DOCUMENT RESUME

ED 443 904 UD 033 678

AUTHOR	Goyette, Kimberly; Xie, Yu
TITLE	Educational Expectations of Asian-American Youth: Determinants and Ethnic Differences. Research Reports.
INSTITUTION	Michigan Univ., Ann Arbor. Population Studies Center.
SPONS AGENCY	Grant (W.T.) Foundation, New York, NY.; National Science Foundation, Arlington, VA.
REPORT NO	PSC-97-396
PUB DATE	1997-06-00
NOTE	32p.
PUB TYPE	Reports - Evaluative (142)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Ability; *Academic Aspiration; *Asian American Students; Culture; *Expectation; *High School Students; High Schools; Immigrants; Multivariate Analysis; Socioeconomic Status; *Student Characteristics
IDENTIFIERS	National Education Longitudinal Study 1988

ABSTRACT

This paper tests three explanations for the high educational expectations of Asian American high school students living in the United States: (1) favorable socioeconomic and background characteristics; (2) demonstrated academic ability; and (3) cultural values conducive to education. The focus is on differences in the relevance of these explanations across Asian American ethnic groups. Data from the National Education Longitudinal Study of 1988 (NELS:88), for 1988 through 1992, were used with five multivariate regression models to explain differences in educational expectations between Asian American ethnic groups and Whites, both for the base year and for changes over time. Much diversity is found in the forces that shape educational expectations and effect changes in them across Asian American ethnic groups. The educational expectations of groups that are well assimilated into U.S. society are principally influenced by socioeconomic and demographic factors, while parental expectations explain much of children's high educational expectations for recent immigrant refugees. Appendixes contain charts of estimated coefficients of linear regressions models predicting educational expectations for the first and second follow-ups of the NELS:88. (Contains 5 tables and 56 references.) (SLD)

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Kimberly Goyette and Yu Xie

Educational Expectations of Asian-American Youth: Determinants and Ethnic Differences

Report No. 97-396

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Educational Expectations of Asian-American Youth: Determinants and Ethnic Differences

by Kimberly Goyette and Yu Xie

Research Report No. 97-396
June1997

Abstract: This paper tests three explanations for the high educational expectations of Asian-American high school students living in the United States: favorable socioeconomic and background characteristics, demonstrated academic ability, and cultural values conducive to education. We focus on differences in the relevance of these explanations across Asian-American ethnic groups. With data from the National Educational Longitudinal Study (NELS), 1988-1992, we employ five multivariate regression models to explain differences in educational expectations between Asian-American ethnic groups and whites, both for the base year and for changes over time. We find much diversity in the factors that shape educational expectations and effect changes in them across Asian-American ethnic groups. The educational expectations of groups that are well-assimilated into U.S. society are principally influenced by socioeconomic and demographic factors, while parental expectations explain much of children's high educational expectations for recent immigrant refugees.

Dataset used: National Educational Longitudinal Study (NELS): U.S., 1988-1992

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Acknowledgments

This research was supported by a research grant from the William T. Grant Foundation and a Young Investigator Award from the National Science Foundation to Yu Xie and an NICHD traineeship to Kimberly Goyette.

Educational Expectations of Asian-American Youth: Determinants and Ethnic Differences

Introduction

Discussions of Asian Americans in both popular and academic publications have pointed to their high educational achievement and its importance to their economic success. Not only are Asian Americans more highly educated than other minorities in the U.S., but commentators and scholars have also observed that adult Asian Americans as a group have obtained more education than their white counterparts (Endo 1980; Hirschman and Wong 1986; Nee and Sanders 1985; Nee and Wong 1985; Barringer, Takeuchi, and Xenos 1990). Among youth, Asian Americans' superior educational achievement is even more noticeable: Asian-American students score consistently better on standardized tests of math abilities, have higher grade point averages, and attend four-year colleges at higher rates than students of other races (Hsia 1988; Caplan, Whitmore, and Choy 1991; Sanchirico 1991; Zhou and Bankston 1994; Fejgin 1995; Kao 1995). Largely as a result of their higher educational achievement, some Asian-American ethnicities attain average family incomes surpassing those of whites (Lee and Edmonston 1994). Because of these educational and economic successes, Asian Americans are often referred to as a "model minority" (Hurh and Kim 1989; Kao 1995).

Recently, researchers exploring the "model minority" image have concentrated on Asian-American children's academic performance, using such indicators as test scores and grades (Portes and Rumbaut 1990; Chen and Stevenson 1995; Fejgin 1995; Kao 1995; Chen 1996). However, little research attention has hitherto been devoted to explaining differences in motivations to achieve, such as varying educational expectations, between Asian Americans and other races, although these differences have been known to be large for some time. For example, the National Center for Education Statistics (1984) reported that in 1980, 61.5% of Asian-American high school seniors expected to attend a four-year college, while 37.7% of whites, 37.6% of Blacks, and 27.4% of Hispanics intended to enroll in a four-year institution. Our research fills this gap in knowledge by systematically examining the determinants of Asian Americans' higher educational expectations, paying close attention to ethnic differences, using a nationally-representative, longitudinal dataset.

We chose to focus our research on educational expectations in order to understand the mobility process of Asian Americans for two theoretical reasons. First, past research in the tradition of the "Wisconsin model" of status attainment has firmly established social psychological factors as important causal mechanisms mediating family background on the one hand and one's own achievement on the other hand (e.g., Sewell, Haller, and Portes 1969; Sewell, Haller, and Ohlendorf 1970; Hauser, Tsai, and Sewell 1983; Looker and Pineo 1983). The main lesson learned from this research is that family influences are important insofar as they determine a child's motivations for success. Beyond the indirect effects through motivational factors, there is no direct effect of family background on a child's later socioeconomic status. Although the Wisconsin model originally underscored the importance of educational and occupational aspirations as intervening links

between family influences and educational and occupational attainment, later research found that measures of expectations are better predictors of future accomplishment because they incorporate perceived barriers to achievement (Marini and Greenberger 1978; Hanson 1994). For Asian Americans, their high educational expectations reflect not only their desires for high educational attainment, but also their assessments of the likelihood of achieving them. Because educational expectations are powerful predictors of later achievement, if we understand the reasons why Asian Americans have high educational expectations compared to whites, we will be much better positioned to answer the question of why Asian Americans are successful educationally and economically.

Second, it has been proposed by Stevenson and his associates (see Stevenson and Stigler 1992) that a major cultural difference between the U.S. and the Asian countries where they have studied (i.e., China, Japan, and Taiwan) is that Asian students and their parents generally have much higher academic expectations than students and their parents in the U.S. Chen and Stevenson (1995) suggest that this cultural difference accounts for high educational achievement among Asian Americans. If their cultural explanation holds, we expect to see a large and persistent disparity between Asian Americans and whites in educational expectations that cannot be fully explained by family and personal characteristics. To see if this is so, we examine the educational expectations of Asian-American youth and compare them to those of whites.

The primary aim of this paper is to document the reasons that Asian Americans hold higher educational expectations than do whites. However, we contend throughout our paper that this cannot be done completely if Asian-American ethnicities are not considered separately both theoretically and empirically. As Kao (1995), Chen (1996), and others have recognized, the term "Asian-American" does not represent a demographically nor culturally homogenous group. Apart from cultural differences between the many Asian nations, Asian Americans also differ by immigration and settlement experience in the United States. Japanese and Chinese, for example, have been in the United States far longer than Vietnamese and South Asians. Asian Americans of different ethnicities immigrated to the United States under varying circumstances and immigration laws. Asian Americans who were born in the U.S. or have lived in the U.S. for longer periods of time differ in many respects from those who have recently immigrated (Grant and Rong 1992; Tang 1993; Kao and Tienda 1995; Chen 1996; Xie and Goyette forthcoming). Due to the large differences in culture and immigration experience among Asian-American ethnicities, careful attention should be given not only to their commonalities, as is done in most literature on Asian-American achievement,[1] but also to their diversity. Asian Americans of all ethnicities may have higher educational achievement than whites, but their paths to higher achievement can radically differ. While ethnicity is simply used as a control variable in other research, we make the study of ethnic differences among

[1] An exception to this generalization is Kao (1995), who explicitly compares mathematical ability and grades across eight Asian-American ethnic groups.

