Educational Achievement among Asian Children: Ethnic Differences in First Grade Math and Reading Scores

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Abstract

The burgeoning Asian population in the U.S. makes it imperative to understand the factors influencing their educational attainment. The pan-ethnic category of "Asian American" overgeneralizes about diverse populations and has led to a monolithic view of Asians as high achieving students with little need for educational services. The model minority myth may be masking the drastic variation in educational attainment among ethnic Asian groups. This study uses data from the Early Childhood Longitudinal Study—Kindergarten Class (ECLS-K) to: (1) examine whether there are significant achievement gaps between different Asian ethnic groups in first grade and (2) analyze factors that account for the differences in achievement. To determine if ethnicity is a major factor in student achievement, a linear regression model controlling for school and familial factors is conducted. The findings of this study suggest that the model minority myth may not exist, and the results add to the growing body of literature underscoring both the diversity in academic achievement and the needs of Asian students.

Introduction

The Asian population is one of the fastest growing racial groups in the United States. The Asian population alone is increasing faster than the total U.S. population by more than four times, growing by 43% between 2000 and 2010 (U.S. Census, 2010). The burgeoning population of Asians makes it imperative to understand the factors influencing the educational attainment of ethnic Asian groups often concealed by the pan-ethnic social category of "Asian American." The label overgeneralizes about extremely diverse populations, and academically, it has led to a monolithic view and perception of Asian students as "high achievers who have little need for educational services" (Pang et al., 2011, p. 378).

The model minority myth is the most prevalent stereotype for Asian Americans. The myth threatens strides towards greater educational equity by stressing that Asian Americans have succeeded despite their racial background and have excelled in the U.S. educational system because of their hard work and cultural values. The model minority myth "promotes the belief that the United States is a color-blind society wherein schools operate in an equitable system of merit" (Pang et al., 2011, p. 379). The image of Asian students as the model for other minorities has been further supported by academic research drawing conclusions from aggregated statistical data that mask the tremendous differences in the educational achievement within the racial group. Previous studies have also focused on identifying factors that positively impact higher academic outcomes that Asian American students possess more of than their peers as a way to "decode the secrets of their success" and "bottle it" (Kao, 1995, p. 122). Research of this kind has disregarded the struggles and challenges many ethnic Asian minorities face, and it implies that Asians are not minorities who need educational attention.

This article has two objectives: (1) examine whether there are significant achievement gaps between different Asian ethnic groups in first grade, and (2) analyze factors that account for the differences in achievement. The terms "Asian American" and "Asian" will be used interchangeably in this paper. As defined by the Early Childhood Longitudinal Study—Kindergarten Class (ECLS-K) dataset used in this analysis, the term "Asian" is referring specifically to U.S.-born citizens, immigrants, and refugees having origins from Far East Asia, Southeast Asia or the Indian subcontinent. For the purposes of this study, "Asian" does not include Pacific Islanders. Recognizing the diverse origin, language, and background of Asians and Pacific Islanders, the Census 2000 was the first time the two groups were split into separate categories.

Background

Differences among Asian subgroups

Asians make up 4.2%, or 11,900,000 people, of the total U.S. population (Census, 2010). Research done by Teranishi (2002, 2004) has discredited the monolithic perception by explicating how Asian Americans are the least homogeneous of all racial groups with no common language or religion. "Asian American and Pacific Islander" encompasses more than 50 distinct ethnic groups with more than 30 different languages spoken among them (Iwamasa, 2012). According to the U.S. Census, of the total Asian population, 69% are foreign born and 79% speak a language other than English at home (2010). Chinese Americans make up the largest Asian group followed by Filipinos, Asian Indians, Vietnamese, Koreans, and Japanese, and the differences among these groups are important to point out (Census, 2010). In comparison to the total U.S. population, a larger proportion of Asians have earned a bachelor's degree (Census, 2010). However, disproportionately, Asian Indian, Pakistani, Chinese, Filipino, Korean, and Japanese have the highest percentage of people with a bachelor's degree, and Hmong, Cambodian, and Laotian have the highest percentage of people with less than a high school degree (Census, 2010). The median age among Asian ethnicities varies greatly. Japanese have the oldest population with a median age of 42.6 and Hmong have the youngest population with a median age of 16.3 (Census, 2010). More than half (55.2%) of the Hmong population is under the age of 18 (Census, 2010). The reverse is true for average household size. Japanese have the smallest average household size of 2.25 and Hmong have the largest household size of 6.14 people (Census, 2010). Clearly the heterogeneity and diversity of the Asian subgroups is greatly masked by the model minority and the pan-ethnic label.

