THE ROLE OF PARENTAL INVOLVEMENT IN THE ACADEMIC ACHIEVEMENT OF LATINO YOUTH

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by
Lindsey E. Snyder-Hogan
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Examining Committee Members:

Frank Farley, Educational Psychology
Joseph Ducette, Educational Psychology
Erin Rotherham-Fuller, School Psychology
Catherine Fiorello, School Psychology
Kenneth Thurman, Educational Psychology

ABSTRACT

The educational plight of Latino students in the U.S. is an increasing concern given the low achievement and attainment status of this population. Although many risk factors associated with underachievement are difficult to alter, parent educational involvement has been shown to positively impact learning outcomes. In this study, parental home- and school-based involvement practices and educational aspirations were compared in a large (*n* = 6085), nationally representative sample of Latino (*n*= 1,313) and non-Latino white (*n* = 4,772) first grade students. The role of these forms of involvement in predicting student achievement in third grade was then assessed. Findings indicate that Latino parents had higher educational aspirations for their children but were less involved at home and school than non-Latino white parents. Multiple hierarchical regression analysis showed that socioeconomic status and parental aspirations, respectively, were the most significant predictors of achievement among Latino and non-Latino white students, even when controlling for SES. While higher levels of school-based and lower levels of home-based educational involvement significantly predicted achievement among non-Latino white students, educational participation was not predictive of achievement among Latino students. Language status served as a meaningful barrier to Latino parent involvement. Findings suggest that educators should harness Latino parents' high aspirations for their children by making greater efforts to communicate and engage them in their native language. Future research should assess non-traditional forms of Latino parents' educational involvement and explore involvement practices that are culturally sensitive and meaningful to Latino parents.

DEDICATION

To my parents, Kim and Colby Snyder, you have always known just when to edit, tease, and encourage. This process was a result of your optimism, love, and unflagging support for all of my educational pursuits. To my husband, Patrick, your ideas challenge me, your integrity inspires me, and your love forever grounds me. This project was possible with you by my side.

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CHAPTER 1

INTRODUCTION

In the United States there is growing concern that Latino students are not attaining educational success. This problem is compounded by the fact that Latinos are disproportionately young and poor, and they represent the fastest growing minority population in America (Ramirez & De La Cruz, 2002). Approximately 28% of Latino teenagers live in poverty, and in some major cities Latinos comprise the majority of schoolchildren (Ramirez, 2004). Yet as this population grows within the U.S., Latino youth continue to underperform academically. The high school drop-out rate among Latinos is one of the highest in the nation at 24%, which is substantially higher than that of European-Americans (7%) and African-Americans (12%; U.S. Department of Education [USDE], 2007). Very few Latino young adults obtain a bachelor's degree (11%) when compared with European Americans (33%), and African Americans (17%) (USDE, 2005). In addition, Latinos score significantly lower than European Americans on achievement tests in math and reading (NCES, 2007). Given the rapid growth and high poverty levels of the Latino population, an increased need exists to identify the factors associated with poor educational progress.

Research suggests that a number of risk factors contribute to the low achievement and attainment of Latino youth, including socioeconomic status (SES), educational attainment of parents, language barriers, acculturative stress, and lack of exposure to learning opportunities (Eamon, 2005; Garcia-Coll et al., 2002; Hoover-Dempsey et al., 2005; Prelow & Loukas, 2003). Institutional factors can also hinder the achievement of Latino youth because of inadequate instructional support for English language learners

(ELLs; Iglesias & Fabiano, 2003), limited incorporation of Latino culture, history, and tradition in curriculum (Carreon, Drake, & Barton, 2005; Moll, Amanti, & Gonzalez, 1992), and racial or ethnic discrimination (Portes & Zady, 2001).

There is growing evidence linking parental involvement to positive academic development and outcomes in youth. Numerous studies have shown that when parents are involved in their children's education, students have more positive attitudes toward school, higher attainment, and higher achievement (Epstein, 1987; Fan & Chen, 2001; Ibanez, Kupermine, Jurkovic & Perilla, 2004; Sheldon & Epstein, 2005). While there is increasing consensus that parental involvement is important to academic success, some studies suggest that Latino parents participate less in traditional types of school involvement than non-Latino parents (U.S. Department of Education [USDE], 2001; Olivos, 2004; Tinkler, 2002).

Statement of the Problem

Latino students are at-risk for low achievement and attainment in our society. Considerable research suggests that parental educational involvement is associated with higher academic achievement, attainment, and positive attitudes toward school (Dearing, Kreider, Simpkins & Weiss, 2006; McWayne, Hampton, Fantuzzo, Cohen, & Sekino, 2004; Lareau, 2000; Pomerantz, NG, & Wang; 2006). Although many of the factors associated with the educational struggles of Latinos are difficult to alter, such as SES, improving Latino parents' relationships with educators may be both a feasible and effective means of enhancing student performance (Desimone, 1999). In spite of this, very few empirical studies have specifically assessed involvement practices among

Latino parents and whether such practices are associated with student achievement (Desimone, 1999; Lopez & Cole, 1999; Kuperminc, Darnell, & Alvarez-Jimenez, 2008; Ritblatt, Beatty, Cronan, & Ochoa, 2002).

Purpose of the Study

The purpose of this study is to determine if there are differences in the ways that Latino parents engage in parent involvement practices, perceive school efforts to involve them, and experience barriers to involvement when compared to Non-Latino white parents. If there are barriers to involvement that are particular to Latino parents, knowledge of these obstacles could promote change in parental involvement policy, programs, or opportunities. This study also sought to determine if there is a relationship between Latino parent involvement practices and students' academic achievement and whether this relationship differs between Latino families and Non-Latino white families.

There is considerable variability in the way parental involvement is defined throughout the literature. Some studies refer to involvement as a broad construct, without parsing it into behaviors or beliefs (Fan & Chen, 2001). Other studies define involvement using one or many specific home-based behaviors (e.g. time spent supervising work completion; Greene, Walker, Hoover-Dempsey, & Sandler, 2007) or school based behaviors (e.g., contact with the school and/or participation in school-parent related activities; Grolnick, Benjet, Kurowski, & Apostoleris, 1997). Additional studies consider the extent to which parents value education and expect their children to succeed to be defining features of parental involvement (Englund, Luckner, Whaley, & Egeland, 2004). Institutional factors may also influence parent involvement, such as the school's approach to incorporating parents into the educational processes; if the school does not provide opportunities for parents to become involved, promote a welcoming, communicative environment, or encourage feedback from parents, parent involvement may be hindered (Grolnick et al., 1997; Schulting, Malone, & Dodge, 2005). The current study comprehensively evaluated home and school based involvement practices as well as parents' educational aspirations for their children. It also considered demographic characteristics of families, such as socioeconomic and language status, in addition to contextual factors that are affected by SES, such as working hours and childcare. This is the only study to date that compared the effect of multiple forms of parental involvement on achievement between Latino and non-Latino white families of elementary school students using a nationally representative sample.

Significance of the Study

Very few studies provide insight into the nature of Latino parents' educational involvement (Delgado-Gaitan, 1992; Ramirez, 2003; Riggs & Medina, 2005). While teachers and school administrators report that Latino parents participate less in school events (USDE, 2001a) and communicate less frequently with the teachers (Chrispeels & Rivero, 2001), few studies have systematically assessed this contention. In addition, Latino parents' perceptions of involvement and barriers to becoming involved have been minimally addressed in the literature (Delgado-Gaitan, 1992; Ramirez, 2003). Logistical barriers, such as long work hours and language differences, have been noted as obstacles to communication with school and attendance at school events (Delgado-Gaitan, 1991). However, many studies have focused on Latino parents' lack of school-based participation with minimal attention to home-based forms of educational involvement (Garcia-Coll, et al., 2002; USDE, 2001a). Further information about the amount and type of school-related supervision at home, involvement at school, and parental aspirations for children's achievement may reveal patterns in the way Latino parents are involved in their children's schooling. This study further assessed whether such patterns differ from the involvement practices of non-Latino white parents, as has been suggested in the literature (Chrispeels & Rivero, 2001; USDE, 2001a).

This study adds to the growing literature on the relationship between parental involvement and achievement. The sample was comparatively large, and data were examined longitudinally to consider effects of involvement on learning over time. A comprehensive definition of parental involvement was used, including home and school-based types of involvement in addition to educational aspirations. This study also examined the relationships between contextual barriers, school outreach practices, and educational involvement. Additionally, differences in the way educational involvement relates to achievement between Latino and Non-Latino white students was considered. Results not only add to the current literature on parental involvement and academic achievement in general, but they also help clarify specific differences that may exist between Latino and Non-Latino white groups.

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Research Questions

This study was designed to answer the following research questions:

1. Do Latino and non-Latino white parents report differences in school- and home-based educational involvement practices and educational aspirations?

a. Do Latino and non-Latino white parents report differences in their perceptions of school outreach practices?

b. Do Latino and non-Latino white parents report differences in language and contextual barriers to school involvement?

2. Are there differences in the relationship between Latino and non-Latino white parents' educational involvement practices and school outreach, language, and contextual factors?

3. Are there differences in the relationship between types of parent involvement in first grade and achievement in third grade among Latino and non-Latino white students?

CHAPTER 2

REVIEW OF THE LITERATURE

Latino Students in the United States

Latinos constitute the fastest growing minority population in the United States and are expected to become the second largest racial/ethnic group by 2010 (Ramirez, 2004). By origin, approximately 70% of Latino-Hispanic individuals in the United States are Mexican, 14% are Central South American, 9% are Puerto Rican, 4% are Cuban, and 9% originate from some other region (Ramirez & De La Cruz, 2002). The terms "Latino" and "Hispanic" are often used interchangeably, as individuals from a variety of regions tend to self-identify using either classification (Grieco & Cassidy, 2001). This review will use the term *Latino* to encompass individuals whose heritage is Mexican, Puerto Rican, Cuban, and Central and South American (San Miguel, 2003). As a population, Latinos are disproportionately young and poor (Ramirez, 2004). Data from the Annual Demographic Supplement to the March, 2002 Current Population Survey (CPS) indicates that 34% of Latinos are under the age of 18 years, whereas only 23% of Non-Latino whites are younger than 18 years of age. Twenty-eight percent of Latino children are living in poverty compared with 9% of Non-Latino white children. By the year 2030, it is projected that Latino students will comprise one-fourth of all students in kindergarten through twelfth grade (Gibson, 2002). In California it has been predicted that by 2014, the majority of students entering high school will be Latino (Hayes-Bautista, Hsu, Perez,

& Kahramanian, 2003). Therefore, over the next two decades, Latino students are expected to become a dominant presence in schools throughout the country.

As the Latino population and poverty rate has grown, Latino youth struggle to remain in school (Chrispeels & Rivero, 2001; Tinkler, 2002). Twenty-four percent of Latinos do not graduate from high school or obtain a GED, compared to 12% of African-Americans, and 7% of Non-Latino whites (USDE, 2007). With respect to college attainment, 33% of Non-Latino whites and 17% of African Americans have earned a Bachelor's degree, compared with only 11% of Latinos (USDE, 2005). There are differences in graduation rates between specific Latino groups; Puerto Ricans, Cubans, Central and South Americans, and other Latinos are more likely to graduate from high school than Mexicans (Ramirez & De La Cruz, 2002).

The academic underachievement of Latinos, including their performance on standardized tests and school work, is also of concern (Olivos, 2004). On the National Assessment of Educational Progress (NAEP), also known as "the Nation's Report Card," a nationally representative sample of fourth and eighth grade Latino youth scored lower than Whites, Asians, and African-Americans (NCES, 2007). "Basic" scores on this test denote partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade assessed. Only 50% and 58% of fourth and eighth grade Latino students, respectively, scored in the above basic range on tests of reading, compared to 78% and 84% of Non-Latino whites. Similarly, on math achievement tests, 70% of fourth grade Latino students, and 55% of eighth grade Latino students' scores fell in at or above basic range, compared to 91% and 82% of Non-Latino white students. Similar trends are reflected in the NAEP's transcript study, which surveyed a nationally representative sample of over 26,000 transcripts from high school graduates (NCES, 2006). Latinos had lower GPAs than Non-Latino whites and were less likely to have taken an advanced science or math course. Results of these national level studies indicate that Latino students are at-risk for low attainment and achievement compared to most other ethnic groups in the U.S.

Causes and Perceptions of Underachievement among Latinos

Throughout the literature, a number of factors have been linked to the low attainment and achievement of this population. High poverty levels among Latino families limit learning opportunities since schools in impoverished neighborhoods are more likely to have less funding, fewer resources, and poorer quality instruction (Prelow & Loukas, 2003; Tapia, 2004). In addition, many poor Latino children grow up with single parents who have limited education and work experience themselves (Eamon, 2005; Prelow & Loukas, 2003; Tapia, 2004). These parents may be less likely to provide learning opportunities in the home environment that relate to school-based learning concepts.

Various institutional or school-related factors have been associated with poor academic outcomes among Latinos. Inadequate instruction for English language learners can limit learning potential for Latino youth (Iglesias & Fabiano, 2003; Tapia, 2004; Tinkler, 2002). In addition, a lack of incorporation of Latino culture or history into the curriculum (Moll, Amanti, & Gonzalez, 1992), and in some cases, ethnic discrimination (Portes & Zady, 2001) may also be factors reducing the engagement and academic achievement of Latino students.

Some researchers use a "deficit" model to understand the poor academic progress of Latino students, which presumes that educational struggles are a result of internal characteristics such as cognitive, motivational, and cultural factors (Frost & Hawkes, 1966; Vaughn, Bos, & Schumm, 1997). While this model acknowledges the Latino families have fewer social resources and less exposure to traditional educational involvement practices, it concludes that they therefore are indifferent to their children's schooling (Valencia & Black, 2002). In contrast to the deficit model, studies of Latino families, as well as political activism among Latinos, suggest that education is highly valued and perceived as a means to achieving upward mobility by Mexicans, Puerto Ricans, and other Latino groups in American society (Delgado-Gaitan, 1992; Garcia-Coll, et al., 2002; Lopez & Cole, 1999; Valencia & Black, 2002).

Despite the findings that Latinos do place high value on education, studies show that they are less involved in their children's learning than their Non-Latino counterparts (Delgado-Gaitan, 1991; Olivos, 2004; Tinkler, 2002). Data collected from a nationally representative sample of parents by the National Center for Education Statistics (NCES) indicate that Latino parents are less likely to attend school meetings and events, volunteer, or serve on a committee than non-Latino white parents (USDE, 2001a). Evidence suggests that minority parents of lower SES families are less likely to attend parent oriented school events than their middle and upper class counterparts (Floyd, 1998; Griffith, 1998; Lareau, 2003). In addition, teachers of Latino students report dissatisfaction with levels of their parents' involvement (Delgado-Gaitan, 1991). However, in the study conducted by NCES, no differences were found in the number of meetings Latino and non-Latino white parents scheduled with teachers (USDE, 2001a).

While it may be the case that, overall, Latino parents are less involved in school-based activities, it is possible that the types of participation that take place at these schools reflect the values of the dominant culture (De Gaetano, 2007), and Latino parents may value other forms of involvement (Carreon et al., 2005). It may also be the case that teachers are more apt to solicit involvement from parents that are already involved, limiting opportunities for low income parents to engage in school activities (Griffith, 1998). Such a pattern may perpetuate the stereotype that low income, minority parents are in fact less involved in schools.

While it is likely that less participation in traditional educational involvement practices is related to lower student achievement, this link has not been studied extensively among Latino families. There is a growing consensus that parental involvement is important to academic success within the Non-Latino white community, yet there is limited research on involvement by Latino parents. Given the increased educational risk status of these students, improving parent-school relationships between Latino parents and educators may promote increases in performance and attainment.

Theoretical Framework: Home and School Contexts

Ecological systems theory, developed by Urie Bronfenbrenner, maintains that various nested contexts, or “ecosystems”, shape students’ educational beliefs, behaviors, and functioning (Bronfenbrenner, 1975, 1976). Christenson and Sheridan (2001) describe how Bronfenbrenner’s theory applies to home-school relationships: A child’s *microsystem* includes the beliefs and supports in the immediate home and school environment, such as parents’ homework assistance and teachers’ approach to instruction.

The *mesosystem* refers to communication and interactions between home and school settings. The *exosystem* consists of patterns or choices that indirectly affect the child such as parents' professions, social networks, and resources in the community. Finally, the *macrosystem* defines the overall approach to schooling within the child's culture. According to Bronfenbrenner, it is the interaction of these nested ecosystems that influences a student's approach to education. This dissertation focuses primarily on the micro- and mesosystems by exploring parent involvement patterns and beliefs, as well as the interaction between educational professionals and parents. In addition, this dissertation considers the relationships among SES, contextual barriers, and traditional involvement practices at exo- and macrosystem levels.

Research by Phelan, Davidson, and Yu (1996), and Erikson (1987) extend Bronfenbrenner's theory to focus on the interaction between home and school contexts for minority populations. Phelan and colleagues' *multiple worlds model* holds that if a lack of continuity exists across home and school settings, a child may have difficulty traversing between environments. They stress that minority students' "ability to adapt to various circumstances has tremendous implications for… their chances of using the educational system as a stepping-stone to further education" (pgs. 4, 5). In addition, Erickson's (1987) cultural compatibility theory highlights the socio-cultural, socio-economic, psycho-linguistic, and structural differences or "boundaries" experienced between students and teachers. If teachers and students have incongruent expectations, behaviors, and cultural patterns, Erikson proposes that this may lead to misinterpretations of one another's actions and false attributions for behavior. Numerous negative encounters with teachers may lead minority students to perceive the educational system as oppressive and disengage (Erickson, 1987). A lack of continuity in beliefs, behaviors, and expectations across home and school environments may create barriers for students, which lead to academic disengagement (Phelan et al., 1996). Collectively, Phelan and colleagues and Erikson's models underscore the importance of communication and collaboration between parents and professionals to develop a mutual understanding of educational beliefs and expectations.

