



6-7-2018

Conceptualizing Latina/o College-going Behavior in High School

Victor B. Saenz Ph.D.

University of Texas at Austin, vsaenz@austin.utexas.edu

Anna P. Drake Ph.D.

University of Central Florida, anna.drake@ucf.edu

Claudia Garcia-Louis Ph.D.

University of Texas at San Antonio, claudia.garcia-louis@utsa.edu

Wonsun J. Ryu

The University of Texas at Austin, wonsunjustin.ryu@gmail.com

Luis Ponjuan Ph.D.

Texas A&M University, luis.ponjuan@tamu.edu

Follow this and additional works at: <https://scholarworks.wmich.edu/jca>



Part of the [Higher Education Commons](#), and the [Secondary Education Commons](#)

Recommended Citation

Saenz, Victor B. Ph.D.; Drake, Anna P. Ph.D.; Garcia-Louis, Claudia Ph.D.; Ryu, Wonsun J.; and Ponjuan, Luis Ph.D. (2018)

"Conceptualizing Latina/o College-going Behavior in High School," *Journal of College Access*: Vol. 4 : Iss. 1 , Article 4.

Available at: <https://scholarworks.wmich.edu/jca/vol4/iss1/4>

This Article is brought to you for free and open access by the Western Michigan University at ScholarWorks at WMU. It has been accepted for inclusion in Journal of College Access by an authorized editor of ScholarWorks at WMU. For more information, please contact maira.bundza@wmich.edu.



Conceptualizing Latina/o Students' College-going Behavior in High School

ABSTRACT

This study examined the influence of participation in school and extracurricular activities on Latino males' intention to pursue a bachelor's degree in relation to their Latina peers. Using nationally representative High School Longitudinal Study data from 2012, researchers developed two factors and three dichotomous variables focused on academic, non-academic, or pre-college activities and ran multivariate regression models to determine the effect on intention to pursue a bachelor's degree. After accounting for background characteristics, being female retained a strong positive effect on intention to pursue a bachelor's degree. Two factors were positively associated with Latino males' bachelor's degree intention: *Hours on School Work* and *College Planning and Preparation*. Two dichotomous variables, *Math Activities* and *Science Activities* were positively associated; however, the other dichotomous variable, *Non-academic Activities*, was negatively associated. Most significantly, this study found that effects of high school activities and preparation for college are not constant across gender.

Extensive research has established disparate educational attainment between Latino/as and White students and between Latinos and Latinas (Aud, Fox, & KewalRamani, 2010; Aud, et al., 2012; Nuñez & Kim, 2012; Strayhorn, 2014). However, researchers too often apply a cultural deficit perspective that neglects systemic and structural factors and over-emphasizes students' background characteristics (Bonilla-Silva, 2006; Harper, 2012; Solorzano, 1992). Consequently, students of color are often perceived as deficient or incapable of academic excellence. This study addressed two pressing scholarly and practical problems: the dearth of literature bringing an asset-based perspective



Authored by

Victor B. Saenz Ph.D. (University of Texas at Austin)

Anna P. Drake Ph.D. (University of Central Florida)

Claudia Garcia-Louis Ph.D. (University of Texas at San Antonio)

Wonsun J. Ryu (The University of Texas at Austin)

Luis Ponjuan Ph.D. (Texas A&M University)

to the study of students of color outcomes, and the need to improve educational pathways for their success.

Studies indicate the achievement gap between Latino/a and White students is largely due to low SES, not lack of student ability or desire to succeed (Gándara, 2010; KewalRamani et al., 2010; Solorzano, 1992). Latina/os largely attend high-poverty urban schools, qualify for free and reduced lunch, and receive limited academic support, factors that place serious challenges to their academic preparation and success (Gandara, 2010; Stanton-Salazar, 2001). Despite these barriers, Latina/o students actively establish ambitious educational goals and career plans (Solorzano, 1992; Solorzano & Delgado Bernal, 2001). However, Latinas tend to outperform their male counterparts: Latinas are 3.3 times more likely to enroll in a four-year college (Nuñez & Kim, 2012) and more likely to take higher levels of twelfth grade math – a key predictor of college readiness (Strayhorn, 2014). Research must examine intra-group dynamics in order to identify ways to help Latino males achieve academic success.

Latina/o Students' College-going Behavior in High School

Using High School Longitudinal Study (HSL:2012) data, this study examined the factors influencing Latino students' opportunities and intentions to pursue a bachelor's degree, and compared the influence of these factors on postsecondary intention between Latino males and their female counterparts. The purpose of the study was to better understand how Latino males' high school activities inform their future college going behavior. The two guiding research questions were:

What patterns of college-going behavior do Latino male students exhibit in high school?
How do these patterns of behavior affect expressed intention to pursue a bachelor's degree by gender?

Literature Review

Latina/os face an arduous journey from high school to college (MacDonald, Botti, & Hoffman Clark, 2005). High schools are often unable or unwilling to meet their academic needs, placing them at an unfair academic disadvantage early on (Irizarry, 2012). For Latina/os who enroll in college, many perceive a negative climate for diversity and often report a lower sense of belonging (Hurtado & Ponjuan, 2005; Nuñez, 2009), making them more likely to withdraw (Hausmann, Schofield, & Woods, 2007). Despite these challenges, scholars (i.e. Yosso, 2005) have identified nontraditional forms of "cultural capital" that help students of color persist.

Demographic and Contextual Factors

Demographic and contextual factors affect students' educational opportunities, and research indicates this is undoubtedly the case for Latino students. Perna and Thomas (2008) identified four contexts affecting college enrollment: student, family, school, and broader social, political, and economic conditions. At the student and family level, Nuñez and Kim (2012) found that Latino students from families earning \$25,000 to \$75,000 per year were less likely to enroll in a four-year institution than their more affluent counterparts. Studies by Hagedorn and Perrakis (2008) and Saenz and Ponjuan (2009) have identified gender as a factor influencing college attendance, finding Latinas more likely to enroll in a four-year institution than their Latino peers. Parental education level also affects postsecondary intentions by contributing to students' information and awareness about college (Perna, 2000).

