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FAMILY PROCESSES PROMOTING ACHIEVEMENT MOTIVATION AND PERCEIVED SCHOOL COMPETENCE AMONG LATINO YOUTH: A CULTURAL ECOLOGICAL-TRANSACTIONAL PERSPECTIVE

by

NATALIE J. WILKINS

Under the Direction of Gabriel Kuperminc

ABSTRACT

This longitudinal study uses a cultural ecological-transactional perspective (Garcia-Coll, et. al., 1996; Kuperminc, et al., in press) to examine whether relational factors (familism and parental involvement) predict processes of motivation and achievement one year later among 199 Latino adolescents from immigrant families. Parent involvement predicted higher present-oriented and future-oriented motivation, and familism predicted higher present-oriented motivation. Future-oriented motivation predicted higher perceived school competence, while present-oriented motivation predicted lower perceived school competence. Both future and present-oriented motivation increased over time for recent immigrants significantly more than for US-reared youth. Findings suggest that 1) familism and parent involvement relate significantly to processes of achievement motivation among Latino youth 2) future-oriented and present-oriented motivation are distinct from one another and are linked to perceived school competence in unique, and inverse ways among Latino

youth and 3) immigration age plays an important role in the motivational processes of Latino youth over time.

INDEX WORDS: Latino, Immigration, Achievement motivation, School, Hispanic, Familism, Parent involvement, School competence, Youth, Adolescence

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NATALIE J. WILKINS

A Dissertation Submitted in Partial Fulfillment of Requirements for the Degree of

Doctor of Philosophy

in the College of Arts and Sciences

Georgia State University

2009

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by

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INTRODUCTION

Latinos are the largest and one of the fastest growing ethnic minority groups in the United States (Pew Hispanic Center, 2006). It is predicted that Latino children will make up 29% of the school-aged population in the US by 2050 (US Census Bureau, 2004). As such, it is important to understand the ways in which this rapidly growing group of children are motivated to achieve, so that we may better foster their positive development and academic success (Suárez-Orozco & Suárez-Orozco, 1995; Yowell, 2000). Understanding achievement motivation among Latino youth is also a pressing issue given that currently, Latino students rank lower than their non-Latino peers in academic achievement outcomes such as grades (Pew Hispanic Center, 2004), high school graduation, and college enrollment rates (US Census Bureau, 2003). Nationally, Latino students accounted for 41% of high school dropouts in 2003 although they only account for 17% of the total youth population (US Census Bureau, 2003). Furthermore, only one third of Latino high school graduates in the US go on to college, in comparison to 39% and 46% of their African American and White peers, respectively (U.S. Census Bureau, 2001). In Georgia, the location of the current study, 60% of Latino students dropped out of high school in 2007 (Georgia Department of Education, 2008).

While these statistics indicate that Latino students in the US are doing more poorly in school than many of their peers from other ethnic and cultural groups, there are many Latino youth who are doing quite *well* in school (Suárez-Orozco & Suárez-Orozco, 2001), and there is little understanding of the factors that inhibit or bolster Latino youths' academic success (Yowell, 2000). Garcia-Coll and colleagues (1996) suggest that factors relating to culture and immigration experiences influence youths' school achievement in direct and tangible ways. Kuperminc, Wilkins, Roche, and Alvarez (in press) integrate this idea into the *cultural ecological-transactional perspective*, which asserts that there are multiple levels within

adolescents' environments that influence their development, ranging from individual characteristics to socio-political beliefs, and public policy, and that cultural beliefs and values act as a "lens" through which Latino youth experience, organize, and act upon the information they receive from these varying levels of their environment.

The cultural ecological-transactional model also emphasizes the importance of recognizing that development and well-being occur at individual, relational and collective levels, and that the balance of these dimensions varies as a function of cultural beliefs and values (Birman, Weinstein, Chan, & Beehler, 2007; Kuperminc, et al., in press; Evans and Prilleltensky, 2007). At the individual level, it has been suggested that achievement motivation may be a key factor in the achievement processes of Latino youth (Suárez-Orozco & Suárez-Orozco, 1995; Yowell, 2000), however psychological research focusing on achievement motivation processes among Latinos has been sparse. Those studies that have examined links between motivation and academic achievement among Latinos are often limited in at least three ways. First, they typically do not directly measure achievement motivation, but use other markers of achievement as proxies for motivation (e.g., Anderson & Evans, 1976; Rumberger & Larson, 1998), thus confounding achievement motivation with its presumed outcomes. Second, few studies examine achievement motivation within the context of Latino culture and processes of immigration. Third, whereas most studies of motivation focus on its association with grades and other concrete academic outcomes, it is also important to examine the association between motivation and the precursors to such outcomes. In this study, we consider achievement in the context of adolescents' own beliefs about their school competence. Such a conceptualization attends to the more immediate mechanisms of motivation and achievement that are important correlates, if not determinants, of eventual academic attainment (Kuperminc, Darnell, & Alvarez, 2008; Valentine, DuBois, & Cooper, 2004). The current study seeks to address these limitations in the literature and

examines achievement motivation among Latino youth from a cultural ecological-transactional perspective. As will be discussed in the sections that follow, this perspective provides a basis by which to examine achievement motivation among Latino youth as an individual-level, psychological phenomenon that is inherently linked to Latino cultural values.

Research has linked strong connections to the family (*familism*), and parental involvement to positive academic outcomes among Latino youth (Kuperminc, et al. 2008; Suárez-Orozco & Suárez-Orozco, 1995). Again, following the cultural ecological-transactional perspective, this study examined the contribution of these relational factors to process of motivation and achievement, in order to provide a more comprehensive understanding of Latino youths' academic adjustment.

The primary goal of this study was to examine processes of motivation and achievement among Latino youth from a cultural ecological-transactional perspective (Garcia Coll et al., 1996; Kuperminc, et al., in press; Perreira & Smith, 2007). More specifically, this study assessed the impact of cultural values on individual processes (achievement motivation) and relational processes (familism and parent involvement) linked to school achievement.

Individual Processes- Achievement Motivation

Achievement motivation has been defined as the extent to which individuals differ in their need to strive to attain rewards, such as physical satisfaction, praise from others, and feelings of personal mastery (McClelland, 1985). Theories of the underlying processes of achievement motivation range from the uni-dimensional, in which individuals are characterized as being at "high" or "low" ends of a motivational continuum (McClelland, 1988), to the multi-dimensional, in which assessments of motivation are based upon a combination of the perceived likelihood of achieving certain outcomes and the value placed on these outcomes (Graham & Weiner, 1996; Taylor & Graham, 2007).

Achievement Goal Theory states that motivational styles are products of individuals' achievement-related goals (Dweck & Leggett, 1988), and orientations toward tasks and challenges (Elliot & Church, 1997). Wilkins and Kuperminc (*in press*) found that mastery-avoidance motivation (when students are motivated to master skills, but avoid challenges) was the only form of motivation linked to Latino youths' negative academic outcomes, whereas the majority of the literature on goal-centered motivation among non-Latino groups indicates that performance-avoidance motivation (when students are motivated to demonstrate their abilities and avoid challenges) is the form of motivation linked to the most detrimental school outcomes (Elliot & Church, 1997; Elliot & Harackiewicz, 1997; Elliot & McGregor, 2001; Middleton & Midgley, 1997). These findings suggest that goal-centered concepts of motivation operate differently for Latino youth than for their peers from other ethnic and cultural backgrounds.

Self-Determination Theory, as proposed by Deci, Vallerand, Pelletier, and Ryan (1992), describes motivational processes as the "energization of behavior" (p. 326) and are influenced by effectance in striving for three basic human needs: Competence (the ability to accomplish tasks), autonomy (the ability to self-initiate and self-regulate behavior), and relatedness (development of secure and satisfying social connections). Deci and colleagues explain that when individuals engage in behavior that fulfills these needs, they are motivated *intrinsically*, or with a full sense of volition and self-determination, without the influence of reward or punishment. When behavior does *not* fulfill the needs of self-determination, individuals are often motivated *extrinsically*, or for the sake of an external reward or punishment, although the degree to which such extrinsic motivation is *internalized*, or integrated into the individuals' own value system, may vary. For example, a student may be extrinsically motivated to be a good student because he or she: 1) wants to avoid punishment from teachers/parents (*external regulation*), 2) wants to avoid feeling guilty for not being a

good student (*interjected regulation*), 3) feels it is important to be a good student in order to get a good job (*identified regulation*), or 4) feels that being a good student is part of his or her identity and is consistent with this or her values (*integrated regulation*).