To prevent disengagement described by Phelan and colleagues (1996), Christenson and Sheridon (2001) recommend that educators and policy-makers examine home-school contexts to reinforce learning and thinking in ways that are significant to families. Likewise, Epstein and Hollifield's (1996) research with diverse, low income families supports a theory of *overlapping spheres of influence*, which proposes that schools, families, and communities communicate and reach similar goals to ensure the success of students. They further state that current conceptions of involvement may be too "narrow" and should be "broadened" to include home participation practices (p. 36). To reconcile these spheres, educators must understand the way Latino parents participate in their children's education. They must also help Latino parents to understand school-based practices in order to increase continuity between home and school.

Parent Involvement as a Construct

Parent involvement has been defined and studied in a number of ways. Meta-analytic studies present parental involvement as a broad construct by combining multiple types of behaviors and beliefs into a composite (Fan & Chen, 2001; Jeynes, 2005). In contrast, Joyce Epstein's seminal research parses parental involvement into six types of behaviors, which are referenced throughout the literature (Epstein & Hollifield, 1996). This typology includes the following aspects: 1) supportive parenting at home, 2) communicating with teachers, 3) volunteering at school, 4) learning at home, 5) school-based decision making (i.e. governance and advocacy) and 6) collaborating with the community and community-based organizations. Many parental involvement researchers have included aspects of this typology in their research, however, most studies make the general distinction between types of involvement that occur at home and those that occur at school. For example, Greene et al.'s (2007) model of involvement distinguishes between involvement-related beliefs and behaviors that typically occur in the home environment, such as monitoring homework progress and talking about school, from those that occur in the school environment, such as attending Parent Teacher Association (PTA) meetings.

While this distinction between home- and school-based forms of involvement has been made in a number of studies, (Grolnick, et al., 1997; Mcwayne, Hampton, Fantuzzo, Cohen, & Sekino, 2004), Desimone's (1999) study used data from the National Education Longitudinal Study of 1988 (NELS-88) to show that Epstein's typology is a better predictor of involvement patterns of white, middle class families than for minority or low income families. Therefore, in addition to reviewing home- and school-based educational involvement practices, this literature review also considered the influence of demographic characteristics and institutional barriers to involvement on parent participation. Parent educational aspirations were considered as well, since various studies suggest that this is an important aspect of involvement (Chrispeels & Rivero, 2003; Griffin, 1998).

Home Involvement

Before children begin formal schooling, their primary learning environment is in the home. As the learning environment shifts to the school setting, parents are charged with the important role of supporting and reinforcing formal education at home (Garcia-Coll, et al., 2002). Parents' provision of structure in the daily schedule and verbal support for classroom learning inevitably impacts their children's attitudes toward school and, most likely, their performance. A number of studies have evaluated types of involvement that occur in the home environment. By analyzing definitions of home-based involvement provided by parents, teachers and children, Grolnick et al. (1997) found a distinction between personal (e.g. knowledge about school activities and names of peers) and cognitive-intellectual involvement (e.g. going to the library, talking about current events). Such findings are similar to Epstein's involvement types one and four, which include parenting (i.e. establishing a supportive home environment) and learning at home (helping with homework and other curriculum-related materials), respectively (Sheldon & Epstein, 2005).

Another widely-studied example of home involvement includes homework support; helping children with homework exposes parents to the learning process and provides them with the opportunity to reinforce the importance of schoolwork (Epstein & Van Voorhis, 2001; Sheldon & Epstein, 2005; Pomerantz, et al., 2006). An additional example of home involvement includes engaging in developmentally-appropriate problem-solving using board games or other educationally-oriented activities (Englund, et al., 2004). Overall, these studies suggest that parents become involved in their children's education through a variety of home-based practices. While much research focuses on cognitive development and learning, other important aspects of home involvement include personal support, encouragement, and structure.

School Involvement

Parental involvement in the school setting has been evaluated by a number of studies. Ritblatt, Beatty, Cronan, and Ochoa (2002) surveyed 357 parents in the San Diego area and found that parent school-based involvement pertained to: 1) general school issues such as district-level decisions and meeting with other concerned parents, 2) specific problems related to their child's performance, which may involve attending a parent-teacher conference, and 3) extracurricular events such as attending bake sales, field trips, or athletic activities. In these ways, school involvement ranges from activism and child advocacy to volunteering and attending school events. These findings parallel three of Epstein's involvement typologies, including type five (collaborating with community), two (communicating with teachers), and three (volunteering at school; Sheldon & Epstein, 2005).

Greene et al. (2007) analyzed the most common school involvement practices by collecting information about parent participation from 853 parents. The results from this study showed that parents were most likely to attend PTA meetings and other school events when they had time available and when they were invited by teachers and administrators. Findings suggest that while parents' work schedules may interfere with participation, the perception of parents and teachers as welcoming may increase the likelihood of school involvement. In a similar study of school involvement practices, Grolnick, et al. (1997) analyzed factors that predicted involvement of 209 parents, their children, and 28 teachers in urban northeast schools. Results showed that parents were less apt to attend parent-teacher conferences, open-houses, or volunteer events when they had less social support and fewer family resources. Collectively, these studies show that there while there are many paths to school-based involvement, schools' invitations as well as parents' time and resources influence the levels of actual participation.

Educational Aspirations

The extent to which parents value education and expect their children to succeed has also been considered a form of parental involvement (Chrispeels & Rivero, 2001; Englund et al., 2004). Parents who have high aspirations for their children may be more likely to encourage and motivate them to perform at a high level. In addition, parents' expectations for their children's achievement likely influence the quality of their own involvement (Pomerantz, Moorman, & Litwack, 2007). For example, if parents believe their children will be academically successful, they may highlight their strengths and help them attribute challenges to external events, such as a distracting environment or task difficulty. These students may internalize their parents' positive perceptions and approach tasks with increased optimism and resilience.

In one study of parental aspirations, Griffith (1998) surveyed over 30,000 parents in 122 elementary schools to ascertain key factors that predict school involvement. The study found that parents who had higher educational expectations for their children were also more involved in school activities. Additionally, research by Phillipson and Phillipson (2007) focused on the relationship between parents' educational expectations for their elementary-aged children, the levels of involvement at home and school, and academic achievement. This study showed that the level of parents' expectations was consistent with their students' performance on measures of reading and mathematics and that parents' with higher expectations were more involved at school. Englund et al. (2004) also found that parental expectations had significant, positive effects on achievement in a sample of children that were assessed longitudinally from birth to third grade. Taken together, these studies suggest that parental expectations may be an important predictor of parent educational involvement and child academic achievement.

Demographic Factors

Many studies of parental involvement consider the effects of demographic characteristics such as socioeconomic status and number of parents in the household on parent involvement practices (Greene et al., 2007; Grolnick, et al. 1997; Shulting et al., 2005; Ritblatt, et al. 2002). Grolnick et al. (1997) measured the effect of demographic characteristics, inadequacy of resources, and financial support on involvement. The study found that mothers with higher SES and a spouse living at home were more likely to be involved in school activities than single mothers of lower SES. Home involvement, as defined by both personal and cognitive-intellectual activities, however, was not associated with SES. In contrast to Grolnick's findings about the minimal impact of SES on home involvement, Lareau (2000) found that parents in a middle-class community had higher educational and professional aspirations for their children, were more apt to reinforce the school curriculum at home, and communicated more frequently with teachers and administrators than low-income parents. These differences were primarily attributed to low-income parents' lack of time and financial resources, in addition to middle-income parents' greater familiarity with the schools' involvement structures through social circles. Taken together, these studies are somewhat mixed in their findings about the home-involvement patterns of lower income families. One possible reason for Grolnick's finding that home involvement was not linked to SES may be that Grolnick's research used parent self-report, while observational methods were used in Lareau's study. Therefore, it is possible that low-income parents in Grolnick's research reported higher than actual levels of home involvement due to social desirability (Holden & Passey, 2009). Both Grolnick and colleagues and Lareau's results suggest that lower SES families are less able to be involved in school, due to work conflicts and knowledge of school culture.

In an intervention study of school involvement, Sheldon (2005) measured the effect of a community- and family-based partnership program on levels of school-based parent participation (a composite of attendance at parent-teacher conferences and open houses) in 565 primarily urban, low SES elementary schools. Although the results indicated that parents of lower SES families were less involved in schools, higher levels of parent participation were found in schools that attended to the barriers faced by low-income populations by translating forms and providing home outreach. These findings support the contention that involvement levels can vary among parents in the same SES category depending on resources provided and measures taken by schools to increase participation (Hoover-Dempsey et al., 2005). Overall, research by Grolnick and colleagues (1997) and Lareau (2000) suggest that parents with fewer financial and social resources are less likely to participate in school-based activities; however, efforts by schools to accommodate low-income families may increase involvement (Sheldon, 2005).

Institutional Outreach and Barriers

Institutional outreach, which constitutes the school's approach to incorporating parents into the educational process and the overall school climate, are considered in a number of studies of parental involvement (Greene et al., 2007; Grolnick et al., 1997; Shulting et al., 2005). School climate has been defined as the structure and management of school (Hoover-Dempsey et al., 2005). Institutional outreach may range from tangible behaviors and actions such as invitations to school events, to more intangible factors, such as a sense of feeling welcomed and respected by teachers and administrators.

In general, research has indicated that schools' active, school-initiated contacts with parents can increase involvement. In a review of the literature, Hoover-Dempsey et al. (2005) show how invitations convey that parents' presence is welcomed and expected at school, which, in turn, motivates them to participate. These tangible efforts to involve parents have been deemed effective in low-income areas where parents are usually less available (Epstein & Hollifield, 1996). For example, Sheldon's (2005) study showed that levels of parent involvement were lower in poorer schools, but attending to challenges through outreach in low SES schools did increase involvement. Similarly, Drummond and Stipeck (2004) interviewed and surveyed 234 demographically diverse second and third grade parents and found that the value parents placed on involvement in school was positively related to teachers' initiations for involvement.

With respect to less tangible forms of outreach, results from Ritblatt et al. (2002) indicated that teachers' sensitivity and support were strongly, significantly related to the amount of time parents were involved at school. In a previously described study (Hoover-Dempsey et al., 2005) the importance of trust in the parent-teacher relationship to establish open communication with parents was highlighted. Greene et al. (2007) also showed that parents' relationships with teachers were more important than SES in predicting involvement at home and school. Likewise, Griffith (1998), found the highest levels of parent involvement when parents reported that teachers had positive attitudes, communicated openly, and provided opportunities for parent-school collaboration. Taken together, these studies indicate that teachers' and administrators explicit invitations to involve parents, as well as a general sense of warmth and receptiveness by educators, are important factors in facilitating parent involvement and may be particularly critical in low income communities.

Summary

Overall, parent involvement has been conceptualized based on parents' home-based activities and school based involvement. Home involvement has been defined though learning activities, homework support, encouragement, and structure. School-based involvement has included communication with teachers, volunteering in the classroom, attending PTA meetings, and community-based outreach. Parents' educational aspirations for their children's attainment were also found to predict involvement and achievement. Studies show that limited social and financial resources can have an adverse effect on school involvement, which may potentially be mitigated by school efforts to eliminate barriers and involve parents. With respect to home-based involvement, the effect of SES has not been consistent throughout the research.

Parent Involvement and Academic Achievement

There is a growing literature base that supports a relationship between parental involvement and children's academic performance (Dearing, et al, 2006; Mcwayne, et al. 2004; Lareau, 2003; Pomerantz et al., 2007), and meta-analyses have shown this link among geographically diverse student populations of all ages (Fan & Chen, 2001; Jeynes, 2005). Fan and Chen (2001) conducted a meta-analysis of twenty-five empirical studies that were published in peer-reviewed journals as early as 1987. Results varied depending on the way parent involvement was defined: parents' aspirations for their children had the strongest correlation with academic achievement while home-based support had a less significant relationship with achievement. Collectively, studies in this meta-analysis indicate a small to moderate, yet practically meaningful relationship between involvement and achievement. Jeynes' (2005) more recent meta-analysis of 41 studies of urban elementary-aged students also revealed a significant, positive relationship between involvement and achievement. This relationship remained true when data were disaggregated by specific types of parental involvement, in addition to racial minority status. Taken together, these meta-analytic studies suggest positive effects of parent involvement on academic achievement irrespective of racial group. This research also indicates that parental aspirations may have a stronger affect on achievement than other forms of involvement.

Home Involvement and Achievement

Throughout the literature, most studies have emphasized either school-based involvement or a combination of home- and school-based involvement. However recent research has exclusively focused on the independent impact of home-based forms of involvement on achievement. In a study of 307 low income kindergarteners, McWayne, Hampton, Fantuzzo, Cohen, and Sekino (2004) found significant relationships between parents' self-reported involvement at home and children's social and academic competence. In this study, involvement at home was defined as providing structure and talking about learning. Lareau's (2000) qualitative research also suggests that when parents create structure in the home and become knowledgeable about the school curriculum their children's academic performance improves.

Epstein and Hollifield (1996) reviewed a number of studies that showed that parental assistance with homework had positive effects on achievement in both math and language arts domains (e.g. Balli, Demo, Wedman, 1998; Epstein, Simon, & Salinas, 1997). In a more recent study of homework involvement, Sheldon and Epstein (2005) found that when students worked collaboratively on math homework with their parents, their math proficiency scores improved on standardized tests. Similarly, in a sample of 114 third, fourth and fifth grade students, Pomertanz et al. (2006) found that when mothers engaged in homework assistance that was "mastery oriented" (i.e. involved direct teaching or support for solving problems) it enhanced students' sense of academic competence over time. However, no achievement or performance data were collected in this study.

Overall, research on the relationship between specific home-based involvement practices and achievement indicate that structure in the daily schedule, assistance with homework, and reinforcement of the school curriculum are associated with student achievement and competence.

School Involvement and Achievement

Recent studies show that school-based involvement is positively associated with academic achievement. As discussed previously, McWayne et al. (2004) found that parents' self-reported involvement at school, including volunteering and communication with teachers, was positively related to children's social and academic competence. Likewise, Dearing, Kreider, Simpkins, and Weiss (2006) found that increased levels of parent involvement in school, including communication with teachers, classroom visits, and volunteering, were associated with improvements in literacy performance in a sample of 281 low-income children who were followed from kindergarten to 5th grade. Consistent with these findings, Lareau's (2000) qualitative research in low- and middle-income communities suggests that when parents volunteered in the classroom and communicated regularly with teachers, their children's academic performance improved. A number of additional studies further support the positive relationship between parent involvement in school, and student performance (e.g. Desimone, 1999; Epstein, 1987; Ibanez, et al., 2004; Shulting et al., 2005).

Aspirations and Achievement

Parental aspirations for children's attainment have also been associated with academic achievement. As reviewed previously, Englund et al. (2004) and Phillipson and Phillipson (2007) showed that parental academic expectations for elementary-aged children were positively associated with educational performance. Fan and Chen's (2001) meta-analytic research also showed the important effects of parental aspirations on achievement across ethnic groups. In addition, Hong and Ho (2005) used data from the National Education Longitudinal Study, collected in 1988 (NELS-88), to assess parental influence on achievement in a nationally representative sample of eighth grade students. Results showed that parental aspirations had significant indirect effects on student achievement by way of cultivating student aspirations. Findings suggest that when parents had high aspirations for their children, these children likely internalized their parents' hopes and were motivated to achieve academically. The study also showed that such effects lasted at least four years. Overall, research to date indicates a positive relationship between beliefs and achievement. Further research is needed to understand how parents' expectations influence involvement practices and children's approach to academics (Pomerantz et al., 2005).

Demographic Factors and Achievement

Socioeconomic status (SES) has consistently been associated with educational involvement (Greene et al., 2007; Grolnick et al., 1997; Ritblatt et al., 2005). Various studies have considered how the involvement of parents from different SES levels influences student achievement. Desimone's (1999) large scale study of 8th grade students showed that school-based involvement was a better predictor of achievement for middle-income students than for low-income students. Specifically, volunteering at school, discussions about the future, and discipline at home significantly predicted achievement among middle-income families, but not among low income families. While these findings may reflect lower levels of involvement among poorer families, they might also suggest that common school-involvement practices may not be as beneficial, academically, for low income students. School professionals may need to adjust their involvement practices to account for the difference, cultural or otherwise, between low- and middle-income families. New approaches that are more culturally sensitive or personally meaningful to low-income families may promote involvement of this demographic.

Dearing et al.'s (2006) findings in a study of elementary-aged children contrasted with results of Desimone's study in that a significant relationship was found between parental school involvement of low income families and increased literacy performance. Similarly, in studies of low income kindergarten families, higher levels of home and school based involvement were associated with children's social and academic competence (McWayne et al, 2004; Miedel & Reynolds, 2000). Although results of studies which consider SES are somewhat mixed, studies of elementary-aged students suggest that when parents from lower SES levels participate in school, student performance improves. Perhaps the less significant relationships in Desimone's study can be attributed to the types of involvement programs and academic work that exist in higher grades, or as previously noted, that involvement practices in were not culturally or personally meaningful in this sample.

