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Elderly Asian and Hispanic Foreign- and Native-Born Living Arrangements: Accounting for Differences

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Abstract

This study examines the relative importance of demographic, resource, and assimilation statuses in explaining the living arrangements of foreign- and native-born Asian and Hispanic elders from 11 origins in 2000 and accounting for why these groups have higher levels of extended living than native-born Whites. Drawing on the 2000 Public Use Microdata 5% Sample (PUMS) files and using logistic regression, the findings show that demographic characteristics are the major determinants of elderly extended living, followed by resource availability, assimilation, and group origin. Assimilation, on the other hand, is the major determinant of group differences between native White and Asian and Hispanic elders. While findings provide support for assimilation theory, the persistence of differentials across Asian and Hispanic groups after controlling for model covariates, and modest increases in extended living for most native-born Asian and Hispanic groups as well as native Whites in the 1990s underscores the enduring nature of ethnic diversity in living arrangements.

Keywords

elderly living arrangements; Asian elders; Hispanic elders; elderly immigrants

Increasing U.S. immigration after passage of the 1965 Immigration Act led not only to growth in the productive age population but also to growth in the numbers of elderly immigrants from non-European origins, particularly in those from Asia and Latin America. As researchers started to study the living arrangements of these new ethnic elders, they found that Asian and Hispanic elders were considerably more likely to live in extended households than non-Hispanic Whites. However, the important questions raised by researchers, namely, why are Asian and Hispanic elders more likely than native White elders to live in extended households and will the differences in living arrangements between Asian and Hispanic elders and native Whites converge as assimilation proceeds, have not been settled. Although several studies found that Asian and Hispanic differences with native Whites in extended living diminished after controlling for demographic characteristics, social and economic resources, and assimilation, large differences remained unaccounted for (Blank and Torrecilha 1998; Burr and Mutchler 1992, 1993; Kamo and Zhou 1994; Lubben and Becerra 1987; Mutchler and Frisbie 1987; Wilmoth, DeJong, and Himes 1997). This study addresses those questions anew by looking at patterns of extended living among foreign- and native-born Asian and Hispanic elders from 11 different origins.

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The early studies carried out on Asian and Hispanic living arrangements drew on 1980 and 1990 census data but we have not found any studies that update findings using 2000 census data. This is surprising given that sample numbers of elderly foreign- and native-born from different origins are considerably larger in the 2000 census than they were in the two previous censuses due to continued immigration and population aging of foreign- and native-born cohorts. While the numbers of non-Hispanic native White elders (hereafter native Whites) aged 60 and older increased by 6% in the 1990s, Asian foreign- and native-born elders increased by 28% and 114%, respectively, and Hispanic foreign- and native-born elders increased by 42% and 81%, respectively. These increases greatly augmented sample numbers of ethnic elders in the 2000 census, which permits study of a larger number of Asian and Hispanic groups than was previously possible. This article takes advantage of 2000 Public Use Microdata 5% Sample (PUMS) data to examine 11 groups of Asian and Hispanic elders, including their foreign- and native-born components. In addition to describing trends in extended living between 1990 and 2000, the article addresses two questions: What is the relative importance of demographic, resource, and assimilation statuses in explaining the living arrangements of foreign- and native-born Asian and Hispanic elders from different origins, and what is the relative importance of these dimensions for explaining differentials between native White and Asian and Hispanic elders in levels of extended living? By addressing anew the issue of what accounts for ethnic levels of extended living and for group differences between native Whites and Asian and Hispanic elders, insights can be gleaned about likely future trends in living arrangements as the numbers of foreign- and native-born elders from Asia and Latin America increase in the years ahead (Terrazas 2009).

Conceptual Framework

Most native White elders in America live alone or with a spouse and no other adult relatives present. This has evolved as the preferred living norm in a social context where elders have economic alternatives to extended living (Soldo, Wolf, and Agree 1990; Wolf 1990). However, the living arrangements of Asian and Hispanic foreign- and native-born elders differ considerably from this norm. Figure 1 shows that both foreign- and native-born Asian and Hispanic elders were much more likely than native Whites to reside in extended households in 2000 and that there is considerable variation among ethnic groups from each region in extended living propensity. Foreign-born elders from Mexico, the Dominican Republic, Philippines, Vietnam, and India are about four or more times as likely as native Whites to live in extended households. For the other groups, the differentials with native Whites persist but are smallest for Japanese foreign born and native-born Chinese, Cubans, and Colombians.

Efforts to explain the living arrangements of Asian and Hispanic elders usually draw on theoretical perspectives that emphasize the roles of demographic characteristics, social and economic resources, assimilation, and group values. All studies show that demographic characteristics have robust relationships to elder living arrangements. Indeed, while marital status, age, and sex are important predictors of extended living, group differences in demographic characteristics do not account for ethnic differentials with native Whites. Most researchers who have studied immigrant groups or the foreign- and native-born components of Asians and Hispanics conclude that group differences stem from more than demographic characteristics (Wilmoth 2001; Wilmoth et al. 1997).

A second theoretical approach focuses on economic need and resource availability, and views extended living as a coping response to limited income, lack of resources, and host society discrimination. As supporting evidence, scholars point to higher poverty rates among ethnics (McLaughlin and Jensen 1993) and survival strategies of pooling income and other

resources pursued by low-income families (Angel and Tienda 1982; Blank and Torrecilha 1998). According to this perspective, multigenerational households in segregated neighborhoods are encouraged by poverty and race rather than reflecting ethnic group cultural preferences. Resource access is usually indexed by income and education based on the assumption that they underlie elders' ability to control their living environment and obtain needed goods and services. Since a large share of the immigrant population has relatively low educational attainment and income, it is reasonable to expect that group differences in resources may play a role in the varied levels of extended living observed for Asian and Hispanic elders (Terrazas 2009). However, the resource explanation is complicated by the reality that some immigrant groups, such as Indians, have high levels of both resources and extended living, suggesting that something more than demographics and resources account for the large differences shown in Figure 1.

