

# EARLY FACTORS LEADING TO COLLEGE GRADUATION FOR ASIANS AND NON-ASIANS IN THE UNITED STATES

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This article explores factors that lead Asian Americans, both as a group and as subgroups, to obtain a college degree in comparison to members of other racial/ethnic groups in the United States. Using data from the 2000 wave of the National Education Longitudinal Study, we find that the effects of race on educational attainment virtually disappear once individual and family factors are controlled. However, there is significant heterogeneity in college attainment among Asian Americans. In addition, we find that the effects of socioeconomic status, parental expectations, eighth-grade grade point average, and family structure are generally weaker for Asian Americans relative to non-Asians while parental immigrant status and standardized test scores are stronger. Asians appear to be “protected” from many of the usual factors that negatively affect educational outcomes while receiving an enhanced benefit from being of an immigrant family.

## INTRODUCTION

Asian Americans have been shown to be more economically and educationally successful than other racial groups in the United States (Kasindorf and Chin 1982; Ramirez 1986; Hurh and Kim 1989; Fong 1998). Data from the 2000 Census and other sources show that Asian Americans as a group have the highest median family incomes and some of the lowest poverty rates among any racial or ethnic group. High proportions owned homes in 2000, most lived in two-parent families, and relatively few, in comparison to national

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averages, were unemployed (Lai and Arguelles 2003). In addition to their seemingly successful economic and family profiles, much of the focus on Asian-American success is related to their high levels of educational attainment. According to the 2000 Census data, more than one-quarter of Asian Americans over age 25 had bachelor's degrees in comparison to 15.5 percent of U.S. residents overall. Similarly 17.4 percent of Asian Americans, compared with 8.9 percent of the U.S. population, had graduate or professional degrees (calculated from the U.S. Census Bureau, File 3). In comparison to African Americans, Hispanics, and other ethnic minority groups, Asian Americans have tended to keep pace with, and even bypass, White Americans in recent years in their educational and economic attainments.

The high levels of education among Asian Americans are often puzzling in light of the barriers many Asians faced historically when they arrived in the United States. Many Asians were prohibited from entering the United States during parts of the 19th and 20th centuries. Some were physically and verbally attacked when they did arrive, and many were subject to official barriers enacted by Congress, the states, and the courts (Hirschman and Wong 1986; Takaki 1989, 1993; Xie and Goyette 2003). The official situation changed with the passage of the 1965 Immigration Act, but Asians continued to suffer from many forms of discrimination (see Takaki 1989, 1993). Despite this history, many Asian Americans have succeeded educationally and otherwise in the United States, in part because of selective immigration from Asia that favored individuals with modest social class advantages who were poised to access and benefit from educational opportunities in the United States, especially in the second generation. Many Asian groups also developed strong ethnic economic enclaves that provided resources and opportunities for upward mobility, perhaps especially through the use of the educational system by subsequent generations (Bonacich and Modell 1980; Hirschman and Wong 1986; Sanchirico 1991).

The suggestion that Asian Americans *as a group* are successful, however, is problematic on several levels. First, by categorizing Asian Americans as a single group, one misses the significant variation that exists in educational and socioeconomic origins and outcomes within the Asian population in the United States. These differences are related to the length of time particular Asian-American groups have been in the United States, the conditions under which they arrived, and their socioeconomic diversity, among other factors (Miller 1995; Portes and Rumbaut 1996; Kao and Thompson 2003). The educational attainment of well-established Asian groups like Japanese, Chinese, and Asian Indians, for example, far surpasses that of groups like Laotians, Hmong, and Vietnamese who arrived more recently and as refugees (Lai and Arguelles 2003).

Second, Asian-American success is sometimes attributed to some *intrinsic* intelligence and hardworking grit. This assumption presumes that success is rooted primarily in these characteristics, but it also presumes that all Asian ethnic minorities are similar across these categories. Further, such an attribution presumes that the U.S. social structure provides ample opportunity for the success of all minorities, or at least those with the same "values" and attitudes presumed of Asian Americans (Sowell 1983; Steinberg 2001).

In this article we examine the educational success of Asians by comparing the effects of individual, family, and other factors on the likelihood of completing college for Asian

Americans and members of other racial/ethnic groups in the United States. We also examine differences between Asian-American subgroups to better understand the educational diversity among Asian Americans. With the earnings premiums associated with college graduation getting even larger over the last two decades (Gladieux 2004:18–19), a college degree increasingly provides its possessor with a negotiable credential, convertible in the labor market for economic capital and reflecting accumulated (and allowing for the augmentation of one's stock of) cultural and social capital. A focus on the determinants of college graduation, therefore, provides insight into a key moment in the larger educational attainment process, providing an important lever for understanding what differentiates Asian Americans from other groups and what explains variation within the Asian-Americans groups. We will focus especially on how immigrant status, parental educational orientation, socioeconomic status (SES), and early school achievement affect the likelihood of college graduation. While subsequent educational factors obviously affect this dependent variable (e.g., high school achievement and college selectivity), our attention to early family and school factors highlights a key part of the status attainment and transmission process.

## LITERATURE REVIEW

Researchers hypothesize that educational success is a function of inherited predispositions, SES, family structure, parental expectations, and residential context. More theoretically, researchers have explored the concepts of economic, cultural, and social capital to explain educational achievement (Bourdieu and Passeron 1977; Coleman 1988). A Bourdieuan perspective focuses on the ways that social power is reproduced through the resources generated by systems of capital. Bourdieu (1984) suggests that predispositions toward the world are shaped by one's "habitus," whereby family expectations and aspirations—rooted in one's class position—shape one's orientations toward the future. Coleman (1988), on the other hand, posits that human capital is a function of social capital, such that the strength of the physical and emotional parent–child relationship, as well as the density of interactions in a community, can predict educational outcomes.

Some researchers argue that Asian-American educational success is attributed to Asians being inherently more intelligent than other racial/ethnic groups, although sociologists generally dismiss these arguments because of their lack of attention to social context (Herrnstein and Murray 1994; Jencks and Phillips 1998). Other researchers focus on the socioeconomic position of Asians, compared to other ethnic groups, and explain their educational attainment as attributed to when they arrived in the United States; the fit between their skills and the needs of the local economy; and the development of robust community institutions and social capital (Sanchirico 1991). Family structure, including their parents' educational and socioeconomic profiles, combined with a tendency toward two-parent families, has also been a focus of research (Kao 1995; Blair and Qian 1998; Goyette 2000). Another group of scholars look to cultural factors to explain Asian Americans' educational attainments and success in the United States: for example, a particular work ethic, the extent to which parents value education, what parents teach their

children about success, and the values they impart to their children more generally (Kao 1995; Goyette and Yu 1999).

Recent empirical research that compared Asian Americans' educational attainments to those of other ethnic groups suggests that the most important predictors of children's educational expectations and eventual educational success are parents' education and family incomes.<sup>1</sup> In comparison to other racial and ethnic groups, some, although not all, Asian-American parents have very high educational levels themselves, which also explains some of their children's success (Fejgin 1995; Kao 1995; Kao, Tienda, and Schneider 1996; Blair and Qian 1998; Kao and Thompson 2003). One social-psychological mechanism through which this occurs is via the very high educational expectations that Asian-American parents have for their children, which often lead the children also to have high expectations for themselves (Kao 1995; Goyette and Yu 1999). In addition to their parents' educations and incomes, Asian-American children disproportionately have both parents within their households, which is also an important predictor of their educational attainments (Finn and Owings 1994; Blair and Qian 1998; Hirschman 2001).

Empirical evidence further demonstrates that a number of cultural factors influence the educational success of Asian Americans (Kao and Thompson 2003). Ogbu (1978, 1991) argues that *immigrant* minorities, such as Asian Americans, operating with a frame of reference that focuses on a perceived open opportunity structure in the United States compared to a limited one in their country of origin, exhibit particular kinds of academic behaviors and achievements that lead to success. On the other hand, *involuntary* minorities, such as African Americans and some Hispanics, in the context of a perceived rigid job ceiling, resist performing well in school, which is seen as "acting white" (Ogbu 1978, 1991; Matute-Bianchi 1986). Stacey Lee has, indeed, shown that *some* Asian students do opt to "act white" (Lee 1994). Other researchers argue that Asian Americans are more likely than whites to believe education is vital to their socioeconomic success, a belief which, in combination with anticipated discrimination, leads Asians to perform well in school (Sue and Okazaki 1990).<sup>2</sup> In part, this may stem from high parental expectations of educational success, a characteristic that seems to transcend socioeconomic class (Louie 2004).

With respect to parent-child relationships, researchers use a variety of conceptualizations and explore the impacts of these relationships. For example, some argue that Asian-American school success stems from the fact that Asian parents tend to have a high degree of control over their children, that Asian youth feel more responsibility to their parents, and that Asian-American children are taught that it is their responsibility to do well in school (Schneider and Lee 1990; Sue and Okazaki 1990; Kao 1995; Kao et al. 1996; Blair and Qian 1998). The findings about the impact of parent-child relationships on Asian-American educational achievement, however, are neither as consistent nor as predictable as for non-Asians. Dornbusch et al. (1987) show that Asian-American adolescents tend to succeed in school *despite* the types of authoritarian parenting that tends to inhibit the success of adolescents of other racial/ethnic backgrounds. Similarly, Kim and Goto (2000) find that Asian-American adolescents are far less likely to engage in deviant behavior in

the face of low parental support relative to their non-Asian counterparts. This may be explained in part by the finding that Asian-American adolescents report weaker parental bonds than their non-Asian peers (Jang 2002).

Labeled by Kao and Tienda (1995) the “immigrant optimism hypothesis,” researchers also find that immigrant youth, many of whom are Asian, are more likely than native-born students to believe in the value of education for future success and to do better in school (Rong and Grant 1992; Kao and Tienda 1995; Kao et al. 1996; Fuligni 1997; Hao and Bonstead-Bruns 1998). This is, in many ways, the flip side of Ogbu’s involuntary minority/job ceiling hypothesis that leads to *resistance* to education. Here, we see, as a Bourdieuan perspective would predict, that equipped with a habitus that perceives an open opportunity structure and predisposes the student toward school culture and success, students perform well; when the social structure is perceived to impose a job ceiling, students resist.<sup>3</sup>

Although Asian Americans, overall, achieve higher levels of education than their White, Hispanic, and African-American counterparts, there is considerable diversity in educational attainment within the Asian-American category (Miller 1995; Kao and Thompson 2003). The small number of Asian Americans in many nationally representative data sets makes this diversity difficult to measure precisely and analyze, allowing it often to be overlooked. To the extent that we are able (given our own data limitations), we examine variation in college graduation among Asian-American students with different national origins. Examining the factors that lead Asian Americans as a group as well as various Asian national groups to obtain different levels of education permits a more nuanced explanation of Asians’ high levels of educational attainment than has been possible in some previous examinations. Toward this end, we present further the results on the different characteristics of Asian national groups and the effects of these differences on the likelihood of college graduation.

