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The association between parent and child educational attainment for first- and second-generation immigrants

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ABSTRACT

Title of Document: "THE ASSOCIATION BETWEEN PARENT AND CHILD EDUCATIONAL ATTAINMENT FOR FIRST- AND SECOND-GENERATION IMMIGRANTS."

Dann Malihom, Master of Applied Sociology, 2016

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This thesis looks at the association between parent and child educational attainment for various immigrant groups in the United States. Specifically, this study seeks to determine if (1) there is a measurable association between parent and child educational attainment and (2) if this association is weaker for Asian Americans when compared to other immigrant groups. There is also exploratory analysis to measure trends within other immigrant groups. Regression analysis was conducted using the Children of Immigrants Longitudinal Study (CILS) to measure the association between educational attainment along with cultural value controls and sociodemographic controls. A statistically significant association was found between parent and child educational attainment. The weakest association was for Asian immigrants, while the strongest association was for Caribbean immigrants. Mexican immigrants did not have a statistically significant association between parent and child's educational attainment.

The association between parent and child educational attainment for first- and second-generation immigrants

Dann Malihom
Master's Thesis
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Introduction

As of 2010, there were nearly 40 million foreign-born individuals living in the United States. This amounted to approximately 13% of the entire U.S. population. Of these 40 million individuals, nearly thirty-five percent entered in 2000 or later. Extending back to 1990 or later, nearly two-thirds of this foreign-born population migrated to the United States during this time (U.S. Census Bureau). The purpose of this study is to examine educational attainment among children of immigrants as a function of parents' educational attainment. Eighty-nine percent of the native-born population aged twenty-five and older are high school graduates. In contrast, only sixty-eight percent of foreign-born individuals in the same age range are high school graduates (U.S. Census Bureau). For the purposes of this paper, individuals born outside of this country who migrate to the United States will be considered "first-generation immigrants." Individuals born within the United States to first-generation parents or who migrate to the United States at a young age (twelve years or younger) will be referred to as "second-generation immigrants." Before delving into immigrant populations and relevant factors, I look at existing data on the associations between parent and child educational attainment.

Literature Review

Parent/Child Education Patterns

Studies have shown that parents' educational attainment has a correlation with the educational attainment of their child. Fessler and Schneebaum (2012) found that Austrian parents' educational attainment was positively correlated with their child's academic performance, with the father's education having a larger influence. Belzil and Hansen (2003) found that household background variables, and in particular parents' education, account for 67.6% of variation in educational attainment in th e United States. Put another way, individual

abilities, observed and unobserved, accounted for only 32.3% of the variation in an individual's educational attainment. This is after accounting for scholastic abilities potentially explained by parents' background. When not taking this into consideration, the variation in educational attainment is 85% explained by household variables, with 71.3% of that variation coming from parents' education alone. This pattern may be a result of certain expectations or values instilled in the child from the parent's own experiences. For many immigrants, one of the primary reasons for migration to the United States is seeking a better future for their family through academic achievement (Suárez-Orozco & Suárez-Orozco, 1995; Raleigh & Kao, 2010). Do immigrants experience a similar association between parent educational attainment and child educational attainment? In order to address this question, I first review the theories of acculturation and generational relationships, and how they might influence this relationship.

Acculturation

Acculturation can be described as a process of adaptation by an individual to reconcile differences between their native culture and the mainstream one of a new country or place. The process is usually defined by the individual having two separate "orientations" and how they retain or remove aspects from either orientation usually has bearing on their status and well being (Arévalo Avalos and Flores, 2016; Yu, Cheah, and Calvin, 2016). Barriers to acculturation can be obvious ones, such as English being a second language (if known at all) or religious differences, or they may be subtler, like social criteria for interactions based on sex (Campbell, 2015). How well an individual acculturates can influence external interactions such as commute, daily communication, or in-group conflicts, to internal measures such as self-esteem, depression, anxiety, and well being (Schwartz and Montgomery, 2002; Abad and Sheldon, 2008).

Acculturation is not limited to first-generation immigrants, either. Second-generation immigrants can feel the same, if not worse, effects from acculturation as their parents.

Differences in coping methods account for different effects of acculturation for first- and second-generation immigrants. The reason for second-generation immigrants experiencing more stress from acculturation than first-generation immigrants is that second-generation immigrants often do not seek the support that the first-generation immigrant community provides for each other (Santiago, Gudiño, Baweja, and Nadeem, 2014). They may also put more precedence on balancing their two orientations, whereas first-generation immigrants are often content to abide by the mainstream orientation just long enough for it to benefit them (Al-Qahtani, 2015). This discrepancy in cultural orientation between parent and child can cause tension. If the parents tend to orient toward native culture, their perspectives might not allow them to recognize or relate to the challenges their child might be experiencing in the mainstream culture (Kim, Chen, Wang, Shen, Orozco, and Lapray, 2013). Further, this intergenerational tension can lead to developmental or behavior issues for the child, such as depression, difficulty in school, or delinquency (Santiago et al., 2014). These negative outcomes are predominantly associated with native-born second-generation immigrants. Foreign-born immigrants record higher measures of stress from acculturation than native-born ones, but it seems the ties to family and their native culture reduces the effects of intergenerational conflict (Santiago et al., 2014). This distinction may arise from the fact that foreign-born first-generation immigrants tend to identify as members of one group, whereas native-born second-generation immigrants tend to categorize themselves as belonging to two salient groups (Grant, 2007). These differences in acculturation perspectives and experience of stressors can affect the relationship between the first- and second-generation. This intergenerational tension could potentially alter what values and priorities the second-

generation adopts from the first, such as focus on high educational attainment. Tensions and stressors from acculturation are not limited to intergenerational relations, however. Preexisting stereotypes within the mainstream culture can also shape the experiences of immigrants.

One such stereotype Asian Americans, in particular, have to deal with is the idea of the "model minority." Compared to other immigrant or minority groups, individuals from Asian countries are perceived as being more obedient, harder working, and performing better academically (Thompson, Kiang, and Witkow, 2016; Yoo, Miller, and Yip, 2015). There are two components to the model minority myth: the first is the belief that Asians attain higher achievement through work ethic, motivation, and perseverance. The second is the assumption that Asians experience fewer barriers to opportunity from racial prejudice and discrimination than other minority groups. How an individual internalizes this myth can affect their ethnic self-identity as well as how they respond to good or poor academic achievement (Thompson et al., 2016).

Academic Achievement

Bankston and Zhou (2002) argue that US immigrants face many barriers to educational attainment, such as cultural and language limitations. However, second-generation immigrants have higher educational attainment than foreign-born immigrants, likely due to acculturation and stronger English language proficiency (Siahaan, Lee, and Kalist, 2014). Further, second-generation immigrants have higher educational attainment than native-born individuals of the same ethnic group (Siahaan et al., 2014). This finding might be surprising given similar acculturation and language proficiency, but the variation may be explained by cultural characteristics of immigrant families. For example, Feliciano (2006) suggests the correlation between second-generation immigrants and higher educational attainment might be due to higher

aspirations from their parents. Raleigh and Kao (2010) found that immigrant parents have an optimistic outlook on their children's educational attainment, regardless of their own. Raleigh and Kao also found that within the same ethnic group, immigrant parents had a more positive outlook on educational trajectory than native-born ones. Therefore, higher educational attainment among immigrant children compared to native-born may be due to cultural differences rather than parents' education.

These expectations and desires may not line up between generations, however. Many Latino youth experience high pressure from their parents to succeed academically, as that is their primary reason for immigration (Santiago et al., 2014). A desire to orient with the mainstream culture and reject their native culture might mean rejecting their parents' values and priorities, including education (Santiago et al., 2014). There are even Filipino youth who actively disagree with being categorized as Asian, despite the arguably positive stereotype of being "middle class or upwardly mobile" (Ocampo, 2013). While their protestations have grounds on numerous levels (geographic distance, language differences, historical differences) their denial of categorization reflects more on their national identity than their cultural one (Ocampo, 2013). Abad and Sheldon (2008) also found that authoritarian parents can lead to behavior problems, less obedience, and less motivation, resulting in poorer academic performance.