The additional element most commonly considered is immigrant assimilation. Proponents of this approach (Burr and Mutchler 1992; Kamo and Zhou 1994) assert that ethnic group differences stem from origin group cultural preferences, the disruptions of the immigration process, or challenges and obstacles encountered in the host society. Previous studies have identified several assimilation measures that are associated with group differences, including duration of exposure to host society culture, English language ability, and citizenship (Alba and Nee 2003; Wilmoth 2001). A variant on the assimilation approach focuses more explicitly on the origin society cultures that Asian and Hispanic immigrants bring with them and calls attention to their deeply rooted normative attitudes and behaviors toward the family, particularly the practice in some societies of assigning children the responsibility of caring for elderly parents (De Vos 1990; Hirschman and Teerawichitchainan 2003; Martin 1988; Ruggles and Heggeness 2008). While the assimilation and resource perspectives see group differences as temporal patterns that diminish as immigrants and their descendants assimilate into mainstream America, the group culture variant focuses on normative patterns and institutional structures believed to be deeply rooted in cultural belief systems that endure across time and generations. Ethnic groups can actively work to preserve traditional behavioral patterns or be constrained from changing by barriers to integration in the host society. In the United States, the Amish are an example of an established ethnic group that has maintained a separate way of life for centuries. Across generations, Amish cultural preferences have been consciously maintained and are expressed today in the form of distinct familial and other behaviors. African American family patterns provide another example and are often cited as having been strongly shaped by the barriers and challenges presented by American society in earlier centuries (Peek et al. 2004; Ruggles 1994).

Census data are not well suited to determining the extent to which origin culture contributes to behavioral outcomes since they include no measures of values, preferences, or organized cultural activities. Even augmenting destination society data with origin society data, a task beyond the scope of the current article, cannot easily sort out the complexity of origin society heterogeneity and diverse migration selection processes that operate both within and across societies. As such, in most studies, origin culture is measured as a residual effect or the component left unexplained by the model. This residual conceptualization of culture is unsatisfactory for several reasons. First, inadequate measurement of resources or assimilation, the competing concepts, may contribute to the residual group effect. Second, origin societies in Asia and Latin America are complex and heterogeneous, making it difficult to conceptualize and measure the overall culture. Third, migration is a selective process rendering questionable the assumption that immigrants in America are representative of origin society cultures. Finally, migration and the subsequent processes of settlement and adaptation are disruptive and different behaviors may result from these disruptions. This is illustrated in a recent study by Van Hook and Glick (2007), which used census data from the United States and Mexico to compare living arrangements of Mexicans

aged 25 and older in sending and receiving contexts. They found marked differences between the living arrangements of Mexican immigrants and non-immigrants in the two countries and concluded that the immigration process disrupts family structures, leading in turn to living arrangements that are not solely dependent on group culture.

We draw on these frameworks to examine the determinants of extended living for foreign- and native-born Asian and Hispanic elders from six Asian (China, India, Japan, Korea, Philippines, and Vietnam) and five Hispanic origins (Colombia, Cuba, Dominican Republic, Mexico, and Puerto Rico) and to identify the sources of differences in extended living between native Whites and Asian and Hispanic elders. Overall, 85.4% and 78.5%, respectively, of Asian and Hispanic elders came from one of these origins in 2000. However, only five of these origin groups (Mexicans, Cubans, Chinese, Japanese, and Indians) have been examined in other studies of ethnic elders (Wilmoth 2001). By looking at a larger number of ethnic groups than previous studies and differentiating between their native- and foreign-born components, we can provide a broader overview of living arrangement differences both within and across regions and assess whether ethnic groups respond differently to resource and assimilation conditions.

To account for group differences in extended living between native White and Asian and Hispanic elders from different origins, we evaluate the following four hypotheses:

Hypothesis 1: Assimilation—measured by nativity status, English language ability, age at immigration, and spatial dispersion—accounts for a significant share of Asian and Hispanic group differences with native Whites in extended living.

Hypothesis 2: Social and economic resources—measured by education, own income, Social Security income, and disability status—account for a significant share of ethnic group differences with native Whites in extended living levels but do so less for Asian than Hispanic elders because Asians have higher resource levels.

Hypothesis 3: Demographic characteristics are significant determinants of elderly extended living arrangements but not an important source of Asian and Hispanic group differences with native Whites because group differences in demographics are relatively small compared to those for resources and assimilation.

Hypothesis 4: Net of assimilation, social and economic resources, and demographic characteristics, other unmeasured origin group characteristics remain as significant sources of Asian and Hispanic group differences with native Whites in extended living.

Although most of the indicators used in this study to measure covariate subsets are comparable to those examined in other studies, we look at two understudied assimilation dimensions, namely, age at immigration and geographic dispersion. Research indicates that recent elderly immigrants from most origins are likely to live in extended households and also suggests that life course stage is important for living arrangements (Blank and Torrecilha 1998; Wilmoth 2001). To assess the life course effect, we look at differences for six age cohorts, expecting to find lower levels of extended living among immigrants who arrive at younger ages since they will have had greater exposure to U.S. society. In contrast, foreign born arriving at older ages probably come to join family members who immigrated earlier and thus will be more likely to live in extended households.