Studies have linked both intrinsic and integrated extrinsic motivation to positive academic outcomes (Connell & Wellborn, 1991; Gottfried, 1990; Vallerand, Blais, Briere, & Pelletier, 1989), and cross-cultural research suggests that the processes of self-determination motivation occur in both individualistic and collectivistic cultures (Chirkov, Ryan, Kim, & Kaplan, 2003; Iyengar & Lepper, 1999; Lynch, La Guardia, & Ryan, 2005; Yamauchi & Tanaka, 1998). According to findings from this research, in collectivist cultures, where a primary emphasis is placed on the group over oneself, individuals often act autonomously (by their own will and desire) for the good of the group. Thus, Ryan and Deci (2006) explain that a self-determination model of achievement motivation applies to individuals from collectivist cultures (e.g., Latinos), since collectivist goals may be incorporated into self-determination processes and expressed through intrinsic and/or internalized extrinsic forms of achievement motivation. It is not clear, however, how processes of self-determination and motivation may operate uniquely among immigrant populations, especially immigrant youth who often identify both with the cultures of their family's country of origin and the US. It is also unclear whether nutriments of motivation (competence, autonomy, and relatedness) contribute to motivation in a linear fashion, or if they are more iterative in nature. For example, it is unclear whether feelings of competence precede motivation only, or if students' perceptions of their competence are also an outcome of motivational processes.

Toward a Culturally Based Achievement Motivation Theory for Immigrant Latino Youth. While the aforementioned constructs of achievement motivation are helpful in thinking about the different mechanisms by which youth may be motivated to achieve in school, none of these constructs directly addresses the role that cultural values and

expectations may play in the motivational processes of Latino youth from immigrant families. For example, while the goal-orientation construct of achievement motivation is helpful for understanding how goals and orientations towards achievement play important roles in motivational processes, this perspective does not take into account values typical of Latino cultures such as *respeto (*respect for authority) which may influence Latino youths' willingness to approach/avoid challenges teachers offer them, and *allocentrism* (focus on group well-being and interdependence), which may influence the goals Latino youth are motivated to achieve (La Roche & Shriberg, 2004). Also, while Ryan and Deci (2006) explain that self-determination processes of motivation occur within collectivist cultural groups, they do not examine the ways in which these processes operate among immigrant youth, who often identify with both the culture of their family's country of origin, and the US. More specifically, research has yet to examine how factors related specifically to culture and immigration influence Latino youths' motivation to achieve along the intrinsic-extrinsic continuum.

Affiliative Motivation. As mentioned previously, we believe it is best to conceptualize achievement motivation from a cultural ecological-transactional perspective, where the transaction between youths' cultural values and their motivation to do well in school is considered. In other words, Latino youth (and all other youth) perceive the world through the "lens" of their culture, and thus, Latino youths' motivational processes are inextricably intertwined with the beliefs, values, and practices of their culture. The research of Suárez-Orozco and Suárez-Orozco (1995) confirms the idea that cultural values influence the ways that Latino adolescents are motivated to achieve in school. These authors studied a multi-ethnic sample of youth and found that Mexican and Mexican-American immigrant adolescents demonstrated high levels of what the authors termed *affiliative* achievement motivation, characterized by achievement motives focused on collectivist, group-oriented

goals. Conversely, they found that White American and US-born Mexican-American adolescents were motivated more by values relating to independence and personal gain, both characteristics associated with more "traditional" constructs of achievement motivation developed in and for members of individualistic societies (i.e. the US). These findings lend support to the idea that cultural variables directly influence processes of achievement motivation among Latino youth, especially among those who are immigrants, and lend support to research that indicates that youth from collectivist cultures are likely to be motivated to achieve by integrated extrinsic goals focused on interdependence (i.e. Iyengar & Lepper, 1999).

Future Orientation. Further lending support to this cultural ecological-transactional model of achievement motivation, the literature suggests that factors linked to the immigration process may also directly influence Latino youths' motivation to achieve in school. Ogbu (1987) explains that immigrant minority youth are often more optimistic about the future than their White American and non-immigrant minority (i.e. African American, Native American) peers, and typically assume that hardships such as language barriers, discrimination, and poverty are only temporary. In addition, Suárez-Orozco (1987) explains that many immigrants hold a "dual frame of reference," in which present circumstances in the US are perceived within the context of honoring the sacrifices made during the immigration process, and by comparing opportunities in the US to the often bleak prospects of many immigrants' countries of origin. These perspectives create a sense of optimism toward the future that is largely unique to immigrant groups, and, following the cultural ecological-transactional perspective, directly influence processes of motivation (Ogbu, 1987; Suárez-Orozco, 1987; Suárez-Orozco, 1991).

Processes of imagining future possibilities, establishing goals for the future, making plans to help achieve goals, and evaluating the feasibility of achieving goals, echoes the

aforementioned experiences of many Latino immigrants, and has been labeled in the literature as *future orientation* (Lewin, 1997; Nuttin, Lorion, & Dumas, 1984; Trommsdorff, Lamm, & Schmidt, 1979). Future orientation is also linked closely to the concept of *possible selves*, or the conception of one's self in the future (Markus & Nurius, 1986). Research suggests a strong link between future orientated perspectives (i.e. future orientation and possible selves) and motivational processes (Lens, Simons, & Dewitte, 2001; Manderlink & Harackiewicz, 1984; Nurmi, 1991; Nuttin, et al., 1984). Nurmi (1991), for example, suggests that future-orientation is inextricably linked to motivational processes. He explains that individuals form goals by comparing their motives and values to their expectations for the future. Studies have shown evidence to support this idea, indicating that future orientation is linked to motivational process such as task engagement and persistence (Lens, Simons, & Dewitte, 2001) and intrinsic motivation (Manderlink & Harackiewicz, 1984).

Research also suggests that future orientated perspectives may be linked to positive educational outcomes (Brown & Jones, 2004; Hock, Deshler, & Schumaker, 2006). Brown and Jones (2004) studied African American youth and found that future orientation was linked to positive feelings towards education, which in turn led to positive academic outcomes. Similarly, Hock and colleagues (2006) explain that students who engage in possible selves-focused curricula earn better grades, are more likely to stay in school, and are more likely to graduate from school than their peers who do not engage in possible selves curricula. Conversely, Evans and Anderson (1973) found that present-orientation (focus on immediate goals and rewards) was linked to negative academic outcomes among Mexican-American middle schoolers. These findings suggest that temporal orientation plays an important role in Latino youths' motivational and achievement processes, and that future-orientation is linked to more positive academic outcomes then present-oriented motivation.

Research also indicates that culture may play an important role in the formation and

meaning of youths' possible selves (Erikson, 2007; Yowell, 2000). Erikson (2007) explains that culture influences social norms and youths' values and perspectives on their role in society, which in turn influences the ways they perceive themselves in the future. Yowell (2000) found that *affiliative goals* (Suárez-Orozco & Suárez-Orozco, 1995), which are linked to cultural values such as *respeto* (respect for elders and authority figures) influenced Latino youths' priorities and goals for the future. More specifically, Yowell found that the majority of Latino students interviewed considered the ability to care and provide for their parents in the future as the primary rationale for striving toward educational and occupational attainment. Yowell explains that these culturally determined, family-oriented goals may be of particular importance among *immigrant* Latino adolescents, since these youth are often more knowledgeable about US culture than their parents and elders, and thus are often relied upon to provide their family members with cultural knowledge and expertise. These findings suggest that Latino youth may be *extrinsically* motivated to achieve, but in ways that are integrated and self-determined. It is not known, however, whether this integrated extrinsic motivation is linked to higher academic achievement among immigrant Latino youth when motivation is focused on the *future* specifically.

The current study presented a cultural ecological-transaction perspective of achievement motivation for Latino youth from immigrant families by conceptualizing motivation as a culturally-based phenomenon in which achievement goals transact with, and are influenced by cultural values and are understood within the context of immigration. More specifically, achievement motivation was understood to include both temporal orientation (future vs. present) and affiliative goals perspectives. In support of this perspective, Kuperminc, Darnell, & Jurkovic (2004) found through exploratory factor analysis that temporal orientation (focus on the future vs. present) played an important role in Latino

youths' motivation, and that affiliative goals were present in both future and present-oriented motivation.

Relational Processes- Family Context

As asserted by the cultural ecological-transactional perspective, it is important to examine the ways in which cultural values influence not only the construct of achievement motivation, but also relational processes that are tied to motivational and achievement outcomes. This perspective is also consistent with self-determination theory, in which relatedness is considered to be a key antecedent of motivation.

Familism. Familism (sense of pride, belonging, and obligation to the members of the nuclear and extended family), is a relational phenomenon that is based on allocentric values and is central to many Latino cultures (Marin & Marin, 1991; Santiago-Rivera, 2003). Research indicates that familism is relatively stable across generations (Sabogal, Marín, Otero-Sabogal, Marín, Perez-Stable, 1987; Rueschenberg & Buriel, 1989), country of origin (Fuligni, Tseng, & Lam, 1999; Phinney, Ong, & Madden, 2000) and is linked to positive psychosocial and academic outcomes among Latino youth (Esparza & Sánchez, 2008, Frauenglass, Routh, Pantin, & Mason, 1997; La Roche & Shriberg, 2004; Romero & Ruiz, 2007).

