Contributions to variations in academic trajectories amongst recent immigrant youth

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Abstract
Immigration presents both challenges and opportunities that affect students’ academic achievement. Over the course of five years, varying academic trajectories were identified for recent immigrant students from Central America, China, the Dominican Republic, Haiti, and Mexico. Latent class growth curve analysis revealed that although some students performed at high or improving levels over time, others showed diminishing performance. Multinomial logistic regressions identified significant group differences in academic trajectories, particularly between the high-achieving youth and the other groups. Consistent with ecological systems theory, school characteristics (a: school segregation rate; b: school poverty rate; and c: student perceptions of school violence), family characteristics (a-separation from mother and father; b-maternal education; and c-paternal employment), and individual characteristics (a-academic English proficiency; b-academic engagement; c-psychological symptoms; d-gender) were associated with different trajectories of academic performance.

Keywords
immigrants, adolescence, academic pathways, policy and practice implications

Academic trajectories of recent immigrant youth
Early adolescence is a time of heightened risk for a “downward educational spiral” (Eccles et al., 1993, p. 90), particularly when the educational environment does not meet developmental needs. This is especially true for newly arrived immigrant youth, who often experience dissonance between their home and school environments (Berry, Phinney, Sam, & Vedder, 2006). Many immigrant-origin youth struggle to succeed in the educational system, performing poorly on a variety of academic indicators, including achievement tests, grades, dropout rates, and college attendance (Gándara & Contreras, 2009; Orfield & Lee, 2006).

Newcomer students arriving at the midway point of their educational trajectory must surmount a “formidable barrier” (Hood, 2003, p. 9) of adjusting to a new land (Suárez-Orozco, 2008), developing academic English skills (Carhill, Suárez-Orozco, & Páez, 2008), and fulfilling graduation requirements (Ruiz-de-Velasco, Fix, & Clewell, 2001). Moreover, their parents are often ill-equipped to help them navigate a complex, foreign, and sometimes hostile educational system (Olsen, 1997; Suárez-Orozco et al., 2008).

Newcomer immigrant students undergo myriad stresses of migration while adapting to a new schooling environment (García-Coll & Magnuson, 1997; Suárez-Orozco & Suárez-Orozco, 2001), placing them at particular educational risk. Nearly half of newcomer youth arrive sometime during their secondary education; the middle and high schools they encounter are often inadequately equipped to address their needs, leaving them “overlooked and underserved” (Ruiz-de-Velasco et al., 2001, p. 1). In a knowledge-intensive economy in which the stakes of school failure are greater than ever before (21st Century Workforce Commission, 2000), deepening our understanding of the processes that contribute to trajectories of academic success and failure has clear social implications.

Despite the cumulative stresses of migration, not all immigrant youth fall prey to school failure and disengagement. While some succumb to structural obstacles that lead to patterns of downward assimilation, others retain their initial optimism over time (Portes & Rumbaut, 2001). Still others demonstrate varying levels of achievement during the course of their education (Suárez-Orozco et al., 2008). It is likely that newcomer students’ academic adjustment over time is sensitive to a range of family, school, and individual factors. This study draws on longitudinal data of newcomer immigrant adolescents. Its analytic aims are twofold: (a) identify trajectories of academic performance for recently arrived immigrant youth over the course of five years; and (b) identify school, family, and individual characteristics that contribute to these varied trajectories of academic performance.

Contexts and characteristics that influence immigrant student performance
Immigrant youth do not grow up in a vacuum. Academic trajectories are determined not only by their own efforts, but also by the contexts in which they develop (Bronfenbrenner, 1977). Variations
in school, family, and individual characteristics are linked to widely different trajectories.

**School characteristics**

New immigrants, who face much higher levels of poverty than do U.S. native-born students (Hernández, Denton, & Macartney, 2007), typically settle in neighborhoods with under-resourced schools that provide far from optimal opportunities for their children (Kozol, 1991). Immigrant youth typically find themselves in racially and ethnically segregated schools where racial and ethnic minorities comprise a large proportion of the student bodies. Immigrant students also carry an added burden of attending linguistically isolated schools, placing them at further academic risk. The multiple dimensions of segregation (class, racial/ethnic, and linguistic) are associated with a variety of negative school characteristics, including limited school district resources (Orfield & Lee, 2006), low teacher expectations (Weinstein, 2002), poor achievement test outcomes (Gándara & Contreras, 2009), high dropout rates (Orfield & Lee, 2006), and limited information about access to college (Gándara & Contreras, 2009; Orfield & Lee, 2006). Such school contexts are also associated with negative school climates (Noguera, 2003) and increased school violence (Goldstein & Conoley, 1997), which undermine students' capacities to concentrate, their sense of security, and their ability to learn (Suárez-Orozco et al., 2008).

