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The Transition from Middle School to High School as a Developmental Process Among Latino Youth

Yolanda Vasquez-Salgado, M.A.[*] and **Gabriela Chavira, Ph.D.**
California State University, Northridge

Abstract

The transition from middle school to high school is an important developmental period to investigate because of the negative impact it has on youths' academics. The purpose of this study was to investigate Latino youths' academic achievement prior to, during, and after the transition to high school, and gender differences in youths' achievement over time. School transcripts were obtained for 92 youth. Three latent growth curve models were tested. Youth were stable in achievement throughout middle school, declined in grades during the transition, yet remained stable in high school. Youth with higher achievement in fall of eighth grade declined in the transition at a faster rate than youth who held lower achievement. Girls held higher levels of achievement across each stage in development; boys and girls differed in high school trajectories. Policy makers interested in fostering a successful transition should create programs for both high and low achieving Latino youth.

Keywords

academic achievement; middle school; high school; transition to high school; gender

The transition from middle school to high school is a very important developmental period to investigate because of the negative impact that it has on youths' academics. A multitude of studies have found that youths' grades decline from eighth grade to ninth grade (Benner & Graham 2009; Isakson & Jarvis 1999; Reyes, Gillock & Kobus, 1994; Roderick, 2003; Roeser, Eccles & Freedman-Doan, 1999; Seidman, Aber, Allen & French, 1996). This pattern may be attributed to changes that are embedded with the adolescent stage of development, a change from one school to another, or simply, the characteristics of high school or demands it sets forth (Weiss & Bearman, 2007).

Although several studies are available on this transition period (Benner, 2011), very few have examined this period with Latino samples (Benner & Graham, 2009; Reyes et al., 1994). In fact, the studies with Latino samples have included other ethnic groups in their analyses.

Correspondence concerning this article should be addressed to Yolanda Vasquez-Salgado.
[*]Yolanda Vasquez-Salgado (yvasquez@ucla.edu) is currently a Ph.D. student in the Department of Psychology at the University of California, Los Angeles.
Gabriela Chavira (gchavira@csun.edu) is currently an Associate Professor at California State University, Northridge.

The U.S. Latino population is the largest and fastest growing ethnic minority group in the United States (U.S. Census Bureau, 2011) and by 2020, Latinos will account for 19% of the U.S. labor workforce (U.S. Department of Labor, 2012). However, Latinos lag behind other groups in education attainment such that they are less likely to graduate from high school and college (Sólorzano, Villalpando, & Oseguera, 2005). Given this reality, it is vital to examine factors contributing to the academic success of this ethnic group. A failure to do so may result in dire consequences for our nation's future workforce and economy. Therefore, the current study examined the transition from middle school to high school with a sample that consisted of solely Latino youth.

The Transition to High School as a Developmental Process

The conceptual framework that guided this study was the examination of the transition to high school as a developmental process that unfolds over time (Benner, 2011). The majority of studies on the transition to high school have been short-term longitudinal inquiries that focus on eighth and ninth grade outcomes (e.g., Isakson and Jarvis 1999; Reyes et al., 1994) and only one study has examined the transition as a developmental process (Benner & Graham, 2009). In their longitudinal study, Benner and Graham found that youths' grades were stable across middle school, declined upon transitioning into high school and continued to decline after the transition. It is worth noting however, that other research that has focused on youths' trajectory throughout middle school noted a decrease in grades rather than stability in grades in middle school (Juvonen, Wang & Espinosa, 2011; McGill, Hughes, Alicea & Way, 2011). Also, another study that examined the early years of high school discovered that there is several possible academic trajectories can occur throughout high school (e.g., stable grades, decline, inconsistency; Ding, 2008).

Nonetheless, the conceptual framework suggests that studies only examining change in academic achievement from eighth to ninth grade, (e.g., Reyes et al., 1994), lack knowledge about youths' academic trajectories prior to the transition. It is unclear as to whether youth in such studies were already declining academically throughout middle school and continued to decline across the transition into high school, or whether they performed well throughout middle school, only to experience a disruption in their academic achievement upon transitioning into high school (Benner, 2011). Such studies also lack information about the influence that the transition has on youths' subsequent trajectory across high school. For example, after experiencing declines in academic achievement, youth may have bounced back from the disruption or continued to exhibit declines in academic achievement (Benner, 2011). Given the potential significance of the transition as a developmental process that unfolds over time, the present study examined the transition to high school, as well as years prior to and after the transition.