Suárez-Orozco and Suárez-Orozco (1995) explain that youths' sense of independence has often been considered essential in achievement motivation (McClelland, Atkinson, Clark, & Lowell, 1953), and that the importance of *interdependence*, especially among Latino families, has often been overlooked and even considered a detriment to achievement processes (Carter & Segura, 1979; Heller, 1966). They argue, however, that many studies that have examined the role of familism in Latino youths' achievement motivation processes fail to take into account other confounding factors that may influence Latino youths' motivation to succeed in school, such as immigration experiences and minority status. As such, they

studied four groups of youth: Mexican adolescents; Mexican-American immigrant adolescents; US-born Mexican-American adolescents; and White American adolescents, in order to ascertain how familism influences Latino youths' motivational processes *beyond* other confounding factors such as immigration experiences and minority status. Findings indicated that the Mexican-born adolescents (those living in Mexico and those who had immigrated to the US) were strongly motivated to achieve in school, and focused on achieving success in school in order to give back to the family. Their White and US-born Latino peers, however, were more ambivalent about achieving success in school, and were motivated to achieve in order to gain *independence* from the family. These findings indicate that Latino adolescents *are* motivated to achieve in school and that familism serves an important, positive role in motivational processes.

Parent Involvement. Parent involvement is another family-based, relational factor that has been linked to academic outcomes among both Latino and non-Latino youth (Hoover-Dempsey & Sandler, 1994; Ibañez, Kuperminc, Jurkovic, & Perilla, 2004; Keith, Reimers, Fehrmann, Pottebaum, & Aubey, 1986; Kuperminc, et al., 2008; Reynolds, 1989). Deci and colleagues (1992) suggest that parental involvement may contribute to students' sense of *relatedness* to parents and teachers and therefore bolster processes of self-determination and motivation. Hardaway and Fuligni (2006) also suggest that parental involvement may be of particular importance among Latino youth, since such a high value and emphasis is placed on the family in many Latino cultures, and among immigrant families in particular.

The literature on parental involvement distinguishes between *in-school* involvement, where parents are physically present at their children's school (i.e. volunteering in the classroom, attending parent-teacher conferences, etc.), and *home-based* involvement, where parents are involved in their children's education through activities outside of school (i.e. helping with homework, talking about school issues, helping select courses, etc.; Pomerantz

et al., 2007). Kuperminc, et al. (2008) found that parent involvement (a composite variable assessing both in-school and home-based involvement) was linked to academic outcomes among Latino high school students, but not among Latino middle school students. The authors suggest that a lack of understanding between teachers and Latino parents on the nature of parental involvement may decrease the impact of parental involvement on youths' academic outcomes.

La Roche & Shriberg (2004) also report a disconnect between teachers and Latino parents on their views of parental involvement. More specifically, the authors state that teachers often report Latino parents are uninvolved in their children's education due to parents' low levels of in-school involvement. This low in-school involvement often reflects a range of barriers that Latino parents face including limited English proficiency, lack of knowledge about school systems and policies, long and inflexible work hours, lack of transportation, and culturally-based beliefs that parents should not "interfere" with teachers' authority in school (Crozier, 1999; National Center for Education Statistics, 2006; Pullman, 2006; Suárez-Orozco & Suárez-Orozco, 2001b). Research indicates, however, that parental involvement functions differently among different cultural groups, and that while Latino parents demonstrate relatively low levels of in-school involvement, they are highly involved with their children's education at home (e.g. checking homework, helping youth select classes) and greatly value their children's education (Eccles & Harold, 1996). This home-based involvement is rarely observed by school officials and thus largely goes unrecognized (La Roche & Shriberg, 2004), despite the fact that a number of studies have shown that parental involvement at *home* may be more strongly linked to positive academic outcomes than parents' involvement at school (Izzo, Weissberg, Kasprow, & Fendrich, 1999; Sui-Chu, & Willms, 1996).

In accordance with the cultural ecological-transactional perspective, this study sought to better understand motivation and achievement among Latino youth by examining the transaction between culturally-relevant relational processes (familism and parental involvement), and youths' motivation to succeed in school.

Perceived School Competence

Most studies of motivation focus on its association with grades, GPA, and other academic outcomes. While these studies are helpful in determining overall links between motivation and *eventual* academic achievement, they do not offer insight into the nuanced processes linking motivation with more *proximal* indicators of achievement. In this study, adolescents' own beliefs about their school competence[1] were considered. This proximal indicator of achievement was chosen for two reasons: 1) Students' perception of their school competence has been linked to long-term academic outcomes, and 2) Perceived school competence provides a more detailed understanding of processes linking youths' motivation to the eventual academic outcomes that impact their education and life chances.

Whereas self-determination theory considers competence an antecedent of motivation (Deci, et al., 1992), research suggests students' perceived school competence is also an *outcome* of motivation, and is linked to other markers of academic achievement such as grades and standardized test scores (Valentine, DuBois, & Cooper, 2004).

It is hoped that by having sought to understand the links between motivation, and perceived school competence, this study may illuminate ways to bolster the achievement processes and long term academic outcomes of Latino youth, such as GPA, high stakes tests, graduation, and pursuit of higher education.

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[1] For brevity's sake, we refer to this to concept as *perceived school competence* in this paper.

The Present Study

This short-term longitudinal study aimed to better understand the motivational and achievement processes of Latino youth within the context of their cultures and the immigrant experience. More specifically, this study addressed three main questions. First, how are relational variables (familism & parent involvement) associated with Latino youths' motivational processes? Second, how is achievement motivation related to Latino youths' perceived school competence? And finally, does youths' achievement motivation mediate the association between relational variables and their perceived school competence?

It was expected that temporal orientation (focus on the future vs. present) would play an important role in Latino youths' motivation, and that affiliative goals would be present in both future and present-oriented motivation. It was also predicted that future-oriented motivation at Year 1 would be more strongly related to positive perceived school competence at Year 2 than present-oriented motivation. Finally, it was expected that both future and present-oriented achievement motivation would mediate the association between relational factors (familism and parent involvement) and youths' perception of school competence. More specifically, it was predicted that higher levels of familism and parent involvement at Year 1 would be associated with higher levels of Year 2 future-oriented achievement motivation, and to a lesser extent Year 2 present-oriented achievement motivation, which in turn would be linked to higher perceived school competence at Year 2.

METHOD

Participants

Participants were 199 Latino adolescents ages 12-14 from the seventh and eighth grades of a public middle school in Atlanta, Georgia. The sample consisted of 110 females (56%) and 84 males (43%). One hundred two (52%) of the participants were seventh graders and 94 were eighth graders (48%). One hundred and fifty-six (80%) of the adolescents in the

sample were immigrants who were born outside of the United States and 40 (20%) were born in the US. Of those participants who were born in other countries, 37 (19%) immigrated to the US when they were less than five years old, 69 (35%) immigrated between the ages of five and 11, and 53 (27%) were 12 years or older than when they immigrated to the US.

Procedure

The middle school students who participated in this study were recruited by researchers who visited classrooms and the school cafeteria. The study was explained to students by the researchers in both English and Spanish and students were invited to take part in the study if they identified themselves as Latino/a or Hispanic. Students were told that they could participate regardless of whether they spoke Spanish or were born in the US. Parent consent forms were written in both Spanish and English. As an incentive for their participation, students were offered a free movie ticket for completing the survey.

At both Year 1 and Year 2 questionnaires were administered by researchers in small groups of 10-15 students, grouped by language preference. Approximately half of the sessions were administered in Spanish by native Spanish speaking researchers. The remainder were administered in English. Researchers introduced each questionnaire to the students and read each item aloud to aid reading comprehension and to control for reading ability. Questionnaires included both English and Spanish versions of each item side by side. Spanish translations of all items were created using a process of initial translation, back-translation, and de-centering (Barona & Barona, 2000) by a bilingual group that included persons from different Latin American countries, including Mexico, to ensure that the language used would be understood by all students, the majority of whom were of Mexican origin. The student questionnaire assessed adolescents' perceptions and levels of functioning in a variety of domains. Data for this study were gathered from self-report surveys assessing achievement motivation, familism, parent involvement, and perception of school competence.

Demographic information such as age of immigration, gender, and grade level was also collected through self-report.

Measures

Demographics. Information on youths' grade level, gender, immigration age, and country of origin was collected and included in analyses for the present study. Immigration age was measured by one, two-part question that asked "Were you born in the United States?" If youth answered "no," the second part of the question asked "How old were you when you moved to the United States?" and youth were given three answers to choose from ("younger than 5 years old"; "5-11 years old"; and "12 years old or older"). For this study, immigration age was recoded into "US-reared" (US-born to younger than 5 years old; *N*= 77) and "Recent immigrants" (5 to 12 years or older; *N*= 122). It was reasoned that US-reared youth differed from recent immigrants in that all of their formal education was likely received in the US. Country of origin was measured by a single, open-ended question that asked "Where were you born?" and provided space for youth to fill in the name of the city, state, and country they were born in. The majority of participants in this study were of Mexican origin (71%), and the remaining 29% were split between 13 other countries of origin. Since no countries of origin (besides Mexico) had a substantial proportion of participants, the country of origin variable was recoded into "Mexican" and "Non-Mexican."