At the school level, Nuñez and Kim (2012) and Engberg and Wolniak (2010) found that higher levels of free and reduced lunch participation were negatively associated with four-year college enrollment. Gandara and Contreras (2009) demonstrated that Latino students were often classified into lower academic tracks that limited their academic pathways, and that schools with higher Latino enrollment tended to provide fewer college planning resources compared to schools with larger proportions of White students. Research also indicates that students attending private high schools are more likely to enroll in a four-year postsecondary

Latina/o Students' College-going Behavior in High School

institution (Falsey and Haynes, 1984), and students from rural high schools are less likely to earn a bachelor's degree than peers from urban or suburban schools (Byun, Meece, & Irvin, 2012).

Educational Aspirations & Expectations

Positive relationships play an important role in minority students' postsecondary aspirations (Diemer, Wang, & Smith, 2010). Studies have found that peer relationships (Cohen, 1983; Hallinan & Williams, 1990), school counselors (Fallon, 1997; McDonough, 2005), and family member and parental support (Ceja, 2006) can increase high school students' educational goals. However, Latino males have limited access to resources and mentors, placing them at greater disadvantage than their peers (Lasley Barajas & Pierce, 2001; Saenz & Ponjuan, 2009). Family SES is highly correlated with parents' education, income, and employment (Harding, Morris, & Hughes, 2015), and low parental education compounds challenges to children's educational achievement (Reardon, 2011). Olivos (2006) argued the school system has systematically isolated bilingual parents from engaging in the schooling of their children. Administrators and educators may view bilingual parents as uninvolved and incompetent, resulting in lower support for students' academic success.

Research also demonstrates that high school preparation and high school behaviors influence students' predisposition toward college and persistence in higher education

(Adelman, 1999; Warburton, Bugarin, & Nuñez, 2001). Arbona and Nora (2007) found Latina/o high school graduates' likelihood of attending a four-year institution following graduation was influenced by their expectation of attaining a bachelor's degree, plans to attend college immediately, completion of a rigorous curriculum in high school, and the presence of a majority of peers with similar four-year college plans. High school students with strong college ambitions by sophomore year were found to be more likely to enroll in a four-year institution than their peers without clear college plans.

Strayhorn (2014) found that time spent studying predicted college readiness among historically underrepresented students; the only predictor more significant was SES. Participating in precollege preparation programs also predicted Latina/o students' college readiness more significantly than other racial/ethnic minority groups. Gonzalez (2011) identified taking the highest available level of high school math, planning to take or taking the SAT/ACT, students' expectations for high educational attainment, and frequency of discussing college with parents correlated with Latino/a aspirations to enroll in a 4-year college. Gibbons and Borders (2010) developed the College-Going Self-Efficacy Scale (CGSES) based on middle school students' attitudes toward attendance and persistence, and found lower college-going self-efficacy beliefs among those whose parents had not attended college (Gibbons & Borders, 2010).

Latina/o Students' College-going Behavior in High School

College Planning and Preparation

Literature on college planning and preparation emphasizes the experience of affluent, White students and largely neglects the experiences of students of color. While White, native-born children with college-educated parents are more likely to form a “college-going *habitus*” – a largely unconscious set of preferences, behaviors, and styles closely related to social origin (Grodsky & Riegle-Crumb, 2010) – students of color rely more heavily on school networks, teachers, and counselors to navigate college decisions (Farmer-Hinton, 2008). However, Latino/a students often encounter inadequate access to sufficient resources and mentors at school, and the constraints of school counselors who serve large student populations place Latina/o students in a “double bind” with limited support (Irizarry, 2012; Cabrera, Lopez, and Saenz, 2012).

Despite institutions' limited capacity to appropriately serve all students, research indicates that contact with school counselors can predict college application rates among high school low-income and students of color. Bryan et al. (2011) found students with counselor contact during or prior to tenth grade were twice as likely to apply to one school and 3.5 times more likely to apply to multiple schools. Similarly, Engberg and Gilbert (2014) argued that counseling norms and access to counseling resources increase likelihood of applying to college. Extracurricular engagement can also affect college-going: Martinez (2010) showed

students were able to navigate the college choice process through their social identities as athletes, band students, and/or club members because these activities exposed them to college knowledge and provided access to school personnel.

In sum, the majority of existing literature portrays Latina/o students as deficient and displaces much of the school and systemic responsibility onto the students rather than identifying institutional responsibility. However, an increasing amount of research demonstrates how Latina/os actively resist these constraints and pursue quality education despite their circumstances (Solorzano & Delgado Bernal, 2001; Cabrera, Lopez, & Saenz, 2012). Consequently, this study sought to maintain an asset-based perspective that values and empowers Latina/o students while attempting to identify replicable solutions for success.

Theoretical Framework

This study utilized Azjen's (1985; 1991) theory of planned behavior, a social psychology theoretical lens. Ajzen (2005) suggested that previous behavior is a precursor to an individual's intention of future behavior. The theory argues that behavioral beliefs about potential consequences produce a certain attitude toward the behavior; normative beliefs about other people's expectations produce norms and social pressure; and control beliefs shape an individual's perceived ability to perform a certain behavior. The theory emphasizes the role of consciousness and intentional action in

Latina/o Students' College-going Behavior in High School

guiding behavior: as Azjen (2011) stated, "its concern is primarily with behaviors that are goal-directed and steered by conscious self-regulatory processes" (p. 1116). According to this theory, performance of a behavior should be predictable based on the individual's intentions and their perceived behavioral control (Azjen, 2011).

