**Autonomy and Control as Moderators for the Association between Parent Involvement and Educational Aspirations among Latino Adolescents**

by

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Abstract

      This study examined the relationship between parent academic involvement and educational aspirations among Latino adolescents.  Additionally, this study examined the moderating effect of varying parenting practices, autonomy-granting and psychological, on the association between involvement and educational aspirations.  Sex differences were analyzed as well as an additional academic outcome, academic achievement.  Sample data were collected from the Youth and Family Project at Texas Tech (2003-2004).  Overall findings demonstrated a consistent positive association between academic involvement and both educational aspirations and academic achievement among males and females.  Parent autonomy-granting was significant among males and females, while psychological control was negatively associated with academic achievement among females, alone.  The moderation results revealed that parent autonomy-granting moderates the relationship between academic involvement and educational aspirations among Latino males.

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Introduction

Latinos in America make up a substantial portion of the population and are the fastest growing ethnic group in the United States (US Census Bureau, 2010). As Latinos become more prominent in the United States, evaluating youth outcomes is more relevant. A particular area of concern is educational outcomes among Latino youth. Currently, Latino youth are at risk for poor educational outcomes since they are likely to have less-educated parents (Driscoll, Russell, and Crockett, 2008) and live in poverty (Fuligni, 1997; Driscoll, Russell, and Crockett, 2008). Furthermore, the Latino community has the highest high school dropout rates and lowest post-secondary school attendance and completion among the major ethnic minority groups in the United States (US Department of Education [USDOE], 2012). Because post-secondary and even secondary education attainment is low, understanding the educational aspirations of Latino adolescents is an area of particular salience in evaluating future educational outcomes.

Educational aspirations can be conceptualized as a sense of purpose and goal orientation, which has been found to be associated with positive outcomes (Bernard, 1991). Based on the research of these positive outcomes, it is important to take a closer look at educational aspirations among the Latino population. Newcomb and Bentler (1986) found that educational aspirations predicted high school graduation, even more than academic achievement (GPA). There is evidence to suggest that educational aspirations may be decreasing from generation to generation. One possible reason for this is that second and third generation Latino adolescents may perceive that their parents do not value their education as much as immigrant and 1st generation adolescents (Fuligni, 1997). Poor educational attainment can lead to Latinos having

lower levels of social capital and being subject to government assistance, poverty, and unemployment (Ream and Rumberger, 2008). Because there is a disparity between Latino educational aspirations and their actual educational attainment, and evidence that parenting plays a role, it is important to examine how parents may attenuate poor educational outcomes among Latino adolescents. Understanding Latino parenting practices and family dynamics could offer valuable information concerning educational aspirations among Latino adolescents.

Furthermore, there is evidence to suggest that there are sex differences in educational aspirations and academic achievement. Females are more likely to apply to (Castillo, Lopez-Arenas, and Saldivar, 2010) and attend college than their male counterparts (Sciarra, 2007). Being female also predicted higher grades in high school (Suarez-Orozco et al., 2009; Dornbusch et al., 1987). Since these differences exist within academic outcomes, examining the differences between males and females is important and can offer valuable insight into the academic state among Latinos.

Academic involvement has proven to be particularly important to academic outcomes of youth. Although parental involvement has been described across the literature in many different ways, for the proposed study, parental involvement will be defined as "parental participation in the educational processes and experience of their children" (Jeynes, 2007, p. 83). Parental involvement includes practices such as encouragement to complete school work, asking about homework or grades, helping to complete homework, etc. This kind of support in the home has been proven to be related to positive outcomes (Astone and McLanahan, 1991; LeFevre and Shaw, 2012; Sciarra, 2007; Garcia-Reid and Peterson, 2005; Henry, Plunkett and Sand, 2011). School-related aspects of parenting like parental aspirations and supervision were related to various educational outcomes, such as school attendance, grade maintenance, attitude towards

school, dropping out and obtaining a high school diploma or GED, and educational aspirations (Astone and McLanahan, 1991). LeFevre and Shaw (2012) found that both formal (i.e. school-based support such as PTA meetings, parent teacher meetings, etc.) and informal (i.e. home-based support such as helping with homework, providing a quiet homework setting, discussing future plans, and encouragement) involvement were positively associated with academic achievement (i.e. graduating high school on time, including GED attainment, or failing to graduate on time). Latino parents were far more informally involved and less formally involved in their children's education (LeFevre and Shaw, 2012). Given that informal involvement was found to be nearly as important to academic achievement as formal involvement for predicting academic achievement, it is clear that parental involvement in general has positive effects on academic outcomes and warrants more attention in the Latino community.

Some researchers have suggested that because of the poor educational outcomes among Latinos, Latino parents may not be involved with or care about their children's education. There is evidence, however, that Latino parents do care about their children's education, but may appear to have lower levels of involvement due to barriers which include limited English speaking abilities and ignorance concerning the education system and college application processes (Zalaquett, 2005). In spite of these barriers, Latinos report that strong family support helped them succeed in high school and pursue a college education, indicating that among academically successful youth, parental involvement and support plays a vital role (Zalaquett, 2005).

Other studies have found similar results. For instance, Henry, Sands, and Plunkett (2011) found that Latino adolescents in intact families who perceived that their parents were invested in their life by academic involvement like encouragement and help with school work were more

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likely to have higher academic motivation.  This suggests that even for the youth, having some

sense that their parents are involved encourages them to work harder.  These findings are

especially relevant for the present study, since LeFevre and Shaw's (2012) construct of informal

support and Henry, Plunkett and Sand's (2011) construct of academic support are reminiscent of

our construct of academic involvement.   These studies also revealed that family structure plays a

role in academic outcomes for adolescents such that adolescents in intact homes fared better than

adolescents in non-intact homes (Astone and Maclanahan, 1991; Henry et al., 2011; LeFevre and

Shaw, 2012).  Because there is an association between parental involvement and academic

achievement or motivation, it is reasonable to further expand the research in this area by

examining other factors that may be moderating this relationship.

Much of the research on parenting uses the parenting typologies of Baumrind's seminal

work.  Baumrind identified three major parenting styles: authoritarian, authoritative, and

permissive parenting (Baumrind, 1967).  Parenting styles have been studied at length since

Baumrind's original typology in 1966 and have been shown to have effects on various youth

outcomes including internalized and externalized maladaptive behavior in youth (Aunola, Stattin,

and Nurmi, 2000; Wolfradt, Hempel, and Miles, 2002).  It is also related to academic

achievement, and presumably, educational aspirations (Aunola, Stattin, and Nurmi, 2000).

Radziszewska, Richardson, Dent and Flay (1996) found that adolescents with authoritative

parents, parents who are generally high on autonomy-granting and warmth had higher academic

achievement than those with parents who were authoritarian (i.e. high on psychological control

and low on warmth).  Fletcher, Walls, Cook, Madison, and Bridges (2008) obtained similar

results.  These studies provide evidence of the kinds of positive or negative effects differing

parenting styles can have on youth.  Furthermore, much of the early work on parenting did not

include Latinos in their samples (Baumrind, 1966; Baumrind, 1967), therefore there is a need to continue to examine parenting in the context of the Latino culture.

Darling and Steinberg (1993) argue that parenting style may provide the context in which other parenting practices are exhibited. Since Darling and Steinberg's work, other researchers argued that more needs to be done to measure the moderating effect that parenting styles have on parenting practices, such as academic involvement (Pettit, Laird, Dodge, Bates and Criss, 2001; Kochanska, Aksan, Knaack, and Rhines, 2004; Spera, 2005). Using the parenting typologies, however, can be limiting since only about half of the population can be characterized into one parenting typology (Dornbusch, Ritter, Leiderman, Roberts, and Fraleigh, 1987). Therefore, understanding different dimensions within parenting styles may offer valuable information.

Recently, researchers have been disaggregating the parenting styles and examining the dimensions within Baumrind's original typology to gain more insight into the nuances of parenting (Smetana, Campione-Barr, and Metzger, 2006). Parental autonomy-granting is usually associated with authoritative parenting, while psychological control is generally associated with authoritarian parenting (Baumrind, 1967). The early research on parenting style provides preliminary evidence of the effects that psychological control and autonomy-granting can have on youth outcomes since those dimensions are included within the different parenting styles, as discussed earlier. However, more studies have to be done in order to fully understand the impact of different parenting style dimensions on youth.

In recent literature, psychological control and autonomy-granting have emerged as two of the major dimensions within parenting styles and have been shown to have significant impact on youth outcomes (Pettit, Laird, Dodge, Bates and Criss, 2001). Research shows that autonomy – granting was associated with less depression (Silk, Morris, Kanaya, and Steinberg, 2003) and

higher self-esteem (Bean and Northrup, 2009).  Conversely, parental rejection which is associated with psychologically controlling parenting was found to be related to adolescent's poor mental health (Dwairy, 2010).  Pettit, Laird, Dodge, Bates and Criss (2001) found that psychological control predicted higher levels of anxiety, depression and delinquent behavior in youth.  This may suggest that it is *this* aspect of parenting style, psychological control, which may be contributing to poor youth outcomes.

Overall, consistent findings show that parents have an impact on a myriad of outcomes from mental health to academic achievement (Steinberg, 2001).  Furthermore, there has been longitudinal research that suggests that it is in fact parental factors that influence adolescent competence and not the other way around (Steinberg, 2001; Steinberg, Elmen, and Mounts, 1989).  Since parental practices have serious implications for the well-being of adolescents, it is important to study the effects of varying parental style dimensions and their effects on the educational aspirations of Latino students.   While Darling and Steinberg (1993) suggested that parenting style serves as the climate in which parenting practices are exhibit, this study will take the contextual model one step further by disaggregating the parenting styles and focusing on the dimensions of psychological control and autonomy-granting.  Specifically, this study will focus on how the differing parenting dimensions of psychological control and autonomy-granting may provide the context and moderate the relationship between parental academic involvement and educational aspirations among Latino students.

Review of Literature

**Latino Culture**

Although many studies have focused on examining parenting practices and characteristics, much of the focus has been on European Americans and African Americans. Because Latinos share a different culture from the dominant norms in America, it should not be assumed that research targeted towards the dominant culture is representative of the Latino population. Culture shapes how parents will parent their children and inevitability influences the values and behaviors that their children will hold (Kao, 2004) and understanding it can provide insights into the psychological processes occurring (Oyserman and Lee, 2008). For instance, Latinos have been considered more of a collectivistic culture, unlike the more individualistic, Westernized culture, characterized by European Americans and African Americans (Oyserman, Sakamoto, and Lauffer 1998; Oyserman, Coon, and Kemmelmeier, 2002).

People in collectivistic cultures tend to make decisions based on the needs of the group (i.e. family, tribe, country) and are high on sociability and family integrity (Triandis and Gelfand, 1998). Individualism refers more to those who make their choices based on their own personal goals (Triandis, 2001) and stress competition (Triandis and Gelfand, 1998). Furthermore, child-rearing in collectivistic cultures emphasizes conformity, obedience, and security while individualistic child-rearing focuses more on exploration, self-reliance, independence, and creativity (Triandis, 2001). Depending on which cultural worldview one is accustomed to, there can be a wide range of plausible consequences or implications (Oyserman, Coon, and Kemmelmeier, 2002) and since Latino adolescents are living in a predominantly

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individualistic culture, there may be some competing ideologies that influence them. Latino parents have been found to have a more collectivistic worldview than their children, particularly if they are immigrants and their children are not (Raeff, Greenfield, and Quiroz, 2000). While collectivism and individualism are not opposites of each other (Triandis, 1993), and one person can have different levels of both, Latinos tend to have higher collectivistic views than European Americans. Exposure to individualistic norms via mass media or other avenues inevitably will affect the worldview of Latino children growing up in America (Triandis, 1993). Because Latinos may be accustomed to different parenting characteristics but may also share the views of the dominant culture, they may actually respond very differently to parenting practices. Fuligini (1998) even found that Latino adolescents of Mexican descent tended to have great respect for parental authority and lower emphasis on autonomy than their European American counterparts.