Statistical Techniques in Transition to High School Research

Earlier transition studies have primarily utilized paired samples t-tests to examine whether there was a significant difference between youths' grades from eighth to ninth grade (e.g., Reyes et al., 1994; Roeser et al., 1999). More recently (Benner & Graham, 2009), research has utilized sophisticated statistical methods – piecewise latent growth curve modeling. The

statistical technique allowed Benner and Graham to examine the trajectory of youths' grades during middle school and high school; an analysis was conducted to examine whether the difference between grades in spring of eighth grade and fall of ninth grade was significantly different from zero. Although these analyses provided fruitful information about the transition and inspired the current study, conducting three separate models – one for each stage of development (middle school, transition, high school) – might provide meaningful information that is not currently available in the literature. Three separate models would allow us to become knowledgeable of the average change (e.g., average decrease in grades) taking place in each stage of development and more importantly, a separate model for the transition (i.e., fall and spring of grades 8 and 9) would allow us to understand whether high or low achievement at the start of eighth grade is related to a particular trajectory across the transition (e.g., faster increase or decrease in grades). The current study intends to conduct three separate latent growth curve models in order to examine whether initial academic achievement is related to youths' academic trajectories over time.

Gender Differences in Academic Achievement Among Latino Youth

It is well documented that among Latino youth, girls outperform boys in academics (Colon & Sanchez, 2010; Henry, Merten, Plunkett & Sands, 2008; Sanchez, Colon & Esparza, 2005; Suarez-Orozco & Quin-Hilliard, 2004). However, very few studies have examined these gender differences longitudinally (Suarez-Orozco & Quin-Hilliard, 2004).

Researchers have attempted to explain this "gender gap" (Suarez-Orozco, Bang & Onaga, 2010) in academic achievement. One explanation may be that ethnic minority boys have lower educational aspirations (Kao & Tienda, 1998). Another might be a difference in teacher expectations for boys and girls (Suarez-Orozco & Quin-Hilliard, 2004). In addition, the cultural values and norms that immigrant families hold for boys and girls may also help explain the "gender gap" in achievement. Immigrant parents place more restrictions on girls than boys and these restrictions may lead girls to treasure their time at school and hence be more academically engaged (Suarez-Orozco & Suarez-Orozco, 2001). While overall gender differences in performance are well documented in the literature, it is unclear whether or not the "gender gap" remains stable throughout students' academic trajectory, or if this gap widens or narrows throughout middle and high school and during periods of transition. The current study will examine whether there are gender differences in Latino youths' academic achievement across different development periods.

Research Questions and Hypotheses

Three research questions guided this study: (1) What academic achievement trajectories do Latino youth exhibit across middle school, high school and the transition from middle school to high school? (2) Does initial academic achievement relate to youths' academic trajectory in middle school, high school and the transition? (3) Are there gender differences in Latino youths' academic achievement over time?

In regards to the first research question, given that studies have noted a stable academic trajectory (Benner & Graham, 2009) or a decline in grades throughout middle school (Juvonen et al., 2011; McGill et al., 2011), we hypothesized that Latino youths' academic

trajectory would follow a similar pattern (i.e., either a decline or a stable trajectory) throughout middle school. To examine this, a linear trend was tested.

Also, given the large body of research that suggests that there is a decline in grades upon transitioning to high school (Benner and Graham 2009; Isakson and Jarvis 1999; Reyes et al., 1994; Roderick 2003; Roeser et al., 1999; Seidman et al., 1996), it was hypothesized that Latino youth would decline in academic achievement upon transitioning into high school. Therefore, a linear trend was tested in an attempt to verify the decline in youths' grades during the transition to high school.

Finally, studies on youths' academic trajectory throughout the early years of high school have found that there is a decline in grades (Benner & Graham, 2009; Ding, 2008), as well as other patterns (e.g., stable, inconsistent; Ding, 2008). Consequently, we refrained from making a hypothesis on this developmental stage because of the variation in previous results. Similar to the aforementioned developmental periods, a linear trend was tested.

In regards to the second question, given the limited statistical methods utilized in previous studies, the current study will explore whether youths' initial academic achievement influences their academic trajectory (i.e., rate of change) across each developmental period.

In reference to the third research question, a large body of research suggests that Latina girls outperform boys in academics (Colon & Sanchez, 2010; Henry et al., 2008; Sanchez et al., 2005; Suarez-Orozco & Quin-Hilliard, 2004). Therefore, the current study hypothesized that Latina girls will outperform boys throughout middle school, the transition to high school and high school. However, the current study explores whether this gender difference in academic achievement implies differential developmental trajectories across each stage in development.

Method

Participants

Participants in this study consisted of 92 Latino youth who were a subset of a larger sample of 354 youth that took part in a larger project of a community charter high school located in Los Angeles County. The high school was predominantly Latino (71%) and had an Academic Performance Index statewide ranking score of 3, whereby a 1 is considered low and 10 is high.