Achievement Motivation. The Reasons for Achievement Scale was created for this study with 14 items that tap into a range of reasons that adolescents may be motivated to do well in school. The scale consists of items from the Intrinsic Motivation Inventory (Deci, Eghrari, Patrick, & Leone, 1994), the Revised Scale of Intrinsic Versus Extrinsic Orientation in the Classroom (Harter, Rumbaugh-Whitesell, & Kowalski, 1992), and 4 items based on focus groups with Latino youth and Suárez-Orozco & Suárez Orozco's (1995) work on affiliative achievement motivation. Kuperminc, Darnell, & Jurkovic (2004) conducted an

exploratory factor analyses with these items and found that they measure two forms of achievement motivation- future-oriented motivation (i.e. "I want to be a good student because I want my family to live better in the future"; Cronbach's alpha= .86), and present-oriented motivation (i.e. "I want to be a good student to make my parents happy"; Cronbach's alpha= .81).

Familism. The Familism Scale (Cuellar et al., 1995) assesses adolescents' perceptions of the importance of family interdependence and loyalty, and the degree to which adults should be respected and obeyed. Each of the 11 items were rated on a four-point Likert-type scale ranging from 1 (*Not at all True*) to 4 (*Very True*). One item pertaining to parental involvement in school was dropped from the original measure because of overlap with other instruments used in this study. An example of an item assessing adolescents' perception of familism is, "Relatives are more important than friends" (Cronbach's alpha= .60)

Parent Involvement. The Parental Involvement in Schooling scale (Steinberg et al., 1992) assesses the degree to which parents assist their child with homework, attend extracurricular activities, and help with class selection. The scale consists of 5 items on a 4-point Likert type scale ranging from 1 (*Not at all True*) to 4 (*Very True*). An example of an item from this scale is, "Adults in my family know how I am doing in my classes." Based on feedback from pre-testing the measure, one item was added to the original 5-item measure that read, "I talk with adults in my family about problems I am having in school" (Cronbach's alpha= .63).

Perceived School Competence. Students' perceived school competence was assessed with a 5-item scale adapted from Harter's (1988) Self Perception Profile for Adolescents, which measures students' perceptions of their scholastic abilities. Items on this scale include, "I feel I am just as smart as others my age," and, "I do very well at my class work." The original instrument presents two statements side by side, one positive and one negative.

Participants are asked to select one of the statements as more true for them and rate whether the statement is ‘‘sort of true’’ or “really true.’’ This format proved difficult to administer during pre-testing. Consequently, the items were altered to a response format with a 4-point Likert scale ranging from 1 (*Not at all True*) to 4 (*Very True*; Cronbach’s alpha= .62)

Plan of Analysis

Data were screened for missing values, outliers, and normal distributions. Preliminary analyses rendered descriptive statistics and bivariate correlations for all variables.

Major analyses were conducted by testing two alternative models using structural equation modeling and LISREL 8.0. The first model focused on testing the associations of relational variables (familism and parent involvement) to subsequent future-oriented and present-oriented achievement motivation, and the link between both these forms of motivation and perceived school competence. The second model provided a more stringent test, examining the role of relational variables in explaining 1-year changes in future and present-oriented motivation, and the contribution of both these forms of motivation to school competence. In this model, Year 2 motivation was examined controlling for Year 1 motivation. Thus, associations of relational variables with Year 2 motivation could be interpreted as representing prediction of change in motivation over time. Research supports the use of this method to measure change, and suggests that residualized change techniques are as robust as other techniques for measuring change, such as growth modeling (Roberts & Chapman, 2000).

Single-indicator latent variables were created from all observed variables in both models in order to better estimate measurement error (Kline, 2005). These single-indicator latent variables were created by fixing the paths between each observed variable and its corresponding latent variable to one, and fixing the error variances of each observed variable according to its reliability [$(1-\alpha)$ * variance; Kelloway, 1998]. Covariates gender, grade,

immigration age, and Mexican-origin were also included in both models, with paths to familism, and parent involvement.

There was a 29% attrition rate from Year 1 to Year 2. While this rate is relatively low considering the highly transient population in this study (US General Accounting Office, 1994), the amount of missing data in Year 2 was too great to be ignored. Full Information Maximum Likelihood (FIML) was used in all analyses in lieu of estimating missing data at Year 2. This method is recommended as a robust strategy in data sets with moderate to large amounts of missing data (Widaman, 2006). To assess model fit, Hu & Bentler (1999) recommend using combinations of fit statistics, rather than relying on just one statistic, and suggest using the Comparative Fit Index (CFI) with a cutoff value of .95, and the Standardized Root Mean Square Residual (SRMR) with a cutoff value of .09 as fit statistics in samples of $N \leq 250$. Lisrel 8.0 does not provide the SRMR statistic in analyses using FIML, so this combination of fit statistics could not be used to assess model fit. Instead, the CFI and RMSEA were used with cutoff values of .95 and .06, respectively. While Hu & Bentler do not suggest specific cutoff values for this combination of fit statistics, they do recommend cutoff values of .95 for the CFI and .06 for the RMSEA when these fit statistics are used to assess model fit individually (Hu & Bentler, 1999). LISREL provides estimates of both direct and indirect effects of an independent variable on one or more dependent variables. These indirect effects estimates, calculated using the Sobel test, were used to determine whether motivation mediated the association between relational variables and perceived school competence. McKinnon and colleagues (2002) suggest that the Sobel test can be underpowered and therefore sometimes overly conservative in its estimates of indirect effects. As such, Mallincrodt and colleagues (2006) suggest using bootstrapping (which cannot be done using LISREL), or the test of joint significance to measure indirect effects. The test of joint significance measures indirect effects by determining the significance of the

paths from the predictor to the mediator (relational variables to motivation variables), and the mediator to the outcome variable (motivation variables to perceived school competence). If these paths are significant, then the indirect effect of the predictor on the outcome variable, via the mediator, is assumed to be significant as well (MacKinnon, Lockwood, Hoffman, West, & Sheets, 1998). Therefore, in this study both the Sobel test and the test of joint significance were used to determine the indirect effects of relational variables on perceived school competence via motivation. Collins, Graham, and Flaherty (1998) assert that given an adequate theoretical rationale, a significant indirect effect is sufficient for establishing mediation.

RESULTS

Preliminary Analyses

Sample demographics and descriptive statistics are presented in Tables 1 and 2. Table 3 shows bivariate correlations between all variables included in the main analyses (correlations reflect raw values, uncorrected for measurement error). As expected, grade level, gender, immigration age, and Mexican-origin were all significantly correlated with variables of interest, and were thus included in all analyses. Gender was correlated with familism (with boys scoring higher), and future-oriented achievement motivation at both Years 1 and 2 (with girls scoring higher). Grade was also correlated with familism, as well as Year 1 present-oriented achievement motivation, with seventh graders scoring higher than eighth graders on both of these variables. Immigration age was significantly correlated with familism, and Year 1 future-oriented achievement motivation, present-oriented achievement motivation, and perceived school competence. Recent immigrants scored higher than their US-reared peers on familism, Year 1 future-oriented achievement motivation, and present-oriented achievement motivation, while US-reared youth scored higher on Year 1 perceived school competence than recent immigrants. Mexican origin was correlated with perceived

school competence at both Years 1 and 2, with non-Mexican youth scoring higher than their Mexican-origin peers.

All Year 1 variables were positively correlated with their Year 2 counterparts (*r*s ranged from .25 to .57), indicating some stability over time. All the correlations between achievement motivation variables were significant and positive (*r*s ranged from .23 to .70).

Year 2 perceived school competence was weakly, positively correlated with Year 2 future-oriented motivation, and weakly, negatively correlated with familism. At Year 1, perceived school competence was moderately, positively correlated with parent involvement, but not with any of the motivation variables. This suggests that in the present study, school competence did not act as a precursor to motivation. At Year 2, future-oriented motivation was weakly, positively correlated with parent involvement, and present-oriented motivation was moderately, positively correlated with familism and parent involvement. At Year 1, both future and present-oriented achievement motivation were moderately, positively correlated with familism and parent involvement. These correlations suggest links between family (relational) and motivational processes.

Mediating Effects of Achievement Motivation

Figure 1 shows the simple mediation model used to test whether future-oriented and present-oriented achievement motivation mediated the association between relational variables and perceived school competence. This model fit the data well [X^2 (14, N= 199)= 17.730, p= .220; CFI= .976; RMSEA= .037 (90% CI= .000; .083)]. There were significant direct effects between relational variables and motivation variables (see Table 4). Parent involvement significantly predicted Year 2 future-oriented and present-oriented achievement motivation, and familism significantly predicted Year 2 present-oriented achievement motivation. There were also significant direct effects between Year 2 motivation variables (mediators) and perceived school competence at Year 2. There was a significant, positive

Table 1. Sample Demographics Frequencies

	N	%
Gender		
Female	110	56
Male	84	43
Grade		
Seventh	102	52
Eighth	94	48
Immigration Age		
US-Reared	77	39
Recent Immigrant	119	60
Mexican Origin		
Mexican	141	71
Non-Mexican	55	28

Table 2. Means and Reliability for Independent and Dependent Variables

	Year 1			Year 2		
	Mean	SD	Alpha	Mean	SD	Alpha
Familism	3.09	.43	.61	na	na	na
Parent Involvement	2.76	.65	.63	na	na	na
Present Achievement Motivation	2.99	.73	.81	2.87	.71	.79
Future Achievement Motivation	3.62	.51	.86	3.51	.59	.88
School Competence	2.73	.62	.61	2.89	.61	.68