Spatial factors have been ignored in ethnic elder studies, but there is reason to expect that they too may be important. Although most immigrants settle in concentrated ethnic settlements in large metropolitan areas after they arrive (Gordon 1964; Massey and Mullan 1984; Yancey, Ericksen, and Juliani 1976), immigrant groups differ greatly not only in

terms of which metropolitan areas they select but also in their subsequent internal dispersion rates (Kritz and Gurak 2001). Cuban elders, for instance, concentrate in Miami and other parts of South Florida while Dominicans and Puerto Ricans favor the New York region. Mexicans are concentrated in California, Texas, and other southwestern states, but significant numbers of them have recently settled in metropolitan areas in the Midwest, Southeast, and Mid-Atlantic regions. Similar settlement differences occur among Asians. Whereas Filipinos and Vietnamese tend to live in Los Angeles and other western areas, Indians locate mainly in New York, New Jersey, or Chicago. Chinese and Koreans split more evenly between east and west coast locations. If immigrants and their descendants remain settled in large ethnic enclaves, the social norms and behaviors of their cultural group are easier to reinforce and may endure longer than they would for elders who disperse to communities where fewer co-ethnics reside. Recent research shows that immigrants have been moving beyond gateway areas during the past two decades but that rates and patterns of dispersion vary by origin (Massey 2008). Thus, increasing numbers of Asian and Hispanic elders now live in places where there are fewer co-ethnics. The forces shaping this recent dispersion process remain poorly understood, but research suggests that dispersed residence is positively correlated with other assimilation indicators such as English language fluency, duration of U.S. residence, and citizenship (Leach and Bean 2008).

Data and Measurement of Living Arrangements

To assess why Asian and Hispanic elders differ in their living arrangements, one needs data for several different groups that have large foreign- and native-born components. Of the 11 study groups, 5 fully met this criterion in 2000, namely, Mexicans, Puerto Ricans, Japanese, Chinese, and Filipinos, since they have immigration roots in the nineteenth and early twentieth centuries and are the largest of the study groups. The other groups—Koreans, Indians, Vietnamese, Cubans, Dominicans, and Colombians—had small but sufficient native-born sample sizes for study purposes in the 2000 Public Use Microdata 5% Sample. While our analysis draws mainly on 2000 census data, to assess change in living arrangements from 1990 to 2000 we also use the 1990 PUMS 5% file. The harmonized census files from IPUMS (Ruggles et al. 2009) were used for both decades.

Respondents were assigned to country of origin categories using multiple indicators. Country of birth alone identifies the foreign born, exclusive of persons born abroad to U.S. citizens, but several indicators were used to identify their native-born counterparts. Asian native born were identified using elder's detailed race, first and second ancestry measures, and language spoken at home and an origin assignment made if a positive result occurred on any item. Hispanic native born, in contrast, were identified by their responses to the Hispanic identity item and two census ancestry questions. Spanish language was not used to assign Hispanics to an origin country since it is a common language for all Hispanic groups. A small number of native-born persons specified more than one Hispanic or Asian origin. To handle this ambiguity, we first classified all native-born ethnics whose origins were clear and rank-ordered the specified groups by size. Then we classified the mixed race/ ancestry/ language cases by assigning them to the study group that had the smallest sample size. This means, for example, that if an elder indicated they were Japanese on the race item and Vietnamese on an ancestry or language question, they were classified as Vietnamese because the native-born Vietnamese elder population size was smaller than that of Japanese elders. This procedure is arbitrary in that we could have given priority to a single measure such as race for Asians or Hispanic identity for Hispanics. While such a priority assignment might be defensible, it would also be arbitrary and have produced slightly lower native-born sample sizes for the smaller groups, namely, Vietnamese, Indians, Colombians, and Dominicans. We opted to maximize the native-born sample sizes so that a larger number of groups could be studied. The number of ambiguous assignments, in any case, is small.

Finally, although Puerto Ricans are native born, they are included in our analysis sample to add further diversity to the Hispanic category. Puerto Ricans born in Puerto Rico are classified as foreign born and those born in the mainland United States as native born.

The analysis focuses on elders (60 or older) living in extended versus other types of living arrangements in 2000. Elders living in group quarters are not included in the sample. In 2000, only 1.2% of foreign-born Hispanics and 0.8% of foreign-born Asians lived in group quarters. In contrast, 5% of native White elders lived in group quarters. A person is classified as living in an extended household if at least one adult relative other than a spouse or a relatively young child also lived in the household. A child was considered young if he or she was unmarried or married but with no spouse present and younger than 40 years of age, or he or she was married with a spouse present but younger than 30 years of age. These age constraints reduce the possibility of classifying households as extended that might be considered nuclear, such as a case of a 60 year old with a younger spouse and children in their 20s and 30s.

Although the analysis focuses only on the contrast between elders living in extended households versus those living in all other types of living arrangements, we generated a detailed classification of elderly living arrangements. From the 2000 IPUMS 5% files, household data were obtained for all persons 60 or older and all other persons living in the household regardless of age. We then used both IPUMS (Ruggles et al. 2009) detailed household relationship codes and other information generated by counting specific combinations of relationship and age for all persons present in 2000 to create a summary measure of each elder's household type. Details of the measurement criteria and household compositions can be obtained from the authors. Among elders 60 or older in 2000 who did not reside in an institution or group home, 15.5% lived in extended households. Another 26.6% lived alone, 47.1% lived with spouse only, and 8.7% were in mixed relative households with a young child, grandchild, niece, or nephew present but no other adult relative (except possibly a spouse). An additional 2.1% of elders lived in some other type of household including ones with boarders or other unrelated persons. For the total foreign-born population, the corresponding percentages were: 30.3% "extended," 19.2% "alone," 33.3% with "spouse only," 13.7% "mixed relative," and 3.5% "other." We estimated models employing the adult relative constraint along with other models employing different constraints for age of relatives and marital status and find only small differences in estimated coefficients. The basic findings described in the following remain robust regardless of the extended living specification.

Extended living arrangements of Asian and Hispanic elders from different origins showed both continuity and change in the 1990s (see Table 1). In 1990 and 2000, foreign- and native-born Asians and Hispanics from all origins were more likely than native Whites to live in extended households. Moreover, extended living increased among all Hispanic foreign-born groups in the 1990s although those increases were modest except for Mexicans whose 1990 level of 36.4% increased to 45.9% by 2000. While several foreign-born Asian groups (Japanese, Koreans, Filipinos, and Indians) had lower levels of extended living in 2000 than in 1990, extended living increased among all the native-born Asian groups except Indians, and native Whites also showed an increase. Nonetheless for all groups, levels of extended living were lower for the native born than they were for the foreign born in both decades, which is consistent with a convergence tendency.