Institutional Outreach and Achievement

Studies which assess school's efforts to involve parents suggest positive relationships with achievement. A large scale study conducted by Shulting and colleagues (2005) assessed the effects of school-based kindergarten transition practices on achievement using a sample of 2,991 teachers from the ECLS-K study. Transition practices included invitations for preschoolers to visit the kindergarten classrooms, home visits by teachers, and parent meetings to discuss the transition into kindergarten. Results showed that teacher transition practices were a significant predictor of parent-initiated school involvement, and parents' school involvement mediated the relationship between transition practices and achievement. This effect was particularly strong for low-SES children. Similarly, Sheldon and Epstein (2005) showed that when schools designed collaborative math homework assignments that involved parents, student's scores on math achievement tests improved. Results of these two studies demonstrate that institutional efforts to involve parents can have positive effects on participation levels and student achievement.

Summary

Overall, the literature supports a positive relationship between parental home and school-based educational involvement, in addition to educational aspirations for their children, and students' academic performance. Some research suggests that school involvement may not be predictive of achievement among low income families (Desimone, 1999). However, other studies have also shown that when schools solicit participation of low- income parents and design appropriate involvement activities, parents become more involved, and student achievement improves (Sheldon & Epstein, 2005; Shulting et al., 2005).

Involvement among Latino Parents

While there is a growing consensus that parental involvement is important to academic success, studies have shown that Latino parents are less involved in schools than their non-Latino White counterparts (USDE, 2001a; Olivos, 2004; Tinkler, 2002). A small body of research has focused on factors that limit school-based educational involvement of Latino parents including language barriers, limited understanding of school expectations, long working hours, and different value systems (Hoover-Dempsey et al., 2005; Hughes, Valle-Riestra and Arguelles, 2002; Kuperminc et al., 2008). Beyond this focus on Latino school-based involvement, fewer studies have considered home-based strategies that promote achievement (Delgado-Gaitan, 1992; Garcia-Coll et al, 2002) or educational aspirations among Latino families (Arzubiaga, Rueda & Monzó, 2001).

Home Involvement among Latino Parents

A small number of studies have evaluated specific home-based educational involvement practices of Latino parents. In a qualitative study, Delgado-Gaitan (1992) explored the meaning of education to six working-class, immigrant Mexican-American families by visiting their homes over the course of nine months. Observations and interview data collected by Delgado-Gaitan suggest that these parents were actively involved in their children's educational development. At home, they provided discipline, allocated homework time, and enforced sleeping and eating routines. Parents also emphasized the importance of education; they cited their own "lack of educational opportunities" to their children in an effort to "motivate" them academically (pg. 512). In addition, parents stressed the importance of being "buen educado" or "well-educated" with respect to academics and socialization, and they emphasized respect and cooperation outside of school (pg. 506). In these ways, parents provided social and emotional support for the learning process. However, it was notable that parents of lower achieving students in this study demonstrated confusion about homework and initiating contact with schools. These findings suggest that Mexican-American parents' may be less involved in cognitive-intellectual forms of home involvement (i.e. helping with homework or reading) and school involvement in part because they lack knowledge of how to engage in such practices. In sum, Delgado-Gaitan's research indicates that enthusiasm for education, discipline, and emotional support may be the most prevalent forms of home-involvement practiced by Latino parents.

In a larger-scale quantitative study, Garcia-Coll and colleagues (2002) collected information from 101 low-income Dominican parents of second and third grade students regarding home- and school-based involvement. Results indicated that greater comfort with the English language was associated with higher levels of parent involvement (based on a composite score of home and school involvement practices). Parents in the study also reported that their own lack of formal education, unfamiliarity with the U.S. culture, and long working hours served as barriers to involvement. While this study did not focus exclusively on home-based involvement, results support previous findings that a number of barriers may impede participation in both home and school settings among lower income parents (Hoover-Dempsey et al., 2005; Kuperminc et al., 2008). Another study of home-based involvement among 18 Latino families further supports the contention that work commitments may serve as barriers to involvement; parents' workload in this study was inversely related to the value that their children place on reading (Arzubiaga et al., 2001). These studies indicate that factors associated with lower SES and cultural difference, such as long working hours, language barriers and lack of formal education may hinder more cognitive-intellectual forms of involvement at home, such as reading support (Arzubiaga et al., 2001; Garcia-Coll et al., 2002).

School Involvement among Latino Parents

There is a slightly larger body of research on school-based participation, and many of these studies highlight the barriers faced by Latino parents. Ramirez (2003) interviewed 33 immigrant Latino parents from a low income area regarding perceptions of parent involvement. These parents reported language barriers, confusion about school events, and a desire for increased contact with teachers. Although they wished to become more involved, a lack of interpreters and inconvenient meeting times interfered with their ability to do so. Consequently, they described feelings of "helplessness" and "abandonment" with respect to involvement in their children's education (pg. 93). Delgado-Gaitan (1991) also explored Latino parent involvement patterns, in addition to school policies for incorporating parents of Mexican-American students in elementary through high school over the course of four years. Like Ramirez's study, results showed that Latino parents experienced structural barriers to involvement such as inconvenient meeting times and lack of translators. Additional studies by Garcia-Coll and colleagues

(2002) and Durand (2008) replicate the findings that language barriers, low acculturation, and long working hours serve as obstacles to school-based involvement among Latino parents.

Even in specialized programs, such as special education, where levels of parental involvement tend to be higher, barriers have been shown to limit Latino parents' participation in the educational experience of their children. Hughes et al. (2002) assessed Latino parents' perceptions of their child's elementary special education program through interviews and surveys. Parents generally expressed satisfaction with the level of communication from the school, but some cited difficulty with language barriers.

In sum, studies suggest that many Latino parents experience barriers to involvement including lack of translators and inconvenient meeting times, and they express feelings of confusion about involvement. Despite these obstacles, Latino parents consistently express the desire to be involved in school and communicate effectively with teachers (Delgado-Gaitan, 1992, Hughes et al., 2002; Ramirez, 2003).

Latino Parents' Aspirations

Previous research has shown that parents' high educational aspirations for their children are positively associated with involvement and student achievement (Englund et al., 2004; Phillipson & Phillipson, 2007). However, the deficit model proposed by some researchers attributes the lower levels of involvement among Latino parents to a lack of value placed on education and a lack of motivation for their children to succeed (Frost & Hawkes, 1966; Vaughn, Bos, & Schumm, 1997). The model suggests that parents' limited financial resources and experience with education may lead them to be indifferent to schooling. Yet, numerous studies challenge this contention. Garcia-Coll and colleagues (2002) found that among 101 low-income Dominican parents of elementary-aged students, 85% reported that they wanted their child to obtain a professional degree. Similarly, Moreno and Lopez (1999) interviewed 158 Latina mothers and found that those who were less acculturated and had lower educational attainment actually had higher expectations for their children's achievement and attainment. Additionally, in a qualitative case study, immigrant Latina mothers reported feeling optimistic and hopeful about the educational and professional opportunities for their children despite financial adversity (Orozco, 2008). Such findings are further supported by political activism for improved education among Latino parents (Valencia & Black, 2002), in addition to the self-reported perception that education is a means to achieving professional success (Delgado-Gaitan, 1992; Lopez & Cole, 1999).

John Ogbu's well known theories on the adaptation of minority groups in the U.S. may partly explain the high aspirations among less acculturated Latino parents (Ogbu, 1987; Ogbu & Simons, 1998). Ogbu's research shows that minorities that come to the U.S. voluntarily, such as Latinos, often have higher achievement aspirations than involuntary minority groups, such as African-Americans. These voluntary minority groups perceive the U.S. as a place where their children will have the opportunity to achieve educational and financial success. Ogbu contends that over time, if these groups are faced with racism and lack of opportunity for advancement, they may eventually lose faith in their ability to attain their goals and develop an oppositional "frame of reference" (Ogbu, 1993, pg. 483). Thus, studies by Garcia-Coll (2002) and colleagues and Moreno and Lopez (2002) may reflect the hopes of many Latino parents who immigrate to the

U.S. specifically to improve their children's educational and professional outcomes. There is a paucity of research, however, which evaluates the relationship between Latino parents' aspirations for their children, and their educational involvement practices.

Intervention Studies: Overcoming Contextual Barriers

A small body of research supports the effectiveness of interventions that educate Latino parents about ways to become involved in schools. In the school-based study conducted by Delgado-Gaitan (1991; previously described), parents experienced many barriers to involvement, yet their school participation and child advocacy increased following involvement trainings and teacher modeling of instructional activities. In an additional intervention study with 300 Latino parents in southern California, involvement trainings resulted in increases in the number of home-based literacy and verbal activities, contacts with teachers, and involvement in reading and homework support (Chispeels & Rivero, 2000). De Gaetano's (2007) intervention research found that when Latino parents participated in weekly workshops regarding school participation over a three year period, their involvement at school increased from 15% to 40%. Likewise, Riggs and Medina (2005) found that when Latino students attended a multisite afterschool program over a two year period that provided a bilingual program leader known as a "home educator" to communicate with parents, these parents reported higher quality relationships with teachers, more frequent teacher communication, and higher engagement in their children's school activities.

Programs which include a liaison and provide support in Latino parents' native language may serve as a bridge between parents and teachers; the liaisons enable parents to communicate more comfortably about school processes and, in turn, visit the school more often (Chrispeels & Rivero, 2003; De Gaetano, 2007). These intervention studies provide compelling support for the critical value of educating Latino parents about involvement and providing liaisons and translators. With such resources in place, levels of involvement and parent-reported satisfaction have been shown to increase.

Latino Parent Involvement and Academic Achievement

There has been a limited amount of research connecting parental involvement of Latino families to their children's learning and academic success. Much of the research has instead focused on barriers to parental involvement. However, some studies suggest that there is a positive relationship between parental involvement and Latino students' educational achievement, although results vary among the different forms of home and school involvement.

Latino Home Involvement and Achievement

A small body of research has evaluated the effects of Latino parent home involvement on student achievement. In one such study, Ibanez, et al. (2004) found that Mexican-American high school student-reported levels of parent involvement, which included help with homework and attendance at extracurricular activities, were positively related to achievement motivation. The study also showed that parental involvement was positively related to the value highly-acculturated students placed on learning. Thus, with greater parent involvement, highly-acculturated Latino high school students valued their education more than students with less parent involvement. These results suggest that a combination of home and school involvement behaviors may be important to academic achievement among Latino high school students.

Two additional studies of adolescent Latino students also found beneficial effects of parents' involvement at home. Prelow and Loukas's (2003) study included 549 Latino youth ages 10-14. The highest achieving students in this study were given assistance with homework and encouragement about learning. Eamon's research (2005) included a nationally representative sample of 388 Latino adolescents. Similar to Prelow and Loukas's findings, the highest achieving students benefitted from cognitive stimulation in the home environment through reading materials and resources, in addition to school related discussions with their parents. In an intervention study with Puerto Rican kindergarten students, Lopez and Cole (1999) found significant spelling improvements after parents consistently implemented a spelling drill at home. Providing these families with a concrete strategy appeared to produce a direct improvement in performance.

In contrast to the findings in Ibanez (2004) and Prelow and Loukas (2003) that homework support is beneficial to achievement, results of Desimone's (1999) large scale study of eighth grade students indicate that homework help is negatively associated with reading achievement. However, Desimone additionally found that students' report of structure and rules in the home was positively associated with reading achievement. With the exception of Desimone's findings regarding homework assistance, studies to date suggest that parental support at home in the form of cognitive-intellectual activities, school related discussions, and homework support are associated with achievement. The inverse relationship between homework help and achievement in Desimone's research may be due to the fact that the struggling Latino students required additional help from parents, whereas higher achieving 8th grade Latino students may have been better equipped to work independently.

Latino School Involvement and Achievement

A small number of studies have evaluated the impact of Latino parents' school-based involvement practices on student achievement. Three of these studies focus exclusively middle and high school students. In one such study, Keith et al. (1998) evaluated the combined effects of parents' aspirations and communication with the school in a sample of approximately 11,000 Latino high school students from the NELS. Results indicated that these forms of parental involvement were an important predictor of GPA. In an additional study of middle and high school students, Kuperminc, et al. (2008) evaluated the relationships among student perceptions of school belonging, academic performance, and parent involvement, defined as involvement in school activities. Positive feelings of school belonging mediated the relationship between parental involvement and higher academic performance. Thus, students who perceived that their parents were involved in school felt a greater sense of belonging, which lead to academic gains. In contrast, Desimone's (1999) study of eighth grade students showed that having a parent who volunteers at school did not significantly predict achievement among Hispanics, while it did predict achievement among non-Latino white students.

In the only study of early elementary students, Durand (2008) used a nationally representative sample of Latino parents (n = 2,051) of kindergarten students from the Early Childhood Longitudinal Study, kindergarten (ECLS-K) class of 1998-99. Results showed that parent involvement in school activities (e.g. scheduled conferences, open-houses, and fundraising) significantly predicted children's early literacy skills. SES, however, served to moderate this relationship.

Overall, studies of Latino parent involvement in school suggest that communication with teachers and physical presence at school predict student achievement. However, results of Desimone's (1999) study suggest that volunteering in particular does not predict achievement among Latino students. Such a finding may reflect lower levels of involvement among Latino parents or that school involvement practices are not as beneficial to Latino students as they are to non-Latino white students. It is possible that other factors inhibited the effectiveness of Latino parent involvement in Desimone's study such as lack of culturally sensitive school outreach, inadequate instruction for ELLs (Iglesias & Fabiano, 2001) or limited incorporation of Latino culture into the school curriculum (Moll, Amanti, & Gonzalez, 1992). While Durand's (2008) study shows that Latino parental involvement in school is important to literacy development among kindergarten students, more research is needed at the elementary level to replicate this finding.

Latino Aspirations and Achievement

The influence of Latino parents' educational aspirations on their children's achievement is generally understudied. Keith and colleague's (1998) longitudinal study combined parents' aspirations for their children's achievement and their amount of communication with the school to yield a composite "involvement" score. This study found a relationship between involvement and achievement which suggests that aspirations may have contributed at some level. In contrast, using the same data set as

Keith and colleagues, Desimone (1999) found that parent-child discussions about post-high school plans were not significantly associated with achievement for Hispanics. One possible explanation is that "discussions" may be interpreted as conversations about possible careers rather than aspirations of attending higher education. While studies with racially diverse samples suggest that parents with higher expectations have students who achieve more (Englund et al., 2004; Fan & Chen, 2001, Hong & Ho, 2005) additional research in this area with Latino families is needed.

Demographic Factors and Achievement

Given Latino's lower SES than other demographic groups (Ramirez & DeLaCruz, 2002), they may be more likely to experience instability in the home, which may in turn lead to more limited parental involvement in education. An ethnographic study conducted by Tapia (2004) provides one example of the effect of the home environment on academic achievement in two Mexican and two Puerto Rican families from Tucson, Arizona and Philadelphia, Pennsylvania, respectively. While there were differences among the families such as parenting style and social support, their financial struggles were associated with emotional instability, residential mobility, and poorer academic performance among the children. The children in these case studies were initially high-achieving, yet their grades declined as the families moved, or struggled to find work. While the parents' lack of focus on their children's education may have ultimately contributed to the students' declining grades, it appeared that the parents' primary goals were to provide food and shelter for their families.

Summary

Overall, this small body of research suggests a link between student achievement and Latino parental educational involvement at home and school; however SES may have moderating effects on this relationship due to the many contextual barriers that result from economic instability. Further research is needed which evaluates the impact of homework assistance, volunteering, and parent aspirations on achievement. Given the dearth of research at the elementary level, additional studies should examine the impact of school involvement on achievement at this age-level.

Assessing Academic Achievement

Student learning may be evaluated in a variety of ways, ranging from teacher self-report to more standardized measures. The current dissertation therefore seeks to evaluate academic achievement comprehensively by including standardized tests as well as teacher self-report.

With the passage of the No Child Left Behind Act (NCLB) in 2002 at the federal level, performance on standardized tests has become increasingly central to defining academic success in our society (USDE, 2001b). Learning domains which are strongly emphasized across elementary school curricula include reading, writing, and arithmetic (Flanagan, Ortiz, Alfonso, & Mascolo, 2006). Therefore, standardized assessments tend to focus on these three domains. Standardized reading assessments generally measure word reading skills, fluency, and comprehension, while math assessments measure both computation and reasoning with numbers (Flanagan et al., 2006). In response to this test-based evaluation of student progress, many states have adopted high-stakes tests, exams students must pass in order to graduate from high school (Massachusetts Department of

Education, 2007; New York State Department of Education, 2004). In addition, sufficient performance on various norm-referenced measures, such as the Scholastic Aptitude Test (SAT; College Board, 2008) are required for acceptance into many U.S. colleges and universities. Standardized tests were included as an outcome variable in this dissertation, given the increasingly integral role of standardized tests in assessing reading and math skills in our society.

Teachers constantly evaluate students' academic performance in order to make appropriate referrals and instructional decisions (VanDerHeyden, Witt, Naquin, & Noell, 2003), determine grades, and more generally, set expectations for students (Bentz & Fuchs, 1993; Eckert, Dunn, Codding, Begeny, & Keinmann, 2006). Therefore, teacher self report of student performance is an important source of data to measure student achievement. Due to the subjective nature of self-reporting, the accuracy and validity of teacher judgments have been assessed in a number of studies. Hoge and Coladarci (1989) conducted a meta-analysis of sixteen studies comparing teacher's indirect (general rating of achievement) and direct (actual score on an achievement test) judgments of students' performance in reading and math. Median correlations between teachers' indirect and direct judgments and students' scores on standardized tests were 0.62 and 0.69, suggesting relatively high levels of agreement. More recent studies of teacher assessments support the accuracy of teacher judgments in both reading and math when compared with standardized measures (Demaray & Elliot, 1998; Kenny & Chekaluk, 1993). In addition to standardized measures, teachers' report of student performance in math and reading were used to assess academic achievement in this dissertation.

