreover, there were no differences between 9th and 10th graders on critical reading ($t(114) = -1.86$, ns) and writing skills ($t(114) = -1.68$, ns). However, 10th graders scored significantly higher than 9th graders on mathematics ($t(114) = -2.30$, $p<.05$). In comparison to the 2010 PSAT norms, overall scores on mathematics from the 10th graders in the current sample were comparable to national average performance whereas scores on critical reading and writing appeared to be a bit lower than the national sample. A MANOVA test revealed no significant differences in generational status among reading, writing and mathematic skills ($\lambda = .93$, $F(6, 222) = 1.30$, ns).

Table 9.

Means and Standard Deviations for PSAT Scores

Domain	Mean	9th grade Mean	10th grade Mean	Males vs. Females
Critical Reading	38.32 (8.99)	37.01 (8.84)	40.12 (8.98)	ns
Mathematics	40.09 (9.46)	39.40 (8.82)	43.41 (9.91)	$t(114) = -2.30$, $p<.05$
Writing Skills	36.47 (8.72)	35.31 (8.52)	38.04 (8.83)	ns

Note. Standard deviation in parenthesis.

Correlational Analyses

Correlations were performed to identify the relationship among the variables included in main analyses for the present study (see Tables 10-17). Among the mental health variables, the internalizing broadband domain scores (i.e., anxiety and withdrawn subscales) were highly correlated, with parent and child report showing modest association between the anxiety and withdrawn scores ($r = .27$, $p<.01$, $r = .48$, $p<.01$, respectively). The same pattern was true for the externalizing broadband domain scores (i.e., aggressive and rule breaking behavior subscales), with similar trends for parent and child agreement on the aggressive ($r = .43$, $p<.01$) and rule breaking behavior ($r = .33$, $p<.01$) subscales. Thus, an internalizing and externalizing latent variable was created to represent adolescent mental health in the main study model.

Table 10.

Intercorrelations Among Mental Health Variables

		YAnx	CWith	YWith	CAgg	YAgg	CRule	YRule
CAnx	—							
YAnx	.27**	—						
CWith	.71**	.34**	—					
YWith	.43**	.54**	.48**	—				
CAgg	.54**	-.01	.45**	.26**	—			
YAgg	.19*	.37**	.22*	.27**	.43**	—		
CRule	.39**	.00	.34**	.24*	.77**	.39**	—	
YRule	.24*	.20*	.26**	.31**	.38**	.69**	.33**	—

Note. CAnx = CBCL Anxiety, YAnx = YSR Anxiety, CWith = CBCL Withdrawn, YWith = YSR Withdrawn, CAgg = CBCL Aggressive Behavior, YAgg = YSR Aggressive Behavior, CRule = CBCL Rule Breaking, YRule = YSR Rule Breaking
*p< .05, **p< .01

Parenting style behaviors as reported by adolescents showed high associations between mothers' and fathers' involvement (r =.56, p< .01), psychological autonomy (r =.80, p< .01), and strictness/supervision (r = .50, p< .01), suggesting that adolescents on averaged rated their parents as providing comparable rearing styles. Interestingly, paternal strictness and supervision was correlated positively with almost all parenting domains indicating that supervision by father, but not necessarily mother, is viewed in a positive light by adolescents (See Table 11).

Table 11.

Intercorrelations Among Parenting Style Subscales

	MInv	MPa	MStrict	DInv	DPa	DStrict
MInv	—					
MPa	.26**	—				
MStrict	.18	.07	—			
DInv	.56**	.17	.04	—		
DPa	.41**	.80**	.24*	.19	—	
DStrict	.21*	.23*	.50**	.48**	.02	—

Note. MInv = PSI Mother Involvement, FInv = PSI Father Involvement, MPa = PSI Mother Psychological Autonomy, FPa = Father Psychological Autonomy, MStrict = PSI Mother Strictness/Supervision, FStrict = PSI Father Strictness/Supervision
*p< .05, **p< .01

Few parenting variables were correlated with adolescent internalizing behavior. Significant relationships were found only on the YSR and suggested that as perceptions of maternal and paternal involvement and psychological autonomy increase, self-report of internalizing behavior decreases (See Table 12). For fathers only, perceptions of strictness and supervision were associated negatively with anxiety (r = -.28, p<.01) and withdrawn behavior (r = -.20, p<.01), indicating supervision as a protective factor. A similar pattern was identified for externalizing behavior and parenting style. With the

exception of adolescent report of maternal involvement, parenting variables were associated with YSR but not CBCL report of mental health. Reports of aggressive and rule breaking behavior in adolescents were correlated negatively with paternal and maternal emotional involvement, psychological autonomy, and strictness/supervision indicating that these behaviors as rated primarily by adolescents are protective of disruptive behavior.

Table 12.

Correlations Between Mental Health and Parenting Mediators

	CAnx	YAnx	CWith	YWith	CAgg	YAgg	CRule	YRule
MInv	-.07	-.19*	-.14	-.09	-.24**	-.36**	-.26**	-.43**
FInv	-.13	-.15	-.05	-.23*	-.13	-.24*	-.14	-.35**
MPa	.05	-.28**	-.03	.01	-.12	-.28**	-.17	-.19*
FPa	.02	-.20*	-.04	.01	-.07	-.31**	-.10	-.35**
MStrict	-.08	-.04	-.09	-.09	-.08	-.22*	-.15	-.33**
FStrict	-.17	-.28**	-.18	-.20*	-.16	-.38**	-.20	-.32**

Note. CAnx = CBCL Anxiety, YAnx = YSR Anxiety, CWith = CBCL Withdrawn, YWith = YSR Withdrawn, CAgg = CBCL Aggressive Behavior, YAgg = YSR Aggressive Behavior, CRule = CBCL Rule Breaking, YRule = YSR Rule Breaking, MInv = PSI Mother Involvement, FInv = PSI Father Involvement, MPa = PSI Mother Psychological Autonomy, FPa = Father Psychological Autonomy, MStrict = PSI Mother Strictness/Supervision, FStrict = PSI Father Strictness/Supervision; *$p < .05$, **$p < .01$

Internalizing behavior as reported by both parent and adolescent were inconsistently correlated to academic achievement variables. Parent but not adolescent report of anxiety ($r = -.20$, $p < .05$) and withdrawn behavior ($r = -.24$, $p < .01$) was modestly related to adolescent critical reading performance. Adolescent self-report of anxiety was correlated positively with writing skill ($r = .19$, $p < .05$), suggesting that arousal may assist in writing performance. Neither parent nor adolescent internalizing behavior was associated with math achievement. Trends for externalizing behavior and

academic achievement followed a somewhat similar pattern. Adolescent self-report of externalizing behavior was not associated with academic achievement variables. However, parent appraisal of their adolescent as breaking rules was correlated negatively with reading (r = -.22, p<.05), math (r = -.29, p<.05), and writing (r = -.27, p<.01). Moreover, parents ratings of their adolescent's aggressive behavior was associated with lower performance on reading (r = -.20, p<.05) and writing (r = -.25, p<.01).

Table 13.

Correlations Between Mental Health and Academic Achievement

	Reading	Math	Writing
CBCL Anxiety	-.20*	-.13	-.15
YSR Anxiety	.00	.12	.19*
CBCL Withdrawn	-.24**	-.13	-.17
YSR Withdrawn	-.12	-.15	-.12
CBCL Aggressive Behavior	-.20*	-.17	-.25**
YSR Aggressive Behavior	.05	-.02	-.04
CBCL Rule Breaking	-.22*	-.29*	-.27**
YSR Rule Breaking	.09	.03	-.05

Note. Reading = PSAT Critical Reading, Math = PSAT Mathematics, Writing = PSAT Writing Skills; *p< .05, **p< .01

Acculturative measures are presented in terms of Hispanicism and Americanism; however, the bidimensional model of acculturation asserts that both domains should be incorporated (i.e., biculturalism) in the relationships among outcomes. Table 14 presents the intercorrelations between the Hispanicism and Americanism subscales for parent and adolescent, but only bicultural scores (BIQ/ABIQ) will be interpreted. Recall that scores closer to zero represent biculturalism and scores deviating from zero reflect Hispanicism (- scores) or Americanism (+ scores). In order to investigate the relative influence that

biculturalism exerts on the outcome variables, point-biserial correlations were computed (see Appendix L). Parent and adolescent biculturalism scores were dichotomized based on preference for Hispanicism or Americanism (i.e., + or – values) and subsequently correlated with the mediator and outcome variables. Individuals whose difference score was 0 were not included in the analyses. Findings were essentially identical to those utilizing the difference score biculturalism variable. Only three correlations were significantly different from those discussed below and do not impact the interpretive findings. As a result, findings will be discussed in terms of the hypothesized biculturalism difference score.

Table 14.

Intercorrelations Among Acculturation Variables

	BIQ	BIQ-H	BIQ-A	ABIQ	ABIQ-H	ABIQ-A
BIQ	—					
BIQ-H	-.79**	—				
BIQ-A	.81*	-.27**	—			
ABIQ	.38**	-.27**	.33**	—		
ABIQ-H	-.36**	.34**	-.24*	-.85**	—	
ABIQ-A	.21*	-.04	.29*	.69**	-.19*	—

Note. BIQ = Bicultural Involvement Questionnaire, BIQ-H = BIQ Hispanicism, BIQ-A= BIQ Americanism, ABIQ=Adolescent Bicultural Involvement Questionnaire, ABIQ-H = ABIQ Hispanicism, ABIQ-A = ABIQ Americanism; *p< .05, **p< .01

Among the outcome variables, both adolescent and parent biculturalism scores were poorly associated with mental health variables. Only parent biculturalism was correlated negatively with parent report of withdrawn behavior (r = -.28, p< .01). Similarly, adolescent biculturalism was related negatively with their report of withdrawn behavior (r = -.21, p< .01). These findings suggest that as parents and adolescent

acculturate to the American culture, less withdrawn behavior by adolescents is experienced. Likewise, parent and adolescent biculturalism scores were positively associated with academic achievement, suggesting that as parents and adolescent express preference to the American culture over the Hispanic culture, performance on reading, math, and writing are higher (see Table 15).

Acculturation scores were not consistently related to the mediator variables. Adolescent biculturalism was only associated negatively with acculturative stress (r = -.30, p< .05), indicating that adolescents who demonstrated a preference for the Hispanic culture were more likely to report acculturative stress. Parent biculturalism was

Table 15.

Correlations Between Acculturation, Mental Health, and Academic Achievement

	BIQ	ABIQ
CBCL Anxiety	-.17	-.06
YSR Anxiety	.04	.07
CBCL Withdrawn	-.28**	-.07
YSR Withdrawn	-.16	-.21*
CBCL Aggressive Behavior	-.14	.01
YSR Aggressive Behavior	-.03	.07
CBCL Rule Breaking	-.14	-.10
YSR Rule Breaking	-.11	.10
PSAT Critical Reading	.25**	.25**
PSAT Mathematics	.30**	.35**
PSAT Writing Skills	.29**	.25**

Note. BIQ = Bicultural Involvement Questionnaire, ABIQ=Adolescent Bicultural Involvement Questionnaire; *p< .05, **p< .01

associated with adolescent perception of maternal psychological autonomy (r = .23, p<.05), acculturative stress (r = -.34, p<.01), and self-esteem (r = .29, p<.01). This

finding suggests that as parents endorse preference for the American culture, adolescents perceive their mothers as allowing greater independence and report less acculturative stress and greater self-esteem.

Lastly, self-esteem and academic motivation were consistently associated in the predicted directions for mental health and other mediator variables (see Table 17). Adolescent self-esteem was correlated negatively with both internalizing and externalizing behaviors and acculturative stress, and correlated positively with all parental rearing behaviors and academic motivation. Adolescent academic motivation was related negatively to withdrawn behavior and externalizing behavior, and positively

Table 16.

Correlations Between Acculturation and Proposed Mediators

	BIQ	ABIQ
Mother Involvement	.06	-.07
Father Involvement	.07	.02
Mother Psychological Autonomy	.23*	-.07
Father Psychological Autonomy	.19	-.10
Mother Strictness/Supervision	.17	.00
Father Strictness/Supervision	.19	.00
ASIC	-.34**	-.30**
RSES	.29**	.12
AMS	.17	-.03

Note. BIQ = Bicultural Involvement Questionnaire, ABIQ=Adolescent Bicultural Involvement Questionnaire, ASIC = Acculturative Stress Inventory for Children, RSES = Rosenberg Self-Esteem Scale, AMS = Academic Motivation Scale; *$p < .05$, **$p < .01$

associated with parental involvement and psychological autonomy. Academic motivation was not associated with acculturative variables or acculturative stress. Both self-esteem and academic motivation were poorly associated with academic achievement; only

adolescent self-esteem was related to critical reading ($r = .27$, $p < .01$). Thus, measures of esteem and motivation were related more to psychological variables than performance measures.

Table 17.

Correlations Between Mental Health, Academic Achievement, and Proposed Mediators

	ASIC	RSES	AMS
CBCL Anxiety	.06	-.35**	-.07
YSR Anxiety	.20*	-.42**	-.07
CBCL Withdrawn	.20*	-.32**	-.19*
YSR Withdrawn	.37**	-.44**	-.07
CBCL Aggressive Behavior	.03	-.20*	-.30**
YSR Aggressive Behavior	.20*	-.28**	-.40**
CBCL Rule Breaking	.05	-.18*	-.30**
YSR Rule Breaking	.25**	-.31**	-.52**
Mother Involvement	-.01	.30**	.50**
Father Involvement	-.03	.35**	.29**
Mother Psychological Autonomy	-.14	.24**	.30**
Father Psychological Autonomy	-.20*	.31**	.41**
Mother Strictness/Supervision	-.22*	.20*	.13
Father Strictness/Supervision	-.18	.28**	.15
PSAT Critical Reading	-.07	.27**	.17
PSAT Mathematics	-.10	.18	.10
PSAT Writing Skills	-.15	.11	.12

Note. ASIC = Acculturative Stress Inventory for Children, RSES = Rosenberg Self-Esteem Scale, AMS = Academic Motivation Scale; *$p < .05$, **$p < .01$

Tests for Mediation

Structural Equation Modeling (SEM) was utilized to test Hypotheses 1-6. SEM is a comprehensive statistical technique designed to test models based on theory. SEM uses linear equations to model relationships among variables. One advantage of SEM over

other techniques is its ability to compare latent constructs[8]. Another strength of SEM lies in its ability to take into account errors of measurement (known as disturbance) in all observed variables, especially predictor variables (Raykov & Marcoulides, 2006). For the present study, structural regression models were used to test mediators (i.e., indirect effects) of the relationship between proposed latent constructs. Assumptions for SEM follow similar guidelines as other parametric analyses in that data should be independent and normally distributed. To analyze the hypothesized mediational pathways by which family acculturation may influence adolescent mental health and academic achievement, paths were tested using SEM with PROC TCALIS in SAS (9.2). Latent constructs in the present study included family acculturation, parenting style, adolescent internalizing behavior, adolescent externalizing behavior, and adolescent academic achievement. Indicators of each latent construct were included in Figure 1. The Maximum Likelihood (ML) method of parameter estimation was utilized in the present study. The ML method establishes estimates for model parameters that "maximize the likelihood of observing the available data if one were to collect data from the same population again" (Raykov & Marcoulides, 2006, p. 30), suggesting that estimates with this method are producing the highest likelihood of fit. The ML method was selected because it can be used with multivariate normal data, as well as with data that are slightly non-normal as was the case with this study. Additionally, the ML method produces parameter estimates that are consistent (i.e., estimates are more precise with greater sample size), asymptotically unbiased[9], asymptotically efficient[10], asymptotically normal[11], provides an overall chi-

[8] Latent constructs are theoretical variables that do not have available observations and are defined by indicators (Raykov & Marcoulides, 2006).
[9] As sample size increases, average estimates are obtained and become more accurate.
[10] Estimators have minimum variance across samples and there is less sampling variance.

square test, and elicits estimates that are easier to interpret. The models will be evaluated in terms of convergence, goodness-of-fit, unstandardized paths, and variance (R^2).