Asian Americans a central concern of this paper by exploring diversity across ethnicities in reasons for the Asian-white gap in educational expectations.

Our empirical work is based on an analysis of data from three waves of the National Educational Longitudinal Study (NELS), 1988-1992. We employ five multivariate regression models to explain differences in educational expectations between Asian-American ethnic groups and whites, both for the base year and for changes over time. Our results provide a picture not only of the determinants of educational expectations at a single point in time but also the extent to which the gap in educational expectations between Asian Americans and whites increases or decreases over the life course.

Explanatory Factors

Approaches to explaining Asian Americans' higher educational expectations fall into three broad categories: socioeconomic background and demographic characteristics, academic ability, and culture. In this section, we discuss each theoretical approach in turn.

Socioeconomic Background and Demographic Characteristics

It has been proposed that much of the educational success of Asian-American children in the United States can be attributed to their favorable family background characteristics (Kao 1995). For example, Asian Indian, Japanese, Chinese, Filipino and Korean American adults surpass whites in average educational attainment (Hsia 1988). Further, the average family income of Japanese, Chinese, South Asian, and Filipino Americans is higher than that of whites. It has long been established by status attainment research (i.e., Blau and Duncan 1967; Sewell and Hauser 1975; Featherman and Hauser 1978) that parental socioeconomic status has strong and positive effects on children's own achievement. Thus, differences in socioeconomic background and demographic characteristics between Asian Americans and whites constitute a plausible explanation for the gap in educational expectations between Asian-American youth and white youth.

The existing literature has lent support to this explanation. For example, Kao (1995) finds that most of the differences between Asian Americans' and whites' math and reading test scores are explained by factors such as family structure and immigrant generation, as well as parents' investment in educational resources for children. Similarly, Chen (1996) finds that first- and second-generation Asian Americans experience similar gains in test scores over time to those of whites once socioeconomic and demographic factors are controlled.

Despite its theoretical appeal and empirical support, the sociodemographic approach is unsatisfactory as a general framework for explaining Asian-American achievement for two important reasons. First, socioeconomic and demographic factors typically do not explain all differences in educational success between Asian Americans and whites. In Kao's (1995) study, for instance, such factors explain much of Asian Americans' greater mathematical ability but not their higher grades. Second, Asian Americans are so diverse, particularly across ethnic boundaries, that they cannot be accurately characterized by average measures of socioeconomic status. As Lee (1994) points out, poverty rates are high among Chinese, Vietnamese, Laotians, Cambodians, and Hmong. The poverty rate for all Asian-American groups combined is actually higher than the white poverty rate – 17.9% compared to 12.4% in 1980. In this paper, we address these two drawbacks

explicitly: we supplement the sociodemographic approach with other explanations and vary the applicability of this approach with ethnicity.

The most salient aspects of socioeconomic background to consider are family income, parents' occupational status, and parents' education. The positive effects of these factors on children's educational aspirations and achievement have been well documented in the status attainment literature (Blau and Duncan 1967; Sewell and Hauser 1975). In addition to these standard measures of family socioeconomic status, we also account for family composition and structure. McLanahan and Sandefur (1994) find that children from single-parent and step-parent families are more likely to drop out of school than children from traditional, two-parent families. Given that Asian Americans are more likely to belong to intact families than whites are (Kitano and Daniels 1988; Min 1988), the effects of family structure should favor Asian-American children. Number of siblings may also affect children's expectations, for the presence of numerous siblings may dilute family resources and decrease parental attention devoted to each individual child (Blake 1989; Steelman and Powell 1993). Finally, we also include the child's immigrant generation as a demographic control. It is possible that children of recent immigrant families are more motivated to succeed and work harder than native-born children (Chen 1996).

Academic Ability

Another explanation for differences in educational success between Asian Americans and whites focuses on variations in academic ability between the two groups. Based on a comprehensive review, Hsia (1988) reports that as a whole Asian Americans appear to have greater aptitude for math and only slightly lower verbal aptitude. For example, Asian Americans' measured mathematical aptitude ranges from .91 standard deviations above Caucasians' (Project TALENT 1960) to .36 standard deviations below Caucasians' (in a study of disadvantaged students -- ACT 1970). The 1984 SAT shows that Asian Americans scored .40 standard deviations above Caucasians: Asian-American students averaged a score of 519 on quantitative skills (Std. Dev. =127), while Caucasians averaged 487 (Std. Dev. =114).

Popular attention to the above descriptive results concerning ability differences between races has led to much speculation about their sources. While some contend that the differences are innate (Herrnstein and Murray 1994), others attribute the discrepancies in measured ability to variations in parents' socioeconomic status and children's access to educational resources in homes, schools, and communities, as well as cultural differences between the two groups (Flynn 1991; Chen and Stevenson 1995; Kao 1995). In fact, it is plausible that higher educational expectations among Asian Americans may positively affect their test scores.[2]

[2] Unfortunately, there are no good instrumental variables in the dataset that would allow us to tease out the possible reciprocal causality between test scores and educational aspirations in this paper.

Whatever the causes, children who have higher proficiency test scores develop higher levels of educational expectations based on positive reinforcements from others and their own perceptions of the feasibility of continuing education. Thus, higher academic ability should lead to higher educational expectations, everything else being equal. For those children who live in poverty, tested ability may be one of the few avenues to a higher education. Children who cannot afford tuition may rely on scholarships for higher education, and often such scholarships are tied to measures of ability like SAT or GRE scores or other proficiency tests (Manski and Wise 1983, Chapter 5). Therefore, we contend that for those ethnic groups with higher poverty concentrations, ability will explain much of the difference in educational expectations between members of that ethnic group and whites. In addition to standardized scores, another measure of academic ability is whether a student has been held back a grade. Children who are not able to complete grades at the same pace as their peers may become discouraged about their competence in school and thus have low educational expectations.

Culture

Although culture has been a popular explanation for any group difference, it typically suffers from a lack of specificity. Very often, cultural explanations are invoked to account for residual differences unexplained by socioeconomic, demographic, and other objectively measurable determinants. Clearly, this is an unsatisfactory approach. In this section, we attempt to explicitly measure the effects of culture by identifying distinct values held by Asian Americans that set them apart from whites and other minority groups in the U.S. These values, whose origins are traceable to Asian cultures, may help immigrants succeed upon immigrating to the United States (Onoda 1976; Sanday, Boardman, and Davis 1976). They are transmitted by immigrant parents to their children and are further reinforced by Asian-American communities (Nash 1987; Zhou and Bankston 1994).

One group of values, attitudes, and beliefs said to influence Asian-American achievement concerns the connection between effort and educational success. Researchers suggest that the historical influence of Confucianism in many Asian countries (notably China, Korea, Japan, and Vietnam) fosters the notion that human beings are perfectible if they work hard to improve themselves (Hsu 1981; Stevenson and Stigler 1992). Because of this, members of some Asian-American groups may be more likely than whites to believe that hard work in school will be rewarded with high educational and occupational attainment (Chen 1996).

There is some empirical support for this hypothesis. Chen and Stevenson (1995) find that Asian-American students view hard work as the primary avenue to achievement, while white students see ability as a major determinant of success (Chen and Stevenson 1995). It has also been proposed that Asian Americans' stronger belief in the connection between hard work and success may explain their different behavioral responses to racial discrimination, as compared to other minorities. Ogbu (1991) notes that other minorities, especially African-Americans, are often fatalistic about the connection between hard work and success due to discrimination faced by both themselves and family members. In contrast, Sue and Ozaki (1990) contend that anticipation of future discrimination on the labor market may actually encourage Asian Americans to work harder in school.

