

**Revisiting the Explanations for Asian American Scholastic Success: A meta-analytic and
critical review**

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Abstract

A few popular explanations attempt to argue for a weaker relationship between socioeconomic status (SES), parental involvement (PI), and achievement among Asian Americans compared to their white counterparts: Asian American students' Confucian culture, strong motivation for upward mobility as immigrants, unique forms of parental involvement different from European Americans, and ethnic social capital. However, there has not been a single synthesis up to date empirically testing whether the effect size for SES and/or PI and achievement is actually weaker among Asian Americans across the body of accumulated scholarship. In this review, we found that quantitatively, the SES-achievement relationship was null for Asian Americans while it was positive for PI and achievement. The current scholarship revealed several key problems. In spite of the intuitive and appealing cultural arguments put forward emphasizing Confucianism and immigration optimism, our review points out that these arguments have weak empirical support, and are too generic to be convincingly applied to Asian Americans without any distinction by ethnicity or generation. Furthermore, the parental involvement measures used did not effectively capture Asian American parents' behaviors. Our review suggests a new comprehensive model better integrating the Confucian and immigrant optimism explanation, developing culturally appropriate measures of PI, distinguishing ethnic variation within Asian American groups, and including a nuanced view on how and whether the explanations hold across generations.

Keywords: Achievement, Asian Americans, Culture, Socioeconomic Status, Parents

Introduction

The current scholarship has generated a large body of work explaining why Asian American students are performing so well academically compared to other ethnic groups, leading to the “model minority” discourse. The key question is: How and why are Asian American students, who tend to be less socioeconomically advantaged than White ethnic groups, able to surpass them at school? Cultural explanations of the uniformly high achievement of Asians have been prevalent, downplaying structural factors such as socioeconomic status. The cultural explanation outlines that Asian Americans value education due to their Confucian beliefs that emphasize education as a moral pursuit. In addition, the upward mobility framework explains that Asian immigrants are likely to be strongly motivated to work hard because they self-selected to migrate to the United States for a better life by choice, contrary to African American groups (e.g., Ogbu 1979, 1987; Ogbu and Simons 1998). Such approach has been criticised, however, for its overwhelmingly uniform narrative portraying and treating Asian Americans as a monolithic group characterised by their academic success. Vivian Louie (2004) has pointed to the socioeconomic variations among Chinese Americans: she found that the strategies to support their children’s education differed among low-SES and high-SES families even within the same ethnic group. Furthermore, it is unclear whether and the extent to which cultural frameworks are still relevant today since some Asian American ethnic groups are in their third generation now, facing very different situations and cultural contexts shaping their motivation compared to the first wave of immigrants.

In spite of the large body of literature constructing and deconstructing the discourse framing Asians as a “model minority” or not (“model minority myth”), empirical evidence is very limited. Due to the difficulty of directly measuring ‘culture,’ empirical studies have

often examined the relation between socioeconomic status (SES) or other structural variables, and interpreted the weak SES-achievement link found in Asian American groups by attributing them to cultural advantages. Alternatively, parental involvement (PI) in education including but not limited to their educational aspirations for children have been used to measure cultural emphasis on education. Leaving aside the question of whether such approach is suitable, there has not been a single synthesis up to date empirically testing these assumptions that are accepted without rigorous questioning.

The empirical research on SES-achievement and PI-achievement has proliferated in the U.S. since the monumental Coleman report (1966) that found family factors to be stronger predictors of school achievement than school resources in the United States. This has culminated in a series of meta-analyses in the U.S. summarizing the correlations for SES-achievement (Harwell et al. 2016; Letourneau et al. 2011; Sirin 2005; White 1982) and PI-achievement (e.g., Fan and Chen 2001; Hill and Tyson 2009; Jeynes 2003, 2005, 2007, 2012; Kim and Hill 2015; Wilder 2014). Unfortunately, the majority of studies group Asian Americans with other ethnic minority groups (e.g. African American, Latino)¹ and label them as a single “minority” group (see White 1982; Sirin 2005), making it impossible to distinguish the effect size for Asian Americans. Harwell et al. (2016) identifies such coding decision as problematic, notably Sirin’s (2005) attempt to interpret the weaker association between SES and achievement in the minority group, because it is impossible to say anything about which ethnic group is driving these findings.

Harwell et al. (2016) is one of the rare studies that includes a breakdown of the effect size by ethnicity. Harwell et al. (2016) conducted an updated meta-analysis building on White (1982) and Sirin’s (2005) work, which included a vast number of studies overlapping

¹ The only exceptions are Harwell et al. (2016) and Jeynes (2003), two studies we describe in detail subsequently.

with White's (1982) study (spanning approximately 6 decades, 1915-75), and a smaller number of additional studies published between 1980 and 2010. This meta-analytic study shows that a large number of studies reported correlations that did *not* include Asian Americans at all ($k= 149$) or were classified as 'unknown' ($k= 139$), suggesting that they failed to report the ethnicity. The number of correlations retrieved for Asians was very small: Out of the 100s of correlations reported in studies published between 1915 and 2010, only 6 included a 100% Asian sample while 3 correlations were based on a sample of 0-99% Asians.² The number of correlations reported for the other ethnic groups was much higher, suggesting that there might simply be fewer studies up to date reporting a separate correlation about the SES-achievement relation for Asians. This is not surprising considering that Asians might be a smaller ethnic minority proportionally to the U.S. population, but points to a gap in the literature because they contribute no less to the theoretical frameworks explaining ethnic differences in achievement.

Thus, in spite of the widespread narrative about Asian American scholastic success that implies different patterns in association between SES, PI, and achievement compared to other ethnic groups, the current evidence is lacking. This study sets out to conduct a systematic review of the current research looking at the associations between SES, parental involvement, and achievement in Asian American samples in the last thirty years. This study will (1) synthesise the quantitative associations between SES-achievement, and PI-achievement among Asians, and (2) investigate how the past scholarship has framed and explained this link, critically examining the theoretical frameworks used in previous related research.

Research methodology

Literature review

² See Harwell et al. (2016).