Education

Much of the literature on education has been concerned with the relationship between schooling and social inequality (Hallinan, 1988). Education has been revered as the "great equalizer" in allowing for great social mobility, but "researchers have been deeply concerned with factors that prevent students from attaining academic success and subsequent occupational status by merit alone" (Hallinan, 1988, p. 251). The academic achievement gap between racial groups has been of great concern for many researchers. Only recently has literature begun examining the intragroup differences among racial groups. Standardized test performance, grades, and dropout rates have all been used as measures to assess the U.S. achievement gap and to identify factors of inequality in an effort to reach a more equitable educational system (Pang et al., 2011). Gutiérrez (2002) makes a distinction between equality and equity, and argues that an equitable educational system is one where academic achievement is not predictable solely based on a student's race, class, ethnicity, sex, proficiency in the dominate language, or other characteristics. Equity encompasses both the conditions in which learning occurs as well as the outcomes as a way to rectify economic and social inequalities (Gutstein et al., 2005).

Theoretical Background

Cultural explanation

Cultural explanation theory has been the most prevalent theory used to explain the educational success of Asian Americans. Caudill and De Vos (1956) were among the first to argue that Asians were successful because they are taught to value education and learning. In their study, they concluded that Japanese Americans had gained relative success because they exhibit cultural characteristics valued by the dominant group. In regards to education, ethnic groups have cultural orientations that can either benefit or hurt their odds of educational success based on how closely their culture matches American culture (Kao, 2003; Lee, 2009). Specific cultural traits, such as docility, diligence, and the ability to assimilate into the dominant culture have been attributed to traditional Asian cultural philosophies like Confucianism (Chou, 2008). Tate's (1995) research argues that the disproportionate number of African American students being tracked into remedial mathematics is due to the traditional approach of mathematics instruction. He supports a culturally relevant mathematics pedagogy that is built around the thinking and realities of African American children instead of a "foreign" pedagogy using a white middle class frame of reference (Tate, 1995). Tate's research, although analyzed through an Afrocentric framework, is still relevant for understanding academic differences among other ethnic minorities. His findings speak to how the linguistic codes,

behavioral expectations, and assumptions about teaching and learning disregard the lived experiences of students of color and of lower economic class.

Bourdieu's concept of cultural capital, originally used to explain the reproduction of social class inequalities, has been adopted as a way to describe the achievement and underachievement of racial and ethnic minorities (Ngo & Lee, 2007). Cultural capital is the set of norms, values, and knowledge transmitted to children through their parents, and Bourdieu & Passeron (1977) assert that schools favor the norms, values, and knowledge of white middle class so that children from a white middle class background are better equipped to be successful in school. Thus, the cultural explanation theory posits that the high academic achievements of Asian American students are attributed to their Asian cultures being more conducive to academic achievement and that they possess similar values to those of white middle class values. However, the theory fails to take into account the within-group differences in academic achievement among Asian students. Researchers have criticized that by focusing on cultural differences, racism has evolved to replace physical characteristics with cultural traits (Chou, 2008). Research done by Covello (1972) and Gibson (1989) has shown that groups who share similar values to Confucian cultural values do not always perform better in school relative to others.

