
Unraveling the Immigrant Paradox

Academic Engagement and Disengagement Among Recently Arrived Immigrant Youth

Carola Suárez-Orozco

New York University

Jean Rhodes

Michael Milburn

University of Massachusetts

Many studies have pointed to a troubling phenomenon known as the “immigrant paradox.” Despite an initial advantage length of residence in the United States appears to be associated with declining academic achievement and aspirations. To date, this line of research has taken a largely cross-sectional approach, comparing first, second, and third generations. The Longitudinal Immigrant Student Adaptation Study (LISA) combines longitudinal, interdisciplinary, and comparative approaches to document the patterns of adaptation of 408 recently arrived immigrant origin youth from Central America, China, the Dominican Republic, Haiti, and Mexico over the course of five years. Here, we present data that demonstrate patterns of academic engagement and achievement of these youths over time, as well as a structural equations model (SEM) that sheds light on the factors contributing to these patterns. These data suggest that supportive relationships significantly mediate the academic engagement and outcomes of immigrant youth. Implications and future directions are discussed.

Keywords: *immigrant youth; academic engagement; achievement; supportive relationships*

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Immigrant origin children are entering the United States' schools in unprecedented numbers, making them the fastest growing segment of the youth population (Landale & Oropesa, 1995; Suárez-Orozco, Suárez-Orozco, & Todorova, 2007). They are highly diverse, with over 80% arriving from Latin America, Asia, and the Afro-Caribbean basin (U.S. Bureau of the Census, 2003). Although they bring remarkable strengths, including strong family ties, a deep-seated belief in education, and optimism about the future, many immigrant origin children also face a range of challenges associated with migration to a new country, including high levels of poverty (Capps, Fix, Ost, Reardon-Anderson, & Passel, 2005), unwelcoming contexts of reception (Portes & Rumbaut, 2001), experiences of racism and discrimination (Suárez-Orozco & Suárez-Orozco, 2001; Szalacha et al., 2004), and school and community violence (M. Collier, 1998; García-Coll & Magnuson, 1997; Suárez-Orozco & Suárez-Orozco, 2001).

Many immigrant children, especially those settling in urban neighborhoods with concentrated poverty, face a daunting mix of odds in their schools and communities (Waters, 1999). They often live in neighborhoods that combine features such as unemployment (Wilson, 1997), violence, structural barriers (Massey & Denton, 1993), and intense segregation by race and poverty (Orfield, 1998). Racism and ethnic discrimination can undermine students' adjustment and diminish psychological functioning, self-esteem, and physical health (Verkuyten, 1998, Williams, Neighbors, & Jackson, 2003). Immigrants are also likely to attend schools that face high teacher and staff turnover and that are overcrowded, understaffed, and plagued by violence and racially hostile peer cultures (García-Coll & Magnuson, 1997; Mehan, Villanueva, Hubbard, & Lintz, 1996; Willis, 1977). Concerns about vulnerability to violent attacks have a detrimental effect on the school climate, which affect students' readiness and ability to learn (Elliott, Hamburg, & Williams 1998) and undermine their relationships with peers and teachers (Garbarino, Dubrow, Kostelny, & Pardo, 1992; O'Donnell, Schwab-Stone, & Muyeed, 2002). As students of color and those attending urban schools are most likely to encounter violence, such concerns affect a disproportionate number of immigrant students.

These stressors complicate immigrant origin students' adjustment to new schools and community settings, taxing even the most robust immigrant adolescents' coping capacities and leaving them vulnerable to academic failure. As a result, a large segment of immigrant origin youth struggle to succeed in the American educational system. A number of recent studies have demonstrated that although immigrant origin youth have more positive attitudes toward their schools (Suárez-Orozco & Suárez-Orozco, 1995),

higher aspirations (Fuligini, 1997; Portes & Rumbaut, 2001), and greater optimism about the future (Kao & Tienda, 1995; Suárez-Orozco & Suárez-Orozco, 2001) than their native-born peers, many perform poorly on a variety of academic indicators, including achievement tests, grades, dropout rates, and college attendance (Gándara, 1994; Orfield, 2002; President's Advisory Commission on Educational Excellence for Hispanic Americans, 1996; Ruiz-de-Velasco, Fix, & Clewell, 2001). Paradoxically, despite an initial advantage, in nearly all immigrant groups today, length of residence in the United States is associated with declining academic achievement and aspirations (Fuligini, 1997; Hernández & Charney, 1998; Portes & Rumbaut, 2001; Steinberg, Brown, & Dornbusch, 1996; Suárez-Orozco & Suárez-Orozco, 1995).

It is important to note, however, that not all first generation, newly immigrated students fall prey to such declines. A better understanding of such resilience can help to inform developmental theory as well as educational practices and policies affecting immigrant students. A major goal of this study is to examine patterns of academic disengagement within a large, longitudinal sample of first generation, recently arrived immigrant youth from diverse countries, tracking variation across various ethnic and sociodemographic subgroups. A related goal is to test a conceptual model of immigrant students' academic experiences and adjustment over time, paying particular attention to the factors that might heighten or attenuate the risk for poor academic outcomes over several years. In this model, academic and relational engagement are expected to mediate the associations between a range of both protective and risk factors and academic outcomes.

Protective Factors in the Lives of Immigrant Youth

Although many immigrant students experience the effects of negative school climates, others who are similarly exposed achieve academic success. A key protective factor is academic self-efficacy—the belief that one is competent and in control of one's learning (at least to some degree). This variable predicts the extent to which a child engages in learning the new language, forges new relationships, and connects with academic tasks (National Research Council, 2004; Schunk, 1991). In essence, higher academic self-efficacy appears to be instrumental in fostering students' learning as well as relational and academic engagement, which, in turn, lead to higher academic performance.

English language proficiency affects students' ability to detect social nuances in the school setting and is also highly predictive of academic

success (Muñoz-Sandoval, Cummins, Alvarado, & Ruef, 1998). Performance on multiple-choice tests and the ability to extract meaning from written text and to argue a point either verbally or in an essay are essential for high levels of academic attainment. Indeed, Portes and Rumbaut (2002) found that, among 5,000 first and second generation immigrant students from 13 different countries, English language fluency was a key factor in predicting more positive academic adjustment. The majority of recently arrived immigrants face the challenge of mastering English while concurrently adjusting to new schools and acquiring the necessary academic skills (Ruiz-de-Velazo et al., 2001). Although verbal proficiency can be developed within a couple of years, the level of language skills necessary to be competitive with native-born peers in the classroom can take 5 to 7 years to acquire (Collier, 1992; Leventhal, Xue, & Brooks-Gunn, 2006). Developing language proficiency is facilitated by higher levels of self-efficacy, where students feel that they are active participants in the learning process (Suárez-Orozco & Suárez-Orozco, in press).