Other cultural aspects that differentiate Latinos from the mainstream culture in the United States are the aspects of *familismo*, *respeto*, and *educación*. *Familismo* refers to the commitment to family needs above the individual needs, loyalty to family, the use of family for emotional support, and the strong desire to maintain close family ties (Negy and Woods, 1992; Staples and Mirandé, 1980). Obligation to the family is seen more as part of a social role of belonging to a family, rather than a personal choice as is more typical in the individualistic worldview (Oyserman, Coon, and Kemmelmeier, 2002). Kao (2004) found that Latino youth desire to live closer to their parents than their European American and African American counterparts. This level of connectedness shifts the decisions that youth may make regarding education and career opportunities. *Respeto* refers to the maintenance of respectful hierarchical relationships determined by age, sex, and social status (Harwood, Leyendecker, Carlson, Asencio, and Miller, 2002). What may be considered psychological controlling in a traditional American culture may

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actually be perceived as *respeto* within the Latino culture (Fuligni, 1998). Educación within the Latino culture has a different connotation than that of the English word, "education." Educación refers more to the training of morals, responsibility and interpersonal relationships (Valenzuela, 1999). This may lend to the idea that parenting characteristics may be of particular relevance for this population since connectedness with family is more important than in other cultures, namely the dominant European American culture which is more individualistic.

Consistent with this collectivist view on Latinos, Suarez-Orozco, Pimentel, and Martin (2009) conducted a mixed method study in which they found that immigrant youth's (not only Latino) behavioral and academic choices were influenced by their relationships with their families. The young students voiced how their family influences their education. One 17-year-old Central American girl described the impact of her parents as:

> "My goal is to go to the university and get a career. I'm doing it for myself, for my family, to help them when I have my career. My parents think these are good goals so I can get ahead and earn money for happiness. But I have to do the work. My parents' support is the best inheritance they could give me (Suarez-Orozco, Pimentel and Martin, 2009, pg. 734)."

It is important to bring up immigrants in our discourse of Latino culture since a substantial part of the Latino community is made up of immigrant Latinos and studies have shown that despite some differences, immigrant and non-immigrant Latinos have more similarities than differences (Kao, 2004). The study proved that immigrant parents are concerned about their children's education and support them to the best of their ability. Furthermore, the authors pointed out how family capital is a stable predictor of resiliency in children. Family capital can greatly contribute to the academic success of school-age Latino children, which is consistent with the value of *familismo* previously discussed (Williams and Dawson, 2011). When children experience barriers to building this kind of capital, they are at a great disadvantage and are at risk for

psychological, structural and environmental barriers that impede success in school (Williams and Dawson, 2011). Therefore, examining parent factors is particularly important for this population. This is further strengthened by a qualitative study conducted by Ceja (2004) that examined 20 Mexican American girls on the college trajectory. The researcher found that despite lower levels of formal education, fluency with English, and knowledge on the U.S. educational system, Latino parents found a way to stay involved in their children's education, whether by formal or informal means. By staying involved despite the challenges, Latino parents demonstrate that they value education and play a role in their children's academic resiliency (Ceja, 2004). Furthermore, Latino parents with lower levels of education tend to emphasize conformity over autonomy, suggesting that children may be motivated to work harder if they perceive that it is of value to their parents (Leung and Lam, 1998).

**Educational Aspirations**

The belief that one is likely to accomplish something or aspires to do so can be predictive of later success. Educational aspirations play a vital role in helping to determine eventual educational attainment (Qian and Blair, 1999). Kao and Thompson (2003) noted in their annual review that educational aspirations are a good indicator for student's plans in the future. Furthermore, Jodl, Michael, Malanchuk, Eccles, and Sameroff (2001) discovered that students with higher educational expectations and aspirations were more likely to desire a professional career. Although not widely studied, there is evidence that there are racial and ethnic differences within educational aspirations. For instance, Qian and Blair (1999) conducted a study using data from the 1992 wave of the National Longitudinal Study (NELS). They asked senior students how far in school they think they will go in schooling. Of the four studied

ethnicities (African Americans, Asian Americans, European Americans, and Hispanics),

Hispanics had the lowest percentage (67%) of belief that they would complete college. Although

lower than other ethnicities, the number was still quite high. Another significant finding in the

study is that parental involvement significantly predicted educational aspirations among

Hispanic, more so than of European Americans (Qian and Blair, 1999).

Arbona and Nora (2007) examined the pre-college factors and college-related factors that

were predictive of 2-year and 4-year college degree attainment among Latinos. The researchers

used data that the Department of Education collected for the NELS following a stratified sample

strategy so that the original sample of $10^{th}$ graders was adjusted to represent the population of

1990 $10^{th}$ graders. They used logistic regression analysis to examine the data and found that

among the students that initially attended a 2-year college, if in the $10^{th}$ grade the student

expected to attain a college degree, they were 93% more likely to achieve that goal than those

with lower expectations. This indicates that for Latinos, aspiring to go to attain a college degree

while they are in high school is highly correlated to actual degree attainment.

Newcomb and Bentler (1986) combined educational aspirations and academic

achievement (GPA) to form academic potential. Data were collected from 722 young adults,

ages 19-24, in 1984 as a part of an 8-year longitudinal study of adolescent development and drug

use. The study originally began with a total of 1,634 students in the seventh, eighth and ninth

grade. This particular study used subjects from the two youngest cohorts in $11^{th}$ and $12^{th}$ grade.

Of these students, 479 completed the young adult follow-up. While in high school the students

were asked to report their grade point average to measure academic achievement. To measure

educational aspirations, the subjects answered one item that asked them to indicate the amount of

schooling they expect to complete. It ranged from *some high school* (indicating drop out) to

*doctor's degree.* Two separate items measured the level of educational aspirations as young adults; the first was a 6-point anchored rating scale that ranged from no more formal education (1) to a doctoral degree (6). The second question asked what the highest educational level expected to be completed in the next few years. The researchers used point bi-serial correlations and multiple regression analysis to examine the impact of academic potential on high school completion or dropout. They used confirmatory latent variable methods to examine the impact of high school academic aspirations on young adult college involvement and educational aspirations.

Newcomb and Bentler (1986) found evidence that lack of educational plans significantly predicted dropping out of high school more so than actual achievement in high school. These results indicate that motivation and/or desire to further their education can be more important than actual achievement. Furthermore, academic potential, the combination of GPA and educational aspirations, was predictive of young adult educational aspirations, college involvement, and college attendance, indicating that even as time passes, early aspirations have predictive power.

**Academic Involvement**

Perhaps one of Latino parents' most valuable contributions to their children's education is emotional capital, which is a broadened view of academic involvement or support (Auerbach, 2007). It has been argued that Latino parents do not value education, given that Latinos have lower educational attainment than other ethnicities. However, studies have shown that Latino parents value both their children's academic and social success in school (Ryan, Casas, Kelly-Vance, Ryalls, and Nero, 2010). In Auerbach's (2007) annual review of the literature on parent

roles in education, the author makes a clear point of the perceived disparity of parental involvement by minority parents, namely Latino parents and that of European American parents. The author offers the justification that minority parents may be unfamiliar with the system and have a general distrust, which prevents them from outward signs of involvement. Auerbach (2007) also noted Latino parents may trust or believe that their children can get into college on their own and will know the steps necessary to get into college and to perform well academically. In this way, Latino parents may be offering their children a level of autonomy that may actually appear as lack of involvement. However, there is evidence that Latino parents provide more home-based involvement and support.

Although few studies have really examined academic involvement in the middle and high school years, it assumed that it plays a role in educational aspirations and achievement of students (Zarate, 2007). Parental involvement has been defined in different ways across different studies. This is particularly the case within the Latino community because of different cultural norms and barriers that may prevent Latino parents from engaging in more outward signs of academic involvement.

Zarate (2007) found that there were two dimensions (academic involvement and life participation) to parental involvement as described by Latino parents themselves, in a qualitative study. Academic involvement included practices like attending parent-teacher conferences, asking about homework, visiting classroom during open houses, knowing when to expect report cards, going to the library with their children, and other similar practices. Life participation included being aware of their child's life, monitoring their child, communicating, teaching good morals and respect for others, providing general encouragement, monitoring school attendance, and other more general forms of involvement. According to Zarate (2007), Latino parents were

likely to exhibit life participation behaviors rather than academic support due to language barriers and less familiarity with the American school system and curriculum. Although Zarate (2007) noted two different types of support, both supports appeared to be important in the educational outcomes of children.

Another study that made the distinction between different dimensions within academic involvement and support was conducted by LeFevre and Shaw (2012). Like Zarate (2007), the researchers found that both dimensions of involvement, formal and informal, are beneficial for Latino students, although formal support appears to have a greater impact. However, evidence exists that the more demonstrative forms of parental involvement like participation in school events had smaller effect sizes than that of less demonstrative (i.e. informal support) parental involvement (Jeynes, 2007). Given that within the literature there has not been one particular definition used for parental involvement, but that in general different aspects of parental involvement in the their children's education has been found significant across the literature, it remains an important relationship to continue to examine, particularly with vulnerable populations struggling to succeed in the education system.

Although some studies have distinguished between different types of parental academic involvement, the majority of the researchers have focused on a more general construct of academic involvement or support. Evidence for the importance of academic involvement or support and its effects high school graduation and post-secondary education has garnered some attention in recent years. One two wave study used data from the National Educational Longitudinal Study (1988-2000) and examined parental support on sophomore Latinos and then whether these students had attained any postsecondary education eight years later. The sample was comprised of 866 Latino students who by the year 2000 had attended postsecondary

institution of some sort.  Sciarra (2007) used multinomial logistic regression to examine the effects of parental support on later educational attainment.  The researcher found that parental support factors such as helping with homework, checking homework, attending school meetings, how often the parent talked to the student about school courses and other parental involvement practices predicted associate and bachelor degree attainment among Latinos.  Sciarra (2007) made the distinction that parental support did not include any financial help, indicating that what made the difference for Latino students was talking about school and having parents be involved somehow in their education.

Astone and Maclanahan (1991) conducted a study in which they examined the effects of parental involvement (e.g. monitoring of school progress, talks with child, general supervision, and parent aspirations) and its effect on engagement in school, including educational aspirations. The data were from the High School and Beyond Study (HSB) and for this particular study, all sophomores in 1980 were used, who participated in all waves.  The sample was ethnically diverse and included European Americans, African Americans, Mexicans, and Puerto Ricans. The researchers used single-equation models to analyze the data and found that different parental practices were significantly correlated with all of the educational outcomes including educational aspirations and achievement.  Regardless of family structure, whether an adolescent is a part of an intact or non-intact home, parental involvement is vital for their academic success and aspirations, although students from intact families fared better than those from non-intact families (Astone and Maclanahan, 1991; Henry et al., 2011).

Garcia-Reid, Reid and Peterson (2005) used a 6-item scale that asked about specific supportive parental behaviors in the last 30 days to 226 Latino students in a low-income middle school.  They utilized structural equation modeling procedure and found that among Latinos who

reported greater frequency of supportive parental behaviors, such as parents giving encouragement, tended to be more positively engaged in school. This correlation indicates that when Latino students feel a sense of caring and support from their parents, they are more apt to engage in academics. This finding suggests a potentially strong relationship between lower levels of parent support, and less parental involvement in academic endeavors. Consistent with our discussion on *familismo* earlier, Valenzuela and Dornbusch (1994) argued that the valuation of close ties to family members is an important part of social capital and is associated with academic achievement among Latinos, indicating that parental involvement or support is particularly salient in this population. This social support aspect—the sense of belonging to a group or family among Latinos—strongly influences and motivate Latino adolescents' engagement in academic activities (Jiang, Yau, Bonner, and Chiang, 2011).