Asian Americans may also presume stronger returns to education, both material and symbolic, than whites and other minorities, based on beliefs

originating in Asian home countries. In traditional Confucian societies, sought-after civil service jobs were historically tied to the successful completion of examinations, which was seen as proof of both competency and virtue. Upward mobility was only achieved through intensive study and successful completion of these exams. Due to the higher value they attach to education, Asian-American parents and their children may be more likely to view education as a prominent, if not the only, means to greater occupational prestige, social standing, and income.

Borrowing from the work of Stevenson and his associates (e.g. Chen and Stevenson 1995; Stevenson, Chen, and Lee 1993; Stevenson and Stigler 1992), we argue that the above beliefs about the connection between effort and educational success and about returns to education are manifested in the educational expectations Asian-American parents hold for their school-age children. Because of the perceived returns to education, parents desire high educational attainment for their children. Since they also believe that educational goals are achievable through expense of effort and not solely determined by ability, they typically push their children to attain as much education as possible. For such parents, providing children with a good education is often synonymous with successful parenting.

While we cannot claim that the high expectations of Asian parents necessarily measure culture,[3] available evidence is consistent with our interpretation. Stevenson and his associates have found that Japanese and Chinese mothers exhibit less satisfaction with and higher expectations for their children's academic performances than American mothers, regardless of the perceived ability of the child (Lummis, Stevenson, and Uttal 1988; Stevenson and Stigler 1992; Stevenson, Chen, and Lee 1993). Other research has found that these cultural values persist in the United States among Chinese and Japanese Americans. Hirata (1975), for example, finds that parents of children living in Chinatown had far higher expectations of their children than did their children's teachers. As will be shown later, Asian-American parents have higher expectations of children than do whites. Thus, Asian-American parents' higher educational expectations may in turn explain the higher educational expectations of Asian-American youth.

Ethnic Differences among Asian Americans

The above three approaches are not necessarily mutually exclusive, competing explanations. It is possible that Asian-American successes are explained, in part, by all three. However, for an adequate assessment of which factors are <u>most</u> important for Asian-American success, we contend that Asian Americans must be disaggregated into ethnic groups, and that the explanatory power of each of the above approaches should be considered separately for each ethnic group. While research using the above approaches often includes Asian-American ethnic groups separately in analyses, discussions of results typically treat Asian Americans as

[3] One possible explanation is that they measure the selectivity of voluntary immigrants in general rather than Asian culture (Ogbu 1991; Kao and Tienda 1995).

though they share similar socioeconomic status and other demographic characteristics, ability levels, and cultural values. Asian-American success is discussed as if it was a function of Asian-Americans' common characteristics transcending ethnic boundaries.

Asian Americans, as a category, represent a variety of cultural heritages and experiences with immigration and settlement in the United States. Because of this, a particular approach may suit one ethnic group better than others. In the following section, we briefly discuss the immigration and settlement history of each Asian-American group and also provide some contemporary demographic characteristics for each group.

Chinese-Americans

Immigration of Chinese Americans, the most populous Asian group in the United States, began in the 1840s. Most Chinese immigrants were peasant men from only a few provinces in China who found work in the United States as laborers and farm workers (Takaki 1989; Chen 1996). Chinese immigration slowed and then stopped, however, around the turn of the century in the face of anti-Asian sentiment which culminated in the Immigration Act of 1924, prohibiting the further immigration of all Asians. The Chinese population did not increase again until 1965, when restrictions against Asian immigrants were repealed and preferences were established for workers with needed skills to immigrate to the United States (Edmonston and Passel 1994).

As a result, Chinese Americans represent a mixture of experiences. Those who immigrated after 1965 tend to have high educational attainment. From our calculation using the 5% Public Use Microsample (PUMS) from the 1990 U.S. Census, the average family income of Chinese Americans in 1989 was $56,858, compared to whites' $54,733.[4] However, Lee (1994) notes that there is also a high poverty rate among Chinese Americans concentrated in urban ethnic communities like Chinatowns. Lee finds that approximately 20% of Chinese Americans lived in poverty in 1980, compared to 12% of whites (Lee 1994).

Filipinos

Filipinos are the second most populous Asian-American ethnicity in the United States (Lee and Edmonston 1994). Most Filipino immigrants originally came to work on plantations in Hawaii, and, because of past contact with both Spain as a colony and with the United States as a territory, Filipinos were more easily able to

[4] All numbers for Chinese Americans and other ethnic groups were computed from the same data source (1990 PUMS). We restrict the calculations to families with at least one child. A Chinese-American family is defined as one in which the father identifies himself racially as Chinese. The same rule applies to families of other racial categories. Due to the practice of top-coding in PUMS, all income figures reported here are contaminated with a downward bias.

assimilate into U.S. society than other Asian ethnicities (Chen 1996). Filipinos also have high family incomes, approximately $60,808 in 1989, and high educational attainment relative to whites, with 40.1% of male household heads having bachelor's degrees or higher compared to 35.8% for whites.

Japanese

Although many Japanese immigrated between 1880-1920 as plantation and other agricultural workers, this group is now one of the most educationally and occupationally successful Asian-American ethnicities. Many Japanese-American families have been in the United States for three or more generations and are structurally well-assimilated. Census data show that this group has higher average educational attainment than whites: 45.8% of male household heads completed bachelor's degrees or higher, and their mean family income of $69,109 in 1989 was also higher than the white average of $54,733.

Koreans

Few Koreans immigrated to the United States prior to 1965. Among those who did, however, were farmers, laborers and students (Takaki 1989; Chen 1996). After 1965, more highly-educated, professional Koreans immigrated to the U.S. According to our calculations from the 1990 5% Census PUMS, over 53% of Korean male household heads completed bachelor's degrees or higher compared to 35.8% of whites. Despite this, however, a portion of the Korean population still occupies middleman economic niches like shop-keepers and other small business owners and is concentrated in enclaves with higher than average poverty rates (Lee 1994). The average family income of Koreans in 1989 was lower than that of whites at $52,427, and Lee (1994) reports that the poverty rate among Koreans in 1980 was 20.9% compared to 12.4%, the rate among whites.

Southeast Asians

This group is an aggregate of several smaller, diverse groups of Asians from countries like Vietnam, Laos, Cambodia and Thailand. Apart from representing several nationalities, this group also includes a variety of smaller ethnic groups like the Vietnamese, Chinese-Vietnamese,[5] Lao, Khmer, and Hmong. Although members of this group have many distinct heritages and histories, they share a common experience of immigrating as political refugees during the 1970s and 1980s. Southeast Asian children and their parents came to the U.S. to escape from political and economic persecution faced in their home countries (Tollefson 1989). Forced to spend time in refugee and re-education camps before immigrating to the U.S., many children of refugees lost years of schooling. Average family incomes of Southeast Asians tend to be low, ranging from $41,243 for Vietnamese families to $26,378 among Laotians and Hmong in 1989.[6]

[5] These are Chinese who immigrated to and lived in Vietnam for many years.

[6] However, standard measures of socioeconomic status are poor indicators of refugees' relative social standing in their native countries prior to immigration.

South Asians

South Asians, as a group, are largely composed of Asian Indians. The majority of Asian Indians came to the U.S. after the 1965 changes in immigration law encouraging the immigration of professionals. From 1969 to 1971, approximately 90% of Asian Indian immigrants were professionals with post-secondary education (Wong and Hirschman 1983). The mean family income of Asian Indians in 1989 was $68,548, compared to $54,733 for whites.

