
Risk of High School Dropout among
Immigrant and Native Hispanic Youth

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Immigration is changing the face of the United States. During the 1980s, immigration accounted for 39 percent of U.S. population growth (Rumbaut, 1994). Many immigrants are recent arrivals, 44 percent arrived between 1980 and 1990 (U.S. Bureau of the Census, 1993). Immigrants tend to be relatively young; many arrive in their prime working and childbearing years. Thus, there are large numbers of immigrant children and children of immigrants in the U.S. whose experiences differ from those of native-born children of native-born parents. Children who are born abroad and move to the U.S. face academic challenges specific to the immigrant experience. Similarly, children born in the U.S. of immigrant parents may experience being raised by parents unfamiliar with American cultural and academic institutions and therefore less likely to be able to guide their offspring. On the other hand, immigrants often come to this country to take advantage of opportunities for upward mobility for themselves and particularly their children.

Immigration has been particularly important for the Hispanic population, accounting for approximately half of its growth. The Hispanic population in the U.S. grew by 53 percent in the 1980s; by 1990 it accounted for 9 percent of the total U.S. population (U.S. Bureau of the Census, 1991). In 1988, 21 percent of Hispanic children were first generation immigrants and 47 percent were the U.S.-born offspring of at least one immigrant parent (Chapa & Valencia, 1993). The overall numbers of Hispanic youth are expected to triple between 1982 and 2020, when they will comprise 25 percent of the nation's youth, surpassing African Americans as the largest minority group in the U.S.

The Hispanic population in the United States is also characterized by high levels of high school attrition. Although the percentages of Hispanics who finish high school and college have increased, as a group they still lag far behind blacks and whites and the gap may be increasing. This situation results from both the historically low percentage of Hispanics who complete high school and from the relatively slow pace of improvement. About one-third of both blacks and Hispanics completed four years of high school or more in 1970, by 1994 that proportion had risen to almost three-fourths of blacks but to just over half of Hispanics (U.S. Bureau of the Census, 1996). Low educational attainment among Hispanics is related to the high percentages of immigrants in this population. In 1990, only 39 percent of foreign-born Hispanics over the age of 30 had at least a high school education (Western & Kelly, 1997).

The U.S. economy that first and higher generation immigrants encounter has evolved from one based largely on industry and manufacturing to one increasingly based on technology and information, making education more important than ever to basic economic survival, much less upward mobility. Those whose human capital matches the needs of this new economy tend to be more successful, whereas those who arrive without such assets face longer odds. These trends make education increasingly more important to economic well-being.

Background

The process of investing in human capital is not particularly straightforward or consistent

across all segments of the population. This is due, in part, to differences in available family resources. Researchers have developed sophisticated models linking ascribed characteristics, such as parental and family background, to educational and occupational attainment, in which parents' education and occupation, along with family income are positively associated with offsprings' years of formal schooling and occupational status (Blau & Duncan, 1967; Featherman & Hauser, 1978). Family socioeconomic status (SES) has been shown to be related to the educational outcomes of immigrants as well (Portes & MacLeod, 1996; Steinberg, Blinde & Chan, 1984; Warren, 1996; Wojtkiewicz & Donato, 1995). Applying the basic tenets of the status attainment model to Hispanics necessitates the inclusion of ascribed characteristics that are particularly pertinent to immigrants and their children; these include immigrant generation, national origin and fluency in English.

This work builds on previous studies on the educational outcomes of Hispanics by building upon the status attainment model and examining how generational patterns of high school dropout are influenced by the level of resources available to Hispanic students across immigrant generations. First, how high school dropout rates vary by generation is described, using a nationally representative sample of Hispanic students. Second, how the resources of students and their parents vary by generation and how this variation affects the patterns seen is examined. Third, given the particular importance of early high school dropout among Hispanics and its contribution to the overall high rate of dropout among this group, generational patterns of early and late dropout are described and the effect of family and personal resources on these patterns is explored.

Although a number of studies have examined the relationship between immigrant generation (defined by whether individuals and their parents are born in the U.S. or abroad) and academic outcomes, inconsistent results render the role of generation unclear. For example, although Hispanic sophomores in the High School and Beyond (HS&B) survey were much more likely to drop out of high school than African American or white students (Ekstrom, et al., 1986), U.S. birth was not a factor in the likelihood of Hispanics dropping out (Fernandez, Paulsen & Hirano-Nakanishi, 1989). This result may be due to combining second and higher generation students, insofar as some research shows that parents' place of birth plays a significant role in educational outcomes. However, no differences were found between first, second and third generation Hispanic high school seniors with regard to math, reading and vocabulary tests (Buriel & Cardoza, 1988). This lack of association may be due to the high attrition rate of Hispanic students before the last year of high school (Hirano-Nakanishi, 1986); Hispanic high school seniors of all generations may, therefore, constitute a select group.

In other studies, generation played a significant if conflicting role in predicting educational outcomes. Rong and Grant (1992) found a positive association between years of education and generation for Hispanics, while another study found that GPAs of high school freshmen decreased as generation increased (Adams, et al., 1994).