The sample was restricted to students that self-identified as being of Latin American descent (297 of 354), were enrolled in their second year in high school (123 of 297), and had available middle school transcripts (97 of 123). Given the relationship between neighborhood quality and academic achievement (Plunkett, Abarca-Mortensen, Behnke, & Sands, 2007; Leventhal & Brooks-Gunn, 2000), the sample was restricted to students who lived in a neighborhood that was within a normative range of the average neighborhood quality of the sample (92 of 97). Neighborhood quality consisted of 4 indicators (gathered from the 2010 U.S. census database): percentage of adults with at least a high school diploma, percentage of people who speak English well, percentage of adults (ages 20 to 64)

employed, and percentage of property owners. Scores for each indicator were standardized and summed into one composite score. Three cases that did not provide home addresses were removed and 2 cases that were three standard deviations above or below the mean were removed.

The sample was gender balanced (55% were boys). The mean age of the youth was 15.51 years (*SD* = .72). In contrast to their parents, of whom 14% of mothers and 12% of fathers were US-born, 88% of the youth reported being born in the U.S. The average level of education for mothers and fathers was 10.65 (*SD* = 3.41) and 10.32 (*SD* = 3.35) years, respectively.

Measures

Academic Achievement—Similar to Benner and Graham (2009), academic achievement was operationally defined as youths' overall (i.e., all courses) grade point averages (GPAs) over time. GPAs were calculated for the fall and spring semesters of grades 7, 8, 9 and 10, resulting in eight separate grade point averages. The grades earned for each course were coded on a 4-point scale (A = 4, to F = 0). The grade codes for a given semester were then averaged, resulting in a grade point average for each semester. Advanced Placement courses were based on a different scale, (A = 5, to F = 0). Calculations were based on official middle and high school transcripts.

Procedure

University Institutional Review Board, as well as school officials at the high school, approved all procedures of the study. During recruitment, a team of researchers visited ninth and tenth grade classrooms. Potential participants were told that the study aimed at understanding factors that contribute to the academic and psychological functioning of Latino youth. All youth, regardless of ethnic background or age, were invited to join the study. Youth, who were interested in participating, were handed a participant packet (included a survey, parental consent and adolescent assent forms). A few days later, the same team of researchers returned to the high school to collect the surveys at a central location. Participants who submitted complete packets were given ten dollars for their participation. For the current study, only school records and demographic information obtained from tenth grade participants were utilized.

Design and Analysis

Three separate stages of development were examined (middle school, transition to high school, high school). Middle school trajectories were based on fall and spring GPAs during grades 7 and 8. Trajectories during the transition to high school were based on fall and spring GPAs during grades 8 and 9. High school consisted of fall and spring GPAs during grades 9 and 10. Although GPAs from several time points were included in our analyses, direct contact with youth did not occur until their second year of high school.

Latent growth curve modeling using EQS was performed. Three separate models (one for each stage of development) were tested (Figure 1). For each model, the first semester GPA served as the intercept (starting point of the growth model) and the slope (trajectory) was

tested as linear. The value and significance of the slope allowed us to test whether there was a significant increase or decrease in youths' academic trajectories over time. The relationship between the intercept and slope allowed us to assess whether initial GPA was related to youths' academic trajectories.

Data analytic techniques occurred in two major steps (Kline, 2011). In the first step, latent growth curve models were tested by only examining variances, covariances and averages of the intercept and slope. This was to ascertain that there was enough variability in both the intercepts and slopes. If the models did fit, this suggested that there was enough variability in the intercept and slope, and therefore, it was appropriate to proceed with the second step (i.e., inclusion of predictors). The inclusion of predictors tested whether variability in the intercept and slope could be explained by gender. This allowed us to test whether there were gender differences in initial GPA and in youths' academic trajectories.

The model fit was evaluated using chi-square χ^2, comparative fit index (CFI) and root mean square error approximation (RMSEA). The model is a "good" fit if the χ^2 is not significant or near non-significance, the CFI is greater than or equal to .95 and RMSEA is less than or equal to .05 (Byrne, 2006). Wald tests were utilized to help denote whether removing theoretically relevant paths would aid the fit of the models. All statistical assumptions for latent growth curve modeling were met.

Means, standard deviations and zero-order correlations for all variables of interest are presented in Table 1. Moreover, all models fit the data well (Table 2). The Wald test was only utilized to remove the path of gender predicting the slope in the middle school model.

Results

Figure 2 graphically presents the trajectories of academic achievement for all three developmental periods, both for the sample as a whole and for each gender separately.