**Family characteristics**

Familial resources have been strongly linked to academic attainment (Perreira, Chapman, & Stein, 2006; Stanton-Salazar & Dornbusch, 1995). Of particular interest to our study is the dynamic (re)structuring of the family unit over the course of immigration. Parents are frequently separated from their children as they search for adequate housing in the host country (Hondagneu-Sotelo, 1994; Suárez-Orozco, Todorova, & Louie, 2002). When parents first migrate, children are often left in the care of extended family members and are consequently subject to at least two separations: first from their parents, and then from their caretakers with whom they may have become attached. Complications may arise at both junctures, as well as when the children are ultimately reunited with their parents (Suárez-Orozco et al., 2002).

There are also well-established relationships between parental education, particularly maternal education, and academic performance (Jencks, 1972). More educated parents are better equipped to guide their children in studying, accessing, and making meaning of educational information. Similarly, parental employment, and particularly paternal employment, is one of the most robust indicators of family resources related to child development (Ferriss, 2006; Sirin, 2003). Parents who are active in the workforce are better able to provide the resources and supports needed for their children (Perreira et al., 2006; Sirin 2005).

**Individual characteristics**

Several individual-level factors may lead to different trajectories of performance. The majority of newcomers face the challenge of mastering English while concurrently adjusting to a new school and gaining academic skills (Ruiz-de-Velasco et al., 2001). Academic English language proficiency is highly predictive of academic success (Muñoz-Sandoval, Cummins, Alvarado, & Rief, 1998). While oral proficiency can be developed within a couple of years, students will take, on average, four to seven years under optimal conditions to acquire the level of language skills necessary to be competitive with native-born peers in the classroom (Cummins, 1991; Hakuta, Butler, & Witt, 2000). English language fluency is also a significant predictor of positive academic adjustment in studies of first- and second-generation immigrant students (Portes & Rumbiäut, 2001).

“The degree to which students are ‘connected’ to what is going on in their classes” (Steinberg, Brown & Dornbusch, 1996, p. 131) has been shown to contribute to academic performance (Fredricks, Blumenfeld, & Paris, 2004; Steinberg et al., 1996). Academic engagement has been used in a variety of ways in the literature, and encompasses cognitive, behavioral, and emotional dimensions (Fredricks et al., 2004). Here, we focus on the behavioral dimensions of engagement: students’ participation and efforts around academic tasks of attending school, paying attention and behaving in class, and completing and turning in homework on time.

Self-reported psychological distress has been linked to lower levels of academic performance in nonimmigrant adolescent populations (Bleichman, McEnroe, Carella, & Audette, 1986; Ripple & Luthar, 2000), and immigrants are especially at risk, given the multiplicity of transitions they undergo at critical junctures in their life (García-Coll & Magnuson, 1997; Suárez-Orozco & Suárez-Orozco, 2001). While research consistently shows a positive relationship between length of residency and engagement in risk behaviors (i.e., “immigrant paradox”) (Vega, Alderete, Kolody, & Aguilar-Gaxiola, 1998), data examining the psychological well-being of immigrant-origin youth populations across generations, ages, and countries of origin reveal mixed results (Alegria et al., 2007; Rumbiäut, 2004).

Scholars have noted a gender gap in the academic performance of immigrants and minorities, with girls outperforming boys (Portes & Rumbiäut, 2001; Suárez-Orozco & Qin-Hilliard, 2004). Several factors have been identified as contributing to this phenomenon. Boys of color face lower academic expectations than girls, as well as more stigmatization and blatant discrimination; thus, they are at greater risk for academic disengagement (DeVos, 1980; López, 2003). Additionally, immigrant girls often have more responsibilities at home than their brothers, who tend to be allowed more freedom to engage in the local street culture (Olson, 1997; Waters, 1999). At school, boys tend to have fewer meaningful relationships with their teachers and perceive their school environments to be less supportive than do their female classmates (Suárez-Orozco & Qin-Hilliard, 2004; Way & Chu, 2004).