Cultural-ecology

In Ogbu's (1978) cultural-ecology theory, he examines the ways in which culture and structural explanations jointly influence student achievement. The theory "emphasizes the importance of community forces and a group's historical experiences in the racially stratified system in the United States in shaping a group's educational aspirations and achievement" as a way to better understand variation among ethnic groups (Ngo & Lee, 2007, p. 418). Ogbu (1983) introduces the concept of voluntary and involuntary minorities. He argues that because of the ways in which involuntary minorities are incorporated into the United States, their perception regarding opportunities and schooling are drastically different than the perception of voluntary minorities who often come to the United States in search of a better life (Lee, 2009). Although Ogbu argues that Asians do better in school than other minorities because of their voluntary status as immigrants, his theory can still be applied to better understand intragroup differences among Asian Americans. This approach links academic performance to the meanings attached to ethnic labels.

In *Unraveling the 'Model Minority' Stereotype*, Lee conducts ethnographic research on a group of Asian American students attending a public high school located in a major East Coast city. She states that "identity, historical experiences, perceptions regarding future opportunities and attitudes toward schooling are related" (Lee, 2009, p. 77). The way in which the students identified affected their academic achievement and attitude towards schooling because they do not all see themselves as being the same. In Lee's study, the new wave-identified students were among the lowest achieving students and their identity as a new wave affected their attitude towards schooling (2009). The new wave students also consisted mainly of second and third wave refugees from working-class and poor families. Masked by the model minority stereotype is the drastically different migration experience of refugees and immigrants from Vietnam, Cambodia, and Laos to the U.S. Lee's study shows that new wave-identified students "did not believe in the connection between schooling and future success," and they saw it as a way to resist racism (Lee, 2009, p. 77).

Methods

Data and sample

The Early Childhood Longitudinal Study—Kindergarten Class of 1998-99 (ECLS-K), sponsored by the National Center for Education Statistics, is a nationally representative sample of children from 1,413 public kindergarten programs. The study followed them from the fall of kindergarten through the spring of eighth grade. The ECLS-K focuses on children's early school experiences, and information is obtained directly from the children, their families, teachers, and schools in seven waves. The base year data was collected in the fall of 1998 and spring of 1999, and it was followed by data collected in the fall and spring of first grade, and the spring of third, fifth, and eighth grades. In the spring of first grade, the sample was freshened to obtain a more nationally representative sample of first graders by expanding the selection to include first graders who were not enrolled in kindergarten during the 1998-99 school year.

Unweighted data from the public use file of the ECLS-K is employed in this study drawing from participants in the spring of first grade and was restricted to Asian students. The final analytic sample consists of

981 elementary students who identified as "Asian" and any respondents with missing data on ethnicity, reading scores, or math scores are excluded from the sample.

Variables of interest

Achievement measures. The outcome variable used to analyze achievement among Asian ethnicities is obtained from the spring of first grade Item Response Theory (IRT) test scores in reading and mathematics. The IRT scores are utilized because they allow for a comparison regardless of which second-stage form a student was administered during their assessment. Questions in the spring of first grade mathematics assessment consisted of number sense, properties, and operations; measurement, geometry, and spatial sense; data analysis, statistics, and probability; and patterns, algebra, and functions. Questions in the reading assessment consisted of initial understanding; developing interpretation; personal reflection and response; and demonstrating a critical stance.

Ethnicity. The independent variable of ethnicity is obtained from the spring of first grade parent survey. The question asked parents to identify whether the child was a member of an Asian group, and if so, which of the following Asian groups best described the child's origin. Parents were given eight ethnic groups to choose from, and they include: Asian Indian (1); Chinese (2); Filipino (3); Japanese (4); Korean (5); Vietnamese (6); Hmong (7); and Other Asian (8). The categories were recoded into: 1 = Asian Indian, 2 = Chinese, 3 = Filipino, 4 = Japanese, 5 = Southeast Asian, and 6 = Other Asian. The Hmong and Vietnamese categories were combined to create a larger sample because there were fewer than 70 students in the Hmong sample. Hmong are an ethnic minority inhabiting parts of southern China and the northern parts of Vietnam, Laos, Thailand, and Myanmar (Martin, 2008). Using the Association of Southeast Asian Nations' (ASEAN) definition of "Southeast Asia," which includes Vietnam and Laos, the Hmong and Vietnamese samples have been combined and recoded as "Southeast Asian."