We conducted a systematic review to locate all studies reporting the association between SES/PI and achievement for Asian American school-age children grades K (kindergarten) to 12. We included the traditional measures of parental education, occupation, and income as indicators of SES, in addition to other material resources such as assets, household possessions, and the availability of educational materials and resources that can be purchased. These factors were frequently used in studies of SES and achievement (e.g., White 1982; Sirin 2005), and was found to be associated with the cognitive development of younger children in the U.S. (Dubow and Ippolito 1994; Hoff 2003). Parental involvement is also closely associated with SES (e.g., more educated parents are more involved), sometimes described as a mechanism explaining the SES-achievement relationship (see Pomerantz et al. 2007). We included studies that provided a measure of parental involvement such as *home involvement* (e.g., monitoring schoolwork, helping with homework), *school involvement* (e.g., volunteering or attending a parent teacher meeting), and *academic socialization* (e.g., parents' beliefs and attitudes about education such as educational expectations). They are the most commonly used indicators in previous meta-analyses (see Wilder 2014).

We limited our studies to those that provided a separate effect size for Asian Americans only, without aggregating the effect size with other ethnic groups. College students and preschool children were excluded because the SES-achievement and PI-achievement relation might operate differently for these age groups. The search was limited to studies published in peer-reviewed articles written in English since 1990 to avoid cohort effects and to make the results comparable to those published by Sirin (2005). We excluded populations of children with severe cognitive / physical disabilities, gifted children, and terminally ill children.

We first searched through online databases in EBSCO, ERIC, SocINDEX, PsychINFO using a combination of the keywords (Socioeconomic Status or socio-economic status or social class or social status or social context or family background or Income or wealth or

asset* or "home possessions*" or education or occupation or job or "cultural capital" or capital* or "home environment*" or "home resources*" or "parent* involvement" OR "family involvement") and (Achievement or "school success" or student performance" or "academic outcome*") and (Asian American* or Asian*). Additional words that describe Asian Americans were added to yield a wider search using the EBSCO thesaurus:

Pacific Islander, Native Hawaiian, Samoan American, Chamorro, Korean American, Cambodian American, Hmong American, Vietnamese American, Indian American, Chinese American, Filipino American. In the next step, we conducted an ancestry search of all review and meta-analytic articles that might include an effect size for Asian Americans (Castro et al. 2015; Erion 2006; Fan and Chen 2001; Hill and Tyson 2009; Jeynes 2007; Jeynes 2012; Jeynes 2003; Patall, Cooper, and Robinson 2008; Senechal and Young 2008; Sirin 2005; Wilder 2014). Surprisingly, very few studies even included a study that reported an effect size for Asian Americans separately, and only one study was retrieved (Kennedy 1995) and included.

Study Sample

In total, our search yielded a total number of 4,141 studies, of which 20 were kept for final inclusion. 6 reported an effect size for SES only, 7 for PI, and 7 for both SES and PI. The majority of studies (13 out of 20) came from two public U.S. nationally representative datasets: National Education Longitudinal Study: NELS 88 (n= 10), and Early Childhood Longitudinal Study – Kindergarten Cohort (ECLS-K) (n= 3). The Early Childhood Longitudinal Study – Kindergarten Cohort (ECLS-K) includes an oversampling of Asian American children and parents, while the National Education Longitudinal Study: 1988 includes an older sample of Asian American children. We note that both datasets were collected in 1988 (NELS 88) and 1998 (ECLS-K), and recent studies on the topic are scarce in spite of the fact that we included studies published until 2017. All except 3 articles

(Bankston 1995; Kiang et al. 2013; Kim and Rohner 2002) were comparative studies of multiple ethnicities in the U.S including Asian Americans providing points of comparison, the reference category being European Americans.

Both U.S. nationally representative dataset were high-quality longitudinal studies using nationally representative samples and were developed under the sponsorship of the U.S. Department of Education, National Center for Education Statistics. NELS 88 used a stratified random sampling procedure targeting U.S. public schools surveying 24,599 students who were followed up across four subsequent waves until 2000. The ECLS-K study was developed and includes about 23,000 kindergarten children followed through fifth-grade. A battery of standardized measures were distributed to measure achievement scores in both surveys. Most of the other studies drew on smaller scale datasets (n varying from 75 to 402) developed and collected by the author, and typically surveyed students sampled from a few schools with varying proportions of ethnic minority groups. For instance, Kiang et al. (2013) drew on students sampled from six schools that varied in terms of academic achievement and ethnic, while Bankston (1995) drew on students sampled from two schools located near the Vietnamese community and including over 75% of the 9th-to-12th grade students in the Vietnamese neighborhood. Studies were carefully designed to fit the research questions. All studies are summarized in Table 1.

Data Analytic strategy

The current review integrates quantitative and qualitative approaches in order to provide a comprehensive and nuanced view of Asian American achievement in light of their socioeconomic status and parental involvement. In the first step, we conducted statistical integration of correlational studies that reported an effect size of the relationship between SES/PI and child achievement using the Comprehensive Meta-Analysis software (CMA version 3.0; Borenstein et al. 2009). The weighted r -index was used because it is the most

commonly used index for correlational studies and permits us to contextualise this study and compare the findings with other correlational meta-analyses of the same measures in other ethnic groups. A random-effects model was used because most studies were naturalistic and there was a large variation in the design and context of the studies, therefore the studies are unlikely to be functionally equivalent. By fitting a random-effects model, we are able to extrapolate from this population and generalise to a range of other possible studies. Effect sizes were weighted by the inverse variance of each effect size multiplied by the inverse of the number of effect sizes within each subgroup (Borenstein et al. 2009; Lipsey and Wilson 2001). All studies that did not provide enough statistical information to calculate effect sizes were excluded. When a study stated that no significant effect was found, correlations were conservatively set to the value of zero as recommended by Borenstein et al. (2009) and Cooper (2010).

In the second step, we reviewed the 20 studies retrieved through our systematic search. We further examined how the 20 articles discussed the SES-achievement / PI-achievement link for Asian Americans. Table 1 provides a summary of the 20 studies. In addition, we conducted a separate non-systematic review of studies that includes a discussion of the frameworks used to explain Asian American achievement in order to provide some background to the narrative found in the 20 studies and to critically review their interpretation of the results.