First and foremost, the convergence criterion must be satisfied. If this criterion is not satisfied, estimates will not be produced. Second, the fit indices of chi-squared (χ^2), root mean square of approximation (*RMSEA*), and Bentler's comparable fit index (*CFI*) were examined. The χ^2 represents the overall fit of the model and should be non-significant. The *RMSEA* is a measure of global fit and determines how well the model replicates reality. The *RMSEA* is one of the fit indices less affected by sample size (Raykov & Marcoulides, 2006) and should be less than 0.05 in value, but less than 0.08 is also acceptable. The *CFI* is an index of comparable fit assuming no relationships between the observed variables (Raykov & Marcoulides, 2006). In essence, the *CFI* is comparing the specified model to the worst imaginable model. The *CFI* should be above 0.95 to suggest a well-fit model. Lastly, R^2 values are reviewed to calculate the degree of unexplained variance (1- R^2) in the outcomes variables. Once the data satisfy the above criteria, unstandardized path coefficients can be examined to determine which pathways are significant. Models that do not produce satisfactory fit indices should not be interpreted because they do not present a good means of data representation (Raykov & Marcoulides, 2006); thus, models with poor fit will not be interpreted. It is important to note that causal inferences cannot be made among the constructs examined in the model due to the cross-sectional nature of the data.

[11] As sample size increases, sample follows a normal distribution and confidence interval are more accurate.

Fit indices for the original model were poor for both the mother (χ^2 (141) = 423.14, p< .01, *RMSEA* = .13, *CFI* = .66) and father (χ^2 (140) = 403.41, p< .01, *RMSEA* = .14, *CFI* = .64) models. Due to the poor fit, Lagrange Multiplier (LM) and Wald Statistic modification indices were reviewed in an attempt to improve the fit. LM indices suggest paths that may be added to improve fit, whereas Wald statistics indicate paths that can be removed to improve fit. Out of concern for possible saturation of the model and because the path additions of the LM did not fit within a conceptual understanding of the models, Wald statistics were utilized in an attempt to make the models more parsimonious.

For the mother model, a second model was tested removing the path from family acculturation to academic achievement. Again, the model revealed poor fit (χ^2 (142) = 423.27, p< .01, *RMSEA* = .13, *CFI* = .66). Modification indices were reviewed and Wald statistics suggested the removal of the path between acculturative stress and adolescent externalizing behavior, the path between adolescent self-esteem and adolescent externalizing behavior, and the path between self-esteem and academic achievement. Likewise, the fit for the third model was poor (χ^2 (145) = 425.65, p< .01, *RMSEA* = .13, *CFI* = .66) and unimproved from the original model. Figure 3 presents the final model.

For the father model, a second model was tested by removing the path between adolescent acculturative stress and adolescent internalizing behavior. Fit indices for the model were poor (χ^2 (141) = 409.50, p< .01, *RMSEA* = .14, *CFI* = .63). Again, modification indices utilizing the Wald statistic suggested the additional removal of the path between parenting style and adolescent externalizing behavior. The resulting fit of the third model remained poor (χ^2 (142) = 409.50, p< .01, *RMSEA* = .14, *CFI* = .64).

Attempts to improve the fit of the models were unsuccessful suggesting that relationships between the variables in the study may not fit together as a conceptual model. Examination of the correlations among the variables suggest that the biculturalism measures were associated with only a few mental health variables, the academic achievement outcomes, and a few mediators. Thus, separate meditational analyses using the Baron and Kenny (1986) method were utilized to identify individual mediators in the relationships between acculturation, mental health and academic achievement in adolescents.

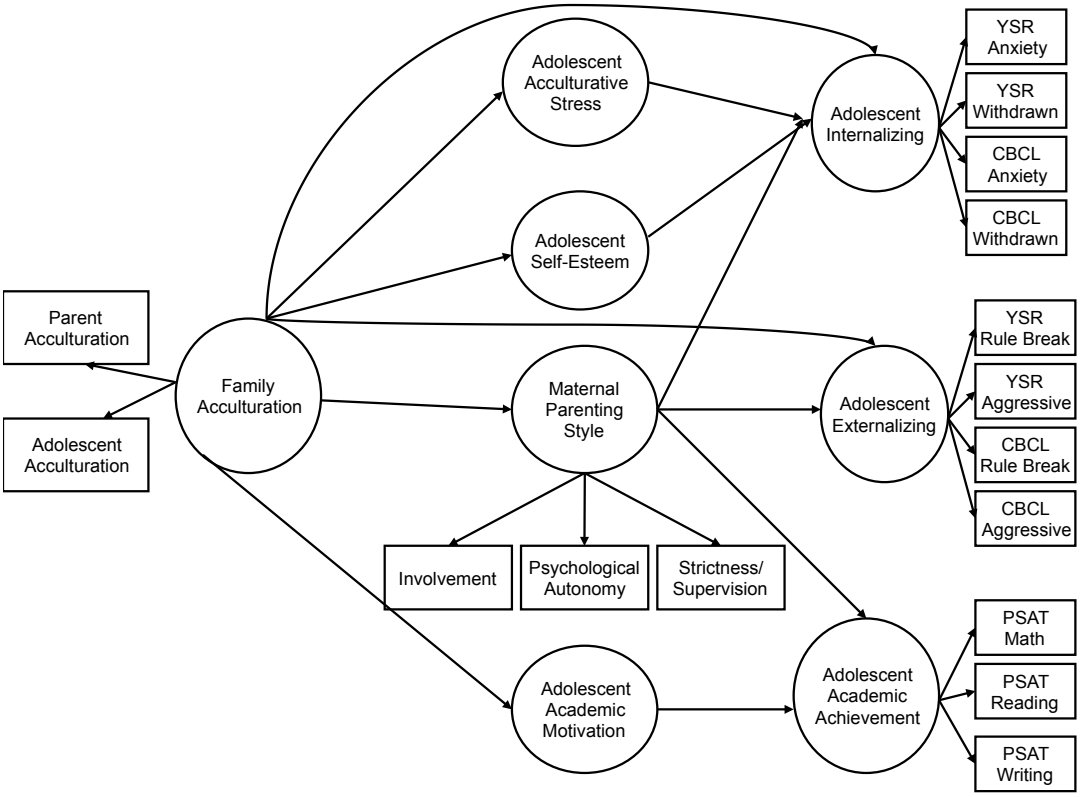

Figure 3. Final meditational model with perception of maternal parenting in the role of acculturation in adolescent functioning.

The Baron and Kenny (1986) model promulgates four steps for partial and full mediation. First, the predictor variable must predict the outcome measure. Second, the predictor variable must correlate with the proposed mediator. Third, the mediator must predict the outcome variable. Fourth, the relationship between the predictor and the outcome measure is decreased after controlling for the influence of the mediator. This step is considered partial mediation. Full mediation occurs when the effect of the predictor on the outcome is zero when the mediator is introduced. The four steps are tested with a series of three regressions. Identified mediators were then tested using the Sobel (1982) test to identify the approximate significance test for the indirect effect as suggested by Baron and Kenny (1986).

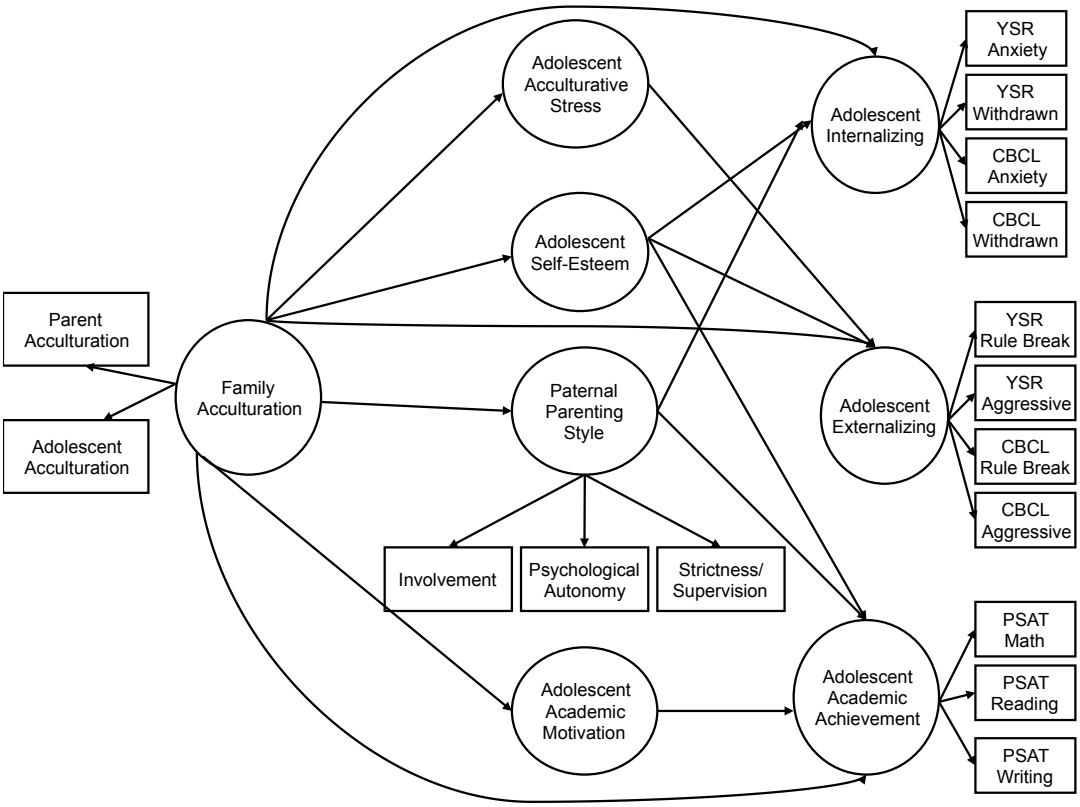

Figure 4. Final meditational model with perception of paternal parenting in the role of acculturation in adolescent functioning.

The Sobel statistic is calculated by finding the square root of $b^2s_a^2 + a^2s_b^2$, where *a* is the unstandardized regression coefficient for the association between the predictor and the mediator, s_a is the standard error of *a*, *b* is the unstandardized regression coefficient for the association between the mediator and the outcome variable while controlling for the predictor, and s_b is the standard error of *b*. The Sobel test is a conservative method because it accounts for the amount of error in the mediator. As described by Baron and Kenny (1986) failure to consider the measurement error in the mediator can result in an underestimate of the effect of the mediator and overestimate the effect of the predictor variable on the dependent variable. Thus, use of the Sobel test can assist in accurately identifying mediators.

To test the first step, multiple regression analyses were ran including parent and adolescent biculturalism (BIQ/ABIQ) as predictors to each respective outcome variable (CBCL/YSR subscales and PSAT domains). Significant regressions were found for parental acculturation and CBCL withdrawn (ß = -.33, $p < .01$), family acculturation (BIQ/ABIQ both predicting) and PSAT math skills (ß = .19, $p < .05$; ß = .28, $p < .01$, respectively), and parental acculturation and PSAT writing skills (ß = .22, $p < .05$). In the second step of mediation, multiple regressions were tested to assess the relationship between family acculturation and the proposed mediators. Significant associations were found for family acculturation and acculturative stress (BIQ ß = -.27, $p < .01$; ABIQ ß = -.20, $p < .05$), parental acculturation and self-esteem (ß = .29, $p < .01$), and parental acculturation and maternal psychological autonomy (ß = .25, $p < .05$). To test for mediation (steps 3 and 4), multiple regressions were conducted by entering the predictor and mediator variables simultaneously in order to control for the influence of predictors

on the dependent variables. The condition for partial mediation was met only for parent acculturation, ß = -.33, $p < .01$, being significantly reduced to ß = -.26, $p < .01$ (Sobel test, $z = -2.06$, $p = .04$; see Table 18). This finding indicates that self-esteem partially mediated the relationship parent biculturalism and adolescent withdrawn behavior. Fourteen percent of the variance in withdrawn behavior as reported by parents was accounted for by adolescent report of self-esteem.

Hypothesis 1: Acculturative stress will mediate the relationship between family acculturation and adolescent mental health. This hypothesis was not supported in the SEM model or post-hoc regression analyses. Acculturative stress did not mediate the relationship between parental acculturation and adolescent mental health (as measured by CBCL Withdrawn subscale; ß = .11, ns), parental acculturation and writing skills (ß = -.05, ns), and family acculturation and mathematic skills (ß = .06, ns).

Hypothesis 2: Perceived parenting styles will mediate the relationship between family acculturation and adolescent mental health and academic achievement. This hypothesis was not supported in the SEM model or post-hoc regression analyses. Paternal involvement, psychology autonomy, and strictness/supervision, as well as maternal involvement and strictness/supervision were not significantly related to family acculturation. Maternal psychological autonomy was not found to mediate the relationship between parental acculturation and adolescent mental health (as measured by CBCL Withdrawn subscale; ß = .04, ns), parental acculturation and writing skills (ß = -.05, ns), and family acculturation and mathematic skills (ß = .02, ns).

Table 18.

Tests for Mediation

Step 1					
Predictors	Outcome	R^2	B	SE B	ß
BIQ	CBCL Anxiety	.03	-.05	.03	-.16
ABIQ			-.00	.03	-.01
BIQ	CBCL Withdrawn	.10	- .12	.04	-.33**
ABIQ			.06	.14	.16
BIQ	YSR Anxiety	.04	-.01	.03	-.04
ABIQ			.06	.03	.20
BIQ	YSR Withdrawn	.02	-.04	.02	-.16
ABIQ			-.00	.03	.00
BIQ	CBCL	.02	-.03	.02	-.14
ABIQ	Rule Breaking		-.00	.03	-.02
BIQ	CBCL	.02	-.06	.03	-.17
ABIQ	Aggressive Beh		.03	.04	.07
BIQ	YSR	.03	-.04	.02	-.17
ABIQ	Rule Breaking		.04	.03	.16
BIQ	YSR	.00	-.02	.03	-.05
ABIQ	Aggressive Beh		.02	.04	.05
BIQ	PSAT Critical	.09	.07	.04	.18
ABIQ	Reading		.08	.04	.18
BIQ	PSAT Math	.16	.08	.04	.19*
ABIQ			.13	.05	.28**
BIQ	PSAT Writing	.11	.09	.04	.22*
ABIQ			.07	.04	.17
Step 2					
Predictors	Mediator	R^2	B	SE B	ß
BIQ	ASIC	.15	-.11	.04	-.27**
ABIQ			-.10	.04	-.20*
BIQ	RSES	.08	.06	.02	.29**
ABIQ			.00	.02	.01
BIQ	PSI Mom	.04	.02	.02	.13
ABIQ	Involvement		-.04	.02	-.20
BIQ	PSI Mom	.05	.06	.02	.25*
ABIQ	PA		-.01	.03	-.05
BIQ	PSI Mom	.03	.02	.01	.17
ABIQ	Strictness		.00	.01	.02
BIQ	PSI Dad	.02	.03	.03	.11
ABIQ	Involvement		-.03	.03	-.11
BIQ	PSI Dad	.05	.05	.02	.23
ABIQ	PA		-.03	.03	-.12
BIQ	PSI Dad	.04	.03	.02	.22
ABIQ	Strictness		-.01	.02	-.08
BIQ	AMS	.04	.02	.01	.21
ABIQ			-.01	.01	-.11

Table 18, cont'd.