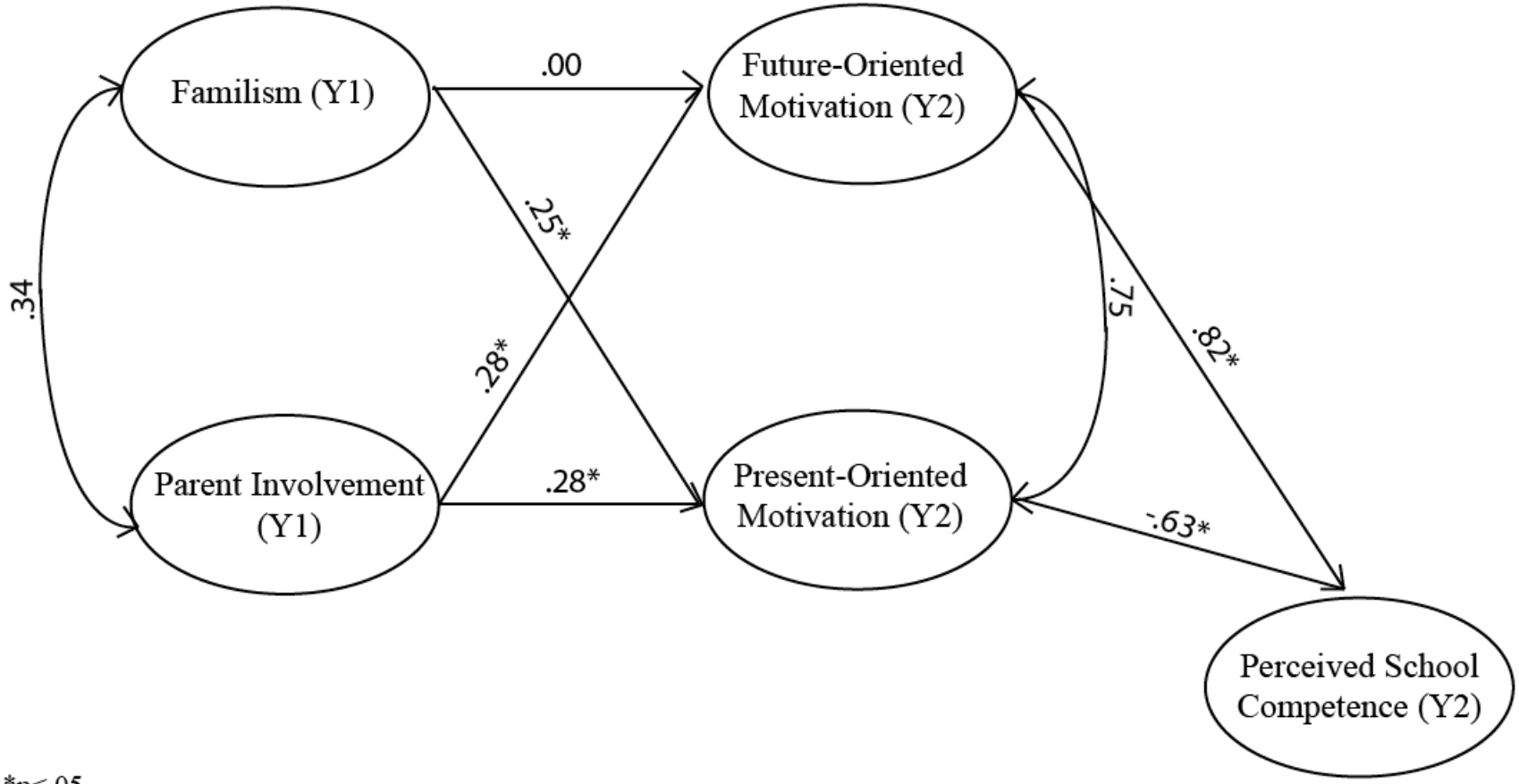
Table 3. Correlations Between Year 1 and Year 2 Variables

		1	2	3	4	5	6	7	8	9	10	11	12
1	Familism Y1	1											
2	Parent Involvement Y1	.209**	1										
3	Future Motivation Y1	.291**	.245**	1									
4	Future Motivation Y2	.112	.181*	.253**	1								
5	Present Motivation Y1	.408**	.268**	.581**	.264**	1							
6	Present Motivation Y2	.232**	.229**	.233**	.697**	.398**	1						
7	School Competence Y1	-.063	.249**	.107	.156	.111	.106	1					
8	School Competence Y2	-.181*	.037	.001	.198*	-.106	.080	.574**	1				
9	Gender	-.201**	-.053	.156*	.171*	-.011	.085	-.027	-.039	1			
10	Grade	-.183*	.023	-.113	.036	-.154*	-.042	0	.068	-.027	1		
11	Immigration Age	.217**	.004	.290**	-.080	.263**	.026	-.179*	-.124	-.022	-.095	1	
12	Mexican Origin	-.085	.062	-.050	-.013	.005	.002	.196**	.174*	.046	-.031	-.318**	1

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

association between future-oriented achievement motivation and perceived school competence, and a significant and *negative* association between present-oriented achievement motivation and perceived school competence. These findings indicate that at Year 2, while future-oriented motivation was associated with higher levels of perceived school competence, present-oriented motivation was associated with *lower* levels of perceived school competence.

According to Sobel test findings, there were no overall indirect effects between relational variables (familism and parent involvement) and Year 2 perceived school competence (see Table 4) when both future-oriented and present-oriented motivation were considered in the same model. It was suspected that a suppression effect between motivation variables and perceived school competence may have "masked" the indirect association between parent involvement and perceived school competence. Separate Sobel tests were run to determine if parent involvement had a significant indirect effect on perceived school competence when the two forms of achievement motivation were examined separately as mediators. Results indicated that the indirect effect of parent involvement on perceived school competence through future-oriented motivation approached significance (p=.07), when examined separately from present-oriented motivation. Results from the second Sobel test indicated that parent involvement did not have a significant indirect effect on parent involvement through present-oriented motivation. Also, when using the test of joint significance to assess indirect effects between relational variables and perceived school competence, it appears that parent involvement had a significant indirect effect on perceived school competence via both future and present oriented motivation, and familism had a significant effect on perceived school competence via present oriented motivation. As shown in Table 5, there were no indirect effects between covariates and Year 2 variables according to both the Sobel test and test of joint significance.



*p<.05

NOTE: Grade level, gender, immigration age, and Mexican-Origin were all included as covariates in the model. Intercorrelations between these variables were freely estimated and each had estimated paths leading to both independent variables. All variables are single-indicator latent variables, created by fixing paths from observed variables and their corresponding latent variables to 1, and fixing the error variance of the observed variables to their reliabilities [(1-α) * variance] (Kelloway, 1998).

Figure 1. Mediation Model with Standardized Regression Coefficients of Relational Variables Predicting Year 2 Motivation and Perceived School Competence

Table 4. Mediation Model- Main Regression Coefficients and Standard Errors

	Future-Oriented Motivation Y2	Present-Oriented Motivation Y2	Perceived School Competence Y2
Direct Effects			
Parent Involvement	.31 (.13)*	.34 (.15)*	na
Familism	.00 (.20)	.47 (.24)*	na
Future-Oriented Motivation Y2	na	na	.75 (.27)*
Present-Oriented Motivation Y2	na	na	-.50 (.24)*
Indirect Effects			
Parent Involvement	na	na	.06 (.07)
Familism	na	na	-.24 (.14)