Studies of Asian Americans based on adults often include Asians educated both in Asia and in the United States, preventing researchers from teasing out relevant factors because the countries in which people received their educations and the timing of that education are often not known. National longitudinal surveys of students in U.S. schools, like *High School and Beyond* and the *National Education Longitudinal Study* (NELS) (which we use here), avoid this problem.

## HYPOTHESES

Our goal, then, is to explore reasons why Asian Americans are more likely to attain a college degree relative to other racial/ethnic groups. To do so, we build on existing research about the factors that influence Asian-American educational attainment by examining four hypotheses that attempt to explain variation in the likelihood of graduating from college. We examine the differences between Asian Americans and members of other racial/ethnic groups in the United States, as well as differences among Asian groups, and use variables that represent individual and family factors in multiple regression models to examine the effects of being Asian. Our strategy is to enter racial/ethnic variables in our

first models and to see how the effects of race/ethnicity change as we add additional variables to our models.

We hypothesize that the difference in college attainment between Asian and non-Asian groups is a function of the following four factors.

1. *Immigrant status*: We hypothesize that having at least one immigrant parent will positively affect educational outcomes. Because Asian Americans are more likely to have immigrant parents, the effects of being Asian will decrease once this variable is introduced. Support for this hypothesis is consistent with, but does not necessarily confirm, the “immigrant optimism hypothesis.” There may be other reasons why parental immigrant status would positively influence educational attainment.

2. *Parental rules, involvement, and expectations*: We hypothesize that parenting behavior will affect educational outcomes. We examine this hypothesis by testing the effects of three variables: (1) the level of parental rules for watching television, doing homework, and maintaining grade point averages (GPAs); (2) the level of parental involvement in the child’s school (such as the Parent–Teacher Association [PTA]); and (3) the level of educational expectations of the parents for the child. Because Asian-American students are often subject to a higher degree of parental rules, involvement, and expectations, the effects of being Asian will decrease once these variables are introduced. However, it has also been hypothesized that Asian adolescents have weaker parental bonds, making Asian adolescents less influenced by parents relative to other groups.

3. *Family structure*: We hypothesize that growing up in two-parent families will have a positive effect on the likelihood of college completion. Because Asian Americans are more likely to grow up in a two-parent family, the effects of being Asian will decrease once this variable is introduced.

4. *SES*: We hypothesize that SES will have a positive effect on the likelihood of college completion. Because Asian-American families have higher levels of SES, the effects of being Asian will decrease once this variable is introduced.

After evaluating these hypotheses, we then explore the direct and indirect effects of quasi-meritocratic measures of educational success in eighth grade (GPA and standardized test score) on the likelihood of receiving a college degree. Although these measures are, obviously, related to the background variables, they are often highlighted in analyses of educational attainment and are therefore included here as controls. We present a final model that controls for urbanicity and region. To explore variation *within* the Asian-American category, we conduct a variety of analyses using the same models with different racial/ethnic comparisons.

## DATA AND METHODS

### Sample

We use data from the NELS, a nationally representative sample of eighth graders in 1988, when the survey was first administered to 26,435 students from 1,052 participating schools. These eighth graders were followed and surveyed again in 1990, 1992, 1994, and most recently in 2000, eight years after many of them graduated from high school.

NELS is a particularly valuable data set to use when studying Asian Americans because the first wave oversampled Asian Americans and the 2000 wave included 640 Asians from a range of different Asian backgrounds. Within the aggregate of 640 Asians were 140 Chinese, 36 Japanese, 75 Koreans, 111 Filipinos, 99 Southeast Asians (Vietnamese, Laotian, Cambodian, Thai, etc.), 57 South Asians (Asian Indian, Pakistani, Bangladeshi, Sri Lankan, etc.), and 123 other Asians (Pacific Islander, Iranian, Afghani, Turkish, Iraqi, Israeli, Lebanese, etc.) (see Goyette and Xie 1999 for categorizing Asians into these groups). Our overall sample also included 8,854 non-Asians, including 6,633 Whites, 782 African Americans, 1,066 Hispanics, and 343 American Indians. Our total sample includes 9,494 respondents. Among other adjustments, multistage sample weights provided with the NELS by the National Center for Education Statistics (U.S. Department of Education, 2002) take into account attrition between survey waves and allow us to generalize our results to the U.S. population.

### Dependent Variable

We use measures of educational attainment from the 2000 NELS data that include information about the level of education individuals completed by 2000, when sample members were approximately 26 years old. The NELS uses high school transcript and other information to determine whether the individual has completed high school or has received a general equivalency diploma (GED). A second variable in the NELS asks respondents to indicate the highest level of postsecondary education they have received. Respondents who cannot provide degree types for any degree that they have received are assigned missing values for this variable. We use this combination of measures to determine individuals' highest levels of education, and then use this information to construct our dependent variable, getting at least a four-year college degree.<sup>4</sup>

### Independent Variables

For the independent variables, we rely on the 1988 wave for demographic data, measures of family background, and academic achievement from a student survey, standardized tests completed by the students, and school-provided information as described later and summarized in Table 2.

We constructed an index for test scores combining standardized test scores for reading, math, science, and history/geography that the students completed in eighth grade.<sup>5</sup> We imputed scores for eighth graders who had missing values for their standardized test scores ( $N = 340$ ) using ordinary least squares (OLS) regression analysis, and included variables such as race, income, parents' education, SES (as provided by the NELS, SES is an index using mother's and father's educational attainment, family income, and mother's and father's occupational status),<sup>6</sup> and GPA in our regressions. In our analyses of college completion, we included a dummy indicator for those whose scores were imputed. We found that our central results changed little when we used or did not use individuals with imputed scores in our analyses.

We also constructed, using principal components analysis, indices for two other variables, measuring parental control and parental involvement in school affairs. The first of

these indices is what we call *rules of the house (Rules)*, which uses variables for whether there are rules about the amount of television that students can watch, rules about the amount of homework that students must do, and rules about keeping up a particular GPA. Our other index variable, for *parental involvement in school affairs (Involved)*, consists of measures of whether the parent is a member of the PTA, goes to PTA meetings, takes part in parent–teacher organizing activities, acts as a volunteer at the school, or belongs to any other school-related organization. With both of these indices, each of our original variables loaded highly onto the first principal component, which we used for our newly created index variable.<sup>7</sup>

Our demographic and family variables included gender, race, living in a two-parent family, whether the family moved before the survey, and number of siblings. Researchers have found that moving has detrimental effects on educational outcomes (Pribesh and Downey 1999; Vartanian and Gleason 1999).

Ultimately, our variable for nativity examines only whether either parent was from abroad; however, we examined nativity in a number of different ways, including the ability of the parents and the child to speak English, and whether the child or the parent was a relatively new immigrant or had been in the United States for a relatively long period. The results of these different approaches proved to be very similar and these variables tended to be highly collinear. We therefore used a single variable, whether either parent was an immigrant, to explore the effect of immigrant status.

Our final models control for other potential effects on college completion, such as area of residence (urban, suburban, and rural area), and region of the country. While we could have included these controls in our first models, our goal was to determine whether the effects of being Asian changed with the introduction of key variables without these controls.

### Analytic Approach

To help situate the larger issue of race/ethnicity and educational attainment, we first present descriptive results for the percentage of each racial group attaining a particular educational level in Table 1. We present these results for the different levels of education, including being a high school dropout, having at least some college education, having at least a college degree, and receiving a graduate or professional degree. We next present descriptive information, primarily demographic, socioeconomic, eighth-grade performance, and parental rules and expectations for the five general racial/ethnic groups (Table 2) and for the Asian subgroups (Table 3). These data provide an eighth-grade snapshot of how Asians and Asian subgroups, Whites, Hispanics, African Americans, and Native Americans differ along key variables. We then test for differences in these mean values to determine whether, at an aggregate level, Asian and Asian subgroups differ from other racial/ethnic groups.

To examine analytically whether and how Asians as a group differ from other groups in their processes of educational attainment, we conduct multiple logistic regression analyses, regressing college degree attainment on a set of demographic, socioeconomic, school-related, and other variables. We first run six regressions for our full sample

TABLE 1. Level of Education, by Race/Ethnicity, in Percentages

	High school dropout	At least some college	At least a college degree	At least a graduate degree	N
Asians	5.73 <sup>c</sup>	87.74 <sup>acd</sup>	48.28 <sup>acd</sup>	7.50 <sup>acd</sup>	640
Hispanics	12.86 <sup>abd</sup>	73.81 <sup>ab</sup>	16.78 <sup>ab</sup>	1.54 <sup>ab</sup>	1,066
African Americans	8.15 <sup>ac</sup>	72.77 <sup>ab</sup>	19.88 <sup>ab</sup>	1.46 <sup>ab</sup>	782
Whites	5.83 <sup>cd</sup>	79.60 <sup>bcd</sup>	36.29 <sup>bcd</sup>	4.35 <sup>bcd</sup>	6,633
American Indians	9.59 <sup>ab</sup>	67.29 <sup>abcd</sup>	13.56 <sup>abd</sup>	0.36 <sup>ab</sup>	343
All	6.90	78.08	32.14	3.72	9,494
By Asian Group					
Japanese	6.72	91.94 <sup>k</sup>	35.29 <sup>fgj</sup>	3.86 <sup>j</sup>	36
Korean	0	92.61 <sup>k</sup>	60.64 <sup>ehjk</sup>	7.36 <sup>j</sup>	75
Chinese	1.71 <sup>i</sup>	98.20 <sup>k</sup>	63.30 <sup>ehjk</sup>	8.19 <sup>j</sup>	139
Filipino	0.75 <sup>ik</sup>	96.08 <sup>k</sup>	37.02 <sup>fgij</sup>	5.10 <sup>j</sup>	111
Southeast Asian	7.63 <sup>h</sup>	93.04 <sup>k</sup>	54.48 <sup>hjk</sup>	8.47 <sup>j</sup>	99
South Asian	0	95.24 <sup>k</sup>	83.97 <sup>efghik</sup>	21.15 <sup>efghik</sup>	57
Other Asian	13.08 <sup>gh</sup>	71.48 <sup>efghij</sup>	30.59 <sup>fgij</sup>	3.98 <sup>j</sup>	123

<sup>a</sup>differences with Whites significant at the .05 level for a two-tailed test.