Figure 1 illustrates the convergence pattern more clearly. The bars show ratios of the percentage extended among Asian and Hispanic elders to the percentage extended among native Whites by ethnic origin and generational status. Differentials with native Whites were largest for the foreign born: Mexican, Dominican, Filipino, Vietnamese, and Indian foreign

born had the largest ratios (3.9 to 4.7) and Japanese the lowest (2.0), but drop sharply for the native born from all origins. Among the native born, Filipinos and Vietnamese have the highest ratios but those for other groups fall between 1.8 (Colombians and Chinese) and 2.4 (Dominicans). The high levels of heterogeneity within both regions underscores the importance of examining ethnic groups from specific origin countries rather than using regional averages, which are affected by origin composition and thus tend toward the averages of the larger groups. Mexicans, for instance, form 49% of the Hispanic elder category, which means that descriptive statistics for Hispanics largely reflect the Mexican pattern.

Asian and Hispanic Elders: Group Heterogeneity

We use multiple indicators to measure assimilation, resource, and demographic characteristics to determine whether they account for why Asian and Hispanic elders differ from native Whites in their levels of extended living. Assimilation is measured by three English language dummy variables (speaks English only, speaks English well or very well, or speaks English poorly or not at all [referent]), three spatial measures (lives in each origin group's top five gateways [referent], lives in each origin group's top 6th to 20th largest areas, or lives in a dispersed area beyond top 20 gateways), and six age at immigration variables. Although the dispersed category includes most of the country, further refinement is not possible given that most foreign-born elders live in one of their group's top 10 metropolitan areas and thus sample sizes are small for dispersed areas. For instance, less than 10% of Cubans and Dominicans and only 11% to 20% of Chinese and Colombians lived in dispersed areas in 2000. Cutoffs for the dispersion categories had to assure adequate cell sizes for all origin groups. Rather than using an indicator variable for nativity, we treat native-born persons as the reference category for the age at immigration dummies. Thus, the coefficients for the age at immigration indicator variables (arrived at ages: 0-15, 16-29, 30-44, 45-59, or 60 and older) represent deviations from native-born persons.

Elders' economic, social, and physical resources are measured by indicators of education, income, and physical limitations. There are three education dummy variables, namely, whether the respondent has less than a high school degree (referent), a high school degree or some college, or a college degree or higher. Two measures of income are used: receipt of Social Security income (coded 1 if there was no income from this source) and the natural log of total income received from all sources. A higher incidence of extended living is expected among elders who have no Social Security and lower own income and education resources. Physical limitations can also affect elders' ability to live on their own and are measured by a count index of the number of disabilities or limitations an elder had. The 2000 census disability and limitation measures provide information about work disabilities, mobility disabilities, personal care limitations, memory problems, seeing and hearing limitations, and general physical difficulties. A seven-category measure was constructed that ranges from 0 for elders with no limitations to 6 for those with all six limitations. We expect physical limitations to be positively related to living in extended households.

Several demographic measures are included in the analysis and expected to have comparable relationships for all elders regardless of their generational status and group origin. Studies show that age generally has a negative relationship to extended living but this effect is nonlinear and increases among the very old. Therefore, the models include a quadratic age term. Research also shows that marital status is an important determinant of elderly living arrangements. Four categories of marital status are differentiated: married (referent), divorced or separated, widowed, and never married. Married elders are expected to be less likely than those in other marital statuses to live in extended households. Both men and women are included in the sample but differentiated by a dummy variable (female = 1).

Given that women live longer than men and have lower resource levels, they should be more likely to live in extended households.

Demographic characteristics, social and economic resources, and assimilation levels differ considerably for Asians and Hispanics from different origins and by generational status (see Table 2). Among foreign-born Asians, the percentage female ranges from 46% for Indians to 59% for Filipinos and 85% for Japanese. The foreign-born Japanese sex imbalance is likely due to the large number of Japanese women who came to the United States as “war brides” during the late 1940s and 1950s. Among Asians, the percentage currently married ranges from 50% for native-born Indians to 70% for foreign-born Chinese. Among Hispanics the range extends from 45% for native-born Dominicans and Colombians to 58% for Mexicans. Despite these substantial ranges, the demographic profiles of most groups are quite similar.

For most groups, native-born elders were more likely to be college graduates than their foreign-born counterparts but that pattern does not hold for Indians, Koreans, and Filipinos. The contrast is most dramatic for Indian elders—44% of the foreign born but only 21% of the native born had college degrees. While high-skilled immigration has characterized Indian, Korean, and Filipino migrations for decades, other groups had lower educational levels. A similar pattern occurs for income. Native-born elders from all groups except Indians had, as expected, considerably higher incomes than their foreign-born counterparts. While Vietnamese foreign born had the lowest income of the groups, Vietnamese native-born income was exceeded only by that of native-born Japanese, Koreans, and native Whites. Both generations of Mexican and Dominican elders, in contrast, had low incomes. Compared to native Whites, native-born and particularly foreign-born Asian and Hispanic elders were less likely to receive Social Security income. That pattern undoubtedly occurs because many foreign born arrive in the United States at older ages and thus do not have time to accumulate sufficient work experience to qualify for Social Security.

Group heterogeneity also characterizes the assimilation indicators, especially those for geographic dispersion. The expected pattern of greater dispersion for native-born ethnics obtains for all groups but Japanese, which is also consistent with the “war bride” idea since many American soldiers returned to small urban or rural areas with their foreign-born wives. Overall, Asian foreign and native born from different origins tend to be more dispersed than Hispanics, but there is considerable group variation within both regions. For instance, the percentage of Hispanic foreign-born elders residing in dispersed areas ranges from 7% for Dominicans to 32% for Mexicans and rises to 47% for native-born Puerto Ricans. The range for foreign-born Asian elders is also considerable. Namely, 40% of foreign-born Indians and 48% of foreign-born Japanese reside in dispersed areas but only 16% of Chinese and 25% of Koreans. Chinese native born are the least likely (23%) of native-born Asians to reside in dispersed regions.