Data and Methods

For this study, we use data from the National Educational Longitudinal Study (NELS), 1988-1992, collected for the National Center for Education Statistics (NCES) by the National Opinion Research Center. In 1988, a sample of 24,599 United States eighth-graders were surveyed. These same respondents were re-interviewed in 1990, 1992, and again in 1994. Information was collected from the sampled students and their parents, teachers and school principals. NELS is particularly appropriate for this research because it contains an over-sample of Asian-American students, thus enabling cross-ethnic comparisons within the Asian-American subpopulation. Our analysis is restricted to Asian-American and white students.

Like many other longitudinal studies, NELS suffers from the problem of attrition in follow-up surveys. We analyze the data with the principle of preserving as many cases as possible. That is, we include all sampled respondents in our analysis for the base year of 1988 but treat dropouts as non-informative (or strongly ignorable) non-responses in the 1990 and 1992 follow-up surveys. Because whites are more likely to drop out, and drop-outs are likely to have low expectations, our treatment of attrition may introduce a conservative (i.e., negative) bias towards the estimated gap in educational expectations between Asian Americans and whites at these two later time periods.[7] The sample sizes at the three time periods are: 16,375 for base year, 10,524 for the first follow-up, and 8,946 for the second follow-up.

[7] Chen (1996) suggests another source of bias in NELS which may affect this research. NELS excluded those children who had extreme difficulty speaking English. Presumably, proportionately more first-generation Asian Americans would be excluded from the sample because of this. Children with less proficiency in English may be more discouraged about their ability to attain higher levels of education in the United States. This may cause the educational expectations of some groups dominated by first-generation Asian Americans, like Southeast Asians and Koreans, to be over-estimated in this research.

Our analytic strategy proceeds in three stages. First, we present descriptive statistics, noting the differences in background characteristics, ability and parents' expectations, not only between Asian Americans and whites, but also across Asian-American ethnicities. In the second stage, we estimate five multivariate regression models using data from the baseline interview in order to assess which factors best explain differences between white and Asian-American educational expectations for each Asian-American group. At this stage, we also attempt to decompose the total explained difference between a particular Asian-American group and whites to the differences explained by each of the three approaches. Finally, we use longitudinal data from the first and second follow-up interviews to assess changes in children's educational expectations over the life-course, again focusing on the relative importance of the different approaches and ethnic differences.

Variables used in our analysis are listed in Table 1. More detailed explanations of them are given as follows.

Children's Expectations: In our analyses, children's educational expectations are measured in years of schooling. Responses to the original question, however, were categorized by levels of education. We used the following rule to convert the categorical responses to a continuous variable: less than high school = 10, high school graduation = 12, two-year college or some college = 14, four-year college = 16, and professional or other graduate degree = 18.

Race/Ethnicity: A variety of Asian-American groups are compared to whites in this research. These groups include: Chinese, Filipinos, Japanese, Koreans, Southeast Asians (a combination of Cambodians, Laotians, Hmong, and Vietnamese), South Asians (Asians Indians and Pakistanis), and "other" Asians defined as those who chose the "other" category. Pacific Islanders are excluded from our analyses because they differ dramatically in culture from the other groups and are not immigrants to the United States.

Background Factors: First, we consider the immigrant generation of the child. First-generation means that both the child and at least one of the child's parents were born outside the United States. Second-generation refers to those children who were born in the United States, but for whom at least one parent was not. Third-generation means that the students themselves and both of their parents were born in the United States. To gauge socioeconomic status, both mother's and father's education are considered with three categories: less than high school, high school, and college. Further, we use a composite index measuring socioeconomic status (SES). The index was constructed by the National Center for Education Statistics, based on the prestige of both mother's and father's occupations (scored with the Duncan SEI scale), family income, and both parents' educations with each component equally weighted. This SES index is standardized to have a mean of 0 and a standard deviation of 1 for the whole sample (National Center for Education Statistics 1990). Family structure and composition are accounted for with two variables: whether the child resides in an "intact" or "non-intact" family and the number of siblings. Two characteristics of children's schools are also included as background characteristics. The first pertains to the type of school a child attends. A dummy variable represents those children who go to public schools in contrast to those attending private schools. The second measures school urbanicity, categorized such that those who attend rural schools are compared to those who attend urban or suburban schools.

Academic Ability: Two sets of variables are used to gauge children's ability. The first measures whether or not a child has been held back; that is, not passed or made to repeat a grade in school. The second set of variables are proficiency test scores standardized on a scale from 0 to 100 (with a mean of 50 and a standard deviation of 10 for the whole NELS sample) in three subjects: reading, math, and science.

Parents' Expectations: Children's reports of both father's and mother's expectations are used in analyses. These are measured continuously in years of education. Values were assigned to categorical responses in the same manner as they were assigned to children's own educational expectations.

Results

Descriptive Results

Table 1 presents weighted descriptive statistics for the variables used in this study by ethnicity. For categorical variables, percent distributions are given; for continuous variables, the sample mean and standard deviation are given. Case weights for the base year were used to account for stratified sampling and non-responses. The first row represents the mean of expected years of schooling, the dependent variable. Clearly, all Asian-American groups have higher average educational expectations than whites do: 15.9 years for Filipinos, 16.0 years for Southeast Asians, 16.2 years for Japanese, 16.3 years for Chinese, 17 years for South Asians, and 17.1 years for Koreans, in contrast to 15.5 years for whites. While it is evident that the educational expectations of Asian-American students are higher than whites', few such clear patterns can be generalized from the distributions of the characteristics we consider explanatory factors.[8] Ethnic differences among Asian Americans in these characteristics are generally very large.

The level of parents' education varies greatly by ethnicity. Note that the comparison of parental education across ethnicity is not straightforward due to the presence of a category for missing values. Interestingly, the percentage of missing values varies enormously by ethnicity. For mother's education, for instance, the percent missing is as high as 42.4 percent for Southeast Asians and as low as 9.7 for whites. A similar pattern holds for father's education. Although we do not know precise reasons for the missing values, it appears that the percent missing is related to the proportion of recent immigrants across different ethnicities: it is the lowest for Japanese Americans and the highest for Southeast Asian Americans. After adjustment for missing values under the assumption of missing at random, we observe that the parents of South Asian, Japanese, and Korean students have substantially higher education than those of whites, while the parents of Southeast

[8] Exceptions are immigration generation and urban location of school. As expected, Asian Americans are more likely to be first- and second-generation immigrants and more likely to attend urban schools.

Asian students are much less educated.[9] For example, merely 4.7 percent of South Asian fathers have not completed a high school education, compared to 13.7 percent of white fathers. The comparable figure for Southeast Asian fathers is 23.2 percent.

Similarly, the SES index also reveals substantial ethnic differences in family socioeconomic background among Asian Americans, with South Asians, Japanese, and Koreans scoring highest on the index (0.65, 0.43, and 0.35 respectively) and Southeast Asians (-0.52) falling behind whites (0.02). Chinese and Filipinos also score higher than whites on the SES measure (0.10 and 0.22 respectively), although their relative advantages are much smaller than those enjoyed by South Asians, Japanese, and Koreans.

The above rank order of ethnicities in terms of measured SES, i.e., South Asian, Japanese, Korean, Filipino, Chinese, whites, and Southeast Asians, however, does not hold true for standardized tests. For instance, on the standardized mathematics test, Koreans score highest (59.3), followed by Chinese (58.2), South Asians (58.1), Japanese (56.4), Southeast Asians (52.9), Filipinos (52.1), and whites (51.9). Note that the differences among Koreans, Chinese, and South Asians are negligible; and the differences among Southeast Asian, Filipino, and whites are also very small. However, the gap between the first group and the second group is large (about 0.5 to 0.7 standard deviations).

Finally, Asian-American students report higher parental expectations than do whites. Asian-American parents' expectations range from 16.3 to 17.3 years, compared to 15.9-16 years of education expected by white parents. It should be emphasized that parental expectations also vary among Asian-American groups. Koreans and South Asians expect children to attain the most schooling -- between 17 and 17.3 years. Among Southeast Asians and Filipinos, parental expectations are lower (respectively around 16.4-16.5 and 16.3-16.4 years). Japanese and Chinese are in the middle (around 16.7-16.9 years).