Azjen (2002) has noted that self-efficacy and an individual's perception of control may reflect both internal and external influences. Relatedly, studies (see Adelman, 1999; Warburton, Bugarin, & Nuñez, 2001) have demonstrated that multiple complex factors shape Latino male college-going activities and decisions. Azjen (2011) acknowledged that background factors such as age, education, gender, and income contribute to people's beliefs about their own behaviors, other people's expectations, and their own self-efficacy. While recognizing and controlling for the influence of these environmental variables, the intent of this study was to identify intentional precollege behaviors that are most likely to predict pursuit of a bachelor's degree among Latino male high school students. We posited that Latino males' high school behaviors may predict their four-year degree intentions.

It is important to note, however, that this and many other behavioral theories normalize the experiences of White individuals with high agency and resources. In applying Azjen's (1985; 1991) theory of planned behavior, this study looked to challenge and begin to

expand the ways in which this and other theories are used to explain the experiences of non-White individuals. By understanding the precollege behaviors of Latino male students, we sought to create a broader view of Azjen's (1985) theory that could more closely reflect the balance of normative, behavioral, and control beliefs among young Latinos.

Methods

Data and Sample

The High School Longitudinal Study of 2009 (HSL:09) includes a nationally representative sample of public and private high school students and is intended to examine students' trajectories from the beginning of high school into postsecondary education and the workforce. Base year data was collected in 2009 and included over 24,000 ninth grade students from 944 schools. A first follow-up of the HSL cohort occurred in spring 2012, when most study participants were completing 11th grade. The survey investigated secondary to postsecondary transition, the evolution of postsecondary plans, and the educational and social experiences that affect these shifts (NCES, 2015). In order to assess college-going behavior during several years of high school, this project utilized the follow-up data with 11th grade students.

The national dataset included 23,503 students overall and 3,862 Latina/o students. This study relied on the subsample of 3,862 respondents who identified as Latina/o students. However, only respondents with

Latina/o Students' College-going Behavior in High School

valid answers on all variables were determined to be eligible for the analytic sample. Researchers ran chi-square tests to compare all Latina/o students with the selected sample of 2,050. Chi-square results suggested that the differences between all Latina/o students and the selected sample by gender (chi-square=.631, $df=1$, $p>.05$), family income (chi-square=3.044, $df=1$, $p>.05$), and parental education level (chi-square=8.396, $df=4$, $p>.05$) were not statistically significant. The sample of 2,050 Latina/o students was included in the present study. Researchers weighted the final sample of 2,050 using the first follow-up student analytic weight (W2STUDENT) before conducting all analyses.

Measures and Analyses

As the purpose of this study was to identify key college-going behaviors of Latino male high school students relative to their peers, researchers reviewed the HSLs survey instrument and identified items addressing a student's participation in activities pertaining to high school or college. Researchers examined the following outcome variable related to college-going behaviors of Latino students: Intention to pursue a bachelor's degree (0 = No, Yes = 1). The identification of predictor variables was informed by the preceding literature review of past studies examining high school students' college-going behavior (see for example Arbona & Nora, 2007; Engberg & Gilbert, 2014; Gonzalez, 2011; Martinez, 2011; Strayhorn, 2014). In addition, five predictors associated

with demographics (i.e., gender, family income, and parental education level) and school characteristics (i.e., school type and school locale) were included as important input variables. The selection of these variables was again driven by literature review of key contextual factors shaping college-going (see for example Gandara & Contreras, 2009; Hagedorn & Perrakis, 2008; Nuñez and Kim, 2012; Perna, 2000; Saenz & Ponjuan, 2009).

Researchers ran principal components analysis and measured reliability using Cronbach's alpha, producing two unique factors used to provide a parsimonious but comprehensive description of school activities for college readiness. Based on these results, two variables – "Hours on school work," with very good internal consistency of .891, and "College planning and preparation," with an acceptable internal consistency of .538 – were added to the dataset. These factors were informed by the literature review framing this study; for example, Strayhorn (2014) found time spent studying was a significant predictor of college readiness, and Bryan et al. (2011) found high school counselor contact by sophomore year increased likelihood of applying to college. In addition to two factors, three predictors of out-of-school activities were used to disentangle the separate influences of extracurricular activities on college-going behavior: math activities, science activities, and non-academic activities. Gonzalez (2011) found taking the highest-level math was a predictor of college-

Latina/o Students' College-going Behavior in High School

going, and Martinez (2010) showed that extracurricular activities helped students navigate the college choice process. Each variable was dichotomized into those who participated in at least one of four or five activities outside of school (1) and those who participated in none of activities outside of school (0).

Each variable is described in more detail in Table 1 (page 27), and the weighted descriptive statistics are presented in Table 2 (page 28). Factor loadings and the degree of reliability (Cronbach's alpha) of two factors, "Hours on school work" and "College planning and preparation," are presented in Table 3 (page 28).

Researchers ran independent sample t-tests for two factors (i.e., Hours on school work, College planning and preparation) and chi-square tests for three dichotomous variables (i.e., Math activities, Science activities, Non-academic activities) against gender variable to identify significant difference between Latino males and their female peers. In addition, researchers utilized logistic regression to predict the likelihood of a student's intention to pursue a bachelor's degree. Logistic regression is appropriate to "predict a discrete outcome such as a group membership from a set of variables that may be continuous, discrete, dichotomous, or a mix" (Tabachnick & Fidell, 2007, p. 437). Two multiple logistic regression models using independent variables guided by the previous research were suggested for data analysis. The first

model examined factors and dichotomous variables related to college preparation, as well as key background characteristics and school characteristics except interaction terms. The researchers added five interaction terms to the second model to investigate how the effects of high school activities and preparation for college on postsecondary differ by gender. The logistic regression model with interaction terms can be expressed with the following equation: $\text{logit}(\pi) = \ln[\pi/(1-\pi)] = \text{Intercept} + \sum\beta_{1-6}$ (Demographic characteristics) + $\sum\beta_{7-10}$ (School characteristics) + $\sum\beta_{11-15}$ (High school activities and preparation for college) + $\sum\beta_{16-20}$ (Interaction terms). π is the estimated probability of postsecondary intention and varies from 0 to 1 on S-shaped curve. β s are the slope coefficients of the independent variables and interaction terms in the logistic regression model. Researchers reported the following parameters in interpreting the logistic regression results: p-value, unstandardized regression coefficient, standard error, and odds ratios. P-value and odds ratios were utilized to express statistical significance and change in the odds of outcome as the function of a predictor variable, controlling for all other variables.