Since there is evidence that more demonstrative or formal parental involvement decreases as children enter the middle and high school years (Zarate, 2007; Mo and Singh, 2008), it is likely that children who were beneficiaries of parental involvement at younger ages, might be receiving involvement in the teen years, in a less overt, informal manner (LeFevre and Shaw, 2012). Furthermore, there is a difference between benign parental involvement in school and their involvement when there are identified school problems. Children tend to react better and have better outcomes with benign forms of involvement (Fan and Williams, 2010). Parental involvement tends to occur more in the home than at school not only for Latino parents, but European American parents as well (Ryan et al., 2010). In fact, parental involvement that took place in the home such as talking about school or homework were predictive of better academic outcomes than involvement that took place at school such as for meetings or functions (Stewart, 2007). Therefore, it seems to be of importance to distinguish between benign involvement that

can be characterized as supportive rather than specific involvement with the school due to existing behavioral or academic problems.

**Early Work on Parenting Styles**

The extant literature on parenting and various child and adolescent outcomes has often used Baumrind's typology of parenting style as their theoretical basis (Baumrind, 1967). Three parenting styles emerged from Baumrind's (1967) pilot study: authoritative, authoritarian, and permissive parenting. Relative to authoritative and authoritarian parenting, permissive parents are not considered strict or focused on behavioral control. They may not display much involvement or behavior-shaping practices (Baumrind, Larzelere, and Owens, 2010). Therefore, given the nature of our study, this style of parenting was not of interest. The two most widely studied parenting styles are authoritarian parenting and authoritative parenting. Based on Baumrind's work, parenting style is characterized by the degree to which parents are demanding and supportive (Baumrind, 1967). Authoritarian parents are considered to be low on warmth (support), while high on psychological control by restricting autonomy (demandingness), and to favor punitive measures of discipline. Authoritative parents, on the other hand, are considered to be high on warmth, encourage autonomy, and believe in non-punitive discipline (Baumrind, 1966).

Parenting style studies have consistently found that authoritative parenting, that is when psychological control tends to be low and autonomy-granting high, is associated with positive outcomes (Baumrind, 2005), including lower levels of substance abuse and higher academic achievement (Baumrind, 1991; Weiss and Shwarz, 1996). Baumrind (2005) posits that the differential in outcomes for adolescents with authoritative parents versus those with authoritarian

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parents is due to the effect of parents' unique combination of high warmth, autonomy support and behavioral control. In a longitudinal study, in which Baumrind, Larzelere, and Owens (2010) examined parents by following preschool-aged children to adolescence, the researcher found consistent results that authoritarian parent's coercive practices had detrimental effects on their children. Parenting style has also been linked to academic outcomes. For instance, children with authoritarian parents were more likely to get lower grades, although this association was stronger in that relationship than with authoritative parenting and grades (Dornbusch et al., 1987).

While the parenting style literature has contributed to our early understanding of parenting, only about half of the population can be characterized as having a pure parenting style (Dornbusch et al., 1987). Furthermore, much of the preliminary work on parenting styles were based on middle class European-American samples (Baumrind, 1966; Baumrind, 1967, Baumrind, 1991; Baumrind et al. 2010). In fact, there is evidence that parenting styles do not fully capture Latino parents, but that the separate parenting style dimensions do (Rodriguez, Donovick, and Crowley, 2009), so using parenting styles for all cultures should be done with caution. For instance, Latino parents have been found to be high in warmth and demandingness, they are relatively low on autonomy-granting, which is not characterized in any of the original parenting typologies (Rodriguez, Donovick, and Crowley, 2009). Interestingly, in a study that did include a diverse sample, authoritarian parenting among Latino adolescents was highly related to adolescent engagement whereas the effect was relatively weak among other subgroups (Steinberg, Lamborn, Dornbusch, and Darling, 1992). Steinberg, Dornbusch, and Brown (1992) also found that authoritative parenting happens less within Latino families. Because of these

mixed results among Latinos specifically and the limited studies that include a diverse sample, much is left to be discovered about how specific parenting practices affect Latinos.

**A Contextual Model**

Psychological control and autonomy have been widely studied in the literature as a part of the parenting style typology, although they are now being examined separately, as the recent trend in the literature would suggest. The theoretical framework for our study comes from Darling and Steinberg's (1993) work in the early nineties.

Darling and Steinberg (1993) proposed a contextual model of parenting in which they suggest that different socialization goals that parents hold for their children such as high achievement in school or going to college leads to different parenting practices. Continuing with the example of a socialization goal of school achievement, the parent would engage in specific parenting practices, such as parental involvement in school, monitoring, and setting limits, which in turn facilitates better academic outcomes. However, the researchers made the distinction between parenting styles and parenting practices. While parenting practices are the specific behaviors geared toward socialization goals, parenting style refers to the emotional climate in which these behaviors are exhibited. This model suggests that parenting style would moderate the relationship between parental involvement and academic outcomes (Darling and Steinberg, 1993).

Some studies have focused on examining both parenting styles and parental involvement and their effects on academic achievement. Mo and Singh (2008) found that both the parent relationship with the child and their involvement had significant effects on students' school performance. However, this study was limited in that it neglected to examine how the quality of

the relationship with the parent might moderate parental involvement, a construct that has been repeatedly linked to positive educational outcomes. To date, this moderation relationship has not been extensively studied, although a few researchers have paved the way (Spera, 2005).

Steinberg, Lamborn, Dornbusch, and Darling (1992) examined the impact of authoritative parenting which includes the dimension of autonomy-granting and parental involvement on adolescent school achievement.  The study was longitudinal in design and drew data from nine different schools in Wisconsin and northern California.  The sample was ethnically diverse although specific numbers were not noted.  Measures for authoritative parenting included three factors: acceptance/involvement, behavioral supervision, and psychological autonomy-granting.  Parental involvement in schooling asked students about the frequency in which their parents help with homework, attend school programs, watch the students in sports or extracurricular activities, help the student select courses, and know how their child is doing in school.  To measure academic outcomes, the authors used self-report grade point average (GPA), a measure widely used across the literature and educational expectation in which the students reported what the highest level of education they actually expect to go in school, given their current situation.  Steinberg and colleagues (1992) computed partial correlations between authoritativeness and each of the academic indices at time 2, after controlling for the time 1 scores on the relevant index.  The authors found that authoritative parenting has a significant impact on adolescent school performance such that adolescents from clearly authoritative homes score higher than their peers.  The partial correlations reveal that authoritative parenting leads to higher achievement rather than just accompanying achievement (Steinberg et al., 1992).

Even more impressive, the authors found that there was a moderation relationship between parenting style, parental involvement and achievement. Authoritativeness was found to moderate the impact of parental involvement on adolescent achievement. While parental involvement was positively and significant related to achievement with all groups, the magnitude of its effect was significantly smaller in non-authoritative homes such that non-authoritative parenting somewhat undermined the benefits of parental involvement in schooling (Steinberg et al., 1992). Therefore, we see that parenting practices that included autonomy granting can actually enhance the positive effects of parental involvement, while the deficit of such parenting can actually offset those positive effects.

More recent studies have also attempted to examine the interaction between parental involvement and parenting style and its association with academic outcomes. Blondal and Adalbjarnardottir (2009) conducted a longitudinal study that examined this moderation relationship using a sample of 474 Icelandic adolescents. Using logistical regression analyses, the researchers found that adolescents that viewed their parents as authoritative at age 14 were more likely to have completed high school than those adolescents with non-authoritative parents. The researchers found that the interaction was significant among those with authoritative parents. Parenting style was found to be more of a predictor of school dropout, rather than parental behaviors like involvement. Furthermore, parenting style predicted high school dropout even when sex, SES, and previous academic achievement were controlled (Blondal and Adalbjarnardottir, 2009).

**Disaggregation of Parenting Dimensions**

According to Smetana, Campione-Barr, and Metzger's (2006) annual review of the literature, a trend of approaching parenting styles or practices as dimensions has emerged. This new focus has led to disaggregation of the original parenting typologies from Baumrind's (1967) seminal work (Silk, Morris, Kanaya, and Steinberg, 2003). Instead of following Baumrind's typology, different dimensions of parenting are being studied such as that of psychological control and psychological autonomy, the dimensions that will be examined in the present study. These two dimensions are of particular relevance since parental involvement is advantageous in early and middle adolescence, but adolescents' increased autonomy between middle and late adolescence leads to better adjustment (Smetana et al., 2006). Therefore, it is important to see how these different dimensions in parenting (psychological control and autonomy-granting) may be interacting with other parenting practices (academic involvement), particularly in adolescence.

Spera (2005) conducted an interesting meta-analysis on parenting practices and parenting styles and their effects on academic outcomes. Spera (2005) makes the case that there has been a considerable amount of research done on parental involvement and academic achievement, little has been done to understand how other parenting dimensions, particularly that of different aspects of parenting style, moderate this relationship (Fletcher, Walls, Cook, Madison, and Bridges, 2008).

Some of the early work in disaggregating parenting style came from Steinberg, Elmon and Mounts (1989). The researchers disentangled the three aspects of authoritarian parenting: acceptance, psychological autonomy, and behavioral control. All three were associated with increases in school grades. Interestingly, the positive impact of psychological autonomy is

consistent across time, while acceptance and behavioral control did not appear to hold across time. Further evidence came from a study in which it was hypothesized that parenting styles would be associated with adolescent self-regulation and school competence (Grolnick and Ryan, 1989). Using regression analysis, the researchers looked at autonomy-granting specifically and found that children with autonomy-granting parents had better self-regulation, acted out less, had greater classroom competence, and higher achievement and grades (Grolnick and Ryan, 1989). Therefore, these studies both elucidate the particular importance of autonomy-granting construct.

Disaggregating parenting styles has further been sharpened by making the distinction between behavioral control and psychological control (Barber, 1996). Barber (1996) made the distinction between parental behavioral control and psychological control to further tease apart the differences between these constructs that have been used interchangeably in the literature. He argued that "psychological control refers to the control attempts that intrude into the psychological and emotional development of the child (e.g., thinking processes, self-expression, emotions, and attachment to parents)" (Barber, 1996, p. 3296). Barber (1996) found that psychological control is a significant predictor of youth problem behaviors like depression or antisocial behavior and more importantly that it was psychological control and not behavioral control that had these effects on youth. Pettit et al. (2001) further provided evidence for this distinction between behavioral control and psychological control in a longitudinal study conducted using data from the Child Development project. The researchers found that behavioral control such as monitoring and limit setting was anteceded by a proactive parenting style while psychological control was anteceded by harsh parenting, proving that these two dimensions of parenting have distinct early childhood precursors. Because of the differing precursors and outcomes, the evidence suggests that psychological control and autonomy-

granting are two distinct dimensions within the overarching construct of parenting rather than opposites sides of a single continuum (Barber et al., 2001; Silk et al., 2003).

**Promotion of Psychological Control and Autonomy**

As discussed earlier, as an alternative to the parenting styles, researchers have now been studying the different dimensions within parenting style as they are likely to be good indicators of parenting characteristics (Darling and Steinberg, 1993). The dimensions of psychological control and autonomy-granting becomes particularly salient as children approach adolescence, since it is time in which they desire more personal autonomy and individualism (Baumrind, 1968).

Some researchers have specifically looked at psychological control and autonomy-granting dimensions. Across the literature, psychological control is usually considered negative and has been found to be associated to adolescent's internalizing problems, whereas autonomy-granting is not (Silk et al., 2003). Given that Latino families tend to exist in a collectivist frame and endorse ideas like *familismo* and *respeto*, the way in which parents promote psychological autonomy or control in their children may be somewhat different than in the mainstream culture. Psychological control may not have the same effects on Latinos that they may have on Caucasian adolescents. These two dimensions to parenting have been found significant in the prediction of academic outcomes, but have not been widely studied among minority populations (Boveja, 1998). While Barber and Harmon (2002) found that psychological control is considered maladaptive for the development of Caucasian adolescents, Halgunseth, Ispa, and Rudy (2006) argue that psychological control among Latinos may carry a different developmental meaning, since it could be considered part of *respeto* for parents to exert a level of control on their

children.  Therefore, much is left to be discovered regarding these constructs. Among Latinos, paternal psychological control and maternal autonomy predicted self-esteem among adolescent boys.  Both maternal and paternal psychological control and autonomy-granting were found to be predictive of self-esteem among adolescent girls (Bean and Northrup, 2009).  Interestingly, acceptance and autonomy-granting have been found to be highly correlated, making it difficult to distinguish between the two aspects of parenting, indicating that perhaps parents who are autonomy-granting are also very accepting of their child (Bean and Northrup, 2009).  From a different perspective, Close and Solberg (2007) examined autonomous and controlled reasons for going to school and how this may relate to overall achievement in school among Latinos.  When the Latino students had autonomous views for coming, rather than feeling like they were coming because they were being controlled by parents, they reported higher levels of academic achievement.  The Latino youth that reported coming to school for controlled reasons also reported higher distress.  These results indicate the kinds of effects autonomy and control may exert on Latino youth.