Tests for Mediation

Steps 3 & 4					
Mediator	Outcome	R^2	B	SE B	ß
ASIC	CBCL Withdrawn	.09	.10	.09	.11
ASIC	PSAT Math	.16	.06	.10	.06
ASIC	PSAT Writing	.09	-.05	.09	-.05
RSES	CBCL Withdrawn	.14	-.48	.17	-.26**
RSES	PSAT Math	.17	.21	.19	.10
RSES	PSAT Writing	.08	.06	.18	.03
Mom PA	CBCL Withdrawn	.08	.06	.16	.04
Mom PA	PSAT Math	.16	.05	.17	.02
Mom PA	PSAT Writing	.08	-.08	.16	-.05

Note. Mediators are presented while controlling for predictor(s); BIQ = Bicultural Involvement Questionnaire, ABIQ=Adolescent Bicultural Involvement Questionnaire, ASIC = Acculturative Stress Inventory for Children, RSES = Rosenberg Self-Esteem Scale, AMS = Academic Motivation Scale; *$p < .05$, **$p < .01$

Hypothesis 3: Perceptions of academic support will mediate the relationship between family acculturation and academic achievement. This hypothesis was not tested due to the ceiling effect obtained from the measure.

Hypothesis 4: Adolescent academic motivation will mediate the relationship between family acculturation and academic achievement. This hypothesis was not supported in the SEM model or post-hoc regression analyses. Adolescent report of academic motivation was not significantly related to family acculturation.

Hypothesis 5: Adolescent self-esteem will mediate the relationship between family acculturation and adolescent mental health and academic achievement. This hypothesis was partially supported. Self-esteem was found to partially mediate the relationship between family acculturation and adolescent internalizing behavior (i.e., withdrawn behavior; Sobel test, $t = -2.06$, $p = .04$). Self-esteem did not mediate the relationship between family acculturation and academic achievement (Math ß = .10, ns; Writing ß = .03, ns).

Hypothesis 6: Differential mediational pathways for perceptions of mothers' versus fathers' academic support and parenting style were to be explored. Parental academic support could not be investigated due to the ceiling effects obtained for the academic support scale. There were no parent related variables that mediated the relationship between acculturation and adolescent mental health and academic achievement.

Discussion

The purpose of the present study was to investigate the potential pathways through which acculturation may influence Hispanic adolescents' psychological functioning and academic achievement. This research is unique in that it is among the few studies to consider a bidimensional model of acculturation, incorporate parental acculturation, examine acculturative stress apart from acculturation, and emphasize adolescent perceptions of both maternal and paternal parenting. Based on the limited extant literature, it was hypothesized that acculturative stress, parenting behaviors, self-esteem, and academic motivation and support would act as mediators in the relationship between acculturation and adolescent mental health and academic achievement. Results from the present study yielded some expected and unexpected findings.

Adolescent participants from the study ranged in generational status to include first, second, and third generation and beyond. Not surprisingly, adolescents on average were more preferring of the American culture (i.e., less biculturated) than parents. As teenagers are more immersed in the American culture via school and the media, one would expect to see a similar trajectory of findings. Guo and colleagues (2009) in a recent study examining multidimensional biculturalism found similar results where adolescents scored higher than their parents on English language use and American cultural practices. However, parents in the present study rated themselves as more *bicultural* on average than did adolescents. As a result, the association between parent and adolescent biculturalism was modest. Although there is little guidance from the

literature for this outcome, this study suggests that parents are retaining their cultural heritage while introducing and valuing mainstream values. This finding would make it less likely for adolescents and their parents to experience a marked parent-adolescent cultural gap. In fact, researchers have argued that bicultural adolescents report greater parental involvement and support, and therefore less familial conflict, than assimilated adolescents because bicultural adolescents *share* heritage retention with their parents (Sullivan et al., 2007). Although parent-adolescent gaps occur in about a third of families, large gaps are problematic because they decrease familism, adaptability, and family cohesion, but the problems lies in preference for Americanism (US involvement) as families who are low in acculturation are more likely to have parent-adolescent conflict due to autonomy struggles (Smokowski & Bacallao, 2006).

Adolescents in the study reported moderate levels of acculturative stress. Correlational findings from the study imply that adolescents who identify with and prefer American culture to a greater degree than Hispanic culture are less likely to experience acculturative stress and having a parent who also prefers American culture also decreases the probability that the teenager will experience acculturative stress. This finding is hopeful because it reduces some of the negative familial consequences associated with acculturative stress such as decreased communication and acculturation gaps (Martinez, 2006). Additionally, acculturative stress was associated with adolescent internalizing and externalizing behavior and parental rearing behaviors, but not academic achievement variables. As acculturative stress may be conceptualized as the psychological experience of the acculturation process, it makes sense that it would be related to mental health variables. Smokowski, Bacallao, and Buchanan (2009) found that acculturative stress in

Latino adolescents was associated significantly more with YSR internalizing symptoms than assimilation measures. The correlations among the parental variables were modest and suggest that the appraisal of stress may be related to other factors aside from perceptions of parenting. The lack of the relationships between acculturative stress and academic achievement was unexpected. One reason for this finding may lie in the fact that academic achievement was assessed using a one-time measure of achievement, whereas, longer term monitoring such as grade point average (GPA) or progress monitoring tools might reflect a different outcome.

Instead, results from the present study showed that preference for Americanism was associated with higher academic achievement. Lopez et al. (2002) also found that Mexican American high school students who reported high levels of biculturalism performed better in school, most likely because of the adaptation of mainstream values, beliefs and norms related to education. Therefore, it may be that emphasis on high achievement is something valued in the American culture. Moreover, preference for American culture would make it more likely that the development of English language skills would be prioritized, making it more likely for an adolescent to perform better on standardized testing. In contrast, preference for Hispanicism was found to be associated with withdrawn behavior in adolescents. One possible explanation for this finding is that Hispanic values or mannerisms (e.g., physical touch, expressions) maybe different from American values or mannerisms and place the adolescent at risk for peer victimization. In their study of Latino adolescents, Yu and associates (2003) found that primary use of the Spanish at home (or dominance of the Spanish language) placed those adolescents at greater risk for social alienation and peer victimization than adolescents who spoke

English at home. Adolescents, in a sensitive period of development, are likely to place inordinate importance on the peer social environment and may withdraw for fear of being different or victimized.

Externalizing behavior as rated by both parents and adolescents was associated negatively with parenting behaviors, youth report of anxiety, and academic achievement variables. These findings while expected and consistent with previous literature also provide the unexpected relationship between parental strictness/supervision and externalizing behavior. It may be the case that within the Hispanic culture, the level of supervision and strictness is viewed as protective. Research by Domenech Rodríguez and colleagues (2009) support this finding. They postulate that the four dimensions of parenting (i.e., authoritarian, authoritative, permissive, and indulgent) do not adequately represent Latino families. Instead, they suggest a fifth parenting style, *protective parenting,* to better represent Latino families. Although parental strictness and supervision in the current study was not associated with either parent or adolescent biculturalism, it was associated positively with parental involvement and psychological autonomy suggesting that adolescents viewed strictness and supervision as a positive parental characteristic, especially when reporting on their fathers. Thus, this finding would support the theorized construct of protective parenting.

As expected, adolescent internalizing behavior was associated with parental rearing behaviors, and critical reading and writing skills. Adolescent externalizing behavior was not associated with parent or child biculturalism. Although adolescent withdrawn behavior was associated with parent and adolescent biculturalism, the association was weak. This finding was unexpected as previous studies have documented

a relationship between adolescent acculturation and mental health behaviors, particularly externalizing behavior (Ebin et al., 2001; Guilamo-Ramos, Jaccard, Johansson, & Turrisi, 2004). Reasons for this unexpected finding are discussed below.

Lastly, adolescent academic motivation was inversely related to adolescent internalizing and externalizing behavior, and parental involvement and psychological autonomy (but not strictness and supervision). These findings are supported by the research of Plunkett and Bamaca-Gomez (2003) who found that maternal and paternal involvement at home, such as the availability to provide homework support, monitoring, and overall support, lead to reports of adolescent motivation in Hispanic adolescents. It would also follow that academic motivation would increase when internalizing and externalizing behavior is lower.

Despite some expected correlational findings, no significant relationships were identified at the point of modeling the proposed directional relationships among the variables. The hypothesized model did not demonstrate sufficient or good fit among the variables indicating that the proposed meditational pathways to explain the relationships between acculturation and mental health and academic achievement was inadequate. At the point of examining the intercorrelations among key predictor, mediator, and outcome variables, few strong relationships were yielded. The challenge is to try to ascertain why these expected relationships were not found.

As stated earlier, this study was among the few that have attempted to investigate biculturalism as opposed to undimensional acculturation. Measures in the study attempting to assess for *acculturation* were bidimensional unlike previous studies that focused exclusively on acculturation in the form of assimilation to the mainstream

culture. It is plausible that the non-significant relationships between some of the outcome variables in this study suggests that biculturalism (preference for both Hispanic and American cultures) creates a protective buffer for anxiety and externalizing or risky behaviors. Current research supports this interpretation. Researchers have suggested that biculturalism is associated with positive functioning in Hispanic adults (Rogler et al., 1991) and families (Smokowski et al., 2008) especially when the level of biculturalism is high (Thoman & Suris, 2004) and when there is an adaptive balance and infusion of both Hispanic and American culture. Moreover, if one were to accept this idea, it would likely follow that the SEM model presented in the present study would not demonstrate good fit and individual level univariate regressions would be insignificant.

As was the case, only self-esteem was found to partially mediate the relationship between family acculturation and internalizing behavior as operationalized by withdrawn behavior. This finding is not surprising given that adolescents are in the period of development where they are more likely to internalize negative self-images or concerns regarding their cultural identity (Gil et al., 2004). Relatedly, Schwartz and colleagues (2007) found that self-esteem in Hispanic adolescents also mediated the relationship between ethnic identity and externalizing problems as well as between ethnic identify and academic achievement. Thus, it appears that biculturalism may operate through self-esteem to influence mental health behavior in adolescence (Schwartz et al., 2007).

At least in the present study, it appears that self-esteem is the key player. Self-esteem was negatively associated with externalizing and internalizing behavior, parental rearing behaviors, and critical reading. Smokowki, Rose, and Bacallao (2010) found that adolescents who endorsed biculturalism were more likely to have higher self-esteem and

fewer internalizing symptoms. Moreover, they found that adolescents' level of internalizing behavior *decreased* over a period of two years further supporting that internalization of both American and Hispanic cultures serves a protective factor for psychopathology. Likewise, Zamboanga and colleagues (2009) found adolescent self-esteem to emerge as the most consistent predictor of substance abuse, such that decreased self-esteem lead to increased probability of substance use. In their study, self-esteem mediated the relationship between Hispanic cultural orientation and alcohol use where self-esteem was the single most important protective factor against substance abuse.

Another reason for the lack of significant findings may be related to the density of Hispanics in the community. Ramírez García and colleagues (2010) posit that in communities with high Hispanic/Latino density, there are greater opportunities for youth socialization in both Hispanic and American cultures, whereas in areas with low Hispanic/Latino density, there is less community encouragement for participation in the culture of origin. As was the case in this study, the Tampa area is culturally diverse and the sampling of schools occurred in culturally diverse neighborhoods; thus, it is possible that biculturalism is built into the social and community networks for many of the adolescents in this study. Along the same line, schools in the Hillsborough County school district are equipped with a multitude of psychological services for adolescents including guidance counselors, school psychologists, social workers, peer mentors, and acculturation centers. Although it is unknown whether the adolescents in this study utilized such services, it is possible that by the high school years, some service was provided. For the nominal number of adolescents who were assessed for depressive or suicidal ideation, many were already receiving in psychological services. Torres and

Rollock (2007) suggested that individuals who endorse active problem-solving coping styles (e.g., talking with someone about problems and drawing upon past experiences), like one would receive in school or community counseling, are more likely to show positive mental health outcomes. In a system that is supportive of culture, it is plausible that less distress would be appraised by adolescents. In fact, Hawley et al. (2007) found that Hispanic children who reported greater acculturative stress utilized coping strategies to a greater extent than other Hispanic children suggesting resiliency during periods of transition and distress.

It is also possible that adolescents are protected by parents, school, and the surrounding community and have yet to experience what Smart and Smart (1995) identified as loss of social support, discrimination, and immigration stress that is prominent in adult acculturative stress. In this study, acculturative stress was not related to generational status indicating that for this sample of adolescents, timing into the US culture was not problematic or suggests that other factors, such as a desire of biculturalism, is protective. As was the case, first generation adolescents in the study were on average more likely to report a desire for biculturalism than second and third generation adolescents, who despite also being bicultural, were more likely to prefer American culture on average. This finding is consistent with Perez and Padilla (2000) who found that preference for Hispanic cultural orientation decreased across three generations of Hispanic adolescents.

Limitations and Future Directions

Despite the attempt to design and carryout a methodologically sound study, limitations do exist. Two limitations concern the response rate and sample

demographics. Although it is not uncommon to experience a low response rate in community-based research, the response rate in the present study was low, 5.6%. Reasons for this rate may be due to the reality that some families did not want to participate in a research study due to stigma (i.e., study in the Psychology Department), fear of legal ramifications (e.g., deportation), literacy, time commitment, or compensation. Regarding sample demographics, while every attempt was made to sample from the population of 9-10th grade Hispanic youth from each participating high school, there remains a possibility that participants self-selected into the study and may underrepresent families who are less acculturated to American culture or are less familiar with the research process. Therefore, due to the nature of sampling, these results should be interpreted in the context of a relatively bicultural, well-adjusted group. This pattern, while common in similar research, has been identified as an area of concern due to the high drop out rates in Hispanic adolescents (Knight, Roosa, Calderon-Tena, & Gonzales, 2009).

Another concern relates to sampling during a developmental period. Adolescence is a period of identity development including the development of ethnic identity. A person's cultural identity is developed over the life span and includes the individual's cultural self-definition, ethnic identity, acculturation, individualism, and collectivism (Berry, 1997). As such, acculturation is a dynamic process that will fluctuate as a person interacts with the environment and reaches key developmental transitions. The timing of acculturation research is important to acknowledge as cultural events and celebrations (e.g., Christmas, Easter, Carnival, Independence Day, birthdays, marriages, festivals) may influence how an adolescent measures preference for Hispanic or American culture.