A natural conclusion from examining the descriptive statistics reported in Table 1 is that Asian Americans are too heterogeneous across ethnic boundaries to be treated as a single group. Japanese Americans, for example, are comprised of many third-generation children (47.9%) while there are very few third-generation Southeast Asians (.4%). Southeast Asians are also far less well-off in terms of standard measures of socioeconomic status than other Asian groups living in the United States. While South Asian, Korean and Japanese parents have the highest levels of socioeconomic status, Chinese-American students score second highest on the standardized math test. Given Southeast Asian students' poor family socioeconomic background and average test scores, it is of special significance that their parents have high educational expectations for them, at half a year above those for whites.

Regression Results for the Base Year

In this section, we present regression results to demonstrate how sociodemographic characteristics, measures of academic ability, and parental expectations explain the

[9] This pattern is true even before adjustment for missing values, although the contrast is less pronounced.

Asian-white gap in educational expectations. In Table 2, we show estimated coefficients and their standard errors for five linear regression models using data from the base year of NELS. The dependent variable is measured as years of schooling that the respondent expected to achieve in the 8th grade. The coefficients were estimated with the sample weights provided by NCES, and robust errors were reported allowing for clustering by schools.

The first model includes only the bivariate effects of ethnicity on educational expectations, and the coefficients simply reproduce the ethnic differences earlier presented in the first row of Table 1. Taking the ratio between the coefficients and their estimated standard errors, we note that all the observed Asian-white gaps are statistically significant from zero at the 5 percent α-level. In Model 2, we include measures of demographic and socioeconomic characteristics. The estimated coefficients of the sociodemographic variables have their expected effects. For example, being a third-generation child has a negative effect on educational expectations (coeff. = -0.353, s.e. = 0.096), and family SES and parental education have strong, positive effects. While the coefficient of family structure is not in the expected direction, it is statistically insignificant (coeff. = 0.032 for non-intact, s.e.= 0.033). Number of siblings is significantly negative (coeff.=-0.058, s.e.=0.010). Children who attend public schools expect significantly less education than those who attend private schools, but the location of the school (urban versus rural) makes little difference.

Once these variables are included in Model 2, differences between almost all Asian-American groups and whites decrease. In particular, for Filipinos and Japanese Americans, differences in educational expectations become insignificant when background variables are included. Southeast Asians, a group with particularly low SES, are an exception to this. Controlling for background characteristics, the net difference in educational expectations between Southeast Asians and whites increases from 0.43 (s.e.=.184) years in the bivariate model to 0.82 (s.e. = 0.188) in Model 2.

In Model 3, we include variables that measure student's academic ability. As expected, scores on reading, math, and science proficiency tests all positively and significantly predict a child's educational expectations, and the experience of being held back a grade has a negative effect. With the inclusion of these variables measuring academic ability, the observed differences between Asian-American groups and whites generally narrows (albeit remains statistically significant from zero); however, an exception to this rule is again Southeast Asians, for whom the estimated advantage over whites increases slightly in Model 3 from Model 1.

Similarly, we include variables measuring parents' expectations in Model 4. Both mother's and father's expectations have strong and positive effects on children's own expectations for themselves. When parents' expectations are controlled for in Model 4, the estimated gaps between all Asian-American groups and whites narrow. Of particular interest is a dramatic decrease to statistical insignificance for Southeast Asians (from coeff.=0.425, s.e.= 0.184 in Model 1 to coeff.=0.192, s.e.=0.176 in Model 4). In addition to Southeast Asians, Filipinos, Japanese and other Asians also no longer experience statistically significant higher expectations than do whites.

Finally, we include all variables used in Models 1 through 4 in a comprehensive model, Model 5. The objective of this model is to ascertain the maximum amount of Asian-white differences explainable by all three sets of

independent variables. This is necessary because the three sets of independent variables are not independent of each other and contain overlapping information, thus overlapping explanatory power. As shown in the last column, the combination of the factors explains the observed higher educational expectations of Chinese, Filipino, Japanese, South Asians and "other" Asians compared to whites. Koreans' and Southeast Asians' educational expectations, however, remain significantly higher than whites'. Koreans still expect to achieve .32 more years of education, and Southeast Asians .36 more years than whites (with s.e. = 0.10, 0.17, respectively).

What is theoretically more important than "explaining away" observed differences between Asian-American groups and whites through controls, however, is the examination of how the explanatory power of the three groups of factors – background, ability, and parents' expectations – varies by Asian-American ethnicity. Extracting the most relevant information from Table 2 and ignoring sampling errors, Table 3 presents a decomposition of the raw differences between each Asian-American group and whites into components that can be separately attributed to background characteristics, ability, and parents' expectations, and then those jointly attributable to all factors. These results confirm our earlier observation that, indeed, there is much heterogeneity between Asian-American ethnic groups.

Table 3 highlights the differences by Asian ethnicity found in the preceding regression results. In the first row of Table 3, we report the coefficients from Model 1 as the raw difference between each Asian ethnicity and whites. In the second row, we present the reductions in the coefficients of ethnicity dummies from Model 1 to Model 2. The objective of doing so is to ascertain how much difference between each Asian-American ethnicity's educational expectations and whites' educational expectations is due to the background variables included in Model 2. Similarly, in the third row, we report the reductions in the ethnicity coefficients from Model 1 to Model 3, the model including measures of ability. The fourth row repeats this exercise for Model 4, which includes parents' expectations.

We hasten to emphasize that our method of attributing raw differences to various factors is upwardly biased. This is due to the fact that our three sets of explanatory variables overlap substantially and thus do not contribute unique information. For example, SES and academic ability are positively correlated. In this sense, entries in rows 2 through 4 are the maximum amounts attributable to each set of factors. This can be easily shown in the comparison of rows 5 and 6. Row 5 (in parenthesis) is a simple sum of all the explained differences separately listed in rows 2-4, and row 6 reports the total explained differences using the ethnicity coefficients from the comprehensive model including all the explanatory variables (i.e., Model 5). It is evident that the sums of the explained differences are far greater than the actual explained differences due to the factors jointly included in Model 5. For Chinese Americans, for example, the sum of the explained differences due to individual factors is an unrealistic number of 1.170, compared to the actual explained difference of 0.708 by Model 5, which includes all factors.

Since the raw difference varies by Asian ethnicity, it is useful to normalize the comparison by using percentages. In the last four rows of Table 3, we present the percentages of the differences explained by the separate factors in Models 2-4 and the joint factors in Model 5. We observe that the three sets of factors do not explain the raw differences between Asian Americans' and whites' educational expectations consistently across ethnic groups. For example, background

socioeconomic and demographic characteristics have the potential to explain all of the difference between Filipinos' and whites' educational expectations, and 96.2 percent of the difference between Japanese and whites. These same characteristics can account for up to 72 percent of the difference between South Asians and whites but a much smaller percentage between Korean and Chinese Americans and whites (respectively 43 and 37 percent). Background variables do not explain any of Southeast Asians' higher educational expectations, and, in fact, enlarge the gap. [10]

Overall, academic ability plays a smaller role than sociodemographic variables in explaining the differences in educational expectations between Asian Americans and whites. For Filipinos and Southeast Asians, it has nil explanatory power in accounting for the Asian-white gap. For other Asian ethnic groups, academic ability potentially explains a substantial proportion of the Asian-white gap -- for Chinese, about 43.4 percent; Japanese, 39.7 percent; Koreans, 32.6 percent; and South Asians, 29.8 percent.