Modeling the Sources of Group Differences in Extended Living

We use nested logistic regression models to address the question of whether ethnic origin, demographic characteristics, social and economic resources, and assimilation explain higher levels of extended living among Asian and Hispanic elders (Table 3). The nested models also permit an assessment of the relative importance of demographic characteristics, resources, and assimilation in accounting for group differences with native Whites in extended living. Model 1 shows the considerable range among Asian and Hispanic elders in extended living and establishes the zero-order relationship against which the effects of other covariate subsets on group differences can be evaluated. After controlling for demographic characteristics (Model 2), extended living increases for all groups except Puerto Ricans, and as expected, the log odds of extended living are higher for women and older seniors and

lower for married elders. Controlling for resources (Model 3), on the other hand, has mixed effects on origin group odds ratios. For Asians, the odds ratios tend to be larger than they were after controlling for origin alone but among Hispanics, the ratios show only modest change. Social and economic resources have the expected effect on extended living—elders with more education and income and fewer disabilities have lower log odds of extended living.

After controlling for group differences in assimilation (Model 4), sharp reductions occur in extended living differences with native Whites. Since native Whites as well as native-born Asians and Hispanics are the reference group for the age at immigration dummy variables, this model also shows the importance of generational status. Immigrants who arrive as children (younger than 16) have similar levels of extended living as the native born and those who arrive before 30 have only modest differences. Indeed, after controlling for generational status in addition to age at immigration, English language fluency, and geographic dispersion, only four groups—Filipinos, Indians, Vietnamese, and Mexicans—have odds of extended living greater than twice those of native Whites, and net of other covariates, the odds of extended living for Korean, Puerto Rican, and Cuban elders are only slightly greater than those for native Whites. As expected, English language fluency decreases the log odds of extended living, and arrival in the United States at an older age increases it. The dispersion indicators also have the expected effects on extended living. Compared to gateway elders, the odds that elders lived in extended households was 11% lower if they lived in a mini-gateway and 29% lower if they lived in a dispersed area.

Since the models in Table 3 are nested, the relative importance of covariate subsets for predicting extended living levels can be assessed using log likelihood ratio tests that contrast differences in model fit when models are estimated without a particular covariate set and compared to the full model (Table 3, note b). Larger test scores indicate which covariate set has the greatest effect in the model. The likelihood ratio tests are reported in the last row of Table 3 and indicate that demographic characteristics are the most important source of elder extended living, followed by social and economic resources, assimilation, and group origin. Whether elders reside in extended households is also strongly conditioned by their age, sex, and marital status as well as by available resources—elders with no Social Security income, less own income and educational resources, and more physical limitations are more likely to be in extended arrangements. In addition, elders who are more assimilated in terms of English language ability, geographic dispersion, native-born status, and age at arrival are less likely to live in extended households.

Although differences among Asian and Hispanic groups in levels of extended living diminish after controlling for demographic, resource, and assimilation covariates, there is a significant unexplained component of the relationship. Moreover, the regression analysis indicates that the covariate subsets that are most important for extended living differ from those that account for group differentials. Figure 2 highlights this point more clearly than Table 3 models do by displaying a histogram with each group's odds ratios from four models that include only two sets of indicators, group origin and another covariate subset. Since the first bar for each group specifies the zero-order odds ratios and the second bar specifies the odds ratios when demographic factors are included in the model, the odds ratios for those two bars are the same as those in Models 1 and 2, Table 3. The third bar, however, shows the resource effect from a new model (not shown) that included only group origin and elderly resources and the fourth bar shows the odds ratios from a new model (not shown) that included only group origin and assimilation indicators.

As discussed earlier, controlling for demographic characteristics actually increases extended living differentials between native Whites and Asian and Hispanic groups, which is why the

second bar is higher than the first bar in almost all the group histograms (except Puerto Ricans). In contrast, the bars from the third model, which included only group origin and resources, show three different patterns—a decrease in extension, an increase in extension, and no effect. For the five Hispanic groups and Vietnamese, the inclusion of resources reduces their differential with native Whites, a finding likely due to the fact that these groups have relatively low income levels. For two groups, Indians and Filipinos, the inclusion of resources increases their differential with native Whites, a finding that likely stems from their high education levels. In fact, 44% of Indian foreign-born elders and 34% of Filipino foreign-born elders had completed at least four years of college, and educated adults have lower levels of extended living. For Chinese, Koreans, and Japanese, resources have no effect on the magnitude of the odds ratio that contrasts their odds of extended living with those of native Whites.

Assimilation has the greatest substantive impact on ethnic group differentials with native Whites in extended living. That effect is seen by the sharp drop in the height of the fourth bar, which captures the assimilation effect. This is not surprising since the study groups and native Whites differ more systematically on the assimilation measures—English language ability, age at immigration, and dispersion—than they do on the demographic measures. Sex ratios, age, and marital status do not differ markedly across elderly groups and those measures have comparable effects on extended living regardless of elders' origins. The assimilation measures, in contrast, reflect differences that stem both from origin society cultural systems as well as immigration selectivity processes that give immigrant groups their distinctive education, skill, and income profiles. The relatively high education profiles of Indian and other Asian foreign born, for instance, differ considerably from the education profiles of their origin societies.

But the assimilation effect may also stem from how it is measured. Since native Whites are always in the age at immigration reference category in our models, along with the native-born components of the Asian and Hispanic groups, this undoubtedly contributes to the large reduction in group differentials associated with the assimilation measures. Although nothing can be done about this since by definition native Whites have no foreign-born component, we used sensitivity analysis to determine if the assimilation effect is a measurement artifact. The full model for the fourth bar, Figure 2, and the full model, Table 3 (not shown), were reestimated using only geographical dispersion to measure assimilation while keeping the rest of the model unchanged. While recent foreign born are less likely to be geographically dispersed than native Whites, there is nothing in the measurement procedure that dictates this outcome. In the sensitivity models compared to the original models, the size of the assimilation effects and the associated odds ratio reduction were smaller for all groups except Japanese and Puerto Ricans. Nevertheless, assimilation significantly reduced extended living differentials between the ethnic groups and native Whites, and the heights of the fourth bars in Figure 2 remained lower than those associated with demographics and resources.