Latent Growth Curve Models of Academic Achievement

Middle school—The middle school model examined Latino youths' academic trajectory throughout middle school, as well as whether genders differed in their achievement at fall of grade 7 and their trajectory over time. The model also examined whether youths' achievement in fall of grade 7 was related to their trajectory throughout middle school. As expected, youth held a relatively stable academic trajectory throughout middle school (b = .05, *n.s.*). There was also a significant difference between girls and boys academic achievement (b = .34, p < .01), indicating that girls' grades in the fall of seventh grade were .34 points higher than that of boys. However, boys and girls did not differ on trajectories. Grades in fall of grade 7 were unrelated to youths' trajectory in middle school.

The transition from middle school to high school—The transition model examined Latino youths' academic trajectory throughout the transition from middle school to high school, as well as whether genders differed in their achievement at fall of grade 8 and their trajectory over time. The model also examined whether youths' achievement at fall of grade 8 was related to their trajectory throughout the transition. As expected, youth declined in

grades during the transition to high school ($b = -.11$ ($p < .01$). Youth declined in grades on an average .11 points each semester of the transition period. In addition, youth who started off with higher levels of academic achievement in the fall of eighth grade declined in achievement at a faster rate than youth who started off at lower achievement levels ($b = -.09$, $p < .001$).

Also as expected, girls made higher grades than boys ($b = .51$, $p < .001$), with girls achieving .51 more points in fall of eighth grade than that of boys. However, boys and girls did not differ on trajectories ($b = -.06$, *n.s.*).

High school—The high school model examined Latino youths' academic trajectory throughout high school, as well as whether genders differed in achievement at fall of grade 9 and in their trajectory over time. The model also examined whether youths' achievement at fall of grade 9 was related to their trajectory throughout high school. Youth held relatively stable grades during high school ($M = .06$, *n.s.*). Also, youth who started off with higher achievement levels in fall of ninth grade increased in grades at a slower rate throughout high school ($b = -.09$, $p < .01$).

As expected, girls achieved higher grades than boys ($b = .45$, $p < .05$), with girls' GPA .45 of a point higher than boys' in fall of grade 8. Also, boys and girls differed on trajectories ($b = -.14$, $p < .01$.). A visual examination (see Figure 2) showed that girls' grades declined, while boy's grades increased and at spring of grade 10, girls and boys grades converged.

Discussion

The current study found that youth with higher grades at the fall of eighth grade declined in the transition to high school at a faster rate than youth who held lower grades. This adds a new insight into transition research. It suggests that while both groups decline in achievement, youth who start off with higher achievement decline at a faster rate and youth who start off with lower achievement decline at a slower rate. This study also found that youth with higher achievement levels at fall of ninth grade increased in grades at a slower rate than other youth throughout high school. Overall, both results indicate a disadvantage for youth with high achievement levels throughout high school and the transition into high school.

As expected, results indicated that youth held stable academic trajectories throughout middle school. The results of this study support previous research with diverse urban samples that have found youths' grades to be stable throughout middle school (Benner & Graham, 2009) but do not support other studies with ethnically diverse youth, which suggest there is a decline in grades throughout middle school (Juvonen et al., 2011; McGill et al., 2011).

As expected, youth's grades declined in the transition from middle school to high school. This is parallel with previous research, which suggest that youth experience declines in grades upon transitioning into high school (Benner and Graham 2009; Isakson and Jarvis 1999; Reyes et al., 1994; Roderick 2003; Roeser et al., 1999; Seidman et al., 1996).

Given that few studies have longitudinally examined academic achievement across high school, this study adds to the literature on this developmental stage. Results indicated that youth remained relatively stable in achievement throughout high school. This trajectory complements Ding's (2008) research, which suggests that a stable trajectory is one type of trajectory that youth may exhibit across the first two years of high school.

As, expected, girls outperformed boys across each stage in development. That is, girls held higher grades throughout middle school, the transition to high school and high school. This is analogous with previous research that suggests Latina girls outperform boys in academics (Colon & Sanchez, 2010; Henry et al., 2008; Sanchez et al., 2005; Suarez-Orozco & Quin-Hilliard, 2004). Our results support the notion that there is a "gender gap" (Suarez-Orozco, Bang & Onaga, 2010) in academic achievement.

Boys and girls differed in their trajectories throughout high school, with girls exhibiting declines in grades and boys exhibiting increases in grades. However, at the end of tenth grade, their grades converged. This finding was surprising, giving our previous knowledge that girls outperform boys in academic achievement (Suarez-Orozco & Hilliard; Eccles, 2001). It might be possible that Latina girls and boys have differential experiences throughout high school, which may have an impact on their academic trajectories. Girls and boys did not differ in trajectories in middle school or in the transition to high school.