*p<.05

Table 5. Mediation Model- Covariate Regression Coefficients and Standard Errors

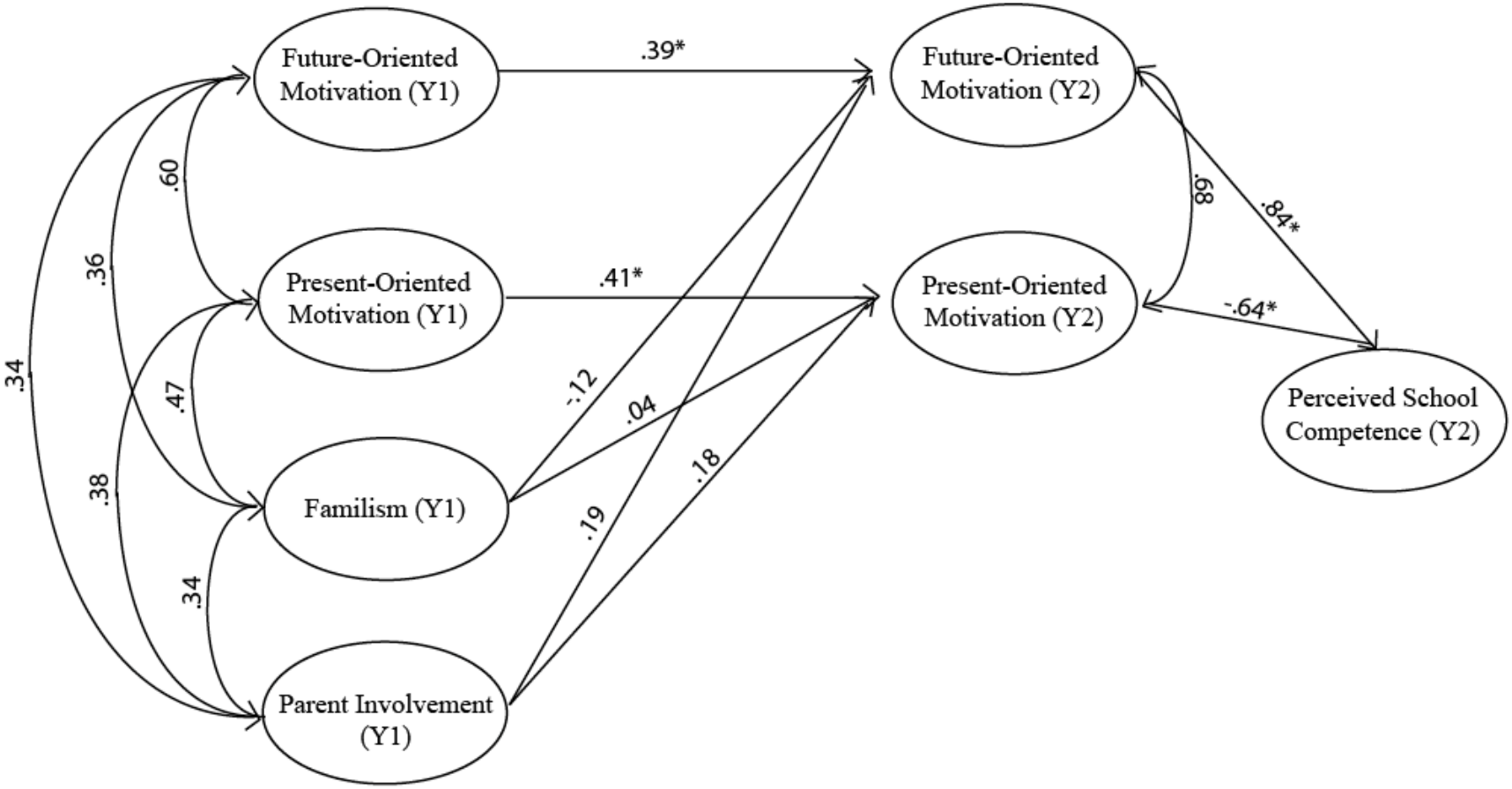
	Direct Effects		Indirect Effects		
	Parent Involvement	Familism	Perceived School Competence Y2	Future-Oriented Motivation Y2	Present-Oriented Motivation Y2
Grade	.03 (.09)	-.15 (.06)*	.04 (.03)	.01 (.04)	-.06 (.06)
Gender	-.04 (.09)	-.17 (.06)*	.04 (.03)	-.01 (.04)	-.09 (.06)
Mexican Origin	.09 (.10)	-.02 (.06)	.01 (.02)	.03 (.03)	.02 (.05)
Immigration Age	.03 (.10)	.17 (.06)*	-.04 (.03)	.01 (.04)	.09 (.06)

*p<.05

Changes in Achievement Motivation

Figure 2 shows a more stringent mediation model used to test whether relational variables predicted *changes* in future-oriented and present-oriented achievement motivation. This model also fit the data well [X^2 (18, N= 199)= 19.280, p= .370; CFI= .996; RMSEA= .019 (90% CI= .000; .068)]. As shown in Table 6, Year 1 future-oriented and present-oriented achievement motivation both significantly predicted their Year 2 counterparts. With Year 1 motivation variables included in the model, neither of the relational variables (familism and parent involvement) were associated with Year 2 motivation variables, indicating that familism and parent involvement did not significantly predict *change* in motivation over time. Similar to findings in the simple mediation model, Year 2 motivation variables *were* significantly associated with perceived school competence at Year 2, although in this model, these findings indicate significant associations between Year 2 motivation and Year 2 perceived school competence while taking into account Year 1 motivation. Year 2 future-oriented motivation was *positively* associated with Year 2 perceived school competence, and Year 2 present-oriented motivation was *negatively* associated with Year 2 perceived school competence. Consistent with findings in the previous mediation model, these findings suggest that future-oriented motivation at Year 2 was linked to higher Year 2 perceived school competence, while present-oriented motivation at Year 2 was linked to *lower* Year 2 perceived school competence.

Sobel tests and the test for joint significance indicated there were no indirect effects between relational variables (familism and parent involvement) and Year 2 perceived school competence (see Table 7). In this change model, these findings indicate that Year 2 motivation did not mediate the association between relational variables and Year 2 perceived school competence, when Year 1 motivation was taken into account.



*p<.05
NOTE: Grade level, gender, immigration age, and Mexican-Origin were all included as covariates in the model. Intercorrelations between these variables were freely estimated and each had estimated paths leading to all 4 independent variables. All variables are single-indicator latent variables, created by fixing paths from observed variables and their corresponding latent variables to 1, and fixing the error variance of the observed variables to their reliabilities [(1-α) * variance] (Kelloway, 1998).

Figure 2. Change Model with Standardized Regression Coefficients of Relational Variables Predicting Changes in Motivation and Year 2 Perceived School Competence

Table 6. Change Model- Main Regression Coefficients and Standard Errors

	Future-Oriented Motivation Y2	Present-Oriented Motivation Y2	Perceived School Competence Y2
Direct Effects			
Parent Involvement	.21 (.13)	.22 (.15)	na
Familism	-.20 (.21)	.08 (.26)	na
Future-Oriented Motivation Y1	.48 (.11)*	na	na
Present-Oriented Motivation Y1	na	.39 (.11)*	na
Future-Oriented Motivation Y2	na	na	.76 (.24)*
Present-Oriented Motivation Y2	na	na	-.51 (.22)*
Indirect Effects			
Parent Involvement	na	na	.05 (.07)
Familism	na	na	-.19 (.13)
Future-Oriented Motivation Y1	na	na	.36 (.13)*
Present-Oriented Motivation Y1	na	na	-.20 (.10)*

*p<.05

Table 7. Change Model- Covariate Regression Coefficients and Standard Errors

	Direct Effects				Indirect Effects		
	Parent Involvement	Familism	Future-Oriented Motivation Y1	Present-Oriented Motivation Y1	Perceived School Competence Y2	Future-Oriented Motivation Y2	Present-Oriented Motivation Y2
Grade	.03 (.09)	-.14 (.06)*	-.08 (.07)	-.19 (.1)	.04 (.03)	.00 (.05)	-.08 (.06)
Gender	-.05 (.09)	-.17 (.06)*	.16 (.07)*	.01 (.1)	.09 (.04)*	.10 (.06)	-.02 (.07)
Mexican Origin	.09 (.1)	-.03 (.06)	.07 (.08)	.14 (.11)	.01 (.03)	.06 (.05)	.07 (.06)
Immigration Age	.02 (.1)	.17 (.06)*	.29 (.08)*	.42 (.11)*	-.01 (.04)	.11 (.06)*	.18 (.07)*

*p<.05

Grade, Gender, Immigration Age, and Mexican-Origin

Analyses indicated significant associations between covariates and Year 1 variables. In the simple mediation model, grade, gender, and immigration age were all significantly associated with familism (see Table 5). These findings indicate that seventh graders, boys, and recent immigrant youth endorsed familism significantly more than eighth graders, girls, and US-reared youth. Mexican-origin was not significantly associated with any relational or motivation variables, although preliminary analyses indicate it was correlated with perceived school competence at both Years 1 and 2 such that non-Mexican youth perceived themselves to be more competent in school than their Mexican-origin peers did.

In the change model, Sobel tests and the test for joint significance indicated that gender had a significant indirect effect on Year 2 perceived school competence, with girls scoring higher than boys. According to both tests, immigration age had a significant indirect effect on Year 2 future-oriented and present-oriented achievement motivation (see Table 7). These indirect effects indicate that more recent immigrants showed higher future and present-oriented achievement motivation at Year 2 than their US-reared peers, when taking into account Year 1 motivation.

DISCUSSION

This study examined processes of motivation and achievement among Latino youth from a cultural ecological-transactional perspective. More specifically, this study examined the transactions between individual and relational level variables (achievement motivation, familism, and parent involvement) among Latino youth, and explored how these transactions related to youths' perceptions of their competence in school, within the context of culture.

Mediation Analysis

As predicted, future-oriented achievement motivation was associated with more positive perceived school competence than present-oriented motivation. Although the cross-

sectional nature of these associations makes it difficult to draw conclusions about their direction, these findings suggest that youth who are motivated to achieve goals focused on the future (i.e. giving back to their community) also report feeling highly competent in school, while youth who are motivated by more immediate goals (i.e. making their parents happy) report feeling *less* competent in school. These very different associations between the two different forms of achievement motivation and perceived school competence suggest the presence of a suppression effect when both types of motivation are considered simultaneously. These findings are consistent with previous research linking future-orientation to positive motivation and achievement, and present-orientation with negative school outcomes among Latino youth (Evans & Anderson, 1973; Suárez-Orozco, 1991). Suárez-Orozco and Suárez-Orozco (1995) suggest that Latino youth from immigrant families typically report positive attitudes toward the future and school in general, but that this optimism may be tempered by difficulties in everyday school tasks (i.e. problems learning and understanding English as a second language). This may be one of the reasons why in this study, perceived school competence did not act as a precursor to motivation. Latino youth who experience difficulties in adjusting to school may base their motivation to do well in school from sources *other than* their perception of the school competence (such as familism and parent involvement), a phenomena that appears to be a marker of resilience among these youth. Also indicating processes of resilience, are findings suggesting that youth who focus on more distal, future-oriented goals and less on the daily challenges of school, may be more likely to base their perception of their school competence on broader, long-term accomplishments and gradual improvements over time. Conversely, youth who focus on more immediate school outcomes (such as praise from teachers) may base their perception of their school competence on the everyday “ups and downs” they experience in school, and not

on the overall, “big picture” of their achievements, and may thus be more susceptible to negative appraisals of their overall competence in school.