<sup>b</sup>differences with Asians significant at the .05 level for a two-tailed test.

<sup>c</sup>differences with Hispanics significant at the .05 level for a two-tailed test.

<sup>d</sup>differences with African Americans significant at the .05 level for a two-tailed test.

<sup>e</sup>differences with Japanese significant at the .05 level for a two-tailed test.

<sup>f</sup>differences with Koreans significant at the .05 level for a two-tailed test.

<sup>g</sup>differences with Chinese significant at the .05 level for a two-tailed test.

<sup>h</sup>differences with Filipinos significant at the .05 level for a two-tailed test.

<sup>i</sup>differences with Southeast Asian significant at the .05 level for a two-tailed test.

<sup>j</sup>differences with South Asian significant at the .05 level for a two-tailed test.

<sup>k</sup>differences with Other Asian significant at the .05 level for a two-tailed test.

Notes: The NELS defines the different Asian groups by the categories given above. Those eighth-grade students who answered positively to being Asian were then asked, "Which of these best categorizes your background?" Chinese, Filipino, Japanese, Korean, Southeast Asian (Vietnamese, Laotian, Cambodian, Thai, etc.), Pacific Islander (Samoan, Guamanian, etc.), or South Asian (Asian Indian, Pakistani, Bangladeshi, Sri Lankan, etc.). We then put West Asian (Iranian, Afghan, Turkish, etc.), Middle Eastern (Iraqi, Israeli, Lebanese, etc.), and Other Asian into a single group. NELS, National Education Longitudinal Study.

relating to our hypotheses outlined earlier. We use these six models to determine if and when the effects of being Asian or in one of the Asian groups change. Thus, we examine whether differences exist between Asians and Whites before and after we add variables, and also do this with controls for different Asian groups to determine whether statistical differences exist between these different Asian groups and Whites. These full sample regressions have 9,494 observations and are presented in Tables 4 and 5. In Table 4, we examine how each of the non-Asian groups differs from our excluded Asian category, while in Table 5, when we examine differences among Asian subgroups, we used Whites

TABLE 2. Means and Standard Deviations by Racial/Ethnic Group

	Full sample Mean (SD)	Asian sample Mean (SD)	White sample Mean (SD)	African American Mean (SD)	Hispanic sample Mean (SD)	American Indian Mean (SD)
Two-parent home	.684 (.465)	.868 (.339) <sup>acd</sup>	.707 (.455) <sup>bd</sup>	.448 (.498) <sup>abc</sup>	.711 (.453) <sup>bd</sup>	.664 (.473) <sup>bd</sup>
Moved	.268 (.443)	.282 (.450)	.265 (.441)	.255 (.436)	.285 (.452)	.302 (.460)
SES variables						
SES	-.043 (.763)	.234 (.794) <sup>acd</sup>	.080 (.717) <sup>bcd</sup>	-.409 (.743) <sup>abc</sup>	-.567 (.771) <sup>abcd</sup>	-.275 (.671) <sup>abcd</sup>
Father college	.265 (.441)	.416 (.493) <sup>acd</sup>	.304 (.460) <sup>bcd</sup>	.129 (.335) <sup>ab</sup>	.135 (.342) <sup>ab</sup>	.117 (.321) <sup>ab</sup>
Mother college	.220 (.414)	.325 (.469) <sup>acd</sup>	.247 (.431) <sup>bcd</sup>	.146 (.353) <sup>abc</sup>	.094 (.291) <sup>abd</sup>	.137 (.345) <sup>abc</sup>
By income/1,000	39.791 (35.742)	49.695 (44.934) <sup>acd</sup>	43.505 (36.855) <sup>bcd</sup>	26.135 (26.093) <sup>ab</sup>	26.091 (25.431) <sup>ab</sup>	33.605 (31.587) <sup>abcd</sup>
Profession father	.286 (.452)	.334 (.472) <sup>cd</sup>	.312 (.463) <sup>cd</sup>	.213 (.410) <sup>abc</sup>	.175 (.380) <sup>abd</sup>	.251 (.435) <sup>abc</sup>
Profession mother	.243 (.429)	.317 (.466) <sup>cd</sup>	.283 (.450) <sup>cd</sup>	.086 (.280) <sup>abc</sup>	.114 (.317) <sup>abd</sup>	.186 (.390) <sup>abcd</sup>
Immigrant parent	.127 (.333)	.764 (.425) <sup>acd</sup>	.053 (.225) <sup>bc</sup>	.062 (.242) <sup>bc</sup>	.571 (.495) <sup>abd</sup>	.042 (.201) <sup>bc</sup>
Eighth-grade student performance and effort						
GPA eighth grade	2.938 (.755)	3.213 (.715) <sup>acd</sup>	2.990 (.753) <sup>bcd</sup>	2.755 (.720) <sup>ab</sup>	2.768 (.731) <sup>ab</sup>	2.671 (.751) <sup>abc</sup>
Standardized test scores, index	-.116 (1.743)	.237 (1.828) <sup>cd</sup>	.177 (1.707) <sup>cd</sup>	-1.101 (1.441) <sup>ab</sup>	-1.011 (1.538) <sup>ab</sup>	-.927 (1.561) <sup>ab</sup>
Hours homework/week	5.991 (5.117)	6.446 (5.513) <sup>d</sup>	6.079 (5.120) <sup>d</sup>	5.802 (4.920)	5.399 (4.815) <sup>ab</sup>	5.838 (5.746)
Parental household rules, participation in school, and educational expectation						
Rules in house, index (higher values = more)	.032 (2.352)	.134 (2.468) <sup>d</sup>	-.048 (2.040) <sup>cd</sup>	.463 (3.674) <sup>abc</sup>	.230 (2.800) <sup>ad</sup>	-.221 (1.620) <sup>bcd</sup>
Involved, index (higher values = more)	.004 (1.894)	-.041 (1.772) <sup>cd</sup>	-.116 (1.633) <sup>cd</sup>	.618 (3.033) <sup>abc</sup>	.236 (2.033) <sup>abd</sup>	.022 (1.741) <sup>d</sup>
Expected years of education	15.469 (2.326)	16.771 (2.518) <sup>acd</sup>	15.442 (2.244) <sup>bcd</sup>	15.769 (2.478) <sup>abc</sup>	15.149 (2.535) <sup>abd</sup>	14.875 (2.214) <sup>abcd</sup>
N	9,494	640	6,633	782	1,066	343

<sup>a</sup>differences with Whites significant at the .05 level for a two-tailed test.

<sup>b</sup>differences with Asians significant at the .05 level for a two-tailed test.

<sup>c</sup>differences with Hispanics significant at the .05 level for a two-tailed test.

<sup>d</sup>differences with African Americans significant at the .05 level for a two-tailed test.

SES, socioeconomic status; GPA, grade point average.

TABLE 3. Means and Standard Deviations by Asian Subgroups

	Japanese Mean (SD)	Korean Mean (SD)	Chinese Mean (SD)	Filipino Mean (SD)	Southeast Asian Mean (SD)	South Asian Mean (SD)	Other Asian Mean (SD)
Two-parent home	.853 (.359)	.851 (.358) <sup>c</sup>	.841 (.367)	.805 (.398) <sup>eg</sup>	.800 (.402) <sup>fg</sup>	.954 (.210) <sup>hde</sup>	.910 (.287) <sup>de</sup>
Moved	.101 (.306) <sup>cdef</sup>	.188 (.394) <sup>c</sup>	.350 (.479) <sup>eg</sup>	.342 (.477) <sup>eg</sup>	.368 (.485) <sup>eg</sup>	.395 (.493) <sup>ahg</sup>	.197 (.400) <sup>cdef</sup>
Immigrant parent	.500 (.507) <sup>bcddef</sup>	.903 (.299) <sup>eg</sup>	.899 (.303) <sup>eg</sup>	.854 (.355) <sup>defg</sup>	.994 (.077) <sup>adg</sup>	.952 (.215) <sup>adg</sup>	.499 (.502) <sup>bcddef</sup>
SES variables							
SES	.454 (.584) <sup>eg</sup>	.267 (.750) <sup>ef</sup>	.149 (.812) <sup>def</sup>	.439 (.566) <sup>cefg</sup>	-.443 (.859) <sup>abcdfig</sup>	.741 (.721) <sup>bodeg</sup>	.166 (.754) <sup>adef</sup>
By income/1,000	56.5 (36.7) <sup>c</sup>	46.9 (40.0) <sup>ef</sup>	46.8 (48.9) <sup>ef</sup>	50.9 (34.0) <sup>ef</sup>	33.0 (43.7) <sup>abcdfig</sup>	71.3 (54.6) <sup>bodeg</sup>	47.7 (44.0) <sup>ef</sup>
Father college	.630 (.490) <sup>cdleg</sup>	.424 (.497) <sup>ef</sup>	.404 (.492) <sup>af</sup>	.413 (.495) <sup>af</sup>	.285 (.454) <sup>ahf</sup>	.668 (.475) <sup>bodeg</sup>	.335 (.474) <sup>af</sup>
Mother college	.460 (.505) <sup>eg</sup>	.322 (.470) <sup>e</sup>	.300 (.460) <sup>ef</sup>	.430 (.497) <sup>eg</sup>	.145 (.354) <sup>abcdaf</sup>	.513 (.504) <sup>ceg</sup>	.251 (.436) <sup>ae</sup>
Profession father	.323 (.474)	.310 (.465)	.438 (.498) <sup>eg</sup>	.409 (.494) <sup>eg</sup>	.196 (.399) <sup>cdf</sup>	.456 (.502) <sup>eg</sup>	.239 (.428) <sup>cdf</sup>
Profession mother	.492 (.507) <sup>cdle</sup>	.284 (.454) <sup>ef</sup>	.195 (.398) <sup>hfg</sup>	.260 (.441) <sup>def</sup>	.123 (.330) <sup>abcdfg</sup>	.589 (.496) <sup>bodeg</sup>	.360 (.482) <sup>def</sup>
Eighth-grade student performance							
GPA eighth grade	2.813 (.850) <sup>bcddef</sup>	3.481 (.558) <sup>adg</sup>	3.417 (.642) <sup>adg</sup>	3.169 (.746) <sup>abcdg</sup>	3.298 (.636) <sup>adg</sup>	3.630 (.456) <sup>adeg</sup>	2.931 (.714) <sup>bcddef</sup>
Standardized test scores, index	.169 (1.274) <sup>bc</sup>	.928 (1.690) <sup>adeg</sup>	.494 (1.896) <sup>g</sup>	.358 (1.698) <sup>hfg</sup>	.170 (1.648) <sup>hfg</sup>	.960 (1.642) <sup>adeg</sup>	-.421 (1.883) <sup>bcddef</sup>
Hours homework/week	5.734 (4.323) <sup>b</sup>	8.621 (7.368) <sup>acd</sup>	6.815 (5.826) <sup>b</sup>	5.736 (4.947) <sup>bf</sup>	7.234 (7.010) <sup>g</sup>	7.746 (4.953) <sup>hfg</sup>	5.538 (4.356) <sup>bef</sup>
Parental household rules, participation in school, and educational expectation							
Rules in house, index (higher values = more)	-.141 (.966)	.168 (2.614)	.521 (2.699) <sup>df</sup>	-.140 (1.347) <sup>c</sup>	.285 (2.448)	-.461 (.591) <sup>eg</sup>	.206 (3.149) <sup>f</sup>
Involved, index (higher values = more)	-.274 (1.147) <sup>c</sup>	.093 (1.492) <sup>g</sup>	.115 (1.698) <sup>g</sup>	.305 (2.660) <sup>g</sup>	.528 (2.463) <sup>hfg</sup>	-.192 (1.484) <sup>c</sup>	-.468 (.788) <sup>bcdle</sup>
Expected years of education	16.84 (2.33) <sup>fg</sup>	17.38 (2.30) <sup>dg</sup>	17.33 (2.18) <sup>dg</sup>	16.35 (2.25) <sup>bdef</sup>	17.43 (2.66) <sup>hfg</sup>	18.05 (2.66) <sup>adg</sup>	15.82 (2.46) <sup>abcdcf</sup>
N	36	75	140	111	99	57	123