In conclusion, when conceptualizing the transition to high school as a developmental process that unfolds over time, we found that Latino youth's grades were stable throughout middle school, declined upon transitioning into high school, and remained stable throughout high school. Youth with higher achievement levels in eighth grade declined at a faster rate in the transition to high school. Across each stage in development, girls held higher grades. However, girls and boys differed in trajectories in high school, with boys increasing and girls decreasing in grades and eventually both converged at the end of tenth grade.

Limitations, Future research, Implications

One limitation of this study was that participants were recruited at tenth grade rather than earlier in their education. It would have been more favorable to conduct analyses with youth who were recruited in middle school or in ninth grade so that alternate explanations could be ruled out. For example, national statistics (Stillwell, 2010) and research (Neild, Stoner-Eby, & Furstenberg 2008) suggest that boys are more likely than girls to dropout of high school. Also, among their ethnic counterparts, Latinos hold one of the largest high school dropout rates (NCES, 2012). It may be that the Latino boys in this study were the "survivors" that did not drop out. This may explain why the boys in this study were slightly increasing in achievement during high school whereas girls were declining in achievement. Therefore, it is imperative that future studies recruit Latino youth in middle school or immediately upon their transition to high school.

Another limitation was the use of all courses instead of more rigorous ones to calculate GPA. For example, if we would have restricted the calculation of GPA to courses that fulfill A–G requirements, a different trajectory might have emerged. Still, overall GPA was optimal for these analyses because it enabled us to examine the development of Latino

youths' academic trajectory as reflected in each semester of their middle school and high school transcripts.

A final limitation was the use of three models instead of one. One model would have provided an overall picture of Latino youths' academic trajectory. However, we believe three models were useful because we were able to model the transition to high school separately. A separate model of the transition provided us with new information not yet available in the transition literature – the impact that achievement in fall of eighth grade had on youths' trajectory from eighth to ninth grade.

Several implications can be gathered from this study. First, given that the most change in Latino youths' academic achievement occurs during the transition to high school, policy makers and researchers should focus on this transition period. Second, educators, academic counselors and policy makers that are interested in reducing the negative impact that the transition to high school has on Latino youth can devise programs not only for youth who are performing poorly in the eighth grade, but also for youth who are performing well. This is because the transition to high school negatively impacts most youth, but youth who display high levels of academic achievement in fall of eighth grade are more likely to decline in achievement at a faster rate. Lastly, researchers and educators interested in academic achievement among Latino youth subsequent to the transition to high school should be aware of the possible diversity in trajectories across gender. Transition to high school programs should be developed in a way that attends to the diverse needs of both girls and boys.

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References

Benner AD. The transition to high school: Current knowledge, future directions. Educational Psychology Review. 2011; 23(3):299–328. [PubMed: 21966178]

Benner AD, Graham S. The transition to high school as a developmental process among multiethnic urban youth. Child Development. 2009; 80(2):356–376. [PubMed: 19466997]

Byrne, B. Structural Equation Modeling with EQS: Basic Concepts, Applications, and Programming. 2nd Ed. Mahwah, New Jersey: Lawrence Erlbaum Associates; 2006.

Colón Y, Sánchez B. Explaining the gender disparity in Latino youth's education: Acculturation and economic value of edcation. Urban Education. 2010; 45(3):252–273.

Cooper, R.; Markoe-Hayes, S. UCACCORD Public Policy Series: PB-013-0905. UC Berkeley: University of California All Campus Consortium on Research for Diversity; 2005. Improving the educational possibilities of urban high school students as they transition from 8th to 9th grade. Retrieved from http://escholarship.org/uc/item/8xq0f06t

Ding CS. Variations in academic performance trajectories during high school transition: Exploring change profiles via multidimensional scaling growth profile analysis. Educational Research And Evaluation. 2008; 14(4):305–319.

Donegan B. The linchpin year. Educational Leadership. 2008; 65(8):54–57.

Dornbusch SM, Ritter PL, Steinberg L. Community influences on the relation of family statuses to adolescent school performance: Differences between African Americans and non-Hispanic Whites. American Journal Of Education. 1991; 99(4):543–567.

Dotterer AM, McHale SM, Crouter AC. The development and correlates of academic interests from childhood through adolescence. Journal Of Educational Psychology. 2009; 101(2):509–519. [PubMed: 22238475]

Eccles, JS. Achievement. In: Worell, J., editor. Encyclopedia of women and gender: Sex similarities and differences and the impact of society on gender. Academic Press; 2001. p. 43-53.

Gillock KL, Reyes O. High school transition-related changes in urban minority students' academic performance and perceptions of self and school environment. Journal Of Community Psychology. 1996; 24(3):245–261.