The results of this acculturation difference and intergenerational tension can be varied. For some individuals, their parents have little advice to offer since they themselves never attended higher education (Campbell, 2015). In another study, having a first-generation Chinese father was shown to have a negative effect on the GPA trajectory of their second-generation children (Kim, Wang, Chen, Shen, & Hou, 2015). This effect was explained by the parent's lack of involvement with the mainstream culture, meaning difficulty in being involved with the

education system and supporting their child's schoolwork. Bankston (2014) found that second-generation Korean immigrants experienced higher college dropout rates compared to native-born individuals. He explains this trend by noting the high expectations and pressures explicitly placed on them by their parents. Other studies, however, show that second-generation youths reach higher levels of academic success because when given any sort of endowment they achieve higher educational attainment and perform better academically than native-born peers (Cobb, Clark, & Nguyen, 2012). For Latinos, who have been shown to have negative responses, there can also be positive interactions. When Latino families are educated on positive parental monitoring, their children experience higher levels of motivation and aspirations, leading to higher levels of academic success. As long as the parent maintains a healthy balance of monitoring while acknowledging the child's increasing autonomy, the child experiences positive development coupled with academic achievement (Santiago et al., 2014). Given the variation in responses to acculturation and prioritization of educational attainment for parents and children, is there any clear relationship between the educational attainment of first-generation immigrant parents and their second-generation children?

Research Questions

Taking into account the existing data about the general relationship between parent educational attainment and child educational attainment, this paper asks: is there a measurable association between the educational attainments of first- and second-generation immigrants? Many immigrants place a priority on their children's education, regardless of what level of educational attainment they achieved themselves. Due to cultural identity, values, and parental expectations, is there a weaker association between parent education and child education among Asian immigrants? There are a myriad of immigrants to the United States, and all come with

different cultural values and priorities. As an exploratory follow up, how does the relationship between parent education and child education vary among other immigrant groups?

Methods

Data

The dataset used in this report is the Children of Immigrants Longitudinal Study (CILS), a longitudinal study conducted by Alejandro Portes and Rubén G. Rumbaut. Concerned with second-generation immigrants, the study looked at native-born respondents who had at least one foreign-born parent, or individuals who were born abroad but migrated to the United States at a young age. The survey was conducted in three waves. The first wave, distributed in 1992, gathered general demographic information from eligible respondents in the 8th and 9th grades of public and private schools around Miami and Fort Lauderdale, Florida and San Diego, California. The second stage of the study was distributed three years later, when the respondents were nearing graduation of high school. The third and final wave of the questionnaire was delivered approximately a decade after the respondents first responded, giving updated information on factors such as income, educational attainment, and new demographic details. The researchers retained as much contact with respondents as possible throughout the waves, allowing respondents to complete the later questionnaires from wherever they may have relocated. The majority of responses for Wave III were received through mail, from more than thirty different states and overseas military bases.

This sample had an initial size of 5,262 respondents, which reduced to 3,613 by Wave III due to attrition (i.e., no additional respondents were added to refresh the sample over this time period). Of those sampled in Wave III, there were 3,338 valid respondents that had included data on at least one immigrant parent. Respondents reported data on their parents' countries of origin

as well as their educational attainment. Due to the small sample sizes of many of the countries, the countries of origins were consolidated into approximate geographic regions – Asia, Europe, Middle East, Africa, Caribbean, Central & South America, and other. Mexico was also kept as a distinct region due to its large relative sample size compared to the other regions.

Because the only requirement for the respondents is that one parent be an immigrant, the sample will be split between a father sample and mother sample. Even in situations where both parents are immigrants, it is not guaranteed that both parents will be from the same country. After listwise deletion of entries missing any values, the sample size for the father sample is 2,107 and the sample size for the mother sample is 2,321.

Variables

Independent Variable

The independent variable is parent's educational attainment as recorded by the respondent for both father and mother. Parent educational attainment was recoded into an ordinal variable with six possible responses: (1) elementary school or less, (2) middle school or less, (3) some high school, (4) high school graduate, (5) some college, and (6) college graduate or more. The original set included two additional values, (7) vocational or trade school, and (8) other. Vocational and trade school responses were recoded into (5) some college and (8) other responses were omitted because no supplemental information was provided

Dependent Variable

The dependent variable is child's educational attainment as reported during the third wave of the study, ten years after the first questionnaire was administered. The respondent's (child's) educational attainment was more nuanced, featuring nine values total: (1) some high school, (2) high school graduate, (3) one to two years of college or vocational training, (4)

Associate's degree or vocational school, (5) three or more years of college with no degree, (6) Bachelor's degree, (7) some graduate school, (8) Master's degree, and (9) Professional or Doctoral degree (JD, MD, DDS, Ph.D.). Additionally, the lowest threshold for respondent's education is some high school, as all individuals were already in high school or entering high school when participating in the study.

Cultural Value Controls

Six variables, which I have called Cultural Value controls, measure the respondent's attitudes and expectations about educational attainment. These were used to see if any context could be provided for the trends and differences that appear in the dataset.

Three of the controls focus on the expectations of educational attainment. They were collected in the surveys distributed as part of Wave II of the study. The first measures the respondent's desired education level for him or herself. The second asks the respondent to estimate or answer what level of educational attainment their parents desire for them. Lastly, the respondent is asked to give their realistic potential in educational attainment. These values are coded similar to parent educational attainment, with less gradation than the respondent's actual educational attainment: (1) some high school, (2) finish high school, (3) some college, (4) finish college, and (5) finish a graduate degree.

The respondents were asked, in two different series of value questions, the importance of good grades and the importance of a good education. The possible responses for the importance of good grades were (1) very true, (2) partly true, (3) not very true, and (4) not true at all. For use in the regression as well as due to the heavily weighted distribution of responses, this variable was dichotomized (Very True = 1). Similarly, the possible responses to the importance of a good

education were (1) not important, (2) somewhat important, and (3) very important, with the responses being recoded into a dummy variable (Very Important = 1).

Lastly, the respondents were asked two questions relating to ethnic self-identity, first how they identified and second how important that identity was to them. There were three possible responses to the latter, (1) not important, (2) somewhat important, and (3) very important, with the responses being dichotomized (Very Important = 1).

Sociodemographic Control Variables

Typical demographic controls were utilized in the regressions. Self-reported sex was coded as a dummy variable (0 = Female, 1 = Male) and age was recorded as a direct response. Of note, the only time age was reported by the respondent was during Wave I, so the age used during the regressions was their reported age plus ten, accounting for the time difference between Wave I and Wave III.

Income was coded into continuous ordinal ranges based on total family income of the previous year: (1) less than $5,000, (2) $5,000 - $9,999, (3) $10,000 - $14,999, (4) $15,000 - $19,999, (5) $20,000 - $24,999, (6) $25,000 - $29,999, (7) $30,000 - $34,999, (8) $35,000 - $49,999, (9) $50,000 - $74,999, (10) $75,000 - $99,999, (11) $100,000 - $199,999, and (12) $200,000 or more.

Lastly, because the only requirement for a respondent's participation in the study is that one parent be an immigrant, a dichotomized control variable was created to measure if only one (0) or both (1) parents are immigrants.

Analysis

Statistical analysis was conducted in SAS 9.4. Descriptive statistics were run on the relevant variables for both the father sample and the mother sample. These results are displayed

in Tables 1 and 2. Mean values were provided for all variables or a percentage presented where relevant. Sample sizes were also provided for the total split sample as well as all the individual regions. Ranges were not included with most variables as their limits are defined by their ordinal values. The exception is age, which had a minimum response of twenty-two years in both samples and a maximum of twenty-seven in the mother sample and twenty-eight in the father sample.