**Overview of the current study**

Immigration presents both opportunities and challenges that interact with a range of individual and contextual factors to produce different pathways of academic achievement. Our understanding of such factors, however, has been constrained in part by the limitations of previous studies. Most scholars have employed cross-sectional approaches comparing two or more generations of cohorts (Portes & Rumbiäut, 2001; Steinberg et al., 1996; Suárez-Orozco & Suárez-Orozco, 1995), rather than addressing trajectories of change over time within the same cohort (Fuligni, 2001). Moreover, studies that include second- and third-generation immigrants have been less able to capture the initial adjustment patterns and unique
experiences of recently arrived immigrant students (Fuligni & Pederson, 2002; García-Coll, Szalacha, & Palacios, 2005; Portes & Rumbaut, 2001). This study seeks to address these limitations through a longitudinal study of recent immigrant youth.

Based upon an ecological systems framework (Bronfenbrenner, 1977), we expected different trajectories of performance would emerge over the course of five years: some students would maintain high performance trajectories over time, some would decline, and others would improve. We expected that students attending poorer quality schools (with higher reported levels of school violence, more segregation, and more poverty) were at greater risk of declining performance over time. Similarly, we expected that parent-child separations in the family’s immigration history would have a deleterious effect on students’ academic performance across time. We expected boys to be more likely to demonstrate low and declining trajectories of performance. Finally, we expected that students with strong academic English language skills and students demonstrating higher levels of academic engagement would perform better academically over time.

Method

This study utilized data from the Longitudinal Immigration Student Adaptation (LISA) study (Suárez-Orozco et al., 2008)—a five-year longitudinal study that used interdisciplinary and comparative approaches, triangulating data in order to document patterns of adaptation among recently arrived immigrant youth from Central America, China, the Dominican Republic, Haiti, and Mexico. Here, we report the findings that emerged from a variety of school-, family-, and individual-level constructs hypothesized to impact academic performance over time.

Participants

Four hundred and seven immigrant youth participants (53% female) newly arrived from each country were recruited from the Boston and San Francisco metropolitan areas. We negotiated entrance into school sites with high densities of immigrant students and enlisted the help of school authorities to identify youth who met the inclusion criteria: both parents from one of the five regions of origin and students who had recently immigrated. Research assistants (RAs) requested potential participants’ involvement, assured them confidentiality, and obtained parental informed consent.

Participants ranged in age from 9 to 14 at the beginning of the study (M = 11.7 years of age), though Haitians were significantly younger by one year than the Dominicans and Chinese. All participants had been in the United States no more than a third of their younger by one year than the Dominicans and Chinese. All participants had been in the United States no more than a third of their lives (M = 1.93 years). By Year 5, the final sample included 309 students (representing an attrition rate of 5% annually). No students refused to continue in the study. Attrition resulted from students leaving the schools with no forwarding information; there were no official records of reasons for leaving (which could include dropping out, leaving the school district, or returning to the homeland voluntarily or by being deported). A comparison between students who completed all 5 years of the study with those who did not, however, revealed few differences between the groups (Suárez-Orozco et al., 2008).

The current sample of 282 included students for whom the dependent variable (report card data for all 5 years) was available. Preliminary analyses of the data for the final year sample of students (N = 309) showed that 92 students (29.8%) had missing data. Missing values analysis was performed to determine the percentage of missing data for each variable and to assess whether patterns existed in the missing data. Comparisons between the LISA final sample of 309 and the logistical regression sample of 282 students revealed no significant differences on any of the independent variables used in our analyses.

Procedures

Each year, students completed interviews either during or after school. RAs conducted all interviews on an individual basis orally in the participant’s preferred language. The student interviews took from 1.5 to 2 hours to administer and involved a variety of question formats (open-ended, fill-in-the-blank, Likert scales, etc.). Parent interviews were conducted in their native language the first and last years of the study at the participants’ homes.