<sup>a</sup>differences with Japanese significant at the .05 level for a two-tailed test.  
<sup>b</sup>differences with Korean significant at the .05 level for a two-tailed test.  
<sup>c</sup>differences with Chinese significant at the .05 level for a two-tailed test.  
<sup>d</sup>differences with Filipino significant at the .05 level for a two-tailed test.  
<sup>e</sup>differences with Southeast Asian significant at the .05 level for a two-tailed test.  
<sup>f</sup>differences with South Asian significant at the .05 level for a two-tailed test.  
<sup>g</sup>differences with All Other Asian significant at the .05 level for a two-tailed test.  
<sup>h</sup>SES, socioeconomic status; GPA, grade point average.

TABLE 4. Logistic Regression for the Likelihood of Completing College (with Asian Americans as a Single Category)

Variable	Model 1 Coefficient (SE)	Model 2 Coefficient (SE)	Model 3 Coefficient (SE)	Model 4 Coefficient (SE)	Model 5 Coefficient (SE)	Model 6 Coefficient (SE)
Intercept	-.07 (.11)	-.53 (.13)***	-6.94 (.24)***	-5.68 (.28)***	-6.90 (.33)***	-7.07 (.34)***
Black	-1.32 (.14)***	-.91 (.15)***	-.84 (.17)***	-.08 (.18)	.39 (.19)*	.35 (.20) <sup>†</sup>
Hispanic	-1.53 (.14)***	-1.44 (.14)***	-1.08 (.16)***	-.38 (.17)*	-.15 (.19)	-.14 (.19)
American Indian	-1.78 (.19)***	-1.35 (.20)***	-.98 (.21)***	-.66 (.22)**	-.31 (.24)	-.36 (.24)
White	-.49 (.12)***	-.07 (.13)	.24 (.15) <sup>†</sup>	.30 (.16) <sup>†</sup>	.24 (.17)	.12 (.17)
Asian	—	—	—	—	—	—
Immigrant parent	—	.60 (.08)***	.42 (.09)***	.54 (.10)***	.62 (.10)***	.58 (.11)***
Rules	—	—	.01 (.01)	.00 (.01)	.02 (.01)	.02 (.01) <sup>†</sup>
Involved	—	—	-.17 (.02)***	-.06 (.02)***	-.06 (.02)**	-.05 (.02)**
Expectations	—	—	.39 (.01)***	.27 (.01)***	.13 (.01)***	.14 (.01)***
Female	—	—	—	.39 (.05)***	.29 (.06)***	.29 (.06)***
Siblings	—	—	—	-.15 (.02)***	-.16 (.02)***	-.16 (.02)***
Two-parent home	—	—	—	.66 (.06)***	.51 (.07)***	.48 (.07)***
Moved	—	—	—	-.42 (.06)***	-.33 (.07)***	-.30 (.07)***
SES	—	—	—	1.16 (.05)***	1.04 (.05)***	.06 (.05)***
GPA eighth grade	—	—	—	—	1.13 (.05)***	.16 (.05)***
Standardized test scores	—	—	—	—	-.24 (.02)***	.22 (.02)***
Pseudo R <sup>2</sup>	2.90	4.10	15.67	25.86	34.45	34.93
-2 Log likelihood	11,576.97	11,525.92	10,054.62	8,847.96	7,817.95	7,758.42

\*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ , <sup>†</sup> $p < .10$ .

Notes: N = 9,494. In model 5, a dummy variable for those whose standardized scores are imputed is included but not presented in the table. In model 6, variables for region of the country and urban/rural/suburban residence are included but not presented. SES, socioeconomic status; GPA, grade point average; SE, standard error.

TABLE 5. Logistic Regression for the Likelihood of Completing College (with Asian Americans as Ethnic Subgroups)

Variable	Model 1 Coefficient (SE)	Model 2 Coefficient (SE)	Model 3 Coefficient (SE)	Model 4 Coefficient (SE)	Model 5 Coefficient (SE)	Model 6 Coefficient (SE)
Intercept	-.57 (.02)***	-.66 (.03)***	-6.67 (.19)***	-5.30 (.22)***	-6.57 (.28)***	-6.86 (.29)***
Black	-.83 (.08)***	-.75 (.08)***	-1.07 (.09)***	-.35 (.10)***	.17 (.11)	.24 (.11)*
Hispanic	-1.03 (.09)***	-1.28 (.11)***	-1.27 (.11)***	-.60 (.12)***	-.33 (.13)**	-.21 (.13)†
American Indian	-1.28 (.15)***	-1.26 (.15)***	-1.22 (.16)***	-.94 (.17)***	-.53 (.18)**	-.47 (.18)**
Japanese	-.04 (.54)	-.31 (.55)	-.74 (.59)	-1.19 (.61)*	-.77 (.69)	-.58 (.70)
Chinese	1.07 (.28)***	.70 (.29)*	.26 (.31)	.68 (.34)*	.54 (.37)	.67 (.37)†
Korean	1.16 (.40)**	.79 (.41)†	.36 (.45)	.39 (.48)	.07 (.50)	.10 (.51)
Filipino	.04 (.29)	-.34 (.30)	-.51 (.33)	-.94 (.34)**	-1.00 (.37)**	-.82 (.37)*
Southeast Asian	.75 (.34)*	.39 (.36)	-.12 (.40)	1.03 (.43)*	.92 (.44)*	1.14 (.45)**
South Asian	2.22 (.47)***	1.79 (.48)***	1.41 (.55)**	1.08 (.64)†	.82 (.69)	.72 (.69)
Other Asian	-.04 (.39)	-.20 (.39)	-.26 (.43)	-.23 (.47)	-.34 (.50)	-.23 (.50)
White	—	—	—	—	—	—
Immigrant parent	—	.51 (.08)***	.32 (.09)***	.42 (.10)***	.54 (.10)***	.50 (.11)***
Rules	—	—	.01 (.01)	.00 (.01)	.02 (.01)	.02 (.01)†
Involved	—	—	-.17 (.02)***	-.06 (.02)***	-.05 (.02)**	-.05 (.02)**
Expectations	—	—	.39 (.01)***	.27 (.01)***	.13 (.01)***	.13 (.01)***
Female	—	—	.40 (.05)***	.40 (.05)***	.30 (.06)***	.29 (.06)***
Siblings	—	—	-.15 (.02)***	-.15 (.02)***	-.16 (.02)***	-.17 (.02)***
Two-parent home	—	—	.66 (.06)***	.66 (.06)***	.51 (.07)***	.47 (.07)***
Moved	—	—	-.44 (.06)***	-.44 (.06)***	-.34 (.07)***	-.31 (.07)***
SES	—	—	1.18 (.05)***	1.18 (.05)***	1.06 (.05)***	1.07 (.05)***
GPA eighth grade	—	—	—	—	1.12 (.05)***	1.15 (.05)***
Standardized test score	—	—	—	—	.24 (.02)***	.23 (.02)***
Pseudo R <sup>2</sup>	3.28	4.39	15.84	26.09	34.61	35.10
-2 Log likelihood	11,533.92	11,496.87	10,042.72	8,824.98	7,801.23	7,741.28

\*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ , † $p < .10$ .

Notes: N = 9,494. In model 5, a dummy variable for those whose standardized scores are imputed is included but not presented in the table. In model 6, variables for region of the country and urban/rural/suburban residence are included but not presented. SES, socioeconomic status; GPA, grade point average; SE, standard error.

as our excluded group because Asians are hypothesized to attain similar levels of education relative to Whites.