The integration of quantitative and qualitative approaches, systematic and non-systematic approaches to examine the same phenomena has been rare practice in previous reviews. The most common types of reviews have been classified into traditional, critical, or systematic, and narrative or meta-analytic, emerging from different traditions of philosophical inquiry (Wolgemuth, Hicks, and, Agosto 2017). However, we argue that an integration of quantitative

and critical review is important for a comprehensive outlook in order to advance our understanding on Asian American achievement in light of the narrative of the model minority discourse.

SES, PI, and achievement: Quantitative synthesis

Overall effect sizes

In total, we retrieved 9 studies providing correlations for SES/PI and achievement. We noticed that 3 studies reported on the same dataset (NELS 88), so we counted them only once although they were reported in separate documents (Kennedy 1995; Mau 1997; Peng and Wright 1994). As a result, we ended up with 7 studies included in our quantitative analyses representing 33 correlations. Sample sizes ranged from 75 to 785.

Overall, the weighted average correlation was .12 (95% confidence interval CI [- .03, .26]). However, we notice that this value is adjusted upwards when conducting additional analyses to account for missing data. One of the primary concerns is the tendency for only statistically significant results to be published and reported. To address potential publication bias, the “trim-and-fill” method was used (Duval and Tweedie 2000). In order to improve the symmetric distribution around the mean, studies that were farther away were trimmed while others were imputed on either side of the mean, and the mean based on this correction was recalculated. The primary goal of the trim-and-fill method is to test the distribution of the effect sizes provided by the studies included to the predicted distribution assuming that studies are symmetrically distributed around a true mean. A search limitation or a publication bias favoring statistically significant studies can lead to missing data, making the distribution asymmetric. Such “missing” data is estimated using this method by dropping outlier studies and recalculating the means. Under the random-effects model, we observe 1 imputation on the right of the figure for SES-achievement (positive correlation, see Figure 1), and an

upwardly adjusted effect size of .17 (95% CI [.01, .34]).

[Figure 1 about here]

This adjusted effect size calculated in our study is higher than our original observed effect size of .12, and much closer to the range found in Sirin (2005) and Harwell et al. (2016). The effect size was .17 (95% CI [.16, .19]) for ethnic minorities (including Asian Americans) in Sirin (2005), and .17 (95% CI [.10, .23]) for Asian Americans in Harwell et al. (2016). As for other ethnicities (e.g., White), the effect size was consistently higher in these two meta-analytic studies: The weighted correlation found for White students only in Sirin (2005) was .27 (95% CI [.25, .28]), while it was slightly lower in Harwell et al. (2016): .22 for White, .20 for $\leq 50\%$ Black, and .20 for $\leq 50\%$ Hispanic. Sirin (2005) and Harwell et al. (2016) both constantly found that ethnic minority groups' SES-achievement link was generally weaker compared to other ethnicities.

As for parental involvement, the effect size was positive in our sample of Asian Americans, the weighted correlation being .19 (95% CI [.13, .25]). A trim-and-fill analysis did not yield any imputations, so no adjusted value calculated. These numbers are comparable to those found in previous meta-analyses not focused on Asian American samples ranging from .18 (Hill and Tyson 2009) to .25 (Fan and Chen 2001), or the .22 reported in Jeynes (2003) for Asian Americans only. The findings on ethnic differences have been mixed in previous studies, ranging from no difference (Fan and Chen 2001; Hill and Tyson 2009) to some difference (Jeynes 2003, 2005, 2007, 2012).

Jeynes' (2003) meta-analysis is the only study that has seriously attempted to separate Asian American students from other ethnicities. Jeynes (2003) includes 20 studies published between 1990 and 2000, and divides the students into 6 different racial groupings: (a) mostly African American participants, (b) all African American participants, (c) mostly Asian American participants, (d) all Asian American participants, (e) mostly Latino and Asian

American participants, and (f) all Latino and Asian American participants. This study suggests that the effect size for parental involvement and achievement is the smallest for the Asian American group, estimated at .22. The difference was stark compared to all African Americans ($r = .48$).

Descriptive associations in studies that do not report a separate correlation

11 out of the 20 total studies only reported a regression coefficient and no correlation so we were not able to include them in the meta-analysis. We descriptively report the results so as to provide an overall picture in light of the correlational results (see Table 1). We conducted a thorough analysis paying particular attention to distinguish between those studies that: (1) emphasised differences between Asian Americans and other ethnic groups, (2) argued that Asian Americans were not that different, and (3) provided a mixed picture.

[Table 1 here]

5 articles out of 20 reported that the associations between SES/PI and achievement were weaker for Asian Americans, supporting the correlational results. Pong, Hao, and Gardner (2005) reported that both SES (parental education and income) and PI were not related to achievement. Bankston (1995) found that for Vietnamese Americans, there was no relationship between parental education and achievement, while parental ethnic community involvement positively predicted academic achievement. Studies that used the data set from NELS 88 found that there is no significant relationship between SES and achievement (Kao 1995) or PI and achievement (McNeal 1999). McNeal (1999) further found that parent-child discussion had no relationship with achievement. Unlike Bankston (1995), Kao (1995), McNeal (1999), and Pong, Hao, and Gardner (2005) reporting that SES/PI were not related to achievement, Desimone (1999), using NELS 88, found that SES and parental involvement were weak predictors of academic achievement. Among the parental involvement variables, school involvement such as PTO (Parent-Teacher Organization) meeting and school-level

volunteering were not associated with achievement.

On the other hand, 6 studies reported no difference between Asian Americans and other ethnicities. In other words, the strength of the association between SES/PI and achievement was similar across ethnicity. Using the data from NELS 88, Blair, Blair, and Madamba (1999), Kennedy (1999), and Mau (1997) found that SES and parental expectations were related to achievement. Sy and Schulenberg (2005), based on ECLS-K, reported that parent expectations, school participation, home literacy involvement, and educational activities were positively associated with achievement for both Asian Americans and European Americans. Two studies (Bogenschneider 1997; Kiang et al. 2013) found a positive association between SES/PI and achievement controlling or mediated by other variables. Bogenschneider (1997)'s interpretation is particularly interesting, as it cites Bronfenbrenner's (1986) bioecological framework to argue for the universality of the effects of PI: "These findings provide strong evidence that, even though the levels of parental school involvement vary in different ecological niches, the benefits of parents' school involvement to their adolescents' school success are relatively constant across contexts" (p. 729-30).