The present study collected data over the period of an entire academic year in order to control for such influences. However, the greater conceptual issue is to recognize that a person's level of biculturalism is not fixed. Researchers must create measures that can address the dynamic nature of acculturation as well as conduct longitudinal studies to assess cultural identity over the lifespan.

Also similar to other studies, the majority of parent participants were mothers. There has been a call to consider multiple ratings of Hispanic adolescents' behaviors instead of relying on adolescent or maternal report. Thus it would be ideal to include adolescents, mothers, fathers, and teachers (Umana-Taylor, 2009). Although adolescent participants provided perceptions of both maternal and paternal rearing behaviors in the current study, more mothers than fathers completed the parent measure of biculturalism. Thus, it may be more accurate to suggest that family acculturation was composed of maternal and adolescent biculturalism. Although the focus and general intention of the project was to obtain information regarding the parent-adolescent correlation of biculturalism, this limitation does exist. It is important to note that overwhelmingly more mothers than fathers rated their adolescents' mental health. It is possible that mothers may rate their children differently than fathers; however, the literature indicates that mothers and fathers are comparable in their ratings of behavior (Seiffge-Krenke & Kollmar, 1998).

Another limitation concerns the distribution of scores. Despite the fact that univariate normality was met, the overall multivariate model was not normal and contained outliers. Lack of multivariate normality may have adversely affected model fit or created an increased rate of type II error (i.e., not finding significant results when such

results actually exist in the population). Although SEM is robust to violations of multivariate normality, difficulty in obtaining significant results may have resulted from this pattern. The lack of significant findings in the general model may have been due to the association among the mental health variables. Consistent with the normative data (Achenbach & Rescorla, 2001), the YSR and CBCL subscale scores were more often correlated to each other (i.e., within measure) than across parent and child report. Moreover, YSR scores were more often associated with perceptions of parenting style than CBCL were reports. This finding may have resulted in increased difficulty of identifying a model is adequate fit. This problem is consistent with the issue of common method variance whereby variance is attributed to the measurement method (i.e., same rater) rather than the construct of interest. As a result, there can be a bias to inflate or deflate the relationship between two constructs of interest. However, this finding is not uncommon in social science research. Similarly, research by Davidson and Cardemil (2009) found that Hispanic adolescents' ratings of externalizing behaviors on the YSR were correlated with parental involvement, but parental ratings of their adolescent's externalizing behavior on the CBCL were not associated with parental involvement.

While these limitations do exist, strengths of the current study include the examination of biculturalism as opposed to undimensional acculturation, the focus on both mothers' and fathers' parental rearing, parent and adolescent ratings of mental health, and the inclusion of a standardized assessment of academic achievement. It is hoped that the limitations encountered in the present study do not take away from the important findings that were identified.

Future research should continue to study the complex and fascinating area of

acculturation within families utilizing a bidimensional framework. As recommended by Guo, Suarez-Morales, Schwartz, and Szapocznik (2009), exploration into the multidimensional nature of biculturalism (e.g., linguistics vs practices) should be examined in Hispanic families for their influence on mental health and academic achievement. Likewise, research must strive to include multiple informants to assess for levels of concordance in acculturation and mental health behaviors. Given the heterogeneity of Hispanics, attempts to investigate the diversity within Hispanics (i.e., Hispanic heritage) as it relates to biculturalism, family dynamics, protective factors, and adolescent mental health should be underscored (Umana-Taylor, 2009).

Furthermore, research should investigate the role that biculturalism may hold in parenting interventions for Hispanic families. Families may benefit from bicultural skills training programs to target the difficulties within families related to acculturative stress, acculturation gaps, and how to work with systems (see Smokowski et al, 2008 for a review of programs). Barker, Cook, and Borrego, Jr. (2010) recommend that clinicians assess a family's adherence to traditional cultural variables while also considering the level of acculturation and acculturative stress experienced by family members so that treatment protocols can be adjusted accordingly. Along the same line, researchers should examine the parenting style of *protective parenting* as it relates to parental generational status and varying levels of biculturalism in the family.

Overall, findings from the present study suggest that biculturalism may serve as a protect factor to Hispanic youth. Moreover, self-esteem emerged as a strong proponent in the relationship between acculturation and internalizing behavior. Parents, school psychologists, counselors, and practicing clinicians can make use of this information to

create preventive interventions to foster and promote the self-esteem of at risk Hispanic youth. As low self-esteem tends to underlie many psychiatric disorders, interventionists should strive to monitor and work with adolescents and their families to improve adolescents' self-esteem and well-being.

References

Achenbach, T.M., & Rescorla, L.A. (2001). *Manual for the ASEBA school-age forms & profiles.* Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families.

Achenbach, T.M., Rescorla, L.A., & Ivanova, M.Y. (2005). International cross-cultural consistencies and variations in child and adolescent psychopathology. In C.L. Frisby & C.R. Reynolds (Eds.), *Comprehensive handbook of multicultural school psychology* (pp. 674-709). Hoboken, NJ: Wiley & Sons, Inc.

Alfaro, E.C., Umana-Taylor, A., & Bamaca, M.Y. (2006). The influence of academic support on Latino adolescents' academic motivation. *Family Relations, 55*, 279-291.

Alvarez, E.M. (2007). *Development of a scale to measure parenting in Hispanic adolescents' families* (Doctoral dissertation). University of South Florida, Tampa, FL.

Anderson, E.R., & Mayes, L.C. (2010). Race/ethnicity and internalizing disorders in youth: A review. *Clinical Psychology Review, 30*, 338-348.

Baker, C.H., Cook, K.L., Borrego, Jr., J. (2010). Addressing cultural variables in parent training programs with Latino families. *Cognitive and Behavior Practice, 17*, 157-166.

Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical consideration. *Journal of Personality and Social Psychology, 51*, 1173-1182.

Baumrind, D. (1966). Effects of authoritative control on child behavior. *Child Development, 37*, 887-907.

Baumrind, D. (1989). Rearing competent children. In W. Damon (Ed.), *Child Development Today and Tomorrow* (pp. 349-378). San Francisco, CA: Jossey-Bass.

Baumrind, D. (1991). Parenting styles and adolescent development. In J. Brooks-Gunn, R. Lerner, & A.C. Peterson (Eds.), *The encyclopedia on adolescence: Vol. 2* (pp. 746-758). New York: Garland.

Bamaca, M.Y., Umana-Taylor, A.J., Shin, N., & Alfaro, E.C. (2005). Latino adolescents' perceptions of parenting behaviors and self-esteem: Examining the role of neighborhood risk. *Family Relations, 54*, 621-632.

Bayer, J.K., Sanson, A.V., & Hemphill, S.A. (2006). Parent influences on early childhood internalizing difficulties. *Journal of Applied Developmental Psychology, 27*, 542-559.

Bean, R.A., Bush, K.R., McKenry, P.C., & Wilson, S.M. (2003). The impact of parental support, behavioral control, and psychological control on the academic achievement and self-esteem of African American and European American adolescents. *Journal of Adolescent Research, 18*, 523-541.

Berry, J.W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology: An International Review, 46*, 5-34.

Blascovich, J., & Tomaka, J. (1993). Measures of self-esteem. In J.P. Robinson, P.R. Shaver, & L.S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (3rd ed., pp. 115-160). Ann Arbor: Institute for Social Research.

Bosco, G.L., Renk, K., Dinger, T.M., Epstein, M.K., & Phares, V. (2003). The connections between adolescents' perceptions of parents, parental psychological symptoms, and adolescent functioning. *Applied Developmental Psychology, 24*, 179-200.

Brislin, R.W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology, 1*, 185-216.

Bronstein, P., Ginsburg, G.S., & Herrera, I.S. (2005). Parental predictors of motivational orientation in early adolescence: A longitudinal study. *Journal of Youth and Adolescence, 34*, 559-575.

Brown, S.A., Arnold, D.H., Dobbs, J., & Doctoroff, G.L. (2007). Parenting predictors of relational aggression among Puerto Rican and European American school-age children. *Early Childhood Research Quarterly, 22*, 147-159.

Cabassa, L.J. (2003). Measuring acculturation: Where we are and where we need to go. *Hispanic Journal of Behavioral Sciences, 25*, 127-146.

Cabrera, N.J., & Garcia Coll, C. (2004). Latino fathers: Uncharted territory in need of much exploration. In M.E. Lamb (Ed.), *The role of the father in child development* (4th ed., pp. 98- 120). Hoboken, NJ: Wiley & Sons.

Calzada, E.J., & Eyberg, S.M. (2002). Self-reported parenting practices in Dominican and Puerto Rican mothers of young children. *Journal of Child and Adolescent Psychology, 31*, 354-363.

Cardona, P.G., Nicholson, B.C., & Fox, F.A. (2000). Parenting among Hispanic and Anglo-American mothers with young children. *The Journal of Social Psychology, 140*, 357-365.

Carlson, C., Uppal, S., & Prosser, E.C. (2000). Ethnic differences in processes contributing to the self-esteem of early adolescent girls. *Journal of Early Adolescence, 20*, 44-67.

Casper, L.M., & Bianchi, S.M. (2002). *Continuity and change in the American family.* Thousand Oaks, CA: Sage Publications.

Cervantes, R.C., & Cordova, D. (2011). Life experiences of Hispanic adolescents: Developmental and language considerations in acculturative stress. *Journal of Community Psychology, 39*, 336-352.

Cha, E.-S., Kim, K.H., & Erlen, J.A. (2007). Translation of scales in cross-cultural research: issues and techniques. *Journal of Advanced Nursing, 58*, 386-395.

Chavez, D.V., Moran, V.R., Reid, S.L., & Lopez, M. (1997). Acculturative stress in children: A modification of the SAFE scale. *Hispanic Journal of Behavioral Sciences, 19*, 34-44.

Coatsworth, J.D., Maldonado-Molina, M., Pantin, H., & Szapocznik, J. (2005). A person-centered and ecological investigation of acculturation strategies in Hispanic immigrant youth. *Journal of Community Psychology, 33*, 157-174.

College Board (2011). *Scores & review: Information on the score report*. Retrieved February 27, 2011, from http://www.collegeboard.com/student/testing/psat/scores.html

Culp, R.E., Schadle, S., Robinson, L., & Culp, A.M. (2000). Relationship among paternal involvement and young children's perceived self-competence and behavioral problems. *Journal of Child and Family Studies, 9*, 27-38.

Davidson, T.M, & Cardemil, E.V. (2009). Parent-child communication and parental involvement in Latino adolescents. *Journal of Early Adolescence, 29*, 99-121.

Darling, N., & Steinberg, L. (1993). Parenting style as context: An integrative model. *Psychological Bulletin, 113*, 487-496.

Dick, D.M., Viken, R., Purcell, S., Kaprio, J., Pulkkinen, L., & Rose, R.J. (2007). Parental monitoring moderates the importance of genetic and environmental influences on adolescent smoking. *Journal of Abnormal Psychology, 116*, 213-218.

Dinh, K.T., Roosa, M.W., Tein, J.Y., & Lopez, V. (2002). The relationship between acculturation and problem behavior proneness in a Hispanic youth sample: A longitudinal mediation model. *Journal of Abnormal Child Psychology, 30*, 295-309.

Dogan-Ates, A., & Carrión-Basham, C.Y. (2007). Teenage pregnancy among Latinas: Examining risk and protective factors. *Hispanic Journal of Behavioral Sciences, 29,* 554-569.

Domeneche Rodriguez, M.M., Donovick, M.R., & Crowley, S.L. (2009). Parenting styles in a cultural context: Observations of "protective parenting" in first-generation Latinos. *Family Process, 48*, 195-210.

Ebin, V.J., Sneed, C.D., Morisky, D., Rotheram-Borus, M.J., Magnusson, A.M., & Malotte, C.K. (2001). Acculturation and interrelationships between problem and health-promoting behaviors among Latino adolescents. *Journal of Adolescent Health, 28*, 62-72.

Felix-Ortiz, M., Newcomb, M.D., & Myers, H. (1994). A multidimensional measure of cultural identity for Latino and Latina adolescents. *Hispanic Journal of Behavioral Sciences, 16,* 99-115.

Finkelstein, J.S., Donenberg, G.R., & Martinovich, Z. (2001). Maternal control and adolescent depression: Ethnic differences among clinically referred girls. *Journal of Youth and Adolescence, 30*, 155-171.

Florida Department of Education (FDOE). (2008a, February). *Florida education and community data profiles 2006-2007*. Retrieved on October 26, 2008, from http://www.fldoe.org/eias/eiaspubs.

Florida Department of Education (FDOE). (2008b, April). *Florida information note: Growth of minority student populations in Florida's public schools.* Retrieved on October 26, 2008, from http://www.fldoe.org/eias/eiaspubs/pdf/minority.pdf.

Florida Department of Education (FDOE). (2008c). *School district data: Hillsborough County school district.* Retrieved October 26, 2008, from http://www.fldoe.org/eias/flmove/hillsbor.asp.

Galambos, N.L., Barker, E.T., & Almeida, D.M. (2003). Parents do matter: Trajectories of change in externalizing and internalizing problems in early adolescence. *Child Development, 74*, 578-597.

Garber, J., Robinson, N.S., & Valentiner, D. (1997). The relation between parenting and adolescent depression: Self-worth as a mediator. *Journal of Adolescent Research*, *12*, 2- 33.

Gil, A.G., Vega, W.A., & Dimas, J.M. (1994). Acculturative stress and personal adjustment among Hispanic adolescent boys. *Journal of Community Psychology, 22*, 43-54.

Gonzales, N.A., Coxe, S., Roosa, M.W., White, R.M.B., Knight, G.P., Zeiders, K.H., et al. (2010). Economic hardship, neighborhood context, and parenting: Prospective effects on Mexican-American adolescent's mental health. *American Journal of Community Psychology, 47,* 98-113.

Gonzales, N.A., Deardorff, J., Formoso, D., Barr, A., & Barrera, M., Jr., (2006). Family mediators of the relation between acculturation and adolescent mental health. *Family Relations, 55*, 318-330.

Gonzalez Wahl, A-M., & McNulty Eitle, T. (2010). Gender, acculturation and alcohol use among Latino/a adolescents: A multi-ethnic comparison. *Journal of Immigrant and Minority Health, 12*, 153-165.

Guilamo-Ramos, V., Jaccard, J., Johansson, M., & Turrisi, R. (2004). Binge drinking among Latino youth: Role of acculturation-related behaviors. *Psychology of Addictive Behaviors, 18*, 135-142.

Guo, X., Suarez-Morales, L., Schwartz, S.J., & Szapocznik, J. (2009). Some evidence for multidimensional biculturalism: Confirmatory factor analysis and measurement invariance analysis on the Bicultural Involvement Questionnaire – Short Version. *Psychological Assessment, 21*, 22-31.

Harwood, R., Leyendecker, B., Carlson, V., Asencio, M., & Miller, A. (2002). Parenting among Latino families in the U.S. In M.H. Bornstein (Ed.), *Handbook of parenting: Volume 4, Social conditions and applied parenting* (2nd ed., pp. 21-46). Mahwah, NJ: Lawrence Erlbaum Associates.