Figure 1 compares the means by region of educational attainment for mother, father, and respondent. Because of the different sample sizes for the mother and father sample, in this graph the mean of the respondent is represented by the means of the respondents from the father sample and the mother sample for each respective region. Due to the larger sample size of the mother sample compared to the father sample (N=2321 versus N=2107) this puts slightly more weight on the educational attainment of the mother sample.

OLS regression was used to analyze the effect of parent educational attainment on child educational attainment, with nested regressions adding in cultural values and controls to potentially explain away any influences or interactions. These analyses represent the five models present in Table 3 (father sample) and Table 4 (mother sample). All results include R-Square and Adjusted R-Square values, as well as levels of significance.

Model 1 represents the direct correlation between parent educational attainment and respondent educational attainment. Model 2 includes the parent on child relationship, with the added variable of if the parent is from an Asian country. Model 3 looks at the same parameters as Model 2, but includes the cultural values and control variables. Model 4 removes the Asia parameter from Model 2, instead looking at the other regions reported in the dataset (Mexico,

Europe, Middle East, Africa, Caribbean, Central and South America, and other.) Finally, Model 5 looks at all the other regions as well as the cultural values and control variables.

Not reflected in the tables, additional regressions were conducted measuring the interaction between parent educational attainment and the region they were from. This was calculated by multiplying the parent educational attainment by each region and then including that new variable in the regression. Additional models with significance were then ran on subsamples, isolated by region, where there was sufficient sample size to regress. These additional models measured the effect on respondent's educational attainment by parent's educational attainment, cultural values, and control variables limited by regions. The unstandardized coefficients for the association between parent education and child education are visualized in Figure 2.

Results

Descriptive Tables

Table 1 shows the descriptive means for the father sample, broken down by region. Educational attainment for parent education and respondent education are comparable across the board. The mean educational attainment for respondents in the sample is 4.34, while the mean educational attainment for fathers is 4.23. The range of respondent's educational attainment is 3.35 (Mexico) to 5.40 (Africa). The largest disparity between parent educational attainment and child educational attainment was for Mexican respondents (Respondent mean = 3.35 versus Father mean = 2.61). For the total sample, respondents on average achieved higher educational attainment than their parents (+0.11). This pattern was mirrored in the subsamples of Asia (+0.16), Mexico (+0.74), Africa (+0.40), and the Caribbean (+0.14). The Middle East (-0.14), Central and South America (-0.34), and Other (-0.62) exhibited lower child educational

attainment means when compared to their fathers'. However, as the scales for parent and child are slightly different, a lower mean does not necessarily mean lower educational attainment overall. Europe's father mean (4.75) and child mean (4.73) were nearly identical.

Ethnic self-identity rated high for some regions (Asia, Mexico, and Africa) and relatively low for others (Middle East, Europe, and other.) While a vast majority of respondents indicated that they highly valued a "good education" (81% - 100%), there was much more variance in responses on the importance of "good grades" (63% - 100%.) The majority of respondents were female, with the average age being twenty-four years old. Income was similar across all regions with a few exceptions. Africa and "other" pushed the range in either direction, but both have single digit sample sizes. Similarly, the Middle East had the next lowest mean income accompanied by a small sample size. Mexico had the lowest of the income means among the remaining groups, 0.8 lower than the mean for the total father sample and 1.04 lower than Central and South American respondents who had the highest mean income. Most of the sample had both parents as immigrants, with the Middle East (79%) and Europe (73%) reporting the fewest dual-immigrant parents.

Table 2 shows the descriptive means for the mother sample in the same breakdown configuration as Table 1. For this split sample, the means of respondent educational attainment and parent educational attainment are 4.29 and 4.12, respectively. The range for respondent's educational attainment is 3.35 (Mexico) to 5.50 (Africa). Respondents' average educational attainment is higher than mothers' educational attainment for the total sample (+0.17), Asia (+0.19), Mexico (+0.75), Middle East (+0.09), and the Caribbean (+0.12). On average, children achieve lower educational attainment means for Africa (-0.17), Central and South America (-0.11), and Other (-0.13). Again, this does not necessarily mean lower educational attainment as a

whole. The parent and child educational attainment for Europe is the same. Except for the Middle East and Central and South America, respondents had the same or higher desired educational attainment for themselves than their parents.

The mean of responses for the importance of good grades for the mother sample is about the same as the father sample, but the range has shifted down (50% - 83%). On the question of ethnic self-identity, 61% of the total sample reported that ethnic self-identity was very important. A higher percentage of respondents from Asia, Mexico, the Middle East, and Africa reported that ethnic self-identity was very important. Seventy percent of the total sample reported that it was very true that good grades are important, and 91% reported that it was very true that a good education was very important. The sex and age breakdowns are virtually the same between the father and mother samples, but the mother sample has a lower mean income (7.35 versus father's 7.45) and more one-immigrant parent families than the father sample (10.34% versus father's 6.41%).

Figure 1 shows the means of educational attainment across all regions for mother, father, and respondent. Overall, there is a trend toward children having a higher educational attainment than their parents, but there are a few instances in this dataset where fathers have the highest achievement. In the Europe, the Middle East, Central and South America and Other samples, father's educational attainment is the highest mean. In the Africa subsample, mothers have the highest mean educational attainment. As noted previously, the values assigned to parent educational attainment are not a one-to-one correlation with child educational attainment. A possible explanation for some of these aberrations is small sample size.

Multivariate Regressions

Tables 3 and 4 show the association between the various independent variables on the dependent variable of respondent's educational attainment. Included in all models is the R-Square value, which indicates the percent of variation of the dependent variable explained by the independent variables. In both samples, Model 1 examines the association existing between parental educational attainment and child educational attainment to address the first research question. In Model 1, when examining only the association between parent education and child education, the R-Square value is 0.0567 and 0.062 for fathers and mothers, respectively. Put in different terms, parent educational attainment explains about six percent of the variation in child educational attainment. Adding in the cultural value controls and sociodemographic controls increases these to 0.241 and 0.252 for Model 3, again for fathers and mothers, respectively. In Model 5, when looking at all regions with Asia as the reference category as well as the cultural value controls and sociodemographic controls, the R-Square values are similar to Model 3, at 0.245 for fathers and 0.256 for mothers. Taken together, all of the variables measured in this analysis explain approximately twenty-five percent of the variation in children's educational attainment.

Table 3 shows the nested regressions for the father sample. For all five models, there is a statistically significant association between father's educational attainment and child's educational attainment. However, this unstandardized coefficient weakens when control variables are added to the model (Model 1: 0.25, Model 3: 0.15, Model 5: 0.13). The association of the father's region of origin and respondent's educational attainment is statistically significant for Asia, Mexico, Caribbean, and Central and South America. Models 2 and 4 have similar coefficient estimates for association between father and child education, but Model 4, which

controls for regions individually, has a slightly weaker association (0.24 versus 0.20). Net all the other variables, individuals with a father from Asia have higher educational attainment compared to those from other regions. Compared to individuals with fathers from Asia, respondents with fathers from Mexico (coefficient: -0.54), Central and South America (coefficient: -0.30), and the Caribbean (coefficient: -0.20) have lower educational attainment, regardless of their parents' level of education (see Model 4). Respondents with immigrant fathers have a 0.76 to 0.78 unit increase in educational attainment for each unit increase in their reported realistically possible educational attainment, depending on what variables are used to control for region (Model 2 and Model 4). Model 3 shows that individuals with immigrant fathers who reported ethnic self-identity as being very important (very important = 1) had a negative association with educational attainment, but this association is only marginally significant ($p \leq 0.1$). Compared to individuals who do not think it very true that good grades are important (very true = 1), individuals within both models who reported this statement very true were associated with higher educational attainment. In both models 3 and 5, for every unit increase of age, there is a 0.13 unit decrease in respondent's educational attainment. Accounting for the individual regions, rather than the whole of all other regions as a reference variable, increases the percent of variation explained by the regions (Model 2: 6.4% versus Model 4: 8.0%), but this difference is smaller when considering the cultural value controls and sociodemographic controls (Model 3: 24.1% versus Model 5: 24.5%).