However, there is evidence that among Latinos, psychological control may not be a bad thing.  For instance, Sher-Censor, Parke and Coltrane (2010) found that adolescents who perceived their parents as promoting more autonomy also perceived them as more psychologically controlling, suggesting that Latinos may perceive parental control as a sign of caring. While some studies have found that Latinos do not react negatively to psychological control, others have found that psychological control has a negative impact on Latino students. Further examination of these dimensions is needed to understand the factors that affect Latino students in adolescence.

**The Present Study**

In the literature varying definitions were used to describe parental involvement (Jeynes, 2007; Zarate, 2007). Many researchers described parental involvement as a multi-dimensional construct, encompassing both formal and informal practices (Jeynes, 2007; LeFevre and Shaw, 2012). Some even included support within the parental involvement construct (Zalaquett, 2007; LeFevre and Shaw, 2012). One commonality within the extant of the literature on parental involvement is the overall positive effect of varying forms of parental involvement on academic outcomes. Therefore, the construct of parental involvement in the current study is described in more general terms to encompass a balanced view of formal and informal practices.

Furthermore, many of the studies examined different academic outcomes ranging from engagement in school, to GPA, to high school graduation. Because educational aspirations, as a construct, has not been studied as extensively, but has been found to be a good indicator of future attainment, the current study will use this construct as the outcome variable (Newcomb and Bentler, 2006). As a secondary outcome variable, academic achievement will be examined in order to gauge current achievement in school.

Following the theoretical framework of Darling and Steinberg (1993), the current study examines how academic involvement and different parenting dimensions interact and affect the educational aspirations of Latino youth. Following the trend of disaggregating parenting styles (Smetana, 2006), this study will contribute to the literature by disaggregating parenting style and acutely focusing only on psychological control and autonomy-granting, versus Baumrind's typology of parenting styles. By disaggregating the parenting styles, we hope to better understand how these two dimensions of parenting (control and autonomy) may serve as the climate in which parental involvement is exhibited.

*Research Questions:*

1.      Is there a relationship between academic involvement and educational

aspirations/academic achievement?

A) For females

B) For males

2.      Is there a relationship between parent autonomy-granting and educational

aspirations/academic achievement?

A) For females

B) For males

3.      Is there a relationship between parent psychological control and educational

aspirations/academic achievement?

A) For females

B) For males

4.      Does parent autonomy-granting moderate the relationship between academic

involvement and educational aspirations/academic achievement?

A) For females

B) For males

5.      Does parent psychological control moderate the relationship between academic

involvement and educational aspirations/academic achievement?

A) For females

B) For males

Methods

**Participants**

Secondary data from the Youth and Family Project, a 2003-2004, school-based, self-reported survey of 9-12$^{th}$ grade Latinos from west Texas area school districts were utilized for this study. The sample was originally comprised of 2,214 students of which 37.9% were Latino. Only the Latino students were examined for the purpose of this study.  The subsample of 840 students consisted of 92 9$^{th}$ graders, 249 10$^{th}$ graders, 279 11$^{th}$ graders, and 272 12$^{th}$ graders.  The age of the sample ranged from 14-18 years old. Fifty-seven percent were female, while 43% were male.  To determine SES, respondents were asked to describe their family's financial situation in comparison to other families.   Fourteen percent reported being poorer than most, 55% indicated that being about the same as most, and 22% identified as wealthier than most. Family structure varied within the sample with 45.6% percent of respondents living with both their biological parents, 16.2% living with at least one biological parent and a stepparent, 27.8% living with one parent, most commonly the mother, and the remaining Latino youth living alone or with relatives or non-family guardians.  To measure parenting, respondents were asked questions regarding mother's and father's parenting behaviors regardless of living arrangements, meaning that respondents rated parenting done by non-custodial parents as well.

**Measures**

*Educational Aspirations.*  To measure educational aspirations (e.g., how likely are you to graduate from high school, 2-year college, 4-year college, etc.), the following single-item

question was used, "How likely is it that you will do each of the following things…"

Respondents are given a choice to respond on a 4-point Likert scale that ranges from

1=*Definitely would not* to 4=*Definitely would* to statements like, "*Graduate from high school,*

*graduate from a four-year college or university, etc*." This item was developed specifically for

this project and higher scores indicate higher educational aspirations.

     *Academic Achievement.* To measure academic achievement, a single-item question was

used, "In general, how well did you do in school? Would you say your grades were…."

Respondents responded on a 5-point Likert-type scale from 1 = *well above average* to 5 = *well*

*below average relative to grades*. This scale was developed specifically for this project and

higher scores indicate higher achievement.

     *Academic involvement.* To measure the degree to which parents are involved in the

adolescent's schooling, a six-item assessment of parental limit-setting was used. Respondents

answered the question, "during the past 30 days, how often did one of your parents…" using a 4-

point Likert scale ranging from 1 = *Never* to 4 = *Often*. Respondents answered to statements

like, "*Check to see whether your homework was done, go over your homework with you, check*

*over papers you brought home that a teacher had graded.*" These responses indicate that the

parent limit setting items measure in-home parental involvement in the respondent's education.

This scale was developed specifically for this project ($\alpha$=.67; in the current study) and higher

scores will indicate more parental involvement.

     *Parental Control.* Parental psychological control was measured using the seven-item

Psychological Control Scale-Youth Self-Report (PCS-YSR; Barber, 1996). *Mother*

*psychological control* ($\alpha$=.77; in the current study) and *father psychological control* ($\alpha$=.80; in

the current study) were measured independently. After examining the inter-item correlations for

this measure, it was determined that the question, "mother/father *blames me for other family member's problems,*" did not correlate well with the other items in the measure.  Including this item decreased the internal consistency of the measure.  Therefore, the Cronbach's alpha scores reported reflect the internal consistency after the deletion of this particular item.  Respondents responded on a 3-point Likert-type scale from 1 = *not like her (him)* to 3 = *a lot like her (him)* as to how well items described their mothers and fathers.  They responded to statements like, *"changes the subject whenever I have something to say, is less friendly with me whenever I do not see things his/her way, and brings up past mistakes when s/he criticizes me."*  Higher scores indicate that parents exercise higher levels of control.  Because academic involvement measured *parent's* involvement rather than mother and father involvement separately, mother and father psychological control were combined and averaged to form *parent psychological control.* Combining the scores provides continuity among the varying parenting practices measures. Moreover, past researchers have regularly used combined parent scores instead measures for mothers and fathers separately (Grolnick and Ryan, 1989; Jiang et al., 2011).   If only a single parent score existed, then the score for that parent was used to describe *parent psychological control.*

   *Parental Autonomy-granting.* Parental autonomy-granting was measured using the seven-item Psychological Control Scale-Youth Self-Report (PCS-YSR; Barber, 1996) to examine the degree to which a parent fosters independence and acceptance to the respondent.  Respondents responded on a 3-point Likert-type scale from 1 = *not like her (him)* to 3 = *a lot like her (him)* as to how well items described their mothers and fathers. *Mother psychological autonomy* ($\alpha$=.87; in the current study) and *father psychological autonomy* ($\alpha$=.88; in the current study) were measured independently.  After examining inter-item correlations, mother/father "*does not blame*

*me for other family member's problems*" did not correlate well with the other items. Furthermore, inclusion of this item decreased internal consistency. Therefore, this item was deleted from the measure to improve the Alpha Cronbach's score. The remaining items included statements like: "*encourages me to express my feelings and opinions, lets me finish my sentences when I am talking to him or her, and values who I am as an independent person.*" Higher scores indicate that the parent encourages personal autonomy in the respondent. Mother and father autonomy were combined to form *parent autonomy-granting* variable by averaging total scores for the sake of continuity among the parenting practices measures (i.e. academic involvement, parent psychological control). Additionally, past researchers have examined parenting practices similarly (Grolnick and Ryan, 1989; Jiang et al., 2011). If only a single parent score existed, that score was used to describe *parent* autonomy-granting.

**Plan of Analysis**

First, preliminary analyses were conducted; the descriptive statistics for all of the study variables (i.e., means, standard deviation, range, skewness) were examined in order to have a better understanding of the characteristics of the sample. The distributions of all variables for males and females were examined to verify that each exhibits normal distributions. Skewness statistics were used to test for normality. Furthermore, since sex differences have been found to be predictive of different educational outcomes (Jeynes, 2007; Fan and Williams, 2010), independent samples t-tests were conducted to ascertain whether there are sex differences in the predictor and outcome variables.

Additionally, bivariate correlations were conducted to examine preliminary associations between the variables of interest and to ensure that there is not an issue of multicollinearity

between the predictor variables. If any of the predictor variables were found to be highly correlated, the continuous variables (parental involvement, parent psychological control and autonomy-granting) were centered at the sample means to account for any problems with multicollinearity and interaction terms (Aiken and West, 1991).

Finally, to test the proposed research questions, hierarchal linear regression models were utilized to determine the unique contributions of parental involvement, psychological control, and autonomy-granting on educational aspirations. To examine what the effects of the aforementioned variables are on the current academic state of Latino adolescents, the unique contributions of the predictor variables to academic achievement were examined. For the proposed study, controls were utilized (i.e., SES, family structure, and age). Jeynes (2007) found that the effect sizes for the association between parental involvement and educational outcomes was somewhat higher in studies that did not choose to control for SES, versus those that did. Family structure has also been found to affect academic outcomes (Astone and MacLanahan, 1991; Henry et al., 2011). Additionally, parenting practices differ among youth at varying ages (Zarate, 2007; Mo and Singh). By controlling for these confounding variables, more accurate results were achieved.

To determine the possible moderating effect of parent psychological control and academic involvement and conversely, parent autonomy-granting and parental involvement, a multiplicative effect of the two variables was created. This moderating variable was added to the model to evaluate the interaction between these two variables on educational aspirations, and then in the model with academic achievement. A diagram of the effects is shown below:
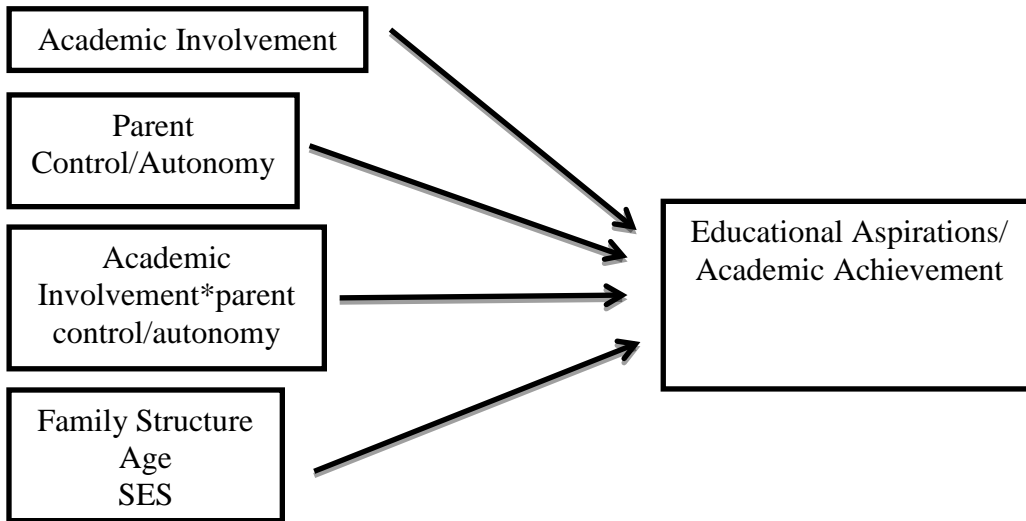
*Figure 1.* Statistical Path Model for Moderation Effect

Results

First the descriptive statistics of all of the study variables, including the mean, range,

standard deviation, and skewness were examined (See Table 1). On average, the sample

reported having high educational aspirations as evidenced by the high mean scores of 14.86 for

females and 14.65 for males on a range of 6-20. The academic achievement variable was

reverse-coded to reflect low grades for low scores and high grades for high scores for this

analysis and the ones thereafter. Respondents generally considered themselves to have average

grades compared to their peers since the mean score was at the midpoint (For Males: M=2.39;

For Females: M=2.43). Both males and females perceived their parents to grant them higher

levels of autonomy since mean scores were above the midpoint of 14 out of a possible 21 points

(For males: M=16.10; For females: M=16.34). On average, both male and female respondents

considered their parents to be on the lower end of psychologically controlling since mean scores

were below the midpoint of 14 out of 21 points (For males: M=10.57; For females: M=11.11).