We then run similar sets of regressions for our samples of Asians and non-Asians. Here, we explore whether any of the independent variables have different effects for Asians than for other racial/ethnic groups and describe the variation among the different Asian ethnic groups. Thus, we examine Asians in a single sample, with a sample size of 640 and present these results in Table 6 and non-Asian groups in another sample, with a sample size of 8,854 and present these results in Table 7. In Table 6, we use Chinese Americans as our excluded race/ethnicity category because Chinese Americans have attained high levels of education among Asian groups and because the sample size of Chinese Americans is the largest among Asian Americans ( $N = 139$ ). These two tables indicate the differential effects of our independent variables on college graduation among the Asians and between the Asian and non-Asian groups. We further examine the different effects of our independent variables on Asians and non-Asians by using the full sample ( $N = 9,494$ ) and by exploring interactions between the independent variables and our Asian status variable, and also by examining nonlinearities in the effects of some of our important independent variables. Interaction and nonlinear effects are reported in Appendix Table 4.

For ease of interpretability, we also present odds ratios for some of our interesting results ( $e^b$ ) as well as probability estimates for the likelihood of being a college graduate. The probability estimates are determined by using the formula for the logistic model  $e^{xb}/(1 + e^{xb})$ , and we use mean values for all independent/control variables except those we are examining. To interpret more concretely the effects of some of our interval scale variables (such as SES), we generally examine them at one standard deviation above and below the mean for the full sample (as opposed to the mean for the Asian or non-Asian samples). We use the coefficient estimates from the separate Asian and non-Asian models to determine the probability of college graduation for the Asian and non-Asian groups, respectively.

## UNIVARIATE RESULTS

Overall, as shown in Table 1, over 78 percent of the students surveyed completed at least some college, with 32 percent completing a college degree, and close to 4 percent completing graduate education (a master's, Ph.D., or professional degree). When examined by racial and ethnic group, Asian Americans as a group were the most likely to complete some college (88 percent), followed by Whites (80 percent), Hispanics<sup>8</sup> (74 percent), African Americans (73 percent), and American Indians (67 percent). The largest percentage of a given racial/ethnic group completing a college degree was also Asian Americans (48 percent), followed by Whites (36 percent), African Americans (20 percent), Hispanics (17 percent), and American Indians (14 percent).<sup>9</sup> Indeed, Asian Americans were significantly more likely than any other racial/ethnic group to attain some college, a college degree, and a graduate degree. The educational gap between Asian Americans and Whites, on the one hand, and Hispanics, African Americans, and American Indians, on the other, is particularly evident in these data as well as in the percentages of students in

TABLE 6. Logistic Regression for the Likelihood of Completing College, Asian Sample

Variable	Model 1 Coefficient (SE)	Model 2 Coefficient (SE)	Model 3 Coefficient (SE)	Model 4 Coefficient (SE)	Model 5 Coefficient (SE)	Model 6 Coefficient (SE)
Intercept	-.26 (.13)*	-1.14 (.23)***	-5.22 (.66)***	-3.47 (.76)***	-4.50 (.95)***	-4.17 (1.00)***
Japanese	-.35 (.40)	-.08 (.42)	-.29 (.43)	-.64 (.45)	-.65 (.50)	-.58 (.51)
Korean	.69 (.32)*	.56 (.32)	.49 (.34)	.22 (.36)	-.37 (.40)	-.37 (.41)
Filipino	-.28 (.24)	-.37 (.24)	-.27 (.25)	-.77 (.28)**	-.96 (.31)**	-.95 (.32)**
Southeast Asian	.44 (.27)	.20 (.28)	.13 (.29)	.91 (.34)**	.52 (.36)	.53 (.36)
South Asian	1.91 (.35)***	1.75 (.36)***	1.67 (.38)***	1.28 (.44)**	.90 (.48)†	.73 (.49)
Other Asian	-.35 (.30)	.24 (.34)	.13 (.35)	.36 (.38)	-.12 (.42)	.05 (.44)
Chinese	—	—	—	—	—	—
Immigrant parent	—	1.13 (.24)***	.55 (.26)*	1.12 (.29)***	.99 (.32)**	1.02 (.33)**
Rules	—	—	.04 (.03)	.03 (.04)	.05 (.04)	.04 (.04)
Involved	—	—	-.02 (.05)	.05 (.05)	-.02 (.06)	-.01 (.06)
Expectations	—	—	.27 (.04)***	.15 (.04)***	.09 (.05)†	.08 (.05)†
Female	—	—	—	.24 (.19)	.47 (.21)*	.49 (.22)*
Siblings	—	—	—	-.28 (.07)***	-.20 (.07)**	-.19 (.07)**
Two-parent home	—	—	—	.28 (.29)	.21 (.32)	.18 (.32)
Moved	—	—	—	-.28 (.22)	-.11 (.24)	-.04 (.25)
SES	—	—	—	.82 (.15)***	.51 (.17)**	.49 (.17)**
GPA eighth grade	—	—	—	—	.66 (.19)***	.70 (.20)***
Standardized test scores	—	—	—	—	.46 (.08)***	.45 (.08)***
Pseudo R <sup>2</sup>	9.74	11.79	16.30	25.22	34.89	35.39
-2 Log likelihood	830.24	806.18	754.29	683.14	586.94	581.24

\*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ , † $p < .10$ .

Notes: N = 640. In model 5, a dummy variable for those whose standardized scores are imputed is included but not presented in the table. In model 6, variables for region of the country and urban/rural/suburban residence are included but not presented. SES, socioeconomic status; GPA, grade point average; SE, standard error.

TABLE 7. Logistic Regression for the Likelihood of Completing College, Non-Asian Sample

Variable	Model 1 Coefficient (SE)	Model 2 Coefficient (SE)	Model 3 Coefficient (SE)	Model 4 Coefficient (SE)	Model 5 Coefficient (SE)	Model 6 Coefficient (SE)
Intercept	-.56 (.03)***	-.66 (.03)***	-6.76 (.20)***	-5.42 (.23)***	-6.70 (.29)***	-7.01 (.30)***
Black	-.83 (.08)***	-.76 (.09)***	-1.09 (.09)***	-.36 (.10)***	.16 (.11)	.24 (.12)*
Hispanic	-1.04 (.09)***	-1.30 (.11)***	-1.32 (.12)***	-.64 (.12)***	-.36 (.13)**	-.23 (.13)†
American Indian	-1.29 (.15)***	-1.27 (.15)***	-1.23 (.16)***	-.95 (.17)***	-.54 (.18)**	-.48 (.18)**
White	—	—	—	—	—	—
Immigrant parent	—	.58 (.09)***	.40 (.10)***	.48 (.10)***	.58 (.11)***	.53 (.11)***
Rules	—	—	.01 (.01)	.00 (.01)	.02 (.01)	.02 (.01)
Involved	—	—	-.18 (.02)***	-.07 (.02)***	-.06 (.02)**	-.05 (.02)**
Expectations	—	—	.39 (.01)***	.27 (.01)***	.13 (.02)***	.14 (.02)***
Female	—	—	—	.41 (.06)***	.29 (.06)***	.28 (.06)***
Siblings	—	—	—	-.14 (.02)***	-.15 (.02)***	-.16 (.02)***
Two-parent home	—	—	—	.67 (.07)***	.52 (.07)***	.48 (.07)***
Moved	—	—	—	-.44 (.07)***	-.34 (.07)***	-.31 (.07)***
SES	—	—	—	1.19 (.05)***	1.08 (.05)***	1.10 (.05)***
GPA eighth grade	—	—	—	—	1.14 (.06)***	1.17 (.06)***
Standardized test scores	—	—	—	—	.23 (.02)***	.22 (.02)***
Pseudo R <sup>2</sup>	2.71	3.71	15.64	26.01	34.52	35.04
-2 Log likelihood	10,746.28	10,710.35	9,317.62	8,172.09	7,232.53	7,175.33

\*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ , † $p < .10$ .

Notes: N = 8,854. In model 5, a dummy variable for those whose standardized scores are imputed is included but not presented in the table. In model 6, variables for region of the country and urban/rural/suburban residence are included but not presented. SES, socioeconomic status; GPA, grade point average; SE, standard error.

each racial/ethnic group that drop out of high school and go on to graduate education. To emphasize this latter point, it is worth noting that Hispanics were more than twice as likely as Asians as a group to be high school dropouts and Asians were about five times more likely than Blacks and Hispanics to attain a graduate degree (7.5 percent versus approximately 1.5 percent).

Further analysis of different Asian groups shows that, save for the residual Other Asian category, all the Asians groups have over a 90 percent chance of going to college. Differences emerge, however, when we examine rates of college completion: 84 percent of South Asians, over 60 percent of Koreans and Chinese, and 54 percent of Southeast Asians completed at least a college degree, while Japanese, Filipino, and Other Asian groups have completed college at rates of 37 percent or less.<sup>10</sup> There are also large and statistically significant differences between South Asian Americans and all other Asian groups in the likelihood of completing a graduate degree. Overall, these results point to the large degree of heterogeneity among the Asian-American groups in their educational attainment.

In order to examine the factors that lead such high percentages of Asian Americans as a group to complete at least some college or receive a college degree, we focused first on descriptive information as summarized in Tables 2 (Asians versus non-Asians) and 3 (Asian subgroups). Notably, when we examine family characteristics as one set of independent variables, we find that parents of Asian-American students, as found in previous research, have more education than the parents of students in other racial/ethnic groups. Close to one-third of Asian Americans have a mother who has a college degree in comparison to 25 percent of the mothers of White respondents, 9 percent of the mothers of Hispanic respondents, 15 percent of the mothers of African-American respondents, and 14 percent of the mothers of American-Indian respondents. Among the fathers, 42 percent of the fathers of Asian Americans had a college degree in comparison to 30 percent of the fathers of White students, 14 percent of the fathers of Hispanic students, 13 percent of the fathers of African-American students, and 12 percent of the fathers of American-Indian students. These levels of college education for fathers and mothers were significantly higher for the Asian group than for all other racial/ethnic groups. Level of education is especially high for Japanese Americans and South Asian Americans. Further, SES scores indicate that Asians also have the highest SES level of the five racial/ethnic groups examined (all differences are statistically significant at the .05 level), and in results not shown, were far less likely to be in the lowest SES categories than non-Asians (15 percent of Asians were in the overall bottom quartile while, as expected, 25 percent of non-Asians were in the bottom quartile for SES). Asians who are one standard deviation below their mean SES are at about the mean SES for Hispanics and are only slightly lower than the mean SES for Blacks.