Given the heterogeneity observed for Asian and Hispanic elders in levels of extended living and on many other covariates, we performed tests for group interactions with all covariates. These interaction tests were indeed significant, which is not surprising given that the analytic sample has close to 2 million cases. Therefore, separate group models were estimated for native Whites and the 11 Asian and Hispanic groups to assess the extent to which origin determinants of extended living differed (Table 4). While the group-specific models show some variation in the magnitude and significance of relationships, they are highly consistent with the overall findings from the pooled full model (Table 3, Model 4). Most relationships, even if insignificant, are in the expected direction. Moreover, the odds ratios for the demographic measures are highly consistent across groups, and those for

resources are comparable. The assimilation relationships vary the most across groups, but the differences are generally in degree rather than direction with some exceptions. For instance, contrary to the expectation of no significant difference, Colombian elders who immigrated as youths have higher log odds of extended living than their native-born counterparts. However, the small size of the native-born component of the Colombian elder sample suggests caution in interpreting that coefficient. The results for key covariates such as income, arrival in the United States after age 59, and residence in dispersed regions also have expected effects in most cases. All 12 coefficients for income are negative and significant; 11 coefficients for immigration after age 59 are positive and significant; and 8 of 12 coefficients for dispersed residence are negative and significant. All of the exceptions are statistically insignificant. Although interactions can influence estimates of the magnitude of reductions in group differentials in extended living, these influences appear to be small. The overall consistency of the findings for the pooled and group models suggests that it is reasonable to use the more parsimonious pooled models. Nothing in the group models suggests that assimilation levels are not important for understanding differentials with native Whites or that demographic and resource covariates account for observed group differences.

Discussion

Two questions were addressed in this article: What is the relative importance of demographic, resource, and assimilation statuses for predicting extended living among foreign- and native-born Asian and Hispanic elders and in explaining the living arrangement differentials of these elders with native Whites. To address these questions we examined the living arrangements of the six Asian and five Hispanic groups with the largest numbers of nativeborn elderly in 2000. Four hypotheses framed the analysis. The first expectation was that assimilation would be strongly related to reductions in extended-living group differences with native Whites, and the analysis confirmed this expectation. Controlling for group differences in age at immigration, English language fluency, and spatial dispersion significantly reduced gaps between native Whites and Asian and Hispanic elders in extended living. The second expectation was that social and economic resources would account for a significant share of Hispanic group differences with native Whites in extended living levels but be less important for Asian elders because of their relatively high resource levels. These expectations were supported by the analysis. Among groups characterized by low resource levels, namely, Vietnamese and Hispanic elders, controlling for resources did reduce differentials with native Whites in extended living, although the reductions were smaller than those for assimilation. For Chinese, Koreans, and Japanese, resource availability was unrelated to group differences with native Whites, and for two groups, Indians and Filipinos, controlling for resource differences increased differentials with native Whites.

While we expected demographic characteristics to be important determinants of extended living, we did not expect them to be important predictors of group differences in extended living because those characteristics do not differ much across groups. These expectations were borne out by the analysis. Demographic characteristics were indeed the most important determinants of whether an elder lived in an extended household, but they had little effect on the gaps between native Whites and Asian and Hispanic groups. Finally, we expected that a residual group effect would remain after taking into account demographic, resource, and assimilation statuses. The analysis confirmed this expectation, although the residual effect was relatively small for several groups albeit significant. Indians, Filipinos, Vietnamese, and Mexicans had the largest residuals.

The findings for the effect of resource availability on extended living raise several issues that require further investigation. The resource perspective emphasizes the impact of constrained access to education and income and suggests that extended living serves as a

means of coping with these constraints. Our analysis indicates that this reasoning applies within groups: In the group models, lower levels of resources were positively associated with extended living. However, for explaining group differences with native Whites, the impact of resources was mixed. When the focus was on groups with generally low resource levels, namely, Hispanics and Vietnamese, controlling for resources did reduce the differentials with native Whites. However, for high resource groups (all Asian groups except Vietnamese), controlling for resource levels either had no effect on group differentials or increased them. What is happening in terms of the statistical estimation is clear: Controlling for resource levels for a high resource group means that it is assigned a lower resource level than it actually has. This applies upward pressure on the adjusted group coefficient. What needs further consideration is the set of reasons why some high resource groups have high levels of extended living. One possibility is that the availability of more economic resources allows immigrants to fulfill their preferences to form extended households and make immigration arrangements for parents to join them in the United States after they naturalize. Under U.S. immigration policy, parents are considered immediate relatives of citizens and not subject to numeric limitations. Further research is needed to determine whether immigration of elders is an articulation of strong group norms favoring extended households or simply a means of reuniting families separated by migration that is more available to ethnic groups with high resource levels. We can only say with certainty that for groups with both high levels of extended living and high resource levels, extended living is not predominantly due to efforts to cope with resource constraints.

What implications do study findings have for future living arrangement trends? Will convergence in living arrangements continue to proceed among Asians and Hispanics, or will large ethnic differentials among the native born persist? Some speculation can be offered based on study findings. The results for the assimilation measures indicate that the convergence process is well underway. Levels of extended living among native-born Asian and Hispanic elders are dramatically lower than among the foreign born and also lower among foreign born who immigrate at younger ages. Ethnics more adept at English have reduced levels of extended living, and most ethnics are learning English. Residence in dispersed areas is also strongly linked to lower levels of extended living, and that process too is underway. And, the longer immigrants live in the United States, the lower the odds that they live in extended households as elders. Still, caution is in order. Between 1990 and 2000, levels of extended living increased modestly for most native-born Asian and Hispanic elders and native Whites and an argument can be made that the forces encouraging elderly extended living remain strong since even under the hypothetical condition of equalized demographic, resource, and assimilation conditions, the analysis shows that significant differentials persist for most groups.