Parents' expectations are the only factors that can explain most of the Asian-white gap across all Asian ethnicities. The amount of the gap potentially attributable to parental expectations varies between 93.9 percent for Japanese to 54.8 percent for Southeast Asians and South Asians. This result points to the potentially powerful role of Asian-American parents' expectations in shaping children's educational expectations. We note, however, that parental expectations can be confounded with high socioeconomic status. This may be true, for example, among South Asians, Japanese and Filipinos. For Southeast Asians, however, parental expectations are the only factor that reduces the raw difference between their educational expectations and those of whites. Despite the fact that Southeast Asians have lower socioeconomic status than whites do, high parental expectations encourage children to overcome disadvantages in order to attain high levels of education.

Longitudinal Results

We further corroborate our earlier results with longitudinal data from NELS. In our regression models incorporating longitudinal data, we control for educational expectations at the previous interview. Thus, regression coefficients for ethnicity essentially represent an increase or decrease in the expectation gap between an Asian ethnic group and whites. At the first follow-up interview (tenth grade), differences between Asian Americans' and whites' educational expectations increase across all ethnic groups (Appendix A). However, the increase in the gap is significant only for Japanese, Koreans, Southeast Asians and South Asians, but not for Chinese or Filipinos. Our analysis is similar to the one for the base year survey. We ran regression models parallel to those presented in Table 2 (see Appendix A), with the summary results reported in Table 4.

[10] This is indicated by the negative sign in front of the value for the difference. Because of Southeast Asians' lower socioeconomic status than whites', the net difference between Southeast Asians and whites increases after the control of background variables.

Table 4 shows that the power of various factors to explain the increasing gap between Asian Americans' and whites' educational expectation varies by ethnicity. Concentrating only on those ethnicities which report significant raw differences from whites, it appears that once again background variables can explain a sizable portion of the differences between Japanese, Korean and South Asians compared to whites (39.5%, 29% and 29.3%, respectively). Background factors do not explain any of the difference between Southeast Asians and whites. Ability can explain a portion of the Asian-white gap for Koreans (23.8%), but not for any other group. Parental expectations appear to play a large role in explaining Asian-white differences for Japanese, Koreans, and Southeast Asians (between 33.2% and 44.6%).

This exercise is repeated for the second follow-up interview (twelfth grade), and the summary results are presented in Table 5. The gap in expected years of schooling between Chinese, Filipinos, Koreans, Southeast Asians, South Asians, and whites increases significantly from tenth to twelfth grade. We ran similar regressions with lag effects and report the coefficients and standard errors in Appendix B. In Table 5, we show similar heterogeneity among explanatory approaches for each ethnic group. Background variables can potentially explain all of the difference between South Asians and whites (over 100%) and a large portion of the difference between Koreans' and Filipinos' expectations compared to whites' (72.2% and 74.3%, respectively). Ability matters most for differences between Chinese and whites (32%), while parental expectations can explain a large portion of all ethnic groups' advantages over whites, most notably, those of Southeast Asians (86.7%).

Conclusion

This research began with two primary goals. The first was to account for the higher educational expectations of Asian Americans relative to whites. In order to do this, we identified three explanations for the high educational expectations of Asian-American high school students: favorable socioeconomic and background characteristics, demonstrated academic ability, and cultural values conducive to education. Moreover, we argue in this paper that Asian Americans should not be treated as a homogenous group because of the diversity in cultural heritages and immigration experiences across different ethnic groups. This led to our second goal: the exploration of different reasons for high educational expectations among distinct Asian-American groups.

Through our multivariate analysis with regression models, both for the base year and the follow-up surveys of NELS, we find support for all three explanations. However, their explanatory power is unequal across different Asian ethnic groups. Background factors, for example, explain much of the differences between the educational expectations of Filipinos, Japanese, and South Asians and those of whites, but none of the difference in expectations between Southeast Asians and whites. Ability explains some of the high expectations held by Chinese, Koreans, Japanese, and South Asians but none of those held by Filipinos or Southeast Asians. Parental expectations play an important role in explaining the Asian-white gap for all ethnic groups and stand out as the only explanatory factor accounting for Southeast Asian students' relatively high expectations.

Ostensibly through different paths and for different reasons, Asian-American youth expect higher levels of education than do their white counterparts. It is indeed remarkable that so many Asian ethnic groups with diverse cultural heritages and immigration experiences actually converge in this important aspect: i.e., they all want to attain more education than the white majority. Perhaps this commonality is partially due to the selectivity of unobserved characteristics and experiences shared by all immigrants (Ogbu 1991; Kao and Tienda 1995); perhaps it is part of Asian Americans' conscious strategy to overcome racial discrimination and achieve upward mobility (Sue and Ozaki 1990; Xie 1993). Whatever the causes, its implications are clear. In a society where economic returns to schooling have been rising (Mare 1995), education serves as an increasingly more important channel leading to socioeconomic success (Blau and Duncan 1967; Sewell and Hauser 1975; Featherman and Hauser 1978). Through attaining more education than whites, Asian Americans are able to achieve social status equal or superior to that of the white majority. We propose that it is in this sense – i.e., social mobility through the educational channel – that Asian Americans of diverse groups are similar and can be treated as such.

Appendix A: Estimated Coefficients of Linear Regressions Models Predicting Educational Expectations, First Follow-Up of NELS

	Model 1		Model 2		Model 3		Model 4		Model 5	
	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.
Constant	9.768	0.184	11.580	0.255	8.871	0.187	6.441	0.271	7.227	0.306
Ethnicity (white=excluded)										
Chinese	0.332	0.255	0.193	0.242	0.187	0.244	0.088	0.136	-0.044	0.240
Filipino	0.139	0.160	-0.059	0.185	0.133	0.167	0.037	0.136	-0.019	0.159
Japanese	0.496	0.253	0.326	0.255	0.501	0.253	0.275	0.179	0.252	0.198
Korean	0.606	0.125	0.457	0.170	0.462	0.117	0.405	0.110	0.280	0.141
Southeast Asian	0.289	0.133	0.466	0.192	0.320	0.128	0.183	0.129	0.277	0.177
South Asian	1.163	0.117	0.846	0.195	0.994	0.100	0.968	0.123	0.766	0.158
Other Asian	0.290	0.271	0.148	0.309	0.262	0.249	0.266	0.282	0.199	0.268
Expectations Two Years Prior	0.394	0.012	0.317	0.012	0.290	0.013	0.226	0.013	0.166	0.013
Child's Generation (first=excluded)										
Second	-	-	0.031	0.126	-	-	-	-	-0.016	0.119
Third	-	-	-0.143	0.181	-	-	-	-	-0.062	0.143
SES Index			0.197	0.041	-	-	-	-	0.029	0.038
Father's Education (less than high school=excluded)										
High school graduate	-	-	-0.091	0.072	-	-	-	-	-0.166	0.075
College graduate	-	-	0.176	0.090	-	-	-	-	0.015	0.087
Mother's Education (less than high school=excluded)										
High school graduate	-	-	-0.144	0.076	-	-	-	-	-0.212	0.085
College graduate	-	-	-0.001	0.091	-	-	-	-	-0.117	0.095
Family Structure (intact=excluded)										
Non-intact	-	-	-0.110	0.055	-	-	-	-	-0.049	0.053
Number of Siblings	-	-	-0.052	0.015	-	-	-	-	-0.043	0.015
School Type (private=excluded)										
Public	-	-	-0.276	0.080	-	-	-	-	-0.172	0.062
School Urbanicity (urban or suburban=excluded)										
Rural	-	-	0.044	0.041	-	-	-	-	0.044	0.039
Held Back (no=excluded)										
Yes	-	-	-	-	0.059	0.071	-	-	0.049	0.066
Standardized Reading Score	-	-	-		0.017	0.003	-	-	0.011	0.003
Standardized Math Score	-	-	-	-	0.028	0.003	-	-	0.020	0.003
Standardized Science Score		-	-	-	0.003	0.003	-	-	0.001	0.003
Father's Expectations	-	-	-	-	-	-	0.197	0.024	0.144	0.021
Mother's Expectations	-	-	-	-	-	-	0.187	0.023	0.177	0.021
R^2	0.213		0.253		0.270		0.314		0.353	