Table 4 displays the nested regressions for the mother sample. The trends in the mother sample follow the same patterns as in the father sample, but the associations are all slightly weaker. For example, while the coefficient estimate for fathers from Asia, net the other variables, is 0.31, for mothers from Asia, net the other variables, the coefficient estimate is 0.25. The

association between mother's region of origin and respondent's educational attainment is again significant for Asia, Mexico, the Caribbean, and Central and South America. Individuals with mothers from Mexico, the Caribbean, and Central and South America have lower educational attainment than individuals with mothers from Asia. For both individuals from Asia and from other regions, there is a positive association between the respondent's desired educational attainment and actual educational attainment, but this association is only marginally significant. For every unit increase in the respondent's realistic educational attainment, there is a 0.76 unit increase in educational attainment. Reporting a belief in the importance of good grades (very true = 1) was positively associated with higher educational attainment, but this association was only marginally significant in one of the two models (Model 3, $p \leq 0.1$). This positive association between reporting the importance of good grades as very true and educational attainment is statistically significant in Model 5 ($p \leq 0.05$). In both Models 3 and 5, there is a negative association between reporting ethnic self-identity as being very important and the respondent's educational attainment. Age is negatively associated with educational attainment for immigrant respondents, with a 0.13 unit decrease in educational attainment for every unit increase in age. For respondents with two immigrant parents in both Models 3 and 5, there are positive associations with educational attainment, but these associations are only marginally significant.

Split Samples and Interactions

For both the mother and the father samples, interactions were run comparing the association between parent educational attainment and child educational attainment by region using Asia as the reference category for comparison to the other regions. Some of these interactions were found to be statistically significantly, indicating that the relationship between parent education and child education is statistically significantly different than in Asia for certain

regions. Compared to a parent from Asia, having a father from Mexico, a mother from Mexico, a mother from the Middle East, a mother from Africa, and a mother from the Caribbean results in a different association between parent and child education. However, when rerunning the regressions isolated to just individuals from these regions, the sample sizes were too small for the Middle East (N = 11) and Africa (N = 6). The coefficients of the associations between parent education and child education for the regions with sufficient sample sizes for regression (total, Asia, Mexico, Caribbean, and Central and South America) are displayed in Figure 2. All of these associations, except for both Mexican father and Mexican mother, were found to be statistically significant. The association between parent education and child education was positive for all regions except for Mexico. The region with the strongest predictor of child educational attainment from parent educational attainment was the Caribbean. The educational attainment of parents from Asia was a weaker association than the educational attainment of parents from the total of all other regions.

Discussion

Parents' Education Predicts Children's Education in Immigrant Groups

Addressing the first research question, for all immigrant groups, parent educational attainment is positively associated with child educational attainment. This holds true for both immigrant mothers and immigrant fathers. These findings support the previous findings of Belzel and Hansen (2003) that parents' education accounts for a large part of an American individual's educational attainment. Bukodi and Goldthorpe (2013) and Fessler and Schneebaum (2012) found similar associations in their research on intergenerational relationships of educational attainment for individuals in Great Britain and Austria, respectively. This study now provides additional evidence that these associations do not wholly depend on an individual's cultural

background. Cultural background may strengthen or weaken the association of this relationship, but without a single, large dataset, direct comparisons cannot be made. These patterns indicate that educational attainment of children does not exist in a vacuum and that learning happens just as much outside of the classroom as it does within it, starting with the parents' educational attainment. Thus, optimization of education may require a more holistic approach to the system, rather than simply restructuring classroom interactions and testing.

Asian Children's Educational Attainment May Be Less Dependent on Parents'

While individuals with Asian parents have higher educational attainment overall, there is a weaker association between parent educational attainment and child educational attainment when compared to all other immigrant groups. This means, net of all the other variables, Asian parent educational attainment is a weaker predictor of child educational attainment compared to other immigrant groups. While this could be due to pressure from parents' expectations for their children to perform better than they did (Feliciano, 2006), there is not enough data in the analysis to support this. Parents' desired educational attainment for their child did not have a statistically significant association with the respondent's actual attainment. One factor to consider is the possible skewing of the association due to the large percentage of the sample that had parents from the Philippines. Due to the history the Philippines has with the United States, classes are taught in English starting with the sixth grade, and Bankston (2014) believes this allows Filipino immigrants a strong advantage both in language and acculturation when migrating to the United States. This imbues Filipinos with a strong mainstream American orientation by nature of the overlap of cultures and history. This advantage could transfer over as an increased parental involvement in academics for second-generation Filipinos as their parents would not have to contest with language and cultural barriers while supporting their children in school as many

other immigrant parents do (Campbell, 2015; Kim et al., 2015; Santiago et al., 2014). Bukodi and Goldthorpe (2013) found that in the modern age in the United Kingdom, parents' class, status, and education are no longer interchangeable as they once were, and that parental involvement is becoming a stronger predictor of a child's academic success. While a difference in cultural orientation may cause intergenerational tension, the more pressing issue may be the difficulty the parent experiences in acculturation, limiting the support and resources they can provide for their child (Kim et al., 2013). With the intention of so many immigrant families being a higher level of educational attainment for their children, programs that assist in parent acculturation would ultimately be beneficial to their children as well.

In addition, it is possible that Asian Americans internalize the model minority myth, which may be compounded into cultural values regarding education as well as educational attainment. For example, Yoo, Miller, and Yip (2015) found that internalization of the model minority myth accentuated the individual's academic ability, positively or negatively. For those that performed well, their abilities and achievements were validated and their expectations met, resulting in better well-being. Individuals who had weaker academic performances developed psychological stress due to falling short of perceived ability levels. In the long term, this could create a combination feedback loop and self-fulfilling prophecy where individuals that have high expectations and perform well initially continue to find success, but those that have initial hardships may limit themselves and predict lower educational attainment overall.

Variation among Immigrant Groups by Region

Caribbean immigrants have a much stronger association between parent educational attainment and child educational attainment than do Asian immigrants. They also have a stronger association between parent and child education than the total sample of immigrants. Roopnarine

and Jin (2012) found that Caribbean countries, specifically Trinidad and Tobago and Guyana, maintain traditional households and expectations. In Guyana, Jamaica, and St. Vincent and the Grenadines, respondents described similarly across all three countries the basic expectations of preschools. This emphasis was on academic training, rather than considering any child development milestones or holistic considerations such as the role of play (Roopnarine and Jin, 2012). This traditional and straightforward view of education, especially early childhood, may indicate a perspective of education simply being an expectation. No greater weight is placed on it to encourage excellence or importance, but likewise it is considered too commonplace to dismiss out of hand. Whereas some immigrant groups see education as a means to success and prosperity and others prefer manual labor or vocation as more immediate financial stability (Bankston, 2014), there may be the perspective for Caribbean immigrants that the path of education is just a tradition one follows. Worth noting is that for both samples, the means of parent and child educational attainment of Caribbean individuals (Respondent M = 4.41; Father M = 4.27) more closely match the means of the total immigrant sample (Respondent M = 4.34; Father M = 4.23) than any other individual region.

Mexican immigrants do not have a statistically significant association between parent and child educational attainment. This lack of an association may be due to the amount of variation possible in this relationship. Parents' lack of experience in higher education and acculturation factors may play a large role in parent involvement and support (Campbell, 2015), while other factors such as poverty and discrimination could weaken any positive gains to be had (Santiago et al., 2014). Coupled with the high expectations from parents, second-generation Latino immigrants might feel more comfortable identifying with the mainstream orientation and reject their family's traditional orientation, downplaying the importance of academic achievement and

limiting their educational attainment (Santiago et al., 2014). In contrast, those that can balance the acculturation may be the ones who prosper and weaken the association. Mexican American undergraduate men who identified with both cultural orientations found more support and confidence, resulting in higher well being and better academic achievement (Arévalo Avalos and Flores, 2016). There may be geographic or community factors that can account for the variation in responses. Were one to control for these variables, we might find a more statistically significant association between parent and child educational attainment of Mexican immigrants.