Limitations

Factoring of variables was conducted and informed through literature. However, it is important to note that this process simplifies the complex realities of Latino male educational experiences. Additional variables not represented in the HSLs survey likely inform students' educational pathways, and

Latina/o Students' College-going Behavior in High School

Table 1
Definitions and coding of main variables

Variable	Description and Coding
Dependent variable	
Intention to pursue a bachelor's degree	1 = Yes, 0 = No
Independent variables	
<i>(1) Demographic Characteristics</i>	
Gender	1 = Male, 0 = Female
Family income	1 = \$35,000 or less, 0 = Greater than \$35,000
Parental education level	5 = Ph.D./M.D/Law/other high level professional degree, 4 = Master's degree, 3 = Bachelor's degree, 2 = Some college, 1 = High school or Less
<i>(2) School Characteristics</i>	
School type	1 = Private, 0 = Public
School locale	Four dichotomous variables indicate school locale: (1) Rural, (2) Town, (3) Suburb, and (4) City. The reference group is (1) Rural and the other three dummy variables were included in the analysis.
<i>(3) High School Activities and Preparation for College</i>	
Hours on school work	A factor score of the following three items: student were asked how many hours do you spend (1) working on math homework and studying for math class during a typical week, (2) working on science homework and studying for science class during a typical week, and (3) working on other homework and studying for other class during a typical week.
Math activities	A dichotomous variable indicates whether or not a student participated in at least one of the following four math activities since 2009: (1) math club, (2) math competition, (3) math camp, and (4) math group study. This item was coded as 0 for those who participated in none of activities and 1 for one or more.
Science activities	A dichotomous variable indicates whether or not a student participated in at least one of the following four science activities since 2009: (1) science club, (2) science competition, (3) science camp, and (4) science group study. This item was coded as 0 for those who participated in none of activities and 1 for one or more.
Non-academic activities	A dichotomous variable indicates whether or not a student participated in at least one of the following five activities outside of school since 2009: (1) Art, (2) Music or dance, (3) Theater or drama, (4) Organized sports, and (5) Scouting or club activity. This item was coded as 0 for those who participated in none of activities and 1 for one or more.
College planning and preparation	A factor score of the following five items: (1) sat in on or taken a college class, (2) took a course to prepare for a college admission exam, (3) attended a program or a tour of a college campus, (4) searched internet or read college guides for college options, and (5) talked with HS counselor about options for after HS.

Latina/o Students' College-going Behavior in High School

Table 2
Descriptive statistics of the variables

Variable	Mean	S.D.	Min.	Max.
DV: Intention to pursue a bachelor's degree	.798	.401	0	1
IVs				
Gender	.511	.500	0	1
Family income	.436	.496	0	1
Parental education level	1.731	1.013	1	5
School type	.057	.232	0	1
School locale (ref. Rural): Town	.065	.247	0	1
School locale (ref. Rural): Suburb	.292	.455	0	1
School locale (ref. Rural): City	.467	.499	0	1
Hours on school work	0	1	-1.683	3.108
Math activities	.158	.365	0	1
Science activities	.140	.347	0	1
Non-academic activities	.698	.459	0	1
College planning and preparation	0	1	-1.772	1.859
Interactions				
Male*Hours on school work	-.044	.734	-1.683	3.108
Male*Math activities	.071	.256	0	1
Male*Science activities	.072	.258	0	1
Male*Non-academic activities	.367	.482	0	1
Male*College planning and preparation	-.051	.725	-1.772	1.859

Table 3
Factor loadings and Cronbach's alpha for high school activity factors

	Factor loadings
Factor 1: Hours on school work	
How many hours 11th grader spend working on math homework and studying for math class during a typical week?	0.911
How many hours 11th grader spend working on science homework and studying for science class during a typical week?	0.888
How many hours 11th grader spend working on other homework and studying for other class during a typical week?	0.921
Cronbach's alpha coefficient	0.889
Factor 2: College planning and preparation	
11th grader sat in on or taken a college class.	0.611
11th grader took a course to prepare for a college admission exam.	0.541
11th grader attended a program or a tour of a college campus.	0.650
11th grader searched internet or read college guides for college options.	0.615
11th grader talked with HS counselor about options for after HS.	0.548
Cronbach's alpha coefficient	0.538

Latina/o Students' College-going Behavior in High School

HSLs variables not included in this analysis may play a role as well. In addition, factors included in the dataset are limited in what they capture, and while factor analysis helps quantify the phenomenon of Latino male pre-college behaviors, it does not provide explanation or background for these students' experiences and choices. As such, this study offers an important foundation for further examination; additional supplemental research, particularly through qualitative approaches, can provide rich contextual analyses of students' experiences and processes.

Results

As indicated in Table 4 (page 30), independent t-tests suggested significant gender differences between Latina/o students' reported effort on school work and participation in activities relevant to preparation for college. Latino males indicated significantly less involvement in academic curricular activities during high school (Hours on school work: $t=67.599$, $p<.001$) than their female counterparts; in addition, Latino males reported fewer college preparatory activities (College planning and preparation: $t=78.263$, $p<.001$) than their peers.

As shown in Table 5 (page 30), chi-square results also suggested significant differences in experiences with extracurricular activities based on gender (Math activities: chi-square= 1749.809 , $df=1$, $p<.001$, Non-academic activities: chi-square= 1219.688 , $df=1$, $p<.001$).