Appendix B: Estimated Coefficients of Linear Regressions Models Predicting Educational Expectations, Second Follow-Up of NELS

	Model 1		Model 2		Model 3		Model 4		Model 5	
	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.
Constant	6.305	0.241	8.295	0.293	5.011	0.243	0.586	0.256	0.959	0.279
Ethnicity (white=excluded)										
Chinese	0.741	0.128	0.543	0.158	0.504	0.104	0.485	0.142	0.288	0.140
Filipino	0.432	0.188	0.111	0.175	0.404	0.218	0.070	0.150	-0.012	0.150
Japanese	0.292	0.230	0.022	0.192	0.209	0.275	0.324	0.248	0.166	0.282
Korean	0.407	0.157	0.115	0.170	0.297	0.147	0.129	0.123	-0.021	0.134
Southeast Asian	0.407	0.196	0.482	0.207	0.414	0.215	0.054	0.183	0.045	0.194
South Asian	0.456	0.185	-0.103	0.172	0.348	0.185	-0.245	0.168	-0.418	0.171
Other Asian	0.286	0.209	0.002	0.203	0.183	0.199	-0.121	0.134	-0.218	0.144
Expectations Two Years Prior	0.601	0.015	0.480	0.015	0.459	0.015	0.306	0.016	0.232	0.016
Child's Generation (first=excluded)										
Second	-	-	-0.334	0.127	-	-	-	-	-0.248	0.110
Third	-	-	-0.426	0.118	-	-	-	-	-0.219	0.096
SES Index			0.524	0.045	-	-	-	-	0.149	0.038
Father's Education (less than high school=excluded)										
High school graduate	-	-	0.190	0.109	-	-	-	-	0.080	0.089
College graduate	-	-	0.347	0.122	-	-	-	-	0.127	0.097
Mother's Education (less than high school=excluded)										
High school graduate	-	-	0.282	0.098	-	-	-	-	0.122	0.085
College graduate	-	-	0.285	0.109	-	-	-	-	0.083	0.094
Family Structure (intact=excluded)										
Non-intact	-	-	-0.035	0.053	-	-	-	-	-0.002	0.046
Number of Siblings	-	-	-0.021	0.015	-	-	-	-	-0.006	0.013
School Type (private=excluded)										
Public	-	-	-0.101	0.068	-	-	-	-	-0.024	0.063
School Urbanicity (urban or suburban=excluded)										
Rural	-	-	-0.119	0.048	-	-	-	-	-0.062	0.038
Held Back (no=excluded)										
Yes	-	-	-	-	-0.279	0.096	-	-	-0.077	0.081
Standardized Reading Score	-	-	-		0.017	0.003	-	-	0.009	0.003
Standardized Math Score	-	-	-	-	0.046	0.004	-	-	0.026	0.003
Standardized Science Score		-	-	-	0.004	0.003	-	-	0.002	0.003
Father's Expectations	-	-	-	-	-	-	0.277	0.024	0.228	0.023
Mother's Expectations	-	-	-	-	-	-	0.379	0.023	0.356	0.022
R^2	0.280		0.358		0.360		0.542		0.578	

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Table 1: Descriptive Statistics Concerning Student's Demographic and Socioeconomic Characteristics, Ability and Parent's Expectations by Ethnicity

	White	Chinese	Filipino	Japanese	Korean	Southeast Asian	South Asian	Other Asian
Child's Expectations*	15.5	16.3	15.9	16.2	17.1	16.0	17.0	16.0
(Std. dev.)	(1.9)	(1.9)	(1.7)	(2.0)	(1.2)	(1.9)	(1.4)	(2.0)
Child's Generation								
First	1.0	43.3	44.3	27.8	51.0	81.7	50.8	32.7
Second	4.4	40.3	40.9	24.4	36.2	10.2	44.5	13.6
Third	93.3	13.4	10.4	47.9	6.8	0.4	4.1	52.8
Missing	1.3	3.1	4.4	0.0	6.0	7.8	0.6	0.9
Father's Education								
Less than high school	12.0	11.6	7.1	6.6	2.7	14.6	4.2	6.1
High school graduate	47.1	26.8	40.2	31.1	30.0	24.7	16.0	35.7
College graduate	27.9	40.2	37.3	55.8	51.3	23.5	69.1	36.9
Missing	13.0	21.3	15.4	6.5	16.0	37.2	10.8	21.4
Mother's Education								
Less than high school	11.0	17.1	9.4	3.6	7.0	24.9	4.9	12.8
High school graduate	57.0	27.6	35.9	45.4	30.3	20.1	16.3	33.2
College graduate	22.4	32.5	36.5	39.2	42.0	12.5	58.7	35.5
Missing	9.7	22.8	18.3	11.9	20.7	42.4	20.2	18.5
SES Index*	0.02	0.10	0.22	0.43	0.35	-0.52	0.65	0.14
(Std. dev.)	(0.71)	(0.89)	(0.70)	(0.57)	(0.66)	(0.83)	(0.79)	(0.87)
Family Structure								
Intact	67.8	81.1	76.9	85.0	80.1	74.3	91.6	78.9
Non-intact	31.5	17.3	21.2	14.2	18.7	23.8	7.8	18.7
Missing	0.7	1.5	2.0	0.8	1.2	2.0	0.5	2.4
Number of Siblings*	2.1	2.2	2.2	1.7	1.8	3.3	1.8	2.4
(Std. dev.)	(1.5)	(1.6)	(1.5)	(1.3)	(1.2)	(1.8)	(1.3)	(1.6)
Missing	0.4	0.9	0.3	2.4	0.7	0.0	0.0	1.5
School Type								
Public	87.2	85.9	80.1	83.6	87.8	92.4	83.6	78.6
Private	12.8	14.1	19.9	16.4	12.3	7.6	16.4	21.4
School Urbanicity								
Urban or suburban	64.1	87.2	89.7	89.6	86.2	87.2	92.2	78.0
Rural	36.0	12.8	10.3	10.4	13.8	12.8	7.8	22.0
Held Back								
No	80.6	85.4	87.0	87.8	81.6	80.0	85.9	75.7
Yes	14.7	8.9	7.8	2.1	10.0	11.0	7.3	17.9
Missing	4.7	5.7	5.3	10.0	8.3	9.1	6.8	6.4
Standardized Reading Score*	51.8	53.0	51.3	52.4	55.9	49.2	56.1	51.0
(Std. dev.)	(9.9)	(10.7)	(9.9)	(10.1)	(9.6)	(9.3)	(10.2)	(10.1)
Missing	2.7	1.4	4.7	5.3	0.3	3.5	2.3	2.7
Standardized Math Score*	51.9	58.2	52.1	56.4	59.3	52.9	58.1	53.4
(Std. dev.)	(9.9)	(11.4)	(10.7)	(10.9)	(10.3)	(10.4)	(11.6)	(10.5)
Missing	2.7	1.4	4.3	5.3	0.3	3.5	2.3	3.8
Standardized Science Score*	52.0	54.1	51.1	54.5	56.4	50.6	53.6	52.4
(Std. dev.)	(9.9)	(11.6)	(10.6)	(10.6)	(10.5)	(9.3)	(10.9)	(10.7)
Missing	2.7	1.9	6.2	5.3	0.7	3.5	2.3	3.8
Father's Expectations*	15.9	16.7	16.3	16.9	17.3	16.4	17.1	16.3
(Std. dev.)	(1.7)	(1.7)	(1.6)	(1.3)	(1.1)	(1.5)	(1.3)	(1.6)
Missing	13.7	13.3	15.5	9.7	11.1	23.9	8.2	11.3
Mother's Expectations*	16.0	16.7	16.4	16.7	17.2	16.5	17.0	16.4
(Std. dev.)	(1.7)	(1.7)	(1.6)	(1.6)	(1.1)	(1.6)	(1.4)	(1.6)
Missing	10.6	12.6	14.2	7.7	9.8	22.9	9.2	12.5
n	15153	258	258	81	171	205	114	135

bers reported are means, not percentages as in the rest of the table. Missing values are excluded for ation of means. Data Source: NELS, 1988.