Factors that relate to the family environment are also among the most stable predictors of resilience in children exposed to school and community violence (Garbarino & Kostelny, 1997; O'Donnell et al., 2002). Immigrant children live in varied and complex households. Although some grow up in traditional two-parent families, many others live either in extended families, blended families, or with nonparental caretakers (such as grandparents, godparents, aunts, and uncles.) Two or more adult figures in the home are more likely to be able to provide financial resources, supervision, guidance, and discipline. Multiple caretakers are better equipped to diffuse the stressors of childcare in a foreign country (Portes & Rumbaut, 2001), to deploy resources to reduce social anxiety, and to facilitate academic engagement and outcomes. There are also direct relationships between parental education and performance on achievement tests, grades, and dropping out (Bourdieu & Passeron, 1977; Jencks, 1972; Madaus & Clarke, 1998). Parents with higher educational levels are better able to provide the types of resources that would place their children at an advantage. These advantages include exhibiting more sophisticated vocabularies, providing more literacy opportunities and access to computers, assisting in homework assignments and SAT preparation, accessing college pathway knowledge, and the like (Suárez-Orozco & Suárez-Orozco, 2001).

Gender also appears to be associated with educational outcomes, with immigrant girls outperforming boys in educational settings (Brandon, 1991; Garcia Coll, Szalacha, & Palacios, 2005; Portes & Rumbaut, 2001; Qin-Hilliard, 2003; Rong & Brown, 2001; Suárez-Orozco & Qin-Hilliard,

2004). A number of factors may contribute to this phenomenon. In a variety of settings (for example, for Afro-Caribbean youth in Britain, Canada, and in the United States; for North African males in Belgium; Koreans in Japan; and for Moroccans and Algerians in France), there is evidence that boys are more likely targets of school violence, suffer higher levels of physical aggression and racism, and are at greater risk for academic disengagement than girls (Crul & Vermeulen, 2003; DeVos, 1980; Ogbu, 1978). Furthermore, research consistently suggests that, compared to their brothers, immigrant girls have many more responsibilities at home and feel a stronger sense of family obligation, which may keep them focused away from the lures of the street (Fulgini & Pederson, 2002; Olsen, 1997; Sarroub, 2001; Valenzuela, 1999; Waters, 1996). In addition, immigrant boys tend to have fewer meaningful relationships with their teachers and perceive their school environments to be less supportive than their sisters (Suárez-Orozco & Qin-Hilliard, 2003; Way, 2004).

Mediating Influences

Relational Engagement

Successful adaptations among immigrant students appear to be linked to the quality of relationships that they forge in their school settings (Portes & Rumbaut, 2001; Zhou & Bankston, 1998). Indeed, social support in school is integral to the academic adaptation of students in general and immigrant students in particular (Cauce, Felmer, & Primavera, 1982; Dubow, 1991; Levitt, Guacci-Franco, & Levitt, 1994; Wentzel, 1999). Social relations provide a variety of protective functions—a sense of belonging, emotional support, tangible assistance and information, cognitive guidance, and positive feedback (Cobb, 1976; Sarason, Sarason, & Pierce, 1990; Wills, 1985). The literature suggests that relationships in school play a crucial role in promoting socially competent behavior in the classroom and fostering academic engagement and achievement (Fredricks, Blumenfeld, & Paris, 2004; Furrer & Skinner, 2003; Hill & Madhere, 1996; National Research Council, 2004).

Relationships with peers, for example, provide emotional sustenance that supports the development of significant psychosocial competencies in youth (Selman, Levitt, & Schultz, 1997). Peers can moderate the effects of school-related violence, providing support and relief from anxiety (Gibson, Gándara, & Koyama, 2004; Hill & Madhere, 1996). Moreover, by valuing certain academic outcomes and modeling specific academic behaviors, peers

establish the norms of academic engagement (Berndt, 1999; Ogbu & Herbert, 1998; Steinberg et al., 1996). Peers tangibly can support academic engagement by clarifying readings or lectures, helping one another complete homework assignments, and exchanging information, for example, about SATs, helpful tutors, volunteer positions, and other college pathway knowledge (Stanton-Salazar, 2004); however, because immigrant youth often attend highly segregated, deep poverty schools (Orfield, 1998), they may have limited access to networks of knowledgeable peers.

In addition, connections with teachers, counselors, coaches, and other supportive adults in school are important in the academic and social adaptation of adolescents in general (Hamilton & Darling, 1996; Lynch & Cicchetti, 1997; Pianta, 1999; Rhodes, Reddy, & Mulhall, 2003; Roeser & Eccles, 1998) and appear to be particularly important to immigrant adolescents (Roffman, Suárez-Orozco, & Rhodes, 2003). These youths undergo profound shifts in their sense of self and struggle to negotiate changing circumstances in relationships with their parents and peers (Rhodes, 2002). Protective relationships with nonparent adults can provide immigrant youth with compensatory attachments, safe contexts for learning new cultural norms and practices, and information that is vital to success in schools (Roffman et al., 2003). Consistent associations have also been found between students' perceptions of relationships with peers and caring adults at school, and increases in social goal pursuit, motivation, academic competence and achievement, psychosocial functioning, school attendance, and academic engagement (see Davis, 2003; Hamre & Pianta, 2001; Goodenow, 1992; Jenkins, 1997; Midgley, Feldlaufer, & Eccles, 1989; Roeser & Eccles, 1998; Ryan & Grolnick, 1986; Ryan, Stiller, & Lynch, 1994).

Academic/Behavioral Engagement

Academic engagement—"the degree to which students are 'connected' to what is going on in their classes" (Steinberg et al., 1996, p. 131)—in turn, has been shown to contribute to academic performance (Fredricks et al., 2004; Greenwood, Horton, & Utley, 2002; Marks, 2000; National Research Council, 2004; Steinberg et al., 1996). The term *academic engagement* has been used in a variety of ways in the literature, and it 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, completing homework, and

turning in assignments on time. Of course, behavioral engagement and performance occur along a continuum. Highly engaged students are actively involved in their learning, completing the tasks required to perform well in school. Somewhat engaged students may be doing good enough academic work, but they are not reaching their academic potential. Further along the continuum, there may be a significant gap between students' intellectual potential and their academic achievement. In cases of more extreme academic disengagement, erratic class attendance and assignment completion lead to multiple course failures that often foreshadow dropping out (Rumberger, 2004). Moreover, academic disengagement may not be immediate but may occur over time in response to accruing difficulties in the community, at school, and within the family. Thus, rather than classifying academically resilient youth based on a cutoff on the positive end of a distribution, resilience in this study will be inferred from the pattern of statistical associations (Luthar & Cushing, 1999).