Potential Importance of Cultural Values

Respondent's realistic perception about their educational attainment positively increased their eventual educational attainment. It is possible that higher expectations and more positivity toward their accomplishments became a self-fulfilling prophecy for respondents. For individuals who reported higher ethnic self-identity importance with any immigrant mother, there was also a decrease in educational attainment. Hernandez and Napierala (2014) discuss the strong association between mother's educational attainment and child's, believing societal norms put more onus on the mother to handle childrearing, homework supervising, and socialization. If the immigrant mother holds a traditional orientation it can be assumed the child will develop one as well, resulting in acculturation stresses that limit academic performance.

Importance of good grades increased educational attainment for all groups, but more so for individuals with immigrant fathers. This may be due to a desire of the respondent to perform well, not simply pass through the system. There was much less variation in the responses to the importance of a good education because one could argue that such a concept is universally recognized. But the importance of good grades, and by extension, absorbing and enacting that knowledge gained, gives insight into an individual's perspective on what value is to be derived

from a good education. Individuals with parents from the Caribbean had one of the lowest response rates of the importance of good grades, but placed more priority on the importance of good education. This may tie into the possibility that education is seen as an expectation and part of the process, but not as a stepping stone or deterrent. Given the association between good grades and educational attainment, programs should be structured to reward effort and emphasize the ongoing process, while minimizing the thought process that all that ultimately matters is receiving a diploma regardless of grades.

Conceptual Complexity of Assessing Intergenerational Educational Attainment

Finally, the topic of intergenerational educational attainment contains a number of crucial complexities that cannot be fully address in the present paper, but are important to note and discuss. First, parent educational attainment has a positive association with child educational attainment, but parental structure may introduce other confounding factors. For instance, this paper does not delve into the complexities that may arise in single parent families. With one parent, ethnic self-identity may be reduced due to interaction with only one parent. Or, ethnic self-identity could actually be strengthened if a grandparent or other relative is also involved in childcare, as is more common in single parent families. In addition, income may become a more determinant factor in single parent families. Although income was not a statistically significant association in my analysis and my analysis does not account for single parent families, these dynamics should be explored in future research.

Second, the timing of parental meeting and marriage (e.g., in another country versus after arriving in the US) may also add a layer of complexity that we are unable to measure. If two parents meet in their home country and arrive to the US together, for example, they may be more likely to maintain a traditional orientation even after migrating. This may also apply to two

immigrants from the same ethnic group who meet within an ethnic enclave in their new home country. On the other hand, in families where one immigrant parent marries a native-born individual, acculturation may be amplified and traditional orientation minimized. Each of these scenarios likely impacts children's cultural values, and potentially educational attainment. Looking at the data used in this study, over six percent of the fathers in their sample were in mixed native/foreign marriages, and over ten percent of the mothers were in a similar situation. In future research, analysis could be done to see how mixed heritage marriages affect the ethnic self-identity of the second-generation.

Third, education can be a difficult concept to measure consistently across forms of training, generations, and regions. In the present study, for example, educational attainment values for respondents included more gradation, including responses for associates degree, vocational training, and the like in their continuum, while the parents' response categories were more truncated. Further, technical and vocation school was coded as a separate value higher than college graduate. While number of years in a vocational school may be less than a college degree, it is difficult to make comparisons on the skill or training involved in both. For the parents, responses of (7) technical or vocational school (approximately 1% of parents) were recoded as (5) some college or university to make the values more in line with the child educational attainment responses. Yet, these are not exact comparisons.

Finally, in terms of categorizing second-generation immigrants, many studies use the sorting method utilized by this study: adults and individuals over twelve who migrate to a new country are first-generation, while those born in the new country or are under the age of twelve are considered second-generation. The idea behind this division is that young individuals have not fully adopted the customs and perspective of their home country at such a young age and are

therefore more similar in acculturation to those born in the new country. There is great variation in how an individual develops and adapts to their home or host country orientation. Some studies categorize immigrants into "1.5" or "2.5" generation to account for these possible differences and future research should continue to explore potential options for measuring immigration.

Limitations

First, a major limitation of this analysis has been the need to generalize and oversimplify the number of regions and cultural differences interacting in the relationship between parent and child education. For many of the countries reported, the sample size was substantially lower than the number needed for regression analysis. To overcome this limitation, countries were grouped based on geographic and relative cultural similarities. Even then, some regions, such as the Middle East and Africa, were underrepresented. The full list of countries reported, their sample sizes, as well as the regions they were ultimately grouped into, can be found in Appendices A and B.

A second limitation of this study was the minimal number of responses focused on cultural value controls. While the questions posed, such as ethnic self-identity, parents' expectations, and importance of good grades and education, provide some insight into the perceptions of second-generation immigrants, more direct questions about acculturation and how that shapes their own expectations could lead to more clear associations.

Third, this dataset is focused on the respondent's reported answers and perceptions. The individual answered what they believe to be the opinions and values of their parents, but the parents do not verify these responses. While children's perceptions of parental expectations can have a great deal of weight on child behavior, it would be ideal to have both parent and child perceptions in the dataset to compare and contrast these varying influences.

Fourth, the cross-sectional nature of the analysis is a limitation. Despite the data set being longitudinal, the aspects of the respondents are limited to one observation per person. Relevant demographic and value questions pulled from earlier waves are used as a reference point, but these variables as well as educational attainment are not measured for changes over time. Further, the respondent in both Wave 1 and Wave 2 reports the parent educational attainment, but there is no elaboration in Wave 3 about potential further education. A parent seeking higher education after migrating to the United States might have different influences on their child compared to someone who immigrates and does not seek further academic achievement.

Lastly, the lack of a native-born portion of the sample limits the direct comparisons that can be made about the associations between child and parent educational attainment for immigrants and for native-born individuals. General comparisons can be made about the similar positive association that exists within both groups, but without a standardized sample and method no observations can be made about the variation and relative strengths of these associations to each other.

Future Research and Policy Application

Future research should seek to correct or reduce the limitations inherent in this study. For example, a more representative sample needs to be gathered to alleviate the need to group immigrants by region. Separating respondents by country of origin would provide more clarity on the effects of separate cultures. Further, non-immigrants of the same ethnic groups should be included in the sample in order to provide a subsample with which to compare second-generation immigrants.

Context needs to be given to the cultural value controls so that these responses have more clarity. While superficial motivations can be determined by how an individual responds to the

importance of good grades or education, there is nuance missing and no explanation for why the individual feels this way. As such, future research should seek to explore these motivations with either a qualitative survey question or a ranking of other motivators with education included.

There are a number of potential policies that could be implemented to benefit the immigrant populations based on this research. At the local level, school districts and parent-teacher associations could establish outreach programs for immigrant parents. For many who know little or no English, language courses would improve their English proficiency and allow them to be more involved with their child's education. Classes could also be taught on American customs and experiences to strengthen their mainstream culture orientation (Santiago et al., 2014; Kim et al., 2015). While this should not be done in an attempt to erode their traditional orientation or culture, at the least a deeper understanding of what their child may be experiencing could reduce the amount of intergenerational tension due to this dissonance (Santiago et al., 2014). At the larger state or federal level, the realization that second-generation immigrants perform better than both their parents and native-born ethnic group peers could be an argument for allowing more immigration into the country. While immigration policies usually rely on either familial relations already residing in the United States or a desired skill or high educational attainment (U.S. Citizenship and Immigration Services, 2016), showing the academic success of second-generation immigrants could be support for viewing immigration as an investment in the future.

Lastly, additional research in this area could lead to improvements in educational attainment in other populations. A deeper understanding of the motivations and priorities imparted from immigrant parents on their children could be utilized to restructure lesson plans. Immigrants with limited resources, less income, or who lack other factors that may bolster

academic performance, may benefit from research on how to maximize their children's opportunities.