Henry CS, Merten MJ, Plunkett SW, Sands T. Neighborhood, parenting, and adolescent factors and academic achievement in Latino adolescents from immigrant families. Family Relations: An Interdisciplinary Journal Of Applied Family Studies. 2008; 57(5):579–590.

Isakson K, Jarvis P. The adjustment of adolescents during the transition into high school: A short term longitudinal study. Journal Of Youth And Adolescence. 1999; 28(1):1–26.

Juvonen J, Wang Y, Espinoza G. Bullying experiences and compromised academic performance across middle school grades. The Journal Of Early Adolescence. 2011; 31(1):152–173.

Kao G, Tienda M. Educational aspirations of minority youth. American Journal Of Education. 1998; 106(3):349–384.

Kline, R. Principles and Practices of Structural Equation Modeling. 3rd Ed. New York, NY: Guilford Press; 2011.

Leventhal T, Brooks-Gunn J. The neighborhoods they live in: The effects of neighborhood residence on child and adolescent outcomes. Psychological Bulletin. 2000; 126(2):309–337. [PubMed: 10748645]

McGill R, Hughes D, Alicea S, Way N. Academic adjustment across middle school: The role of public regard and parenting. Developmental Psychology. 2011

Neild R, Stoner-Eby S, Furstenberg F. Connecting Entrance and Departure: The Transition to Ninth Grade and High School Dropout. Education And Urban Society. 2008; 40(5):543–569.

Plunkett SW, Abarca-Mortensen S, Behnke AO, Sands T. Neighborhood Structural Qualities, Adolescents' Perceptions of Neighborhoods, and Latino Youth Development. Hispanic Journal Of Behavioral Sciences. 2007; 29(1):19–34.

Reyes O, Gillock K, Kobus K. A longitudinal study of school adjustment in urban, minority adolescents: Effects of a high school transition program. American Journal Of Community Psychology. 1994; 22(3):341–369. [PubMed: 7879746]

Reyes O, Gillock KL, Kobus K, Sanchez B. A longitudinal examination of the transition into senior high school for adolescents from urban, low-income status, and predominantly minority backgrounds. American Journal Of Community Psychology. 2000; 28(4):519–544. [PubMed: 10965389]

Roderick M. What's happening to the boys? Early high school experiences and school outcomes among African American male adolescents in Chicago. Urban Education. 2003; 38(5):538–607.

Roeser RW, Eccles JS, Freedman-Doan C. Academic functioning and mental health in adolescence: Patterns, progressions, and routes from childhood. Journal Of Adolescent Research. 1999; 14(2): 135–174.

Sánchez B, Colón Y, Esparza P. The role of sense of school belonging and gender in the academic adjustment of Latino adolescents. Journal Of Youth And Adolescence. 2005; 34(6):619–628.

Seidman E, Aber J, Allen L, French S. The impact of the transition to high school on the self-esteem and perceived social context of poor urban youth. American Journal Of Community Psychology. 1996; 24(4):489–515. [PubMed: 8969448]

Sólorzano DG, Villalpando O, Oseguera L. Educational Inequities and Latina/o Undergraduate Students in the United States: A Critical Race Analysis of Their Educational Progress. Journal Of Hispanic Higher Education. 2005; 4(3):272–294.

Stillwell, R. National Center for Education Statistics, Institute of Education Sciences. Washington, DC: U.S. Department of Education; 2010. Public School Graduates and Dropouts From the Common Core of Data: School Year 2007–08. (NCES 2010-341). from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2010341 [Retrieved, May 2, 2012]

Suarez-Orozco C, Bang H, Onaga M. Contributions to Variations in Academic Trajectories amongst Recent Immigrant Youth. International Journal Of Behavioral Development. 2010; 34(6):500–510.

Suárez-Orozco, C.; Qin-Hilliard, D. Immigrant Boys' Experiences in U.S. Schools. In: Way, N.; Chu, JY.; Way, N.; Chu, JY., editors. Adolescent boys: Exploring diverse cultures of boyhood. New York, NY US: New York University Press; 2004. p. 295-316.

Suárez-Orozco, C.; Suárez-Orozco, MM. Children of immigration. Cambridge, MA: Harvard University Press; 2001.

United States Census Bureau. [Retrieved, March 30, 2012] Profile America Facts for Features: Hispanic Heritage Month 2011. 2011. (CB11-FF.18). from http://www.census.gov/newsroom/releases/archives/facts_for_features_special_editions/cb11-ff18.html

U.S. Department of Education, National Center for Education Statistics. The Condition of Education 2012. 2012. (NCES 2012-045), Indicator 33.