Parents' and families' ability to invest in the education of their children is related to their level of resources. Socioeconomic status has been generally found to be positively associated with academic outcomes, including graduating from high school; this is the case for immigrants and natives, and for minorities and non-Hispanic whites. The relationship between immigrant generation and education may be due both to the relationship between SES and educational outcomes, and to improvement in SES across generations. For example, controlling for SES narrowed but did not close the gap between the chances of graduating from high school of whites and U.S.-born and Mexican-born Mexican students. Country of birth remained significant: first generation Mexican students were less likely to graduate from high school than U.S.-born students of Mexican origin, who, in turn, were less likely to graduate than white students (Warren, 1996). In a recent study of early dropout, second generation Hispanics were less likely to drop out than their third generation counterparts, net of SES (Rumberger, 1995).

The close association between immigrant generation and proficiency in English, a form of human capital that is specific to immigrant groups, may offer a plausible partial explanation for the relationship between generation and educational outcomes. English proficiency is an *important, if inconsistent, predictor of academic outcomes*. It appears to be closely tied to success in at least some aspects of schooling for some racial/ethnic groups. For example, Asian eighth graders who speak a language other than English at home (a situation much more common in homes headed by foreign-born parents) have higher math test scores but lower English grades than other Asian students (Kennedy & Park, 1994). Hispanics whose first language is Spanish are less likely to finish high school than those whose mother tongue is English. However, this pattern does not hold for students of other ethnicities: non-Hispanic non-English speaking students are not at greater risk of dropping out than their non-Hispanic English-speaking peers (Steinberg, Blinde & Chan, 1984).

Other factors intertwined with the immigrant experience have also been shown to be related to educational outcomes. The experiences of different national origin groups in the U.S. vary considerably; these differences may be due to dissimilar governmental and societal receptions (Portes & McLeod, 1996), reasons for immigration and the level and types of human capital that immigrants possess. For example, most Cuban immigrants in the 1960s were welcomed. In addition, these refugees were generally educated, middle class and of European descent, factors that aided their success in the U.S. In contrast, a sizable proportion of Mexican immigrants entered the U.S. illegally; they are more commonly viewed as a threat to natives' employment opportunities and living standards. Furthermore, the average education among immigrant Mexicans is quite low relative to U.S. standards, many Mexicans arrive with few skills appropriate for high-paying employment and most are mestizo, increasing their risk of racial discrimination. The disparate histories and characteristics of Mexicans, Cubans, Puerto Ricans and 'other' Hispanics in the U.S. have led to different average levels of economic well-being among these groups (Velez, 1989).

Students' expectations for their educational futures are also associated with school performance. Among junior high Asian and Mexican origin students, educational expectations

are positively related to test scores (Kennedy & Park, 1994) whereas low expectations are associated with early high school dropout for students of all races and ethnicities (Rumberger, 1995). The typical high school dropout expects to finish high school and attend junior college, while the typical continuing student expects to complete between two and four years of college (Ekstrom et al., 1986).

High parental aspirations also appear to be an important factor in children's success among Hispanics (Kao, 1995; Kao & Tienda, 1995). Expectations for the educational attainment of their children may be higher among foreign-born parents, for whom the advancement and success of their children was often an important reason for coming to the U.S. In addition, there is evidence that cultural values towards education and behaviors conducive to academic success are stronger and more common among foreign-born parents than among native-born parents (Hirschman & Wong, 1986; Lee & Rong, 1988; Schneider & Lee, 1990). For example, U.S.-born Mexicans with two foreign-born parents were more likely to graduate from high school than U.S.-born Mexican students with at least one U.S.-born parent and U.S.-born non-Hispanic whites (Wojtkiewicz & Donato, 1995).

How students perform academically appears to be a risk factor for dropping out among both Hispanic and non-Hispanic students (Fernandez, Paulsen & Hirano-Nakanishi, 1989; Velez, 1989). Students with higher grades are less likely to become high school dropouts than those who have performed poorly. Similarly, students who have been held back a grade, poor academic performance being the most common reason, are far more likely to drop out of high school before graduating than students who have progressed steadily through school (Fernandez, Paulsen & Hirano-Nakanishi, 1989).

This study builds on previous research efforts by using a nationally representative sample of first, second and third generation Hispanic students who were first interviewed in the eighth grade and followed throughout their high school years, allowing for prospective analysis of dropout. The relationship between immigrant generation and the likelihood of ever dropping out of high school among Hispanic students is investigated. The role of the level of personal and family resources across generations in this relationship is explored. It is hypothesized that dropping out of high school during the first two years is qualitatively different from dropping out later in high school. This study explores whether the factors that predict early dropout differ from those that predict later dropout, and whether the same factors play different roles in early and late dropout, given that students at risk for late dropout are a select subsample of those at risk for early dropout. Therefore, in order to arrive at a more detailed and clearer understanding of why dropout rates among Hispanics are so high, relative to other racial/ethnic groups, early and late dropout are analyzed separately. In this way, the relationships between immigrant generation and both the likelihood of dropping out of high school and the timing of dropout can be more accurately assessed for this population.