The extent of convergence is likely to be linked to the magnitude of immigration in the future and to the robustness of assimilation processes through time. Immigration of Asians and Hispanics continues at a high level and the passage of time is providing the opportunity for the offspring of earlier immigrants to age and for growth in native-born Asian and Hispanic populations. As ethnic populations grow, cultural contacts and networks are easier to maintain. Since there are already differences among Asians and Hispanics from different origins in extended living levels and trends, one possible scenario is that those patterns will persist in the years ahead, albeit at levels lower than currently. It is also possible that extended living may increase in importance as an adaptation to problems posed by population aging. However, until more becomes known about the long-term assimilation trajectories of Asians and Hispanics, it is difficult to draw this conclusion without further research. In the future, when data from a larger number of annual American Community Surveys can be aggregated, it will be possible to extend this analysis to additional groups and examine in greater detail not only trends in ethnic group living arrangement but also the

effects of assimilation, resources, and demographic composition on elderly living arrangements.

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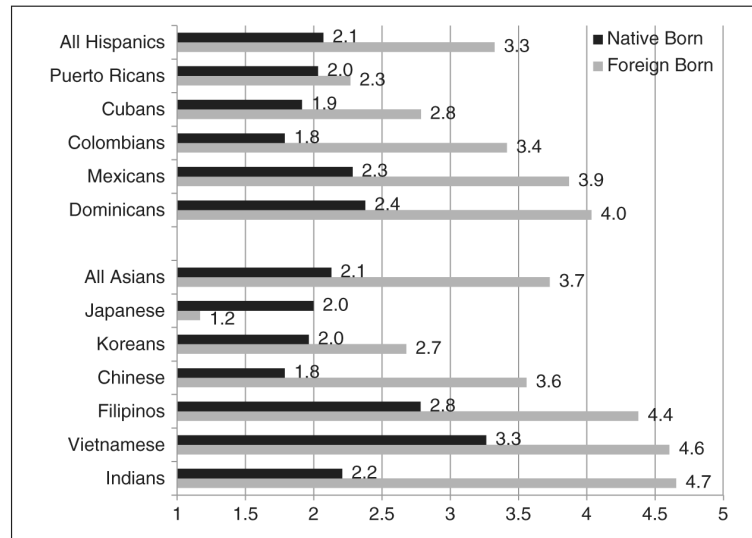


Figure 1. Ratios of percentage extended among Asian and Hispanic elders to native White percentage extended by origin and nativity, 2000.
 Note: For each group, the top bar provides the ratio for the foreign born and the bottom bar provides the ratio for the native born.

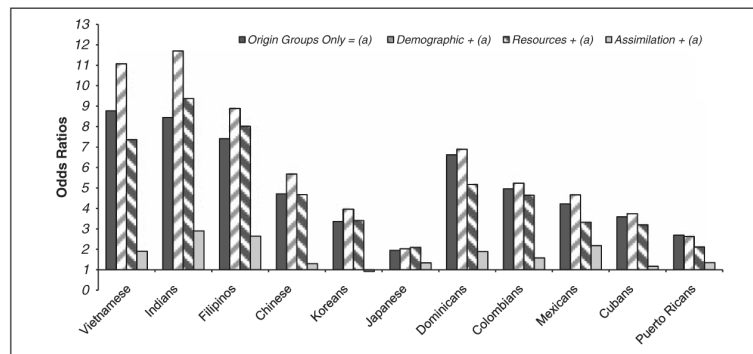


Figure 2.

Changes in the odds of extended living of Asian and Hispanic elders relative to those of native Whites after controlling for covariate subsets. Note: For each origin group, the first bar shows the zero-order odds ratio, the second bar shows the change in each group's zero-order odds ratio after controlling for demographics, the third bar shows the change in each group's zero-order odds ratio after controlling for resources, and the fourth bar shows the change in each group's zero-order odds ratio after controlling for assimilation.

Table 1

Percentage of Foreign- and Native-Born Asian and Hispanic Elders in Extended Living Arrangements, 2000 and 1990

	<u>Foreign born</u>		<u>Native born</u>	
	1990	2000	1990	2000
Native-born Whites	—	—	10.8	11.9
All Asians	45.4	44.2	19.6	25.2
Japanese	17.4	13.9	18.6	23.7
Chinese	39.8	42.2	17.5	21.2
Koreans	47.5	31.8	16.7	23.3
Vietnamese	51.3	54.6	14.7	38.7
Filipinos	52.6	51.9	25.0	33.0
Indians	63.0	55.2	26.2	26.2
All Hispanics	33.8	39.4	19.1	24.6
Puerto Ricans	24.2	26.9	20.6	24.1
Cubans	31.9	33.0	18.4	22.7
Mexicans	36.4	45.9	21.3	27.1
Colombians	38.8	40.5	33.5	21.2
Dominicans	45.7	47.8	30.8	28.2

Note: Elders living in group quarters are not included in calculations.

Table 2
Descriptive Statistics for Asian and Hispanic Foreign and Native Born by Nativity Status, 2000