Study Objectives

The goal of this study was to examine associations among the risk and protective factors described above. Perceiving a threatening school climate was hypothesized to heighten the risk for poor academic outcomes through negative associations with relational engagement, behavioral engagement as well as language proficiency. In contrast, higher levels of self-efficacy and language proficiency were expected to attenuate this risk through their positive associations with relational and behavioral engagement. Relational engagement at school was expected to enhance students' behavioral engagement, which, in turn, was expected to be associated with better academic performance. Structural equation modeling was used to examine whether relational and behavioral engagement partially mediated associations between the risk and protective factors and academic performance (Baron & Kenny, 1986; Holmbeck, 1997). Given the complexity of the relational patterns specified in our hypotheses, structural equation modeling offered the best opportunity to test the impact of multiple variables with both direct and indirect effects on school outcomes.

We also examined the role of background characteristics on these outcomes. Being female, having two parental figures in the home, and having more educated parents were expected to be associated with higher levels of engagement and better academic outcomes. Finally, we include brief case studies that exemplify some of the pathways under investigation.

Method

Design and Procedures

This study used data from the Longitudinal Immigration Student Adaptation (LISA) study (Suárez-Orozco, & Suárez-Orozco, 2001). The LISA study was a 5-year longitudinal study that used interdisciplinary and comparative approaches, mixed-methods, and triangulated data to document patterns of adaptation among recently arrived immigrant youth from Central America, China, the Dominican Republic, Haiti, and Mexico.

Recruitment. Schools in Boston and San Francisco with high densities of immigrant students were selected for participation in this study. Participating schools provided access to students, teachers, staff, and school records. With the help of school personnel, youth who potentially met the inclusion criteria (newcomer immigrants whose parents were both from the same country of origin) were identified. Bilingual and bicultural (largely from the participants' countries of origin) research assistants (RAs) described the project to potential participants and requested their involvement. The youth took home permission slips for parental signature, and parents were sent a letter (in their language of origin) requesting their informed consent. In many cases, the RAs followed up with phone calls to the students' homes. The students and parents were told that this was a 5-year project investigating the experience of immigration and were assured that their confidentiality would be maintained.

Interviews. Students completed interviews at school or after school each year, depending on the participant's availability and the activities occurring at school on the day of the interview. RAs conducted all interviews on an individual basis in the language of the participant's preference. The student interviews were conducted each year, took from 1.5 to 2 hours to administer, and involved a variety of question formats (open-ended, fill-in-the-blank, Likert-type scales, etc.). The scales were administered entirely on a verbal basis—students were not asked to read items so as not to jeopardize the validity of responses given by students with limited literacy skills. Students were reimbursed for their time and participation. Parent interviews were conducted the first and last years of the study at the participants' homes.

Participants

A diverse sample ($N = 407$; 53% female) of newcomer immigrant students was recruited from seven school districts in the Boston and San Francisco metropolitan areas. The participants ranged in age from 9 to 14 at the beginning of participation in this study ($M = 11.8$). Haitians were, on average, nearly 1 year younger than the other participants. By Year 5, the sample was 309 (Chinese = 72, Dominican = 60, Central American = 57, Haitian = 50, Mexican = 70), representing an attrition rate of 5% annually. Students of Chinese origin had significantly higher completion rates (90%) than Dominicans, Mexicans, Central Americans (approximately 75%), or Haitians (69%), and significantly more girls than boys completed the five interviews (81% vs. 70%). Relative to completers, noncompleters reported witnessing more school violence (37% vs. 23%; Suárez-Orozco, Suárez-Orozco, & Todorova, 2008).

Parental Education

Mean maternal education was 9.2 years for the total sample, with a range from 0 to 21 years. Among the groups, mean maternal years of education were fairly comparable; however, a one-way ANOVA found a significant difference in education between mothers from different countries of origin, $F(4, 238) = 7.1, p < .001$. Similarly, although mean paternal education was 8.8 years for the total sample, with a range from 0 to 26 years, a one-way ANOVA found a significant difference between fathers from different countries of origin, $F(4, 176) = 8.2, p < .001$; see Table 1). This large range in years of education is consistent with national norms, which indicate that immigrants are overrepresented at both high and low ends of the educational spectrum (U.S. Bureau of the Census, 2003).

Income Distribution

Although there were some group differences in total yearly household income, a chi-square test of the country of origin by household income relationship fell short of statistical significance, $\chi^2(32) = 45, p = .064$. In addition, there is a positive skew, and the chi-square test approached significance, only because of the relatively small difference in the number of Chinese and Mexican households that reported greater than US\$80,000 in income; no Haitian, one Central American, and two Dominican households were in this income group. Over 70% of household incomes from all groups clustered in the US\$0-US\$40,000 range (see Table 2).

Table 1
Years of Parental Education

	Maternal Figure Education			Paternal Figure Education		
	<i>M</i>	Range	<i>SD</i>	<i>M</i>	Range	<i>SD</i>
Chinese	9.9	0-19	4.56	10.9	2-26	5.39
Dominican	11	5-21	3.54	9.2	2-17	4.20
Central American	7.3	2-19	3.99	8.2	2-15	3.59
Haitian	10.0	0-16	4.01	10.1	1-16	3.83
Mexican	8.0	0-18	4.66	6.2	1-14	3.50
Total	9.2	0-21	4.41	8.8	0-26	4.59

Parental Employment

By Year 5 of the study, most parents worked, with fathers more likely to be employed than mothers in each immigrant group (see Table 2).

Family Structure

Participants in this study lived in households ranging in size from 2 to 17 people. Central American ($M = 6.40$) and Mexican ($M = 6.38$) participants lived in the largest households, whereas the Chinese lived in the smallest ($M = 4.38$). A little over half of the sample lived in families with two parental figures. There was a significant difference between groups, however, with Dominicans the least likely (24%), and Chinese the most likely (84%), to live in two-adult homes (see Table 2).

Rural/Urban Origins

Participants' parents primarily reported arriving from urban origins (see Table 2). However, there were significant differences among groups, $\chi^2(8) = 26.6$, $p = .001$, with Haitians showing more major urban and less rural origins than the other groups (see Table 2).