METHODS

Data

The data are from the National Education Longitudinal Study of 1988 (NELS:88). A nationally representative sample of eighth-grade schools and students was selected in 1988 using a two-stage stratified probability design. Schools were the primary sampling unit and students were the secondary sampling unit; 24,599 students from 1,057 schools participated in the base year interview. The NELS:88 sample includes oversamples of Hispanic and Asian students to ensure adequate sample sizes for analyses of these two groups. All respondents were reinterviewed in 1990, 1992 and 1994 and information was gathered on their academic careers, including whether they had dropped out of high school (National Center for Education Statistics, 1994).

The NELS:88 dataset is particularly well-suited for studies of student populations with high rates of high school dropout because the student cohort is first interviewed in eighth grade, when virtually all youths are still enrolled in school. Thus, early high school dropouts can be analyzed. Most existing work on high school dropouts followed students only from the tenth grade onward, excluding early school leavers from analysis. However, one of the criteria for excluding students at the time of sample selection should be taken into consideration when carrying out and interpreting research on Hispanics. Students whose insufficient command of English prevented them from completing the questionnaire and tests were not interviewed. Nevertheless, the advantages of using NELS:88 to carry out research on the educational outcomes of Hispanic students outweigh this drawback.

At the baseline interview, 13.6 percent of the respondents identified themselves as Hispanic. The study sample includes all 1,548 students who self-identified as Hispanic and for whom information on generation was available. Those that chose this category were then asked which subcategory best described them: Mexican/Chicano, Cuban, Puerto Rican or 'other' Hispanic ('other' Hispanics are of Central or South American origin or descent). Generation variables were constructed using questions to the student's parent on the student's place of birth - whether or not he/she was born in the U.S. - and the birthplace of each of his/her biological parents. In this study, generations are defined in the following manner. First generation students are defined as those who were born outside the United States (or in Puerto Rico); second generation students were born in the U.S. and at least one of their parents was born outside the U.S. Third generation students are students who were born in the U.S. of two U.S.-born parents. Thus, the third generation subgroup actually includes respondents who are third generation and higher. By these definitions, just under 20 percent of the sample are first generation immigrants, 41 percent are second generation immigrants and 40 percent are third generation or higher.

Variables

Outcome variables. The first dropout variable analyzed in this study is a dichotomous variable defined as ever dropping out of school after the baseline interview. This outcome is then partitioned into two separate dichotomous outcomes, early dropout and late dropout. Early

dropout is defined as having dropped out of school before the first follow-up interview when students would normally be second semester sophomores. Late dropout is operationalized as having finished tenth grade, but having dropped out of school before the second follow-up at the end of senior year.

Generation variables. Immigrant generation is the focal independent variable for all analyses in this study. In the bivariate analyses, immigrant generation is a three-category categorical variable. Dummy variables are used in the multivariate analyses. In all regression models, U.S.-born students of two U.S.-born parents, third (or higher) generation students, serve as the reference category.

Individual factors. Level of English proficiency combines the student's self-assessment of his/her ability to speak, understand, read and write English. It is a continuous variable with a range of one to four, with four equal to the highest level of proficiency. Teens' educational expectations for their own futures is a dichotomous variable where high expectations, meaning that the teen expects that he/she will at least graduate from college, is coded as '1', lower expectations is coded as '0'. Gender is also a dichotomous variable; in the multivariate analyses, males are coded as '1', females as '0'.

Family background and resources. Family income is a continuous variable and is measured in \$1,000. Parents' education is coded as a dichotomous variable; if either parent has at least a high school education, the variable is coded as '1', if neither parent has completed high school, the variable is coded as '0'. Number of siblings is a continuous variable. A variable parallel to that describing teens' educational expectations was constructed for mother's educational aspirations for her son/daughter (the percentage of missing data on father's educational aspirations for their child was too high to include in the analyses). In the bivariate analyses, national origin is represented by a four category variable. Dummy variables are used in the multivariate analyses. Students are divided into four groups: Mexicans, Puerto Ricans, Cubans, and 'other' Hispanics, of which Mexicans are the largest group. In all regression models, Mexicans serve as the reference category.

Past academic performance. Grade point averages (GPA) are constructed by averaging students' grades in four core subjects - math, English, social studies and science. The scale ranges from 0 to 4 with a 0 equal to a grade of 'F' and a 4 equal to a grade of 'A'. Whether students were ever held back a grade or repeated a grade prior to eighth grade is measured as a dichotomous variable.

Analysis

The overall goal of the analyses is to assess the extent to which generational patterns in dropout are explained by individual and family factors and by past academic achievement. To achieve this goal, several sets of analysis are carried out. Bivariate generational patterns of dropout and of independent variables are presented as are the correlations between dropout and

these variables. At the multivariate level, the odds of dropping out for each generation are estimated, controlling for individual and family factors and previous academic performance.

In the multivariate analyses, separate sets of logistic regression models estimate the odds of ever dropping out of high school, and the odds of early and late high school dropout. To assess the likelihood of ever dropping out of school, variables from the first wave of data are used in order to include all members of the original sample. To predict early school dropout, these same set of variables are used to predict the odds of dropping out by the end of sophomore year. The analyses used to predict late dropout parallel those used for early dropout, but are carried out only on students who were still enrolled in school at the first follow-up interview. Variables measured at the first follow-up, in tenth grade, are used to predict the odds of dropping out before graduation. These variables are used in the analysis of late dropout because they were asked only of students who are not early dropouts and because they incorporate changes from the baseline year.