The Current Study

In sum, the research to date suggests that Latino parents are less involved in school that non-Latino white parents (Delgado-Gaitan, 1992; NCES, 2001). However, no studies have comprehensively and systematically compared patterns of home and school involvement between Latino and non-Latino white parents of elementary level students using a nationally representative sample. In addition, parental aspirations for children's attainment appear to contribute to both levels of parental involvement and student achievement (Griffith, 1998; Pomerantz et al., 2007), yet this has not been evaluated systematically at a national level. Many studies suggest that school outreach is important to parent involvement (Hoover-Dempsey, 2005; Greene, 2007), particularly among low income populations (Drummond & Stipek, 2004; Sheldon, 2005), yet few studies have considered parent perceptions of school outreach, specifically. In addition, while a small body of qualitative research indicates that Latino parents experience many barriers to educational involvement (Arzbugiaga, 2001; Delgado-Gaitan, 1991, 1992; Garcia-Coll, 2002), it is unclear which barriers are greatest, and how these barriers impact involvement among non-Latino white families. Using a nationally representative sample of elementary-level Latino and non-Latino white students, this study extended the current research to clarify 1) differences in levels and types of educational involvement including parent aspirations, 2) differences in parental perceptions of school outreach practices, and 3) differences in parental perceptions of barriers to home and school involvement. In addition, this study evaluated the relationships between parental perceptions of school outreach/barriers and types of involvement, and compared them between the two samples.

Finally, no studies to date have assessed the relationship between various types of Latino parent involvement and achievement among students at the elementary level. Although results of meta-analytic studies suggest that parental aspirations are the most significant predictor of student achievement, no studies have assessed this relationship among Latino families. Therefore, the current study extends the literature on the relationship between parental involvement and achievement by 1) including various types of involvement, most notably aspirations, and 2) using a nationally representative sample of Latino and non-Latino white students at the elementary level.

CHAPTER 3

METHODS

Introduction

Data in this study were drawn from the Early Childhood Longitudinal Study-Kindergarten (ECLS-K), collected by the National Center for Education Statistics (NCES). Access to this public data base was granted by the Project Officer at the National Household Education Surveys Program (NHES) at NCES. The ECLS-K is longitudinal in nature and follows a nationally representative sample of children from kindergarten to eighth grade. Beginning in the fall of 1998, data collection was conducted in the fall and spring of kindergarten, fall and spring of first grade, and the spring of third, fifth and eighth grades. This dissertation uses data collected from the spring of first grade and the spring of third grade. Data were collected from students, parents, teachers, and school administrators with particular focus on annual learning progress and transitions in the relationship between home and school experiences. Data were collected on aspects of the home environment, home educational activities, school and classroom environment, classroom curriculum, and teacher qualifications. This dissertation examines data collected from parents and teachers about the home environment, student achievement, various demographic characteristics, and the relationship between home and school.

Participants

Participants consisted of 6085 first grade students (4,772 non-Latino white, and 1,313 Latino) from the larger public database whose primary caregiver completed a parent interview. Data were extracted from this sample as follows: First, only students attending public school, as opposed to private or parochial school, were included so that the sample would not be balanced in favor of a not be balanced in favor of higher achieving, more affluent, demographic group. Second, only students for which direct academic assessment and teacher indirect assessment data were collected in 3rd grade, were included in the analysis. The students' primary caregiver and 3rd grade teachers were also surveyed. Only one caregiver was surveyed per child, and this was typically the mother but could also have been a father, stepparent, adoptive parent, foster parent, grandparent, another relative, or non-relative guardian, provided that they lived in the home and were familiar with the child's care and education.

Procedure

The ECLS-K employed a multi-staged probability sampling procedure to ascertain a nationally representative sample of kindergarten students in 1998-99. In the first stage, data were collected at the level of a county or group of counties, which was referred to as the primary sampling unit (PSU). In the second and third stages, schools within the PSU and students within these schools were sampled, respectively. One hundred PSUs were selected for the study, and 1,280 schools were sampled in the kindergarten year (with 133 added in the 1st grade). Of these, 953 were public schools and 460 were private schools. Approximately 23 students were targeted for sampling within each school. All students who were assessed during their kindergarten year were included in the first grade spring assessment, regardless of whether the student switched schools or had been retained in kindergarten for an additional year. In a process referred to as “freshening”, a random 50 percent sub-sample of students who had not participated in the initial kindergarten wave were included to ensure that the sample was not biased toward students who had attended kindergarten.

First grade students were sampled in the spring of 1999-2000 and again in the spring of the 2001-02 school years. A total of 103 field supervisors and 317 assessors were trained to conduct child assessments and parent interviews over a three week period using written exercises, role plays, and training videos. Letters were sent to schools and previously-enrolled families in the winter of 2000 to inform them that data collection would begin in March, 2000. Students for the freshened sample (students who had not attended kindergarten) were selected from the same schools as children who were included in the sample the previous year. They were selected by choosing the name subsequent to a previously-enrolled 1st grade student on a class roster list. If this student had not enrolled in kindergarten, the students’ parents were then asked to participate in the study. If the child had enrolled in kindergarten, the process of selecting the subsequent name on the roster was repeated.

To administer the direct child assessment, a trained assessor visited the children in their schools. Children were assessed in an untimed one-on-one format. The direct child assessment involved collecting information about children's reading and mathematics skills and knowledge, their general knowledge (i.e. science and social studies) in kindergarten and first grade, and their science knowledge in third grade. This dissertation exclusively evaluated third grade scores on reading and math assessments. Reading and math assessments were administered by assessors using an easel, and assessors read all math and reading questions aloud while children responded in workbooks. Reading passages were administered in a booklet format, which enabled children to refer back to the story while answering reading assessment questions.

To collect information from parents, a trained interviewer phoned the parent at their home and conducted a 45-50 minute interview. Computer-assisted interviewing methods were used to record the parent's answers. If the child's family did not have a telephone, the interview was conducted in person.

Teachers were contacted in their school and asked to complete a three part questionnaire. Depending on the school, questionnaires were distributed either by mail or during pre-assessment visits. Teachers were compensated seven dollars for each child rating scale that they completed.

Measures

Direct Child Assessments

Consistent with the national trend towards standardized testing (USDE, 2001b), the research team at NCES developed standardized tests to assess students' math and reading skills. In approximately one hour, children completed direct, individual assessments that measured skills in the following domains: reading (language and literacy), math, and general knowledge (science and social studies). All measures were designed for the ECLS-K. National and state standards were used to derive these measures, including the National Assessment of Educational Progress (NAEP), the

National Council of Teachers of Mathematics (NCTM), the American Association for the Advancement of Science (AAAS), and the National Academy of Science (NAS), in addition to the documents related to scope and sequence from state assessments. Each of the direct achievement measures was adaptive in nature. Students initially completed a routing test to broadly determine their skill level, followed by a second stage of measures which more appropriately measured the student's academic skill levels. This dissertation focused exclusively on 3rd grade measures of reading and math.

The math measure for 3rd grade was developed based on curriculum standards of the NCTM and assesses the following skills: number sense, properties, operations, measurement, geometry, spatial sense, data analysis, statistics, probability, patterns, algebra, and functions. Standards for the reading measure were developed based on NAEP's 1992 and 1994 reading frameworks, which included initial understanding, developing interpretation, personal reflection and response, and demonstrating a critical stance (National Assessment Governing Board, 1999). NAEP's standards were designed for grades four and higher and therefore needed to be adapted to include skills developed in early grades, specifically familiarity with print, letter recognition, phonemes, and vocabulary.

A variety of methods were used to score measures, including Item Response Theory (IRT) scale scores, norm-referenced standardized scores (T-scores), and proficiency probability scores which are criterion referenced and derived from the IRT model. IRT scaled scores are calculated in a way that takes into account each students' pattern of correct, incorrect, and omitted responses, as well as the level of difficulty of all items. While students responded to a variety of different questions at the second stage of the assessment (following the routing test), a core set of items made it possible to derive a common scale (NCES, 2001). As such, the IRT method estimates the score a child would have obtained if she had completed all of the items.

Reliabilities were derived from the theta estimate, specifically the IRT scale scores, T-scores, and proficiency probabilities. Reliabilities were high, ranging from .88 to .96 for all measures. A number of methods were used to assess the validity of the measures which included comparing them to national and state performance standards and state and commercial assessments. The measures were also reviewed by curriculum experts and teachers.

Teacher Questionnaires

Given the empirical support for the ability of teachers to accurately judge student performance (Coldarci, 1986; Demaray & Elliot, 1998; Hoge & Coladarci, 1989; Kenny & Chekaluk, 1993), teacher reports of students' academic progress were also included in the study. Teachers completed a three-part questionnaire. Parts A and B asked about classroom characteristics and overall school climate, respectively, and part C included 21 questions about the child's academic performance. Only one question from part C was considered for the purpose of this dissertation: "Overall, how would you rate this child's academic skills in each of the following areas compared to other children of the same grade level?" The areas of interest for this dissertation included "language and literacy" and "mathematical skills". Responses were on a 5-point Likert scale format and ranged from below average to far above average.

Parent Interviews

The parent or caregiver was given a structured interview for 45 to 50 minutes in person or over the phone, using computer assisted interviews. This dissertation focuses exclusively on interview data collected from parents in 2001, during the spring of the students' first grade year. Topics of interest included parent characteristics (e.g. age, highest level of education, language spoken at home, and income level), family structure (e.g. number of parents in home), home- and school-based involvement practices, school outreach practices, and potential barriers to parents' educational involvement.

With respect to school-based involvement practices, parents where asked if they had participated in any of the following since the beginning of the school year: 1) attended an open house, 2) attended a PTA meeting, 3) gone to a regularly scheduled parent conference, 4) attended a school event, 5) volunteered at the school, or 6) engaged in any fundraising. Responses were in a yes/no format. Regarding home-based involvement, parents were asked how often they did any of the following in with their child in a typical week: 1) practiced reading, writing or working with numbers, 2) told stories, 3) played games or puzzles, 4) talked about nature or do science projects, 5) read books, and 6) helped their child with homework. Response options included not at all, once or twice per week, three to six times per week, or daily. An additional topic of interest was parents' educational aspirations for their child, which measured how far the primary caregiver expected his or her child to go in school. Response choices included: 1) less than a high school diploma, 2) graduate from high school, 3) attend two or more years of college, 4) finish a four or five-year college, 5) earn a master's degree, or 6) finish a Ph.D., MD, or other advanced degree. Interviews were conducted in Spanish when appropriate.

To assess school outreach practices, parents responded to four questions regarding how well the school had done with each activity during the school year: 1) informed them of how the child is doing between report cards, 2) helped them understand what children at their child's age are like, 3) notified them of volunteer opportunities, and 4) provided workshops or advice to help children learn at home. Response options included: doesn't do this at all, just o.k., does this very well. To assess barriers to involvement, parents were asked whether any of the following reasons made it hard for them to participate in activities at their child's school: 1) no childcare keeps you from going to meetings and events, 2) family members cannot get off from work, 3) problems with safety going to school, 4) problems with transportation and 5) your family speaks a language other than English. Responses were in a yes/no format.

Data Analysis

As previously described, students were excluded from the sample who attended private school and for whom direct academic assessment or teacher indirect assessment data were not collected in 3^{rd} grade. Once the sample was extracted, data were evaluated for missing data points in addition to violations of normality, outliers, and non-linearity. Child-level data were weighted to adjust for differential selection probabilities at each stage of sampling, and to compensate for the effects of non-response, differential selection probabilities and differential coverage of certain populations (NCES, 2002). In addition, the accuracy of the sample estimates derived from data collected were evaluated by estimating the variance of these estimates (NCES, 2002).

Demographic data were calculated in the form of descriptive statistics and frequencies for the Latino and non-Latino white samples, including child, caregiver and teacher-level characteristics. The parental involvement literature to date suggests that parental involvement can be delineated into forms of home-based involvement and school-based involvement (Epstein & Hollifield, 1996; Greene et al., 2007; Grolnick et al., 1997; McWayne et al., 2004). Therefore, the current dissertation sought to clarify whether the parent involvement interview items used in this data set represented the expected factors of home-based involvement and school-based involvement. To this end, a principal components factor analysis was computed using a varimax rotation. All factors with eigenvalues over 1.0 were retained. In addition, a scree test was used to determine which factors to retain.

To address the first research question, multivariate analysis of variance (MANOVA) was used to determine whether there were differences in the educational involvement practices of Latino parents as compared to those of Non-Latino white parents. MANOVA was used address question 1A to determine whether there were differences in perceptions of outreach practices. A chi-square test was used to answer question 1B regarding parent perceptions of barriers to involvement.

The second research question considered whether school outreach language and contextual factors function differently, between Latino and non-Latino white groups as barriers or supports to parent involvement. To answer this question, correlations were run between each of these factors (school outreach and barriers) and parent involvement variables.

Multiple regression was used to address the third research question of whether there were differences in the relationship between types of parent involvement in first grade and achievement in third grade among Latino and non-Latino white students. Academic achievement scores for Latino students in 3rd grade were entered as the criterion variable, and types of parent involvement identified through the confirmatory factor analysis and educational aspirations, were entered as predictor variables. Two separate regressions were computed with the respective achievement criterion variables, one using the direct child assessment and the other using teacher report of student academic performance. Separate sample t-tests were performed between reading and math scores on the direct child assessment and teacher report to determine whether significant differences existed. No significant differences were found, and therefore composites of reading and math achievement were created to represent an overall achievement score. Hierarchical regression was used to control socioeconomic differences between the Latino and non-Latino white families, with SES entered first into the regression.

CHAPTER 4

RESULTS

All data analyses were performed in SPSS using sample weights to adjust for differential selection probabilities at each stage of sampling and differential coverage of certain populations. Sample weights were provided with the Early Childhood Longitudinal Study-Kindergarten (NCES, 2002). In addition, to account for the clustered nature of the sampling procedures, variance stabilization procedures were approximated using the design effect (DEFF). Approximation involved 1) normalizing the sample weight (sample weight * [sample n/population N]), and 2) adjusting the weight so that an adjusted standard error was produced in each analysis (normalized weight/ mean DEFF). More information about these procedures is available in the ECLS-K manual (NCES, 2002).

Before conducting any analyses, the file was examined for missing data. With the exception of missing data regarding teachers' year of birth (27%), years of teaching experience (25%), and highest educational level (25%), all of the other variables were missing less than 15% of their data points. Thus, for each analysis that included missing data, missing cases were dropped. Data were also examined for violations of normality, outliers, and non-linearity; no violations of assumptions were found.

Descriptive Statistics

The present sample consists of 6085 children who attended public school; 4,772 (78%) of these students were racially categorized as non-Latino white, and 1,313 (22%)

were Latino. The students' primary caregivers reported information about a variety of demographic variables in the spring of 2000 during their children's first grade year. Information about the reporting caregiver's relationship to the subject (i.e. mother, father, etc.) was suppressed to protect the confidentiality of the respondents. The means, standard deviations, and frequencies of all variables are presented in Table 1. Non-Latino white children (t_{3320}= 4.66, p < .001) and caregivers (male: $t_{907.9}$= 1.65, p < .001; female: t_{3272}= 7.10, p < .001) were slightly older than those in the Latino sample; however, the effect of this difference was small with age accounting for approximately 1% of the variance in differences between the two samples.

The socioeconomic status (SES) of these families was computed at the household level based on the following five components: 1) father/male guardian's level of education, 2) mother/female guardian's level of education, 3) father/male guardian's occupation, 4) mother/female guardian's occupation, and 5) household income. Occupation was coded to reflect the average of the 1989 General Social Survey (GSS) prestige score of the occupation (Nakao & Treas, 1992). Each component was converted to a z-score. SES levels were computed into a composite score and subsequently divided into "quintiles" with the first quintile being the lowest level (NCES, 2002). Significantly more Latino families' SES levels fell in the lowest quintile (40%) than non-Latino white families (9%; χ^2_4= 515.09, p <.001). Conversely, only 6% of Latino families SES levels fell in the highest quintile, in contrast to 25% of non-Latino white families' SES levels. The effect of this difference was moderate, as assessed by the obtained Phi of .41.[1]

[1] The effect size criteria for Phi, a test on frequencies, are as follows: small =.10; medium = .30; large = .50 (Huck, 2008).

The poverty level of families in the sample was also computed based on preliminary census poverty thresholds for 1999 that vary by household size; households in which parent income fell below the appropriate threshold were classified as impoverished. For example, if a household contained two members and the household income was lower than $11,214, then the household was considered to be below the poverty threshold. Significantly more Latino families in the sample lived below the poverty threshold (36%) as compared to non-Latino white families (11%), χ^2_1= 272.80, p <.001. The obtained Phi of .29 suggests that the effects of such differences are small to moderate.

Significantly more non-Latino white families had two caregivers living in the home (83.7%; χ^2_1= 27.87, p <.001) as compared with Latino families (75.1%). The effect of this difference was small, however, as assessed by an obtained Phi of .10. Regarding language status, significantly more Latino families reported that a language other than English was primarily used in the home (49%) than non-Latino white families (1%; χ^2_2= 1300, p <.001). The obtained Phi of .63 indicates a strong relationship between race and language status.