However, these differences varied by subject. While there was no significant difference between males and females in science activities (chi-square= $.639$, $df=1$, $p>.05$), 55.3 percent of Latino females participated in math activities, compared with 44.7 percent of Latino males. At the same time, Latino males indicated they were more likely to participate in science activities than their female counterparts (52.6 percent, 47.4 percent). Latino males showed slightly higher participation in science activities than Latina peers (51 percent, 49 percent).

Two distinct models of multiple logistic regression analysis were utilized in order to predict the likelihood of intention to pursue a bachelor's degree as reported by Latino males. Table 6 contains the findings. The effect size for Model 1 was Nagelkerke R^2 , .240; 24% of the variance in the dependent variable is explained by the model. As indicated by the odds ratio, most high school activities that prepare students for college (i.e., Hours on school work, Math activities, Science activities, and College planning and preparation) were a positive predictor of high school students' intention to pursue a bachelor's degree. In contrast, the out-of-school variable, Non-academic activities, was negatively associated with intention to pursue a college degree for Latino males. In addition, parents' education level was positively associated with intention to pursue a degree. However, the model predicted that a Latino student has lower odds of intending to pursue a bachelor's degree if the student is male or

Latina/o Students' College-going Behavior in High School

Table 4

Gender difference in Latino/a's school work and preparation for college

$p < .001$, $p < .01$, $p < .05$

		Mean	S.D.	t-statistics
Hours on school work	Female	.091	.965	67.599***
	Male	-.087	1.025	
College planning and preparation	Female	.105	.976	78.263***
	Male	-.100	1.012	

Table 5

Gender difference in Latino/as' high school activities

		Gender (%)		Chi-square
		Female	Male	
Math activities	None	47.7	52.3	1749.809***
	One or more	44.7	55.3	
Science activities	None	48.9	51.1	.639
	One or more	49.0	51.0	
Non-academic activities	None	52.4	47.6	1219.688***

Percentages were calculated using weighted sample.

$p < .001$, $p < .01$, $p < .05$

Latina/o Students' College-going Behavior in High School

has a family income equal to or less than \$35,000 per year. Findings suggested lower-income Latino males were less likely to plan on enrolling in postsecondary education than their more affluent peers.

The odds ratios of school factors entered into Model 1 indicated that there are significant differences between students' intentions to pursue a bachelor's degree. Students who attended private schools reported higher intentions of enrolling in postsecondary education than those who attended public schools. In other words, high school students are more likely to plan to pursue a bachelor's degree when they are attending private schools than public schools – regardless of locale. This finding was congruent with intra-group findings listed above, where low-SES Latino males were found to be less likely to plan to attend college than higher income Latino males. School type was also found to be important: results revealed that students attending schools in the suburbs or cities were more likely to report an intention to pursue a bachelor's degree than those attending schools in rural areas. Students attending schools in suburbs reported the highest intention to pursue a bachelor's degree compared to students in other locales.

The results of Model 2, presented in Table 6 (page 33), suggested there were statistically significant interaction effects between gender and high school activities and preparation for college. This indicated the association between activities in and out of school relevant to preparation for college and

intention to pursue a bachelor's degree was moderated by gender, even after controlling for gender, high school activities in preparation for college, and interaction terms. Interaction effects revealed the odds ratios for the association between "hours on school work" and "intention" and the association between "college planning and preparation" and "intention" were significantly lower for Latino males compared to their female counterparts. In contrast, the odds ratios for the association between "math activities" and "intention," for the association between "science activities" and "intention," and for the association between "non-academic activities" and "intention" were significantly larger for Latino males compared to Latinas.

Discussion

The primary purpose of this study was to investigate the influence of high school activities on college-going behavior for Latino males. Most significantly, this analysis found that effects of high school activities and preparation for college are not constant across gender. The results of interactions between gender and extracurricular activities indicate that Latino males who participate in math activities, science activities, or non-academic activities outside school are still less likely to pursue a bachelor's degree than their female counterparts. The effects of academic engagement in school work and college preparation are also smaller for Latino males. In other words, Latino males are less likely to pursue a bachelor's degree compared to their

Latina/o Students' College-going Behavior in High School

female counterparts, even when Latino males indicate the same academic effort toward school work and experience in college preparatory programs. These findings suggest that academic activities in high school and college preparatory programs may be less effective in motivating college behavior for Latino male students in relation to their Latina peers.

Findings supported the application of Azjen's (1985; 1991) theory of planned behavior to the bachelor's degree intentions of Latina/o students in high school. Data showed some college-related behaviors in high school do predict Latina/os' plans to pursue a bachelor's degree. The significance of two behavioral factor revealed that behaviors related to precollege activities and academic engagement in school carry predictive weight. As Azjen's theory would suggest, participation in college preparatory activities – such as pre-college classes or programs, college fairs, or counseling – does predict an intention to pursue a bachelor's for Latina/o students. However, the theory's ability to predict bachelor's degree intention is stronger for Latinas than Latinos. As noted, Azjen's (1985; 1991) theory and many other behavioral models primarily capture White norms to the exclusion of minority perceptions, identities, and experiences. These findings reinforce Azjen's theory, but warrant further research on the high school behaviors that do and do not predict college plans among Latina/os, as well as further analysis –

perhaps through qualitative methods – of how these choices and activities influence college intentions.

Demographic and contextual findings from this analysis suggest the persistence of systemic challenges facing P-20 educational attainment, particularly related to gender and family income. The significance of gender throughout the model – namely the increased likelihood that girls compared to boys will plan to pursue a bachelor's degree – speaks to the importance of continuing national efforts on behalf of supporting boys throughout the educational pipeline. The strong influence of socioeconomic background and family education reinforces existing literature on the challenges low-income and first-generation students face in considering college (Harding, Morris, & Hughes, 2015; Reardon, 2011).