Skewness statistics for all of the variables were acceptable, indicating normal distribution.

Table 1

*Descriptive Statistics for Educational Aspirations, Academic Achievement, Academic Involvement, Parent Autonomy-Granting, and Parent Psychological Control (N=840)*

| | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|
| Variables | *M* | *SD* | Range | Skew | *M* | *SD* | Range | Skew |
| Educational Aspirations | 14.65 | 2.6 | 3-20 | -.82 | 14.86 | 2.27 | 6-20 | -.41 |
| Academic Achievement | 3.61 | .92 | 1-5 | -.22 | 3.57 | .74 | 1-5 | -.01 |
| Academic Involvement | 12.16 | 4.16 | 6-24 | .31 | 12.89 | 3.93 | 6-23 | .28 |
| Parent Autonomy | 16.10 | 3.53 | 4.5-21 | -.64 | 16.34 | 3.38 | 6-21 | -.69 |
| Parent Control | 10.57 | 3.40 | 1-21 | .23 | 11.11 | 3.16 | 1-21 | .164 |

Independent-samples t-tests were conducted to compare the study variables in males and females. There were no significant differences in males and females when examining the outcome variables, educational aspirations and academic achievement. However, significant differences were found between males (M=12.16, SD=4.16) and females (M=12.89, SD=3.93) when examining academic involvement; t(743), *p*<.05. Significant differences between the males (M=10.57, SD=3.40) and females (M=11.11, SD=3.16) were also discovered when examining parent psychological control; t(833), *p*<.05. Specifically, these results indicate that sex of the adolescent plays a role in how adolescents perceive their parents such that females perceive that their parents are more involved in school and psychologically controlling than their male counterparts. Because differences between males and females were found among the variables of interest, males and females will be examined separately.

Next, I examined the bivariate correlations of all of the study variables (See Table 2). The main outcome variable, educational aspirations, was positively correlated to academic involvement, among males and females (For males: $r=.212$, $p<.001$; For females: $r=.141$, $p<.01$). Educational aspirations was also positively correlated to parent autonomy-granting (For males: $r=.136$, $p<.01$; For females: $r=.119$, $p<.01$ ). Similarly, the secondary outcome variable, academic achievement was also correlated to academic involvement ($r=.182$, $p<.001$) and parent autonomy-granting ($r=.161$, $p<.001$), among females. Among males, however, academic achievement was also positively correlated to parent autonomy-granting ($r=.169$, $p<.001$), but not to involvement. As expected, academic achievement and parent psychological control were found to be negatively correlated, among females ($r=-.156$, $p<.001$).

As expected, both males and females, educational aspirations and academic achievement were positively correlated such that when the respondents reported high educational aspirations, they also reported high academic achievement (For males: $r=.359$, $p<.001$; For females: $r=.212$, $p<.001$). Parent autonomy-granting and parent psychological control were negatively correlated indicated that when parents were rated high on control, they were rated low on autonomy-granting and vice-versa (For males: $r=-.351$, $p<.001$; For females: $r=-.411$, $p<.001$).

Correlations involving control variables for males revealed that SES was positively associated with parent autonomy-granting, indicating that when male respondents reported high SES, they also reported a high level of parent autonomy-granting ($r=.120$, $p<.05$). Female results were similar, with SES being positively correlated to parent autonomy-granting ($r=.159$, $p<.001$). Females results revealed a positive correlation between SES and educational aspirations ($r=.109$, $p<.05$). Among males, family structure was negatively correlated with academic involvement ($r=-.119$, $p<.05$). Conversely, with females, family structure was not

significantly correlated with any of the variables of interest.  As expected, age was negatively

correlated to academic involvement for males ($r$=-.202, $p$<.001) and females ($r$=-.118, $p$<.05).

Since none of the variables of interest were highly correlated, multicollinearity is unlikely and

therefore, continuous variables did not need to be centered at the mean.

Table 2

*Correlations for Study Variables for Males and Females (N=840)*

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1. SES | 1 | -.030 | .040 | -.043 | .109* | .081† | .159*** | -.056 |
| 2. Family Structure | -.024 | 1 | .039 | -.058 | -.039 | -.019 | -.033 | .024 |
| 3. Age | .006 | .002 | 1 | -.008 | .066 | -.118* | .021 | .004 |
| 4. Achievement | -.097† | .055 | .000 | 1 | .213*** | .182*** | .161*** | -.156*** |
| 5. Aspirations | .041 | -.070 | -.046 | .359*** | 1 | .141** | .119** | -.065 |
| 6. Involvement | .094† | -.119* | -.202*** | .034 | .212*** | 1 | .256*** | -.071 |
| 7. Parent Autonomy | .120* | -.081 | -.023 | .169*** | .136** | .223*** | 1 | -.411*** |
| 8. Parent Control | -.104† | .056 | .009 | -.011 | .017 | -.059 | -.351*** | 1 |

*Correlations below the diagonal represent the males' correlations; correlations above the diagonal represent the females' correlations.  †$p$<.10, *$p$<.05, **$p$<.01, ***$p$<.001*

Next, a series of nested hierarchical regression models were fit to answer each research

question.  To be included in the models as a control variable, the non-continuous, family

structure variable was dummy-coded into four different variables: two-parent, single-parent,

blended family, and other type.  Male and female adolescents were examined separately due to

the group differences across the parenting variables as measured by the independent samples t-

tests.  Furthermore, parental autonomy-granting and parental psychological control were each

examined within their own nested models.  Each model was examined twice, once with the

primary dependent variable, educational aspirations, and once with the secondary dependent

variable, academic achievement.

In sum, there are a total of eight nested models.  There are four models for males and four

for females. The models tested two dependent variables, academic achievement and educational

aspirations.  The independent variables are: Academic involvement, parental autonomy granting,

parental psychological control. The control variables are socio-economic status, and family

structure, and age.  In the first step of each model, the control variables of family structure, SES,

and age are introduced.  The second step added the independent variables, academic involvement

and parent autonomy-granting or parent psychological control.  The third step included the

interaction variable of parent autonomy-granting * academic involvement or parent

psychological control*academic involvement.  The presentation of results is organized by

research question.

**RQ 1:  Is there a relationship between academic involvement and educational**

**aspirations/academic achievement?**

**A) For females**

The first research question was answered by two of the taxonomies of fitted models

corresponding to females.  In the first taxonomy of fitted models, educational aspirations is

regressed on academic involvement, parent autonomy-granting, and the control variables (See

Table 3).  Model 2 is a significant model fit ($F(7, 418)=2.96$, $p<.01$) and explains 4.7% of the

variance ($R^2=.047$).  After controlling for SES, family structure, and age, academic involvement

is statistically positively significant ($B=.08$, $\beta=.14$, $t=2.77$, $p<.01$).  In the second taxonomy of

fitted models, academic achievement is regressed on academic involvement, parent autonomy-

granting, and the control variables (See Table 4). Of the three nested models, Model 2 is a significant model fit ($F(7, 417)=3.90$, $p<.001$) and explains 6% of the variance ($R^2=.06$). After controlling for SES, family structure, age, and parent autonomy-granting, academic involvement was found to be statistically significant within this model ($B=.03$, $\beta=.16$, $t=3.29$, $p<.001$). In other words, an increase in academic involvement meant that there was an improvement in educational aspirations and in academic achievement for females.

Similar results were obtained in the third and fourth taxonomies of fitted models that included psychological control in the model instead of parent autonomy granting. In the third taxonomy of fitted models, educational aspirations is regressed on academic involvement, parent psychological control, and the control variables (See Table 5). Of the three nested models, Model 2 is a significant model fit ($F(7, 418)=2.80$, $p<.01$) and explains 4.5% of the variance ($R^2=.045$). After controlling for SES, family structure, age, and parent psychological control, academic involvement was found to be statistically significant within this model ($B=.09$, $\beta=.15$, $t=3.08$, $p<.01$). In the fourth taxonomy of fitted models, academic achievement is regressed on academic involvement, parent psychological control, and the control variables (See Table 6). Of the three nested models, Model 2 is a significant model fit ($F(7, 417)=4.13$, $p<.001$) and explains 6.5% of the variance ($R^2=.065$). After controlling for SES, family structure, age, and parent psychological control, academic involvement was found to be statistically significant within this model ($B=.03$, $\beta=.18$, $t=3.70$, $p<.001$). Specifically, for females, when there was an increase in academic involvement, there was also an improvement in both educational aspirations and academic achievement when psychological control was taken into account. Therefore, academic involvement makes a difference in the academic outcomes for female students.

**B) For males**

In the fifth taxonomy of fitted models, the unique contributions of academic involvement and parent-autonomy on educational aspirations are examined (See Table 7). Of the three nested models, Model 3 is a significant model fit ($F(8, 280)=4.17$, $p<.001$) and explains 11% of the variance ($R^2=.11$). Controlling for all else in the model, academic involvement was found to be statistically significant within this model (B=.58, $\beta$=.94, $t$=3.45, $p<.001$). For males, whenever they perceived their parents to be involved, there was also an improvement in educational aspirations. In the sixth taxonomy of fitted models, academic achievement is regressed on academic involvement, parent autonomy-granting, and the control variables (See Table 8). None of the models in this regression analysis were statistically significant, therefore the following should be approached with caution. Within Model 2 ($F(7, 280)=1.67$, *ns*), which explained 4% of the variance ($R^2=.040$), academic involvement was not significant (B=.01, $\beta$=.03, $t$=.47, *ns*). Therefore, among males, when autonomy-granting is accounted for, academic involvement impacts educational aspirations, but not academic achievement.

The next two taxonomies of fitted regressions included psychological control as one of the predictors instead of parent autonomy-granting. In the seventh taxonomy of fitted models, educational aspiration is regressed on academic involvement, parent psychological control, and the control variables (See Table 5). Of the three nested models, Model 2 is a significant model fit ($F(7, 281)=3.71$, $p<.001$) and explains 8.5% of the variance ($R^2=.085$). After controlling for SES, family structure, age, and parent psychological control, academic involvement was found to be statistically significant within this model (B=.17, $\beta$=.28, $t$=4.66, $p<.001$). Therefore, when adolescent males perceived their parents to be involved, there was an improvement in educational aspirations. In the eighth taxonomy of fitted models, academic achievement is regressed on academic involvement, parent psychological control, and the control variables.

None of these nested models were statistically significant.  Thus, when psychological control was accounted for in males, academic involvement only impacted educational aspirations, not academic achievement.

**RQ 2:  Is there a relationship between parent autonomy-granting and educational aspirations/academic achievement?**

**A) For females**

The first taxonomy of fitted models tested for the association between parent autonomy-granting and educational aspirations.  In Model 2, controlling SES, family structure, age, and academic involvement, parent autonomy-granting was not statistically significant ($B$=.05, $\beta$=.08, $t$=1.56, *ns*).  The second taxonomy of fitted models tested for the association between parent autonomy-granting and academic achievement.  Parent autonomy-granting was significantly associated to academic achievement, controlling for all else in the model, such that whenever parent autonomy-granting increased, there was an associated, positive change in academic achievement ($B$=.03, $\beta$=.14, $t$=2.72, $p$<.01).  Therefore, parent-autonomy-granting has an effect on academic achievement, but not educational aspirations among females.