Hawley, S.R., Chavez, D.V., & St. Romain, T. (2007). Developing a bicultural model for academic achievement: Looking at acculturative stress, coping and self-perception. *Hispanic Journal of Behavioral Sciences, 29*, 283-299.

Hill, N.E., Bush, K.R., & Roosa, M.W. (2003). Parenting and family socialization strategies and children's mental health: Low-income Mexican-American and Euro-American mothers and children. *Child Development, 74*, 189-204.

Hofferth, S.L. (2003). Race/ethnicity differences in father involvement in two-parent families: Culture, context, or economy? *Journal of Family Issues, 24*, 185-216.

Hollingshead, A.A. (1975). Four-factor index of social status. Unpublished manuscript, Yale University, New Haven, CT.

Hovey, J.D., & King, C.A. (1996). Acculturative stress, depression, and suicidal ideation among immigrant and second-generation Latino adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*, 1183-1192.

Hurt, E.A., Hoza, B., & Pelham, W.E., Jr. (2007). Parenting, family loneliness, and peer functioning in boys with Attention-Deficit/Hyperactivity Disorder. *Journal of Abnormal Child Psychology, 35,* 543-555.

Julian, T.W., McKenry, P.C., & McKelvey, M.W. (1994). Cultural variations in parenting: Perceptions of Caucasian, African-American, Hispanic, and Asian-American parents. *Family Relations, 43*, 30-37.

Kaufmann, D., Gesten, E., Santa Lucia, R.C., Salcedo, O., Rendian-Gobioff, G., & Gadd, R. (2000). The relationship between parenting styles and children's adjustment: The parents' perspective. *Journal of Child and Family Studies, 9*, 231-245.

Knight, G.P., Roosa, M.W., Calderon-Tena, C.O., & Gonzales, N.A. (2009). Methodological issues in research on Latino populations. In F.A. Villarruel, G. Carlo, J.M. Grau, M. Azmitia, N.J. Cabrera, & T.J. Chahin (Eds.), *Handbook of U.S. Latino psychology: developmental and community-based perspectives* (pp.45-62). California: Sage Publications, Inc.

Lamborn, S., Mounts, N., Steinberg, L., & Dornbusch, S. (1991). Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent, and neglectful homes. *Child Development, 62*, 1049-1065.

Lau, A.S., Yeh, M., Wood, P.A., McCabe, K.M., Garland, A.F., & Hough, R.L. (2005). The acculturation gap-distress hypothesis among high-risk Mexican American families. *Journal of Family Psychology, 19*, 367-375.

Lee, S.M., Daniels, M.H., & Kissinger, D.B. (2006). Parental influences on adolescent adjustment: Parenting styles versus parenting practices. *The Family Journal: Counseling and Therapy for Couples and Families, 14*, 253-259.

Lengua, L.J., & Kovacs, E.A. (2005). Bidirectional associations between temperament and parenting and the prediction of adjustment problems in middle childhood. *Applied Developmental Psychology, 26*, 21-38.

Lopez, E.J., Ehly, S., & Garcia-Vazquez, E. (2002). Acculturation, social support, and academic achievement of Mexican and Mexican-American high school students: An exploratory study. *Psychology in the School, 39*, 245-257.

Maccoby, E.E., & Martin, J.A. (1983). Socialization in the context of the family: Parent-child interaction. In P.H. Mussen (Series Ed.) & E.M. Hetherington (Vol. Ed.), *Handbook of child psychology: Vol. 4. Socialization, personality, and social development* (4^{th} ed., pp. 1-101). New York: Wiley & Sons.

Martinez, C.R., Jr. (2006). Effects of differential family acculturation on Latino adolescent substance use. *Family Relations, 55*, 306-317.

Martinez, C.R., Jr., DeGarmo, D.S., & Eddy, J.M. (2004). Promoting academic success among Latino youths. *Hispanic Journal of Behavioral Sciences, 26*, 128-151.

Masten, A.S., Roisman, G.I., Long, J.D., Burt, K.B., Obradovic, J., Riley, J.R., et al. (2005). Developmental cascades: Linking academic achievement and externalizing and internalizing symptoms over 20 years. *Developmental Psychology, 41*, 733-746.

McLoyd, V.C., Cauce, A.M., Takeuchi, D., & Wilson, L. (2000). Marital processes and parental socialization in families of color: A decade review of research. *Journal of Marriage and the Family, 62*, 1070-1093.

Mena, F.J., Padilla, A.M., & Maldonado, M. (1987). Acculturative stress and specific coping strategies among immigrant and later generation college students. *Hispanic Journal of Behavioral Sciences, 9*, 207-225.

Miranda, A.O., & Matheny, K.B. (2000). Socio-psychological predictors of acculturative stress among Latino adults. *Journal of Mental Health Counseling, 22*, 306-317.

Mounts, N.S. (2007). Adolescents' and their mothers' perceptions of parental management of peer relationships. *Journal of Research on Adolescence, 17*, 169-178.

Nieri, T., Kulis, S., Keith, V.M., & Hurdle, D. (2005). Body image, acculturation, and substance abuse among boys and girls in the Southwest. *The American Journal of Drug and Alcohol Abuse, 31*, 617-639.

Olvera, N., Suminski, R., & Power, T.G. (2005). Intergenerational perceptions of body image in Hispanics: Role of BMI, gender, and acculturation. *Obesity Research, 13,* 1970-1979.

Organista, P.B., Organista, K.C., & Kurasaki, K. (2003). The relationship between acculturation and ethnic minority mental health. In K.M. Chun, P.B. Organista & G. Marin (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 139-161). Washington, DC: American Psychological Association.

Paniagua, F.A. (2000). Culture-bound syndromes, cultural variations, and psychopathology. In I. Cuellar & F.A. Paniagua (Eds.), *Handbook of multicultural mental health* (pp.139-169). San Diego, CA: Academic Press.

Park, H.S., & Bauer, S. (2002). Parenting practices, ethnicity, socioeconomic status, and academic achievement in adolescents. *School Psychology International, 23*, 386-396.

Pearson, J. Muller, C., & Frisco, M.L. (2006). Parental involvement, family structure, and adolescent sexual decision making. *Sociological Perspectives, 49*, 67-90.

Perez, W., & Padilla, A.M. (2000). Cultural orientation across three generations of Hispanic adolescents. *Hispanic Journal of Behavioral Sciences, 22*, 390-398.

Pesquera, B.M. (1993). "In the beginning he wouldn't lift even a spoon": The division of household labor. In A. DeLa Torre & B.M. Pesquera (Eds.), *Building with our hands: New directions in Chicana studies* (pp. 181-195). Berkley, CA: University of California Press.

Plunkett, S.W., & Bamaca-Gomez, M.Y. (2003). The relationship between parenting, acculturation, and adolescent academics in Mexican-origin immigrant families in Los Angeles. *Hispanic Journal of Behavioral Sciences, 25*, 222-239.

Polaha, J., Larzelere, R.E., Shapiro, S.K., & Pettit, G.S. (2004). Physical discipline and child behavior problems: A study of ethnic group differences. *Parenting: Science and Practice, 4*, 339-360.

Radziszewska, B., Richardson, J.L., Dent, C.W., & Flay, B.R. (1996). Parenting style and adolescent depressive symptoms, smoking, and academic achievement: Ethnic, gender, and SES differences. *Journal of Behavioral Medicine, 19*, 289-305.

Ramírez García, J.I. Manongdo, J.A., & Cruz-Santiago, M. (2010). The family as mediator of the impact of parent–youth acculturation/enculturation and inner-city stressors on Mexican American youth substance use. *Cultural Diversity and*

Ethnic Minority Psychology, 16, 404–412.

Ramirez, R.R., & de la Cruz, G.P. (2003). *The Hispanic population in the United States: March 2002* (Current Population Report P20-545). Washington, DC: US Census Bureau.

Raykov, T., & Marcoulides, G.A. (2006). *A first course in structural equation modeling, 2nd edition.* Lawrence Erlbaum Assocaites: New Jersey.

Renfield, R., Linton, R., & Herskovits, M.J. (1936). Memorandum for the study of acculturation. *American Anthropologist, 38,* 149-152.

Rogler, L.H., Cortes, D.E., & Malgady, R.G. (1991). Acculturation and mental health status among Hispanics. *American Psychologist, 46*, 585-597.

Rosenberg, M. (1989). *Society and the adolescent self-image* (Rev ed). Middletown, CT: Wesleyan University Press.

Rothbaum, F., & Weisz, J.R. (1994). Parental caregiving and child externalizing behavior in non- clinical samples: A meta-analysis. *Psychological Bulletin, 116*, 55-74.

Ryan-Arredondo, K., & Sandoval, J. (2005). Psychometric issues in the measurement of acculturation. In C.L. Frisby & C.R. Reynolds (Eds.), *Comprehensive handbook of multicultural school psychology* (pp. 861-880). Hoboken, NJ: Wiley & Sons, Inc.

Sands, T., & Plunkett, S.W. (2005). A new scale to measure adolescent reports of academic support by mothers, fathers, teachers, and friends in Latino immigrant families. *HispanicJournal of Behavioral Sciences, 27*, 244-253.

Schafer, E.S. (1965). Children's reports of parental behavior: An inventory. *Child Development, 36*, 413-424.

Schwartz, S.J., Zamboanga, B.L., & Jarvis, L.H. (2007). Ethnic identity and acculturation in Hispanic early adolescents: Mediated relationships to academic grades, prosocial behaviors, and externalizing symptoms. *Cultural Diversity and Ethnic Minority Psychology, 13*, 364-373.

Seiffge-Krenke, I., & Kollmar, F. (1998). Discrepancies between mothers' and fathers' perceptions of sons' and daughters' Problem behaviour: A longitudinal analysis of parent-adolescent agreement on internalising and externalising problem behavior. *Journal of Child Psychiatry and Psychology, 39*, 687–697.

Segura, Y.L., Page, M.C., Neighbors, B.D., Nichols-Anderson, C., & Gillaspy, S. (2003). The importance of peers in alcohol use among Latino adolescents: The role of alcohol expectancies and acculturation. *Journal of Ethnicity in Substance Abuse, 2*, 31-49.

Silber, E. & Tippett, J. (1965). Self-esteem: Clinical assessment and measurement validation. *Psychological Reports*, *16*, 1017-1071.

Simons-Morton, B.G. (2004). The protective effect of parental expectations against adolescent smoking initiation. *Health Education Research, 19*, 561-569.

Smart, J.F., & Smart, D.W. (1995). Acculturative stress of Hispanics: Loss and challenge. *Journal of Counseling & Development, 73*, 390-396.

Smokowski, P.R., Bacallao, M., & Buchanan, R.L (2009). Interpersonal mediators linking acculturation stressors to subsequent internalizing symptoms and self-esteem in Latino adolescents. *Journal of Community Psychology, 37*, 1024-1045.

Smokowski, P.R., Rose, R., & Bacallao, M.L. (2008). Acculturation and Latino family processes: How cultural involvement, biculturalism, and acculturation gaps influence family dynamics. *Family Relations, 57*, 295-308.

Smokowski, P.R., Rose, R.A., & Bacallao, M. (2010). Influence of risk factors and cultural assets on Latino adolescents'' trajectories of self-esteem and internalizing symptoms. *Journal of Child Psychiatry and Human Development, 41,* 133-155.

Smokowski, P.R., & Bacallao, M.L. (2006). Acculturation and aggression in Latino adolescents: A structural model focusing on cultural risk factors and assets. *Journal of Abnormal Child Psychology, 34*, 659-673.

Smokowski, P.R., & Bacallao, M.L. (2007). Acculturation, internalizing mental health symptoms, and self-esteem: Cultural experiences of Latino adolescents in North Carolina. *Child Psychiatry and Human Development, 37*, 273-292.

Sobel, M.E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological Methodology 1982* (pp. 290-312). Washington DC: American Sociological Association.

Soenens, B., Vansteenkiste, M., Smits, I., Lowet, K., & Goossen, L. (2007). The role of intrusive parenting in the relationship between peer management strategies and peer affiliation(s). *Journal of Applied Developmental Psychology, 28,* 239-249.

Spera, C. (2005). A review of the relationship among parenting practices, parenting styles, and adolescent school achievement. *Educational Psychology, 17*, 125-146.

Steinberg, L., Elmen, J.D., & Mounts, N.S. (1989). Authoritative parenting, psychosocial maturity, and academic success among adolescents. *Child Development, 60*, 1424-1436.

Steinberg, L., Lamborn, S.D., Darling, N., Mounts, N.S., & Dornbusch, S.M. (1994). Over-time changes in adjustment and competence among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development, 65*, 754-770.

Steinberg, L., Lamborn, S.D., Dornbusch, S.M., & Darling, N. (1992). Impact of parenting practices on adolescent achievement: Authoritative parenting, school involvement, and encouragement to succeed. *Child Development, 63*, 1266-1281.

Steinberg, L., Mounts, N.S., Lamborn, S.D., & Dornbusch, S.M. (1991). Authoritative parenting and adolescent adjustment across varied ecological niches. *Journal of Research on Adolescence, 1*, 19-36.

Suarez-Morales, L., Dillon, F.R., & Szapocznik, J. (2007). Validation of the Acculturative Stress Inventory for Children. *Cultural Diversity and Ethnic Minority Psychology, 13*, 216-224.

Sullivan, S., Schwartz, S.J., Prado, G., Huang, S., Pantin, H., & Szapocznik, J. (2007). A bidimensional model of acculturation for examining differences in family functioning and behavior problems in Hispanic immigrant adolescents. *Journal of Early Adolescence, 27*, 405-430.

Szapocznik J., Kurtines, W.M., & Fernandez, T. (1980). Bicultural involvement and adjustment in Hispanic-American youths. *International Journal of Intercultural Relations, 4,* 353-365.

Taylor, L.C., Clayton, J.D., & Rowley, S.J. (2004). Academic socialization: Understanding parental influences on children's school-related development in the early years. *Review of General Psychology, 8*, 163-178.

Teichman, J.R., & Contreras-Grau, J.M. (2006). Acculturation and teaching styles among young mainland Puerto Rican mothers. *Hispanic Journal of Behavioral Sciences, 28,* 84-101.

Thoman, L.V., & Suris, A. (2004). Acculturation and acculturative stress as predictors of psychological distress and quality-of-life functioning in Hispanic psychiatric patients. *Hispanic Journal of Behavioral Sciences, 26*, 293-311.

Torres, L., & Rollock, D. (2007). Acculturation and depression among Hispanics: The moderating effect of intercultural competence. *Cultural Diversity and Ethnic Minority Psychology, 13*, 10-17.

Toth, J.F., & Xu, X. (1999). Ethnic and cultural diversity in fathers' involvement: A racial/ethnic comparison of African American, Hispanic, and White fathers. *Youth & Society, 31*, 76-99.

Umana-Taylor, A.J. (2009). Research with Latino early adolescents: Strengths, challenges, and directions for future research. *Journal of Early Adolescence, 29*, 5-15.

US Census Bureau. (2004a, March 18). *Census bureau projects tripling of Hispanic and Asian populations in 50 years; Non-Hispanic Whites may drop to half of total population.* Retrieved October 26, 2008, from http://www.census.gov/Press-Release/www/releases/archives/population/001720.html.