Conclusion

The analysis executed here shows there is a positive association between the educational attainment of an immigrant parent and that of their child. Further, this association is weaker for Asian immigrants than it is for the total of all immigrant groups. Depending on culture and background, the educational attainment of immigrant parents partially determines the academic achievement of their children. The ramifications of these associations can be beneficial or detrimental. For instance, Mexican immigrants have no statistically significant association between parent and child educational attainment while Caribbean immigrants have a strong association between parent and child academic achievement. A strong correlation between parent and child education means that child education is strongly tied to that of the parent. While immigration policies may preference individuals with higher education (U.S. Citizenship and Immigration Services, 2016), it might actually be desirable to see a de-coupling of parent and child education for all groups (including U.S.-born families). If we were to one day see a weak correlation between parent and child education nation-wide, this may indicate that educational attainment is becoming more of an individual accomplishment. In other words, a weak correlation would mean that child education is less tied to family background (i.e., education advantage/disadvantage), in contrast to current trends that show a strong and consistent family influence on child outcomes for most immigrant and native-born groups.

Immigrants face a range of unique issues in addition to those experienced by native-born citizens, and these factors can inhibit their academic success and future well being. Yet the data and studies show immigrants are still successful in spite of these challenges. Future research into

how they overcome these hardships might prove useful in improving the success of the nation's population as a whole.

Table 1: Descriptive Statistics - Educational Attainment, Cultural Values Controls, and Sociodemographic Controls, broken down by region - Fathers Sample (Means or %)

	Total (N = 2107)	**Asia** (N = 708)	**Mexico** (N = 231)	**Europe** (N = 44)	**Middle East** (N = 14)	**Africa** (N = 5)	**Caribbean** (N = 706)	**C. & S. America** (N = 391)	**Other** (N = 8)
Respondent's Educational Attainment	4.34	4.60	3.35	4.73	4.86	5.40	4.41	4.29	4.13
Father's Educational Attainment	4.23	4.44	2.61	4.75	5.00	5.00	4.27	4.63	4.75
Respondent's Desired Educ. Attainment	4.67	4.72	4.30	4.57	4.79	5.00	4.72	4.70	4.63
Parents' Desired Educ. Attainment	4.62	4.66	4.33	4.50	4.64	5.00	4.61	4.73	5.00
Respondent's Realistic Educ. Attainment	4.34	4.39	3.86	4.43	4.64	5.00	4.43	4.36	4.38
Ethnic Self-Identity Importance (1 = Very Important)	0.61	0.66	0.69	0.45	0.50	0.80	0.58	0.54	0.38
Importance of Good Grades (1 = Very True)	0.70	0.76	0.68	0.64	0.79	1.00	0.66	0.67	0.63
Importance of Good Education (1 = Very True)	0.91	0.92	0.90	0.82	0.93	1.00	0.91	0.90	1.00
Male	44.14%	46.33%	42.42%	34.09%	50.00%	60.00%	44.05%	42.46%	25.00%
Age	24.13	24.14	24.14	24.18	24.00	24.20	24.04	24.27	24.00
Income	7.45	7.59	6.65	7.02	6.57	10.60	7.48	7.69	6.38
Both Parents Are Immigrants	93.59%	97.03%	88.74%	72.73%	78.57%	100.00%	92.49%	95.14%	87.50%

Table 2: Descriptive Statistics - Educational Attainment, Cultural Values Controls, and Sociodemographic Controls, broken down by region - Mothers Sample (Means or %)

	Total (N = 2321)	**Asia** (N = 792)	**Mexico** (N = 278)	**Europe** (N = 35)	**Middle East** (N = 11)	**Africa** (N = 6)	**Caribbean** (N = 740)	**C. & S. America** (N = 451)	**Other** (N = 8)
Respondent's Educational Attainment	4.29	4.51	3.35	4.66	4.91	5.50	4.39	4.25	4.25
Mother's Educational Attainment	4.12	4.32	2.60	4.66	4.82	5.67	4.27	4.36	4.38
Respondent's Desired Educ. Attainment	4.64	4.69	4.28	4.69	4.55	5.00	4.68	4.69	4.88
Parents' Desired Educ. Attainment	4.59	4.61	4.27	4.57	4.64	4.83	4.60	4.71	4.88
Respondent's Realistic Educ. Attainment	4.32	4.35	3.87	4.54	4.36	5.00	4.41	4.35	4.38
Ethnic Self-Identity Importance (1 = Very Important)	0.61	0.66	0.68	0.49	0.64	0.67	0.58	0.55	0.50
Importance of Good Grades (1 = Very True)	0.70	0.76	0.70	0.51	0.82	0.83	0.65	0.68	0.50
Importance of Good Education (1 = Very True)	0.91	0.92	0.91	0.89	0.73	1.00	0.90	0.92	0.75
Male	44.12%	46.21%	42.45%	60.00%	27.27%	50.00%	43.92%	41.24%	25.00%
Age	24.13	24.11	24.15	24.26	23.91	24.17	24.07	24.24	24.25
Income	7.35	7.42	6.57	7.34	6.91	10.17	7.42	7.61	5.38
Both Parents Are Immigrants	89.66%	87.75%	83.45%	71.43%	90.91%	100.00%	93.51%	92.02%	75.00%