Nine studies found mixed results, and provided a more ambiguous interpretation regarding how different Asian Americans were compared to other ethnicities. The two studies that used the data from ECLS-K (Cooper et al. 2010; Davis-Kean and Sexton 2009) found that family income/poverty was not related to achievement. Different types of school and home involvement also yielded various associations depending on the type of outcome. For instance, Cooper et al. (2010) found that home-learning activities had no relationship with math or reading achievement, but that providing cognitively stimulating materials in the home had a positive relationship with math achievement, while it had no significant relationship with reading achievement.

Four studies (Corwyn and Bradley 2008; Kao 2004; Peng and Wright 1994; Yan and

Lin 2005) using the data from NELS 88 found that parental educational expectations and achievement had a positive relationship. Similar to Peng and Wright (1994), Yan and Lin (2005) also found that parental expectations had a positive relationship with achievement but school-related involvement, family rules, and parent information networks had no significant relationship with achievement. Kao (2004) found that parents' educational aspirations and having a discussion about college were positively related to achievement, while having a discussion about school in general was negatively related to achievement. Two studies *not* based on national datasets provided contradictory results: Moon, Kang, and An (2009) found that family income had a positive relationship with achievement while school involvement and parental education were not related to achievement. Okagaki and Frensch (1998) found that parents' expectations for children's grade and creating an academically enriching environment were not predictive of achievement, whereas parents' expectations for children's educational attainment had a positive relationship with achievement.

The above studies provide a very mixed picture of how SES and PI might influence achievement for Asian Americans. Roughly 25% of the studies provided an argument for a weaker relationship for Asian Americans while another 25% suggested that the associations for Asian Americans might not be different from their European American counterparts. Another 50% of studies including multiple measures of SES/PI provided mixed results, displaying simultaneously similar *and* different patterns of association between Asian Americans and their European American counterparts across a wide range of measures.

Explaining Asian American students' achievement

In spite of the rather inconclusive quantitative evidence provided above, a large body of scholarship has focused on documenting the unique characteristics of Asian Americans conducive of their achievement, which we will explore in this section. Various explanations were provided to clarify the associations between SES/PI and achievement for Asian

American groups within the context of their consistently high achievement and drawing heavily from the model minority myth discourse. We draw on four central themes explaining the weaker SES-achievement association for Asian Americans: (1) Cultural explanations, (2) Immigration, (3) Parental involvement, and (4) Ethnic communities and social capital.

1. Cultural explanations

In the 1980s-1990s, the scholarship has largely been focused on describing *why* the status attainment model emphasizing the role of SES for intergenerational reproduction of educational attainment has generally failed to explain Asian American achievement (Lee and Zhou 2014). Asian American families often *lack* the structural resources and the cultural capital that were found to benefit the achievement of White middle-class families in the U.S., but are no less academically successful. To explain this puzzling phenomenon, two contrasting hypotheses were put forward: genetic versus cultural. The genetic hypothesis suggested that Asian American achievement was explained by their hereditary intellectual superiority while the cultural hypothesis emphasised that cultural factors promoted Asian academic achievement. Older studies in our sample still mention the genetic versus cultural argument (Bankston 1995; Sue and Okazaki 1990). For instance, Bankston (1995) referred to previous scholarship that cited the higher IQ of Asians as evidence for their higher levels of intellectual ability in his theoretical framework (Lynn 1987; Sue and Okazaki 1990; Owen 1985). However, these types of explanations became obsolete after the 1990s and were replaced by a strong focus on cultural factors and immigrant optimism instead. In a pivotal article widely cited and published right at this turning point, Sue and Okazaki (1990) foreshadows this change in the research direction from explanations tied to genetics, culture, and finally immigration optimism.

The next phase of the post-1990s produced a body of work arguing that Asian Americans share Confucian cultural roots with their East Asian counterparts who also consistently rank

high on the global PISA test, and that traditional Confucian teachings value education, lifelong learning, and hard work (Barringer et al. 1993; Jiménez and Horowitz 2013; Wong 1990; Schneider and Lee 1990; Stevenson and Stigler 1992). Linked to the Confucian argument, Harold Stevenson and colleagues built a large body of work over a decade and argued that Asian students score better on mathematics tests because they tend to attribute success to effort over ability (Stevenson and Lee 1990). However, Bempechat (1999) argued that these studies are fatally flawed because they omit some counter-findings while selecting only some portions of the results, and ultimately misinterprets the concept of effort and ability by inappropriately applying an exclusively American framework on Asian individuals.

2. Immigration

Immigrant attitudes and behaviors have been most widely used as an additional cultural frame to explain Asian American students' achievement besides emphasis on education linked to Confucianism. Kao and Tienda (1995) explain immigrant optimism in the following way: "immigrant parents are optimistic about their children's future socioeconomic success and such optimism helps promote academic success of the first and second generations." Ogbu's (1979) cultural-ecological theory of minority school performance further distinguishes between autonomous, voluntary or immigrant (such as Asian American groups who came to the States out of choice), and involuntary nonmigrant categories (such as African Americans who did not migrate voluntarily to the States). This framework explains the high motivation of Asian American immigrants for upward mobility, which they believe can be achieved through education. Ogbu and Simons (1998) argues that Asian Americans' positive beliefs and attitudes towards school contrast with the negative attitudes of African Americans, who were entrenched in poverty over generations and do not believe that upward mobility can be achieved through education. Frank Pieke (1992) further elaborates on the "folk theory of success" in Chinese Dutch immigrants, who articulate their

educational behavior within a complex set of interactions between the cultural logic, social environment and socioeconomic characteristics of their setting.

On the other hand, a reverse logic can be applied to Asian American students' emphasis on education, which might be due to their blocked mobility through other means such as social networks (Sue and Okazaki 1990). These immigrant theories were prevalent in the 1990s, and we find that studies published before 2000 in our sample heavily draw on them. For example, Kennedy (1995) explains that voluntary minorities place value on academic success and are willing to overcome the cultural barriers because they perceive academic success as the only way to future economic success (Kao 1995; Pong, Hao, and Gardner, 2005; Sue and Okazaki 1990). Asian Americans' fear of an unstable future and racial discrimination might be driving their strong desire to secure their future through education when other options are less available to them (Kao 1995; Sue and Okazaki 1990).