**B) For males**

In the fifth taxonomy of fitted models, the unique contributions of academic involvement and parent-autonomy on educational aspirations are examined (See Table 7).  Parent autonomy-granting was found to be statistically significant, controlling for all else in the model, such that when there was an increase in parenting autonomy-granting, there was an improvement in educational aspirations (B= .34, β=.47, $t$=2.70, $p$<.01), among males.  In the sixth taxonomy of fitted models, the unique contributions of academic involvement and parent-autonomy on academic achievement are examined (See Table 8).  Parent autonomy-granting was found to be

statistically significant (B=.04, β=.14, $t$=2.25, $p$<.05), controlling for all else in the model. In other words, when parent autonomy increased, there was an improvement in achievement for males. Overall, it appears parent autonomy-granting positively contributes to the educational aspirations and academic achievement of Latino males.

**RQ 3: Is there a relationship between parent psychological control and educational aspirations/academic achievement?**

**A) For females**

In the third taxonomy of fitted models, educational aspirations is regressed on academic involvement, parent psychological control, and the control variables (See Table 5). Controlling for all else in the model, psychological control was found non-significant in this model (B=-.04, β=-.06, $t$=-1.15, *ns*). In the fourth taxonomy of fitted models, academic achievement is regressed on academic involvement, parent psychological control, and the control variables (See Table 6). Parental psychological control was found to be statistically significant, controlling for all else in Model 2, such that whenever psychological control increased, academic achievement decreased and vice-versa (B=-.03, β=-.14, $t$=-2.99, $p$<.01). Therefore, females were adversely affected in their academic achievement when they had psychologically controlling parents. However, there was no association found between psychological control and educational aspirations.

**B) For males**

In the seventh taxonomy of fitted models, educational aspiration is regressed on academic involvement, parent psychological control, and the control variables (See Table 9). Parent psychological control was found non-significant (*B*=.03, β=.04, $t$=.67, *ns*). In the eighth taxonomy of fitted models, academic achievement is regressed on academic involvement, parent psychological control, and the control variables (See Table 10). None of these nested models

were statistically significant.  Consequently, psychological control had no effect on educational aspirations or academic achievement, among males.

**RQ 4:  Does parent autonomy-granting moderate the relationship between academic involvement and educational aspirations/academic achievement?**

**A) For females**

To test for the moderation relationship, the third model of each taxonomy of fitted models included the interaction variable.  In the first taxonomy of fitted models, educational aspirations is regressed on academic involvement, parent autonomy-granting, and the control variables (See Table 3).  Examination of the third model, which included the interaction variable of parent- autonomy-granting*academic involvement revealed that the interaction was non-significant (B=-.00, $\beta$=-.01, $t$=-.31, $ns$).  Results were similar when the interaction variable was tested on academic achievement in the second taxonomy of fitted models.  The third model, which included the interaction variable of parent- autonomy-granting*academic involvement revealed that the interaction was non-significant (*B=.00, $\beta$=.00, $t$=.64, ns*).  Thus, it was determined based on the hierarchical regression analyses that parent-autonomy did not moderate the association between academic involvement and educational aspirations or academic achievement, among females.

**B) For males**

In the fifth taxonomy of fitted models, the unique contributions of academic involvement and parent-autonomy on educational aspirations are examined (See Table 7).  The third model, also included the interaction variable of parent- autonomy-granting*academic involvement and revealed that the interaction was significant (B=-.03, $\beta$=-.88, $t$=-2.55, $p$<.01; See Figure 2).

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Interaction results reveal that, on average, when academic involvement was low (below the mean) and parent autonomy-granting was low (below the mean), males averaged achievement self-ratings of 3.57 on a 5-point scale. When academic involvement was high (above the mean) and parent autonomy-granting was high (above the mean), males average achievement self-ratings of 3.75. When academic involvement was low (below the mean) and parent autonomy-granting was high (above the mean), males averaged achievement self-ratings of 3.65. When academic involvement was high (above the mean) and parent autonomy-granting was low (below the mean), males averaged achievement self-ratings of 3.42.

In the sixth taxonomy of fitted models, academic achievement is regressed on academic involvement, parent autonomy-granting, and the control variables (See Table 8). The third model, which included the interaction variable of parent- autonomy-granting*academic involvement revealed that the interaction was non-significant ($B$=.0, $\beta$=.06, $t$=.16, *ns*). Therefore, parent autonomy-granting only moderated the association between academic involvement and educational aspirations among males, but not academic achievement.
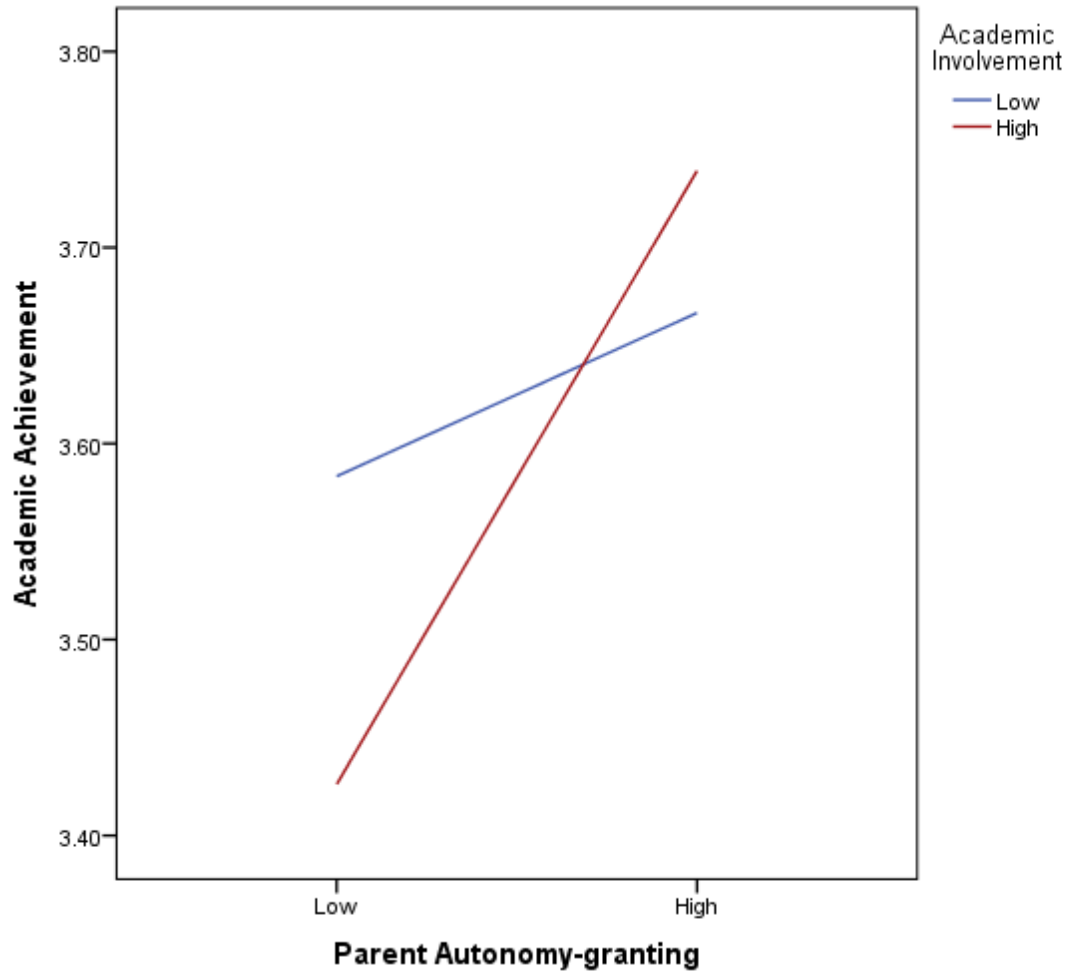
*Figure 2.* Graph of Interaction of Academic Involvement and Parent Autonomy-granting.

**RQ 5:  Does parent psychological control moderate the relationship between academic involvement and educational aspirations/academic achievement?**

**A) For females**

In the third taxonomy of fitted models, educational aspirations is regressed on academic involvement, parent psychological control, and the control variables (See Table 5).  The third model, which included the interaction variable of parent psychological control*academic involvement revealed that the interaction was non-significant (B=-.00, $\beta$=-.07, $t$=-.29, *ns*). Results were similar when the models were tested with the other dependent variable, academic achievement in the fourth taxonomy of fitted models.  The third model, which included the

interaction variable of parent psychological control*academic involvement revealed that the interaction was non-significant (B=-.00, β=-.23, *t*=-.97, *ns*). Therefore, psychological control did not moderate the association between academic involvement and educational aspirations or academic achievement, among females.

**B) For males**

In the seventh taxonomy of fitted models, educational aspiration is regressed on academic involvement, parent psychological control, and the control variables (See Table 5). The third model, which included the interaction variable of parent psychological control*academic involvement revealed that the interaction was non-significant (*B*=.02, *β*=.44, *t*=1.76, *p*<.10).

In the eighth taxonomy of fitted models, Model 3 tested the interaction variable of academic involvement*parent psychological control. Examination of this model revealed no interaction effects (See Table 10). Therefore, among males, psychological control did not moderate the relationship between academic involvement and educational aspirations or academic achievement.

Table 3

*Summary of Hierarchical Regression Analysis for Academic Involvement and Parent Autonomy-granting Predicting Females' Educational Aspirations (N=480)*

| Variable | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | $B$ | $SE$ | $\beta$ | $B$ | $SE$ | $\beta$ | $B$ | $SE$ | $\beta$ |
| Constant | 11.35 | 1.76 | | 9.25 | 1.84 | | 8.74 | 2.48 | |
| SES | .34 | .16 | .10* | .28 | .16 | .08† | .27 | .16 | .08† |
| Age | .16 | .11 | .07 | .18 | .11 | .08 | .18 | .11 | .08 |
| Family Structure | | | | | | | | | |
|   Single Parent | .05 | .26 | .01 | .14 | .26 | .03 | .13 | .26 | .03 |
|   Blended Families | -.22 | .31 | -.04 | -.25 | .30 | -.04 | -.26 | .30 | -.04 |
|   Other types | -.03 | .44 | -.00 | .04 | .43 | .00 | .03 | .43 | .00 |
| Involvement | | | | .08 | .03 | .14** | .12 | .14 | .21 |
| Parent Autonomy | | | | .05 | .03 | .08 | .08 | .11 | .13 |
| Involvement*Parent Autonomy | | | | | | | -.00 | .01 | -.10 |
| $R^2$ | .018 | | | .047 | | | .047 | | |
| $\Delta R^2$ | .018 | | | .029 | | | .000 | | |

†$p<.10$, *$p<.05$, **$p<.01$, ***$p<.001$

Table 4

*Summary of Hierarchical Regression Analysis for Academic Involvement and Parent Autonomy-granting Predicting Females' Academic Achievement (N=480)*

|  | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| Variable | *B* | *SE* | *β* | *B* | *SE* | *β* | *B* | *SE* | *β* |
| Constant | 3.30 | .56 | | 2.39 | .58 | | 2.72 | .78 | |
| SES | .02 | .05 | .02 | -.01 | .05 | -.01 | -.01 | .05 | -.01 |
| Age | .02 | .03 | .02 | .02 | .03 | .04 | .03 | .03 | .04 |
| Family Structure | | | | | | | | | |
|   Single Parent | -.02 | .08 | -.01 | .02 | .08 | .01 | .02 | .08 | .01 |
|   Blended Families | .05 | .10 | .03 | .04 | .10 | .02 | .04 | .10 | .02 |
|   Other types | -.22 | .14 | -.08 | -.20 | .14 | -.07 | -.19 | .14 | -.07 |
| Involvement | | | | .03 | .01 | .16*** | .00 | .05 | .01 |
| Parent Autonomy | | | | .03 | .01 | .14** | .01 | .03 | .04 |
| Involvement*Parent Autonomy | | | | | | | .00 | .00 | .21 |
| $R^2$ | .008 | | | .061 | | | .062 | | |
| $\Delta R^2$ | .008 | | | .053 | | | .001 | | |