The benefits of private and suburban institutions in particular underscore the importance of ensuring resources and opportunities are available to all high school students, regardless of their school context. It is ever more critical to double efforts on behalf of underrepresented and low-income students, as even those exhibiting college preparatory behaviors remain disadvantaged by their environments. This study's model predicts that meeting with high school counselors and participating in college fairs increases the likelihood of planning to pursue a bachelor's degree, but these resources too must be available in order to be utilized. Given Latina/o students' concentration in low-income schools, it is important to

Latina/o Students' College-going Behavior in High School

Table 6

Logistic regression results predicting postsecondary intention

N=2,050	Model 1			Model 2		
	<i>b</i>	SE	OR	<i>b</i>	SE	OR
Constant	1.701***	.012	5.481	1.914***	.014	6.777
Gender (ref. Female)	-.296***	.007	.744	-.763***	.014	.466
Family income (ref. Greater than \$35,000)	-.660***	.007	.517	-.664***	.007	.515
Parental education level (ref. HS or less)						
Some college	.136***	.009	1.145	.158***	.010	1.171
Bachelor's degree	.372***	.012	1.450	.373***	.013	1.453
Master's degree	.716***	.020	2.046	.701***	.021	2.015
Ph.D./Professional degree	1.660***	.074	5.262	1.654***	.074	5.230
School type (ref. Public)	.095***	.023	1.100	.152***	.023	1.164
School locale (ref. Rural): Town	-.095**	.015	.909	-.121***	.016	.886
School locale (ref. Rural): Suburb	.621***	.011	1.860	.629***	.011	1.876
School locale (ref. Rural): City	.079***	.010	1.082	.089***	.010	1.093
Hours on school work	.688***	.005	1.989	.878***	.008	2.406
Math activities	.772***	.017	2.165	.791***	.024	2.207
Science activities	.686***	.018	1.986	-.170***	.024	.843
Non-academic activities	-.060***	.008	.941	-.185***	.012	.831
College planning and preparation	.405***	.004	1.500	.476***	.006	1.610
Male*Hours on school work				-.346***	.010	.708
Male*Math activities				.139***	.035	1.150
Male*Science activities				1.695***	.037	5.446
Male*Non-academic activities				.310***	.016	1.364
Male*College planning and preparation				-.101***	.008	.904
<i>Nagelkerke R-Square</i>		.240***			.251***	

b = unstandardized regression coefficient; OR = odds ratio

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

Latina/o Students' College-going Behavior in High School

acknowledge that these students often lack access to the guidance, activities, and resources our model indicates can support bachelor's degree intentions. Community-based programs and organizations that provide college counseling services in partnership with local schools can play a critical role in countering inequitable distribution of school resources by locale and type.

Previous studies have shown a positive effect on college readiness of time spent studying (Strayhorn, 2014) and math or science activities available (Gonzalez, 2011). This study showed that academic effort on school work predicts bachelor's intentions among Latino high school students. The model also indicated that participation in academic extracurricular activities may encourage college-going among underrepresented students, particularly towards four-year institutions. These findings are consistent with previous research suggesting academic engagement is positively related to college-going behavior.

Unexpectedly, the models showed that participation in non-academic extracurricular activities such as art, athletics, and clubs was negatively related to bachelor's intentions. In contrast with other scholars (see Cohen, 1983; Halliman & Williams, 1990; Martinez, 2010) who have argued that these extracurricular activities can be particularly beneficial for students of color by providing a positive environment, encouraging role models, and

nurturing students' individual strengths and talents, this study's results suggested potential negative effects of these activities on Latino males' postsecondary trajectories. However, research on the effects of extracurricular activities on academic outcomes for Latino males is limited and inconsistent (Peguero, 2010): studies have found extracurricular activity associated with decreased dropout and stronger school attachment among Latinos (Davolos et al., 1990; Diaz, 2005), while others have shown extracurriculars, particularly athletics, correlated with lower academic performance (Prelow & Loukas, 2003). This model's indication of a negative effect underscores the need to delve deeper into the nuance and variation of extracurricular engagement and outcomes for Latino males in high school (Peguero, 2010).

Implications & Conclusion

This model's initial results provide an important baseline from which to build a more robust multivariate model that begins to answer why these trends may exist among Latino male students and their peers. The multivariate regression model included student input characteristics, environmental variables related to their high school campuses, and key factor measures related to college-going behaviors. After accounting for student- and school-level effects, findings revealed Latino males still lag behind their female peers in their volume of college-going activities. The imperatives outlined by President Obama's "My Brother's Keeper"

Latina/o Students' College-going Behavior in High School

initiative supporting the academic success of young men of color (The White House, 2016) must remain a priority. However, variables that account for these inter-gender differences were not identified by this study. Further studies could focus on understanding where these differences exist and how to adequately support Latino males' bachelor's degree intentions.

This study's findings on the positive effects of college planning and academic preparation activities are particularly valuable for high school counselors and organizations looking to strengthen academic engagement and aspirations among underrepresented students. As Latino students disproportionately attend lower-resourced schools, college outreach efforts and the work of nonprofit partner organizations are essential to promoting access and opportunity for students in low-income and/or remote areas. This study also reveals an opportunity for subsequent research on the effects of participation in college pathway programs, such as GEAR Up and TRIO, on Latino males' bachelor degree plans. Examination of these programs should dissect the program types, components, and level of student involvement that may influence their ability to support bachelor's degree intentions. Further, all researchers should adopt a culturally appropriate perspective when assessing the educational experiences of non-White students. An appropriate cultural lens allows for the identification of unique intra-group nuances not acknowledged or valued

by generalistic models.