3. Parental Involvement

Parental involvement, defined as parent's commitment of resources to the academic arena of children's lives (Grolnick and Slowiaczek 1994), includes a broad range of beliefs, attitudes, and practices, including home, school involvement and academic socialization. We find that Asians varied tremendously across these different types of involvement. Academic socialization as a manifestation of parents' educational beliefs and attitudes was found to be the major factor leading to high achievement regardless of SES for Asian Americans. Cooper (2010) explains that Asian parents across a range of socioeconomic status were found to hold uniformly high expectations of their children's education than parents of any other racial group, buffering the academic risks of family poverty. This same explanation was found across a range of articles, including Corwyn and Bradley (2008), Davis-Kean and Sexton (2009), Kao (1995), Mau (1997), Pong, Hao, and Gardner (2005), and Yan and Lin (2005). Most notably, Pong, Hao, and Gardner (2005) linked Asian parents' higher educational

expectations with their propensity to invest more resources on education.

On the other hand, home and school involvement was less influential. Notably, multiple studies repeatedly found that Asian American parents scored the lowest on school involvement (Bogenschneider 1997; Desimone 1999; McNeal 1999; Sy and Schulenberg 2005), and that their school involvement was the least predictive of achievement compared to other ethnicities. This corroborates the large body of literature explaining that Asian parents are the least likely to be involved in schools or to enact cultural capital as their Western upper middle-class counterparts (Chao 1996, 2000; Huntsinger et al. 1997; Huntsinger et al. 2000; Schneider and Lee 1990). Some explain that Asians are less involved in school because they view the home and school spheres as separate and defer authority to teachers (Lee and Zhou 2014). Others point out that Asian parents tend to engage more in indirect forms of involvement (such as structuring the child's out-of-school time) rather than directly participating in school activities (Sy and Schulenberg 2005). One of the most obvious reasons is that Asian parents have difficulty interacting with school staff and personnel due to poorer English language skills, especially if they are recent immigrants (Kao 1995; Pong, Hao, and Gardner 2005).

4. Ethnic communities and social capital

Instead of being directly involved, Asian American parents were often found to be deeply engaged with their communities and to send their children to ethnic after-school programs, tapping into their ethnic social capital. This is another mechanism explaining why Asian American children with lower SES are not always performing poorly, due to community-level academic support. We note that there is a growing body of work, mostly qualitative, examining social capital and networks (Ainsworth 2002; Bankston 1995; Bankston, Caldas, and Zhou 1997; Louie 2004).

Bankston (1995) found that parents' and children's community involvement were strong predictors of achievement for Vietnamese American students. Bankston (1995) identified the

following mechanisms by which community involvement can increase achievement: ethnic social capital (networks), formal organizations that aim to facilitate cooperative relations such as after-school classes or religious center, neighborhood relationships, social relations, expectations of community members, encouragement, and support. Ainsworth (2002) expanded on the effect of neighborhoods, and argued that neighborhood is the site where collective socialization takes place as educational beliefs, behaviors, and attitudes are transmitted within the community. In the case of Asian Americans, living in neighborhoods that value education collectively is likely to lead to better outcomes for members of the community. Social ties with peers from the same ethnic background was also found to positively or negatively influence achievement depending on how much their peer group valued education. Bankston, Caldas, and Zhou (1997) reported that Vietnamese American students who interacted with other Vietnamese peers demonstrated greater academic success than their cohorts, and attributed it to academic beliefs and attitudes preserved and reproduced within closed ethnic social boundaries.

These studies suggest that ethnic capital plays an important role for Asian Americans and provides an alternative explanation for the academic success of Asian American over socioeconomic status. It is thus important to take into account the context of broader social relations beyond the family unit, and further research is needed to understand the particular mechanisms of how ethnic capital is formulated, obtained, and transmitted within various ethnic communities.

Revisiting the Explanations for Asian American Scholastic Success

The above central themes explaining the weaker SES/PI-achievement association for Asian Americans are often accepted uncritically. We next re-examine these explanations.

1. *Immigrant optimism and Confucian culture*

It is important to note the distinction between immigrant optimism and Confucian culture. They are fundamentally different explanations of a same phenomenon that are quoted simultaneously or individually to account for Asian American academic success regardless of SES. However, the scholarship is unclear as to how these two frameworks interact with each other, and we are left with much ambiguity as to the extent to which they are able to predict the achievement of various groups: Confucian recent immigrants such as Korean American, Confucian non-immigrants such as mainland Chinese, and non-Confucian immigrants such as Hispanic, for instance.

On the one hand, Asians (non-immigrants) and Asian Americans have often been viewed as a similar group when explaining their educational outcomes: The same Confucian frameworks are used to explain both groups' achievement. However, these groups are obviously very different starting with their position in the social strata in their respective contexts, a point overlooked in the literature. Very few studies actually compare Asian Americans to non-immigrant Asians directly or investigate their differences. The only exception is Mau (1997), where perceived parental expectation of Asian immigrants and Asian Americans was *not* found to be significantly different although higher than their European American counterparts—but this finding was left unexplained.

What about different ethnic groups classified as “Asian”? Confucianism is once again used as a blanket explanation to explain achievement differences across these groups. For instance, Corwyn and Bradley (2008) explain that Confucianism in varying doses across various ethnic groups produces varying beliefs, attitudes, and practices conducive to higher achievement:

In agreement with the view that Confucianism has a positive effect on academically related variables, the two Asian groups that are believed to have the strongest Confucian influence also had the highest level of parental aspirations, total number of hours spent

on homework, and academic achievement. Moreover, because Filipino American students are less likely to adhere to Asian values, they were not expected to benefit from academically supportive factors that are typically attributed to Asian academic success. Indeed, they showed lower parental aspirations and lower academic achievement than Chinese Americans and Korean Americans and fewer hours spent on homework than all other Asian groups. (Corwyn and Bradley, 2008, p.102)

Despite the interesting division between more Confucian and less Confucian Asian ethnic groups above, the problem with the Confucian argument is that the empirical evidence is lacking, and it is unclear to what extent Confucianism *is* actually driving achievement in light of contradictory evidence regarding the argument that Asians value effort over ability (e.g., Bempechat 1999). More importantly, the influence of Confucianism is not examined in light of all the other interacting factors (such as immigration and acculturation), which misses out on the various ways these cultural frames might interact to influence different groups.