Control variables

School level characteristics:

School type. The variable for school type is obtained from the spring of first grade school administrator questionnaire. The variable consists of a dichotomous measure where 1 = public and 0 = private.
School size. School size is recoded using data collected from the spring of first grade school administrator questionnaire. The question asked school administers to enter the total enrollment at their school. The original item consisted of five categories: 0-149 students (1); 150-299 students (2); 300-499 students (3); 500-749 students (4); and 750 and above (5). The variable was condensed into a simple dichotomous measure where 1 = small school size and 0 = large school size. This study employs the U.S. Department of Education's definition for the classification of school size, which considers elementary and secondary schools with less than 300 students "small" (U.S. Department of Education, 2011).
Location type. The location type of the school is taken from the spring of first grade school administrator questionnaire. The original item consisted of three categories: central city (1); urban fringe and large town (2); and small town and rural (3) and was recoded into 1 = urban, 2 = suburban, and 3 = rural.

Family level characteristics:

Marital status. The variable for marital status is recoded utilizing the spring of first grade parent survey asking for the current marital status of the parent filling out the questionnaire and was recoded into a dichotomous measure where 1 = unmarried and 0 = married.
Poverty level. The dichotomous variable for poverty level is obtained from a composite of two variables: parent income and household total. Income and household total were compared to preliminary census poverty thresholds for 1999 in order to determine whether a household fell above or below the threshold. The variable is coded in a measure where 0 = below poverty threshold and 1 = at or above poverty threshold.
Language status. The dichotomous variable for language status is taken from the spring of first grade parent questionnaire. Parents were asked if the primary language spoken at home was English and given two response options: Non-English language at home (1) and English at home (0).

Analytic Strategy

In this study, preliminary analyses are conducted to determine whether ethnicity is related to test scores. ANOVA tests are used to determine if there were any significant differences between the test means of both mathematics and reading between the various Asian ethnic groups. Then, cross-tabulations using bivariate analyses are used to show the relationship between ethnicity and control variables of interest. Finally, regression analyses are used to determine whether the control variables (described above) can account for the differences between groups.

Results

Descriptive statistics

Table 1 presents the distribution of Asian ethnicities within the sample and the descriptive statistics for the variables used in the study. The ethnic categories utilized in this study were Asian Indian, Chinese, Filipino, Japanese, Korean, Southeast Asian and Other Asian (those who chose the "other" category or identified themselves as Asian by race but did not choose an ethnic category). The number of students in the seven groups range from Filipinos being the largest group with 239 (24.4%) participants and Koreans being the smallest group with 71 (7.2%) participants. In the study population, Asian Indian (27.1%), Filipino (25.5%), and Korean (23.9%) have the most students in small schools. Filipino (30.5%) and Asian Indian (28.0%) have the most students in private school, and Southeast Asian (11.2%) and Other Asian (13.7%) have the least amount of students in private school. Japanese (84.1%), Filipino (67.8%), and Asian Indian (51.7%) have the most students who speak English at home, whereas Southeast Asian (16.8%) by far has the fewest students who speak English at home. Southeast Asian (83.2%) has the most students who speak a non-English language at home. Also, disproportionately, Southeast Asian (40.6%) and Other Asian (29.0%) have the most students living below the poverty threshold compared to the other groups examined in the study.