US Census Bureau. (2004b, June 14). *Hispanic and Asian Americans increasing faster than overall population.* Retrieved October 26, 2008, from http://www.census.gov/Press-Release/www/releases/archives/race/001839.html.

US Census Bureau. (2006). *Hispanics in the United States*. Retrieved October 26, 2008, from http://www.census.gov/population/www/socdemo/hispanic/hispanic.html.

Varela, R.E., Vernberg, E.M., Sanchez-Sosa, J.J, Riveros, A., Mitchell, M., & Mashunkashey, J. (2004). *Journal of Family Psychology, 18*, 651-657.

Vega, W.A., Khoury, E.L., Zimmerman, R.S., Gil, A.G., & Warheit, G.J. (1995). Cultural conflicts and problem behaviors of Latino adolescents in home and school environments. *Journal of Community Psychology, 23*, 167-179.

Williams, C.L., & Berry, J.W. (1991). Primary prevention of acculturative stress among refugees: Application of psychological theory and practice. *American Psychologist, 46*, 632-641.

Yu, S.M., Huang, Z.J., Schwalberg, R.H., Overpeck, M., & Kogan, M.D. (2003). Acculturation and the health and well-being of U.S. immigrant adolescent. *Journal of Adolescent Health, 33*, 479-488.

Zamboanga, B.L., Schwartz, S.J., Hernandez Jarvis, L., & Van Tyne, K. (2009). Acculturation and substance use among Hispanic early adolescents: Investigating the mediating roles of acculturative stress and self-esteem. *Journal of Primary Prevention, 30*, 315-333.

Appendices

Appendix A

Bicultural Involvement Questionnaire - Adolescent

The following statements are about aspects of Hispanic and American culture. Please rate how much you agree with the following statements using the scale below.

0	1	2	3	4
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1.	I am comfortable speaking Spanish at home.	⓪	①	②	③	④
2.	I am comfortable speaking Spanish in school.	⓪	①	②	③	④
3.	I am comfortable speaking Spanish with friends.	⓪	①	②	③	④
4.	I am comfortable speaking Spanish in general.	⓪	①	②	③	④
5.	I am comfortable speaking English at home.	⓪	①	②	③	④
6.	I am comfortable speaking English in school.	⓪	①	②	③	④
7.	I am comfortable speaking English with friends.	⓪	①	②	③	④
8.	I am comfortable speaking English in general.	⓪	①	②	③	④
9.	I enjoy Hispanic music.	⓪	①	②	③	④
10.	I enjoy Hispanic dances.	⓪	①	②	③	④
11.	I enjoy Hispanic-oriented places.	⓪	①	②	③	④
12.	I enjoy Hispanic-type recreation.	⓪	①	②	③	④
13.	I enjoy Hispanic TV programs.	⓪	①	②	③	④
14.	I enjoy Hispanic radio stations.	⓪	①	②	③	④
15.	I enjoy Hispanic books and magazines.	⓪	①	②	③	④
16.	I enjoy American music.	⓪	①	②	③	④
17.	I enjoy American dances.	⓪	①	②	③	④
18.	I enjoy American-oriented places.	⓪	①	②	③	④
19.	I enjoy American-type recreation.	⓪	①	②	③	④
20.	I enjoy American TV programs.	⓪	①	②	③	④
21.	I enjoy American radio stations.	⓪	①	②	③	④
22.	I enjoy American books and magazines.	⓪	①	②	③	④
23.	I would want food to be Hispanic.	⓪	①	②	③	④
24.	I would want language to be Spanish.	⓪	①	②	③	④
25.	I would want music to be Hispanic.	⓪	①	②	③	④
26.	I would want TV programs to be Hispanic.	⓪	①	②	③	④
27.	I would want books to be Hispanic.	⓪	①	②	③	④
28.	I would want dances to be Hispanic.	⓪	①	②	③	④
29.	I want radio programs to be Hispanic.	⓪	①	②	③	④
30.	I would want birthdays to be Hispanic.	⓪	①	②	③	④
31.	I would want weddings to be Hispanic.	⓪	①	②	③	④
32.	I would want food to be American.	⓪	①	②	③	④
33.	I would want language to be English.	⓪	①	②	③	④
34.	I would want music to be American.	⓪	①	②	③	④
35.	I would want TV programs to be American.	⓪	①	②	③	④

0	1	2	3	4
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

36. I would want books to be American.	⓪	①	②	③	④
37. I would want dances to be American.	⓪	①	②	③	④
38. I would want radio programs to be American.	⓪	①	②	③	④
39. I would want birthdays to be American.	⓪	①	②	③	④
40. I would want weddings to be American.	⓪	①	②	③	④

Bicultural Involvement Questionnaire – Adult

The following statements are about aspects of Hispanic and American culture. Please rate how much you agree with the following statements using the scale below.

0	1	2	3	4
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1.	I am comfortable speaking Spanish at home.	⓪	①	②	③	④
2.	I am comfortable speaking Spanish at work.	⓪	①	②	③	④
3.	I am comfortable speaking Spanish with friends.	⓪	①	②	③	④
4.	I am comfortable speaking Spanish in general.	⓪	①	②	③	④
5.	I am comfortable speaking English at home.	⓪	①	②	③	④
6.	I am comfortable speaking English at work.	⓪	①	②	③	④
7.	I am comfortable speaking English with friends.	⓪	①	②	③	④
8.	I am comfortable speaking English in general.	⓪	①	②	③	④
9.	I enjoy Hispanic music.	⓪	①	②	③	④
10.	I enjoy Hispanic dances.	⓪	①	②	③	④
11.	I enjoy Hispanic-oriented places.	⓪	①	②	③	④
12.	I enjoy Hispanic-type recreation.	⓪	①	②	③	④
13.	I enjoy Hispanic TV programs.	⓪	①	②	③	④
14.	I enjoy Hispanic radio stations.	⓪	①	②	③	④
15.	I enjoy Hispanic books and magazines.	⓪	①	②	③	④
16.	I enjoy American music.	⓪	①	②	③	④
17.	I enjoy American dances.	⓪	①	②	③	④
18.	I enjoy American-oriented places.	⓪	①	②	③	④
19.	I enjoy American-type recreation.	⓪	①	②	③	④
20.	I enjoy American TV programs.	⓪	①	②	③	④
21.	I enjoy American radio stations.	⓪	①	②	③	④
22.	I enjoy American books and magazines.	⓪	①	②	③	④
23.	I would want food to be Hispanic.	⓪	①	②	③	④
24.	I would want language to be Spanish.	⓪	①	②	③	④
25.	I would want music to be Hispanic.	⓪	①	②	③	④
26.	I would want TV programs to be Hispanic.	⓪	①	②	③	④
27.	I would want books to be Hispanic.	⓪	①	②	③	④
28.	I would want dances to be Hispanic.	⓪	①	②	③	④
29.	I want radio programs to be Hispanic.	⓪	①	②	③	④
30.	I would want birthdays to be Hispanic.	⓪	①	②	③	④
31.	I would want weddings to be Hispanic.	⓪	①	②	③	④
32.	I would want food to be American.	⓪	①	②	③	④
33.	I would want language to be English.	⓪	①	②	③	④
34.	I would want music to be American.	⓪	①	②	③	④
35.	I would want TV programs to be American.	⓪	①	②	③	④

0	1	2	3	4
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

36.	I would want books to be American.	⓪	①	②	③	④
37.	I would want dances to be American.	⓪	①	②	③	④
38.	I would want radio programs to be American.	⓪	①	②	③	④
39.	I would want birthdays to be American.	⓪	①	②	③	④
40.	I would want weddings to be American.	⓪	①	②	③	④

Appendix B

Acculturative Stress Inventory for Children

Here in the United States, there are many groups of people from many different backgrounds. You may have learned already from your history class that everyone has parents, grandparents, great-grandparents, or some other relative from the past who came from another country to live here in America. That is why there are people who may look differently than you, who may speak a different language than you, and who may do things a little differently than you do. That's because we all have different cultural backgrounds. In fact, people can be grouped by the culture that they belong to – for example, Japanese Americans, African Americans, German Americans, Italian Americans, Jewish Americans, American Indians, and so on; what's your culture group?

You will be reading some statements about some things that you may or may not think about. After reading each statement, decide whether or not the statement is a problem for you. If it is a problem, mark how much it bothers you using the choices below.

0	1	2	3	4	5
Doesn't Apply	Doesn't Bother Me	Almost Never Bothers Me	Sometimes Bothers Me	Often Bothers Me	Bothers Me a Lot

1.	I often feel like people who are supposed to help are really not paying any attention to me.	⓪	①	②	③	④	⑤
2.	It bothers me when people force me to be like everyone else.	⓪	①	②	③	④	⑤
3.	Because of the group I am in, I don't get the grades I deserve.	⓪	①	②	③	④	⑤
4.	Many people believe certain things about the way people in my group act, think, or are, and they treat me as if those things are true.	⓪	①	②	③	④	⑤
5.	Because of the group I am in, I feel others don't include me in some of the things they do, games they play, etc.	⓪	①	②	③	④	⑤
6.	I have more things that get in my way than most people do.	⓪	①	②	③	④	⑤
7.	It's hard for me to tell my friends how I really feel.	⓪	①	②	③	④	⑤
8.	I feel bad when others make jokes about people who are in the same group as me.	⓪	①	②	③	④	⑤
9.	It's hard to be away from the country I used to live in.	⓪	①	②	③	④	⑤
10.	I don't feel at home here in the United States.	⓪	①	②	③	④	⑤
11.	People think I'm shy, when I really just have trouble speaking English.	⓪	①	②	③	④	⑤
12.	I think a lot about my group and its culture.	⓪	①	②	③	④	⑤

Appendix C

Rosenberg Self-Esteem Scale

Below is a list of statements dealing with your general feelings about yourself. If you strongly disagree, bubble in the 1. If you disagree with the statement, bubble in the 2. If you agree, bubble in the 3. If you strongly agree, bubble in the 4.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

1.	On the whole, I am satisfied with myself.	①	②	③	④
2.	At times, I think I am no good at all.	①	②	③	④
3.	I feel that I have a number of good qualities.	①	②	③	④
4.	I am able to do things as well as most other people.	①	②	③	④
5.	I feel I do not have much to be proud of.	①	②	③	④
6.	I certainly feel useless at times.	①	②	③	④
7.	I feel that I'm a person of worth, at least on an equal plane with others.	①	②	③	④
8.	I wish I could have more respect for myself.	①	②	③	④
9.	All in all, I am inclined to feel that I am a failure.	①	②	③	④
10.	I take a positive attitude toward myself.	①	②	③	④

Appendix D

Child Behavior Checklist

Please print **CHILD BEHAVIOR CHECKLIST FOR AGES 6-18**

For office use only
ID #

CHILD'S FULL NAME First Middle Last

CHILD'S GENDER ☐ Boy ☐ Girl

CHILD'S AGE

CHILD'S ETHNIC GROUP OR RACE

TODAY'S DATE Mo. ____ Day ____ Year ____

CHILD'S BIRTHDATE Mo. ____ Day ____ Year ____

GRADE IN SCHOOL _____

NOT ATTENDING SCHOOL ☐

Please fill out this form to reflect your view of the child's behavior even if other people might not agree. Feel free to print additional comments beside each item and in the space provided on page 2. ***Be sure to answer all items.***

PARENTS' USUAL TYPE OF WORK, even if not working now.
(Please be specific — for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.)
FATHER'S TYPE OF WORK _____
MOTHER'S TYPE OF WORK _____

THIS FORM FILLED OUT BY: (print your full name)
_____

Your gender: ☐ Male ☐ Female

Your relation to the child:
☐ Biological Parent ☐ Step Parent ☐ Grandparent
☐ Adoptive Parent ☐ Foster Parent ☐ Other (specify)

I. Please list the sports your child most likes to take part in. For example: swimming, baseball, skating, skate boarding, bike riding, fishing, etc.

None ☐

	Compared to others of the same age, about how much time does he/she spend in each?				Compared to others of the same age, how well does he/she do each one?			
	Less Than Average	Average	More Than Average	Don't Know	Below Average	Average	Above Average	Don't Know
a. _____	☐	☐	☐	☐	☐	☐	☐	☐
b. _____	☐	☐	☐	☐	☐	☐	☐	☐
c. _____	☐	☐	☐	☐	☐	☐	☐	☐

II. Please list your child's favorite hobbies, activities, and games, other than sports. For example: stamps, dolls, books, piano, crafts, cars, computers, singing, etc. (Do ***not*** include listening to radio or TV.)

None ☐

	Compared to others of the same age, about how much time does he/she spend in each?				Compared to others of the same age, how well does he/she do each one?			
	Less Than Average	Average	More Than Average	Don't Know	Below Average	Average	Above Average	Don't Know
a. _____	☐	☐	☐	☐	☐	☐	☐	☐
b. _____	☐	☐	☐	☐	☐	☐	☐	☐
c. _____	☐	☐	☐	☐	☐	☐	☐	☐

III. Please list any organizations, clubs, teams, or groups your child belongs to.

None ☐

	Compared to others of the same age, how active is he/she in each?			
	Less Active	Average	More Active	Don't Know
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

IV. Please list any jobs or chores your child has. For example: paper route, babysitting, making bed, working in store, etc. (Include both paid and unpaid jobs and chores.)

None ☐

	Compared to others of the same age, how well does he/she carry them out?			
	Below Average	Average	Above Average	Don't Know
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

Be sure you answered all items. Then see other side.

6-1-01 Edition - 201

Please print. Be sure to answer all items.

Below is a list of items that describe children and youths. For each item that describes your child ***now or within the past 6 months***, please circle the ***2*** if the item is ***very true or often true*** of your child. Circle the ***1*** if the item is ***somewhat or sometimes true*** of your child. If the item is ***not true*** of your child, circle the ***0***. Please answer all items as well as you can, even if some do not seem to apply to your child.