Table 1
Demographic Characteristics of Families; Spring, 2000
(n = 6,085)

	Non-Latino white Families n=4,772 % M(SD)	*Latino Families* n=1,313 % M (SD)	*Test Statistic*	*Effect Size*	*Missing Data (%)*
Child Sex					
Male	50.6	49.5	$\chi^2(1)= .29$,		
Female	49.4	50.5	$p = .591$	--	0
Child Age (months)	87.2 (4.2)	86.3(4.2)	$t(3320)=$ 4.66, $p < .001$	$\eta_p^2=$ .01	6
Caregiver Age (years)					
Male	37.1 (6.5)	35.5 (7.2)	$t(907.9)=$ 1.65, $p < .001$	$\eta_p^2=$ .01	15
Female	34.6 (5.9)	32.9 (6.3)	$t(3272)=$ 7.10, $p < .001$	$\eta_p^2=$ .01	3.4
Socioeconomic status					
First quintile (lowest)	9.0	40.0			
Second quintile	19.5	23.5			
Third quintile	23.0	17.5	$\chi^2(4)=$		
Fourth quintile	23.9	13.1	515.09,		
Fifth quintile	24.7	5.8	$p <.001$	Ø = .39	0
Poverty Threshold			$\chi^2(1)=$		
Above	89.4	64.5	272.80,		
Below	10.6	35.5	$p <.001$	Ø = .29	0
Primary language in home					
English	98.1	50.5	$\chi^2(2)=$		
Non-English (Spanish)	1.3	49.3	1300.0, $p <.001$	Ø = .63	0
Family type (in home)			$\chi^2(1)=$		
Two Parents	83.7	75.1	27.87,		
One Parent	16.3	24.9	$p <.001$	Ø = .10	2.5

Demographic data were also collected from participants' teachers when they were in 3rd grade (Table 2). Information about teachers in the ECLS-K dataset are presented at the child-level, so it is unknown how many students in the sample were in the same class.

Descriptive statistics represent the percentage of children whose teachers had specified characteristics, and it is possible that these means and frequencies are presented more than once for teachers who have multiple children in the study. Information about teachers' gender and race were suppressed to protect confidentiality and anonymity. Results of all analyses of teacher characteristics should be interpreted with caution given the percentage of missing data points (25-27%).

Teacher characteristics included age, highest level of education, and years of teaching experience. An independent samples t-test showed that teachers of non-Latino white children were significantly older than teachers of Latino children, $t_{2413} = -4.16, p < .001$. However, the size of this difference was small as assessed by partial eta squared, with age accounting for approximately 1% of the variance. Teachers of non-Latino white students had achieved significantly higher levels of education than teachers of Latino students, $\chi^2_3 = 12.56$, $p < .001$, but the effect of this difference was also small (.07) as assessed by Phi. Teachers of non-Latino white children had significantly more years of teaching experience than those of Latino children, $t_{2475} = -7.09$, $p < .001$. However, the size of this difference was small as assessed by partial eta squared, with years of teaching experience accounting for 2% of the variance.

Table 2
Percentage Distribution and Means of Spring, 2000 First Graders, by selected Third-grade Teacher Characteristics

	Non-Latino white Students *n*=4,772 % M(*SD*)	*Latino Students* *n*=1,313 % M (*SD*)	*Test Statistic*	*Effect Size*	*Missing Data* (%)
Age (years)	41 (11)	39 (11)	$t(2431)= -4.16, p < .001$	$\eta_p^2= .01$	27
Highest Level of Education:					
High School	21.0	22.4			
Bachelors	30.0	36.0			
Masters	38.9	34.4			
Specialist /Doctorate	10.1	7.1	$\chi^2(3)= 12.56, p <.001$	Ø = .07	25
Years of Teaching Experience	15.4 (10)	12.0 (9)	$t(2475)= 7.09, p < .001$	$\eta_p^2= .02$	25

Research Question 1

Do Latino and non-Latino white parents report differences in school- and home-based educational involvement practices and educational aspirations?

Prior to evaluating differences in the educational involvement practices of Latino and non-Latino white parents, the types of involvement were analyzed further. To determine whether the hypothesized dimensions of “home-based” and “school-based” involvement existed among the variables in the dataset, a principal components factor analysis with a varimax rotation was conducted (Table 3). The factor solution was determined using the scree plot method. When the extraction was run, it was limited to only two factors given the hypothesized home and school dimensions. It was decided that factors extracted would only comprise items with a factor loading greater than .30. The factor solution was comprised of twelve items, which were grouped into two factors that accounted for 32.7% of the variance. Factor 1, defined as *Home Involvement* (eigenvalue = 2.3), accounted for 19.3% of the variance, and included six items measuring how often parents conduct the following activities: 1) read to their child, 2) practiced reading, writing, or working with numbers, 3) told stories, 4) played games, 5) talked about nature or do science projects, and 6) helped with homework. Response options ranged from “not at all” = 1 to “daily” = 4. Factor 2, defined as *School Involvement* (eigenvalue = 1.6), accounted for 13.3% of the variance, and included six items measuring whether the caregiver had done any of the following at school in the past year: 1) acted as a volunteer, 2) attended an open house, 3) attended a school event, 4) participated in fundraising, 5) attended a PTA meeting, and 6) attended a parent-teacher conference. Response options were dichotomous (yes =1, no = 0). To assist in the interpretation of the factors, factor scores were converted to T-Scores (mean of 50 and standard deviation of 10).

Table 3
Summary of Factor Analysis Results for Parent Involvement Variables

	Factor Loadings	
Item	*Home Involvement*	*School Involvement*
Read to child	**.69**	.10
Practice reading, writing, numbers	**.68**	.01
Tell child stories	**.64**	.03
Play games	**.54**	.10
Teach child nature	**.52**	.10
Help with homework	**.32**	.01
Volunteer at school	.06	**.68**
Attend open house	.07	**.63**
Attend school event	.03	**.57**
Participate in fundraising	.07	**.57**
Attend PTA meeting	.03	**.49**
Attend parent-teacher conference	.06	**.34**
Eigenvalues	2.3	1.6
% of variance	19.3	13.3

Note: Factor loadings over .30 appear in bold.

To address the first research question of whether Latino and non-Latino white parents report differences in home- and school-based educational involvement practices and educational aspirations, a multivariate analysis of variance (MANOVA) was performed. The educational aspirations variable was not included in the factor analyses given that it represents a belief rather than a behavioral manifestation of parent involvement (Chrispeels & Rivero, 2003; Englund et al., 2004; Griffith, 1998). Table 4 summarizes the means and standard deviations for each of these variables.

Table 4
Descriptive Statistics on Parent Involvement Variables

	Non-Latino white Parents % or M(*SD*)	*Latino Parents* % or M(*SD*)
Educational Aspirations	3.9(0.9)	4.2(1.2)
Home Involvement	50.4(9.8	48.8(10.6)
Help with Homework	3.5(0.7)	3.6(0.8)
Tell Stories	2.8(0.9)	2.7(0.9)
Play Games	2.7(0.8)	2.5(0.8)
Teach Nature	2.2(0.8)	2.1(0.8)
Practice Reading, Writing, Math	3.4(0.7)	3.3(0.8)
Read to Child	3.2(0.8)	3.0(0.9)
School Involvement	51.1(9.7)	46.5(10.1)
Attended an Open House	84%	75%
Attended a PTA Meeting	40/%	58%
Attended Parent-teacher Conference	91%	88%
Attended School Event	80%	68%
Volunteered	57%	33%
Fundraised	72%	45%

Results of the MANOVA are depicted in Table 5. The overall score of parent involvement analyses showed that there were significant differences between the two groups, F (3,2808) = 79.39, $p < .001$. Although Latino parents had significantly higher educational aspirations for their children, F (1, 2809) = 86.57, $p < .001$, non-Latino white parents were significantly more involved at home, F (1,2809) = 12.21, $p < .001$, and at school, F (1,2809) = 96.59, $p < .001$. However, the effect sizes of home- and school-based involvement and educational aspirations as assessed by partial eta squared were small.

Table 5
Results of the MANOVA on Parent Involvement Variables

Source of variance	*Dependent variable*	*df*	*F*	*Partial eta squared*
Ethnic Group	Across all types of involvement	3, 2808	79.39**	.08
	Home involvement	1, 2810	12.21**	.00
	School involvement	1, 2810	96.59**	.03
	Educational aspirations	1, 2810	86.57**	.03

***p*<.001

Due to the statistically significant differences in SES levels between the two groups, a MANCOVA was performed with the same variables, using SES as a covariate (Table 6). Results indicate similar patterns of differences between the two groups: the non-Latino white parents' home and school involvement behaviors remained significantly different from Latino parents' after controlling for SES. In addition, the higher educational aspirations of Latino parents' explained more of the variance between the two groups (6%) and had a medium as opposed to a small effect.

Table 6
Results of the MANCOVA on Parent Involvement Variables

Source of variance	*Dependent variable*	*Df*	*F*	*Partial eta squared*
Ethnic Group	Across all types of involvement	3, 2807	69.17**	.07
	Home involvement	1, 2809	6.85*	.00
	School involvement	1, 2809	5.66*	.00
	Educational aspirations	1, 2809	182.87**	.06

***p*<.001, **p*<.05

As an exploratory analysis, an additional MANCOVA was run with home and school-based involvement variables entered individually as dependent variables, and ethnic group as the independent variable (Table 7). The purpose of this analysis was to determine whether certain types of home and school involvement distinguished the two groups more significantly than others. SES was again entered as a covariate given the differences found in the previous analyses (Tables 5 and 6). The overall score of parent involvement analyses again showed that there were significant differences between the two groups, F (13, 2797) = 21.35, $p < .001$. Results indicated that Non-Latino white parents reported significantly higher levels of the following: volunteering at school, fundraising, playing games with their children, and practicing reading, writing, and numbers. However, none of these differences was especially meaningful, as indicated by the small effects of partial eta squared. In contrast, the Latino parents reported significantly higher levels of attendance at PTA meetings and educational aspirations for their children. While the effect size of the differences in PTA meeting attendance was small, it was medium in relation to educational aspirations, suggesting that Latino parents' aspirations are meaningfully higher than non-Latino white parents' educational aspirations for their children. No significant differences were found between Latino and non-Latino white parental perceptions of how often they read, told stories, or talked about nature with their child, helped with homework, and attended open houses or school events.

Table 7
Results of the exploratory MANCOVA on Individual Parent Involvement Variables

Source of variance	*Dependent variable*	*df*	*F*	*Partial eta squared*
Ethnic Group	Across all types of involvement	13, 2797	21.35**	.09
	Aspirations	1, 2809	182.87**	.06
	Attend open house	1, 2809	.04	--
	Attend PTA meeting	1, 2809	18.64**	.01
	Attend teacher conference	1, 2809	.26	--
	Attend school event	1, 2809	2.66	--
	Volunteer at school	1, 2809	22.33**	.01
	Participate in fundraising	1, 2809	22.37**	.01
	Helps with homework	1, 2809	2.22	--
	Tells stories	1, 2809	.93	--
	Plays games/puzzles	1, 2809	23.11**	.01
	Teaches nature/science	1, 2809	.88	--
	Practice reading/writing/numbers	1, 2809	5.23*	.00
	Read to child	1, 2809	1.10	--

**p<.001, *p<.05

Research Question 1a

Do Latino and non-Latino white parents report differences in their perceptions of school outreach practices?

To address the first subsidiary research question of whether Latino and non-Latino white parents report differences in their perceptions of school outreach practices, a multivariate analysis of variance (MANOVA) was performed. The analysis included each of these perceptions as dependent variables, including how well the school 1) informed them of how the child is doing between report cards, 2) helped them understand what children at their age are like, 3) notified them of volunteer opportunities, and 4) provided workshops to advise them on how to help their child learn at home (Table 9). Table 8 summarizes the means and standard deviations for each of these variables by subgroup.

Responses were coded as follows: “doesn’t do this at all” =1; “just ok” =2; “does this very well” =3.

Table 8
Descriptive Statistics on School Outreach Practices

	Non-Latino white parents		*Latino parents*	
Measure	*M*	*SD*	*M*	*SD*
How child is doing	2.52	.680	2.64	.567
Help understand child	2.32	.724	2.40	.703
Chance to volunteer	2.76	.513	2.58	.629
Help learn at home	2.44	.696	2.47	.670

The overall score of school outreach analyses showed that there were significant differences between the two groups, F (4, 2910) = 29.26, p < .001. Latino caregivers perceived that their children’s schools as making greater efforts to inform them of how their children are doing, F (1, 2913) = 19.37, p < .001, and helping them understand their children’s development F (1, 2913) = 7.84, p < .001; however, these differences account for less than 1% of the variance as assessed by partial eta squared. Non-Latino white parents reported that their children’s schools were significantly more likely to inform them of chances to volunteer F (1, 2913) = 62.16, p < .001, yet partial eta squared indicated that these differences account for only 3% of the variance. No significant differences were found between non-Latino white and Latino parents’ perceptions that schools helped their children learn at home, F (1, 2913) = .99, p = .320.

Table 9

Results of the MANOVA on School Outreach Variables

Source of variance	*Dependent variable*	*df*	*F*	*Partial eta squared*
Ethnic Group	Across all types of outreach	4, 2910	29.26**	.04
	Inform of child progress	1, 2913	19.37**	.00
	Help understand child	1, 2913	7.84*	.02
	Chance to volunteer	1, 2913	62.16**	.02
	Help learn at home	1, 2913	.99	--

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

A MANCOVA was additionally performed to ensure that differences were not primarily due to SES (Table 10). While Latino and non-Latino white parents' perceptions of school outreach were less significantly different after controlling for SES, the same patterns of difference were found.

Table 10

Results of the MANCOVA on School Outreach Variables

Source of variance	*Dependent variable*	*df*	*F*	*Partial eta squared*
Ethnic Group	Across all types of outreach	4, 2909	14.85**	.02
	Inform of child progress	1, 2912	9.92*	.00
	Help understand child	1, 2912	5.50*	.00
	Chance to volunteer	1, 2912	29.72*	.01
	Help learn at home	1, 2912	.60	--

**p<.001, *p<.05

Research Question 1b

Do Latino and non-Latino white parents report differences in language and contextual barriers (working hours, childcare, safety, transportation) to school involvement?

To address the second subsidiary question of whether Latino and non-Latino white parents reported differences in their perceptions of barriers to educational involvement, a chi-square test was performed (see Table 11), including each of these perceptions as dependent variables. These barriers included 1) language problems, 2) lack of childcare,

3) work schedule conflicts, 4) problems with safety going to school, and 5) problems with transportation. Table 11 summarizes the means and standard deviations for each of these variables by subgroup. Responses were in a yes/no format (yes = 1, no = 2).

The overall findings from chi-square analyses showed that Latino caregivers perceive significantly more barriers to involvement than non-Latino white parents, including language barriers, $\chi^2(1)$=254.33, p < .001, lack of childcare, $\chi^2(1)$=15.95**, work schedules, $\chi^2(1)$=7.44**p < .001, neighborhood safety, $\chi^2(1)$=43.09**, p < .001, and problems with transportation, $\chi^2(1)$=29.78**, p < .001. The language barrier had a medium effect on the relationship between race and barriers to involvement as assessed by Phi (0.3). Lack of childcare, problems with transportation, work schedules and neighborhood safety each had only a small effect.

Table 11
Results of Chi-square on Barriers to Involvement

Type of Barrier	*Latino*		*Non-Latino white*		*Test Statistic*	*Effect Size*
Percentage	Yes	No	Yes	No	χ^2	Phi
Language barrier	12.4	87.6	.6	99.4	$X^2(1)$=254.33**	.30
Lack of childcare	26.1	73.9	19.5	80.5	$X^2(1)$=15.95**	.05
Work schedule	55.0	45.0	49.5	50.5	$X^2(1)$=7.44**	.01
Safety going to school	5.5	94.5	1.4	98.6	$X^2(1)$=43.09**	.11
Problems with transportation	6.8	93.2	3.7	96.3	$X^2(1)$=29.78**	.09

**p<.001

Research Question #2

Are there differences in the relationship between Latino and non-Latino white parents' involvement practices and school outreach, language, and contextual factors?

To address the second research question of whether school outreach, language and contextual factors functioned as barriers or supports to parent involvement, correlations were run between each of these factors and the parent involvement variables (Table 12). Among the Latino parents, significant positive associations were found between home-based involvement and efforts of schools to help parents to understand their child (r=.140**) and help their child to learn at home (r=.134**). Among non-Latino white parents, higher levels of home-based involvement were strongly, positively associated with all of the school outreach variables, including informing parents of how their child was doing (r=.093**), helping parents to understand their child (r=.112**), and helping their child to learn at home (r=.101**). With respect to barriers to home involvement, work conflicts were significantly negatively correlated in the non-Latino white sample (r=.-.068**) while language problems were negatively correlated in the Latino sample (r=.-.143**). The effect sizes of the relationships between each of variables and home involvement were determined using the coefficient of determination (r^2). Results indicate that although many of the relationships were significant, they were not especially meaningful, with each accounting for less than 3% of the variance in home involvement behaviors.