For each dropout outcome, a series of four logistic regression models is carried out. Model 1 includes dummy variables for generation and measures of individual factors - English language proficiency, educational expectations and gender. Model 2 includes generation variables and family background and resources - total family income, parental education, number of siblings maternal educational expectations and the family's national origin. Model 3 combines generation with both individual and family level variables. The final model adds two measures of students' past academic performance - self-reported grade point average (GPA) and whether students were ever held back a grade. Combined GPA across sixth, seventh and eighth grades is used to predict ever dropout and early dropout, tenth grade GPA is used to predict late dropout. All bivariate and multivariate analyses are weighted so that the samples are nationally representative of the Hispanic student population.

RESULTS

Bivariate Results

Predictors of Dropping Out

Overall Dropout. The first column of Table 1 presents the percent of students who dropped out in each generation and differences between students who eventually dropped out and those who stayed in school. Slightly more than a quarter of native-born Hispanic eighth-graders dropped out of high school, compared to almost one in three immigrant students; however, these differences are not statistically significant. Students who expect to at least graduate from college are less than half as likely to drop out as are students with lower expectations. Similarly, the offspring of mothers with high expectations are about half as likely to drop out as other students. Among other possibilities, this pattern suggests either that these expectations are self-fulfilling or that teens with greater prospects of finishing high school have higher expectations. Dropouts' command of English and their school grades are lower than those of continuing students. Not

unexpectedly, students who drop out come from poorer families and have more siblings. Roughly 30 percent of Mexican and Puerto Rican students drop out of high school, followed closely by Cubans.

Early Dropout. While overall dropout rates do not significantly differ by generation, such is not the case for early dropout (Table 1, column 2). The proportion of immigrant students who drop out of school early is more than twice that of either group of native-born teens. More than half of first generation students who drop out of high school leave by the end of their sophomore year; about one-third of native-born students who leave school drop out during this time.

Early dropouts are poorer, have more siblings, have lower English proficiency, lower grades and lower personal and maternal educational expectations than continuing students, a pattern similar to that of overall dropout. Higher percentages of Mexican students drop out early, but among all national origin groups a minority of the students who eventually drop out do so before the end of their sophomore year. Unlike the case for ever dropout, males are more likely to drop out early than females.

Late Dropout. The third column of Table 1 profiles late dropouts. Among those students still in school at the end of their sophomore year, there are no generational differences in the percentage of those who subsequently drop out of high school. Higher proportions of Mexican and Puerto Rican students drop out of high school late than other students. Once again, significant and sizable differences remain between students who expect to at least graduate from college and those with more modest goals, although there is no association between maternal expectations and late dropout. The mean GPA of students who become late dropouts is below a 'C' while continuing students have significantly higher GPAs.

Level of English proficiency no longer differs across the two groups, suggesting that students with serious problems communicating in and understanding English have left school early. Mean family income is significantly lower for late dropouts than for continuing students. It appears that the exclusion of early dropouts from this part of the analysis shifts the average income of the remaining sample upward; mean income of late dropouts is higher than that of early dropouts, although it is still lower than for continuing students. Parental education is no longer associated with the likelihood of dropping out once students reach their sophomore year. Late dropouts have more siblings, on average, than continuing students.

Generational Differences

First, second, and third generation Hispanic teens differ from each other in several important ways as shown in Table 2. As expected, level of English proficiency increases with each generation (maximum score = 4.0). While even first generation Hispanics score relatively high on this measure (this result is undoubtedly influenced by the exclusion of limited English proficient students from the NELS:88 sample), each generation shows significant improvement

in both the eighth and tenth grades. Although both second and third generation students are born in an English-speaking country, children of immigrants are not necessarily born into English-speaking households; this may explain why their levels of English proficiency are lower than those of higher generation students. Students' expectations for their own educational attainment do not vary by generation until their sophomore year. Slightly more than half of Hispanic eighth graders of all generations expect to at least graduate from college. Among sophomores, U.S.-born students are more likely to have high educational expectations than foreign-born students.

Average family income increases over each generation. Nevertheless, while there are substantial and significant generational increases in family income, the level from which improvement is measured is so low that even hefty generational gains still leave third generation Hispanic teens worse off than most of their non-Hispanic peers. The percentage of students with at least one high school-educated parent increases among third generation students, undoubtedly because both parents of these students are U.S.-born. Second and third generation students have fewer siblings than immigrant students, thus the greater income of higher generation students is used to support fewer children, resulting in more financial resources per child. Contrary to findings of earlier research, maternal expectations do not differ across generations; the percentage of sophomores whose mothers have high educational expectations for them is uniformly low for all generations.

Immigrant eighth graders have significantly lower GPAs and are more likely to have been held back a grade than their U.S.-born counterparts. Among sophomores there are no GPA generational differences; however, for those still in school at this point, first generation students are more likely to have been held back a grade.

Multivariate Results

Overall Dropout. Table 3 presents odds ratios for the logistic regression models predicting the odds of ever dropping out of high school. As the first model shows, controlling for individual level factors does not alter the bivariate generational pattern. English proficiency is inversely correlated with the odds of dropping out of high school. Students who expect to at least graduate from college are only one quarter as likely to drop out of school as students with lower expectations. Gender is not a predictor of overall dropout. This model suggests that while some individual factors are directly related to the odds of dropping out, they have no effect on the relationship between generation and dropout.