0 = Not True (as far as you know) **1 = Somewhat or Sometimes True** **2 = Very True or Often True**

0 1 2 1. Acts too young for his/her age
0 1 2 2. Drinks alcohol without parents' approval (describe): _____
_____
0 1 2 3. Argues a lot
0 1 2 4. Fails to finish things he/she starts
0 1 2 5. There is very little he/she enjoys
0 1 2 6. Bowel movements outside toilet
0 1 2 7. Bragging, boasting
0 1 2 8. Can't concentrate, can't pay attention for long
0 1 2 9. Can't get his/her mind off certain thoughts; obsessions (describe): _____
_____
0 1 2 10. Can't sit still, restless, or hyperactive
0 1 2 11. Clings to adults or too dependent
0 1 2 12. Complains of loneliness
0 1 2 13. Confused or seems to be in a fog
0 1 2 14. Cries a lot
0 1 2 15. Cruel to animals
0 1 2 16. Cruelty, bullying, or meanness to others
0 1 2 17. Daydreams or gets lost in his/her thoughts
0 1 2 18. Deliberately harms self or attempts suicide
0 1 2 19. Demands a lot of attention
0 1 2 20. Destroys his/her own things
0 1 2 21. Destroys things belonging to his/her family or others
0 1 2 22. Disobedient at home
0 1 2 23. Disobedient at school
0 1 2 24. Doesn't eat well
0 1 2 25. Doesn't get along with other kids
0 1 2 26. Doesn't seem to feel guilty after misbehaving
0 1 2 27. Easily jealous
0 1 2 28. Breaks rules at home, school, or elsewhere
0 1 2 29. Fears certain animals, situations, or places, other than school (describe): _____
_____
0 1 2 30. Fears going to school
0 1 2 31. Fears he/she might think or do something bad
0 1 2 32. Feels he/she has to be perfect
0 1 2 33. Feels or complains that no one loves him/her
0 1 2 34. Feels others are out to get him/her
0 1 2 35. Feels worthless or inferior
0 1 2 36. Gets hurt a lot, accident-prone
0 1 2 37. Gets in many fights
0 1 2 38. Gets teased a lot
0 1 2 39. Hangs around with others who get in trouble
0 1 2 40. Hears sound or voices that aren't there (describe): _____
_____
0 1 2 41. Impulsive or acts without thinking
0 1 2 42. Would rather be alone than with others
0 1 2 43. Lying or cheating
0 1 2 44. Bites fingernails
0 1 2 45. Nervous, highstrung, or tense
0 1 2 46. Nervous movements or twitching (describe): _____
_____
_____
0 1 2 47. Nightmares
0 1 2 48. Not liked by other kids
0 1 2 49. Constipated, doesn't move bowels
0 1 2 50. Too fearful or anxious
0 1 2 51. Feels dizzy or lightheaded
0 1 2 52. Feels too guilty
0 1 2 53. Overeating
0 1 2 54. Overtired without good reason
0 1 2 55. Overweight
56. Physical problems ***without known medical cause:***
0 1 2 a. Aches or pains (***not*** stomach or headaches)
0 1 2 b. Headaches
0 1 2 c. Nausea, feels sick
0 1 2 d. Problems with eyes (***not*** if corrected by glasses) (describe): _____
_____
0 1 2 e. Rashes or other skin problems
0 1 2 f. Stomachaches
0 1 2 g. Vomiting, throwing up
0 1 2 h. Other (describe): _____
_____

 Be sure you answered all items. Then see other side.

Please print. Be sure to answer all items.

0 = Not True (as far as you know) **1 = Somewhat or Sometimes True** **2 = Very True or Often True**

0 1 2 57. Physically attacks people
0 1 2 58. Picks nose, skin, or other parts of body (describe): _____
_____

0 1 2 59. Plays with own sex parts in public
0 1 2 60. Plays with own sex parts too much

0 1 2 61. Poor school work
0 1 2 62. Poorly coordinated or clumsy

0 1 2 63. Prefers being with older kids
0 1 2 64. Prefers being with younger kids

0 1 2 65. Refuses to talk
0 1 2 66. Repeats certain acts over and over; compulsions (describe): _____
_____

0 1 2 67. Runs away from home
0 1 2 68. Screams a lot

0 1 2 69. Secretive, keeps things to self
0 1 2 70. Sees things that aren't there (describe):
_____
_____

0 1 2 71. Self-conscious or easily embarrassed
0 1 2 72. Sets fires

0 1 2 73. Sexual problems (describe): _____
_____
_____

0 1 2 74. Showing off or clowning

0 1 2 75. Too shy or timid
0 1 2 76. Sleeps less than most kids

0 1 2 77. Sleeps more than most kids during day and/or night (describe): _____
_____

0 1 2 78. Inattentive or easily distracted

0 1 2 79. Speech problem (describe): _____
_____

0 1 2 80. Stares blankly

0 1 2 81. Steals at home
0 1 2 82. Steals outside the home

0 1 2 83. Stores up too many things he/she doesn't need (describe): _____
_____
_____

0 1 2 84. Strange behavior (describe): _____
_____

0 1 2 85. Strange ideas (describe): _____
_____

0 1 2 86. Stubborn, sullen, or irritable
0 1 2 87. Sudden changes in mood or feelings

0 1 2 88. Sulks a lot
0 1 2 89. Suspicious

0 1 2 90. Swearing or obscene language
0 1 2 91. Talks about killing self

0 1 2 92. Talks or walks in sleep (describe): _____
_____

0 1 2 93. Talks too much

0 1 2 94. Teases a lot
0 1 2 95. Temper tantrums or hot temper

0 1 2 96. Thinks about sex too much
0 1 2 97. Threatens people

0 1 2 98. Thumb-sucking
0 1 2 99. Smokes, chews, or sniffs tobacco

0 1 2 100. Trouble sleeping (describe): _____
_____

0 1 2 101. Truancy, skips school

0 1 2 102. Underactive, slow moving, or lacks energy
0 1 2 103. Unhappy, sad, or depressed

0 1 2 104. Unusually loud
0 1 2 105. Uses drugs for nonmedical purposes (***don't*** include alcohol or tobacco) (describe):
_____
_____

0 1 2 106. Vandalism
0 1 2 107. Wets self during the day

0 1 2 108. Wets the bed
0 1 2 109. Whining

0 1 2 110. Wishes to be of opposite sex
0 1 2 111. Withdrawn, doesn't get involved with others

0 1 2 112. Worries
113. Please write in any problems your child has that were not listed above:
0 1 2 _____
0 1 2 _____
0 1 2 _____

Please be sure you answered all items.

Please print

YOUTH SELF-REPORT FOR AGES 11-18

For office use only
ID #

YOUR FULL NAME First Middle Last

YOUR GENDER ☐ Boy ☐ Girl

YOUR AGE

YOUR ETHNIC GROUP OR RACE

TODAY'S DATE Mo. ____ Day ____ Year ____

YOUR BIRTHDATE Mo. ____ Day ____ Year ____

GRADE IN SCHOOL _____

NOT ATTENDING SCHOOL ☐

IF YOU ARE WORKING, PLEASE STATE YOUR TYPE OF WORK:

_____

_____

PARENTS' USUAL TYPE OF WORK, even if not working now.
(Please be specific — for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.)

FATHER'S TYPE OF WORK _____

MOTHER'S TYPE OF WORK _____

Please fill out this form to reflect *your* views, even if other people might not agree. Feel free to print additional comments beside each item and in the spaces provided on pages 2 and 4. ***Be sure to answer all items.***

I. Please list the sports you most like to take part in. For example: swimming, baseball, skating, skate boarding, bike riding, fishing, etc.

None ☐

a. _____
b. _____
c. _____

Compared to others of your age, about how much time do you spend in each?

	Less Than Average	Average	More Than Average
a.	☐	☐	☐
b.	☐	☐	☐
c.	☐	☐	☐

Compared to others your age, how well do you do each one?

	Below Average	Average	Above Average
a.	☐	☐	☐
b.	☐	☐	☐
c.	☐	☐	☐

II. Please list your favorite hobbies, activities, and games, other than sports. For example: cards, books, piano, crafts, cars, computers, etc. (Do ***not*** include listening to radio or TV.)

None ☐

a. _____
b. _____
c. _____

Compared to others of your age, about how much time do you spend in each?

	Less Than Average	Average	More Than Average
a.	☐	☐	☐
b.	☐	☐	☐
c.	☐	☐	☐

Compared to others of your age, how well do you do each one?

	Below Average	Average	Above Average
a.	☐	☐	☐
b.	☐	☐	☐
c.	☐	☐	☐

III. Please list any organizations, clubs, teams, or groups you belong to.

None ☐

a. _____
b. _____
c. _____

Compared to others of your age, how active are you in each?

	Less Active	Average	More Active
a.	☐	☐	☐
b.	☐	☐	☐
c.	☐	☐	☐

IV. Please list any jobs or chores you have. For example: paper route, babysitting, making bed, working in store, etc. (Include ***both*** paid and unpaid jobs and chores.)

None ☐

a. _____
b. _____
c. _____

Compared to others of your age, how well do you carry them out?

	Below Average	Average	Above Average
a.	☐	☐	☐
b.	☐	☐	☐
c.	☐	☐	☐

Be sure you answered all items. Then see other side.

6-1-01 Edition - 501

Please print. Be sure to answer all items.

Below is a list of items that describe kids. For each item that describes you ***now or within the past 6 months***, please circle the ***2*** if the item is ***very true or often true*** of you. Circle the ***1*** if the item is ***somewhat or sometimes true*** of you. If the item is ***not true*** of you, circle the ***0***.

0 = Not True **1 = Somewhat or Sometimes True** **2 = Very True or Often True**

0 1 2 1. I act too young for my age
0 1 2 2. I drink alcohol without my parents' approval (describe): _____
_____
0 1 2 3. I argue a lot
0 1 2 4. I fail to finish things I start
0 1 2 5. There is very little that I enjoy
0 1 2 6. I like animals
0 1 2 7. I brag
0 1 2 8. I have trouble concentrating or paying attention
0 1 2 9. I can't get my mind off certain thoughts: (describe): _____
_____
0 1 2 10. I have trouble sitting still
0 1 2 11. I'm too dependent on adults
0 1 2 12. I feel lonely
0 1 2 13. I feel confused or in a fog
0 1 2 14. I cry a lot
0 1 2 15. I am pretty honest
0 1 2 16. I am mean to others
0 1 2 17. I daydream a lot
0 1 2 18. I deliberately try to hurt or kill myself
0 1 2 19. I try to get a lot of attention
0 1 2 20. I destroy my own things
0 1 2 21. I destroy things belonging to others
0 1 2 22. I disobey my parents
0 1 2 23. I disobey at school
0 1 2 24. I don't eat as well as I should
0 1 2 25. I don't get along with other kids
0 1 2 26. I don't feel guilty after doing something I shouldn't
0 1 2 27. I am jealous of others
0 1 2 28. I break rules at home, school, or elsewhere
0 1 2 29. I am afraid of certain animals, situations, or places, other than school (describe): _____
_____
0 1 2 30. I am afraid of going to school
0 1 2 31. I am afraid I might think or do something bad
0 1 2 32. I feel that I have to be perfect
0 1 2 33. I feel that no one loves me
0 1 2 34. I feel that others are out to get me
0 1 2 35. I feel worthless or inferior
0 1 2 36. I accidentally get hurt a lot
0 1 2 37. I get in many fights
0 1 2 38. I get teased a lot
0 1 2 39. I hang around with kids who get in trouble
0 1 2 40. I hear sounds or voices that other people think aren't there (describe): _____
_____
_____
0 1 2 41. I act without stopping to think
0 1 2 42. I would rather be alone than with others
0 1 2 43. I lie or cheat
0 1 2 44. I bite my fingernails
0 1 2 45. I am nervous or tense
0 1 2 46. Parts of my body twitch or make nervous movements (describe): _____
_____
_____
0 1 2 47. I have nightmares
0 1 2 48. I am not liked by other kids
0 1 2 49. I can do certain things better than most kids
0 1 2 50. I am too fearful or anxious
0 1 2 51. I feel dizzy or lightheaded
0 1 2 52. I feel too guilty
0 1 2 53. I eat too much
0 1 2 54. I feel overtired without good reason
0 1 2 55. I am overweight
56. Physical problems ***without known medical cause:*** _____
_____
0 1 2 a. Aches or pains (***not*** stomach or headaches)
0 1 2 b. Headaches
0 1 2 c. Nausea, feel sick
0 1 2 d. Problems with eyes (***not*** if corrected by glasses) (describe): _____
0 1 2 e. Rashes or other skin problems
0 1 2 f. Stomachaches
0 1 2 g. Vomiting, throwing up
0 1 2 h. Other (describe): _____
_____
_____

 Be sure you answered all items. Then see other side.

Please print. Be sure to answer all items.

0 = Not True **1 = Somewhat or Sometimes True** **2 = Very True or Often True**

0 1 2 57. I physically attack people
0 1 2 58. I pick my skin or other parts of my body (describe): _____
_____

0 1 2 59. I can be pretty friendly
0 1 2 60. I like to try new things

0 1 2 61. My school work is poor
0 1 2 62. I am poorly coordinated or clumsy

0 1 2 63. I would rather be with older kids than kids my own age
0 1 2 64. I would rather be with younger kids than kids my own age

0 1 2 65. I refuse to talk
0 1 2 66. I repeat certain acts over and over (describe): _____
_____

0 1 2 67. I run away from home
0 1 2 68. I scream a lot

0 1 2 69. I am secretive or keep things to myself
0 1 2 70. I see things that other people think aren't there (describe): _____
_____

0 1 2 71. I am self-conscious or easily embarrassed
0 1 2 72. I set fires

0 1 2 73. I can work well with my hands
0 1 2 74. I show off or clown

0 1 2 75. I am too shy or timid
0 1 2 76. I sleep less than most kids

0 1 2 77. I sleep more than most kids during day and/or night (describe): _____
_____

0 1 2 78. I am inattentive or easily distracted

0 1 2 79. I have a speech problem (describe): _____
_____

0 1 2 80. I stand up for my rights

0 1 2 81. I steal at home
0 1 2 82. I steal from places other than home

0 1 2 83. I store up too many things I don't need (describe): _____
_____

0 1 2 84. I do things other people think are strange (describe): _____
_____

0 1 2 85. I have thoughts that other people would think are strange (describe): _____
_____

0 1 2 86. I am stubborn
0 1 2 87. My moods or feelings change suddenly

0 1 2 88. I enjoy being with people
0 1 2 89. I am suspicious

0 1 2 90. I swear or use dirty language
0 1 2 91. I think about killing myself

0 1 2 92. I like to make others laugh
0 1 2 93. I talk too much

0 1 2 94. I tease others a lot
0 1 2 95. I have a hot temper

0 1 2 96. I think about sex too much
0 1 2 97. I threaten to hurt people

0 1 2 98. I like to help others
0 1 2 99. I smoke, chew, or sniff tobacco

0 1 2 100. I have trouble sleeping (describe): _____
_____

0 1 2 101. I cut classes or skip school

0 1 2 102. I don't have much energy
0 1 2 103. I am unhappy, sad, or depressed

0 1 2 104. I am louder than other kids
0 1 2 105. I use drugs for nonmedical purposes (***don't*** include alcohol or tobacco) (describe): __
_____
_____
_____

0 1 2 106. I like to be fair to others
0 1 2 107. I enjoy a good joke

0 1 2 108. I like to take life easy
0 1 2 109. I try to help other people when I can

0 1 2 110. I wish I were of the opposite sex
0 1 2 111. I keep from getting involved with others

0 1 2 112. I worry a lot

Please write down anything else that describes your feelings, behavior, or interests:

Please be sure you answered all items.

Appendix E

Parenting Style Index

Please answer the next set of questions about the parents (or guardians) you live with. If you spend time in more than one home, answer the questions about the parents (or guardians) who have the most say over your daily life.