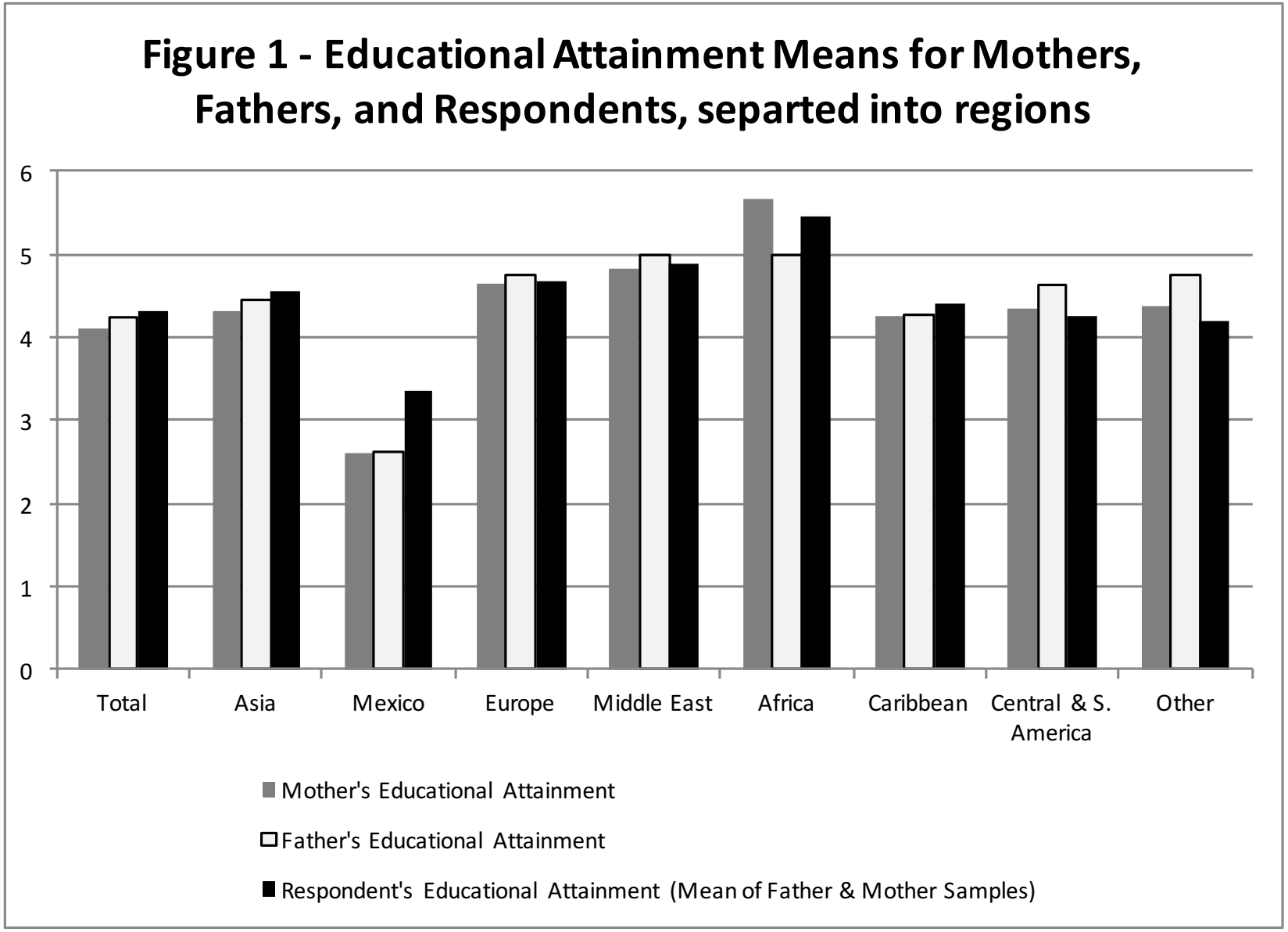


Figure 1 - Educational Attainment Means for Mothers, Fathers, and Respondents, separted into regions
6
5
4
3
2
1
0
Total
Asia
Mexico
Europe
Middle East
Africa
Caribbean
Central & S. America
Other
Mother's Educational Attainment
Father's Educational Attainment
Respondent's Educational Attainment (Mean of Father & Mother Samples)

Table 3: OLS Regression results predicting respondent's educational attainment by region - Fathers Sample

	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	3.29 ***	3.22 ***	2.62 *	3.72 ***	3.10 **
	(0.101)	(0.102)	(1.023)	(0.121)	(1.043)
Father's Educational Attainment	0.25 ***	0.24 ***	0.15 ***	0.20 ***	0.13 ***
	(0.022)	(0.022)	(0.021)	(0.024)	(0.022)
Is Father from…					
Asia		0.31 ***	0.27 ***		
		(0.076)	(0.069)		
Mexico				-0.89 ***	-0.54 ***
				(0.130)	(0.121)
Europe				0.07	0.11
				(0.252)	(0.232)
Middle East				0.15	-0.01
				(0.437)	(0.398)
Africa				0.69	0.16
				(0.727)	(0.662)
Caribbean				-0.16 #	-0.20 *
				(0.086)	(0.079)
Central & South America				-0.35 ***	-0.30 **
				(0.102)	(0.094)
Other				-0.53	-0.52
				(0.576)	(0.525)
Cultural Values					
Respondent's Desired Educational Attainment			0.08		0.07
			(0.069)		(0.069)
Parents' Desired Educational Attainment			0.04		0.04
			(0.054)		(0.054)
Respondent's Realistic Educational Attainment			0.78 ***		0.76 ***
			(0.055)		(0.056)
Ethnic Self-Identity Importance (1 = Very Important)			-0.11 #		-0.10
			(0.067)		(0.067)
Importance of Good Grades (1 = Very True)			0.18 *		0.19 *
			(0.075)		(0.075)
Importance of Good Education (1 = Very True)			-0.02		0.00
			(0.121)		(0.121)
Male			-0.07		-0.07
			(0.066)		(0.066)
Age			-0.13 ***		-0.13 ***
			(0.039)		(0.039)
Income			0.02		0.02
			(0.012)		(0.012)
Both Parents Are Immigrants			0.10		0.10
			(0.132)		(0.134)
R-Square	0.057	0.064	0.241	0.0804	0.245
R-Square (Adjusted)	0.056	0.063	0.230	0.0769	0.239

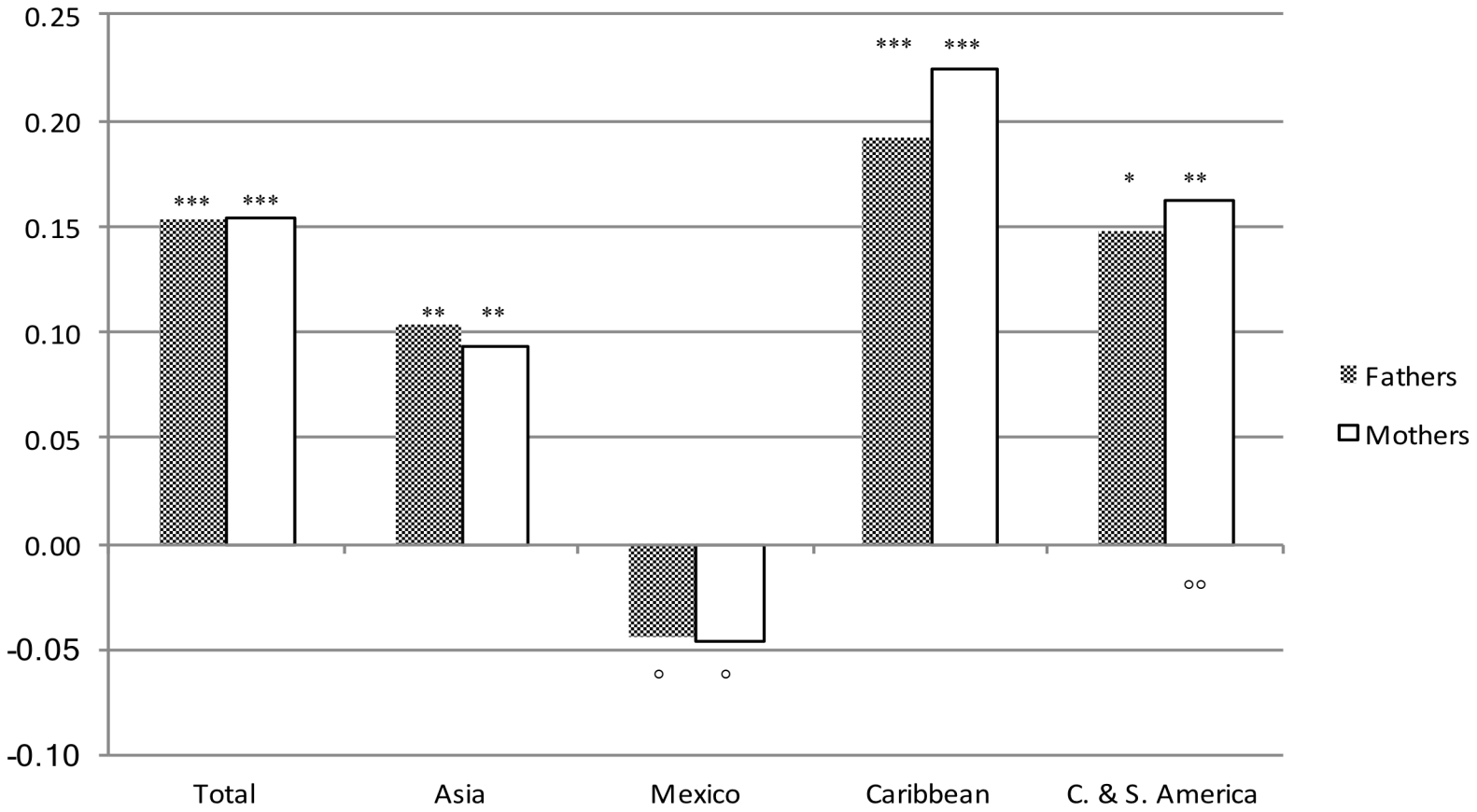
Note: Table presents unstandardized coefficients (standard errors in parentheses) # p ≤ 0.1, * p ≤ 0.05, ** p ≤ 0.01, *** p ≤ 0.001

Table 4: OLS Regression results predicting respondent's educational attainment by region - Mothers Sample