Model 2 suggests that family factors affect the generational pattern. Second generation students are only about two-thirds as likely to drop out of school as are higher generation students, net of family background and resources. Family income is inversely related to the odds of ever dropping out, and each additional sibling increases the chances of dropout. Students with a high school-educated parent are no more likely to graduate from high school themselves than students whose parents have fewer years of schooling. Those whose mothers have high expectations for them are twice as likely as other to stay in school and Central and South

American students are less likely than others to ever drop out of high school.

As Model 3 shows, holding constant both individual and family background factors does not change the generational pattern found when only family background is controlled. However, controlling for students' own educational expectations appears to erase the association between the odds of dropping out of high school and maternal expectations. Model 4 adds educational expectations and past school performance. Although both GPA and being held back in school are directly correlated with the odds of ever dropping out, the addition of these variables does not change the generational pattern in Models 2 and 3. When past school performance is held constant, males are one-third less likely to drop out of school than females suggesting that poorer past performance drives the dropout rates of males more than females.

Early Dropout. The results of models predicting the odds of dropping out of high school early are presented in Table 4. Holding personal and family resources constant does not change the bivariate generational pattern for early dropout (Model 1). Nevertheless, English proficiency, expecting to complete college, and being male are all inversely associated with early dropout. When family background variables are controlled, first generation students are no longer more likely than others to become early dropouts (Model 2). Family income, parental education and maternal expectations are directly associated with the odds of early dropout. Controlling for both individual and family variables results in second generation students having lower odds of dropping out than other students (Model 3). This pattern disappears when variables describing past academic performance are entered into the model, suggesting that the lower dropout odds of second generation students were due to better previous school performance. Those with higher GPAs are less likely to drop out and those who have been held back in school are three times as likely to drop out early as those who were never held back. In addition, the correlation between English proficiency and early dropout is eliminated, suggesting that the association between English proficiency and early dropout operates through school performance. Number of siblings becomes significant. Students who expect to graduate from college are only one-third as likely to drop out early as are students with lower expectations. Males are only one-third as likely to drop out before the end of sophomore year as are females.

Late Dropout. The results of the logistic regressions predicting the odds of dropping out of school after sophomore year among students who are not early dropouts are presented in Table 5. The addition of individual factors does not change the bivariate generational pattern for late dropout (Model 1); students with high expectations are much less likely to drop out of high school at this point than other students. When family background variables are held constant, first generation sophomores are only 59 percent as likely to drop out as their U.S.-born classmates (Model 2). Among students still in school, family income and number of siblings are correlated with the odds of dropping out. Parents' education and mothers' expectations do not play a role in predicting whether Hispanic sophomores continue in school or leave. Controlling for both individual and family characteristics does not change either the generational pattern or the correlation between any of these variables and the odds of late dropout (Model 3).

The addition of educational expectations and past school performance alters these findings. Compared to third generation students, other students are less likely to drop out, this is particularly true of first generation students. English proficiency emerges as a significant predictor of late dropout, while number of siblings is no longer significant. Educational expectations continue to be very important in lowering the odds of dropout, as are school grades. As is the case for overall and early dropout, being held back in school increases the chances of late dropout.

To summarize these results, generational status is associated with the overall likelihood of dropping out of high school and the timing of dropout. Second generation students are less likely to ever drop out as other students, net of other factors. When overall dropout is broken down into early and late dropout, different generational patterns emerge. Among eighth graders, generation is not related to early dropout; among students who make it through their sophomore year, first and second generation students are much less likely to become dropouts than higher generation students.

High educational expectations lower the odds of both early and late dropout and, therefore, the overall likelihood of dropping out. The lower likelihood of dropout among males relative to females appears to be a result of much lower early dropout rates among males; after sophomore year, males and females do not differ in their odds of dropping out. Family income is a protective factor against dropout both early on and later in high school. The inverse relationship of number of siblings to the overall likelihood of dropping out is driven by the negative correlation between sibling size and early dropout; whereas the inverse relationship between 'other' Hispanic and overall dropout appears to be a function of a lower likelihood of late dropout for students in this category. Grades are a strong predictor of both early and late dropout, and thus of overall dropout; likewise, being held back a grade is highly correlated with both early and late dropout.

DISCUSSION

The Hispanic population of the U.S. is growing rapidly; it is also both young and disadvantaged relative to the rest of the country. These analyses re-affirm that high school dropout is a serious problem among this population. Almost one-third of foreign-born students and just over one-quarter of U.S.-born students drop out of high school. There is little doubt that few of these young people will enjoy opportunities for gainful, steady and meaningful employment without at least a high school diploma.