**$p<.01$, ***$p<.001$

Table 5

*Summary of Hierarchical Regression Analysis for Academic involvement and Parent Psychological Control Predicting Females' Educational Aspirations (N=480)*

|  | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| Variable | *B* | *SE* | *β* | *B* | *SE* | *β* | *B* | *SE* | *β* |
| Constant | 11.35 | 1.76 | | 1.31 | 1.87 | | 9.95 | 2.29 | |
| SES | .34 | .16 | .10* | .30 | .16 | .09† | .31 | .16 | .09† |
| Age | .16 | .11 | .07 | .19 | .11 | .09† | .19 | .11 | .08† |
| Family Structure | | | | | | | | | |
|   Single Parent | .05 | .26 | .01 | .11 | .26 | .02 | .12 | .26 | .03 |
|   Blended Families | -.22 | .31 | -.04 | -.26 | .30 | -.05 | -.26 | .30 | -.04 |
|   Other types | -.03 | .44 | .00 | .07 | .43 | .01 | .08 | .44 | .01 |
| Involvement | | | | .09 | .03 | .15** | .12 | .11 | .20 |
| Parent Control | | | | -.04 | .04 | -.06 | -.01 | .13 | -.01 |
| Involvement*Parent Control | | | | | | | .00 | .01 | -.07 |
| $R^2$ | .018 | | | .045 | | | .045 | | |
| $\Delta R^2$ | .018 | | | .026 | | | .000 | | |

†$p<.10$, *$p<.05$, **$p<.01$

Table 6

*Summary of Hierarchical Regression Analysis for Academic involvement and Parent Psychological Control Predicting Females' Academic Achievement (N=480)*

|  | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| Variable | $B$ | $SE$ | $\beta$ | $B$ | $SE$ | $\beta$ | $B$ | $SE$ | $\beta$ |
| Constant | 3.30 | .56 | | 3.12 | .59 | | 2.72 | .72 | |
| SES | .02 | .05 | .02 | .00 | .05 | .00 | .01 | .05 | .01 |
| Age | .02 | .03 | .02 | .03 | .03 | .04 | .02 | .03 | .04 |
| Family Structure | | | | | | | | | |
| Single Parent | -.02 | .08 | -.01 | .00 | .08 | .00 | .01 | .08 | .01 |
| Blended Families | .05 | .10 | .03 | .03 | .10 | .02 | .04 | .10 | .02 |
| Other types | -.22 | .14 | -.08 | -.17 | .14 | -.06 | -.16 | .14 | -.06 |
| Involvement | | | | .03 | .01 | .18*** | .07 | .03 | .36† |
| Parent Control | | | | -.03 | .01 | -.14** | .00 | .04 | .02 |
| Involvement*Parent Control | | | | | | | .00 | .00 | -.23 |
| $R^2$ | .008 | | | .065 | | | .067 | | |
| $\Delta R^2$ | .008 | | | .057 | | | .002 | | |

†$p<.10$, **$p<.01$, ***$p<.001$

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Table 7

*Summary of Hierarchical Regression Analysis for Academic Involvement and Parent Autonomy-granting Predicting Males' Educational Aspirations (N=359)*

| Variable | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | *B* | *SE* | *β* | *B* | *SE* | *β* | *B* | *SE* | *β* |
| Constant | 16.33 | 2.22 | | 12.02 | 2.35 | | 7.36 | 2.96 | |
| SES | .02 | .19 | .01 | -.05 | .18 | -.02 | -.04 | .18 | -.01 |
| Age | -.10 | .13 | -.05 | .02 | .13 | .01 | .01 | .13 | .00 |
| Family Structure | | | | | | | | | |
| Single Parent | .08 | .36 | .01 | .23 | .35 | .04 | .20 | .34 | .04 |
| Blended Families | .17 | .44 | .02 | .37 | .42 | .05 | .32 | .42 | .05 |
| Other types | -1.05 | .68 | -.09 | -.77 | .66 | -.07 | -.78 | .66 | -.07 |
| Involvement | | | | .16 | .04 | .26*** | .58 | .17 | .94*** |
| Parent Autonomy | | | | .04 | .04 | .05 | .34 | .12 | .47** |
| Involvement*Parent Autonomy | | | | | | | -.03 | .01 | -.88** |
| $R^2$ | .013 | | | .086 | | | .106 | | |
| $\Delta R^2$ | .013 | | | .072 | | | .021 | | |

**p<.01, ***p<.001

Table 8

*Summary of Hierarchical Regression Analysis for Academic Involvement and Parent Autonomy-granting Predicting Males' Academic Achievement (N=359)*

| | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| Variable | *B* | *SE* | *β* | *B* | *SE* | *β* | *B* | *SE* | *β* |
| Constant | 3.42 | .80 | | 2.72 | .87 | | 2.83 | 1.11 | |
| SES | .06 | .07 | .05 | .04 | .07 | .03 | .04 | .07 | .03 |
| Age | .01 | .05 | .01 | .01 | .05 | .02 | .01 | .05 | .02 |
| Family Structure | | | | | | | | | |
| Single Parent | -.24 | .13 | -.12$^{\dagger}$ | -.23 | .13 | -.11$^{\dagger}$ | -.23 | .13 | -.11$^{\dagger}$ |
| Blended Families | .02 | .16 | .01 | .04 | .16 | .02 | .04 | .16 | .02 |
| Other types | -.05 | .25 | -.01 | .03 | .25 | .01 | .03 | .25 | .01 |
| Involvement | | | | .01 | .01 | .03 | .00 | .06 | -.02 |
| Parent Autonomy | | | | .04 | .02 | .14$^{*}$ | .03 | .05 | .11 |
| Involvement*Parent Autonomy | | | | | | | .00 | .00 | .06 |
| $R^2$ | .019 | | | .040 | | | .040 | | |
| $\Delta R^2$ | .019 | | | .021 | | | .000 | | |

$^{\dagger}$*p*<.10, $^{*}$*p*<.05

Table 9

*Summary of Hierarchical Regression Analysis for Academic involvement and Parent*

*Psychological Control Predicting Males' Educational Aspirations (N=359)*

| Variable | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | $B$ | $SE$ | $\beta$ | $B$ | $SE$ | $\beta$ | $B$ | $SE$ | $\beta$ |
| Constant | 16.33 | 2.22 | | 12.04 | 2.38 | | 14.31 | 2.70 | |
| SES | .02 | .19 | .01 | -.02 | .18 | -.01 | -.02 | .18 | -.01 |
| Age | -.10 | .13 | -.05 | .02 | .13 | .01 | .03 | .13 | .01 |
| Family Structure | | | | | | | | | |
| Single Parent | .08 | .36 | .01 | .24 | .35 | .04 | .24 | .34 | .04 |
| Blended Families | .17 | .44 | .02 | .36 | .43 | .05 | .34 | .42 | .05 |
| Other types | -1.05 | .68 | -.09 | -.86 | .66 | -.08 | -.89 | .66 | -.08 |
| Involvement | | | | .17 | .04 | .28*** | -.03 | .12 | -.04 |
| Parent Control | | | | .03 | .04 | .04 | -.20 | .14 | -.27 |
| Involvement*Parent Control | | | | | | | .02 | .01 | .44[†] |
| $R^2$ | .013 | | | .085 | | | .094 | | |
| $\Delta R^2$ | .013 | | | .071 | | | .010 | | |

[†]$p<.10,$ [***]$p<.001$

Table 10

*Summary of Hierarchical Regression Analysis for Academic involvement and Parent*

*Psychological Control Predicting Males' Academic Achievement (N=359)*

|  | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| Variable | $B$ | $SE$ | $\beta$ | $B$ | $SE$ | $\beta$ | $B$ | $SE$ | $\beta$ |
| Constant | 3.42 | .80 |  | 2.95 | .89 |  | 3.01 | 1.01 |  |
| SES | .06 | .07 | .05 | .06 | .07 | .05 | .06 | .07 | .05 |
| Age | .01 | .05 | .01 | .02 | .05 | .02 | .02 | .05 | .02 |
| Family Structure |  |  |  |  |  |  |  |  |  |
| Single Parent | -.24 | .13 | -.12[†] | -.23 | .13 | -.11[†] | -.23 | .13 | -.11[†] |
| Blended Families | .02 | .16 | .01 | .03 | .16 | .01 | .03 | .16 | .01 |
| Other types | -.05 | .25 | -.01 | -.04 | .25 | -.01 | -.04 | .25 | -.01 |
| Involvement |  |  |  | .01 | .01 | .06 | .01 | .04 | .04 |
| Parent Control |  |  |  | .01 | .02 | .05 | .01 | .05 | .02 |
| Involvement*Parent Control |  |  |  |  |  |  | .00 | .00 | .03 |
| $R^2$ | .019 |  |  | .025 |  |  | .025 |  |  |
| $\Delta R^2$ | .019 |  |  | .005 |  |  | .000 |  |  |

[†]$p<.10$

Discussion

While there is research studying the effects of various parenting practices on academic outcomes among Latinos, few studies examine the possible moderating relationship that psychological control and autonomy-granting have on other parenting practices like academic involvement. In fact, this type of moderating relationship is not often studied across most ethnic groups (Spera, 2005). This section will cover the main effects and interaction effects for males and females as well as the emerging trends discovered in this study. Next, the strengths and limitations as well as the future directions for parenting research among the Latino population will be discussed.

**Main Effects**

Consistent with past literature, both males and females benefited from parents who were involved in their academic careers (Zarate, 2007; LeFevre and Shaw, 2012). Females and males with involved parents had higher academic achievement and higher educational aspirations, respectively. These findings are particularly noteworthy in this study since they were significant while accounting for SES, different family structures, parental autonomy-granting characteristics and parental psychological control. Furthermore, these findings are meaningful since they provide evidence that academic involvement is a more consistently strong and significant predictor of academic outcomes among Latinos than autonomy-granting characteristics and parental control. One possible explanation is that parental involvement in school may be considered as a form of caring to Latinos, whether or not parents provide autonomy or exert

psychological control.  Latino students may benefit from their parents showing them that their

education matters to them and may feel drawn to aspire to more and/or achieve more in school.

This is consistent with cultural norms in Latino culture in which *familismo* plays a particularly

important role in behaviors and decision making among Latinos (Halgunseth et al., 2006).  This

strong sense of family may influence Latino youth to consider their family's values and goals

above their own.  If a parent shows caring through involvement, the message among Latinos may

be that they must work harder to please the family.   Another possibility is that academic

involvement may reflect the degree to which parent's monitor their children, which can

positively influence their children's educational outcomes.

While academic involvement was more consistently predictive of positive academic

outcomes, parent autonomy-granting (i.e. *respects me even if I disagree with him/her, values who

I am, respects the way I feel about things, encourages me to express my feelings, loves me even

when I don't see things the same ways as him/her, etc.*) still predicted academic achievement in

females and both achievement and educational aspirations in males.  In the current study,

parental psychological control (i.e. *changes the subject when I have something to say, often

interrupts, brings up past mistakes, is always trying to change the way I think or feel, treats me

less friendly when I disagree, will avoid looking at me if I have upset him/her, stops talking to me

until I have pleased him/her*) had little effect on Latino adolescents since it was only found to be

negatively correlated to academic achievement in females.  When female students had

psychologically controlling parents, they also tended to have lower grades.  These results  are

consistent with the prevailing American culture in which autonomy-granting has been shown to

have positive effects and is considered a more attractive parenting characteristic than

psychological control (Halgunseth et al., 2006).  Males were not affected by psychologically

controlling parents.  For them, parental involvement in school played a more significant role in

their educational outcomes.  The lack of significant findings among males could be the result of

some cultural differences among Latinos.  For instance, control may be perceived as a neutral

parent attribute in line with cultural characteristics like *respeto*, which refers to the maintenance

of respectful hierarchical relationships determined by age, sex, and social status (Harwood,

Leyendecker, Carlson, Asencio, and Miller, 2002).  What may be considered psychologically

controlling in a traditional American culture may actually be perceived as respect towards

hierarchical relationships (Fuligni, 1998) and may not actually have as many detrimental effects

among Latino males.