Instrument Development

LISA involved students from distinct language and cultural backgrounds. Cross-cultural research with immigrants challenges traditional social science assumptions around validity and reliability (McLoyd & Steinberg,

Table 2
Other Demographic Characteristics: Caretaker Employment, Family Structure, and Urban/Rural Origins (in Percentage)

	Chinese	Dominican	Central American	Haitian	Mexican	Total Sample
Annual household income:						
Year 5						
US\$0-US\$19,000	18.5	32.8	23.1	23.5	30.0	26.1
US\$20,000-US\$39,999	46.3	36.1	50.0	55.9	41.7	44.8
US\$40,000-US\$59,000	14.8	24.6	25.0	17.6	18.3	20.3
US\$60,000-US\$79,999	9.3	3.3	0	2.9	0	3.1
Above US\$80,000	11.1	3.3	1.9	0	10	5.7
Percentage of caretakers who are employed: Year 5						
Maternal Figure	74	74	93	84	72	79
Paternal Figure	94	78	98	90	80	88
Family structure: Year 5						
One parental figure	16	76	51	50	38	45
Two parental figures	84	24	49	50	62	55
Urban/rural origins in country of origin						
Metropolis (more than 500,000)	40	31	39	54	31	38
Urban (cities, towns, suburbs)	33	57	39	40	55	45
Rural (less than 25,000)	28	13	22	6	14	17

1998; Suárez-Orozco & Suárez-Orozco, 1995). Questions and prompts that are valid for one group may be neither valid nor culturally and linguistically unbiased. We thus sought to develop a protocol that would be relevant and equivalent across groups. Scale development was informed by the insider RAs, ethnographic fieldwork, and our bicultural protocol development teams. Structured interviews were translated into Spanish, Haitian Creole, Mandarin, and Cantonese by bilingual research teams.

Case Studies

During the data collection phase in the 3rd year of the study, we selected 75 students (15 from each of the 5 immigrant groups) for case study research. These students represented a range of academic profiles, including some who were highly engaged in school, others who were partially

engaged as well as students who seemed completely disengaged. Explicit guidelines for data collection, grounded on previous research and theoretical work (Yin, 2003), were used to ensure that the questions were relevant to different patterns of academic performance (e.g., immigration history, sending and receiving contexts, previous and current schooling experiences, family structure and relations, neighborhood context, social supports, language skills, identity formation, and so forth). Triangulated data were used to establish a chain of evidence to provide construct validity (Yin, 2003).

Measures

Demographic data. Data regarding parental education, parental occupation, household income, household structure, and rural/urban origins were collected using standardized fixed choice question formats imbedded in the 5th year parental interviews.

English language proficiency. The English language proficiency standard score of the Bilingual Verbal Abilities Test (BVAT; Muñoz-Sandoval et al., 1998) was used as the measure of English language proficiency. 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.

School violence. This 10-item scale was developed to determine the frequency with which students perceived problems of violence and bullying in their school and in the adjoining neighborhood (e.g., “I do not feel safe in my school,” “I frequently see students getting into fights,” “I frequently see racial or ethnic conflicts”). Responses were coded on a 5-point scale ranging from 1 (*never*) to 5 (*several times a day*; Cronbach’s $\alpha = .77$, with alpha coefficients ranging from .67 to .79 across ethnic groups).

Academic self-efficacy. This 7-item scale was developed to determine the degree to which students felt empowered and capable of learning (e.g., “When I try hard I can learn almost anything”). Responses were coded on a 4-point scale ranging from “very false” (1) to “very true” (4) (Cronbach’s $\alpha = .71$).

Behavioral engagement. Behavioral engagement was assessed with a 4-item scale that focused on behaviors of academic engagement reported

by the students. As in the self-perception profile for children/adolescents (Harter, 1982, 1988), students were asked whether they were more like the first or second group of students, then were asked whether the statement was *really true* or *sort of true* for them. Behavioral engagement items included the following: “Some students always finish their work *but* other students often do not finish it,” “Some students always turn in their homework on time *but* other students often do not,” “Some students pay close attention in class *but* other do not,” “Some students just get by in school, *but* others always try their best (reversed).” 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 Years 3 and 5 (Cronbach’s $\alpha = .79$).

Relational engagement. This 11-item measure was coded on a 5-point scale ranging from 1 (*never*) to 5 (*always*). Relational engagement items included the following: “I can count on at least one adult in school,” “No one in school can help me (reversed),” “Teachers do not treat me with respect (reversed),” “I have at least one friend at school to help me with homework,” “Teachers care about me and what happens to me,” “I can count on someone if I have a problem at school,” “Teachers do not care about my future (reversed),” “Someone at school makes me feel successful,” “School is a lonely place where no one cares about me (reversed),” “I can count on someone in school to help me with my schoolwork,” and “I can talk about troubles with people at school.” For this measure we collected data in Years 3 and 5 (Cronbach’s $\alpha = .80$).

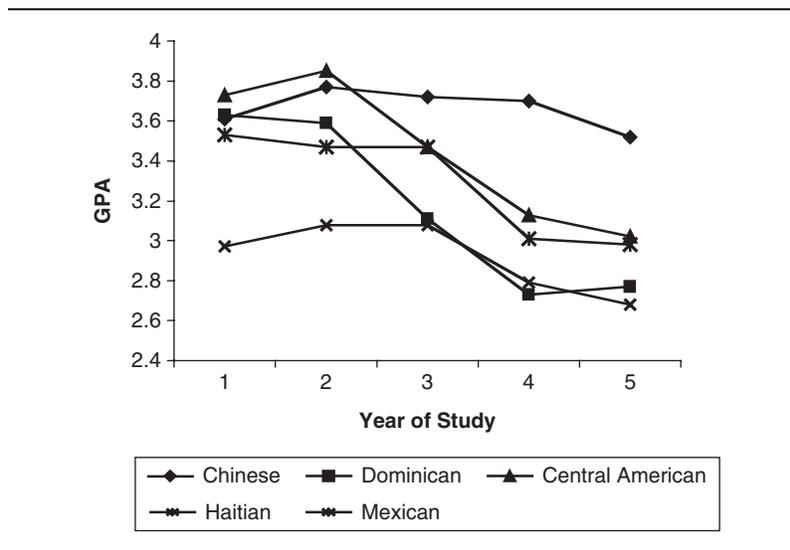
Educational outcome data. Grades were the primary outcome measure. Report cards were gathered for each participant during each year of the study. An academic grade point average was calculated averaging the grades for math, science, language arts, and social studies courses (Cronbach’s $\alpha = .88$).

Results

Longitudinal Patterns of Academic Performance

Although the LISA dataset revealed the familiar pattern of declining academic achievement over time, this trend did not emerge for several

Figure 1
Longitudinal Country of Origin Patterns of Academic Performance



years. Indeed, with the exception of the Central American children, grades appeared stable over the first 3 years of the study. By the 4th year of the study, however, the students began a dramatic downward trajectory that continued into the 5th year for most groups. The Chinese students were the only group that resisted this pattern of decline (see Figure 1).