Participant contexts

School characteristics. Students in our study were recruited from over 50 schools in 7 districts representing typical contexts of reception for newcomer students from each of the groups of origin (U.S. Census Bureau, 2000). Because of normative developmental school transitions (from middle to high school) and high mobility of immigrant students, our participants transferred schools frequently over the course of the 5 years of the study. By the end of the study they had had dispersed to over 100 schools; students’ transfer rates ranged between 1 and 5 transfer incidents (M = 2.4). Data on school quality became available from school district data in the last year of the study following the passage of No Child Left Behind (NCLB). These data included the percentage of students who are poor (eligible for free or reduced-cost lunch) and segregation rates (racial and ethnic school composition). Most of our students’ schools were highly racially and economically segregated (see Table 1). The schools attended were characterized by high percentages of students living in poverty, with an average of 49.2% (SD = 23.5%) of students receiving free or reduced-cost lunch. The minority representation rate at the schools our students attended was, on average, 78.8% (SD = 23.2%) (see Suárez-Orozco et al., 2008 for detailed sample description).

Family characteristics. Participants lived in complex family constellations; here we assessed whether students lived with one or more adult relatives, as having two or more adults provided more protective functions (e.g., supervision as well as potential financial support) (see Suárez-Orozco et al., 2008). On average, students’ mothers (or maternal figures) had received 9.2 years of schooling (SD = 4.53 years), ranging from 0 to 21 years of formal education. One third of the mothers had completed at least a high school education. Dominican mothers reported the most years of schooling, while Central American mothers reported the fewest (see Table 1). These ranges in years of education are consistent with national norms for immigrants (U.S. Census Bureau, 2000). During the first year of the study, 96% of the total sample’s fathers were working. By the fifth year of this study, only 65% of the fathers were employed (perhaps a reflection of the economic downturn).

In addition, nearly three quarters of the participants were separated from one or both of their parents during the migration process. Significant differences between ethnic groups were observed in regard to family separation: Chinese families were least likely to
be separated over the course of migration (52%), while the vast majority of Central American (88%) and Haitian children (85%) were separated from either or both of their parents during the course of migration. Approximately 26% of children in the sample were separated from both parents, a pattern most often occurring in Central American families (54%). In cases where the child was separated from only one parent, about 27% of children were separated from the mother, while about 20% of children were separated from the father. Separation from mothers occurred most frequently among Dominican (40%) families, and separation from father was most frequently found among Mexican (33%) families (see Table 2 for details).

The length of separation between parents and their children varied widely across countries of origin, approaching the entirety of childhood for some participants. The majority of Mexican maternal separations lasted less than 2 years, while 49% of the Central American maternal separations lasted longer than 5 years. When paternal separation occurred, it was typically longer and often permanent: in 51% of all cases of paternal separations, fathers were separated from their children for longer than 5 years. This was the case for nearly three quarters of the Haitian families, as well as over three quarters of the Dominican and Central American families.

### Measures

#### School characteristics

**Segregation.** Two indicators were used: (a) school segregation rate: the percentage of non-White students attending the school, and (b) school poverty rate: the percentage of students in the school receiving free or reduced-cost lunch. This information obtained from school district "report card" websites was available only in the last year of the study (following the passage of national NCLB legislation in 2002).

**Student perceptions of school violence.** A 10-item scale was developed for this study to determine the frequency with which students perceived problems of violence and bullying in their school (e.g., "I do not feel safe in my school"). Responses were coded on a 5-point scale ranging from “never” (1) to “several times a day” (5). We administered this measure in Years 3, 4, and 5; for the analyses presented here, we averaged the scores from these three years (Cronbach’s α range for entire sample = .74 to .78; mean = .76; Cronbach’s α ranged across countries of origin = .63 to .75).

#### Family characteristics

**Socioeconomic factors.** As correlations demonstrated that paternal education levels were nonsignificant, we focused on maternal education. During the interviews, mothers provided information about their levels of education (high school graduation = 1, less than a high school education = 0) and parental employment (employment = 1, no employment = 0).

**Separations from parents and lengths of separations.** In the first year, parents were asked a series of questions about initial patterns
of migration: whether the family migrated together, whether there were separations between either of the parental figures and the child, whether the child is a part of stepwise migration, and the length of separations between children and parents. In this study, we focused on whether the child was separated from the mother and/or father (separation from mother, separation from father). We also examined the length of separation from each of the parental figures (length of separation from mother, length of separation from father), where lengths were categorized as follows: 0 = No separation, 1 = Less than two years, 2 = Two to four years, and 3 = Five years or longer.

**Individual characteristics**

**Academic English proficiency.** The English language proficiency standard score of the Bilingual Verbal Abilities Test (BVAT; Muñoz-Sandoval et al., 1998), a standardized test of academic English proficiency, was used to assess proficiency in academic English. The BVAT has been normed on all of the languages represented in the study. The BVAT manual (Muñoz-Sandoval et al., 1998) reports the median reliability across age groups for the English Language Proficiency scale as .96. This data was collected in Years 3 and 5; for the present analyses, we averaged the two scores.