The first grade IRT score means and standard deviations are shown in Table 2. The table reports the overall means of math and reading scores for each ethnic group and for Asians as an aggregate. The math mean between ethnic groups ranged from a low of 60.28 (for Filipinos) to a high of 69.41 (for Chinese). The aggregate math mean was 64.24 (*SD* = 17.80). In reading, the mean between groups ranged from a low of 76.02 (for Southeast Asian) and a high of 94.28 (for Asian Indian). The aggregate reading mean was 86.20 (*SD* = 25.82).

Table 1. Student Population Characteristics: School and Familial Factors by Ethnicity

	Asian Indian	Chinese	Filipino	Japanese	Korean	Southeast Asian	Other Asian
School Size							
Small	32	23	61	12	17	23	21
(% within ethnicity)	(27.1)	(11.6)	(25.5)	(13.6)	(23.9)	(16.1)	(16.9)
Large	86	175	178	76	54	120	103
	(72.9)	(88.4)	(74.5)	(86.4)	(76.1)	(83.9)	(83.1)
School Type							
Public	85	159	166	70	52	127	107
	(72.0)	(80.3)	(69.5)	(79.5)	(73.2)	(88.8)	(86.3)
Private	33	39	73	18	19	16	17
	(28.0)	(19.7)	(30.5)	(20.5)	(26.8)	(11.2)	(13.7)
Location Type							
Urban	48	106	87	32	20	99	74
	(40.7)	(53.5)	(36.4)	(36.4)	(28.2)	(69.2)	(59.7)
Suburban	66	77	79	33	42	25	45
	(55.9)	(38.9)	(33.1)	(37.5)	(59.2)	(17.5)	(36.3)
Rural	4	15	73	23	9	19	5
	(3.4)	(7.6)	(30.5)	(26.1)	(12.7)	(13.3)	(4.0)

Marital Status							
Married	112	179	196	68	63	120	91
	(94.9)	(90.4)	(82.0)	(77.3)	(88.7)	(83.9)	(73.4)
Unmarried	6	19	43	20	8	23	33
	(5.1)	(9.6)	(18.0)	(22.7)	(11.3)	(16.1)	(26.6)
Language Status							
English at home	61	83	162	74	45	24	50
	(51.7)	(41.9)	(67.8)	(84.1)	(63.4)	(16.8)	(40.3)
Non-English at Home	57	115	77	14	26	119	74
	(48.3)	(58.1)	(32.2)	(15.9)	(36.6)	(83.2)	(59.7)
Poverty Level							
At or above poverty line	111	173	212	83	66	85	88
	(94.1)	(87.4)	(88.7)	(94.3)	(93.0)	(59.4)	(71.0)
Below poverty Line	7	25	27	5	5	58	36
	(5.9)	(12.6)	(11.3)	(5.7)	(7.0)	(40.6)	(29.0)
N	118	198	239	88	71	143	124
	(12.0)	(20.2)	(24.4)	(9.0)	(7.2)	(14.6)	(12.6)

Notes: Total N = 981
Source: Early Childhood Longitudinal Study—Kindergarten

Table 2. Reading and Math Scores by Ethnicity

	Math		Reading	
Ethnicity	Mean	Std. Deviation	Mean	Std. Deviation
Asian Indian	67.44	18.16	94.28	27.85
Chinese	69.41	18.76	92.70	27.30
Filipino	60.28	16.13	85.62	25.02
Japanese	67.39	16.65	85.41	22.77
Korean	67.42	18.69	93.78	24.86
Southeast Asian	60.91	15.92	76.02	22.02
Other Asian	60.29	18.23	77.20	22.91
Total	64.24	17.80	86.20	25.82