Hispanic groups provide an interesting contrast and comparison point to Asian groups, sharing certain characteristics (e.g. immigrant optimism, collectivist orientation) but not others (Confucian culture). Patricia Greenfield's (2009) theory of social change suggests that less developed countries tend to adopt values that are more collective-oriented, but gradually shift in an individualistic direction through an adaptive process as societies move from rural, small-scale, relatively self-contained to urban, large-scale, more educated and heterogeneous, where social relations also change from lifelong to more fleeting with urbanization.

Migration patterns tend to move from less developed to more developed countries (Greenfield 2009), in which case immigrants are likely to share values that are more similar to each other compared to those of their more developed host countries. Furthermore, voluntary immigrants are likely to share higher motivation for upward mobility as reviewed earlier (Kao and Tienda 1995; Ogbu 1979). However, Hispanic groups were consistently

found to have weaker immigrant advantage on academic achievement compared to Asian Americans (Kao 2004; Portes and Zhou 1993). The reasons are not articulated in either study, leaving a gap in our understanding.

The dimension of family obligation best illustrates the lack of a clear unifying framework explaining immigrant achievement, failing to articulate the relationship between Confucianism and immigrant optimism. Family obligation is often used as a measure explaining children's achievement for *both* Asian and Hispanic families (e.g., Fuligni et al. 2005; Yan and Lin 2005). On the one hand, family obligation is described as characteristic of collectivist societies where the parent-child bond is stronger and in situations where immigrant parents have sacrificed much by leaving their home country to provide their children with better life opportunities. In this vein, Pong, Hao, and Gardner (2005, p.931) state: "A high level of trust between parents and their children is likely to foster a sense of obligation in children to fulfill parents' expectations" (p. 931). The concept of family obligation has also been alternatively framed as an East Asian phenomenon linked with the Confucian value of filial piety defining the hierarchical and duty-based parent-child relationship (e.g., Kiang et al. 2013). Both explanations have been used uncritically in the literature, pointing to a need for revisiting and integrating these interpretations.

2. Ethnic variation within the Asian American category

The general treatment of Asian Americans as a monolithic group has been put under much scrutiny. Poon et al. (2016) provides an elaborate explanation of the distinct demographic categories emerging from complex historical, political, and social processes separating Asian Americans from Pacific Islanders for instance. In spite of the widespread agreement that Asian Americans are not a homogeneous group, it is common practice to treat them as one ethnic group for the purposes of analysis because the breakdown makes the analysis impossible due to small cell size. For example, Kiang et al. (2013) reports

multivariate results for an ‘Asian American group,’ but descriptively provides a breakdown of the composition of this group, which includes: Hmong (28 %), multiethnic (within Asian groups; e.g., Cambodian and Chinese) (22 %), South Asian (e.g., Indian, Pakistani) (11 %), Chinese (8 %), and pan- ethnic (i.e., Asian) (8 %), and remaining small clusters of ethnicities such as Montagnard, Laotian, Vietnamese, Filipino/a, Japanese, Korean, and Thai (23%).

Various ethnic groups within the monolithic “Asian American” group were found to behave differently. For instance, SES and achievement had a significant relationship for Filipino and Korean Americans, but not for Southeast Asians (Corwyn and Bradley, 2008). In particular, Korean Americans were found to have the highest level of SES, educational expectations, learning materials in the home when they first immigrated after 1965 (Corwyn and Bradley 2008). On the other hand, Pacific Islanders consistently had lower educational aspirations compared to Chinese, Koreans, and South East Asians (Kao 1995). Based on an analysis of eight Asian ethnic groups, Kao (1995, p.150) concludes: “ethnic effects reveal that the advantage of "Asians" in this expanded model is perceivably driven by Southeast Asians, the only group that still earns higher grades than whites even after these expanded control measures.” This suggests that there is a need to revisit how “Asians” have been defined, and whether the higher achievement and weak SES-achievement association is empirically consistent across all Asian American groups. Cooper (2010) also points out that the current broad racial-group affiliations is problematic because although Asians are grouped together, their home country, circumstances of immigration and acculturation levels are different.

3. Relevance of the parental involvement measure

The particularly low levels of home and school direct involvement lead us to question whether these types of parental involvement are relevant at all for achievement in Asian American groups in the first place, being a weak explanatory mechanism for the SES-achievement relationship. On the one hand, the lack of relevance of home and school parental

involvement for Asian Americans was explained by other factors being more important, such as peers, community networks, or following social norms (Desimone 1999). On the other hand, certain parental involvement variables that tapped into direct forms of involvement were argued to be irrelevant for Asian Americans simply because they did not engage in those behaviors. Parental involvement was found to be a better predictor of achievement for white middle-class students than any other ethnicity (Desimone 1999). This is not surprising seen that parental involvement measures were originally developed based on white middle-class parents' behaviors and subsequently applied to other ethnicities without careful thought into cross-cultural validity.

Desimone (1999) found that parental involvement variables did not explain much of the variance in students' achievement (except for homework checking), and further elaborates that "the structure, interactions, and behaviors of the Asian American family unit are systematically different from those of other cultures, and this affects the parent-involvement-student-achievement relationship" (p. 22). Notably, parenting styles and the parent-child relationship can be seen to interact with parental involvement as the involvement of parents who have closer and warmer relationship with their children is more likely to have a stronger effect on achievement. The puzzle of why Asian American parents with negative parenting styles from a Western perspective (high in control, low in warmth) have a positive influence on their children's achievement has been a key question since Amy Chua's book *The Battle Hymn of the Tiger Mother* (2011). Chao (1994) has explained that Chinese parents tend to associate high control and harsher forms of parenting with the notion of "training" which stems from deep parental care and love for their children. Thus, the meaning attributed to parenting behaviors differs across cultural contexts. Two studies on Korean Americans suggest that Baumrind's (1991, 1993) parenting categories are not universal (Kim and Rohner 2002; Moon, Kang, and

An 2009). The cross-cultural validity of parenting styles for Asian Americans is thus discussed extensively, but leaves much to be desired. On the other hand, any discussion on the cross-cultural validity of parental involvement (specific to education) measures is absent. This strongly suggests that there is a need to move away from white middle-class-centric measures of parental involvement that are less meaningfully associated with achievement in Asian American populations.