The primary focus of this study is the relationship between generation and high school dropout. The results suggest that the risks of dropping out of high school vary across generations for Hispanic teens and that this pattern can be traced to generational differences in the odds of early and late dropout. The overall generational pattern of dropout provides partial support for the immigrant optimism hypothesis (Kao & Tienda, 1995) which predicts that second generation immigrant students will have more positive academic outcomes due to the twin benefits of being

born in the U.S. (and thus learning English early) and of having foreign-born parents whose values and expectations for their children spur them to high levels of academic achievement. However, this study found no association between generation, and therefore parents' place of birth, and mothers' level of educational aspirations for her child. The finding that U.S.-born students of U.S.-born parents do worse than their counterparts with foreign-born parents (and worse than immigrant students when the outcome of interest is late dropout) provides a measure of support for Ogbu's (1987) hypothesis that higher generation immigrants are more likely to perceive structural barriers to success and have less faith in the ability of education to serve as a route to economic success.

Embedded within the discussion of the overall generational pattern of high school dropout is the issue of the timing of high school dropout. A number of factors appear to protect Hispanic students of all generations against early dropout, including high educational goals, being male, higher family income, having a parent with at least a high school education, coming from a small family, and past academic success. Among Hispanic sophomores, past academic success and high future academic goals, along with higher family income, continue to be related to lower dropout rates. In addition, higher English proficiency acts as a protective factor against late dropout regardless of generation.

The above results suggest that these factors also play roles in the generational patterns of early and late high school dropout. At the bivariate level, immigrant students have higher early dropout rates than U.S.-born students. Because this pattern disappears with the addition of family background variables to the logistic regression model, it is seemingly due to the more advantaged status of native students. This same set of factors appears to be responsible for raising the rate of late dropout among immigrant sophomores to that of their third generation peers; when these factors are controlled, first generation sophomores have lower odds of dropping out. Similarly, when past school performance is held constant, second generation sophomores are only half as likely to drop out as are higher generation students, while immigrant sophomores are only about one-quarter as likely to become dropouts.

These findings have potential ramifications for those working with Hispanic teens, particularly those who are immigrants and the children of immigrants. Apparently the primary reason for the high proportion of immigrant students who drop out early, and thus raise their odds of facing future economic hardship, is the disproportionately disadvantaged family backgrounds from which they hail. This is not a surprising result, given that immigrant Hispanics are known to be poorer and less educated than the general population and that past research that shows that economic disadvantage is related to poorer school outcomes for many groups of youth. However, this paper's separate foci on early and late dropout does provide some new and potentially useful information by addressing how the timing of dropout shaped the overall picture and by examining which factors are related to early and late dropout. The results suggest that efforts to counteract the negative effects of economic deprivation on school completion, particularly among foreign-born Hispanic students, must start early, that is, before high school. It appears that when such efforts are successful in preventing early dropout among immigrant

students much of the battle is already won, as immigrant students who make it through their sophomore year are no more likely to drop out than U.S.-born students. Further, if continued efforts to ameliorate the conditions of relative deprivation in which many immigrant youth live have some success, the rates of later dropout among these students will drop further.

This study contributes additional information to the overall topic of the experience of immigrants and their offspring from one perspective on a specific outcome. Taken together with the growing body of literature on immigration and acculturation, it contributes to answering the question of what aspects of the immigrant experience and acculturation process are important to the future success and well-being of immigrants and their descendants. Given the growing proportion of students in this country who are immigrants or the children of immigrants from countries with cultures, histories and levels of economic development very different from the U.S., this is a particularly timely and practical question.

Table 1. Bivariate Associations between Independent Variables and Ever, Early and Late Dropout

Variables	Percentage Who Drop Out		
	Ever Drop Out	Early Drop Out	Late Drop Out
<i>Generation</i>			
1st Generation	32.29	18.25***	15.48
2nd Generation	26.81	8.54	16.11
3rd Generation	26.53	7.71	17.82
<i>Hispanic subgroup</i>			
Mexican	31.15***	12.00*	19.04**
Cuban	26.57	5.85	15.79
Puerto Rican	29.39	7.29	18.30
'Other'	18.24	6.72	10.77
<i>Educational expectations</i>			
Expect to graduate from college	16.99***	4.16***	6.94***
Have lower expectations	40.20	16.94	24.64
<i>Maternal expectations</i>			
Expect R to graduate from college	19.53***	6.34***	15.24
Have lower expectations	38.95	15.19	17.21
<i>Parental education level</i>			
High school or more	16.96***	5.55***	8.49
Less than high school	30.97	18.93	14.85
<i>Sex</i>			
Male	28.33	18.55*	17.73
Female	27.22	11.57	15.72

Mean Values of Dropouts and Continuing Students

Variables	Ever Drop Out		Early Drop Out		Late Drop Out	
	Dropouts	Cont. Students	Dropouts	Cont. Students	Dropouts	Cont. Students
English proficiency	3.66***	3.77	3.41***	3.77	3.82	3.86
Family income (\$1000)	16.21**	28.82	13.90***	27.43	25.71***	34.00
GPA	2.26***	2.85	2.30***	2.77	1.94***	2.78
Number of siblings	3.46***	2.64	3.59***	2.78	3.28***	2.64

^aweighted *p≤.05 **p≤.01 ***p≤.001

Table 2. Generational Comparisons in 8th and 10th Grade

<u>8th Grade</u>	1st Generation	2nd Generation	3rd Generation
<i>Individual Factors</i>			
English proficiency (1-4)****	3.50	3.68	3.91
R expects to complete college (%)	52.76	53.10	54.50
<i>Family Background</i>			
Family income (\$1,000)****	18.97	25.20	30.53
Parent with H.S. education (%)***c	51.02	58.57	83.47
Number of siblings***b	3.24	2.87	2.68
Mother expects R to complete college (%)	53.82	59.67	57.36
<i>Past School Performance</i>			
GPA (6th-8th grade)*c	2.60	2.76	2.76
Ever held back a grade (%)**d	27.24	20.31	18.88
N	263	612	673
weighted percent	19.4	40.8	39.8