In the Latino sample, school-based involvement was most strongly, positively correlated with invitations to volunteer (r=.204**), followed by efforts to help parents understand their children's development (r=.086*). In the non-Latino white sample all of the outreach practices, including informing parents of how their child was doing (r=.109**), helping parents to understand their children (r=.135**), providing invitations to volunteer (r=.173**), and helping their child learn at home (r=.070**), were significantly and positively associated with school involvement. Language problems (r=-.095**) and lack of childcare (r=-.076*) were significantly and negatively correlated to school-based involvement in the Latino sample. In the non-Latino white sample, language problems (*r*=-.053**), lack of childcare (*r*=-.079**), work conflicts (*r*=-.185**), and transportation problems (*r*=-.127**) were all negatively correlated with school-based involvement. However, the finding that language problems and transportation problems posed a significant barrier among non-Latino white parents should be interpreted with much caution; these correlations were based on data from less than 5% of the sample. With respect to effect sizes, results again suggest that although these relationships are significant, they are not especially meaningful, each accounting for less than 5% of the variance in school involvement behaviors.

Table 12
Inter-correlations between Supports and Barriers to Involvement

	Home Involvement		School Involvement	
	Non-Latino white	*Latino*	*Non-Latino white*	*Latino*
Supports				
How child is doing	.093**	.054	.109**	.041
Help understand child	.112**	.140**	.135**	.086*
Chance to volunteer	--	--	.173**	.204**
Help learn at home	.101**	.134**	.070**	.046
Barriers				
Language problem	-.010	-.143**	**-.053****	-.095**
No childcare	--	--	-.079**	-.076*
Work conflict	-.068**	-.030	-.185**	-.065
Unsafe neighborhood	--	--	-.019	-.013
Transportation problems	--	--	**-.127****	-.068

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

Note: *Bolded values should be interpreted with caution; correlations are based on less than 5% of the sample.*

Research Question 3

Are there differences in the relationship between types of parent involvement in first grade and achievement in third grade among Latino and non-Latino white-Latino white students?

Prior to addressing research question 3, the relationships among the achievement variables, with teacher rating and standardized tests were analyzed to determine whether composite variables could be computed. Table 13 presents inter-correlations among the achievement variables, including the standardized math and reading achievement scores, and teacher reports of overall language and math performance. Since correlations between standardized achievement variables (r=.74**) and teacher-rating variables (r=.75**) were strongly, positively correlated, composite variables of both Total Achievement and Total Teacher Rating were computed.

Table 13
Inter-correlations among Achievement Variables

	1.	2.	3.
1. Reading Achievement	—		
2. Math Achievement	.736**	—	
3. Teacher- Language	.707**	.594**	—
4. Teacher- Math	.590**	.653**	.747**

***p< .01*

To answer research question 3, hierarchical multiple regression analyses were computed with achievement scores and teacher ratings as dependent variables and SES and types of parental involvement (home, school, and aspirations) as independent variables. Specifically, two hierarchical regressions were run with each racial group (Latino and non-Latino white-Latino white), using either achievement score or teacher ratings as dependent variables. Given the significantly lower SES levels of Latino families compared to non-Latino white-Latino white families in this sample and the strong, positive correlations between SES and achievement (Table 16), SES was entered into the first step of the regression and types of parent involvement (home, school, and aspirations) were entered in the second step. Descriptive statistics on student achievement are presented in Table 14, and inter-correlations among these variables are presented in Table 15.

Table 14
Descriptive Statistics for Achievement Variables

	Non-Latino white-Latino white students		*Latino students*	
Measure	*M*	*SD*	*M*	*SD*
Achievement Score				
Reading	123.23	24.00	108.38	24.52
Math	97.36	20.12	85.99	20.98
Teacher Rating				
Language	3.26	.90	3.00	.89
Math	3.20	1.02	2.91	.96

Table 15
Inter-correlations among Achievement Composites, Types of Parent Involvement, and SES

	Non-Latino white		Latino	
	Achievement	*Teacher Report*	*Achievement*	*Teacher Report*
SES	.406**	.321**	.355**	.192**
Home Involvement	-.070**	-.055**	.049	.021
School Involvement	.285**	.237**	.185**	.135**
Aspirations	.319**	.260**	.103**	.099**

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

Results of regressions using achievement as the dependent variable are summarized for non-Latino white and Latino samples in Table 16. The model constructs for the non-Latino white sample accounted for a small but significant 21% of the variance, $F(4, 2435) = 166.98$, $p < .001$, in students' academic achievement on standardized measures. Results showed that higher educational aspirations and higher levels of school involvement, and lower levels of home involvement in first grade predicted higher achievement in third grade over and above the significant variance in achievement scores accounted for by SES. As revealed by a comparison of the standardized regression coefficients, SES exerted the greatest effect on achievement (*Beta* = .28), followed by aspirations (*Beta* = .19) and then school involvement (*Beta* = .13).

The model constructs for the Latino sample, which also used the standardized achievement score as the dependent variable, accounted for a smaller, but again significant 13% of the variance, $F(4,775) = 29.08$, $p < .001$. Results showed that higher educational aspirations in first grade predicted higher achievement in third grade over and above the significant variance in achievement scores accounted for by SES. In the Latino sample, however, school involvement only approached significant levels, and home involvement did not significantly predict achievement. Standardized regression coefficients revealed that SES exerted the greatest effect on achievement (*Beta* = .32), followed by aspirations (*Beta* = .08).

Table 16

Summary of Hierarchical Regression Analyses for Variables Predicting Achievement

Variable	*F*	*Adj.* R^2	*B*	*SE B*	*Beta*	*T*	*Sig*
Non-Latino white							
Step 1 SES	461.04**	.159	12.74	.59	.40	21.47	.000
Step 2	166.98**	.214					
SES			8.97	.65	.28	13.77	.000
Aspirations			7.90	.80	.19	9.92	.000
Home Involvement			-3.49	.75	-.08	-4.64	.000
School Involvement			5.50	.82	.13	6.67	.000
Latino							
Step 1 SES	105.24**	.119	11.36	1.11	.346	10.26	.000
Step 2	29.08**	.127					
SES			10.57	1.18	.32	8.94	.000
Aspirations			2.85	1.15	.08	2.50	.013
Home Involvement			-.29	1.33	-.01	-.214	.830
School Involvement			2.55	1.46	.06	1.75	.081

*P<.001***

Results of regressions using the teacher rating as the dependent variable were similar to those in the previous regressions and are summarized for non-Latino white and Latino samples in Table 17. The model constructs for the non-Latino white sample accounted for a small but significant 14% of the variance, $F(4, 2435) = 275.99$, $p < .001$, in students' teacher-reported performance. Consistent with the previous regression, results showed that higher SES, educational aspirations, levels of school involvement, in addition to lower levels of home involvement in first grade predicted higher teacher-reported performance in third grade over and above the significant variance in teacher-report accounted for by SES. As revealed by a comparison of the standardized regression coefficients, SES again exerted the greatest effect on teacher- report (*Beta* = .22), followed by aspirations (*Beta* = .16) and then school involvement (*Beta* = .12).

The model constructs for the Latino sample, which also used teacher-reported performance scores as the dependent variable, accounted for a smaller, but again significant 4% of the variance, $F(4,2431) = 9.57$, $p < .05$, in students' teacher reported performance. Consistent with the previous regression, results showed that SES and aspirations predicted better teacher-reported achievement over and above the significant variance in teacher-report accounted for by SES. In the Latino sample, however, home- and school-based involvement in first grade did not significantly predict teacher-ratings in third grade, yet school-based involvement again approached significance. Standardized regression coefficients revealed that SES exerted the greatest effect on achievement (*Beta* = .16), followed by aspirations (*Beta* = .09).

Table 17

Summary of Hierarchical Regression Analyses for Variables Predicting Teacher Rating

Variable	*F*	*Adj. R^2*	*B*	*SE B*	*Beta*	*T*	*Sig*
Non-Latino white							
Step 1 SES	273.79**	.101	.45	.03	.32	16.55	.000
Step 2	275.99**	.140					
SES			.30	.03	.22	10.15	.000
Aspirations			.29	.04	.16	7.97	.000
Home Involvement			-.12	.04	-.07	-3.54	.000
School Involvement			.21	.04	.12	5.64	.000
Latino							
Step 1 SES	27.64**	.033	.25	.05	.19	5.26	.000
Step 2	9.57**	.042					
SES			.22	.05	.16	4.26	.000
Aspirations			.12	.05	.09	2.44	.015
Home Involvement			-.03	.06	-.02	-.433	.665
School Involvement			.12	.06	.07	1.85	.064

*P<.001***

Summary of Analyses

Results of analyses of demographic characteristics indicate that the SES of the Latino families in this sample is meaningfully lower than the SES of non-Latino white families, and more Latino families in this sample live below the poverty threshold. Latino families were more likely to speak primarily Spanish in the home environment. With respect to third grade teacher characteristics, Latino students' teachers were younger and had fewer years of education and teaching experience, however the effects were small and not especially meaningful.

A principal components factor analysis showed that the hypothesized dimensions of home and school-based parental involvement existed among the involvement variables in the dataset. Results of a MANCOVA that controlled for SES showed that while, overall, Latino parents were significantly less involved in their child's education than non-Latino white parents both at home and at school, the effects of these differences were small. In contrast, Latino parents had higher educational aspirations for their children than non-Latino white parents, and the effects were moderate. When each of the involvement variables was entered individually into the MANCOVA, the only meaningful difference was again the higher aspirations of Latino parents.

MANCOVA revealed some statistically significant differences between Latino and non-Latino white parents' perceptions of school outreach practices, yet the effects of these differences were small. Latino parents reported that the schools informed them of how their child was doing and of ways to support their child's learning more than non-Latino white parents. Conversely, non-Latino white parents felt more aware of chances to volunteer than Latino parents. Results of chi-square tests also showed that Latino parents report significantly more barriers to educational involvement; however, only language barriers had a medium effect, while all other barriers had a small effect.

Results of correlation analyses indicated that school outreach, language, and contextual factors only have small effects as barriers and supports to involvement. However, statistically significant patterns are worth noting: *home involvement* was positively related to the school's efforts to help parents understand their children and to help them learn at home in both the Latino and non-Latino white samples. The non-Latino white parents also showed increased home involvement in relation to being informed about their child's progress. With respect to barriers, Latino parents perceptions of language problems were negatively correlated with home involvement. The same was true of work conflicts among the non-Latino white parents.

Regarding supports to *school involvement*, both Latino and non-Latino white parents were more involved at school when they were informed of volunteer opportunities and provided with strategies to understand their children's development. Among non-Latino whites, school involvement was also significantly, positively correlated with efforts of the schools to inform them of how their child was doing and to teach them ways to educate their child at home. Language barriers and lack of childcare were negatively correlated with school participation in the Latino sample. While language problems, transportation problems, and lack of neighborhood safety were negatively correlated with school involvement among the non-Latino white parents, these correlations apply to less than 5% of the sample and must be interpreted with caution. Additional barriers of the non-Latino white parents included a lack of childcare and work conflicts.

Multiple hierarchical regression analyses showed that socioeconomic status and parental aspirations, respectively, were the most significant predictors of achievement among Latino and non-Latino white students, even when controlling for SES. This was true across achievement measures, including standardized tests and teacher reports. Higher levels of school-based educational involvement and lower levels of home involvement, respectively, followed SES and aspirations in predicting achievement among non-Latino white students. Home- and school-based involvement did not significantly predict achievement in the Latino sample, although school based involvement approached significance.

CHAPTER 5

DISCUSSION

Considerable research with socioeconomically diverse samples suggests that parental educational involvement is associated with higher student achievement, attainment, and positive attitudes toward school (Dearing et al., 2006; McWayne et al., 2006; Lareau, 2000; Pomerantz, Fei-Yin, & Wang; 2006). Although Latinos are among the lowest achieving ethnic groups in the United States (USDE, 2006; NCES, 2007), relatively few studies have examined the relationship between Latino parental involvement and achievement (Desimone, 1999; Prelow & Loukas, 2003). While it is challenging to alter many of the factors that contribute to underachievement of Latino students, such as poorly funded schools, parents' working hours, acculturation, and language-learner status (Eamon, 2005), improving parent-teacher relationships may be a feasible and effective approach to increasing student achievement. To date, research suggests that Latino parents are less involved in school than non-Latino white parents (Chrispeels & Rivero, 2001; Olivos, 2003; USDE, 2001a). This dissertation explored whether differences exist between Latino and non-Latino white parents' forms of educational involvement based on their self-report. Additionally, the relationships between educational involvement, school outreach practices, and potential barriers to becoming involved were also examined. Finally, this is the only study to date that utilizes a nationally representative sample to longitudinally compare the effect of multiple forms of involvement on achievement two years later between Latino and non-Latino white families of elementary school students.

Demographic Characteristics

Demographic characteristics among families in this dissertation were consistent with trends in the national population. The socioeconomic status of Latino families was significantly lower than that of non-Latino white families, and a disproportionate number of these Latino families lived in poverty. The socioeconomic discrepancies between these two groups were meaningful and reflect national-level trends (U.S. Census, 2002, Eamon 2005). While Latino parents were more likely to be young and single, a trend that is also consistent with national data (Eamon, 2005; U.S. Census, 2002), the effect of these differences was small and not especially meaningful in this sample. In addition, Latino students' teachers had lower levels of educational training than non-Latino white students' teachers. Although the effects of such differences were small, they may have implications for the lower achievement scores of the Latinos in this study. They also suggest that Latinos are more likely to attend schools with less qualified teachers, which typically occurs in lower income areas (Prelow & Loukas, 2003; Tapia, 2004). Overall, the lower SES and higher poverty rate in the Latino sample suggests that these students are faced with more environmental adversity than the non-Latino white students, placing them at increased risk for academic underachievement.

Parent Involvement Practices and Aspirations

Using a multidimensional approach, parent involvement was defined to include various forms of educational participation. The results of the principal components factor analysis provide support for the categorization of parent involvement into home- and school-based practices, a delineation that is made throughout the literature (Desimone, 1999; Epstein & Hollifield, 1996; Greene et al., 2007; Grolnick et al., 1997). While the school-involvement factor in this study captured most aspects of Epstein and Hollifeld's (1996) widely accepted model of involvement, including communication with teachers and volunteering at school, school-based governance and collaboration with community members were not considered. The selection of forms of school involvement may have implications for the lower levels of involvement among Latino parents found in this study. Research has shown that when parents perceive that their peers are actively involved in school-based activities, such as governance and collaboration, they are more likely to become involved themselves (Durand, 2008; Grolnick et al., 1997; Shah, 2009). It is possible that Latino parents in this study perceived that their peers were not involved in school governance, and as a result, they felt less inclined to participate. Despite the lack of focus on governance, this dissertation evaluated many aspects of school-based involvement, such as volunteering, communication with teachers, PTA meeting and open-house attendance, and fundraising.

With respect to home-based parental involvement, this study primarily assessed parents' incorporation of cognitive-intellectual activities, which focus on the learning process and include reading books, telling stories, and practicing numbers. Emotional and structural types of home-involvement such as talking about school and locating a quiet place to complete homework were not incorporated in this dissertation (Grolnick et al., 1997). However, emotional and structural types of support have been associated with Latino home involvement in some research studies (Delgado-Gaitan, 1992; Orozco, 2008). Therefore, this dissertation may not have adequately captured the range of putative home-based educational involvement practices. It is possible that the parents in this study engaged in many of the practices highlighted in Delgado-Gaitan's (1992) research, including discipline, allocated homework time, and structured routines. They may also have provided emotional support for learning, and emphasized the importance of education.

Latino parents in this sample were less involved in their children's education at home and at school than non-Latino white parents, yet the effects of these differences were small, limiting their practical significance (Delgado-Gaitan, 1991; Tinkler, 2002; USDE, 2001a). It is notable, however, that once the two ethnic groups were equated on SES, these differences were less statistically distinct. This suggests that factors associated with SES differentially impact the levels of home and school involvement, a finding that is consistent throughout the parent involvement literature (Grolnick et al., 1997; Hoover-Dempsey et al., 2005; Lareau, 2003; Sheldon, 2005). Despite lower levels of involvement among Latino parents, analysis of individual types of involvement indicated that Latino parents were slightly more likely to attend parent teach association (PTA) meetings. This finding was surprising in light of their lower levels of participation across most school-based activities. However, attendance at PTA meetings represented the least attended activity in both samples; it is possible that such organizations were not well developed or emphasized throughout schools in this sample.

Results of this study also provide resounding support for the high value that Latino parents place on their children's education. Latino parents had significantly higher educational aspirations for their children than non-Latino white parents, and these differences remained meaningful even when the two groups were equated on SES. This finding adds to growing evidence that Latino parents have educationally oriented value systems (Garcia-Coll, et al. 2002; Moreno & Lopez, 1999; Orozco, 2008), and weakens the argument that cultural or motivational factors interfere with home and school based involvement (Frost & Hawkes, 1966; Vaughn, Bos, & Schumm, 1997). Ogbu's theory of voluntary minority status may partially explain the finding that Latino parents actually have *higher* aspirations for the children than non-Latino white parents (Ogbu, 1987; Ogbu & Simons, 1998). Although the generational status of the Latino families in this sample was suppressed to protect confidentiality, it is conceivable that many parents were first or second generation immigrants that have come to the U.S. in pursuit of better educational and professional opportunities for their children.

School Outreach and Barriers

Given the critical role of teachers and school administrators in facilitating parent involvement, particularly among low-income families (Epstein & Hollified, 1996; Greene et al., 2007; Hoover-Dempsey et al., 2005), this study sought to examine whether Latino and non-Latino white parents had different perceptions of school outreach efforts. Overall, Latino and non-Latino white parents in this both sample felt that their schools were fairly effective in their efforts to involve them in education, and school efforts were associated with increased involvement at home and school among both groups.

