Latino Parent Home-based Practices That Bolster Student Academic Persistence

Hispanic Journal of Behavioral Sciences 33(4) 490–506 © The Author(s) 2011 Reprints and permission: http://www.

sagepub.com/journalsPermissions.nav DOI: 10.1177/0739986311422897 http://hjb.sagepub.com



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Abstract

Home-based parental involvement practices (i.e., educational encouragement, monitoring, and support) and their impact on students' academic persistence were investigated with a sample of 137, ninth-grade Latino students in a northeast high school. Structural Equation Modeling results indicate that the relationship between home-based parental involvement activities and students' intentions to complete the next school year is mediated by students' school beliefs (i.e., perceptions of school responsiveness, school engagement-trouble, academic attitudes, and academic self-efficacy). Home-based parental involvement influences children's attitudes and beliefs about school culminating in students' intentions to persevere academically. This study addresses the common misperception that Latino parents are not involved in their children's formal education. An important implication of this study is that parents can have an impact on students' academic persistence even if they are not able to attend school-based activities.

Keywords

parental involvement, high school dropout, Hispanic/Latino students, academic persistence, academic socialization

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Latinos are less likely to graduate from high school compared to other racial/ethnic groups (U.S. Department of Education, 2010). The following dropout rates were reported for the year 2008: Asian/Pacific Islanders (4.4%), Whites (4.8%), Black/African Americans (9.9%) and American Indian/Alaska Natives (14.6%). In 2008, Latinos dropped out of high school at an astounding rate of 18.3% (U.S. Department of Education, 2010). The combination of Latinos being the largest racial/ethnic minority group and among the least educated has serious ramifications for political and economic representation, and overall quality of life. A high school degree is often required for entry-level employment and for postsecondary education. When a student drops out of high school, the prospect of a college degree or graduate degree is swiftly removed from the list of potential future options.

The problem of high school dropout requires attention due to the vast repercussions including poor health, drug use, delinquency, low income, unemployment, and overrepresentation in prisons (Martinez, DeGarmo, & Eddy, 2004). Parental involvement has been found to positively influence student academic success; however, less is known about home-based emotional and behavioral parental involvement practices among Latino parents. To this end, the present study investigated the role of home-based parental involvement practices and their influence on students' beliefs about school and academic persistence.

Parental Involvement and Academic Persistence

Family factors have a strong influence on academic achievement (Coleman, 1991; Kerbow & Bernhardt, 1993; White, 1982) and they, in turn, are influenced by various ecological factors (Bronfenbrenner, 1979; Bickel & Lange, 1995; Taylor & Clayton, 2004). Family factors related to high school attrition include the following: parental job status, parental expectations for their child's education, family income (Pirog & Magee, 1997), one- or two-parent families, attachment, (Astone & McLanahan, 1991), family support (Catterall, 1998; Garrett, Antrop-Gonzalez, & Velez, 2010), encouragement, parental involvement, and parenting style (Rumberger, Ghatak, Poulus, Ritter, & Dronbusch, 1990). Other factors observed among Latinos include the following: economic, social, and language proficiency disadvantages as well as cultural misunderstandings when interacting with schools (Hill & Torres, 2010).

Students with parents with low educational attainment and lower expectations for their children's education have lower graduation rates (Ekstrom, Goertz, Pollack, & Rock, 1986). Furthermore, academic achievement is

positively related to high school completion, which is influenced by parental involvement in schools (Astone & McLanahan, 1991; Griffith, 1996; Grolnick & Slowiaczek, 1994; Lareau, 1987).

Unfortunately, the ecological factors that have an effect on level of traditional parental involvement are difficult to influence (e.g., socioeconomic status, family size, educational attainment). However, it is possible to go beyond the demographic factors themselves and investigate how they operate. For example, a single parent might have to work two jobs to make ends meet due to low SES. This situation leaves little time for parents to attend parent-teacher conferences, in which case home-based parental involvement becomes critical. Aspects of home-based parental involvement have been found to have stronger effects on academic achievement than traditional school-based parental involvement (Fan, 2001; Singh et al., 1995). Despite the complex nature of parental involvement in schools, a proactive approach on behalf of schools has been shown to increase home-based parental involvement in their children's schooling (Feuerstein, 2000; Sandham, 1999). Programs that increase family involvement, specifically parents' expectations and communication about school issues, result in greater improvement of student performance (Chan, 1987; Rumberger, 1995).