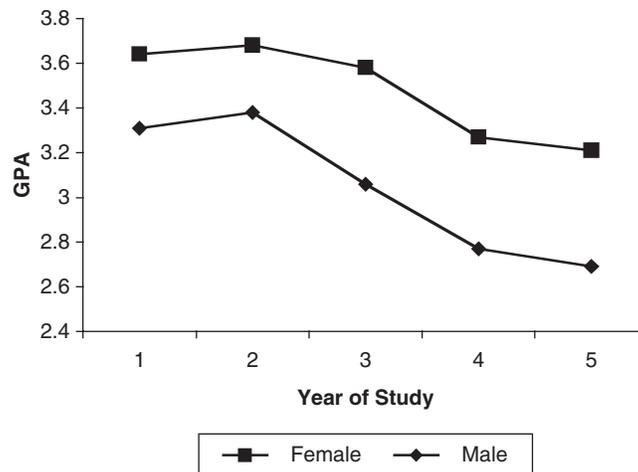
Gendered Longitudinal Patterns of Academic Performance

These patterns held true across gender, with males and females showing declines over time after an initial improvement in Year 1 and Year 2, with females consistently outperforming males (see Figure 2).

Relational Engagement Over Time

We conducted a 3×5 repeated measures ANOVA, with three levels of time as a within subjects factor and country of origin as a between subjects factor predicting relational engagement. The effect of time was significant, $F(2, 522) = 14.3, p < .001$, country of origin was significant, $F(4, 261) = 3.96, p = .004$, whereas time by country was $< .10, F(8, 522) = 1.74$,

Figure 2
Longitudinal Gendered Patterns of Academic Performance



$p = .087$. For every country of origin, students' relational engagement was lower in Year 5 than in Year 3 (see Figure 3 below).

Behavioral Engagement

We also conducted a 3×5 repeated measures ANOVA with time as a within subjects factor and country of origin as a between subjects factor for behavioral engagement. For behavioral engagement, time was significant, $F(2, 456) = 4.78, p = .009$, but country of origin was not significant, $F(4, 228) = 1.09, p = .36$, nor was the interaction, $F(8, 456) = .715, p = .68$. For each country except Haiti, students' behavioral engagement was lower in Year 5 than in Year 3, and the difference for Haitian students was marginal (see Figure 4).

Structural Equation Model

For the structural equation model, we focused on changes that occurred between Year 3 and Year 5 of the study. These years were selected because language proficiency is a key predictor of academic outcome, and we collected BVAT data only in the 3rd and 5th years of the study. The model was estimated with AMOS Version 5. As is clear from Figure 1 showing the changes in GPA over time, decreases are evident between Years 3 and 5.

Figure 3
Behavioral Engagement Year 3 to 5

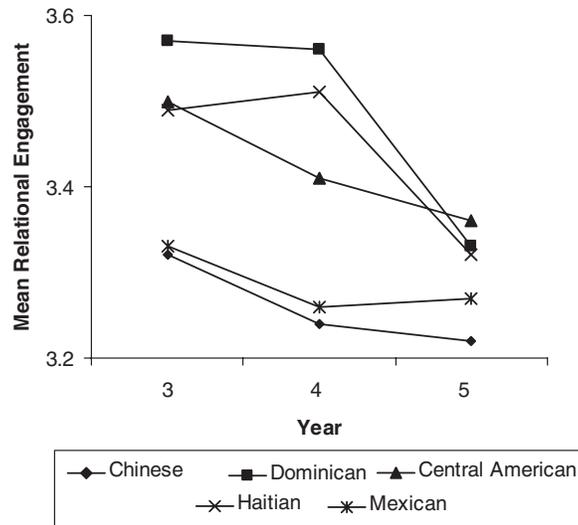


Figure 4

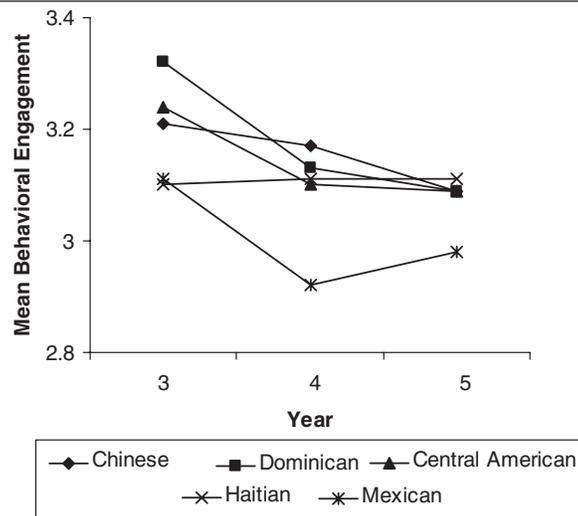


Table 3
Intercorrelations of Exogenous Variables: Paths From
Exogenous Variables to Endogenous Variables

	Age	Gender	Family Structure	Parental Education
Age			-.11*	
Gender			<i>ns</i>	
Family structure				
Parental education				
Year 3 school violence	.11*		.13*	<i>ns</i>
Year 3 self-efficacy	-.20***			.23***
Year 3 relational engagement	-.13*	.12***	.12*	.12*
Year 3 behavioral engagement			<i>ns</i>	
Year 3 English proficiency	.18***	<i>ns</i>		.33***
Year 3 GPA	-.14**	.18***	.09 ^a	
Year 5 school violence	.10*	-.10*	-.10 ^a	
Year 5 self-efficacy		-.09 ^a		<i>ns</i>
Year 5 relational engagement	<i>ns</i>	.11*	<i>ns</i>	
Year 5 behavioral engagement		.09 ^a	<i>ns</i>	
Year 5 English proficiency	-.07*	<i>ns</i>	<i>ns</i>	<i>ns</i>
Year 5 GPA	<i>ns</i>	.18***	.12*	

Note: *ns* = .10 < p < .30; blank = parameter not included in model, p < .30.