Differences between Latino and non-Latino white parents' perceptions of outreach only had small effects, yet some patterns were notable. Latino parents perceived that schools informed them of their child's progress and helped them understand their child's academic development slightly better than non-Latino white parents. This form of outreach likely took place during progress reports or parent-teacher meetings, a required practice in most schools. Research has shown that Latino parents tend to participate in such meetings to learn more about their child's progress (Delgado-Gaitan, 1991; USDE, 2001a). Latino parents in this sample had more limited educational experience yet higher aspirations for their children than non-Latino white children. Given the Latino parents' lack of experience with the educational process and desire to for their children to succeed, they may have been eager for guidance and advice from teachers. It is also possible that Latino parents were more impressed with the advice that teachers provided, in contrast to non-Latino white parents who had more knowledge of the school system and higher expectations from teachers. In either case, Latino parents likely internalized and valued recommendations provided by teachers to support their children, educationally, in the home environment.

Despite feeling well-informed on their child's progress, Latino parents in this study experienced a number of barriers to involvement. Specifically, they felt significantly less aware of opportunities to volunteer than non-Latino white parents. This finding is troubling since volunteer invitations reflect intensive efforts by school personnel to welcome and involve families (Epstein & Hollifield, 1996; Hoover-Dempsey, 2005). Moreover, Latinos in this study perceived language status to be a substantial barrier to involvement. This perception constituted both a significant and meaningful difference between the two ethnic groups and is consistent with the majority of the research on Latino parent involvement (Delgado-Gaitan, 1991; Garcia-Coll, 2002; Hughes et al., 2002). Further, Latino parents' self-reported "language problems" were significantly and negatively correlated with both home and school involvement practices. It is likely that information about volunteer opportunities was distributed in English in many of these schools, and thus Spanish-speaking only parents were less informed of involvement opportunities. Such language difficulties would likely result in a decreased presence of Latino parents who volunteer or govern at school, which may perpetuate the stereotype that they do not desire to become involved (Griffith, 1998). The decreased involvement of Latino parents may also relate to Shah's (2009) theory of symbolic representation; Latino parents are less apt to be actively involved when fewer people "like themselves" are represented within the school (pg. 213).

It is important to note that although correlations between school-based involvement and outreach practices were small in both the Latino and non-Latino white samples, the correlations in the non-Latino white sample were generally stronger. That is, when schools made efforts to include non-Latino white parents, they were more likely to involve themselves at school than Latino parents. This finding is noteworthy given that Latino and non-Latino white parents had similar perceptions of school outreach. It is possible that the nature of school-outreach efforts were not as understandable or beneficial to Latino families. Schools may not have be aware of behaviors, beliefs, and expectations of Latino parents, and thus involvement opportunities offered by the school may not support learning in ways that are significant to these families (Christenson & Sheriden, 2001; Phelan et al., 1996). Specifically, home-based qualitative research by Delgado-Gaitan (2001) found that respect and cooperation are values stressed by Latino parents. It is possible that a lack of emphasis on such characteristics decrease engagement among Latino parents. Schools may need to offer more culturally sensitive methods of outreach through Spanish-speaking liaisons or parent-child educational workshops that have been shown to be effective in the literature (Chispeels & Rivero, 2003; Riggs & Medina; 2005).

Parent Involvement and Achievement

Academic achievement was measured comprehensively, using standardized achievement measures and teacher-report to assess reading and math skills. Teacher ratings of students' math and reading skills were consistent with performance on standardized measures, which suggests that teachers were accurate in their judgments. This finding adds to the growing literature that supports the accuracy of teachers' performance evaluations (Coldarci, 1986; Demaray & Elliot, 1998; Kenny & Chekaluk, 1993). The academic performance of Latino students in this sample was lower than the non-Latino white sample on measures standardized achievement and teacher report, a finding consistent with national level trends (NCES, 2007).

Results of regression analyses show that SES remained the most significant predictor of achievement among Latino and non-Latino white students. These findings are consistent with a majority of the research that evaluates the relationship between educational involvement and student achievement among low-income populations (Desimone, 1999; Durand, 2008; Kuperminc et al., 2008). Thirty-five percent of the Latinos in this sample live in poverty, in contrast to 9% in the non-Latino white sample. Therefore, a multitude of factors likely impact the achievement of Latino students, such as poorer quality schools, family stress, and health and safety issues (Eamon, 2005; Prelow & Loukas, 2003; Tapia, 2004). Conversely, the non-Latino white students may have benefitted from a number of protective factors associated with higher SES including physical health and safety, highly educated parents, access to educational resources and experiences, and well-qualified teachers (Doll & Lyon, 1998).

Parental aspirations were the second most significant predictor of academic achievement among Latino and non-Latino white students. This finding highlights the important effect that parents' beliefs about their children's potential may have on their achievement. It is also consistent with meta-analytic studies of the relationship between achievement and aspirations (Fan & Chen, 2001). Latino parents in this sample actually had *higher* aspirations for their children than non-Latino white parents, yet were *less* involved than non-Latino white parents at home and school. This finding contrasts with previous research indicating that high educational aspirations are associated with school involvement (Griffith, 1998; Phillipson & Phillipson, 2007). It is possible that the definition of school involvement in this study did not capture the unique ways Latino parents aspirations contributed to their children's achievement. A model proposed by Pomerantz and her colleagues (2007), suggests that they *way* in which parents express their goals for their children may positively impact achievement. This model emphasizes the importance of the parents in supporting the *process* of learning as opposed to the *outcome*, fostering positive affect through encouragement and empathy, and emphasizing student autonomy. It is possible that the Latino parents in this sample approached school-related issues in such a manner, which in turn, improved students' performance. Delgado-Gaitan's study (1992) also showed that Latino parents emphasized the importance of education to their children and conveyed their belief that they could succeed academically. These emotionally supportive approaches to fostering achievement motivation may explain the predictive value of Latino parents' aspirations in this study, despite lower levels of home and school-based involvement.

Non-Latino white parents' school-based involvement practices significantly predicted achievement, yet school involvement only approached significance in the Latino sample. Various findings from this study help to explain this difference. Given that SES exerted the greatest impact on achievement in both ethnic groups, and Latinos in this sample have substantially fewer economic resources, it is likely that a variety of other risk factors associated with SES lowered Latino student achievement. These may include poorer quality schools (Prelow & Loukas, 2003), fewer educational resources (Eamon, 2005), and general health and safety concerns (Tapia, 2004). In addition, the stressful events associated with living in poverty may make Latino parents less emotionally available to participate in school-related activities (Grolnick et al., 1997).

As previously noted, Latino parents reported less awareness of volunteer opportunities than non-Latino white parents, as well as language barriers to becoming involved at school. Numerous studies have shown that explicit invitations to events (Chrispeels & Rivero, 2003; Hoover-Dempsey et al., 2005), translation of forms (Delgado-Gaitan, 1991; Garcia-Coll, 2002; Hughes et al., 2002), and culturally sensitive outreach practices (Hoover-Dempsey et al., 2005; Sheldon, 2005) are instrumental to involving low- income, minority parents at school. This is especially true among Latino parents, who report confusion about school events, and more generally, uncertainty about how to become involved (Delgado-Gaitan, 1991, 1992). Such obstacles likely interfered with school-based involvement among Latino parents in this sample, limiting effects on achievement.

Additionally, as previously suggested, the schools' approaches to involving Latino families may have lacked cultural sensitivity and meaning to Latino parents. Although the Latino parents in this study attended school events, such as PTA meetings, the ideas and issues conveyed at such meetings may have been confusing or less relevant to Latino parents given their disparate life experiences. As such, attending these events may have translated to less impact on their children's learning. Understanding Latino parents' backgrounds and cultural frame of reference may help educators reframe involvement practices in ways that positively influence achievement (Christenson & Sheriden, 2001; Phelan et al., 1996). Similarly, it is possible that despite the school-based involvement of Latino parents, Latino student achievement may have been affected by poor instruction for ELLs (Iglesias & Fabiano, 2001) or limited incorporation of Latino culture into the school curriculum (Carreon et al., 2005).

The predictive value of home-based involvement practices on achievement differed between the two groups. Higher levels of home involvement surprisingly predicted lower levels of achievement in the non-Latino white sample, yet they did not predict achievement in the Latino sample. Home involvement was defined primarily through "cognitive-intellectual" activities which included reading, helping with homework, and practicing letters and numbers (Grolnick, 1997; Sheldon & Epstein, 2005). Latino parents in this study engaged less in these types of practices than non-Latino white parents. Previous research suggests that Latino families emphasize the importance of providing emotional support for learning, such as talking about school and allocating a quiet space to complete homework (Delgado-Gaitan, 1992; Orozco, 2008). These emotional and structural forms of involvement may occur among Latino families in this sample and may be more likely to influence achievement than the types of home involvement that were included in this study. Given the large number of Spanish-speaking parents in this study, it is also likely that language status impeded their ability to help with homework or practice reading and writing. In addition, the lower educational levels among Latino parents may have limited their ability to engage these cognitive-intellectual forms of involvement (Garcia-Coll et al., 2002).

The finding that non-Latino white parents' home-based involvement predicted lower levels achievement was surprising, although not entirely novel. Studies have shown that parents provide heightened levels of educational support at home when there are concerns about student learning (Cooper, Lindsay, & Nye, 2000; Desimone, 1999; Georgiou, 1999). Therefore, it is possible that non-Latino white parents in this sample provided more home-based educational support when their children were struggling to achieve academically.

Implications

Despite the adverse economic circumstances and lower levels of educational involvement among Latino parents in this study, results indicate that they strongly value education and have high professional aspirations for their children. The finding that these high aspirations predict student achievement indicates that parents' positive beliefs are likely internalized by their children and may increase motivation. These findings suggest a number of practices that can be improved to involve Latino parents in U.S. schools. Most notably, schools should increase communication with Spanish-speaking parents in their native language. This may be accomplished by hiring a bilingual individual who is knowledgeable about Latino cultures within the school and community. This liaison would translate all meeting and volunteer solicitation forms and assist with translation at school events. The liaison might also teach English classes to improve Latino parents language and literacy skills. With improved English language skills, Latino parents may be more apt to attend events and establish a presence in their child's school (Riggs & Medina, 2005). In addition, given the weaker relationship between school involvement and achievement in the Latino sample, this liaison might examine ways to make school participation more meaningful to Latino parents. This could include conducting educational workshops about ways to be involved in school with specific attention to the expectations and concerns of Latino parents (De Gaetano, 2007; Delgado-Gaitan, 1991).

Results of this study also suggest that Latino parents had difficulty engaging in learning activities at home with their children such as helping them with homework and practicing reading and writing. Limited English speaking skills and lower educational levels likely impede involvement; therefore school-based workshops that provide strategies for helping their child learn at home may increase these practices. Research suggests that Latino parents benefit from being given concrete tasks to perform at home with their children, such as drills or collaborative projects (Lopez & Cole, 1999; Sheldon & Epstein, 2005). In sum, results of the current study suggest that educators should harness the high educational aspirations of Latino families by increasing communication in parents' native language, utilizing culturally relevant involvement practices, and providing concrete ways to become involved at home and school.

Future Research

Much is still unknown about Latino parents' perceptions of educational involvement and their actual home involvement patterns. Larger-scale qualitative studies of Latino families with elementary aged students which replicate those of Delgado-Gaitan (1991, 1992) might continue to examine which forms of involvement are valued, how educational involvement is practiced at home, and what aspects of involvement are confusing or difficult for these parents. Findings may support a broader definition of home-involvement that includes personal forms of participation, such as structure and discipline, as suggested by Christenson and Sheridon (2001). In addition, it may reveal types of school involvement that are more comfortable or meaningful to Latino parents. This line of qualitative research could explore how Latino parents' high aspirations for their children manifest in their parenting styles and support for learning. Such information could be conveyed to teachers and policymakers to help them understand and reinforce Latino families' approach to involvement. In this way, more continuity may be established regarding the types of behaviors and learning practices that are reinforced at home and at school (Erickson, 1987; Phelan, et al., 1996).

In addition, results of the small number of involvement intervention studies with Latino parents are compelling. This literature suggests that increasing communication with Latino parents in their native language and providing explicit involvement strategies increases home and school based involvement (Chrispeels & Rivero, 2003; De Gaetano, 2007; Delgado-Gaitain, 1991; Riggs & Medina, 2005). Future research should target schools with Latino populations that do not sufficiently communicate with or involve Spanish-speaking parents. Involvement interventions could be implemented with the assistance of bilingual liaisons and effects on student achievement could be evaluated quantitatively and longitudinally. Objective forms of data should be gathered, such as attendance at workshops, frequency of parent-teacher contacts, and student performance. These studies might also evaluate teacher perceptions of parent involvement to provide a holistic sense of the teacher-parent interaction. Results would inform policymaking and program development in schools with Latino populations.

Limitations

Although there were numerous benefits to using a large, nationally representative sample of Latino families in this study, the inability to distinguish among their countries of origin constituted a major limitation. Latinos in the U.S. vary greatly with respect to educational beliefs, experiences, and attainment. Therefore, it would be inappropriate to generalize study results to all Latino groups. In addition, data collection for this sample began in 1999, almost a decade prior to this dissertation. Therefore, historical effects may impact these results. For example, with a much larger Latino student population in the U.S. at this point in time, many schools may have adapted by improving parent outreach programs and hiring bilingual liaisons to improve communication.

In addition, the way in which involvement and outreach were defined and coded was somewhat limiting. Given that school involvement was a dichotomous variable (parents responded that they either had or hadn't participated in various school-based activities by March of the first grade year), it was not sensitive to variability in the levels of school-based involvement. Use of a Likert scale may have provided a more accurate portrayal of involvement patterns between these two groups. With respect to home-based involvement, it may be difficult for less educated, Spanish-speaking parents to engage in the cognitive-intellectual activities that were measured in this study. Therefore, it would have been informative to include questions that relate to parenting and providing emotional support within the home context. In addition, a number of studies have emphasized the importance of the parent-teacher relationship in facilitating involvement (Hoover-Dempsey et al., 2005; Ritblatt et al, 2002). It may have been enlightening to examine the extent to which parents felt welcomed and trusted by school professionals with respect to school outreach practices.

The reliance on parents' self-report in this study may also limit findings. Parents were asked to report on a sensitive topic – the extent of their involvement in their child's lives at home and at school. Social desirability may have led them to report inflated levels of involvement (Holden & Passey, 2009). Non-Latino white parents may have been more concerned with appearing involved than Latino parents given their presumed greater awareness of societal standards in the U.S. In addition, parents' reports were retrospective in the sense that they were asked to recall participation in certain activities over the last year. As such, it may have been difficult for parents to accurately recall involvement practices. It would also have been informative to compare parent reports with teacher perceptions regarding school-based involvement and outreach to evaluate agreement and validity. A final limitation in this study is the lack of consideration for child factors, including temperament and cognitive ability. Research has shown that parents' approach to supporting their children may vary, depending on chemistry in the parent-child dyad, and specific developmental, emotional, or cognitive-intellectual concerns (Grolnick, et al., 1997).

Conclusions

Latino students in this study were struggling socio-economically and academically when compared with non-Latino white students, which is consistent with national level trends. Latino parents were less involved educationally, both at school and at home in their children's learning, but the effects of this difference were small. Despite lower levels of involvement, Latino parents had meaningfully higher educational aspirations for their children than non-Latino white parents, and their aspirations significantly predicted achievement after controlling for SES. While higher levels of school-based and lower levels of home-based educational involvement significantly predicted achievement among non-Latino white students, educational participation was not predictive of achievement among Latino students. This finding may be attributed to various factors including lower levels of involvement among Latino parents, logistical and emotional barriers that can result from living in poverty, and possibly the foreign nature of common involvement practices in U.S. schools. Language status also served as a meaningful barrier to involvement among Latino parents, and this finding may explain their lack of awareness of volunteer opportunities in addition to their overall lower levels of involvement. This study offers compelling support for the high value that Latino parents place on education and highlights the important effect that parents' beliefs about their children's potential may have on their achievement. Future research should evaluate the ways in which these aspirations manifest in Latino parenting practices. Findings indicate that educators should make greater efforts to communicate with Latino parents in their native language, to learn about Latino parents' non-traditional forms of involvement, and to provide culturally sensitive education about ways to become more involved in their child’s learning at home and at school.

References

Arzubiaga, A., Rueda, R., & Monzo, L. (2002). Family matters related to the reading engagement of Latino children. *Journal of Latinos and Education, 1*, 231–243.

Balli, S. J., Demo, D. H., & Wedman, J. F. (1998). Family involvement with children's homework: An intervention in the middle grades. *Family Relations, 47*(2), 149-157.

Barge, J. K., & Loges, W. E. (2003). Parent, student, and teacher perceptions of parental involvement. *Journal of Applied Communication Research, 31*(2), 140-163.

Bentz, J. L., & Fuchs, L. S. (1993). Teacher judgment of student mastery of math skills. *Diagnostique*, *18*(3), 219-232.

Bronfenbrenner, U. (1975). *The ecology of human development in retrospect and prospect.* Paper presented at the Conference on Ecological Factors in Human Development held by the International Society for the Study of Behavioral Development. Guildford, England, July 13-17, 1975.

Bronfenbrenner, U. (1976). The experimental ecology of education. *Teachers College Record*, *78*(2), 157-204.