United States Department of Labor. [Retrieved, May 3, 2013] The Latino Labor Force in the Recovery. 2012. from http://www.dol.gov/_sec/media/reports/hispaniclaborforce/

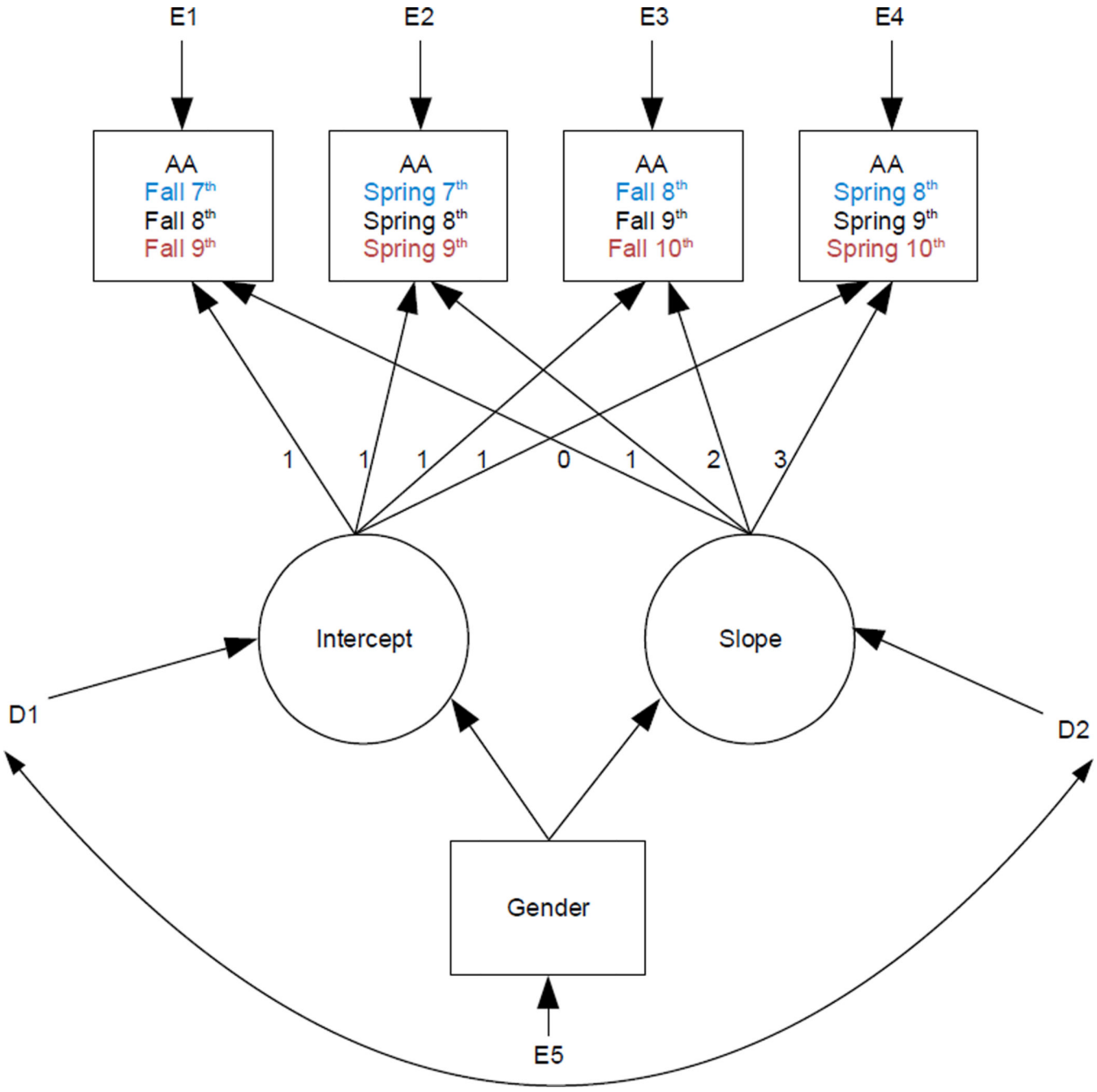

Figure 1.

Hypothesized latent growth curve models. Blue, black and red font colors represent results for the middle school, transition to high school and high school models, respectively.