Source: Early Childhood Longitudinal Study—Kindergarten

One-Way ANOVA

To test for academic achievement differences among the seven ethnic groups, a one-way ANOVA was conducted. The results in Table 3 show that the differences in score means were significant for reading $F(6, 980) = 12.04$, $p < .001$, and for math $F(6, 980) = 8.44$, $p < .001$. Multiple comparisons using the post hoc test were then applied to measure math and reading scores among the groups. For the remainder of this study, Asian Indian students were chosen as the reference group because they were one of the highest achieving groups and differed statistically from most of the other ethnic groups. In math, Asian Indian first graders ($M = 67.44$) scored significantly higher than Filipino ($M = 60.28$, $SE = 1.97$), Southeast Asian ($M = 60.91$, $SE = 2.14$), and Other Asian ($M = 60.29$, $SE = 2.34$) students. In reading, Asian Indian first graders ($M = 92.70$) scored significantly higher than Southeast Asian ($M = 76.02$, $SE = 3.16$) and Other Asian ($M = 77.20$, $SE = 3.29$) students. Asian Indian, Chinese, Japanese, and Korean first grade math and reading scores did not statistically differ from one another; however, they

performed significantly higher than the remaining groups. Southeast Asian and Other Asian differed significantly from each other and from all other groups in both their math and reading scores (data available upon request).

Table 3. Results of the Analysis of Variance for Reading and Math Scores

	Reading				Math			
Comparison	Sum of Squares	df	Mean Square	F	Sum of Squares	df	Mean Square	F
Between Groups	45112.669	6	7518.779	12.037*	15349.313	6	2558.219	8.439*
Within Groups	608381.084	974	624.621		295270.174	974	303.152	
Total	653493.753	980			310619.487	980		

*p < .001
Source: Early Childhood Longitudinal Study—Kindergarten

Table 4. Comparisons of Means in Reading and Math Scores

	Math			Reading		
Ethnicity	Mean	Mean Difference	Std. Error	Mean	Mean Difference	Std. Error
Reference group: Asian Indian	67.44			94.28		
Chinese	69.41	-1.97	2.14	92.70	1.59	3.21
Filipino	60.28	7.15*	1.97	85.62	8.66	3.03
Japanese	67.39	0.05	2.44	85.41	8.86	3.53
Korean	67.42	0.02	2.78	93.78	0.05	3.91
Southeast Asian	60.91	6.53*	2.14	76.02	18.26*	3.16
Other Asian	60.29	7.15*	2.34	77.20	17.08*	3.29
Total	64.24			86.20		

*p<0.05
Source: Early Childhood Longitudinal Study—Kindergarten

Linear Regression

To determine if ethnicity is a major factor in student achievement, school and familial factors are taken into account to see if they can explain the differences in achievement. Table 5 shows estimated coefficients for three linear regression models using Asian Indian as the reference group. The first model includes only the bivariate effects of ethnicity on reading scores. The results show that the reading scores of Filipino, Japanese, Southeast Asian, and Other Asian students were statistically different from Asian Indian students. Taking into account the influence of school characteristics on academic achievement, school factors were added into Model 2. When school factors were added, the coefficients for all ethnic groups increased suggesting that school factors can explain some of the reading score disparities between the other Asian ethnic groups and the reference group, Asian Indian, but not all. After controlling for school level characteristics, Filipino, Japanese, Southeast Asian, and Other Asian were still significantly doing worse than Asian Indian when it came to reading.

In the third model, school factors along with family factors were added. Again, the coefficients for all ethnic groups increased, meaning that school and family level characteristics could jointly explain some of the reading score disparities between groups, but not all. With the inclusion of family level characteristics, reading scores for Filipino, Japanese, Southeast Asian, and Other Asian first grade students were still significantly different from Asian Indian first grade students. This suggests that school and family factors cannot fully explain the achievement disparities among Asian ethnic groups.