As anticipated, this study also points to the need for additional consideration of how Azjen's (1985; 1991) theory of planned behavior does and does not explain bachelor's degree intentions of Latino males in high school. While findings showed key behaviors—namely, academic college preparatory activities—predict college intentions, behaviors related to extracurricular activities such as music, dance, theater, and sports do not. Yet, each of these activities represents a talent students might pursue in college, and scholars have found that participation in these activities can improve likelihood of attending college (see Cohen, 1983; Halliman & Williams, 1990; Martinez, 2010). Further research should examine the relationship between these activities and college plans. In addition, Latina/o students may engage in activities not identified by the survey that are influential in predicting intentions to pursue a college degree. By Azjen's (2011) own admonition, the theory of planned behavior has been criticized for taking too rationalist an approach and diminishing the emotional, subjective processes shaping human behavior. The theory may not fully account for the social and cultural experiences or responses of Latino males in a society built around White norms. Azjen (1985; 1991) placed these affective and emotive elements in the background of his theory; however, it may be necessary to foreground these factors and consider greater social-cultural complexity in order to explain the extracurricular factors

Latina/o Students' College-going Behavior in High School

predicting Latino male bachelor's degree intention.

Building upon the foundation established by the models presented in this study, this research aims to continue exploring these and other factors that may influence Latino male students' pre-college behaviors, and consequently their intentions to pursue a four-year degree. This important work will help scholars and practitioners better understand how Latino males' high school activities may shape their future college decision-making, in turn yielding insights that can inform and improve asset-based approaches to Latino male student success. 

References

- Adelman, C. (1999). *Answers in the toolbox: Academic intensity, attendance patterns, and bachelor's degree attainment*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl and J. Beckmann (Eds.), *Action-control: From cognition to behavior*: 10-39. Berlin: Verlag.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50 (2), 179-211.
- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32(4), 665-683.
- Ajzen, I. (2005). *Attitudes, personality, and behavior* (2nd ed.). New York, NY: McGraw-Hill.
- Ajzen, I. (2011). The theory of planned behavior: Reactions and reflections. *Psychology & Health*, 26(9), 1113-1127.
- Arbona, C., & Nora, A. (2007). The influence of academic and environmental factors on Hispanic college degree attainment. *The Review of Higher Education*, 30(3), 247-269.
- Aud, S., Fox, M. A., & KewalRamani, A. (2010). *Status and trends in the education of racial and ethnic groups* (NCES 2010-015). Washington, DC: Government Printing Office.
- Aud, S., Hussar, W., Kena, G., Bianco, K., Frohlich, L., Kemp, J., & Tahan, K. (2012). *The condition of education 2011*. (NCES 2011-033). Washington, DC: U.S. Department of Education.
- Bell, A. D, Rowan-Kenyon, H. T., & Perna, L. W. (2009). College knowledge of 9th and 11th grade students: Variation by school and state context. *The Journal of Higher Education*, 80(6), 663-685.
- Bonilla-Silva, E. (2006). *Racism without racists: Colorblind racism and the persistence of racial inequality in the United States* (2nd ed.). Lanham, MD: Rowman & Littlefield.
- Bourdieu, P., & Passeron, J. (1977) *Reproduction in education, society, and culture*. London: SAGE.

Latina/o Students' College-going Behavior in High School

- Bryan, J., Moore-Thomas, C., Day-Vines, N., & Holcomb-McCoy, C. (2011). School counselors as social capital: The effects of high school college counseling on college application rates. *Journal of Counseling & Development, 89*, 190-199.
- Byun, S., Meece, J. L., & Irvin, M. J. (2012). Rural-nonrural disparities in postsecondary educational attainment revisited. *American Educational Research Journal, 49*(3), 412-437.
- Cabrera, N., Lopez, P., & Saenz, V. (2012). Ganas: From the Individual to the Community, and the Potential for Improving College Going in the "Land That Texas Forgot". *Journal of Latinos and Education, 11*(4), 232-246. doi:10.1080/15348431.2012.715499
- Calabrese, R. L., & Poe, J. (1990). Alienation: An explanation of high dropout rates among African American and Latino students. *Educational Research Quarterly, 14*(4), 22-26.
- Ceja, M. (2006). Understanding the role of parents and siblings as information sources in the college choice process of Chicana students. *The Journal of College Student Development, 47*(1), 87-104.
- Cejda, B., & Short, M. (2008). Influencing the college attendance rates of Hispanics in Texas. *Community College Journal of Research and Practice, 32*, 437-361.
- Chapa, J., & De La Rosa, B. (2006). The problematic pipeline: Demographic trends and Latino participation in graduate science, technology, engineering, and mathematics programs. *Journal of Hispanic Higher Education, 5*(3), 203-221.
- Cole, D., & Espinoza, A. (2008). Examining the academic success of Latino students in science technology engineering and mathematics (STEM) majors. *Journal of College Student Development, 49*(4), 285-300.
- Cohen, J. M. (1983). Peer influence on college aspirations with initial aspirations controlled. *American Sociological Review, 48*, 728-734.
- Davalos, D. B., Chavez, E. L., & Guardiola, R. J. (1999). The effects of extracurricular activity, ethnic identification, and perception of school on student dropout rates. *Hispanic Journal of Behavioral Sciences, 21*, 61-77.
- Diaz, J. D. (2005). School attachment among Latino youth in rural Minnesota. *Hispanic Journal of Behavioral Sciences, 27*, 300-318.
- Diemer, M.A., Wang, Q., & Smith, A.V. (2010). Vocational interests and college major selection among youth of color in poverty. *Journal of Career Assessment, 18*(1), 97-110.
- Engberg, M., & Gilbert, A. (2014). The counseling opportunity structure: Examining correlates of four-year college-going rates. *Research in Higher Education, 55*, 219-244.
- Engberg, M., & Wolniak, G. C. (2010). Examining the effects of high school contexts on postsecondary enrollment. *Research in Higher Education, 51*(2), 132-153.
- Fallon, M. V. (1997). The school counselor's role in first generation students' college plans. *The School Counselor, 5*, 384-393.
- Falsey, B., & Heyns, B. (1984). The college channel: Private and public schools reconsidered. *Sociology of Education, 57*(2), 111-122.
- Farmer-Hinton, R. (2008). Social capital and college planning: Students of color using school networks for support and guidance. *Education and Urban Society, 41*(1), 127-157.
- Gandara, P. (2010). The Latino education crisis. *Educational Leadership, 67*, 24-30.
- Gibbons, M., & Borders, D. (2010). A measure of college-going self-efficacy for middle school students. *Professional School Counseling, 13*(4), 234-243.
- Gonzalez, L. (2012). College-level choice of Latino high school students: A social-cognitive approach. *Journal of Multicultural Counseling and Development, 40*(3), 144-155.
- Gregory, A., & Huang, F. (2013). It takes a village: The effects of 10th grade college-going expectations of students, parents, and teachers four years later. *American Journal of Community Psychology, 52*, 41-55.
- Grodsky, E., & Rieglecrumb, C. (2010). Those who choose and those who don't: Social background and college orientation. *Annals of the American Academy of Political and Social Science, 627*, 14-35.