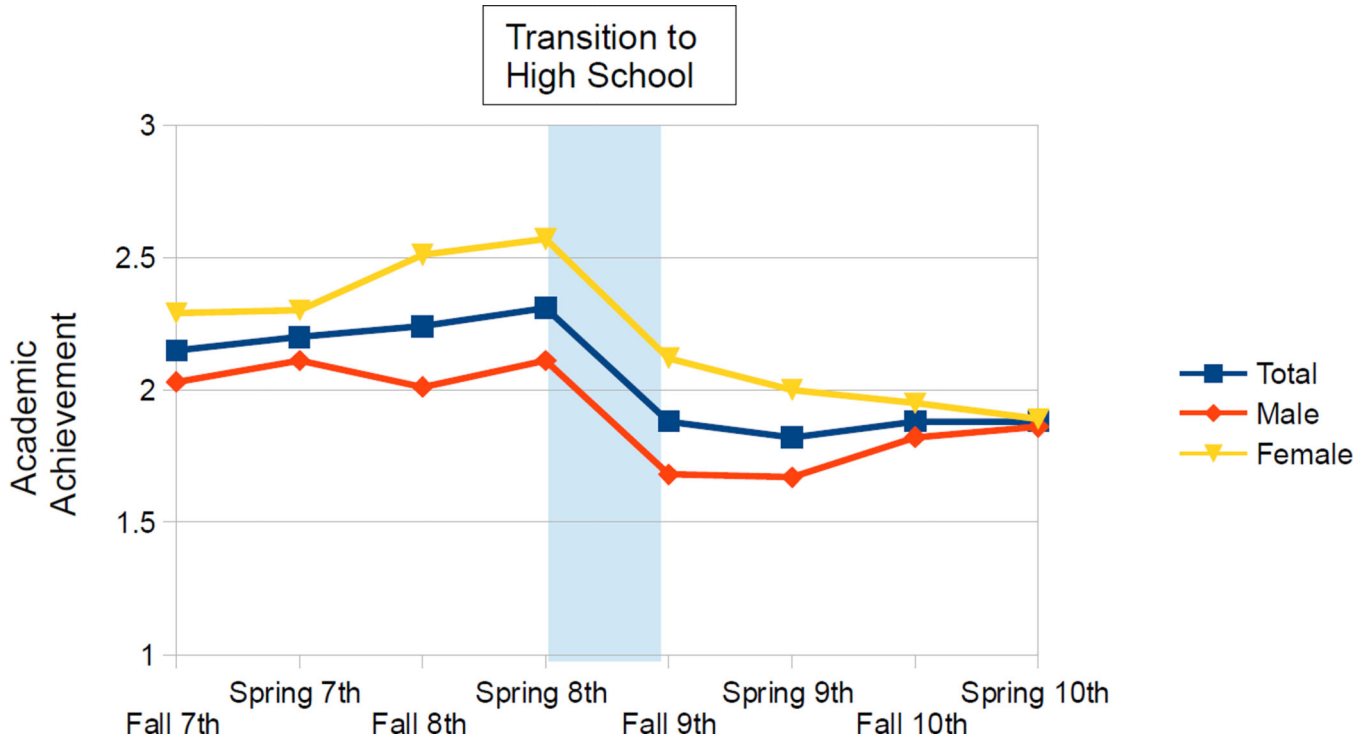

Figure 2.
The transition to high school as a developmental process among Latino youth.

Table 1

Mean, Standard Deviations and Zero-Order Correlations for Variables of Interest in all Models

Variable	1	2	3	4	5	6	7	8	9
1. AA. Fall 7th	1								
2. AA. Spring 7th	.74***	1							
3. AA. Fall 8th	.55***	.66***	1						
4. AA. Spring 8th	.59***	.65***	.78***	1					
5. AA. Fall 9th	.59***	.63***	.61***	.66***	1				
6. AA. Spring 9th	.54***	.55***	.48***	.61***	.84***	1			
7. AA. Fall 10th	.52***	.58***	.52***	.65***	.70***	.75***	1		
8. AA. Spring 10th	.39***	.46***	.46***	.57***	.64***	.74***	.82***	1	
9. Gender	.15	.11	.31**	.26**	.21*	.16	.07	.01	1
M	2.15	2.20	2.24	2.31	1.88	1.82	1.88	1.88	.45
SD	.84	.85	.83	.88	1.05	1.02	.97	1.02	.50

Note: AA = academic achievement; *M* = Mean; *SD* = Standard Deviation;

$p < .05$*,

$p < .01$**,

$p < .001$

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Table 2

Summary of Fit indices for each Model

	Chi-square			
	Chi-square value (df)	**p value**	**CFI**	**RMSEA**
Middle school	13.75 (8)	.09	.97	.12
Transition	20.39 (7)	.00	1.00	.00
High school	3.24 (7)	.86	1.00	.00

Note: CFI = comparative fit index; RMSEA = root mean square error approximation. Degrees of freedom differ in the middle school model because the pathway from gender as a predictor of the slope was removed in order to acquire fit.