	<u>10th Grade</u>		
	1st Generation	2nd Generation	3rd Generation
<i>Individual Factors</i>			
English proficiency (1-4)****	3.76	3.84	3.95
R expects to complete college (%)**b	35.39	46.10	47.94
<i>Family Background</i>			
Family income (\$1,000)****	27.03	32.27	36.58
Parent with H.S. education (%)***c	56.334	62.83	85.74
Number of siblings***b	3.27	2.66	2.60
Mother expects R to complete college (%)	26.54	26.67	26.05
<i>Past School Performance</i>			
GPA (10th grade)	2.66	2.70	2.73
Ever held back a grade (%)**b	24.58	14.58	15.05
N	224	564	615
weighted percent	18.2	41.0	40.8

*p ≤ .05 ** p ≤ .01 *** p ≤ .001

^a all generations significantly different from each other^b 1st generation significantly different from 2nd and 3rd generation^c 3rd generation significantly different from 1st and 2nd generation^d 1st generation significantly different from 3rd generation

Table 3. Logistic Regression Models: Odds Ratios for Ever Dropping Out of High School

Variables	Model 1	Model 2	Model 3	Model 4
<i>Generation</i>				
1st Generation	1.28	0.83	0.86	0.84
2nd Generation	0.87	0.64**	0.62**	0.68*
3rd Generation (ref.)	1.00	1.00	1.00	1.00
<i>Individual Factors</i>				
English proficiency	0.79*		0.92	0.98
Student has high expectations	0.26***		0.40***	0.52***
Male	0.97		1.05	0.66*
<i>Family Background</i>				
Family income (\$1,000)		0.97***	0.97***	0.97***
High school-educated parent		0.79	0.81	0.77
Number of siblings		1.12**	1.11*	1.11*
Mother has high expectations		0.50***	0.76	1.01
Cuban		0.64	0.73	0.86
Puerto Rican		1.11	1.18	1.20
Other Hispanic		0.55**	0.57**	0.48**
Mexican (ref.)		1.00	1.00	1.00
<i>Past School Performance</i>				
GPA				0.42***
Held back a grade				2.09***
-2 log likelihood	123.23***	172.13***	205.99***	257.29***
df	5	9	12	14
N	1,548	1,460	1,460	1,285
*p ≤ .05	**p ≤ .01	***p ≤ .001		

Table 4. Logistic Regression Models: Odds Ratios for Dropping Out of High School Early

Variables	Model 1	Model 2	Model 3	Model 4
<i>Generation</i>				
1st Generation	2.00**	1.34	1.20	1.20
2nd Generation	0.85	0.69	0.57*	0.59
3rd Generation (ref.)	1.00	1.00	1.00	1.00
<i>Individual Factors</i>				
English proficiency	0.51***		0.58***	0.78
Student has high expectations	0.24***		0.32***	0.33***
Male	0.66*		0.74	0.33***
<i>Family Background</i>				
Family income (\$1,000)		0.96***	0.97***	0.97***
High school-educated parent		0.46***	0.49**	0.46**
Number of siblings		1.09	1.05	1.18*
Mother has high expectations		0.54**	0.88	1.41
Cuban		1.00	1.24	1.96
Puerto Rican		0.84	1.04	0.75
Other Hispanic		0.64	0.65	0.36
Mexican (ref.)		1.00	1.00	1.00
<i>Past School Performance</i>				
GPA				0.56***
Held back a grade				3.06***
-2 log likelihood	123.98***	118.25***	162.41***	191.27***
df	5	9	12	14
N	1,548	1,460	1,460	1,285
*p ≤ .05	**p ≤ .01	***p ≤ .001		

Table 5. Logistic Regression Models: Odds Ratios for Dropping Out of High School Late

Variables	Model 1	Model 2	Model 3	Model 4
<i>Generation</i>				
1st Generation	0.62	0.59*	0.53*	0.27**
2nd Generation	0.91	0.78	0.75	0.50*
3rd Generation (ref.)	1.00	1.00	1.00	1.00
<i>Individual Factors</i>				
English proficiency	0.81		1.05	0.43*
Student has high expectations	0.15***		0.18***	0.38**
Male	1.36		1.33	0.68
<i>Family Background</i>				
Family income (\$1,000)		0.97***	0.98**	0.98*
High school-educated parent		1.40	1.46	0.85
Number of siblings		1.20***	1.15*	0.91
Mother has high expectations		1.08	1.37	1.34
Cuban		0.59	0.83	1.27
Puerto Rican		0.97	0.99	1.68
Other Hispanic		0.48**	0.47**	0.40*
Mexican (ref.)		1.00	1.00	1.00
<i>Past School Performance</i>				
GPA				0.31***
Held back a grade				1.89*
-2 log likelihood	91.47***	58.95***	120.37***	152.19***
df	5	9	12	14
N	1,326	1,255	1,255	1,073
*p ≤ .05	**p ≤ .01	***p ≤ .001		