Latinos and Parental Involvement

Some Latino parents have reported not feeling welcome in the schools (Anguiano, 2004). Not feeling welcome in schools is expected to interfere with school-based parental involvement. On the contrary, European Americans, being the dominant group in the United States, are more likely to feel confident engaging in school-based parental involvement (Okagaki & Frensch, 1998). Not feeling welcome due to language barriers is a problem that can be resolved by hiring bilingual professionals or interpreters in schools with a large population of Latino students and families (Ramirez, 2003). Beyond not feeling welcome in the schools, some parents may not have access to transportation, childcare, and/or they may have jobs that offer little or no flexibility in their work schedule.

Bempechat (1998) notes that Latino students report high home-based parental involvement in the form of emphasizing the importance of academic success to get ahead in life. Latino parents also tend to practice structuring and monitoring; activities highly aligned with home-based parental involvement (Sui-Chu & Willms, 1996). Valencia and Black (2002) also attempt to debunk the myth that Latinos do not care about education by highlighting the fact that many Latinos are less involved with school-based activities due to

the common separation between the home and school environments in their countries of origin.

Aims of the Study

The first aim of the study was to determine if the proposed model of relationships between parental involvement, student school beliefs, and intention to complete the present school year fit the data well. The second aim was to assess the hypothesis that the Student School Beliefs latent construct mediates the relationship between the Parental Involvement latent construct and Intent to Complete High School. This hypothesis is drawn from a combination of ecological and parental involvement literature. The ecological theory supports the notion that students are impacted by the familial subsystem prior to forming their intention to complete high school. Furthermore, the Parental Involvement literature provides evidence that from early ages through the high school years parents influence students' perceptions, attitudes, and behaviors. Similar meditational relationships between parent involvement and school performance have been documented (Ross & Broh, 2000; Trusty & Lampe, 1997). However, this study explores a unique set of variables that are not as well understood.

Method

Participants

A sample of 137 Latino adolescents in the ninth grade in a public high school in a small northeastern city was recruited. The participants included 63 Dominicans, 46 Puerto Ricans, 22 Guatemalans, and smaller numbers of Mexican, Salvadorian, Bolivian, Colombians, and Ecuadorians. The mean participant age was 14.28 years (SD = .54) and 56.2% were females. Additionally, 77% of the sample reported receiving free or reduced lunch. The school where the present study took place enrolled 1,641 students and 110 teachers at the time of data collection. According to the School Accountability for Learning and Teaching (SALT) survey data, 64% of all students at this school were eligible for free or reduced lunch. The racial/ ethnic representation for this school is as follows: 51% Hispanic/Latino, 24% Black/African American, 15% White, 9% Asian, and 1% Native American. Additionally, this school reported a 35% dropout rate, compared to 19% for the state. In terms of student attendance, this school reported 21% time out of school, compared to 10% time out of school for the state (National Center on Public Education and Social Policy, 2004).

Procedures

Students completed a confidential, counter-balanced, 30-minute survey during school hours on one of 2 days when the data were collected. Students were given a snack after survey administration and they were entered into a raffle for a compact disc player.

Instrumentation

Sociodemographic data were collected using a questionnaire that assessed students' age, sex, ethnicity, parental level of education, and generational status. Parental level of education and generational status were excluded from analyses due to substantial missing data as a large number of students did not know the answer to those questions.

The Educational Parental Encouragement Scale-Modified (Gloria, Castellanos, Lopez, & Rosales, 2005) was used to assess students' perception of their parents' educational support and encouragement. In the original scale developed for college students, students rated 12 statements such as "My mother/father believes I will complete my college education" using a 4-point scale where $1 = strongly \ agree$ and $4 = strongly \ disagree$. The scale was previously modified for use with high school students by Castillo (2002). Cronbach's coefficient alpha was measured at .89. Monitoring/ Time Management (Campbell, 1994) is a subscale of the Inventory of Parental Influence (IPI). This subscale was used to assess parental rules for watching television, setting aside time for reading, and requiring completion of homework. It consists of eight items such as "My parents keep track of the amount of time I give to homework" rated on a 5-point Likert-type scale (1 = never)and 5 = always). Cronbach's coefficient alpha was measured at .83. The 11-item Family subscale of the Perceived Social Support from Family and from Friends scale (Prodiciano & Heller, 1983) was used to assess students' perception of having their needs for support and information met by their family. Students answered statements such as "My family gives me the moral support I need" by noting: "Yes," "No," or "I don't know" (yes = 1, no = 0). Cronbach's coefficient alpha was measured at .75.