4. Generational differences

The above literature suggests that newly immigrated groups who are strongly influenced by their home culture, are high-achieving in spite of their lower economic status due to the cultural emphasis on education. What about later generation immigrants who might be less influenced by cultural factors or by desire for upward mobility? How does the SES-achievement link vary across generations, when generational differences are likely to exist in terms of language ability, parenting, parental involvement, or family obligation? These key questions are ill-answered in the current literature. Most of the studies using public datasets are dated and no recent studies included most recent generations. Only five of the 22 studies even mentioned generational differences (Bankston 1995; Corwyn and Bradley 2008; Kao 2004; Mau 1997; Pong, Hao, and Gardner 2005). In addition, Kiang et al. (2013) noted the generation (first or second) of the participants in the methodology section of the study but did not have a further explanation on generational differences.

Several studies found that later generations of Asian Americans displayed stronger SES-achievement links as their achievement declined overall. Pong, Hao, and Gardner (2005) found that there was a generational decline in achievement from first to second generation, explaining that there might be a dilution of the cultural factors driving higher achievement in earlier generations. Kao (2004) also found that first and second generation Asian Americans with immigrant parents had a higher GPA compared to the third generation, explained by

factors such as close parent-child relationships and high aspirations at the start. An alternative explanation was declining family obligation: immigrant children were more responsive to parents' high expectations compared to native born children. On the other hand, Pong, Hao, and Gardner (2005) emphasised that unlike parental expectation, parental trust (family obligation) did not show generational decline.

Some studies found the opposite pattern for certain ethnicities such that achievement increased in later generations. For instance, Corwyn and Bradley (2008) found ethnic differences: For Korean Americans, recency of migration and achievement had a positive relationship, but for Filipino Americans and Chinese Americans the two variables were negatively related. These ethnic differences were explained using "selection effect theory". The selection theory explains that some immigrant groups (e.g. the Koreans) are more skilled than others when they first immigrated, leading to higher achieving children initially. In other words, those who are less skilled upon arrival are likely to have lower-achieving children initially, with gradual increase as they become more settled.

Moreover, it is curious that generational differences in parental involvement were downplayed. Two studies (Kao 2004; Pong, Hao, and Gardner 2005) suggested that generational differences cannot be explained by parenting. Immigrant generational differences still existed when parenting practices were controlled and patterns of parenting practices were found to be inconsistent among different generations (Pong, Hao, and Gardner, 2005). On the other hand, Mau (1997) suggested that parents are likely to be more involved in later generations because they are likely more acculturated, fluent in the English language, and knowledgeable about the values of U.S. school.

Overall in our total sample of studies, we note that findings on generational differences are mixed and how achievement interacts with generational change is left unexplored. However, it is important to consider generational differences because they shed light on the

core frameworks behind the Asian minority discourse, including Confucian explanations, immigration and acculturation, parental involvement, and community ties.

Conclusion

Our study is one of the few empirically confirming that the associations between SES/PI and achievement are weaker for Asian American students based on a thorough search of the prior literature. The difference is particularly stark for the SES-achievement relationship, as we found that the effect size for parental involvement was still largely positive while it was null for SES. We further noted the various forms of parental involvement and identified educational expectations as the most salient type of involvement for Asian Americans, while home and school involvement were less relevant.

Several problems were highlighted in the current scholarship. In spite of the intuitive and appealing cultural arguments put forward emphasizing Confucianism and immigration optimism, our review points out that these arguments have weak empirical support, and are too generic to be convincingly applied to Asian Americans. For instance, generational differences or ethnic diversity within the Asian American groups are likely to moderate these cultural factors, but the analyses up to date have failed to engage more deeply with how these factors might interact with cultural explanations for achievement. The Asian American minority myth emerges as an isolated and fragmented discourse that seems to piece together various explanations (Confucianism, immigration, parental involvement, and ethnic capital), without seeking to integrate them or to explain the unique characteristics of Asian Americans. Our review highlights several unanswered questions that call for a more rigorous and critical examination of how studies have framed the issue of Asian American scholastic success. Our review suggests a new comprehensive model better integrating the Confucian and immigrant optimism

explanation, developing culturally appropriate measures of PI, distinguishing ethnic variation within Asian American groups, and including a nuanced view on how and whether the explanations hold across generations.

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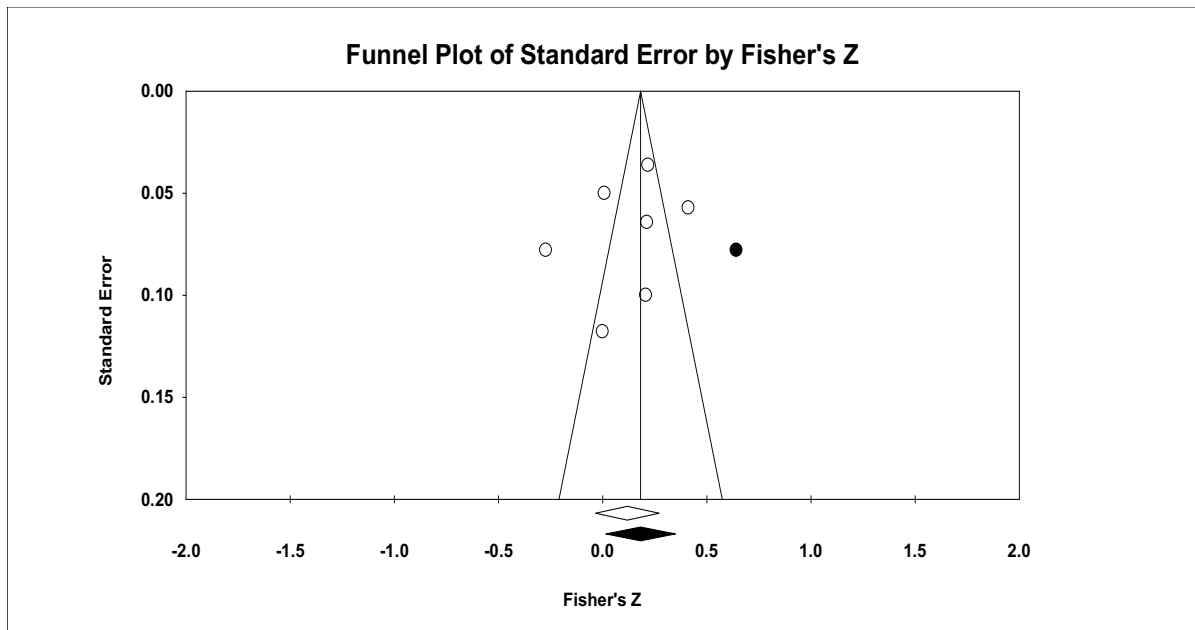