**Academic engagement.** Engagement was assessed using a self-report 7-item scale that focused on behaviors of academic engagement reported by the students. The academic engagement items divided students into two groups. As in the self-perception profile for children/adolescents (Harter, 1988), students were asked whether they were more like the first or second group of students, and then were asked whether the statement was “Really true” or “Sort of true.” Academic engagement items included statements such as: “Some students always turn in their homework on time BUT other students often do not.” Scores ranged from 1 to 4 on each item, with higher scores signifying higher engagement. Participants were also asked how many hours they generally spent on homework after school, how many times they were late to class in the last week, and how many times they skipped class in the last week. We administered this measure in the third, fourth, and fifth years of the study; for the analyses presented here, we use the averaged score for the three points in time when data were collected (Cronbach’s α range for entire sample = .70 to .78; mean = .74; Cronbach’s α ranged across countries of origin = .60 to .85).

**Psychological symptoms.** We developed a 26-item cross-culturally relevant and developmentally appropriate psychological symptom scale for this study informed by the DSM-IV (American Psychiatric Association, 1994) and the SCL-90 (Derogatis, 1977). Participants were asked to respond to the prompt, “Lately, do you . . .?” Sample items included “feel sad,” “feel nervous,” “lose your temper often.” Scores ranged from 1 to 4 on each item, with higher scores signifying higher levels of psychological symptoms. We administered this measure in Years 1 and 5; scores were averaged (mean Cronbach’s α for entire sample = .86; mean Cronbach’s α ranged across countries of origin = .83 to .88).

**Academic performance.** Grades were the primary outcome measure. Report cards were collected for each participant directly from the school during each year of the study. An academic grade point average was calculated averaging the grades for math, science, language arts, and social studies courses (Cronbach’s α = .88).

**Number of school transitions.** Given the normal transition from middle school to high school, all participants experienced one or two school transitions over the course of the study. Students who had three or more school transitions thus were considered to be highly mobile. A dichotomous variable was created to indicate whether the student experienced three or more school transfers = 1 or not = 0.

**Results**

**Latent class growth modeling**

We tested several models ranging from three to six categories. The model with five categories had the highest Bayesian information criterion (BIC) and was thus selected to describe the data (BIC statistics available from the authors upon request). By examining the data in this way, five performance pathways emerged: (a) consistently high performers (high achievers); (b) consistently low performers (low achievers); (c) students whose GPA slowly drifted...
downward across time (slow decliners); (d) students whose GPA declined precipitously (precipitous decliners); and (e) a group that improved over time (improvers).

Two thirds of the participants in this study demonstrated a decline in their academic performance over the course of 5 years. Nearly a quarter of the sample (24.5%, n = 70) were slow decliners, showing a pattern of a slow but steady decline of half a grade from an average of 2.96 to a 2.53 GPA over the 5 years. Another quarter of the sample (27.7%, n = 79) were precipitous decliners, as their GPAs slid from an average of 2.90 to an average of 1.67 GPA, demonstrating nearly a grade-and-a-half drop over the course of the study. Further, 14.5% were low achievers (n = 41) throughout the study: they began with a lower average GPA (2.08) than any of their peers and dropped an additional half grade to an average GPA of 1.44.

Two groups of students demonstrated performance that defied the pattern of decline. Nearly a quarter of the students in the sample (22.7%, n = 64) were high achievers, maintaining an average GPA of 3.50 across the 5 years of the study. A last group, the improvers (11%, n = 30), made considerable strides in augmenting their GPA over time. They began with a GPA of 2.29, but managed by the fifth year of the study to pull up their performance a little more than two thirds of a grade to a GPA of 3.11 (see Figure 1).

**Multinomial logistic regression analyses**

To gain a better understanding of how particular variables contributed to the likelihood of membership in one academic trajectory versus another, we conducted a multinomial logistic regression, using high achievers as the reference group. We were thus able to determine which variables were significantly related to a respondent’s membership in one academic trajectory versus the high achieving reference group. Table 3 displays the variables that emerged as significant in contributing to the likelihood of membership when comparisons were made with high achievers as the reference group. A negative coefficient indicates a greater likelihood of being in the reference group. Table 4 displays the odds of being in one group versus the reference group.