Latina/o Students' College-going Behavior in High School

- Harper, S. (2012). Race without racism: How higher education researchers minimize racist institutional norms. *The Review of Higher Education, 36*(1), 9-29.
- Hallinan, M. T. & Williams, R. A. (1990). Students' characteristics and the peer-influence process. *Sociology of Education, 66*, 122-132.
- Irizarry, J. (2012). Los caminos: Latino/a youth forging pathways in pursuit of higher education. *Journal of Hispanic Higher Education, 11*(3), 291-309.
- Laden, B. V., Hagedorn, L. S., & Perrakis, A. (2008). Donde estan los hombres?: Examining success of Latino male students at Hispanic-serving community colleges. In M. Gasman, B. Baez., and C. Turner (Eds.), *Understanding minority-serving institutions* (127-140). Albany, NY: SUNY Press.
- Lasley Barajas, H., & Pierce, J. L. (2001). The significance of race and gender in school success among Latinas and Latinos in college. *Gender & Society, 15*, 859-878.
- MacDonald, V., Botti, J., & Hoffman Clark, L. (2007). From visibility to autonomy: Latinos and higher education in the US, 1965-2005. *Harvard Educational Review, 77*(4), 474-504.
- McDonough, P. M. (2005). Counseling and college counseling in America's high schools. *National Association for College Admission Counseling*. Retrieved from <http://inpathways.net/McDonough%20Report.pdf>
- Martinez, M. (2010). *Traversing literal and figurative borders in South Texas: Mexican Americans and college choice*. Unpublished Doctoral Dissertation, The University of Texas at Austin.
- Morgan, S. L. (2006). "Expectations and aspirations." In George Ritzer, ed., *The Blackwell Encyclopedia of Sociology* (pp. 1528-1531). Malden, MA: Blackwell.
- National Center for Education Statistics. (2013). The condition of education 2013. *U.S. Department of Education*. Retrieved from <http://nces.ed.gov/pubs2013/2013037.pdf>
- National Center for Education Statistics. (2015). *High School Longitudinal Study of 2009 (HSLs:09)*. Retrieved from <https://nces.ed.gov/surveys/hsls09/>
- Nuñez, A., & Kim, D. (2012). Building a multicontextual model of Latino college enrollment: Student, school, and state-level effects. *The Review of Higher Education, 35*(2), 237-263.
- Peguro, A. A. (2010). A profile of Latino school-based extracurricular activity involvement. *Journal of Latinos and Education, 9*(1), 60-71.
- Perna, L. W. (2000). Differences in the decision to attend college among African Americans, Hispanics, and Whites. *Journal of Higher Education, 71*(2), 117-141.
- Perna, L. W., & Thomas, S. L. (2008). Theoretical perspectives on student success: Understanding the contributions of the disciplines. *ASHE Higher Education Report, 34*(1), 1-87.
- 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*, 513-529.
- Roscigno, V. J., Tomaskovic-Devey, D., & Crowley, M. (2006). Education and the inequality of place. *Social Forces, 84*(4), 2121-2145.
- Saenz, V., & Ponjuan, L. (2009). The vanishing Latino male in higher education. *Journal of Hispanic Higher Education, 8*(1), 54-89.
- Stanton-Salazar, R. D. (2001). Constraints on supportive relations with school personnel In *Manufacturing hope and despair* (pp. 191-217). New York: Teacher's College Press.
- Solorzano, D. (1992). An exploratory analysis of the effects of race, class, and gender on student and parent mobility aspirations. *The Journal of Negro Education, 61*(1), 30-44.
- Solorzano, D., & Delgado Bernal, D. (2001). Examining transformational resistance through a critical race and LatCrit theory framework—Chicana and Chicano students in an urban context. *Urban Education, 36*, 308-342.
- Strayhorn, T. (2014). Modeling the determinants of college readiness for historically underrepresented students at 4-year colleges and universities: A national investigation. *American Behavioral Scientist, 58*(8), 972-993.
- Tabachnick, B. G., & Fidell, L. S. (2007). Using Multivariate Statistics. Pearson Education. Boston, MA.
- Warburton, E., Bugarin, R., & Nuñez, A. (2001). *Bridging the gap: Academic preparation and postsecondary success of first-generation students (NCES 2001-153)*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Latina/o Students' College-going Behavior in High School

Weston, A., & Martinez, M. (2014). Coloring the college pathway: A more culturally responsive approach to college readiness and access for students of color in secondary schools. *Urban Review, 46*, 197-223.

The White House. (2016). *My Brother's Keeper*. Retrieved from <https://www.whitehouse.gov/my-brothers-keeper#section-about-my-brothers-keeper>

Yosso, T. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth. *Race Ethnicity and Education, 8*(1), 69-91.