Who are you answering these questions about?	Biological mother Adoptive mother Step-mother Other_____		Biological father Adoptive father Step-father Other _____

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

		Mother		Father
1.	I can count on my mom/dad to help me out, if I have some kind of problem.	① ② ③ ④		① ② ③ ④
2.	My mom/dad say that you shouldn't argue with adults.	① ② ③ ④		① ② ③ ④
3.	My mom/dad keep pushing me to do my best in whatever I do.	① ② ③ ④		① ② ③ ④
4.	My mom/dad say that you should give in on arguments rather than make people angry.	① ② ③ ④		① ② ③ ④
5.	My parents keep pushing me to think independently.	① ② ③ ④		① ② ③ ④
6.	When I get a poor grade in school, my mom/dad make my life miserable.	① ② ③ ④		① ② ③ ④
7.	My mom/dad help me with my schoolwork if there is something I don't understand.	① ② ③ ④		① ② ③ ④
8.	My mom/dad tell me that their ideas are correct and that I should not question them.	① ② ③ ④		① ② ③ ④
9.	When my mom/dad want me to do something, they explain why.	① ② ③ ④		① ② ③ ④
10.	Whenever I argue with my mom/dad, they say things like, "You'll know better when you grow up."	① ② ③ ④		① ② ③ ④
11.	When I get a poor grade in school, my mom/dad encourage me to try harder.	① ② ③ ④		① ② ③ ④
12.	My mom/dad let me make my own plans for things I want to do.	① ② ③ ④		① ② ③ ④
13.	My mom/dad know who my friends are.	① ② ③ ④		① ② ③ ④
14.	My mom/dad act cold and unfriendly if I do something they don't like.	① ② ③ ④		① ② ③ ④
15.	My mom/dad spend time just talking with me.	① ② ③ ④		① ② ③ ④
16.	When I get a poor grade in school, my mom/dad make me feel guilty.	① ② ③ ④		① ② ③ ④
17.	My mom/dad do things for fun together.	① ② ③ ④		① ② ③ ④
18.	My mom/dad won't let me do things with them when I do something they don't like.	① ② ③ ④		① ② ③ ④

My Free Time

19. In a typical week, what is the latest you can stay out on SCHOOL NIGHTS (Monday-Thursday)?	I am not allowed	Before 8:00	8:00 – 8:59	9:00 – 9:59	10:00 – 10:59	11:00 or later	As late as I want
	_____	_____	_____	_____	_____	_____	_____
20. In a typical week, what is the latest you can stay out on FRIDAY OR SATURDAY NIGHT?	I am not allowed	Before 8:00	8:00 – 8:59	9:00 – 9:59	10:00 – 10:59	11:00 or later	As late as I want
	_____	_____	_____	_____	_____	_____	_____

21. How much does your **mother** TRY to know...	Doesn't Try	Tries A Little	Tries A Lot
a. Where you go at night?	⓪	①	②
b. What you do with your free time?	⓪	①	②
c. Where you are most afternoons after school?	⓪	①	②
22. How much does your **father** TRY to know...	Doesn't Try	Tries A Little	Tries A Lot
a. Where you go at night?	⓪	①	②
b. What you do with your free time?	⓪	①	②
c. Where you are most afternoons after school?	⓪	①	②

23. How much does your **mother** REALLY know...	Doesn't Know	Knows A Little	Knows A Lot
a. Where you go at night?	⓪	①	②
b. What you do with your free time?	⓪	①	②
c. Where you are most afternoons after school?	⓪	①	②
24. How much does your **father** REALLY know...	Doesn't Know	Knows A Little	Knows A Lot
a. Where you go at night?	⓪	①	②
b. What you do with your free time?	⓪	①	②
c. Where you are most afternoons after school?	⓪	①	②

Appendix F

How I was Raised

How true are the following statements for you?

		Not True At All	Somewhat True	Very True
1.	It is my responsibility to do well in school.	⓪	①	②
2.	My parents encourage me.	⓪	①	②
3.	My parents say that I should obey my aunts and uncles.	⓪	①	②
4.	My parents say that I should obey my teachers like I obey them.	⓪	①	②
5.	I am expected to help take care of other family members who need help.	⓪	①	②
6.	My parents have the right to tell me what to do.	⓪	①	②
7.	My parents say that others in the world will treat me well if I treat them with respect.	⓪	①	②
8.	I am not allowed to go out unless I am with an adult from my family.	⓪	①	②
9.	If I have a friend who my parents don't like, I'm not allowed to be with them.	⓪	①	②
10.	If I have a party with friends at the same time that I have a party with family, my parents say I have to choose the family party.	⓪	①	②
11.	My parents restrict me from certain activities.	⓪	①	②
12.	My parents use the phrase "family first" ("la familia primero").	⓪	①	②
13.	There is a day in the week that my family considers a "family day."	⓪	①	②
14.	My parents restrict me from certain people.	⓪	①	②

Appendix G

Significant Other Academic Support Scale

For each person, please answer how much you agree or disagree that the following people have helped you in your education. Use the rating scale below.

Who are you answering these questions about?	Biological mother Adoptive mother Step-mother Other_____	Biological father Adoptive father Step-father Other _____

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

		Mother					Father			
1.	This person has helped me do well in school.	①	②	③	④		①	②	③	④
2.	This person has motivated me to stay in school.	①	②	③	④		①	②	③	④
3.	This person has been important in helping me to make my educational plans.	①	②	③	④		①	②	③	④
4.	This person has encouraged me to continue my education beyond high school.	①	②	③	④		①	②	③	④
5.	This person is able to give me good advice about my education.	①	②	③	④		①	②	③	④
6.	This person cares about my education.	①	②	③	④		①	②	③	④

Appendix H

Academic Motivation Scale

For each person, please answer how much you agree or disagree that the following people have helped you in your education. Use the rating scale below.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

1.	I try hard in school.	①	②	③	④
2.	Grades are very important to me.	①	②	③	④
3.	I usually finish my homework on time.	①	②	③	④
4.	Education is so important that it's worth it to put up with things about school that I don't like.	①	②	③	④
5.	In general, I like school.	①	②	③	④

Appendix I

Parent Questionnaire

Dear Parent: Please answer the following questions to the best of your ability.

Person completing this form (please circle): Mother Father Other _____

Child's name: _____

Child's school: _____

Child's grade (circle): 6 7 8 9 10

Child's age: _____

Child's gender (circle): Male Female

Child's race: White Black

Child's ethnicity: Hispanic Other _____

Which Hispanic heritage is your child (Cuban, Puerto Rican, Mexican, Columbian, etc.)?

Where was your child born? _____

Does your child receive free or reduced lunch? Yes No

Who does your child live with? (please circle)

Mother and Father
Mother, but visits Father
Father, but visits Mother
Mother only (never sees Father)
Father only (never sees Father)
Other _____

Please answer these questions about your child's <u>MOTHER</u>.

Mother's age: _____

Mother's race: White Black

Mother's ethnicity: Hispanic Other _____

What is her Hispanic heritage (e.g. Cuban, Puerto Rican, Mexican)? _____

Where was she born? _____

Where were her parents born? Mother: _____

Father: _____

What language does the child's mother prefer to use? _____

Mother's Occupation/Job (please circle):

Employed as (list job): _____
Unemployed
Retired
Student (full time or part time)_____
Other _____

Mother's highest level of education **completed** (please circle response):

Grade School					Middle School			High School				College					Graduate School				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

Please answer these questions about your child's <u>FATHER</u>.

Father's age: _____

Father's race: White Black

Father's ethnicity: Hispanic Other _____

What is his Hispanic heritage (e.g. Cuban, Puerto Rican, Mexican)? _____

Where was he born? _____

Where were his parents born? Mother: _____
Father: _____

What language does the child's father prefer to use? _____

Father's Occupation/Job (please circle):

Employed as (list job): _____
Unemployed
Retired
Student (full time or part time)_____
Other _____

Father's highest level of education **completed** (please circle response):

Grade School					Middle School			High School				College					Graduate School				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

Appendix J

Parental Consent

Dear Parent,

My name is Ariz Rojas and I'm a graduate student working on my dissertation in the Department of Psychology at the University of South Florida in Tampa. I, along with Vicky Phares, Ph.D., am interested in children's ideas about parenting. The School District of Hillsborough County has reviewed our research and given us permission to request your approval to allow you and your child to participate in our project, entitled ***F****amily* ***A****cculturation and* ***M****ental* ***H****ealth in* ***L****atino* ***Y****outh (FAMILY)*. We hope this project will allow us to better understand the role of acculturation in families. The following information will help you decide if you and your child are right for this study. You may have questions this letter does not answer. If you do, I will be more than happy to answer them.

Why are we being asked to take part in this study?
We are asking you and your child to take part in this study because your child is in middle or high school. We think this is a good time to learn about children's thoughts about parents and school.

How long will the study last?
Your child will be asked to spend about half an hour in this study during the school day. Your parent questionnaire will take about 15 minutes to complete.

What will happen during this study?
Your child will be asked to answer questions about emotions, behaviors, and parenting. We are asking that you complete some questions about yourself and your child's behavior.

What are the benefits that my child or I will receive if we take part in this study?
While you and your child will not benefit directly, your participation may increase our knowledge of how acculturation affects children's mental health and school achievement.

Will you or your child be paid for participation?
You will not be paid for your participation. However, if you decide to participate in the project, you will be entered into a raffle to win $100.00 or gift certificates. If your child decides to participate in the project, he or she will be interested into a raffle to win an iPod or gift certificates.

What are the risks of participating in this study?
There are no known risks to those who take part in this study.

What will we do to keep you and your child's study records from being seen by others?
All information gathered from you and your child will be assigned a code number and kept in a locked room in the Department of Psychology at the University of South Florida. All identifying information will be kept separate from answers. Federal law requires us to keep your and your child's study records private. This means that no one other than me or the study staff will know how you or your child answered. However, certain people may need to see the study records. By law, anyone who looks at these records must keep them private. The only people who will be allowed to see these records are:

- The study staff.
- People who make sure that we are doing the study in the right way. They also make sure that we protect you and your child's rights and safety:
    - The University of South Florida's Institutional Review Board (IRB), its staff, and any other individuals acting on behalf of USF
    - The United States Department of Health and Human Services (DHHS)
- We may publish what we find out from this study. If we do, we will not use your or your child's name or anything else that would let people know who you or your child are.

Although all of your child's answers will be private, there are times when Florida law requires and/or permits us to break confidentiality. For example, if we learn that your child is being abused or if we find that he/she is in danger of hurting themselves or another person, we would inform you about this information.

If you decide not to let your child take part in the study:
Nothing will happen. Your child will not receive any penalty in grading. This study is completely voluntary.

What if you let your child join the study and then later decide you want to stop?
If you decide you want your child to stop taking part in the study, tell your child's homeroom teacher or any member of the study staff as soon as you can. We will take your child out of the study:

- If your child asks us to leave
- If we feel that your child is unhappy during the study

You can get answers to your questions!
If you ever have any questions about this study, please call Ariz Rojas at (813) 974-9222. If you have questions about your or your child's rights as a person who is taking part in this study, call the University of South Florida's Division of Research Integrity and Compliance at (813) 974-5638.

I appreciate the time you have given this letter. I hope you and your child decide to participate in this study! Remember, if you ever need to reach me, do not hesitate.

Ariz Rojas, M.A.
Doctoral Candidate
Department of Psychology
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(813) 974-9222 office
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Professor and Director of Clinical Training
Department of Psychology
University of South Florida
phares@cas.usf.edu

*It's up to you. You can decide if you and your child want to take part in this study.

☐ **I freely give my consent to let my child take part in this study. I certify that I am the biological or adoptive parent of this child. I also agree to answer questions about myself. I understand that this is research. I have received a copy of this consent form.**

☐ **I do not want my child to participate in this study.**

Name of child: _____

_____	_____	_____
Signature of Parent	Printed Name of Parent	Date

I certify that participants have been provided with an informed consent form that has been approved by the University of South Florida's Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

_____	_____	_____
Signature of Researcher	Printed Name of Researcher	Date

Appendix K

Student Assent

Hi _____,

My name is (_____) and I want to know if you would like to be in my research project. Your parents and your teacher already said that it was okay to talk to you. The reason that I'm asking you to be in my research project is because I want to learn about how you see your identity, parents, and how you are feeling.

The project will be here in your school and it will take about half an hour. I'm going to give you some papers with questions and you will answer directly on the paper. This project should be interesting. There are no right or wrong answers.

You may not benefit directly, but by participating, you may help us learn more about being Hispanic. There are no known risks to participating in this project.

No one will know who you are except for me and the people helping me. Your parents and teachers will not know how you answer the questions.

When you are finished with my project, you will be entered into a raffle to win an iPod or gift certificates. This is my way of saying thank you.

If you decide to help me with this research project, you can change your mind and quit at any time. No one will be upset at you. If I think it's time to stop, I will tell you. You can ask questions about this project at any time. If you want to talk with your parents about this project, it's okay. Remember, if you think of other questions later, you can always ask them. Do you have any questions?

I understand what the researcher is asking me to do.

☐ **Yes, I want to do this research project.**

☐ **No, I don't want to do this research project.**

_____ _____

Name of student (signature or print) Date

_____ _____

Researcher or Research Assistant Date

Appendix L

Table 19.

Point- Biserial Correlations Between Acculturation, Mental Health, Academic Achievement, and Proposed Mediators

	BIQ	ABIQ
ASIC	- .28*	- .34**
RSES	.23*	.15
Mother Involvement	.12	- .09
Father Involvement	.14	.07
Mother Psychological Autonomy	.24*	.06
Father Psychological Autonomy	.31**[a]	.04
Mother Strictness/Supervision	.16	.03
Father Strictness/Supervision	.08	.03
AMS	.20*[a]	- .06
PSAT Critical Reading	.21*	.21*
PSAT Writing Skills	.29*	.23*
PSAT Mathematics	.21*	.23*
CBCL Anxiety	- .01	- .07
YSR Anxiety	.10	.17
CBCL Withdrawn	- .20*	.01
YSR Withdrawn	-. 05	.05[b]
CBCL Aggressive Behavior	.05	.07
YSR Aggressive Behavior	.05	.04
CBCL Rule Breaking	.11	.09
YSR Rule Breaking	- .04	.15

Note. BIQ = Bicultural Involvement Questionnaire, ABIQ=Adolescent Bicultural Involvement Questionnaire, ASIC = Acculturative Stress Inventory for Children, RSES = Rosenberg Self-Esteem Scale, AMS = Academic Motivation Scale

[a] Correlation is not significant when using difference score

[b] Correlation is significant when using difference score

*p< .05, **p< .01

About the Author

Ariz Rojas-Cifredo graduated from the University of South Florida in 2004 with a Bachelor of Arts degree in Psychology and Sociology with Psychology Honors and an undergraduate concentration in Applied Behavior Analysis. During her undergraduate training, Ms. Rojas conducted research on childhood sexual abuse, social anxiety, and completed an honors thesis examining social and trait anxiety, personality characteristics, and retrospective accounts of parental control.

Ms. Rojas completed her graduate training at the University of South. During that time, she completed research on the inclusion of fathers in research and therapy, parent-child interventions, and influences of acculturation in families. In 2007, Ms. Rojas received a Master of Arts degree in Clinical Psychology for her work on the perceptions of parenting by children from White and Hispanic families. The research presented above was an extension of that work. She has presented her work at several national conferences, co-authored publications, and participated in teaching at the undergraduate level. Ms. Rojas has provided clinical services to children, adolescents, and families in school, community, and hospital settings. She has created a specialty in the treatment of pediatric anxiety disorders. Ms. Rojas completed a one-year APA accredited internship in 2010 at Children's Hospital Boston/Harvard Medical School where she gained further expertise in the treatment of pediatric disorders. In additional to receiving numerous awards and scholarships, she was the recipient of the prestigious Ford Foundation Diversity Predoctoral Fellowship from the National Academies of Science.