Perceptions of Environmental Responsiveness-Modified scale (Gordon, 1995) is a subscale of the Assessment of Academic Self-Concept and Motivation scale (AASCM). This 20-item subscale was used to assess students' perceptions of school responsiveness. Students rated their school such as, ease of "finding someone at school with whom to discuss plans for your future," using a 7-point Likert-type scale (1 = very responsive and 7 = not

very responsive). Cronbach's coefficient alpha was measured at .88. Academic Self-Efficacy-Modified (Nobel, Hackett, & Chen, 1992) is a 13-item measure of students' perception of their academic ability measured by ratings of their confidence regarding the completion of their coursework with "A" or "B" on a 5-point Likert-type scale where 1 = not sure at all and 5 = completely sure. This scale was modified by replacing the subject "Spanish" with "Foreign language" as not all students were taking Spanish to fulfill their foreign-language requirement. An option for students to select a response of "not applicable" if they have not taken the specific academic subject was added. Cronbach's coefficient alpha was measured at .91. The School Engagement-Trouble (Finn, 1993) subscale consists of six items such as "I was sent to the office because I was misbehaving," to which the students report the frequency with which each occurred. Cronbach's coefficient alpha was measured at .73. The Attitude-Modified (Davis, Ajzen, Saunders, & Williams, 2002) scale was used to assess students' attitudes about completing the present school year. Eight polar pairs of words, such as "rewardingpunishing," are rated using a semantic differential scaling. The semantic differential was originally depicted by a straight line on which students would place a mark; however, the response format was modified for ease of interpretation by replacing the line with seven unlabeled bubble circles to be filled in by the students depending on their perception on each polar pair. Cronbach's coefficient alpha was measured at .88.

The Intention-Modified (Davis et al., 2002) scale is measures students' intention to complete the present school year which is correlated with actual graduation. Due to the inability to follow students for 4 or 5 years through high school, the closest possible measure to actual graduation lies in their intentions. This 6-item scale measured students' anticipation of completing the ninth grade and high school. Three items about intention to complete the present school year were adopted from Davis et al. (2002) Intention scale. Those three items were adapted to include Intention to Complete High School (i.e., all four grades). Students rated, on a 7-point agree-disagree Likert-type scale, the extent to which they intended to, were determined to, and thought they might not complete the present school year and high school. Cronbach's coefficient alpha for the scale was .75.

Variables

Latent variables were formed using the measured variables described above. Forming latent variables allows for the examination of relationships among latent and measured variables based on shared variance, thus strengthening

Dependent variable	Variables	Mean	SD	Values	Factor loadings
	Intent	6.33	0.82	1-7	
Student school beliefs latent construct	Attitude	5.46	1.20	1-7	.68
	Efficacy	3.49	1.05	1-5	.62
	Responsiveness	4.56	1.07	1-7	44
	Trouble	1.71	0.37	0-2	.69
Parental involvement	Encouragement	3.33	0.56	1-4	.69
	Monitor	2.17	0.56	1-4	.36
latent construct	Support	0.59	0.25	0-1	.41

Table 1. Variable Means, Standard Deviations, and Factor Loadings

Note: N = 137.

the reliability of the constructs. As noted by Bullock, Harlow, and Mulaik (1994), using latent constructs provides the benefit of approximating complex real life relationships as multiple measures are used to understand a construct as opposed to a single measured variable. The present study has two latent variables, which have been named Parental Involvement and Student School Beliefs. The Parental Involvement latent construct is comprised of the following measured variables: Monitoring, Social Support from Family, and Parental Educational Encouragement. The Student School Beliefs latent construct is comprised of the following measured variables: Perceptions of School Responsiveness, School Engagement-Trouble, Academic Attitudes, and Academic Self-Efficacy. Intention to Complete High School is a measured dependent variables. See Table 1 for a display of variable means, standard deviations, and factor loadings.

Results

After the data were screened and the assumptions checked they were exported to EQS 6.1, Structural Equation Modeling Program (SEM; Bentler, 2004).

Examination of Hypotheses 1: The Structural Model Fits the Data Well

The integrity of the constructs was determined by observation of the factor loadings of each measured variable on each construct. As hypothesized, all

variables loaded well on the respective factors. See Table 1 for a complete display of factor loadings.

Examination of Hypotheses 2: Student School Beliefs Mediates Parental Involvement and Intention

Three models were tested to examine the hypotheses. According to Bullock et al. (1994) and Hoyle and Panter (1995) testing multiple models provides greater evidence of good- versus poor-fitting models and improves power. The full model tests all paths and was expected to explain the largest amount of variance. The direct effects model tests paths directly from Parental Involvement to Intention to Complete High School skipping the effects of the Student School Beliefs latent construct. The direct effects model was expected to be a poor fitting model. The mediational model, the hypothesized model, predicts that the effects of Parental Involvement impact Intention to Complete High School through the Students' School Beliefs latent construct. The three models were assessed separately and tested against each other using a chisquare difference test (Loehlin, 2004).