Figure 1. Funnel plot for the random-effects model for studies including an Asian American sample ($n=9$). 1 effect size was imputed to the left (black dot). The adjusted effect size .17 (95% CI = .01/.34) is higher than the observed value .12 (95%CI = -.03/.26).

Note. White circles represent the effect sizes of all samples from studies providing bi-variate correlations. The black circles represent the imputed effect size.

Summary of effects of SES and/or PI on achievement in correlational studies

Year	Country (dataset)	Age/grade	Type of SES and/or PI measure
1995)	Vietnamese American (n= 402)	grades 9 to 12	Parental ethnic community involvement + Father's education <i>ns</i> Mother's education <i>ns</i>
er & (1999)	<i>NELS 88</i> Asian American (n= 681)	grades 8 to 10 Longitudinal	SES + Household resources + Parental education + <i>weak</i>
neider	Asian American (n= 706)	grades 9 to 12	Mother's school involvement + <i>weak</i> (covariates: parent's education and child's gender) Father's school involvement + (covariates: parent's education and child's gender)
al.	<i>ECLS-K 98</i> Asian American (n= 1,612)	Kindergarten Longitudinal	Poverty <i>ns</i> Cognitively stimulating materials + (Math), <i>ns</i> (Reading) Organized activities + Home-learning activities <i>ns</i>

			School involvement <i>ns</i>
008)	<i>NELS 88</i>	grade 8	SES + (Family income, parents' occupation, parental education level; Only for Filipino and Korean)
	Chinese American (n= 238), Filipino American (n= 211), Korean American (n= 156), Southeast Asian American (n= 174)		Parents' educational expectations + (Only for Chinese and Korean)
			Home learning materials <i>ns</i>
			Parental discussions about education <i>ns</i>
n & 09)	<i>ECLS-K 98</i>	Kindergarten to grade 3	Parental education +
	Asian American (n= 515)	Longitudinal	Income <i>ns</i>
			Parents' educational expectations +
			Parental reading behaviors + <i>weak</i>
			School involvement <i>ns</i>
(1999)	<i>NELS 88</i>	grade 8	Discussion with child about high school <i>ns</i>
	Asian American (n= 1,201)		Talk with parents about post-high school plans <i>ns</i>
			Volunteering or fundraising <i>ns</i>

Rules about homework, GPA, & chores + *weak*

Parent-Teacher Organization involvement *ns*

Parent attends PTO meetings *ns*

Rules about TV, friends & chores *ns*

Parents check homework +

Contact school about academics +

Discussion with parents about school +

Talk with father about planning high school program + *weak*

Social capital: Knowing parents of child's friends + *weak*

(*Only reported results for grades, not Standardized math or reading test scores)

) *NELS 88*

grade 8

Home resources *ns*

Asian American (n=1,527)

) *NELS 88*

grades 8 to 12

General school discussion - *weak*

Asian American (n=1,087)

Longitudinal

Discussion about college +

			Parents' aspirations for child +
1995)	<i>NELS 88</i> Asian American (n= 1,526)	grade 8	SES (Parental education, occupation, family income) + <i>wea</i>
l.	Asian American (n= 180)	grades 9,10 (and 2 yrs later: grades 11,12)	Socioeconomic stress (Family economic strain or financial insecurity) -
	2 years later (n= 156)	Longitudinal	Mediation: Family obligation (Adolescents' attitudes toward family obligation and the provision of family assista
hner	Korean American (n= 245)	grades 6 to12	Maternal involvement <i>ns</i> Paternal involvement +
)	<i>NELS 88</i> Asian immigrants (n= 472), Asian American (n= 184)	grade 10	SES (Parental education, occupation, family income) + Parental expectations +
999)	<i>NELS 88</i> Asian American (n= 1,087)	grades 8, 10	Parent-child discussion <i>ns</i> PTO involvement <i>ns</i> Monitoring +

			Educational support strategies <i>ns</i>
ng &	Korean American (n= 103)	grades 1 to 3	School involvement <i>ns</i>
			Parental education <i>ns</i>
			Family income + <i>weak</i>
	Asian American (n= 75)	grades 4, 5	Parents' expectations for children's educational attainment
998)			Grade expectations <i>ns</i>
			Creating academically enriching environment <i>ns</i>
right	<i>NELS 88</i>	grade 10	Parental education +
	Asian American (n= 1,527)		Family income +
			Parental assistance (help homework, discuss school) <i>ns</i>
			Educational expectations +
			Additional lessons and activities (outside classes, education activities) +

, & 005	<i>National Longitudinal Study of Adolescent Health (Add Health) 95</i>	grades 7 to 12	Social capital (parental involvement, parents' educational expectation) <i>ns</i> Parental education <i>ns</i> Income <i>ns</i>
Asian American (n= 1,570)			
<i>ECLS-K 98</i>	Kindergarten to grade 1		Parental education + <i>weak</i>
Asian American (n= 514)	Longitudinal		Parent expectations + <i>weak</i> Home literacy involvement + <i>weak</i> School participation + <i>weak</i> Educational activities + <i>weak</i>
<i>NELS 88</i>	grades 8 to 12		Family obligations (PTO activities, attendance at school programs, disc about school topics) <i>ns</i>
Asian American (n= 1,087)	Longitudinal		Parent information networks (Contacting school about child performance) - (Knowledge of teenager's schoolwork, knowledge o parents of teenager's friends) <i>ns</i> Family norms (Family rules) <i>ns</i> (Parental expectations) +