These findings support the assertion that Latino youth from immigrant families are motivated by both long-term, future-oriented goals and short-term, present-oriented goals, and that these different forms of motivation operate differently from one another in processes of school achievement. In other words, youth focused on achieving long-term, future-oriented goals perceive themselves as highly competent in school, whereas youth who focus on more immediate goals do not perceive themselves to be competent in school. Since research has shown that school competence is strongly linked to important academic outcomes such as grades (Valentine, DuBois, & Cooper, 2004), these findings have significant implications for improving the educational attainment of Latino youth. Schools may focus on fostering Latino youths’ goals for the future, and work to link short-term, immediate school outcomes (such as pleasing parents and teachers) with more distal, future goals (such as giving back to the family and community) in order to increase youths’ confidence in their ability to achieve in school.

While there were mixed findings on whether or not achievement motivation did acted as a mediator between relational variables (familism and parent involvement) and perceived school competence as predicted, there were significant associations between both future and present-oriented motivation, familism, parent involvement, and perceived school competence. Parent involvement predicted both Year 2 future and present-oriented motivation, indicating a significant transaction between parent involvement, a relational factor, and motivation, and individual level factor. These findings also indicate that youth who reported that their parents were highly involved with their education at Year 1 were likely to be highly motivated to achieve in school a year later, and that this motivation was focused on achieving both future-oriented goals (e.g., giving back to the community) and

more proximal outcomes (e.g., getting praise from teachers). Findings were mixed regarding the indirect path linking parent involvement and perceived school competence through motivation and it was suspected that the suppression effect mentioned previously between motivation variables and perceived school competence may have "masked" the indirect association between parent involvement and perceived school competence.

Sobel tests indicated that parent involvement did in fact have a significant indirect effect on perceived school competence via future-oriented motivation, when the two forms of achievement motivation were examined separately as mediators. These findings were consistent with the findings from the test of joint significance, which suggested that parent involvement had a significant indirect effect on perceived school competence via both future and present-oriented motivation. These findings suggest a complex association between Latino parents' involvement in their children's education and youths' feelings of competence in school. On the one hand, they indicate that parents' involvement in their children's education may in fact contribute to youth feeling competent in school, by fostering youths' future-oriented motivation. In other words, parent involvement may provide a concrete means by which Latino parents can help their children build motivation for the future by building social capital (Kuperminc et al., 2008). On the other hand, findings also indicate that Latino parents' involvement in their children's education may be promoting present-oriented motivation, which then leads to youths' feeling more negatively about their competence in school. Future research should examine the association between parent involvement and youths' social capital, and how factors other than parent involvement influence the ways that Latino youths' motivation is expressed in school. For example, the emphasis on competition in US classrooms (La Roche & Shriberg, 2004) might make it more likely that youth express their motivation to achieve in school by seeking immediate rewards rather than longer-term goals. If so, then classroom practices that emphasize collaboration and goal setting could

channel youths' motivation in a more positive direction. Also, since findings indicate that overall, parent involvement is linked to Latino youths' achievement motivation, schools may increase youths' motivation in school by creating more opportunities for parents to be involved in their children's education in meaningful, feasible, and culturally appropriate ways. For example, schools may offer activities for parents and children during the evening when parents are not working, provide translation services for families who speak English as a second language, offer more opportunities for parents to be involved with their children's school work in the home, and better recognize parents' out of school involvement and contribution to their children's education.

Familism also predicted Year 2 present-oriented motivation, indicating a significant transaction between familism and present-oriented motivation. These findings also suggest that students who reported having a strong connection and sense of responsibility to their families at Year 1 were also highly motivated to achieve more immediate, proximal educational outcomes (i.e. making parents happy, getting praise from teachers). It is possible that strong ties to the family may lead youth to focus on contributing to their families' more immediate needs, and this, in turn, may influence their motivational goals. Youth who are strongly connected to families with important, immediate needs (i.e. money, social support, acculturative stress) are likely to focus a great deal on the present-oriented, proximal goals related to addressing these needs, and may be "distracted" from their future-oriented goals.

While familism has been linked to positive school outcomes in past studies (e.g. Esparza & Sánchez, 2008), findings from this study suggest familism operates more complexly, fostering present but not future-oriented motivation. It may be that Latino immigrant families' values are consistent with motivation to achieve in school, but youth lack guidance on how to use their motivation to pursue long-term goals, especially in US schools where there is such a strong focus on competition and proximal goals (La Roche & Shriberg,

2004). Schools that create policies and programs that make it easier for youth to contribute to their families (i.e. offering translators for parents, so that youth do not have to translate between their parents and teachers) could provide youth with the support they need to meet the immediate needs of their families, and, in turn, enable them to pursue more future-oriented goals.

Change Analysis

While relational variables (parent involvement and familism) were unrelated to changes in motivation, results did show a significant association between Year 2 motivation and Year 2 perceived school competence while taking into account Year 1 motivation, indicating that youth who had high future-oriented motivation at Year 2, also had high perceived school competence at Year 2, and conversely, youth who had high present-oriented motivation at Year 2 had lower perceived school competence at Year 2. These divergent associations between future and present-oriented motivation and perceived school competence suggest that not only are future and present-oriented motivation inversely associated with perceived school competence, but that these divergent associations are apparent even when Year 1 motivation is taken into account. Future research should further investigate how changes in each of these forms of motivation are related to perceived school competence, and determine whether this inverse association between these two forms of motivation and perceived school competence persists over time.

These findings indicated that cultural values related to the immigrant experience may in fact influence the way that Latino youth are motivated to achieve in school. More specifically, temporal orientation *did* appear to play a significant role in Latino youths' motivation to achieve in school, and future-oriented motivation was linked to youth feeling more confident about their ability to well in school. Considering that schools in the US typically place more emphasis on present-oriented, proximal goals (i.e. grades, standardized

test scores) than future-oriented goals (La Roche & Shriberg, 2004), these findings may have substantial implications for Latino youths' success (or at least their perception of their *ability* to succeed) in school. Research indicates that school climate is linked to a number of psychosocial outcomes among Latino youth, including achievement motivation (Monzó & Rueda, 2001; Stevens, Hamman, & Olivår, 2001; Wilkins & Kuperminc, in press). School climates that foster Latino youths' future-oriented goals (i.e. providing for the family, giving back to the community) will likely increase youths' future-oriented motivation, and accordingly their perceived school competence and eventual academic outcomes. Future studies should investigate these processes of school climate, motivation, and academic achievement further.

The Role of Gender, Age, and Immigration Age

Previous research has found differences in the academic adjustment of Latino girls and boys (Suárez-Orozco & Qin-Hillard, 2004) and between Latino youth at varying stages of acculturation (Suárez-Orozco & Suárez-Orozco, 1995). While such differences were not hypothesized in the present study specifically, findings were consistent with previous research and demonstrated differences in perceived school competence by gender and immigration age, and indicated that these differences might be explained in part by mechanisms of motivation.

Gender, grade, and immigration age all appeared to be important in processes contributing to familism and motivation. Girls reported lower levels of familism than boys, which is consistent with previous research that has shown girls are typically given more responsibilities in the home than boys (Goodnow, 1988), which may cause them to feel overburdened (Kuperminc, Jurkovic, & Casey, in press). Seventh graders and recent immigrants also reported higher levels of familism than their eighth grade and US-reared peers. Research on Latino adolescents' development and acculturative processes indicate that

both autonomy and relatedness are important to youths' development, and that Latino families typically place a stronger emphasis on youths' relatedness and obligation to the family than on their autonomy (Greenfield, Keller, Fuligni, & Maynard, 2003). There are mixed findings, however, on the stability of Latino youths' sense of relatedness and obligation to the family, and some studies suggest that familism decreases as Latino youth spend more time in the US (Kagitcibasi, 2005). Lower levels of familism among eighth graders and recent immigrants in this study may be tied to developmental and acculturative processes that increase youths' need for autonomy and independence from the family.

Girls and recent immigrants also reported higher future-oriented achievement motivation at Year 1, again supporting previous research that has found that girls and immigrants tend to be more motivated to achieve in school than their male (Ibañez, et al., 2004) and US-born peers (Suárez-Orozco & Suárez-Orozco, 1995). Significant indirect associations between gender and perceived school competence also suggest that girls' greater perceived school competence can be explained, in part, by higher levels of future-oriented achievement motivation.