	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	3.20 ***	3.14 ***	1.44	3.59 ***	1.92 #
	(0.094)	(0.095)	(0.971)	(0.113)	(0.983)
Mother's Educational Attainment	0.26 ***	0.26 ***	0.15 ***	0.21 ***	0.13 ***
	(0.021)	(0.021)	(0.020)	(0.023)	(0.021)
Is Father from…					
Asia		0.25 ***	0.24 ***		
		(0.072)	(0.065)		
Mexico				-0.79 ***	-0.48 ***
				(0.120)	(0.110)
Europe				0.08	0.03
				(0.281)	(0.256)
Middle East				0.30	0.31
				(0.494)	(0.447)
Africa				0.71	0.22
				(0.668)	(0.604)
Caribbean				-0.10	-0.16 *
				(0.083)	(0.076)
Central & South America				-0.26 **	-0.28 **
				(0.096)	(0.088)
Other				-0.27	-0.25
				(0.579)	(0.524)
Cultural Values					
Respondent's Desired Educational Attainment			0.11 #		0.11 #
			(0.064)		(0.064)
Parents' Desired Educational Attainment			0.07		0.07
			(0.049)		(0.050)
Respondent's Realistic Educational Attainment			0.76 ***		0.74 ***
			(0.053)		(0.053)
Ethnic Self-Identity Importance (1 = Very Important)			-0.15 *		-0.15 **
			(0.064)		(0.064)
Importance of Good Grades (1 = Very True)			0.14 #		0.15 **
			(0.071)		(0.071)
Importance of Good Education (1 = Very True)			0.04		0.07
			(0.115)		(0.115)
Male			-0.05		-0.06
			(0.063)		(0.063)
Age			-0.09 *		-0.10 **
			(0.038)		(0.038)
Income			0.01		0.01
			(0.012)		(0.012)
Both Parents Are Immigrants			0.19 #		0.17 #
			(0.101)		(0.102)
R-Square	0.062	0.067	0.252	0.082	0.256
R-Square (Adjusted)	0.062	0.066	0.248	0.079	0.250

Note: Table presents unstandardized coefficients (standard errors in parentheses) # p ≤ 0.1, * p ≤ 0.05, ** p ≤ 0.01, *** p ≤ 0.001

Figure 2 - Coefficient Estimate of Association between Parent Education & Child Education by Split Samples of Region



Parent/Child Education Association: * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$
Region Interaction Difference: ° $p \leq 0.05$, °° $p \leq 0.01$, °°° $p \leq 0.001$

Appendix A: Frequencies of Countries of Origin for Fathers

Country	Frequency	Percent	Collapsed Region
Cambodia	25	1.19	Asia
China	7	0.33	Asia
Hong Kong	6	0.28	Asia
India	18	0.85	Asia
Indonesia	3	0.14	Asia
Japan	4	0.19	Asia
Korea	3	0.14	Asia
Laos	68	3.23	Asia
Philippines	409	19.41	Asia
Taiwan	23	1.09	Asia
Thailand	3	0.14	Asia
Vietnam	138	6.55	Asia
Other Asia	1	0.05	Asia
Mexico	231	10.96	Mexico
Austria	5	0.24	Europe
Denmark	1	0.05	Europe
France	2	0.09	Europe
Germany	2	0.09	Europe
Greece	3	0.14	Europe
Hungary	1	0.05	Europe
Italy	7	0.33	Europe
Norway	1	0.05	Europe
Poland	2	0.09	Europe
Portugal	2	0.09	Europe
Romania	2	0.09	Europe
Spain	9	0.43	Europe
Sweden	1	0.05	Europe
United Kingdom	3	0.14	Europe
USSR	1	0.05	Europe
Yugoslavia	2	0.09	Europe
Iran	2	0.09	Middle East
Israel	1	0.05	Middle East
Lebanon	2	0.09	Middle East
Pakistan	6	0.28	Middle East
Syria	2	0.09	Middle East
Turkey	1	0.05	Middle East
Nigeria	2	0.09	Africa
South Africa	2	0.09	Africa
Other Africa	1	0.05	Africa
Bahamas	8	0.38	Caribbean

Country	Frequency	Percent	Collapsed Region
Cuba	547	25.96	Caribbean
Dominican Republic	36	1.71	Caribbean
Haiti	49	2.33	Caribbean
Jamaica	47	2.23	Caribbean
St. Kitts	3	0.14	Caribbean
Trinidad & Tobago	12	0.57	Caribbean
Other Caribbean	4	0.19	Caribbean
Costa Rica	5	0.24	Central and South America
El Salvador	8	0.38	Central and South America
Guatemala	15	0.71	Central and South America
Honduras	14	0.66	Central and South America
Nicaragua	132	6.26	Central and South America
Panama	8	0.38	Central and South America
Argentina	25	1.19	Central and South America
Bolivia	5	0.24	Central and South America
Brazil	4	0.19	Central and South America
Chile	22	1.04	Central and South America
Colombia	101	4.79	Central and South America
Ecuador	22	1.04	Central and South America
Guyana	4	0.19	Central and South America
Peru	14	0.66	Central and South America
Uruguay	5	0.24	Central and South America
Venezuela	6	0.28	Central and South America
Other South America	1	0.05	Central and South America
Canada	5	0.24	Other
Puerto Rico	3	0.14	Other

Appendix B: Frequencies of Countires of Origin for Mothers

Country	Frequency	Percent	Collapsed Region
Burma	1	0.04	Asia
Cambodia	29	1.25	Asia
China	7	0.3	Asia
Hong Kong	11	0.47	Asia
India	12	0.52	Asia
Indonesia	2	0.09	Asia
Japan	12	0.52	Asia
Korea	6	0.26	Asia
Laos	74	3.19	Asia
Phillipines	470	20.25	Asia
Taiwan	20	0.86	Asia
Thailand	5	0.22	Asia
Vietnam	142	6.12	Asia
Other Asia	1	0.04	Asia
Mexico	278	11.98	Mexico
Austria	2	0.09	Europe
Denmark	1	0.04	Europe
Germany	7	0.3	Europe
Hungary	1	0.04	Europe
Ireland	1	0.04	Europe
Poland	1	0.04	Europe
Romania	2	0.09	Europe
Spain	10	0.43	Europe
Sweden	2	0.09	Europe
United Kingdom	6	0.26	Europe
Yugoslavia	1	0.04	Europe
Other Europe	1	0.04	Europe
Israel	2	0.09	Middle East
Lebanon	3	0.13	Middle East
Pakistan	5	0.22	Middle East
Syria	1	0.04	Middle East
Nigeria	2	0.09	Africa
South Africa	2	0.09	Africa
Other Africa	2	0.09	Africa
Antigua	1	0.04	Caribbean
Bahamas	7	0.3	Caribbean
Barbados	1	0.04	Caribbean
Cuba	567	24.43	Caribbean
Dominican Republic	35	1.51	Caribbean
Grenada	1	0.04	Caribbean
Haiti	59	2.54	Caribbean

Country	Frequency	Percent	Collapsed Region
Jamaica	52	2.24	Caribbean
St. Kitts	2	0.09	Caribbean
St. Lucia	1	0.04	Caribbean
Trinidad & Tobago	10	0.43	Caribbean
Other Caribbean	4	0.17	Caribbean
Belize	1	0.04	Central and South America
Costa Rica	9	0.39	Central and South America
El Salvador	12	0.52	Central and South America
Guatemala	18	0.78	Central and South America
Honduras	29	1.25	Central and South America
Nicaragua	161	6.94	Central and South America
Panama	6	0.26	Central and South America
Argentina	25	1.08	Central and South America
Bolivia	4	0.17	Central and South America
Brazil	3	0.13	Central and South America
Chile	18	0.78	Central and South America
Colombia	108	4.65	Central and South America
Ecuador	22	0.95	Central and South America
Guyana	6	0.26	Central and South America
Peru	16	0.69	Central and South America
Uruguay	6	0.26	Central and South America
Venezuela	6	0.26	Central and South America
Other South America	1	0.04	Central and South America
Canada	6	0.26	Other
Puerto Rico	2	0.09	Other

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