**Discussion**

A central aim of this study was to identify the varying academic trajectories of recently arrived immigrant students and to describe the school, family, and individual contextual factors associated with membership in the different trajectories. Latent class growth modeling revealed five distinct trajectories of performance for the recent immigrant students. We examined several school, family, and individual characteristics using multinomial logistic regression analyses. These analyses shed light onto the significance of distinguishing trajectories of school segregation and school poverty, students’ perceptions of school violence, family separations, academic English proficiency, academic engagement, reported psychological symptoms, three or more school transitions, and gender.

Overall, students with the most school, familial, and individual resources tended to perform better academically over time. The high achievers often demonstrated a constellation of advantages: they started out as high performers and maintained high achievement throughout the 5 years of the study. On the other hand, the low achievers started out with low performance and declined further over time, unable to engage in school given the myriad of risk factors. The precipitous decliners started out doing better in school than their low-achieving peers but after struggling with multiple school and background impediments, appeared unable to sustain the effort over the course of time. Improvers, on the other hand, faced initial challenges but had enough environmental supports that over the course of time, allowed them to overcome their initial “transplant shock.”

In some ways these patterns of findings are consistent with findings among nonimmigrant students. The pattern of slow decliners is typical of this age group as they make transitions through middle and high schools (Alspaugh, 1998). School and developmental transitions, as well as more challenging course work, often set the stage...
This was also the case, somewhat counterintuitively, for girls (Blechman et al., 1986; Ripple & Luthar, 2000). The effort required to do well in school—regular attendance, completing homework assignments, being able to express and understand the language—was related to high academic performance. The presence of a maternal separation in the child’s immigration history is negatively associated with academic trajectory: parents who have experienced separations from their mothers were more likely to be precipitous decliners or slow decliners than high achievers. This was also the case for separations from the father. Furthermore, the longer the separation from the father, the greater the negative effect on academic trajectories.

Parental separations resulting from migration is an issue specific to the immigrant youth experience. For a variety of reasons—the high cost of migration, the difficulty establishing stable work and living conditions in the new land, and inefficient (at best) or draconian (at worst) immigration policies—a majority of immigrant children experienced separations from their parents of a prolonged nature lasting anywhere from 6 months to nearly their entire childhood as part of the migratory process. The analysis of parental separations revealed complicated relationships between various dimensions of the separation experience and resulting academic trajectories. The presence of a maternal separation in the child’s immigration history is negatively associated with academic trajectory: students who have experienced separation from their mothers were more likely to be precipitous decliners or slow decliners than high achievers. This was also the case for separations from the father.

Many immigrant students face the particular challenge of acquiring a new language. Struggles in language are evident in the data: only 7% of the sample had developed academic English skills comparable to those of their native-born English-speaking peers after an average of 7 years in the United States (Carhill et al., 2008; Suárez-Orozco et al., 2008). When English learners are not able to participate and compete in mainstream classrooms, they often read more slowly than native speakers, do not understand cultural information of their native-born middle-class peers. Their academic performance and engagement or performing well on “objective” assessments designed for native English speakers.

This study sought to establish common denominators of experience (such as language skills, school contexts, or psychological for normative declines over time (Eccles et al., 1993). The risk is most pronounced among those who undergo multiple school transitions and attend lower performing schools (Temple & Reynolds, 1999). Recent immigrant families with limited resources, however, often enter the poorest school systems, which have the very least to offer to the students most in need of support. Thus, the poor performance of low achievers and precipitous decliners can in part be attributed to the particularly poor quality of the schools they attended, which did little to foster engagement in their students and possibly motivated transfers to other schools, augmenting their academic risk (Eccles et al., 1993; Orfield & Lee, 2006).

Consistent with previous findings in other populations, girls demonstrated better educational outcomes than boys both initially and over time (García-Coll et al., 2005; Portes & Rumbaut, 2001; Suárez-Orozco & Qin-Hilliard, 2004). The boys in the sample were underrepresented among the high achievers and over-represented among the low achievers and precipitous decliners, but were relatively sufficiently represented among the other groups.