Carreón, G. P., Drake, C., & Barton, A. C. (2005). The importance of presence: Immigrant parents' school engagement experiences. *American Educational Research Journal*, *42*(3), 465-498.

Chrispeels, J. H., & Rivero, E. (2001). Engaging Latino families for student success: How parent education can reshape parents' sense of place in the education of their children. *Peabody Journal of Education, 76*(2), 119-169.

Christenson, S., & Sheridan, S. (2001). *Schools and families: Creating essential connections for learning*. New York; London: Guilford Press.

Coladarci, T. (1986). Accuracy of teacher judgments of student responses to standardized test items. *Journal of Educational Psychology, 78*(2), 141-146.

Cooper, H., Lindsay, J.J., & Nye, B. (2000). Homework in the home: How student, family, and parenting style differences relate to homework processes. *Contemporary Educational Psychology*, *25,* 464-487.

De Gaetano, Y. (2007). The role of culture in engaging Latino parents' involvement in school. *Urban Education, 42*(2), 145-162.

Dearing, E., Kreider, H., Simpkins, S., & Weiss, H. B. (2006). Family involvement in school and low-income children's literacy: Longitudinal associations between and within families. *Journal of Educational Psychology, 98*(4), 653-664.

Delgado-Gaitan, C. (1991). Involving parents in the schools: A process of empowerment. *American Journal of Education, 100*(1), 20-46.

Delgado-Gaitan, C. (1992). School matters in the Mexican-American home: Socializing children to education. *American Educational Research Journal, 29*(3), 495-513.

Demaray, M. K., & Elliot, S. N. (1998). Teachers' judgments of students' academic functioning: A comparison of actual and predicted performances. *School Psychology Quarterly, 13*(1), 8-24.

Desimone, L. (1999). Linking parent involvement with student achievement: Do race and income matter? *Journal of Educational Research, 93*(1), 11-30.

Doll, B. & Lyon, M.A. (1998). Risk and resilience: Implications for the delivery of educational and mental health services in schools. *School Psychology Review,* 27(3), 348-363.

Durand, T.M. (2008). *Latino Parental Involvement in the Early School Years: Findings From the Early Childhood Longitudinal Study.* Paper presented at the 2008 annual conference of the American Educational Research Association, New York, NY.

Drummond, K. V., & Stipek, D. (2004). Low-income parents' beliefs about their role in children's academic learning. *Elementary School Journal, 104*(3), 197-213.

Eamon, M. K. (2005). Social-demographic, school, neighborhood, and parenting influences on the academic achievement of Latino young adolescents. *Journal of Youth and Adolescence, 34*(2), 163-174.

Eaves, R. C., Williams, P., Winchester, K., & Darch, C. (1994). Using teacher judgment and IQ to estimate reading and mathematics achievement in a remedial-reading program. *Psychology in the Schools, 31*(4), 261-272.

Eckert, T. L., Dunn, E. K., Codding, R. S., Begeny, J. C., & Kleinmann, A. E. (2006). Assessment of mathematics and reading performance: An examination of the correspondence between direct assessment of student performance and teacher report. *Psychology in the Schools, 43*(3), 247-265.

Englund, M. M., Luckner, A. E., Whaley, G. J. L., & Egeland, B. (2004). Children's achievement in early elementary school: Longitudinal effects of parental involvement, expectations, and quality of assistance. *Journal of Educational Psychology, 96*(4), 723-730.

Epstein, J. L. (1987). Parent involvement: What research says to administrators. *Education and Urban Society, 19*(2), 119-136.

Epstein, J. L., & Hollifield, J. H. (1996). Title I and school-family-community partnerships: Using research to realize the potential. *Journal of Education for Students Placed at Risk, 1*(3), 263-278.

Epstein, J. L., Simon, B. S., & Salinas, K. C. (1997). Effects of teachers involve parents in schoolwork (TIPS) language arts interactive homework in middle grades. *Research Bulletin, 18*.

Epstein, J. L., & Van Voorhis, F. L. (2001). More than minutes: Teachers' roles in designing homework. *Educational Psychologist, 36*(3), 181-193.

Erickson, F. (1987). Transformation and school success: The politics and culture of educational achievement. *Anthropology and Education Quarterly, 18*(4), 335-356.

Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review*, *13*(1), 1-22.

Flanagan, D. P., Ortiz, S. O., Alfonso, V. C., & Mascolo, J. T. (2006). *The achievement test desk reference: A guide to learning disability identification* (Second ed.). Hoboken, New Jersey: John Wiley & Sons, Inc.

Floyd, L. (1998). Joining hands: A parental involvement program. *Urban Education, 33*(1), 123-135.

Frost, Joe L. & Hawkes, Glenn R. (1970) *The disadvantaged child: issues and innovations.* Boston: Houghton Mifflin.

García-Coll, C., Akiba, D., Palacios, N., Bailey, B., Silver, R., DiMartino, L., et al. (2002). Parental involvement in children's education: Lessons from three immigrant groups. *Parenting: Science and Practice, 2*(3), 303-324.

Georgiou S. (1999). Parental attributions as predictors of involvement and influences on child achievement. *British Journal of Educational Psychology, 69*(3), 409-429.

Gibson, M. A. (2002). The new Latino diaspora and educational policy. In E. G. Wortham, Murrillo & E. T. Hamann (Eds.), *Education in the new Latino diaspora; policy and the politics of identity* (pp. 243). Westport, Ct: Ablex Publishing.

Greene, C. L., Walker, J. M. T., Hoover-Dempsey, K. V., & Sandler, H. M. (2007). Parents' motivations for involvement in children's education: An empirical test of a theoretical model of parental involvement. *Journal of Educational Psychology, 99*(3), 532-544.

Grieco E.M. & Cassidy R.C. (2001). *Overview of Race and Hispanic Origin: 2000*, U.S. Census Bureau, Census 2000 Brief, C2KBR/01-1. Retrieved Retrieved on May 16, 2007, 26(280), from www.census.gov/prod/2001pubs/c2kbr01-1.pdf

Griffith, J. (1998). The relation of school structure and social environment to parent involvement in elementary schools. *The Elementary School Journal, 99*(1), 53-80.

Grolnick, W. S., Benjet, C., Kurowski, C. O., & Apostoleris, N. H. (1997). Predictors of parent involvement in children's schooling. *Journal of Educational Psychology, 89*(3), 538-548.

Hayes-Bautista, D. E., Hsu, P., Perez, A., & Kahramanian, M. I. (2003). *The Latino majority has emerged: Latinos comprise more than fifty percent of all births in California.* Los Angeles: Los Angeles: Center for the Study of Latino Health and Culture, University of California.

Hoge, R. D., & Coladarci, T. (1989). Teacher-based judgments of academic achievement: A review of literature. *Review of Educational Research, 59*(3), 297-313.

Holden, R. & Passey, J. (2009). *Social desirability.* In Leary, M.R.; Hoyle, R.H. Ed. Handbook of individual differences in social behavior. pp. 441-454. New York, NY, US: Guilford Press, 2009

Hoover-Dempsey, K. V., Walker, J. M. T., Sandler, H. M., Whetsel, D., Green, C. L., Wilkins, A. S., et al. (2005). Why do parents become involved? Research findings and implications. *Elementary School Journal, 106*(2), 264-285.

Hong, S., & Ho., H.-Z. (2005). Direct and indirect longitudinal effects of parent involvement on student achievement: Second-order latent growth modeling across ethnic groups. *Journal of Educational Psychology, 97,* 32-42.

Huck, S.W. (2008). *Reading Statistics and Research.* Boston, Ma: Pearson Education, Inc.

Hughes, T. H., Valle-Riestra, D., & Arguelles, M. E. (2002). Experiences of Latino families with their child's special education program. *Multicultural Perspectives, 4*(1), 11-17.

Ibañez, G. E., Kuperminc, G. P., Jurkovic, G., & Perilla, J. (2004). Cultural attributes and adaptations linked to achievement motivation among Latino adolescents. *Journal of Youth and Adolescence, 33*(6), 559-568.

Iglesias, A., & Fabiano, L. C. (2003). Bilingual Latino students: The context of home and school. In V. I. Kloosterman (Ed.), *Latino students in american schools.* (pp. 1-15). Westport: Greenwood Publishing Group.

Jeynes, W. H. (2007). The relationship between parental involvement and urban secondary school student academic achievement: A meta-analysis. *Urban Education, 42*(1), 82-110.

Keith, T. Z., Keith, P. B., Quirk, K. J., Sperduto, J., Santillo, S., & Killings, S. (1998). Longitudinal effects of parent involvement on high school grades: Similarities and differences across gender and ethnic groups. *Journal of School Psychology, 36*(3), 335-363.

Kenny, D. T., & Chekaluk, E. (1993). Early reading performance: A comparison of teacher-based and test-based assessments. *Journal of Learning Disabilities, 26*(4), 227-236.

Kuperminc, G. P., Darnell, A. J., & Alvarez-Jimenez, A. (2008). Parent involvement in the academic adjustment of Latino middle and high school youth: Teacher expectations and school belonging as mediators. *Journal of Adolescence, 31*(4), 469.

Lareau, A. (2000). *Home advantage: Social class and parental intervention in elementary education*. Lanham, Maryland: Rowman & Littlefield Publishers.

Lopez, A., & Cole, C. L. (1999). Effects of a parent-implemented intervention on the academic readiness skills of five puerto rican kindergarten students in an urban school. *School Psychology Review, 28*(3), 439-447.

Lucas, T., Henze, R., & Donato, R. (1990). Promoting the success of Latino language-minority students: An exploratory study of six high schools. *Harvard Educational Review, 60*(3), 315-340.

Massachusetts Department of Education. (2007). *Massachusetts comprehensive assessment system: About the MCAS.* Retrieved 5/29, 2008, from http://www.doe.mass.edu/mcas/about1.html

McWayne, C., Hampton, V., Fantuzzo, J., Cohen, H. L., & Sekino, Y. (2004). A multivariate examination of parent involvement and the social and academic competencies of urban kindergarten children. *Psychology in the Schools, 41*(3), 363-377.

Miedel, W. T., Reynolds, A. J. (1999). Parent involvement in early intervention for disadvantaged children: Does it matter? *Journal of School Psychology, 37*(4), 379-402.

Moll, L. C., Amanti, & Gonzalez (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory into Practice, 31*(1), 132-141.

Moreno, R. P., & Lopez, J. A. (1999). Latina parent involvement: The role of maternal acculturation and education. *The School Community Journal, 9*(1), 83-101.

Nakao, K., and Treas, J. (1992). *The 1989 Socioeconomic Index of Occupations: Construction from the 1989 Occupational Prestige Scores:*General Social Security Methodological Report No. 74. Chicago: NORC.

National Assessment Governing Board (1999). Reading framework for national assessment of educational progress. Retrieved on 2/19/10, from http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/17/8e/f0.pdf

National Center for Education Statisicts. (2002). *User's manual for the ECLS-K first grade year public-use data files and electronic code book* (NCES Pub. No 2002-135) [CD-ROM]. Washington, D.C.: U.S. National Center for Education Statistics.

National Center for Education Statisicts. (2007). *The Nation's report card: 2007 assessment results.* Retrieved 2/7, 2010, from http://nces.ed.gov/nationsresportcard

National Center for Education Statistics. (2006). *America's high school graduates: Results from the 2005 NAEP high school transcript study*. Retrieved 5/21/06, 2006, from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2007467

New York State Education Department. (2004). *Annual report - education in new york state: 2002.* Retrieved 5/29, 2008, from http://usny.nysed.gov/publications.html#regents .

Ogbu, J.U. (1987). Variability in Minority School Performance: A problem in search of an explanation. *Anthropology & Education Quarterly, 8*(1), 312-334.

Ogbu, J.U. (1993). Differences in cultural frame of reference. *International Journal of Behavioral Development, 16*(3), 483-506.

Ogbu, J.U. & Simons, H.D. (1998). Voluntary and involuntary minorities: A cultural-ecological theory of school performance with some implications for education. *Anthropology & Education Quarterly, 29*(2), 155-188.

Olivos, E. M. (2004). Tensions, contradictions, and resistance: An activist's reflection of the struggles of Latino parents in the public school system. *The High School Journal, 87*(4), 25-35.

Orozco, G.L. (2008). Understanding the culture of low-income immigrant Latino parents: Key to involvement. *The School Community Journal*, 2008, *18*(1), 21-37

Phelan, P., Davidson, A. L., & Yu, C. (1996). *Adolescent worlds: Negotiating family, peers, and school*. New York ; London : Teachers College Press.

Phillipson S., & Phillipson, S.N. (2007). Academic expectations, belief or ability, and involvement by parents as predictors of child achievement: A cross-cultural comparison. *Educational Psychology, 27*(3), 329-348.

Pomerantz, E. M., Ng, F. F., & Wang, Q. (2006). Mothers' mastery-oriented involvement in children's homework: Implications for the well-being of children with negative perceptions of competence. *Journal of Educational Psychology, 98*(1), 99-111.

Pomerantz, E. M., Moorman, E. A., & Litwack, S.D. (2007). The how, whom, and why of parents' involvement in children's academic lives: More is not always better. *Review of Educational Research, 77*(3), 373-410.

Portes, P. R., & Zady, M. F. (2001). Determinants of reading achievement of immigrant adolescents: The role of demographic and psycho-cultural factors in school adaptation. *American Educational Research Meeting, April 10-14,* Seattle, Washington.

Prelow, H. M., & Loukas, A. (2003). The role of resource, protective, and risk factors on academic achievement-related outcomes of economically disadvantaged Latino youth. *Journal of Community Psychology, 31*(5), 513-529.

Ramirez, A. Y. F. (2003). Dismay and disappointment: Parental involvement of Latino immigrant parents. *Urban Review, 35*(2), 93-110.

Ramirez, R. R., & De La Cruz, G.P. (2002) *The Hispanic Population in the United States: March 2002*, Current Population Reports, P20-545, U.S.Census Bureau, Washington DC.

Ramirez, R. R., (2004). We the People: Hispanics in the United States, Census 2000 Special Reports, CENSR-18. U.S. Census Bureau, Washington, DC. Retrieved on May 16, 2007, http://www.census.gov/prod/2004pubs/censr-18.pdf

Riggs, N. R., & Medina, C. (2005). The 'generacion diez' after-school program and Latino parent involvement with schools. *Journal of Primary Prevention, 26*(6), 471-484.

Ritblatt, S. N., Beatty, J. R., Cronan, T. A., & Ochoa, A. M. (2002). Relationships among perceptions of parent involvement, time allocation, and demographic characteristics: Implication for policy formation. *Journal of Community Psychology, 30*(5), 519-549.

San Miguel, G. (2003). Contested learning: Latino education in the united states from the 1500s to the present. In V. I. Kloosterman (Ed.), *Latino students in American schools.* (pp. 1-18). Westport: Greenwood Publishing Group.

Schafer, J. L. (1997). *Analysis of incomplete multivariate data*. NY: Chapman & Hall.

Schulting, A. B., Malone, P. S., & Dodge, K. A. (2005). The effect of school-based kindergarten transition policies and practices on child academic outcomes. *Developmental Psychology, 41*(6), 860-871.

Shah, P. (2009). The symbolic effects of Latino representation on parent involvement. *Social Sciences Quarterly, 90*(1), 212-229.

Sheldon, S. B. (2005). Testing a structural equation model of partnership program implementation and parent involvement. *Elementary School Journal, 106*(2), 171-187.

Sheldon, S. B., & Epstein, J. L. (2005). Involvement counts: Family and community partnerships and mathematics achievement. *Journal of Educational Research, 98*(4)

Tapia, J. (2004). Latino households and schooling: Economic and sociocultural factors affecting students' learning and academic performance. *International Journal of Qualitative Studies in Education, 17*(3), 415-436.

The College Board. (2008). *About the SAT.* Retrieved 5/29, 2008, from http://www.collegeboard.com/student/testing/sat/about.html

Tinkler, B. (2002). A review of literature on Hispanic/Latino parent involvement in K-12 education. *ERIC Clearinghouse on Urban Education*. 23

U.S. Department of Education, National Center for Education Statistics. (2001a). *The condition of education 2001.* Retrieved 9/08, 2008, from nces.ed.gov

U.S. Department of Education, (2001b) *No Child Left Behind.* Retrieved 2/19/10 from ed.gov/nclb/landing.jhtml

U.S. Department of Education. (2004). *Four pillars of NCLB.* Retrieved 5/29, 2008, from http://www.ed.gov/nclb/overview/intro/4pillars.html

U.S. Department of Education. (2005). *Status and trends in the education of racial and ethnic minorities, Table 26.2.* National Center for Education Statistics. Retrieved 2/7, 2006, from nces.ed.gov

U.S. Department of Education. (2007). *The Condition of Education, 2007.*National Center for Education Statistics. Retrieved 2/7, 2006, from nces.ed.gov

Valencia, R. R., & Black, M. S. (2002). "Mexican Americans don't value education!"--the basis of the myth, mythmaking, and debunking. *Journal of Latinos and Education, 1*(2), 81-103.

Vanderheyden, A. M., Witt, J. C., Naquin, G., & Noell, G. (2001). The reliability and validity of curriculum-based measurement readiness probes for kindergarten students. *School Psychology Review, 30*(3), 363-382.

Vaughn S., Bos, C.S. & Schumm, J.S., (1997). *Teaching mainstreamed, diverse, and at-risk students in the general education classroom.* Boston: Allyn & Bacon.