Table 5. Estimated Coefficients of Linear Regression Models for Reading Scores

	Model 1	**Model 2**	**Model 3**
Constant (Asian Indian)	94.278	87.903	90.451
Chinese	-1.590	0.042	0.858
Filipino	-8.662**	-7.349**	-5.914**
Japanese	-8.863**	-7.140**	-5.972*
Korean	-0.500	-0.717	-0.134
Southeast Asian	-18.259**	-13.872**	-10.384**
Other Asian	-17.078**	-14.339**	-10.666**
Location type (ref=city)		7.346**	6.647**
School type (ref=public)		11.862**	9.875**
School size (ref=large)		-3.875	-3.794
Language status (ref=English at home)			-1.372
Marital status (ref=married)			-10.750**
Poverty level (ref=above poverty level)			-6.986**
R^2	0.069	0.116	0.154

*p < .05, **p < .01
Source: Early Childhood Longitudinal Study—Kindergarten

Table 6 shows the estimated coefficients for three linear regression models using Asian Indian as the reference group. The first model shows the bivariate effects of ethnicity on math scores. The results reveal that the math scores of Filipino, Southeast Asian, and Other Asian students were statistically different from Asian Indian students. Once school factors were added into Model 2, the coefficients for all ethnic groups increased, implying that school factors can explain some of the reading score disparities between the other Asian ethnic groups and the reference group, Asian Indian, but not all. The coefficients for Southeast Asian and Other Asian increased significantly more than the coefficient for Filipino, implying that school level characteristics can explain more of the math score disparity for Southeast Asian and Other Asian than for Filipino. Despite the increase, Filipino, Southeast Asian, and Other Asian were still doing significantly worse than Asian Indian when it came to math.

In the third model, school factors along with family factors were added. The coefficients for all ethnic groups increased, meaning that school and family level characteristics can jointly explain some of the reading score disparities, but not for all groups. With the inclusion of family level characteristics, reading scores for Southeast Asian and Other Asian first grade students were no longer statistically significant. However, reading scores for Filipino first grade students were still significantly different from Asian Indian first grade students. These results suggest that school and family factors can explain the achievement disparities for Southeast Asian and Other Asian students, but not for Filipino students.

Table 6. Estimated Coefficients of Linear Regression Models for Math Scores

	Model 1	**Model 2**	**Model 3**
Constant (Asian Indian)	67.444	63.614	65.869
Chinese	1.971	2.793	3.470
Filipino	-7.155*	-6.006**	-5.199*

Japanese	-0.051	0.901	1.301
Korean	-0.022	-0.287	-0.026
Southeast Asian	-6.529**	-3.699*	-0.828
Other Asian	-7.149**	-5.565*	-2.914
Location type (ref=city)		6.023**	5.572**
School type (ref=public)		6.060**	4.522**
School size (ref=large)		-4.550**	-4.415**
Language status (ref=English at home)			-19.47
Marital status (ref=married)			-6.941**
Poverty level (ref=above poverty level)			-5.325**
R^2	0.049	0.093	0.134

*p<.05, **p<.01

Source: Early Childhood Longitudinal Study—Kindergarten

Discussion

This study adds to the growing body of literature underscoring the diversity in academic achievement and potential needs of Asian students. Supporting the findings of other research (Pang et al., 2011; Newell & Fuller, 2010; Kao, 1995), this study found that the use of a pan-ethnic label "Asian" is an impediment to understanding the achievement differences among Asian American students.

A major challenge to this study is the small sample size. It would have been ideal to have more ethnic groups represented in the study and not have to combine groups. My future research will look more deeply into varying characteristics that are not as easily quantifiable among the Asian population and immigrant generation that may account for the educational disparities not explained by school and family level characteristics utilized in this study.

The findings of this study suggest that the model minority myth may not exist. The variation of educational disparities among Asian ethnic groups dispels the myth that all Asians perform at high levels. Study findings provide support for continuing research in deconstructing racial categories and further examining the academic achievement of Asian and other ethnic minorities whose educational needs are masked by aggregate data. The results suggest that researchers, educators, and policy makers should take more consideration into ethnic differences and look beyond a Black-White dichotomous achievement gap in order to achieve a more equitable educational system.

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