The results of the full model indicate that this model fits the data well. The ratio of chi-square to degrees of freedom was, $\chi^2(18)$ 137 = 24.12, p =.15; CFI was .97; and RMSEA was .05, 90% CI [.000, .097]. The Wald test suggested five paths that could be dropped none of which would significantly improve chi-square and they would compromise the theoretical foundation of the proposed model. The Lagrange Multiplier Test provided 12 possibilities for adding paths to the proposed model. Only one would significantly improve the model although the addition would compromise the theoretical foundation of the model. The model improving addition includes a path from Monitoring to Student School Beliefs. All parameters were statistically significant. The path from the Parental Involvement latent construct to the Student School Beliefs latent construct was statistically significant at a two-tailed level. R^2 was estimated at .10 indicating that about 10% of the variance in Intention was accounted for by this model, which is almost a medium multivariate effect size (need .13 for medium; Cohen, 1992).

The results of the mediational model indicate that the hypothesized model fits the data well. The ratio of chi-square to degrees of freedom was, $\chi^2(19)$ 137 = 24.34, p =.18; CFI was .98; and RMSEA was .05, 90% CI [.000, .092]. The Wald Test did not suggest any paths that could be dropped. The Lagrange Multiplier Test provided 13 possibilities for adding paths to the proposed model. One of the paths recommended by the Lagrange Multiplier Test would significantly improve the model although this addition would compromise

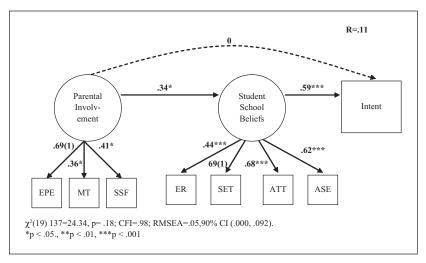


Figure 1. Model 1: Mediational structural model for the effects of Latinos' parental involvement on intention to complete high school directly and through student school beliefs. (36 data points, 18 parameters, 18 degrees of freedom)

the theoretical foundation of the model. More specifically, The Lagrange Multiplier Test recommended adding a path from Monitoring to Student School Beliefs. All parameters were statistically significant. The path between the Parental Involvement latent construct and the Student School Beliefs latent construct was statistically significant at a two-tailed level. R^2 was estimated at .11 indicating that about 11% of the variance in Intention was accounted for by this model, which is almost a medium multivariate effect size (need .13 for medium; Cohen, 1992; Figure 1).

The results of the direct effects model indicate that this model does not fit the data well. The ratio of chi-square to degrees of freedom was, $\chi^2(20)$ 137 = 65.85, p < .001, is well over the recommended criteria and it is statistically significant; CFI was .71; RMSEA was .13; and the 90% CI [.10, .15]. The Wald test suggested four paths that could be dropped although none would be recommended as they would not significantly improve chi-square and they would compromise the theoretical foundation of the proposed model. In addition, the Lagrange Multiplier Test provided 15 possibilities for adding paths to the proposed model, three of which would result in a statistically significant improvement to the model and include the paths in the hypothesized mediational model. Two of the key paths that were recommended by the

Lagrange Multiplier Test and that would make a statistically significant contribution to improving chi square include a path from the Parental Involvement latent construct to the Student School Beliefs latent construct and a path from the Student School Beliefs latent construct to Intention to Complete High School measured variable. If the two aforementioned paths were added it would recreate the hypothesized mediational model. R^2 was estimated at .06 indicating that only 6% of the variance in Intention to Complete High School was accounted for by this model, providing further evidence that the mediational and full models explain the variance in these data best.

Chi-Squared Difference Test

A chi-squared difference test between the above models (i.e., full, mediational, and direct effects models) was conducted to determine which provides the best representation of the data. The chi-squared difference between the full and mediational models was not statistically significant indicating that they are not different from one another, thus the mediational model provides a good representation of the data, $\chi^2(1) = .22$ ns. The chi-squared difference between the full model and the direct effects model was statistically significant, $\chi^2(2) = 41.73$, p = .001, indicating that the direct effects model does a poor job of explaining the variance in the dependent variable and the mediator is a necessary factor that helps to explain the variance in the dependent variable. The best fitting and most parsimonious model is the mediational model.