Table 3 shows that South Asians have significantly higher income levels and SES scores than many of the other Asian groups. Table 2 shows that Asian Americans were also much more likely than others to live with both their mother and their father than were members of other racial/ethnic groups, while Table 3 shows that there is little variation in the likelihood of living with both parents within Asian groups. These differences in living arrangements between Asians and other groups were statistically significant at the .05

level. Asians were also more likely than any of the other groups to have a parent who was an immigrant, with over 76 percent of Asian respondents having an immigrant parent. Table 3 shows that all but Japanese and other Asian Americans have at least an 80 percent likelihood of (at least) one of their parents coming from abroad.

Independent variables that measure respondents' academic performance show that academically, based on eighth-grade data, Asian Americans outperformed members of other ethnic and racial groups. Asian Americans had higher GPAs (all differences are statistically significant at the .05 level) and Asian Americans had higher than average standardized test scores (all statistically significant at the .05 level except for differences between Asians and Whites). Average test scores for Blacks and Hispanics are around 0.7 standard deviation units below Asian test scores. On average, Asians spent around 6.5 hours a week on homework, and this differed significantly only from African Americans. In Table 3 we find that Koreans, Southeast Asians, and South Asians spend considerably more time on homework than some other Asian groups.

Somewhat surprisingly, parental rules and parental involvement in school activities do not distinguish Asians from other groups. In fact, Asian families appear to have fewer rules than do African-American families and they participate less in school activities than Hispanics and African Americans. Among the Asian groups, Chinese Americans appear to have the most rules, while Southeast Asian-American parents participate in a high number of school activities relative to other Asian Americans.<sup>11</sup> Parental expectations are highest among Asian parents while these expectations are especially high for South Asian-American parents.

Our snapshot of 1988 eighth graders reveals, then, that although it is internally differentiated, the Asian-American group is quite distinguished, compared with non-Asians, in its likelihood of having an immigrant parent, growing up in a two-parent household, hailing from a high SES category, and achieving well in school. We now examine the role these factors play in affecting the likelihood of college graduation.

## MULTIPLE REGRESSION RESULTS

Model 1 in Table 4 demonstrates the large differences in the likelihood of having a college degree between Asian Americans and all other racial/ethnic groups. Once we control for parental immigrant status in model 2, the differences between Asians and Whites disappear, and the differences between Asian Americans and the other three groups decline. The effects of having an immigrant parent on college completion is significant and positive, with such students having an 82 percent ( $e^{.60}$ ) higher likelihood of college completion relative to those whose parents were born in the United States, potentially lending support to the "immigrant optimism" hypothesis.<sup>12</sup> In model 3, the addition of parenting factors, including rules, parental expectations, and involvement in school for students in the eighth grade, decreases the odds ratio for this immigration effect by 16 percent (with coefficient estimates going from .60 to .42), and generally decreases the differences between Asian Americans and other groups. It is worth pointing out that the coefficient for Whites in model 3 becomes positive, indicating that, among students with similar

immigrant status and parenting factors, Whites are more likely to have a college degree than Asian Americans. Thus, parental immigrant status and parental expectations appear to play a big role in determining why Asians have higher educational outcomes than Whites. And, indeed, at least part of the immigrant parent effect has to do with its relationship with parental expectations, as specifically predicted by the “immigrant optimism” hypothesis. In model 4 we add SES and family background variables and find that differences between Asians and African Americans, Hispanics, and American Indians decrease again. As expected, higher SES, residential stability, and living in a two-parent home is associated with a greater probability of completing college. It is noteworthy that there are no significant differences between Asians and African Americans in the likelihood of completing college among students with similar SES, demographic, and cultural parenting rules variables. Once we add variables for student achievement in model 5, we find that, controlling for other variables, African Americans are *more* likely to graduate from college than Asian students and there are *no* differences among Asians, Whites, Hispanics, and American Indians. Interestingly, the inclusion of student achievement variables only very slightly decreases the effect of SES on the likelihood of college completion. In model 6, which includes region and urbanicity, we find similar results to model 5.

Reviewing the overall patterns in Table 4, there are a number of notable results. First, our final models (5 and 6) reveal that the effect of having an immigrant parent is as strong after adding all subsequent variables as it was when it was first introduced in model 2. This means that, net of SES, family structure, cultural parenting rules, and even eighth-grade educational achievement, parental immigrant status has a strong, positive, *independent* effect on college completion. Second, while parental expectations continue to have effects after all other variables are controlled, it appears that part of its initial effect had to do with its association with the SES and family structure variables and an equal part was attributed to its association with the educational achievement variables. Third, as expected, the effects of family structure and residential stability on college completion are reduced once the educational achievement variables are introduced, while the SES effect is reduced but only slightly.

The substantial increases in pseudo  $R^2$  values (with decreases in  $-2$  log likelihoods) going from models 1 to 5 in Table 4 indicate that factors related to race/ethnicity (as indicated in Tables 2 and 3) affect outcomes, but that *race/ethnicity itself has little effect on outcomes* once controls are introduced. Table 4 does demonstrate, however, at least partial support for each of our four hypotheses: parental immigrant status, parenting cultural factors, family structure, and SES are significantly related to educational attainment.

## ASIAN SUBGROUPS

In Table 5, we examine racial/ethnic differences as we did in Table 4, but we break the Asian category into seven subgroups, with Whites as the excluded group. Model 1 shows that Chinese, Koreans, Southeast Asians, and South Asians are more likely than Whites to have earned a college degree. Japanese, Other Asians, and Filipinos exhibit no differences from Whites in this model.<sup>13</sup> After we control for all the independent variables (model 6),

Chinese Americans are almost twice as likely to have completed college relative to Whites (with an odds ratio of 1.95). Although the standard errors for the coefficients for South Asians are relatively high because of the small sample size of South Asian Americans ( $N = 57$ ), we do find significant positive effects on the likelihood of completing college relative to Whites through model 4. Once we control for academic achievement, urbanicity, and region, however, South Asians do not differ from Whites in college completion. Koreans' advantage in college completion relative to Whites becomes very small and then disappears once we add parental expectations and other variables into our models. As noted, the coefficient for Filipinos is insignificant in model 1; once we control for demographic factors, SES, academic achievement, and urbanicity/region in models 4 through 6, however, Filipinos are significantly less likely than Whites to complete college. Southeast Asians are more likely than Whites to complete college across most of our models, including our final one; interestingly, the models that include only immigrant status (model 2) and parental cultural rules and expectations (model 3) produce nonsignificant coefficients for Southeast Asians, lending support to the immigrant optimism and cultural factors hypotheses for *this particular group*. It appears that much of the initial Chinese advantage disappears once we control for parental educational orientation in model 3 but they are more likely than Whites to complete college among those of similar SES living in similar regions/urban areas. The dense networks and community orientation toward education that one finds in Chinatowns might, indeed, be supportive of college attainment. Part of the Chinese and South Asian benefit in college completion stems from academic advantages. Compared with our finding in Table 4, which revealed no significant differences between Whites and Asians in our full model, the overwhelming finding from Table 5 is that there is significant variation among Asian Americans' likelihood of graduating from college relative to Whites.

## ASIAN AND NON-ASIAN SAMPLES

To determine whether statistically significant differences exist among Asian Americans and if the effects of our independent variables are different for Asian and non-Asian populations, we look at separate samples of Asian Americans and non-Asian Americans. In Table 6, as explained previously, we use Chinese as the excluded group, and we find that, except for Filipino Americans, there are no significant differences in our final model between the Asian-American ethnic subgroups and Chinese Americans. However, this is primarily attributed to high standard errors and not low coefficient estimates. Once family and individual factors are controlled, we find that Filipino Americans are significantly less likely than Chinese Americans to complete college. South Asians, on the other hand, are more likely—in models 1 through 5—than the Chinese subgroup to complete college; only when urbanicity and region are added in model 6 does the South Asian advantage disappear, suggesting again, perhaps, that Chinese communities provide tangible educational benefits to Chinese-American students.

In comparing the effects of our independent variables on the Asian and non-Asian samples, we find that parental immigrant status has substantial and significant positive

effects in all models in both samples. The effect of having immigrant parents, however, is much larger in the Asian sample and suggests that parental immigrant status is far more important for Asian Americans than for non-Asian Americans in students' likelihood of completing college (an interaction between being Asian and immigrant status for the full sample is not statistically significant, mostly because of a high standard error). The odds ratio for immigrant parents in model 6 for Asians is 2.8 (or 180 percent more likely) as compared to the odds ratio of 1.7 (or 70 percent more likely) for non-Asians in model 6. This means that, net of other variables, students in our Asian sample from immigrant families are more than twice as likely (180 percent – 70 percent = 110 percent more likely) to complete college as are similar students from immigrant families in our non-Asian sample.

Parental expectations appear to have slightly larger effects for the non-Asian group relative to the Asian group, indicating that educational expectations may be more important for the non-Asian group, even though expectations are higher overall for the Asian group.<sup>14</sup> Living in a two-parent family has positive but insignificant effects in the Asian sample for the likelihood of a college degree (mainly because of the high standard errors, attributed, in part, to the fact that so few Asian families are headed by a single parent), while living in a two-parent household has large and significant effects in non-Asian families. Thus, another reason that Asian Americans attain higher levels of education compared to non-Asian Americans appears to be because of the detrimental effect of living in single-parent households for non-Asian Americans. Not only are Asian Americans less likely to live in such families, but they are less affected by it when they do.<sup>15</sup>

Another large difference between the two subsamples is in the effect of SES on college completion. In model 6 in Table 6, SES is statistically significant for Asian Americans in their likelihood of completing college, but the odds ratio is 1.63 while the odds ratio for the non-Asian-American group in model 6 is 3.0, or almost double the effect for the non-Asian-American group. We ran interactions between Asians and SES and found that SES has a significantly smaller differential effect on Asians than it does on non-Asians (see Appendix Table 4). While SES levels are higher for Asians than non-Asians, *the effect of SES on educational attainment for non-Asians is much greater*. Thus, Asian Americans appear to be less affected by low SES, for example, than non-Asian Americans. Using coefficients from the regressions and mean values for the different groups (see Tables 6 and 7), we calculated probability estimates for the likelihood of graduating from college and found that Asian Americans who are one standard deviation below the mean in the overall SES (–.806) still have a 35 percent likelihood of completing college. For Asian Americans at one standard deviation above the mean for the full sample, the likelihood of completing college is 56 percent. For the non-Asian group, the probability of completing college with an SES one standard deviation below the mean for the full sample is 10 percent, while the probability for those one standard deviation above the mean is 46 percent. Thus, those Asian Americans with relatively low SES scores are three times as likely to complete college relative to non-Asians at a low SES level. This finding suggests that perhaps a large part of Asian students' *differential* educational success has to do with unique circumstances that “protect” them from the full negative effects of low SES.<sup>16</sup>

To explore the possible nonlinear effects of SES on college graduation, we ran models with linear and quadratic SES variables with our full set of control variables (results shown in Appendix Table 4). We found that both the linear SES and quadratic SES were all positive and statistically significant in both models (although the quadratic SES was only significant at the 7 percent level in the Asian model), with coefficient estimates of .30 for the linear term and .25 for the quadratic term for Asians, and 1.06 for the linear term and .18 for the quadratic term for the non-Asian group. We then determined probability estimates for completing college for both Asian and non-Asian groups, with all variables held at their means except for SES. Figure 1 plots these probabilities for both Asian and non-Asian groups. Using mean values from the separate samples, our quadratic equation indicates that Asians have no lower than a 40 percent chance of completing college at all SES levels, and that these probabilities are higher for those at the very lowest SES levels for Asians than for Asians with slightly higher SES levels. For non-Asians, we see that SES has more of a linear effect on the likelihood of college completion than for Asians.