**Moderation Effects**

The major finding for this study was that parent autonomy-granting moderated the

relationship between academic involvement and educational aspirations among males.

Interestingly, males whose parents were highly involved in their academics but perceived their

parents to grant them a low level of autonomy, reported the lowest achievement in school.

However, the males with parents who were both highly involved and also provided them high

levels of autonomy, reported the highest achievement. Specifically, this finding demonstrates

that Latino males need both a highly involved parent, i.e. a parent who sets limits on television

watching, looks over graded papers, looks over homework, and sets times to be at home on

weeknights and weeknights, and a parent that provides a sense of autonomy by showing their son

respect for who they are and their independent ideas, valuing who they are, encouraging them to

express their feelings, and showing them love even when they disagree.  It is this combination of

setting limits and a sense of autonomous freedom that impacted males the most in their educational outcomes.

Moreover, it seems that for males, autonomy in adolescence is of particular importance due to the developmental stage that they are in and that they benefit from parents who are involved and grant them autonomy. However, since the association is not significant when academic achievement was examined, there may be a parenting disparity between encouragement to aspire to do more and actual attainment. Educational aspirations may have been formed throughout childhood and early adolescence and remained intact in later adolescent years, while academic achievement is constantly changing from year to year. This disparity may also demonstrate parents' ability to help their sons have high aspirations, but their struggle to help them improve their grades. Furthermore, adolescent males may be more influenced by other factors such as peer relationships or school environment in later adolescence than by the parents' rearing as far as their actual achievement is concerned (Ream and Rumberger, 2008).

## Patterns Noted

An interesting pattern noted in the findings was that of sex differences among adolescents and academic outcomes. For instance, findings suggest that parents have more influence on their son's educational aspirations. Parents that gave their son's a sense of autonomy had sons that exhibited higher educational aspirations. Furthermore, this sense of autonomy from their parents provided a positive context in which parent's involvement in academics was exhibited. These male students tended to have the belief that they would go further in school when their parents were both involved and provided them autonomy. Conversely, parents influence their daughters in their actual achievement when they are involved in their academics and when they provide

them a sense of autonomy. Specifically, when parents granted their daughters autonomy, they tended to have higher grades. Uniquely to females, when parents exerted more psychological control, their daughters tended to have lower grades. This was not the case with their educational aspirations. Only involvement made a difference in educational aspirations for females. For females, parental involvement was the most influential factor in their academic outcomes. Females benefitted from having their parents be involved by checking homework, setting a curfew, looking over grades and setting limits for TV watching, in both improving their educational aspirations and academic achievement. While females benefitted from autonomy-granting characteristics in their parents for their achievement in school, autonomy-granting did not strengthen the effect that involvement had on academic achievement.

In the current study, Latino parents influenced their daughters far more in their academic achievement than in their aspirations and their son's aspirations more than their achievement. This unique pattern may be due to different socialization practices within the Latino culture. It appears that parents exert an influence on their son's in a different way than their daughters. Daughters may be more encouraged to work hard and succeed, but not given the expectation to look toward the future for career and educational success. The expectation may be that they stay at home, close to family or prepare for marriage. Males may be encouraged to think about the future and goal orientation so that they can be successful providers for their families. The idea that females may be encouraged to be hard workers but to be less goal oriented and males encouraged to do more outside the home and to look to the future is in line with the often patriarchal culture in the Latino community in which women are caregivers and homemakers, while males are breadwinners and leaders of the household.

**Strength and Limitations**

One strength of the present study was the large sample size and that students were chosen from several different schools, instead of one school. Having a large sample size minimizes discrepancies in the results; therefore, results for this study are more reliable.

The inclusion of multiple academic outcome variables, educational aspirations and academic achievement, proved to be a valuable attribute to this study. This inclusion strengthened this study since findings not only examined goal orientation as a predictor of future success, but also examined current achievement among Latino students. Being able to examine both outcomes provided a clearer picture of the educational state of Latinos.

Furthermore, the present study benefitted from examining males and females separately, rather than just controlling for sex. In examining males and females, results revealed unique differences between the sexes regarding academic outcomes that may have otherwise been missed or overlooked.

Additionally, this study benefitted by adolescents rating their perception of autonomy-granting or psychologically controlling characteristics in their own parents, versus parents filling out parenting questionnaires, which has proven to be a reliable measure (Barber, 1996). Youth response is more useful for studies like these since it is their perception of their parents that matter rather than their parent's perception of their own parenting.

While this study exhibited several strengths, this study was limited in that it was a correlational study and could not provide causational explanations for the findings. Only including data from one point in time in high school limits the knowledge that can be gained from examining parenting practices since parenting is a trajectory that lasts a lifetime, but is particularly salient in the formative years through late adolescence.

Additionally, this study was limited in some of the measures used, namely the measures for academic achievement and for SES. Both measures asked respondents to compare themselves to other students. Using school records for GPA would have offered a reliable achievement score since many students may not be aware of how well or poorly they compare to others. Their closest peers are likely to perform similarly, which would make it difficult to understand where they may rank. This is also true for the SES measure, in which case asking about specific income and parent education may offer more accurate information.

**Future Directions**

In this study, ratings for mother and father autonomy-granting and psychological control were combined to form a parent rating. However, in this study, male and female students benefitted from parental practices in different ways—females exhibiting better achievement outcomes, while males exhibited better educational aspirations. Future research is needed to examine mothers' and fathers' unique contributions in parenting. Such research would provide insight into different socialization practices that may be influencing differing academic outcomes among the Latino males and females.

While some of the aforementioned findings may well reflect Latino culture, other findings probably reflect more of the individualistic culture prevalent in America. For instance, the findings reveal that males and females react positively to autonomy-granting parents and that females react negatively to psychologically controlling parents, exhibiting worse academic outcomes. While our study involved only Latino students, results demonstrated partial support to past research that includes European Americans and suggests positive gains from autonomy-granting parents and negative effects from controlling parents (Close and Solberg, 2007).

Therefore, future research should also include European Americans in the sample so that parenting effects among Latinos can be accurately compared to those in the broader American culture.

Interestingly, males' aspirations and achievement were not affected by controlling parents, which is in line with Halgunseth and colleagues' (2006) discourse on *respeto*, causing a more neutral response to control among Latinos. This may be due to the level of acculturation among the Latino students. Latinos youth are immersed in American culture while maintaining some of their own culture either from their own memories or experiences, if they immigrated, or from their parents (Triandis, 1993).

Therefore, gathering information about level of acculturation among Latinos may provide valuable information when examining results that are not consistent with the broader American culture. Since Latinos operate within the American culture, but also have a rich history in their own culture, examining their level of acculturation seems particularly relevant. Including generational status (i.e. immigrant, $1^{st}$, $2^{nd}$, $3^{rd}$ generation, etc.) would offer valuable information in both parenting practices and academic outcomes since different generations adhere to American ideals at varying levels.

**Conclusion**

The primary purpose of this study was to investigate the relationship between parental involvement and educational aspirations and the role of parent autonomy-granting and psychological control in this association among male and female Latino students. This relationship was also examined with the alternate academic outcome variable, academic achievement. The findings revealed a statistically significant relationship between academic

involvement and educational aspirations and academic achievement in both males and females. Additionally, there was an association between parent autonomy-granting characteristics and educational aspirations and achievement among males. A positive association was present for females between parent autonomy-granting and academic achievement. Furthermore, parent psychological control was significantly and negatively associated to academic achievement in females, but not in males. Importantly, a statistically significant moderation relationship was found in this study. Parent autonomy-granting characteristics moderated the relationship between involvement and educational aspirations among males.

This study contributes to the literature in that it examined multiple parenting characteristics and how they may be moderating the relationship of involvement and academic outcomes among the Latino population. Specifically, this study looked at how autonomy and control, which are more psychological parenting practices, set the tone for more behavioral practices like academic involvement. Findings suggest that while control does not seem to have an effect in the association between involvement and educational aspirations, autonomy does, among Latino males. This provides valuable information that parents who are more autonomy-granting, while providing support with their involvement, may actually be able to propel their sons to aspire to more in their education.

Additionally, the study was significant since findings partially support the notion that Latino students in America may be reacting to autonomy and control like European Americans do since control had a negative effect on Latinas and autonomy had a positive effect on both males and females. However, the lack of complete findings mirroring American culture suggests the importance of future research including European Americans and information concerning the level of acculturation of Latino youths. Sex differences within this study contributed to literature

as well since it was found that males are more affected by their parents in educational

aspirations, while females are more affected in their actual achievement.  More research is

needed to continue to understand these socialization differences, among Latino males and

females.

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Appendix — Questionnaire Measures

*School Achievement Items*

- Respondents responded on a 5-point Likert-type scale from 1 = *well above average* to 5 = *well below average* relative to grades.

| Survey Variable | Variable Label |
|---|---|
| b6 | In general, how well did you do in school? Would you say your grades were: |

*Parent Limit Setting Items*

- Respondents answered the question, "during the past 30 days, how often did one of your parents…" Respondents responded on a 4-point Likert scale 1 = *Never* or 4 = *Often*.

| Survey Variable | Variable Label |
|---|---|
| b9a | Restrict the amount of time you could watch television? |
| b9b | Check to see whether your homework was done? |
| b9c | Go over your homework with you? |
| b9d | Check over papers you brought home that a teacher had graded? |
| b9e | Set a time you had to be home on school nights? |
| b9f | Set a time you had to be home on the weekend? |

*Educational Aspirations Items*

- Respondents answered the question, "How likely is it that you will do each of the following things…" Respondents responded on a 4-point Likert scale 1 = *Definitely would not* or 4 = *Definitely would.*.

| Survey Variable | Variable Label |
|---|---|
| b10a | Graduate from high school. |
| b10b | Attend a technical or vocational school |
| b10c | Graduate from a two-year college or university |
| b10d | Graduate from a four-year college or university |
| b10e | Attend graduate or professional school after college |

*Parental Psychological Control Items*

- Psychological control was measured by the eight-item Psychological Control Scale-Youth Self-Report (PCS-YSR; Barber, 1996). This scale resulted from an analysis of the 10 items from the psychological control/psychological autonomy subscale of the most recent revision of the CRPBI, combined with another set of items written to more adequately tap the hypothesized dimensions of parental psychological control. The resulting 8-item scale retained 3 of the original CRPBI items and 5 of the newly written items. Respondents responded on a 3-point Likert-type scale from 1 = *not like her (him)* to 3 = *a lot like her (him)* as to how well items described their mothers and fathers.

| Survey Variable | Variable Label |
| --- | --- |
| d3mo, d3fa | changes the subject whenever I have something to say. |
| d12mo, d12fa | blames me for other family members' problems. |
| d23mo, d23fa | brings up past mistakes when s/he criticizes me. |
| d27mo, d27fa | often interrupts me. |
| d30mo, d30fa | is less friendly with me if I do not see things her/his way. |
| d32mo, d32fa | is always trying to change how I feel or think about things. |
| d35mo, d35fa | will avoid looking at me when I have disappointed her/him. |
| d39mo, d39fa | if I have hurt her/his feelings, stops talking to me until I please her/him…. |

*Parental Psychological Autonomy Items* (Barber, 1996)

- Respondents responded on a 3-point Likert-type scale from 1 = *not like her (him)* to 3 = *a lot like her (him)* as to how well items described their mothers and fathers.

| Survey Variable | Variable Label |
| --- | --- |
| d4mo, d4fa | respects me even if I disagree with her or him. |
| d6mo, d6fa | listens to me when I have something to say. |
| d11mo, d11fa | respects the way I feel and think about things. |
| d13mo, d13fa | values who I am as an independent person. |
| d20mo, d20fa | encourages me to express my feelings and opinions. |
| d43mo, d43fa | doesn't blame me for other people's problems. |
| d45mo, d45fa | lets me finish my sentences when I am talking to him or her. |
| d47mo, d47fa | loves me even if I don't see things the same as her or him. |