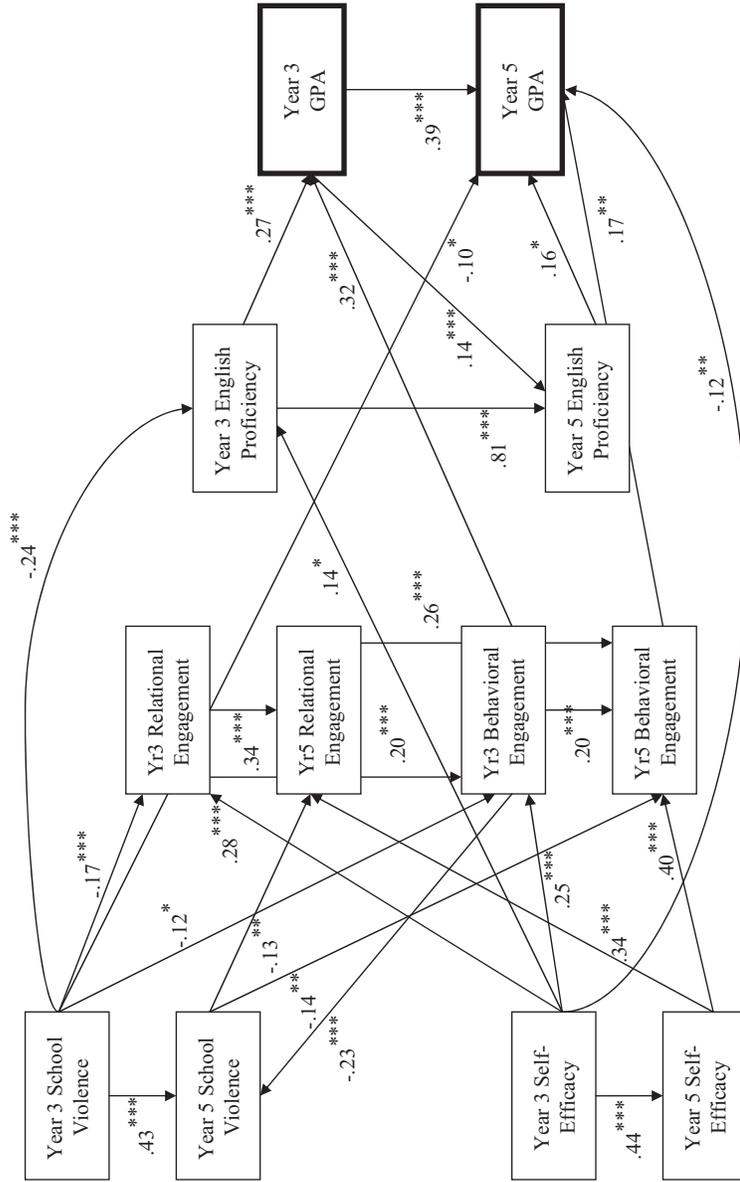
a. .05 < p < .10.

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

The standardized path coefficients among the endogenous variables are presented in Figure 5. The model displayed in this figure reflects the complexity of the relationships being modeled, although for ease of interpretation, the figure has been simplified from the model that we estimated by not including nonsignificant paths and not presenting the fully exogenous variables and their paths to the endogenous variables. The coefficients for the paths to endogenous variables, not represented in the structural equations model (SEM) figure, are presented in Table 3. The standardized direct and indirect effects are presented in Table 4.

The fit of the model was excellent, with a Comparative Fit Index (CFI) = .989, $\chi^2(58) = 74.2$, $p = .075$, root mean square error of approximation (RMSEA) = .025, $p = .998$. The over time consistency of the measured variables varied from $\beta = .81$ for English language skills, signifying the stability of this variable to a low of $\beta = .20$ for academic engagement reflecting the significant change over time.

Figure 5
Endogenous Variables in the Structural Equation Model



Predicting Grade Point Average (GPA)

Proficiency with English exerts an understandable influence on GPA in both Year 3 and Year 5. Girls also had consistently higher GPAs than boys. A central element of our model was the mediating role of relational and behavioral engagement between students' backgrounds and their academic performance. These predictions were clearly supported. In each year, relational engagement predicted concurrent behavioral engagement, and behavioral engagement in turn predicted both Year 3 GPA and Year 5 GPA.

Also consistent with our proposed conceptual model, students' reports of problems in their school predicted lower relational engagement and lower academic engagement at both Year 3 and Year 5. The more problems students perceived in their schools, the lower were their relational and academic engagement. School violence at Year 3 also predicted lower GPA at Year 5.

Problems at the students' schools were associated with a general social context, with exogenous variables associated with the level of school violence that students reported. Students from families with only one parental figure and those whose parents had lower educational levels reported higher levels of school problems. In addition, students' age was associated with level of problems reported, with older students reporting more problems.

The four exogenous variables included in the model, age, gender, family structure, and parental education, showed various impacts on the endogenous variables in the model (see Table 3). Parents' education and age had similar effects on relational engagement; older students were less relationally engaged, and higher parental education was associated with higher levels of relational engagement. Girls were also more relationally engaged, as were students from families with two parental figures. Students whose parents reported higher levels of education also had higher self-efficacy, and younger students had higher self-efficacy than did older students.

The one potentially anomalous result was the negative relationship between Year 3 self-efficacy and Year 5 GPA. The higher the students' self-efficacy was in Year 3, the lower their GPA was in Year 5. This relationship was inconsistent with the overall pattern of results and might reflect an overconfidence early in schooling. Overall, however, the pattern of results is quite consistent with the predicted theoretical model.

The median of the sample was age 12. There were, however, differences in age of immigration by ethnic group, $\chi^2(4) = 15.7, p = .003$, with Haitian and Mexican kids more likely to be younger at age of immigration, so any age group differences were potentially confounded with ethnic group differences. Hence, we constructed a variable that differentiated the sample into two groups: (a) age 11 or younger at the beginning of the study (elementary school

aged, $n = 170$) and (b) age 12 or older (middle to high school aged, $n = 234$) with ethnic group differences. We conducted a multiple group analysis estimating the same model as in Figure 5, simultaneously, for the two groups (older and younger), deleting the variable age from the model. The model, which constrained the structural coefficients (i.e., the path coefficients between the variables) in the two samples to be equal, fit the multiple groups quite well ($CFI = .986$, $\chi^2(154) = 172.8$, $p = .142$, indicating the same pattern of relationships among the variables for children in both age groups.

Case Studies

Case studies demonstrate the ways in which peer, nonparental adult, and family supports can affect the academic outcomes of two immigrant students who experienced very different academic trajectories.

Henry¹

Henry's story vividly illustrates the "immigrant paradox" that is characteristic of so many of the students in the study. Henry emigrated from a coastal city in China with his mother when he was 12 years old. Although Henry began his academic career in the United States with high expectations of himself and with a great deal of academic potential, he showed a dramatic academic disengagement over time.

As a newly arrived 7th grader, Henry voiced his ambitions to attend an Ivy League University and become an architect, genetic engineer, or scientist. He appeared to be on track to reach these goals. Henry and his mother lived in a community where many Chinese immigrants settled because of the relatively good quality of the schools. He did very well academically in his Cantonese/English bilingual middle-school program and received high grades in all of his classes. Henry was one of only two students from this program to gain entry into an elite high school that required a competitive exam for admission. In this middle school program, he received critical guidance from a bilingual school counselor who was a fierce advocate for her students. It was widely agreed by this counselor, the mother, his teachers, and Henry himself that he was a capable, promising student with a bright future.