The effects of GPA are far higher for non-Asian Americans than Asian Americans. Thus, we find that although Asian Americans do better, on average, than non-Asian Americans, their likelihood of completing college is less affected by their eighth-grade GPA. Odds ratios suggest that, net of other factors, for each one point increase in GPA, Asians are twice as likely to complete college, while for non-Asians the increase in GPA leads to students being three times as likely to complete college. We ran models with

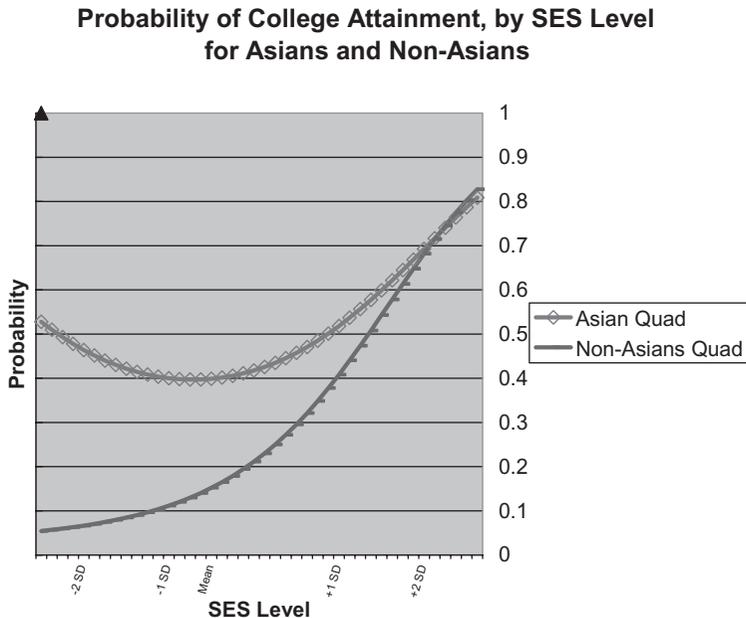


FIGURE 1. The Probability of College Attainment, by SES Level and Asian Status.  
Note: Models with quadratic SES variables were used in calculating these probabilities.  
SES, socioeconomic status.

quadratic GPA variables and full models with GPA interacted with Asian, but none of these coefficients were statistically significant.

Coefficient estimates for standardized test scores are far higher for Asian Americans than for non-Asian Americans. Here, we calculated that Asian Americans have a 25 percent chance of completing college with a standardized score one standard deviation below the full sample mean and a 62 percent chance of graduating from college with a standardized score one standard deviation above the mean. Non-Asian Americans have a 15 percent and a 28 percent chance of graduating from college with a standardized score one standard deviation below and one standard deviation above the full sample mean, respectively. In other words, Asian Americans with a low score have only a slightly lower likelihood of at least completing college relative to non-Asian Americans who have high scores. This speaks again to Asian-American students being “protected” from the usual negative effects of low test scores. Our models with a quadratic standardized score variable showed similar results to our linear model (see Appendix Table 4). We did find that interaction coefficients between Asians and standardized scores in full sample models were statistically significant ( $p < .10$ ).

## DISCUSSION

We examined several hypotheses for why Asian Americans, as a group, have higher levels of education relative to other racial/ethnic groups in the United States. These results suggest that Asian Americans' educational attainment is influenced by individual and family factors. In addition, we examined how these factors differentially affect Asian-American ethnic subgroups. In the full sample, we found support for our hypotheses that parental immigrant status, parental educational expectations, family structure, and SES are all positively and significantly related to educational attainment; with the addition of each set of independent variables, the effects of being Asian decreased. Thus, Asians are generally more likely to attain a college degree because they disproportionately exhibit the kinds of individual and family attributes, including higher SES, two-parent families, and high parental expectations, that help promote educational achievement. We also found evidence of significant heterogeneity among Asian Americans. We did not find support, however, for the hypotheses that parenting rules and parenting participation in school activities were important factors in explaining Asian-American educational success.

Overall, our results suggest a somewhat complex picture of Asian-American college attainment relative to other racial and ethnic minorities. Not only do we find that the effects of race/ethnicity on the likelihood of attaining a college degree virtually disappear when controlling for individual and family factors and that there is significant heterogeneity within the Asian-American category, but also that educational attainment appears to operate differently for Asian Americans. That is, we unexpectedly found that the effects of SES, parental expectations, eighth-grade GPA, and family structure are much weaker (although not always statistically different in our interaction models) for Asian Americans relative to non-Asians, while parental immigrant status and standardized test scores were much stronger. Asians appear to be “protected” from many of the factors that

negatively affect educational outcomes, such as low SES and living in single-parent families, while receiving an enhanced benefit from being of an immigrant family. Combined, these results suggest that Asian Americans react very differently to their individual and family circumstances in their educational achievement compared to other groups.

The most striking finding is that Asian Americans are far less likely to suffer the usual negative effects of low SES, as they seem to achieve beyond what the social structure ordinarily seems to offer. Perhaps, given the nature of their immigration histories and current ethnically dense communities, the habitus of poor Asian Americans is constructed with a sense of optimism and faith in education that is otherwise absent for the non-Asian poor. Net of individual and family factors, the likelihood that an Asian American at one standard deviation below the mean SES level will get a college degree is roughly four times greater than non-Asians. Clearly, this is more than simply “acting white,” because Asians at the lowest SES levels are far more likely than White students at the same SES level to graduate from college. This result lends support to Louie’s (2004) hypothesis that educational success for Asians appears to transcend socioeconomic class. Why Asian-American educational attainment is so anomalous, however, is a question that remains. We suspect that qualitative interview research such as Louie’s (2004) and community research such as Ogbu’s (2003) will help answer this question. In particular, we may learn what factors in Asian-American families and communities lead to focused academic engagement.

In part, it may be because of the fact that Asian Americans seem to respond differently to social and familial influence as evidenced by other research. For example, Asian-American adolescents who grow up in authoritarian households have been found to succeed at a higher rate than their non-Asian peers (Dornbusch et al. 1987). Asian adolescents who report weak parental bonds are also far less likely to engage in deviant behavior relative to non-Asians who have been found to act out as a result of low parental bonding (Kim and Goto 2000). Combined with these studies, our results suggest that we cannot assume that Asian Americans will respond to the types of factors typically associated with academic success in the same ways as other racial/ethnic groups.

Also important is the finding that there are significant differences between Asian and non-Asian Americans such that immigrant status is far more important for Asian than for non-Asian students, while parental expectations, family structure, SES, and GPA are far less important. It may be that Asian immigrants are enmeshed in social networks and establish community bonds in ways that other racial/ethnic groups do not and are thus more optimistic about their future. In different ways, Bourdieu’s and Coleman’s insights about the meaning and distribution of social capital may hold the keys to understanding the dynamics of this complex picture.

## CONCLUSION

Our study raises many questions about Asian-American educational attainment, specifically for those Asian Americans with attributes typically associated with poor outcomes. Although Asian groups are generally quite advantaged relative to other groups, our key finding is that when they *are* disadvantaged, they do not suffer the same consequences as

other racial/ethnic groups with similar disadvantages. Our results also support the importance of examining outcomes by ethnic subgroup given the amount of heterogeneity within the Asian-American population.

As for future research, several areas are ripe for further study. First, we look forward to exploring data sets that include even more students from Asian origins so that additional, more in-depth analyses can be performed. Second, we need to understand in greater depth what it is about immigrant status that produces better educational outcomes. Finally, we need to examine further what, among the Asian students, seems to protect them from the usual negative effects of low SES, single-parent families, low parental expectations, and low GPAs. We believe that some strategic quantitative and qualitative research foci will help answer these questions. Along these lines, it might be interesting to compare Asian students whose parents emigrated in the 1960s to Cuban students whose parents emigrated only slightly earlier. We suggest using broader measures of socioeconomic background so as to better tap the resources that families can muster. Community-level and school-level variables, focusing on resources dedicated to increasing educational attainment (not only strong ethnically based economies but tutoring, college admissions fairs, community media, etc.), might be particularly salient for students from specific ethnic backgrounds.<sup>17</sup> A focus on neighborhood contextual variables would be especially revealing. In short, we believe it would be useful in future research to go beyond individual-level variables and investigate more deeply the sociological context in which these variables differentially manifest themselves. This will help us understand better not only which variables matter, but also how they critically condition one another.

## NOTES

<sup>1</sup>Of note is the fact that the effect size of SES on academic achievement for minorities is smaller than for Whites, as indicated in a recent meta-analytic review by Sirin (2005). However, the studies analyzed by Sirin (2005) generally did not examine Asians separately from other minority groups.

<sup>2</sup>Although we will not explore whether Asian Americans are *actually* discriminated against, Bourdieu (Bourdieu and Passeron, 1977) would argue that students who survive “multiple eliminations”—and are, therefore, over-selected—would be more likely to be excellent students.

<sup>3</sup>Bourdieu’s (Bourdieu and Passeron, 1977) notion of habitus incorporates both cultural and structural factors. Sowell (1983) explains that these factors influence one another. Here, we see that “immigrant optimism” would be difficult to sustain in the face of a job ceiling, for instance. Indeed, Ogbu’s argument suggests that the large cultural variations among “minorities” are a consequence of the large differences in their structural situations.