Discussion

The present study explored various social and psychological variables in search of a more complete picture of Latino high school students' intentions to complete high school. More specifically, the aim of the present study was to better understand the role that parents play in the formation of students' intentions to complete high school. It was proposed that parental influence not visible to schools can, and should, be better understood as a contributing factor.

Two research hypotheses were tested using SEM. The first hypothesis, that the structural model fits the data well was supported. In fact, the factor analysis component of structural equation modeling indicated that two components were formed, each with the anticipated number of variables associated with them. The second hypothesis, that Student School Beliefs mediates the relationship between Parental Involvement and Intent to complete High School, was also supported. Theoretically, one can see how students are

influenced by their parents' expectations and behaviors to form their own views about school.

Parents play an important role, although their involvement cannot be separated from various sociodemographic variables. For example, research reported by Catsambis (2001) and Keith et al. (1998), found a positive relationship among parental involvement and SES. Type of school lunch students receive is often used as a proxy of socioeconomic status. In the present study, 77% of students reported that they received a free or reduced pay lunch. Studies by Catsambis (2001) and Keith et al.(1998) indicate that parental involvement has a significant positive effect on educational outcomes and that higher SES and higher parental academic achievement are associated with higher levels of parental involvement.

The present study sought to measure parental involvement activities that are not always observable to the school system (i.e., encouragement, expectations, monitoring). Latino parents engage with their children in various ways not visible to the school system such as encouraging positive school behaviors, tutoring until the students' academic knowledge exceeds their own, as well as telling their children that they want them to have a better life than they have had and that this may be achieved via education (Arellano & Padilla 1996; Yowell, 1999).

Limitations

The results presented herein should be understood in consideration of various limitations. The participants in this study were not randomly selected from the whole population of ninth graders. The diverse Latino group sampled also limits the generalizability of the findings. This study took place in one school, thus the nonrandom selection poses limits to the generalizability of the results. An additional limitation revolves around the self-report measurement instruments. Self-report scales are susceptible to response bias. Future studies in this area should consider gathering additional, more objective data, as can be found in school records or obtaining data from multiple sources (e.g., students, parents, and teachers). As students were reporting on their perceptions of their parents' behaviors and expectations and themselves, the conclusions about the relationships among the variables may be weakened due to shared method variance. The results of the present study should not be understood as evidence in support of or against causal relationships. Effect sizes were small to medium (Cohen, 1992) likely due to the sample size.

Recommendations for Families

Parents can take steps to demonstrate interest in their children's schoolwork by providing educational encouragement, sharing their educational expectations, and monitoring student activities. Students who perceived their parents as providing educational encouragement, expectations, and monitoring had stronger positive beliefs about school and intentions to persevere academically. Compared to other racial/ethnic groups, fewer Latinos think that they need a good formal education to get the jobs they desire; perhaps a perception that is related to their observation of discrimination in the schools resulting in stunted advancement (Okagaki, 2001). Latino parents can begin to think more grandly and begin to express to their children that they believe that they have what it takes to get far in education. Finally, the children of parents who instill good study habits and self-discipline often reap higher academic achievement (Blair, Legazpi Blair, & Madamba, 1999).

Recommendations for Schools

Schools must enhance communication between students, parents, and teachers; increase the participation of Latinos in school activities; demonstrate an appreciation of Latino culture(s); and engage community supports (Hernandez & Nesman, 2004). Communication between parents and teachers regarding student performance needs to improve (Okagaki, 2001). Schools also have a responsibility to identify students with problems of absenteeism and other troubles as they are at higher risk of low academic achievement and dropping out. Schools also have a responsibility to make learning more meaningful for students (Mullis, Rathage, & Mullis, 2003). These are the types of activities that begin to change students' and parents' perceptions of school responsiveness in a positive direction. School personnel can create greater congruence between home and school cultures (Okagaki, 2001) by engaging in the following activities in the service of helping Latino parents and children feel more welcome: learn about cultures, participate in cultural events, develop relationships, bring families into the classroom, offer activities for families, and hire bilingual staff (Ramirez, 2003, Shah, 2009). Schools can have more extracurricular activities in order to maintain students engaged in school as this has been reported as a protective factor (Gonzalez & Padilla, 1997; Martinez et al., 2004). Schools need to reach out to parents and explain what the expectations are and what parents can do to support their children's education, as not all parents know this information.

Acknowledgments

Special thanks to Drs. Paul Florin, Barbara Newman, and John Stevenson for their contributions to this research and to Dr. Lisa Harlow for generous consultations.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed the following financial support for the research, authorship, and/or publication of this article: This work was supported by a University of Rhode Island Undergraduate and Graduate Research Grant awarded to this author.

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Bio

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