Henry's academic performance plummeted, however, after he transitioned to high school. In large part, his English-language ability had not developed enough to allow him to negotiate the academic and social demands of his new educational environment. In his bilingual middle school, Henry had

had positive relationships with his teachers and counselor. He was comfortable asking them questions as well as for advice. In contrast, in his English-only competitive high school classrooms, Henry felt alienated from his teachers and was reluctant to ask questions. He reported feeling exasperated and isolated in his new school. Within months, his disengagement was evident as he regularly cut classes and began failing multiple courses. After a year, Henry was transferred to a less competitive high school. By the end of the study, Henry had failed numerous classes, repeated a grade, and had a GPA of 2.1.

Rosa

In contrast to Henry, who lived in relatively isolated milieu, Rosa's world was distinguished by a supportive web of mutually satisfying relationships with family members, peers, and teachers. Rosa, who emigrated with her family from Mexico when she was 13 years old, exemplifies a highly relationally and academically engaged immigrant student who remained successful over time.

Rosa attended a blighted high school in an urban setting where gang violence was a regular occurrence. Nevertheless, throughout her high school career, Rosa did exceptionally well, ranking third in her class of 369 and gaining entry with scholarships to University of California, Berkeley, where her father worked as a janitor. Although monolingual Spanish speaking when she entered American schools, Rosa quickly acquired the academic English necessary to excel academically. Rosa was widely described by her peers and teachers as a lovely, popular, and appealing adolescent to whom people were drawn. She reported experiencing the feeling that "everyone is rooting for me."

Rosa's immediate family of two parents and six siblings was cohesive and supportive and had close ties with an extended network of relatives and neighbors who offered Rosa additional support and supervision. Rosa's parents were well-educated professionals in Mexico. Though on migrating they found work as janitors, they referred to their dramatically diminished social position as a sacrifice they gladly endured to ensure their children a more prosperous future. A computer that Rosa's parents worked hard to purchase was a centerpiece in the family's home. The dining table—where large, nourishing family meals were served—functioned as the other center of family activity. Rosa's two older siblings, one of whom was in college and the other who was a senior in high school, were strong role models for Rosa's continued academic success. Rosa, in turn, helped her younger siblings with their homework and spent time each day helping her parents at home doing chores.

Rosa's involvement in the programs "Upward Bound" and "Alma Latina" gave her access to tangible school-based support in negotiating the maze of her large, impoverished high school and offered strategies to manage the college admissions process. These organizations also served to promote Rosa's connections to her cultural heritage. In addition, Rosa was mentored by a college dean who provided her with guidance that sustained her confidence in moments of self-doubt. In spite of the aversive school and neighborhood factors that Rosa faced, the alignment of family, individual characteristics, and school and community supports propelled her to a highly successful academic outcome.

Discussion

This study highlights the vulnerabilities of recently arrived immigrant children in American schools and validates many of our hypotheses regarding risk and mediating processes. Although not immediately evident, children's academic performance began to slip during the 2nd and 3rd year of the study and dropped sharply in 4th and 5th years. This pattern underscores the importance of taking a longitudinal approach to studying immigrant youths' adaptation to U.S. schools. Had we completed data collection after only 1 year, we might have falsely concluded that the children were on a stable or even positive trajectory. The data presented here provide further evidence for the immigrant paradox that heretofore has largely been demonstrated with cross-sectional data comparing first, second, and third generation immigrant origin youth. In our sample of first generation immigrant youth, academic performance declined within the span of 5 years.

Our data permitted interesting cross-cultural comparisons among trajectories over time. For example, although Mexican students demonstrated the lowest grades from the onset, their grades declined less precipitously than did those of their Dominican, Haitian, and Central American counterparts. The pattern of low academic performance for Mexican origin immigrant youth is consistent with national data and findings from other studies (Leventhal et al., 2006; López & Stanton-Salazar, 2001; Portes & Rumbaut, 2001; U.S. Bureau of the Census, 2003). As has been noted by others, several factors that may account for this pattern include the relatively high proportion of Mexican immigrants who are undocumented, as well as the heightened racism stressors, and negative stereotypes about their group (López & Stanton-Salazar, 2001; Romero & Roberts, 2003). Groups that are less visible, less culturally distant, and have more recently

immigrated tend to report less discrimination (Liebkind & Jasinskaja-Lahti, 2000). The Chinese students' grades were the highest throughout the study, although their grades, too, declined over the 5 years of the study. This pattern of greater academic engagement and higher grades among the Chinese students is also consistent with the results of a number of national studies (Louie, 2004; Portes & Rumbaut, 2001; Tseng, 2006; U.S. Bureau of the Census, 2003).

For the sample as a whole, relational engagement played a significant role in predicting academic engagement. Interestingly, the Chinese and Mexican students reported the lowest levels of relational engagement of the five groups. These low levels may account for the lower academic performance of Mexican participants but had less predictive value for the Chinese students. It may be that students from different cultural backgrounds have different cultural expectations of school-based supportive relationships, affording some variance in their protective value across groups. This is a domain that is in need of further empirical and conceptual study.

Girls achieved higher grades both initially and over time. Again, this finding fits well with data showing that girls typically outperform boys academically from childhood through adolescence (Garcia-Coll et al., 2005; Pomerantz, Altermatt, & Saxon, 2002; Portes & Rumbaut, 2001). Girls demonstrate significantly higher levels of relational engagement than did boys, perhaps helping to explain their relative advantage over boys (López, 2003; Qin-Hilliard, 2003; Suárez-Orozco & Qin-Hilliard, 2004). Consistent with this finding, teachers rated their relationships with female students as closer and less conflictual than their relationships with male students (Birch & Ladd, 1997), a difference that is perceived by students as well (Hughes, Cavell, & Wilson, 2001; Reddy, Rhodes, & Mulhall, 2003).

The structural equation model, which enabled us to simultaneously assess a variety of predictors and mediators, provided important insights into this general pattern. A central hypothesis of our model was that students' relational and academic engagement in schools would mediate associations between their backgrounds and their academic performance. These predictions were clearly supported; each year, relational engagement positively predicted academic engagement, which, in turn, positively predicted GPA. Relational engagement also led to fewer perceptions of school violence, both of which significantly predicted academic engagement. In addition to these effects, relational and academic engagement mediated the negative effects of school violence on grades. These findings are intriguing and underscore the important influence of relational and academic engagement on achievement. The model also sheds light onto variables that predict children's perceptions of relational and academic engagement over time. Students' academic

self-efficacy, for example, was associated with higher grades in both Year 3 and Year 5. This association makes sense intuitively and is supported in the literature (Roeser, Eccles, & Sameroff, 1998).

As hypothesized, students' reports of violence and threatening school climates negatively predicted language proficiency, relational engagement, and academic engagement in both Year 3 and Year 5. These findings are consistent with previous research, which has uncovered associations between students' perceptions of their school climates and their social and academic functioning (Kuperminc, Leadbeater, Emmons, & Blatt, 1997; Way, 1998; Way, Reddy, & Rhodes, 2005). Such findings suggest that immigrant youth who experience their schools as threatening and violent may be at a particularly high risk for the development of academic problems.