<sup>4</sup>Although, for the reasons stated earlier, we decided to focus our attention on college degree attainment, in the course of our analyses, we also examined the likelihood of dropping out of high school and the likelihood of receiving a graduate degree, but found the number of Asians who had either dropped out of high school or had gotten a graduate degree (by age 26) to be very small, and therefore the standard errors for our coefficient estimates were very high. This further confirmed our decision to use college graduation as our single dependent variable.

<sup>5</sup>The index was constructed by using principal components analysis, with a single component ultimately used for our analysis. This single component captured 78 percent of the variance of the four separate test scores, and the correlations between each of the original variables and the new

index were between .88 and .89. These tables are available from the authors upon request. Approximately 4 percent of eighth graders did not have any standard scores.

<sup>6</sup>We also examined separately each of the components of SES in our equations. When we substituted the individual variables in our regressions with the full and non-Asian samples, we found that the coefficients for all variables were statistically significant in the expected direction. However, for the Asian sample, the effects of mother's education is not statistically significant, in part, because of the high correlation between mother's education and father's education ( $r = .63$ ). The correlation between mother's and father's education is lower for the non-Asian sample although still quite high (.51), and the sample size for the non-Asian sample is much larger (8,854 versus 640), which may account for the statistical significance for mother's education in the full and non-Asian samples. We chose, therefore, to use the SES index variable instead of the set of highly correlated variables that are contained within it.

<sup>7</sup>The effects of time spent on homework were also examined, and we included this variable in our descriptive statistics, but had many missing values for this variable. Little difference was found when we included this variable in our regressions to see if the effects on the dependent variable of factors such as GPA and standardized scores changed.

<sup>8</sup>We use the term "Hispanic" rather than "Latino/a" because that is how NELS gathered and coded this information.

<sup>9</sup>NELS forced respondents to indicate a single race; therefore, there are no multiracial respondents.

<sup>10</sup>The percentage of Japanese completing college in the NELS appears to be much lower than in other national data sets. This is probably because of the low number of Japanese in our sample.

<sup>11</sup>There's probably an article to be written about differential patterns of rule making and parental involvement in school for the various Asian national groups. For example, we surmise that there are interactions between the structure of the educational system in the "old country" and the nature of the constructed ethnic communities in the United States that would explain parental involvement in schools.

<sup>12</sup>Obviously, there are many correlates of immigration that we have not included in our models, so self-selection effects may not be fully accounted for. At the same time, this finding confirms previous research on the effect of immigrant status.

<sup>13</sup>For Japanese, this is mostly because of the high standard error attributed to the low number of Japanese in the sample.

<sup>14</sup>In a model with all control variables, all observations, and an interaction between Asian and parental expectations, the coefficient for this interaction variable was negative and significant at the .01 level. This indicates that the effect of parental expectations on college graduation is greater for the non-Asian group than the Asian group.

<sup>15</sup>We wonder whether community institutions in specific immigrant enclaves might protect students from the detrimental effects of single-parent families.

<sup>16</sup>This, again, might be attributed to Asian Americans' embeddedness in dense social networks and community institutions.

<sup>17</sup>Just as certain groups may live in neighborhoods with high educational risk factors, so also might groups live in neighborhoods with low educational risk factors (see Sirin 2005).

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**APPENDIX**

TABLE 1. Means and Standard Deviations

	Full sample	Asian sample	White sample	African American	Hispanic sample	American Indian
White	.724 (.447)					
Black	.106 (.308)					
Hispanic	.096 (.294)					
American Indian	.041 (.199)					
Asian	.033 (.179)					
Japanese	.002 (.040)	.047 (.212)				
Korean	.003 (.054)	.079 (.269)				
Chinese	.006 (.076)	.172 (.378)				
Filipino	.006 (.074)	.166 (.373)				
Southeast Asian	.004 (.060)	.110 (.313)				
South Asian	.004 (.060)	.108 (.311)				
Other Asian	.011 (.102)	.317 (.466)				
Female	.506 (.500)	.495 (.500)	.503 (.500)	.493 (.500)	.535 (.499)	.529 (.500)
Siblings	2.260 (1.562)	2.272 (1.594)	2.125 (1.476)	2.658 (1.794)	2.860 (1.706)	2.198 (1.516)
Urban	.243 (.429)	.344 (.475)	.183 (.386)	.491 (.500)	.403 (.491)	.204 (.404)
Rural	.313 (.464)	.102 (.303)	.344 (.475)	.212 (.409)	.206 (.405)	.431 (.496)
Suburban	.445 (.497)	.554 (.497)	.473 (.499)	.297 (.457)	.391 (.488)	.365 (.482)
Northeast	.186 (.389)	.181 (.385)	.202 (.402)	.156 (.363)	.129 (.335)	.105 (.307)
North Central	.268 (.443)	.186 (.389)	.311 (.463)	.126 (.332)	.116 (.320)	.283 (.451)
West	.190 (.392)	.465 (.499)	.168 (.374)	.045 (.207)	.400 (.490)	.241 (.428)
South	.357 (.479)	.168 (.374)	.318 (.466)	.673 (.469)	.356 (.479)	.371 (.484)
Impute stand test score	.038 (.190)	.039 (.195)	.031 (.174)	.083 (.275)	.049 (.216)	.006 (.076)

TABLE 2. Means and Standard Deviations for Asian Groups

	Japanese Mean (SD)	Korean sample Mean (SD)	Chinese Mean (SD)	Filipino Mean (SD)	Southeast Asian Mean (SD)	South Asian Mean (SD)	All other Asian Mean (SD)
Female	.717 (.457)	.546 (.501)	.413 (.494)	.459 (.501)	.506 (.503)	.674 (.473)	.466 (.501)
Siblings	1.728 (1.400)	1.934 (1.285)	2.627 (1.948)	1.894 (1.239)	3.147 (1.802)	1.815 (1.449)	2.348 (1.453)
Urban	.381 (.492)	.148 (.357)	.409 (.493)	.301 (.461)	.478 (.502)	.264 (.445)	.357 (.481)
Rural	.130 (.341)	.179 (.386)	.053 (.224)	.089 (.286)	.070 (.256)	.072 (.261)	.129 (.337)
Suburban	.489 (.507)	.674 (.472)	.538 (.500)	.610 (.490)	.452 (.500)	.664 (.477)	.514 (.502)
Northeast	.085 (.283)	.206 (.407)	.288 (.455)	.026 (.159)	.085 (.280)	.469 (.503)	.139 (.347)
North Central	.048 (.217)	.235 (.427)	.084 (.278)	.115 (.320)	.176 (.383)	.179 (.387)	.297 (.459)
West	.662 (.480)	.409 (.495)	.527 (.501)	.607 (.491)	.531 (.502)	.157 (.367)	.432 (.497)
South	.204 (.409)	.149 (.359)	.101 (.303)	.252 (.436)	.207 (.408)	.194 (.399)	.132 (.340)
Impute stand test score	.109 (.316)	.012 (.109)	.009 (.094)	.070 (.256)	.010 (.099)	.027 (.163)	.051 (.221)

TABLE 3. Principal Components Analysis for Standardized Test Scores, Parental Involvement in School Activities, and Household Rules

Variable	Eigenvector	Correlation with original variable	Eigenvalue	Proportion of variance explained
Standardized score components				
Standardized reading scores	.499	.883		
Standardized math scores	.498	.881		
Standardized science scores	.503	.890		
Standardized history scores	.499	.883		
			3.123	.781
Involvement variable components				
Belong to parent–teacher organization	.455	.883		
Attend parent–teacher organizing meeting	.450	.872		
Take part in parent–teacher organization activities	.462	.896		
Act as a volunteer at school	.432	.838		
Belong to any other organization	.436	.845		
			3.758	.752
Household rules components				
Family rule about TV programs child may watch	.376	.829		
Family rule about how early/late child may watch TV	.389	.858		
Family rule about how many hours child may watch TV	.383	.845		
Family rule about how many hours child may watch TV on school days	.383	.845		
Family rule about maintaining high grade point average	.357	.787		
Family rule about doing homework	.379	.836		
Family rule about doing household chores	.377	.831		
			4.861	.695

TABLE 4. Logistic Regression for the Likelihood of Completing College

Variable	All observer	Asians	Non-Asians
Intercept	-5.72 (.86)***	-5.13 (.97)***	-6.94 (.31)***
Black	-1.05 (.85)	-	.28 (.12)*
Hispanic	-1.53 (.85) <sup>†</sup>	-	-.23 (.13) <sup>†</sup>
American Indian	-1.76 (.86)*	-	-.41 (.18)*
White	-1.29 (.84)	-	-
Immigrant parent	.57 (.11)***	.94 (.28)***	.51 (.11)***
Rules	.02 (.01) <sup>†</sup>	.05 (.04)	.02 (.01)
Involved	-.05 (.02)**	-.03 (.06)	-.05 (.02)**
Expectations	.14 (.01)***	.11 (.05)*	.13 (.02)***
Female	.29 (.06)***	.46 (.21)*	.26 (.06)***
Siblings	-.16 (.02)***	-.17 (.07)**	-.17 (.02)***
Two-parent home	.48 (.07)***	.24 (.31)	.49 (.07)***
Moved	-.29 (.07)***	-.06 (.24)	-.30 (.07)***
SES	1.10 (.05)***	.30 (.15)*	1.06 (.05)***
SES × Asian	-.76 (.19)***		
SES squared		.25 (.14) <sup>†</sup>	.18 (.06)***
GPA eighth grade	1.18 (.06)***	.78 (.19)***	1.20 (.06)***
GPA × Asian	-.38 (.26)		
Standardized test scores	.22 (.02)***	.49 (.09)***	.28 (.03)***
Standardized test scores × Asian	.20 (.11) <sup>†</sup>		
Standardized score squared		-.07 (.04) <sup>†</sup>	-.07 (.01)***
Pseudo R <sup>2</sup>			
-2 Log likelihood	7,744.31	594.87	7,125.96

\*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ , <sup>†</sup> $p < .10$ .

Notes: N = 9,494 for the full sample, 640 for the Asian sample, and 8,854 for the non-Asian sample. For those whose standardized scores are missing, a dummy variable is included but not presented in the table. Variables for region of the country and urban/rural/suburban residence are also included but not presented in the table.

SES, socioeconomic status; GPA, grade point average.