It is important to note that in addition to demonstrating higher levels of future-oriented achievement motivation, recent immigrants also reported higher present-oriented motivation than their US reared peers. While these findings support previous research indicating that being an immigrant is linked to positive adjustment across a wide range of psycho-social factors, including motivation to achieve in school (e.g. Suárez-Orozco & Suárez-Orozco, 1995), they also suggest a complex picture of motivational and achievement processes among immigrant Latino youth. Proximal goals are considered particularly important for "getting ahead" in the US school system (La Roche & Shriberg, 2004), yet findings from the present study link present-oriented motivation, which is focused on proximal goals, to negative perceived school competence. High levels of both future and

present-oriented motivation may lead to recent immigrant youth experiencing mixed perceptions of their school competence, and perhaps mixed academic outcomes (i.e. grades, standardized test scores, etc.) as well. These findings again point to the importance of school policies and classroom practices that promote Latino youths' future-oriented goals and foster their confidence to do well in school. Future research should examine further the differences in motivational processes between Latino youth at varying stages of acculturation, and explore the ways in which these differences link to more distal academic outcomes (i.e. grades, high school graduation, college matriculation, etc.).

Strengths and Limitations

This study used a cultural ecological-transactional perspective to explore the dynamic interplay between culture (i.e. temporal orientation, familism, affiliative motivation), and variables at multiple levels of the social ecology that influence the motivational and school adjustment processes of Latino youth. Temporal orientation (focus on the future vs. present) and affiliative, group-centered goals have been cited as important parts of the immigrant experience among Latino families and youth (Ogbu, 1987; Suárez-Orozco, 1987; Suárez-Orozco, 1991; Suárez-Orozco & Suárez-Orozco, 1995). Yet, these cultural factors are seldom considered when examining processes of motivation and achievement among Latino youth. This study incorporated temporal orientation (future vs. present-oriented motivation), and affiliative goals into the concept of achievement motivation in order to explore processes of motivation that were more congruent with the cultural experiences of Latino youth. Also in accordance with the cultural ecological-transactional perspective, this study examined the ways that relational-level variables (familism and parent involvement) interacted with individual level variables (motivation, immigration age, gender, grade level) to produce youths' perceptions of their own school competence.

This study also examined family and motivational processes among Latino adolescents from a *within groups* perspective. Rather than making cross-cultural comparisons, this within groups approach helped to provide a rich understanding of culturally-specific process of motivation and achievement and differences in these processes among Latino boys and girls, and among youth of differing levels of acculturation and national origin.

The longitudinal design of the present study enabled the examination of prospective associations between relational variables and *changes* in motivation over time. This allowed a better understanding not just how Latino adolescents are motivated to achieve, but how this motivation is linked to factors at multiple levels of the social ecology (i.e. culture, parent involvement, familism), and how motivation changes over time, While cross-sectional data provide valuable insight into the ways such factors relate to one another at one point in time, the longitudinal nature of this study facilitated a better understanding of the dynamic mechanisms that come into play between adolescents, their families, and their motivation to succeed in school. Future studies using three or more waves of data may better investigate the mediating role of motivation between relational factors and school adjustment outcomes. Studies with three or more waves of data may also more fully examine two-way transactional processes between motivation, relational variables, and perceived school competence.

Latino youth and their families come from a wide range of different countries, each with their own histories and traditions. Vega (1992) calls for more research that takes Latinos' country of origin into account when examining differences in psychosocial processes. There was little variance in the countries of origin of youth in the current study, which made it difficult to examine differences in motivational and school adjustment processes among youth from different national backgrounds. Future research should examine

these processes among more diverse samples of Latino youth from multiple different countries of origin.

This study also relied exclusively on self-report data. While self report data was most desirable for many of the variables examined in this study (i.e. perceptions of school competence), research has shown that data from multiple informants may be particularly important when examining processes of school achievement among ethnic minority youth (McKnown & Weinstein, 2001). Future studies should examine processes of the family, motivation, and achievement using multiple informants.

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APPENDIX

Study Measures

Familism

FAMS

		Not At All True	Slightly True	Somewhat True	Very True
1.	All adults should be respected. Todos los adultos deben ser respetados.	1	2	3	4
2.	More parents should teach their children to be loyal to the family. Más padres deben enseñar a sus hijos a ser leales con la familia.	1	2	3	4
3.	It is more important for a woman to learn how to take care of the house and the family than it is for her to get a college education. Es más importante para la mujer aprender a cuidar la casa y la familia que obtener una educación universitaria.	1	2	3	4
4.	The stricter the parents, the better the child. Entre mas estrictos son los padres, mejores resultan los hijos.	1	2	3	4
5.	Some equality in marriage is a good thing, but the father ought to have the main say-so in family matters. Es bueno tener algo de igualdad en el matrimonio, pero el padre debe tener la ultima palabra en los asuntos familiares.	1	2	3	4
		Nada Cierto	Ligeramente Cierto	Algo Cierto	Muy Cierto
6.	Even if a child believes that his parents are wrong, he should obey without question. Aunque el hijo ó la hija crea que sus padres están equivocados, debe obedecer sin preguntar.	1	2	3	4
7.	Relatives are more important than friends. Los parientes son más importantes que los amigos	1	2	3	4
8.	For a child the mother should be the dearest person in the world. La madre debe ser la persona más querida en el mundo para un(a) niño(a).	1	2	3	4
9.	A girl should not date a boy unless her parents approve. Una muchacha (chica) no debería salir con un muchacho al menos que los padres lo aprueben.	1	2	3	4

10.	No matter what the cost, dealing with my relatives' problems comes first (is priority). No importa lo que cueste, tratar con los problemas de mis parientes viene primero.	1	2	3	4
11.	I expect my relatives to help when I need them. Yo espero que mis parientes me ayuden cuando los necesito	1	2	3	4

Achievement Motivation

I want to be a good student….
Quiero ser un(a) bueno(a) estudiante…

		Nada Cierto	Ligeramente Cierto	Algo Cierto	Muy Cierto
5.	because it is fun. *porque es divertido.*	1	2	3	4
6.	because it is important to me. *porque es importante para mí.*	1	2	3	4
7.	so that I can set a good example for younger people. *para dar un buen ejemplo a la gente más joven que yo.*	1	2	3	4
8.	to make my parents happy. *para hacer feliz a mis padres.*	1	2	3	4
9.	because school is interesting *porque la escuela es interesante.*	1	2	3	4

ACH

		Not At All True	Slightly True	Somewhat True	Very True
10.	because I want to get ahead in life. *porque quiero superarme en la vida.*	1	2	3	4
11.	so that I can give back to my community. *para contribuir a mi comunidad.*	1	2	3	4
12.	to get praise from my teachers. *para recibir reconocimiento de los(as) maestros.*	1	2	3	4
13.	because it makes me feel good. *porque me hace sentir bien.*	1	2	3	4
14.	because I want to learn. *porque quiero aprender.*	1	2	3	4
		Nada Cierto	Ligeramente Cierto	Algo Cierto	Muy Cierto
15.	because I want my family to live better in the future. *porque quiero que mi familia viva major en el futuro*	1	2	3	4

16.	so others will think I am smart. *para que otros piensen que soy inteligente.*	1	2	3	4
17.	to show that Latinos can do it. *para demostrar que Latinos(as) pueden hacerlo.*	1	2	3	4
18.	because that is what I am supposed to do	1	2	3	4

Perceived School Competence

SAQ

		Nada Cierto	Ligeramente Cierto	Algo Cierto	Muy Cierto
7.	I feel I am just as smart as others my age. Siento que soy tan inteligente como otros(as) muchachos(as) de mi edad.	1	2	3	4
8.	I am pretty slow in finishing my schoolwork. Soy bastante lento para terminar mis trabajos escolares.	1	2	3	4
9.	I do very well at my classwork. Hago muy bien mis deberes (tareas).	1	2	3	4
10.	I have trouble figuring out the answers in school. Tengo problemas para encontrar las respuestas en la escuela.	1	2	3	4
		Not At All True	Slightly True	Somewhat True	Very True
11.	I feel that I am pretty intelligent. Creo que soy inteligente.	1	2	3	4

Parent Involvement

SAQ

		Nada Cierto	Ligeramente Cierto	Algo Cierto	Muy Cierto
12.	Adults in my family help with homework when asked. Los adultos en mi familia ayudan con las tareas cuando yo se los pido.	1	2	3	4
13.	Adults in my family attend events at my school. Los adultos en mi familia van a los eventos escolares.	1	2	3	4

14.	Adults in my family watch me in sports or other extracurricular activities. Los adultos en mi familia van a verme participar en deportes ó en otras actividades extraescolares.	1	2	3	4
15.	Adults in my family help me select my classes. Los adultos en mi familia me ayudan a escoger las clases.	1	2	3	4
		Nada Cierto	Ligeramente Cierto	Algo Cierto	Muy Cierto
16.	Adults in my family know how I am doing in my classes. Los adultos en mi familia saben cómo me va en mis clases.	1	2	3	4
17.	I talk with adults in my family about problems I am having in school. Yo hablo con los adultos en mi familia acerca de los problemas que tengo en la escuela.	1	2	3	4