References

- Adams, D., B. Astone, E. Nunez-Wormack, and I. Smodlaka. (1994). Predicting the Academic Achievement of Puerto Rican and Mexican-American Ninth-grade Students. *The Urban Review*, 26(1):1-14.
- Blau, P. and O. D. Duncan (1967). *The American Occupational Structure*. New York: Academic Press.
- Buriel, R. and D. Cardoza (1988). Sociocultural Correlates of Achievement among Three Generations of Mexican American High School Seniors. *American Educational Research Journal*, 25(2):177-192.
- Chapa, J. and R.R. Valencia (1993). Latino Population Growth, Demographic Characteristics, and Educational Stagnation: An Examination of Recent Trends. *Hispanic Journal of Behavioral Sciences*, 15(2):165-187.
- Ekstrom, R.B., M.E. Goertz, J.M. Pollack, and D.A. Rock (1986). Who Drops Out of High School and Why? Findings from a National Study. *Teachers College Record*, 87(3):356-373.
- Featherman, D. and R. Houser (1978). *Opportunity and Change*. New York: Academic Press.
- Fernandez, R.M., R. Paulsen, and M. Hirano-Nakanishi (1989). Dropping Out among Hispanic Youth. *Social Science Research*, 18:21-52.
- Hirano-Nakanishi, M. (1986). The Extent and Relevance of Pre-high School Attrition and Delayed Education for Hispanics. *Hispanic Journal of Behavioral Sciences*, 8(1):61-75.
- Hirschman, C. M.G. and Wong (1986). The Extraordinary Educational Attainment of Asian-Americans: A Search for Historical Evidence and Explanations. *Social Forces*, 65(1):1-27.
- Kao, G. (1995). Asian Americans as Model Minorities? A Look at their Academic Performance. *American Journal of Education*, 103:121-159.
- Kao, G. and M. Tienda (1995). Optimism and Achievement: The Educational Performance of Immigrant Youth. *Social Science Quarterly*, 76(1):1-19.
- Kennedy, E. and H-S Park (1994). Home Language as a Predictor of Academic Achievement: A Comparative Study of Mexican- and Asian-American Youth. *The Journal of Research and Development in Education*, 27(3):188-194.
- Lee, E.S. and X. Rong (1988). The Educational and Economic Achievement of Asian-Americans. *The Elementary School Journal*, 88(5):545-560.
- National Center for Education Statistics (NCES) (1994). *National Education Longitudinal*

Study of 1988-Second Follow-up: Student Component Data File User's Manual. Washington, DC: U.S. Department of Education.

Ogbu, J.U. (1987). Variability in Minority School Performance: A Problem in Search of an Explanation. *Anthropology and Education Quarterly*, 18:312-334.

Portes, A. and D. MacLeod (1996). Educational Progress of Children of Immigrants: The Roles of Class, Ethnicity, and School Context. *Sociology of Education*, 69:255-275.

Rong, X.L. and L. Grant (1992). Ethnicity, Generation, and School Attainment of Asians, Hispanics, and non-Hispanic Whites. *The Sociological Quarterly*, 33(4):625-636.

Rumberger, R.W. (1995). Dropping Out of Middle School: A Multilevel Analysis of Students and Schools. *American Educational Research Journal*, 32(3):583-625.

Rumbaut, R.G. (1994). The Crucible Within: Ethnic Identity, Self-esteem, and Segmented Assimilation among Children of Immigrants. *International Migration Review*, 28(4):748-794.

Schneider, B. and Y. Lee (1990). A Model for Academic Success: The School and Home Environment of East Asian Students. *Anthropology & Education Quarterly*, 21:358-377.

Steinberg, L., P.L. Blinde and K.S. Chan (1984). Dropping Out among Language Minority Youth. *Review of Educational Research*, 54(1):113-132.

U.S. Bureau of the Census (1998). *The Hispanic Population of the United States: March 1996.* (Current Population Reports, Series P-20, No. 502). Washington, DC: U.S. Government Printing Office.

U.S. Bureau of the Census (1998). *The Foreign-born Population of the United States, 1998.* (Current Population Reports, Series P-20, No. 507). Washington, DC: U.S. Government Printing Office.

U.S. Bureau of the Census (1996). *Statistical Abstract of the United States: 1996.* (116th edition). Washington, DC: U.S. Government Printing Office.

Velez, W. (1989). High School Attrition among Hispanic and non-Hispanic White Youths. *Sociology of Education*, 62:119-133.

Warren, J.R. (1996). Educational Inequality among White and Mexican-origin Adolescents in the American Southwest: 1990. *Sociology of Education*, 69:142-158.

Western, B. and E. Kelly (1997). Comparing Demographic and Labor-market Characteristics of New Jersey and U.S. Foreign-born. In *Keys to Successful Immigration: Implications of the New Jersey Experience*, edited by T.S. Espenshade. Washington, DC: The Urban Institute

Press.

Wojtkiewicz, R.A. and K.M. Donato (1995). Hispanic Educational Attainment: The Effects of Family Background and Nativity. *Social Forces*, 74(2):559-574.