As with other populations, students who reported greater psychological distress were at greater risk for academic decline (Blechman et al., 1986; Ripple & Luthar, 2000). Precipitous decliners were most likely to report multiple psychological symptoms. This was also the case, somewhat counterintuitively, for improvers. Data from previous case-study research with this sample revealed that improvers often had undergone significant premigration trauma and might in the initial years of migrating have been coping with post-traumatic stress issues that contributed to their inability to fully concentrate on their studies. As they settled in their new land, and had time to begin to heal, they were better able to concentrate on their studies and thus improve their academic performance (Suárez-Orozco et al., 2008).

Also consistent with previous research (Fredricks et al., 2004), academic engagement was related to higher academic performance. The effort required to do well in school—regular attendance, completing homework assignments, being able to express and understand the language—was related to high academic performance over time. When compared to the other groups, high achievers were the most academically engaged of all the groups. Not surprisingly, low performers and decliners demonstrated the least academic engagement.

Table 3. Multinomial logistic regression coefficients and standard errors

<table>
<thead>
<tr>
<th>Reference group:</th>
<th>Slow decliners</th>
<th>Precipitous decliners</th>
<th>Low achievers</th>
<th>Improving achievers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable (chi-square significance)</td>
<td>[24.5%]</td>
<td>[27.7%]</td>
<td>[14.5%]</td>
<td>[10.6%]</td>
</tr>
<tr>
<td>Family characteristics</td>
<td></td>
<td></td>
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<tr>
<td>Separation from mother</td>
<td>.015 ~ (.009)</td>
<td>.017 ~ (.010)</td>
<td>.020 ~ (.011)</td>
<td>2.475 ~ (1.064)</td>
</tr>
<tr>
<td>Separation from father</td>
<td>2.148* (.984)</td>
<td>1.963 ~ (.1189)</td>
<td>.665 ~ (1.440)</td>
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</tr>
<tr>
<td>Length of separation from father</td>
<td>−.745* (.378)</td>
<td>.805* (.378)</td>
<td>.665 ~ (1.440)</td>
<td></td>
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<tr>
<td>Length of separation from mother</td>
<td></td>
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<td></td>
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<tr>
<td>High school graduate mother</td>
<td></td>
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<tr>
<td>Working parent</td>
<td></td>
<td></td>
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<tr>
<td>% Low-income students in school</td>
<td>−.027 ~ (.016)</td>
<td>−.029* (.018)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School segregation rate</td>
<td>.045*** (.017)</td>
<td>.067*** (.022)</td>
<td></td>
<td></td>
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<tr>
<td>Perceived school violence</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Academic proficiency</td>
<td>−.053*** (.014)</td>
<td>−.073*** (.016)</td>
<td>−.076*** (.019)</td>
<td>−.074*** (.018)</td>
</tr>
<tr>
<td>Academic engagement</td>
<td>−.176* (.091)</td>
<td>−.313*** (.095)</td>
<td>−.518*** (.105)</td>
<td>−.337*** (.108)</td>
</tr>
<tr>
<td>Psychological symptoms</td>
<td>.080** (.033)</td>
<td></td>
<td>.102** (.039)</td>
<td></td>
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<tr>
<td>Three or more school transitions</td>
<td></td>
<td>1.201* (.570)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1.046** (.448)</td>
<td>1.278** (.487)</td>
<td>1.676*** (.572)</td>
<td></td>
</tr>
</tbody>
</table>

~ *p < .10; *p < .05; **p < .01; ***p < .001. 
Note. N = 282; log likelihood = 665.901; df = 52.
Table 4. Multinomial logistic regression odds ratios (reference group = high achievers)