Students with less educated, single parents reported higher levels of school problems (Portes & Rumbaut, 2002). Again, this finding is consistent with previous research, which has shown that students from lower socioeconomic backgrounds tend to hold more negative views of their schools than their middle to high socioeconomic status counterparts. As the schools with students from lower SES groups are most often underfunded and understaffed, they tend to have few resources to create positive learning environments (Alvidrez & Weinstein, 1993; Conchas & Noguero, 2004), provide fewer nurturing relationships, and engender feelings of threat and alienation from school (Honora, 2003; Rosenbloom & Way, 2004).

Consistent with the findings of Portes and Rumbaut (2001), English language skills were clearly predictive of academic performance. Not surprisingly, students with higher English proficiency received better grades. It appears that many of the first generation students are still struggling with academic English after 5 years in the country. Our findings underscore the importance of gathering culturally and linguistically sensitive language data that go beyond students' self-reports.

This compounding of risk factors among immigrant children is particularly distressing, as it suggests that the same students who might most benefit from schools with warm, hospitable school climates may be least like to attend them. Indeed, researchers have suggested that positive relational engagement with teachers and school staff may be even more significant for students who are at risk for negative outcomes, as they help to bridge the gap between home and school cultures and provide important feelings of safety and opportunities for academic success (Baker, 1999; Rumberger, 2004; Wang, Haertel, & Wahlberg, 1994).

A comparison of the Henry and Rosa case studies also highlights the factors that can precipitate students' disengagement from school and those that attenuated risk and contributed to her success. Rosa possesses the

characteristics that are associated with higher levels of engagement and better academic outcomes: being female, having more educated parents, and having two parental figures in the home. Furthermore, the quality of relationships Rosa was able to forge at home, in school, and in her community (due in no small part to her appealing personality characteristics) had a protective, positive influence on her educational achievement. For Henry, these supports were sadly lacking.

Of course it is important to note that all youth, not just immigrants, tend to demonstrate declines in both relational and academic engagement as they progress through their academic careers. Many researchers have described how bonds with teachers, academic motivation, attachment to school, and academic achievement begin to diminish for American students, particularly in early adolescence and during transitions to middle school and high school (Eccles & Roeser, 2005). Nonetheless, these drops tend to be less pronounced than those of immigrant ethnic/racial groups who often face discrimination and additional hardships (Eccles & Roeser, 2005).

Limitations

This sample was one of convenience, as random sampling was not possible given the specific inclusion criteria of the study, the need for signed permission from school personnel and parents, and the required commitment of 5 years of participation. This limits, to some degree, our ability to generalize from our sample. Given the results of our descriptive statistics (parental education, parental employment, household size, etc.), however, we are confident that this sample is representative of recently arrived immigrant students (Suarez-Orozco & Suarez-Orozco, in press). As with all longitudinal studies, there is also the potential problem of attrition. The rate of attrition tends to be higher for disengaged students, and it is therefore likely that our results underestimate the pattern of disengagement.

Further research should be conducted to examine nuanced aspects of change over time. To do so, future studies should include larger samples from each country of origin group under consideration to test country of origin differences. Such studies should be designed with at least three points of data collection for each critical variable to take advantage of the power of latent growth curve modeling. To examine whether the conceptual model tested here holds true for other groups of origin, future studies should also include newcomer immigrant groups not included in this study. New research should test additional mediating variables including parent–child relationships, as well as dependent variables such as perceptions of discrimination, and experiences of parent–child separations. Outcomes should

include other indicators of academic performance including culturally appropriate achievement tests, dropout rates, and objective school records of violence as well as objective, independent assessments of the engagement variables. Moreover, it will be important to expand future studies to include additional domains of functioning, as academic resilience does not necessarily imply resilience to other domains (e.g., emotional, behavioral). Finally, more ethnographic work should be done to examine different cultural expectations and needs vis-à-vis the role of supportive relationships within schools. Further studies of community-based organizations that provide after school supports would also be elucidating (Adger, 2001; Roffman et al., 2003).

In addition to serving as an impetus for future research, this study has implications for school policies and practices. Our results underscore the negative effects of school violence, racism, and threats, and offer evidence that perceptions of teacher and peer support provide some protection against this risk. Unfortunately, many students still experience a loss in such support over time. Although decrements in engagement may be explained, in part, by normal developmental changes, the less voluntary aspects of this loss of engagement are a cause for concern. Rather than presenting impediments, schools serving immigrant youth should work toward reducing the threat of violence and racism, while increasing opportunities for supportive relationships to emerge within schools (Chen & Park-Taylor, 2006). Practices that enrich relational engagement, such as homeroom assignments, advising, multiyear classroom placements, smaller grouping of students, and so forth, might go a long way toward enhancing the relational and academic engagement of immigrant youth. Any attempts to improve the prospects for immigrant children and to redress the “immigrant paradox” should consider the importance of supportive relationships in mediating academic outcomes.

Notes

1. Student names have been replaced with pseudonyms to ensure participants' confidentiality.

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Carola Suárez-Orozco is a professor of applied psychology at New York University's Steinhardt School of Culture, Education, and Human Development and codirector of immigration studies at New York University. She publishes widely in the areas of cultural psychology, academic engagement, immigrant families and youth, and identity formation. She is the author of *Children of Immigration* (with Marcelo Suárez-Orozco, Harvard University Press, 2001) and, more recently, *Learning a New Land: Immigrant Students in American Society* (Harvard University Press, 2007).

Jean Rhodes is a professor of psychology at the University of Massachusetts, Boston. She has devoted her career to understanding the role of both natural and assigned adult–youth relationships in the lives of disadvantaged youth. She has written on the topics related to youth development and mentoring, including *Stand by Me: The Risks and Rewards of Mentoring Today's Youth* (Harvard University Press). She is coauthoring *First Do No Harm: Ethical Guidelines for Volunteers in Youth-Serving Organizations* (Harvard University Press).

Michael Milburn is a professor of psychology at the University of Massachusetts, Boston, where he teaches graduate statistics courses, including analysis of variance and multiple regression, multivariate statistics and causal modeling. His research in political psychology focuses on the determinants of political attitudes, the role of emotion in public opinion, and the effects of the mass media on political attitudes and social behavior. He is the author of *Persuasion and Politics: The Social Psychology of Public Opinion* (Wadsworth, 1991), *The Politics of Denial* (with Sheree Conrad, MIT Press, 1996), and *Sexual Intelligence* (with Sheree Conrad, Crown, 2001).