Table 2: Estimated Coefficients of Linear Regressions Models Predicting Educational Expectations, Base Year of NELS

	Model 1		Model 2		Model 3		Model 4		Model 5	
	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.
Constant	15.533	0.027	15.349	0.122	11.211	0.112	3.876	0.157	4.907	0.199
Ethnicity (white=excluded)										
Chinese	0.810	0.150	0.509	0.141	0.455	0.122	0.305	0.102	0.102	0.112
Filipino	0.384	0.129	-0.083	0.123	0.376	0.115	0.112	0.103	-0.071	0.101
Japanese	0.693	0.262	0.026	0.244	0.418	0.213	0.042	0.219	-0.222	0.189
Korean	1.547	0.106	0.878	0.120	1.043	0.091	0.642	0.103	0.319	0.100
Southeast Asian	0.425	0.184	0.823	0.188	0.487	0.161	0.192	0.176	0.359	0.174
South Asian	1.458	0.189	0.413	0.175	1.023	0.204	0.659	0.135	0.199	0.144
Other Asian	0.459	0.214	0.194	0.211	0.455	0.196	0.140	0.208	0.093	0.202
Child's Generation (first=excluded)										
Second	-	-	-0.094	0.104	-	-	-	-	-0.085	0.086
Third	-	-	-0.353	0.096	-	-	-	-	-0.231	0.079
SES Index			0.775	0.033	-	-	-	-	0.322	0.029
Father's Education (less than high school=excluded)										
High school graduate	-	-	0.439	0.059	-	-	-	-	0.167	0.050
College graduate	-	-	0.846	0.071	-	-	-	-	0.336	0.059
Mother's Education (less than high school=excluded)										
High school graduate	-	-	0.338	0.079	-	-	-	-	0.118	0.050
College graduate	-	-	0.471	0.073	-	-	-	-	0.145	0.060
Family Structure (intact=excluded)										
Non-intact	-	-	0.032	0.033	-	-	-	-	0.052	0.028
Number of Siblings	-	-	-0.058	0.010	-	-	-	-	-0.028	0.009
School Type (private=excluded)										
Public	-	-	-0.186	0.039	-	-	-	-	-0.038	0.033
School Urbanicity (urban or suburban=excluded)										
Rural	-	-	-0.002	0.038	-	-	-	-	-0.044	0.029
Held Back (no=excluded)										
Yes	-	-	-	-	-0.706	0.052	-	-	-0.427	0.042
Standardized Reading Score	-	-	-		0.030	0.002	-	-	0.013	0.002
Standardized Math Score	-	-	-	-	0.040	0.002	-	-	0.016	0.002
Standardized Science Score		-	-	-	0.016	0.002	-	-	0.009	0.002
Father's Expectations	-	-	-	-	-	-	0.385	0.018	0.270	0.018
Mother's Expectations	-	-	-	-	-	-	0.355	0.019	0.287	0.017
R^2	0.008		0.222		0.227		0.373		0.468	

Table 3: Decomposition of Differences between Asian Americans' and Whites' Educational Expectations Across Asian-American Ethnicity, Base Year of NELS

	Chinese	Filipino	Japanese	Korean	Southeast Asian	South Asian	Other Asian
Raw Difference	0.810	0.384	0.693	1.547	0.425	1.458	0.459
Differences Separately Attributable to							
Background Characteristics (Model 1 - Model 2)	0.310	0.467	0.667	0.669	-0.398	1.045	0.265
Ability (Model 1 - Model 3)	0.355	0.008	0.275	0.504	-0.062	0.435	0.004
Parental Expectations (Model 1 - Model 4)	0.505	0.272	0.651	0.905	0.233	0.799	0.319
(Sum)	(1.170)	(0.747)	(1.593)	(2.078)	(-0.227)	(2.279)	(0.588)
Differences Jointly Attributable to							
All Factors (Model 1 - Model 5)	0.708	0.455	0.915	1.228	0.066	1.259	0.366
Percentage of Raw Difference Separately Explained by							
Background Characteristics	37.2%	121.6%	96.2%	43.2%	-93.6%	71.7%	57.7%
Ability	43.4%	2.1%	39.7%	32.6%	-14.6%	29.8%	8.7%
Parental Expectations	62.3%	70.8%	93.9%	58.5%	54.8%	54.8%	69.5%
Percentage of Raw Difference Jointly Explained by							
All Factors	87.4%	118.5%	132.0%	79.4%	15.5%	86.4%	79.7%

Table 4: Decomposition of Differences between Asian Americans' and Whites' Educational Expectations Across Asian-American Ethnicity, First Follow-Up of NELS

	Chinese	Filipino	Japanese	Korean	Southeast Asian	South Asian	Other Asian
Raw Difference	0.332	0.139	0.496	0.606	0.289	1.163	0.290
Differences Separately Attributable to							
Background Characteristics (Model 1 - Model 2)	0.139	0.198	0.170	0.149	-0.168	0.317	0.142
Ability (Model 1 - Model 3)	0.145	0.006	-0.005	0.144	-0.031	0.169	0.028
Parental Expectations (Model 1 - Model 4)	0.244	0.102	0.221	0.201	0.106	0.195	0.024
(Sum)	(0.528)	(0.306)	(0.386)	(0.494)	(-0.093)	(0.681)	(0.194)
Differences Jointly Attributable to							
All Factors (Model 1 - Model 5)	0.376	0.158	0.244	0.326	0.012	0.397	0.091
Percentage of Raw Difference Separately Explained by							
Background Characteristics	41.9%	142.4%	34.3%	24.6%	-58.1%	27.3%	49.0%
Ability	43.7%	4.3%	-1.0%	23.8%	-10.7%	14.5%	9.7%
Parental Expectations	73.4%	73.4%	44.6%	33.2%	36.7%	16.8%	8.3%
Percentage of Raw Difference Jointly Explained by							
All Factors	113.3%	113.7%	49.2%	53.8%	7.3%	34.1%	31.4%

Table 5: Decomposition of Differences between Asian Americans' and Whites' Educational Expectations Across Asian-American Ethnicity, Second Follow-Up of NELS

	Chinese	Filipino	Japanese	Korean	Southeast Asian	South Asian	Other Asian
Raw Difference	0.741	0.432	0.292	0.407	0.407	0.456	0.286
Differences Separately Attributable to							
Background Characteristics (Model 1 - Model 2)	0.198	0.321	0.270	0.292	-0.075	0.559	0.284
Ability (Model 1 - Model 3)	0.237	0.028	0.083	0.110	-0.007	0.108	0.103
Parental Expectations (Model 1 - Model 4)	0.256	0.362	-0.032	0.278	0.353	0.701	0.407
(Sum)	(0.691)	(0.711)	(0.321)	(0.680)	(0.271)	(1.368)	(0.794)
Differences Jointly Attributable to							
All Factors (Model 1 - Model 5)	0.453	0.444	0.126	0.428	0.362	0.874	0.504
Percentage of Raw Difference Separately Explained by							
Background Characteristics	26.7%	74.3%	92.5%	71.7%	-18.4%	122.6%	99.3%
Ability	32.0%	6.5%	28.4%	27.0%	-1.7%	23.7%	36.0%
Parental Expectations	34.5%	83.8%	11.0%	68.3%	86.7%	153.7%	142.3%
Percentage of Raw Difference Jointly Explained by							
All Factors	61.1%	102.8%	43.2%	105.2%	88.9%	191.7%	176.2%

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