<table>
<thead>
<tr>
<th>Significant predictor variables</th>
<th>Odds Ratios (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>School characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Higher segregation rate</td>
<td>+ Low achievers</td>
</tr>
<tr>
<td></td>
<td>+ Precipitous decliners</td>
</tr>
<tr>
<td>Higher poverty rate</td>
<td>- Low achievers</td>
</tr>
<tr>
<td></td>
<td>- Precipitous decliners</td>
</tr>
<tr>
<td><strong>Family characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Separated from father</td>
<td>+ Precipitous decliners</td>
</tr>
<tr>
<td></td>
<td>+ Improvers</td>
</tr>
<tr>
<td></td>
<td>+ Low achievers</td>
</tr>
<tr>
<td>Separated from mother</td>
<td>+ Precipitous decliners</td>
</tr>
<tr>
<td></td>
<td>+ Low achievers</td>
</tr>
<tr>
<td></td>
<td>+ Slow decliners</td>
</tr>
<tr>
<td>Prolonged separation from father</td>
<td>+ Precipitous decliners</td>
</tr>
<tr>
<td></td>
<td>+ Improvers</td>
</tr>
<tr>
<td>Unemployed parent</td>
<td>+ Precipitous decliners</td>
</tr>
<tr>
<td><strong>Individual characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Higher English proficiency</td>
<td>- Low achievers</td>
</tr>
<tr>
<td></td>
<td>- Improvers</td>
</tr>
<tr>
<td></td>
<td>- Precipitous decliners</td>
</tr>
<tr>
<td></td>
<td>- Slow decliners</td>
</tr>
<tr>
<td>Higher academic engagement</td>
<td>- Low achievers</td>
</tr>
<tr>
<td></td>
<td>- Improvers</td>
</tr>
<tr>
<td></td>
<td>- Precipitous decliners</td>
</tr>
</tbody>
</table>
symptoms) that contribute to academic trajectories, resisting facile cultural explanations for varying patterns of academic performance. Nonetheless a country-of-origin frame bears consideration. Haitian adolescents were more likely to come out of a situation of trauma, given their context of migration (Stepick, 1997); thus, their higher levels of reported psychological symptoms are not surprising. Central American parents had undergone civil wars and had relatively high rates of unauthorized status; as a result their family separation tended to be quite extensive and protracted as it took considerable time, effort, and expense to be reunited with their children (Suárez-Orozco et al., 2002). And while trajectory analysis based on the ethnicity was not the focus of our study, when these analyses were run, no significant differences emerged based on the students’ countries of origin, except for the Chinese sample, who were significantly more likely to be either high achievers or improvers than the rest of the sample. Chinese parents were quite savvy about locating better quality schools and had access to excellent ethnic networks of information while Latino parents by and large did not (Suárez-Orozco et al., 2008); this no doubt contributed to the kinds of schools their children attended. Cultural values, practices, and beliefs, historical circumstances surrounding an immigration, and the receiving context of the newcomers all contribute to the migratory experience but are beyond the scope of this paper (see Portes & Rumbaut, 2001; Suárez-Orozco et al., 2008).

Limitations and future directions

Longitudinal data afforded a sensitive tool to understanding the academic trajectories of recent immigrant students. Similarly, the large, bicoastal sample of adolescents confers greater confidence in the precision of the parameter estimates and the generalizability of the findings. Nonetheless, this sample was one of convenience. Random sampling was not possible given the specific inclusion criteria of the study, the need for signed permission forms from school personnel and parents, and the required commitment of 5 years of participation. This limits our ability to generalize from this sample to the larger immigrant youth population, though comparisons of our descriptive statistics (parental education, parental employment, etc.) to census data descriptions of each target population’s recent immigrants revealed similar profiles (Suárez-Orozco et al., 2008).

The school report data were collected from school districts and is subject to quality of reporting biases of district data. Because these data were only available the last year of the study (2002), it is possible that the data on school quality was not representative of the quality of experience over all 5 years. Although a step above the standard proxy of family income in educational research (Conchas & Noguera, 2004), our assessment of socioeconomic status was also limited, as we focused only on paternal employment and maternal education. Further, in order to assess whether the academic trajectories identified here hold true for other groups of origin, future studies should also include second-generation immigrant-origin youth as well as minority and mainstream youth comparison groups.

Future research should examine nuanced aspects of change over time. Studies should include larger samples from each country in order to test country-of-origin differences. Such studies should be designed with at least three points of data collection for each critical variable to distinguish true change over time from measurement error, and to examine the shape of individuals’ growth trajectories (Singer & Willett, 2003). More research with other recent immigrant groups not included in this study is also warranted. A systematic and detailed examination of how relationships contribute to academic performance of immigrant youth, looking at what particular academic and emotional resources these relationships provide, is another promising area of future research.
New research should test mediating mechanisms linking immigrant status to achievement, including parent–child relationships and perceptions of discrimination. Outcomes should include other indicators of academic performance, including culturally appropriate achievement tests. Moreover, it will be important to expand future studies to include additional domains of functioning, as academic functioning does not necessarily imply high functioning in other emotional or behavioral domains (Qin, 2008). Further, it will be important to strive to disentangle the challenges normative to development from those of the acculturative stresses resulting from adapting to a new culture (García-Coll & Magnuson, 1997).

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References