Group ^b	Sample N	Demographic						Resources				
		Percentage female	Mean age	Percentage married	Percentage divorced	Percentage widowed	Percentage never married	Percentage college graduate	Percentage high school graduate or some college	Percentage with no Social Security income	Mean income (\$)	Number of disabilities (0-6)
NB Whites ^d	1,809,599	56	72	61	9	26	4	18	56	24	28,695	0.85
Chinese	2,368	52	71	62	9	21	8	29	52	27	26,687	0.69
Japanese	11,533	53	71	70	5	23	2	24	26	60	17,212	0.84
	7,695	53	73	64	7	21	8	19	62	23	31,216	0.71
	3,155	85	69	60	11	27	2	14	58	36	21,445	0.60
Filipinos	1,476	53	69	60	13	21	6	13	57	43	24,060	0.76
	11,807	59	70	64	6	26	4	34	34	63	19,181	0.98
Koreans	438	52	70	61	11	24	4	21	49	36	29,106	0.87
	4,912	60	69	65	7	26	2	28	34	69	19,731	0.79
Indians	345	55	70	50	15	25	10	21	40	43	22,170	1.36
	4,398	46	68	72	4	22	2	44	22	76	29,408	0.82
Vietnamese	145	42	71	58	12	22	8	23	39	52	28,309	1.20
	4,726	53	69	63	9	24	3	9	27	81	11,086	1.32
Mexicans	31,019	56	70	58	13	23	6	5	34	35	18,091	1.04
	28,918	56	70	58	11	25	6	3	14	52	11,482	1.13
Cubans	647	55	72	56	14	22	7	18	42	34	23,274	1.00
	14,526	57	71	56	15	23	6	14	27	41	16,796	1.01
Dominicans	129	53	70	47	16	24	13	14	38	43	17,975	0.89
	3,147	63	69	46	25	20	9	4	17	62	11,252	1.15
Colombians	77	65	71	45	14	29	11	24	44	43	25,510	0.70
	2,805	65	69	51	18	21	10	13	35	59	18,143	0.82
Puerto Ricans ^d	1,578	55	69	52	18	21	9	12	48	40	23,215	0.90
	11,601	59	70	47	21	25	8	6	27	38	14,577	1.13

Group ^b	Sample N	Percentage English only	Percentage English well or very well	Assimilation								
				<16	16 to 29	% Immigrated at age ^d			60 or older	Percentage in gateway	Percentage in mini-gateway ^c	Percentage in dispersed area
						30 to 45	46 to 59	60 or older				
NB Whites ^d	1,809,599	96	3	—	—	—	—	—	8	15	77	
Chinese	2,368	54	40	—	—	—	—	—	35	42	23	
Japanese	7,695	61	34	4	15	20	34	27	60	24	16	
Filipinos	1,476	66	30	3	50	33	9	4	27	25	48	
Koreans	438	48	44	—	—	—	—	—	18	36	46	
Indians	345	67	28	—	—	—	—	—	19	20	61	
Vietnamese	145	22	65	1	13	26	33	27	27	33	40	
Mexicans	4,726	4	24	1	2	19	48	31	47	27	26	
Cubans	647	43	47	—	—	—	—	—	25	32	43	
Dominicans	129	34	42	—	—	—	—	—	56	10	34	
Colombians	3,147	9	23	2	18	31	33	16	79	14	7	
Puerto Ricans ^d	1,578	44	54	2	21	35	25	17	53	29	18	
	11,601	9	55	16	50	17	10	7	51	23	26	

^a“Born in the United States” is the reference category for age at immigration. Reference categories for marital status, education, and English language ability are: married, less than high school, and no English language ability.

^bNB refers to native born and FB to foreign born.

^cAll metropolitan areas were ranked by the population size of each ethnic group (native born and foreign born) to identify the top 5 metropolitan areas that had the largest share of each group’s national population (gateway metropolitan areas). Mini-gateways consist of the next 15 largest areas, and dispersed areas are the remainder.

^d NB Whites are native-born non-Hispanic non-Asian Whites. Native-born Puerto Ricans were born on the U.S. mainland while FB Puerto Ricans were born in Puerto Rico.

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Table 3

Logistic Regression of Extended Living Among Asian and Hispanic Elders on Origin Group, Demographic Characteristics, Resources, and Assimilation,^a 2000

	Model 1	Model 2	Model 3	Model 4
	Origin	1 + Demographic	2 + Resources	3 + Assimilation
Ethnic group				
Native-born Whites (referent)	—	—	—	—
Chinese	4.71 ***	5.68 ***	5.15 ***	1.72 ***
Japanese	1.95 ***	2.02 ***	2.10 ***	1.48 ***
Filipinos	7.41 ***	8.89 ***	8.59 ***	3.34 ***
Koreans	3.36 ***	3.96 ***	3.52 ***	1.14 *
Indians	8.44 ***	11.70 ***	11.00 ***	4.28 ***
Vietnamese	8.77 ***	11.07 ***	8.33 ***	2.31 ***
Mexicans	4.22 ***	4.66 ***	3.58 ***	2.05 ***
Cubans	3.59 ***	3.74 ***	3.25 ***	1.20 ***
Dominicans	6.62 ***	6.89 ***	5.08 ***	1.73 ***
Colombians	4.96 ***	5.23 ***	4.46 ***	1.62 ***
Puerto Ricans	2.69 ***	2.63 ***	2.06 ***	1.08 ***
Demographic characteristics				
Female	—	1.22 ***	1.13 ***	1.14 ***
Age	—	1.02 ***	1.11 ***	1.07 ***
Age squared	—	1.03 ***	0.99 ***	0.99 ***
Married (referent)	—	—	—	—
Divorced/separated	—	2.09 ***	2.01 ***	2.05 ***
Widowed	—	2.55 ***	2.47 ***	2.46 ***
Never married	—	3.26 ***	3.37 ***	3.30 ***
Social and economic resources				
Less than high school degree (referent)	—	—	—	—
High school degree or some college	—	—	0.80 ***	0.82 ***
College degree or higher	—	—	0.57 ***	0.58 ***
No Social Security income	—	—	1.02 **	0.96 ***

	Model 1	Model 2	Model 3	Model 4
	Origin	1 + Demographic	2 + Resources	3 + Assimilation
Log of total income	—	—	0.94***	0.94***
Number disabilities (0-6)			1.17***	1.17***
Assimilation	—	—		
Speaks English poorly/not at all (referent)	—	—	—	—
Speaks English well or very well	—	—	—	0.82***
Speaks English only	—	—	—	0.68***
Native born (referent)	—	—	—	—
Immigrated aged 0 to 15				0.96
Immigrated aged 16 to 29				1.06*
Immigrated aged 30 to 44				1.32***
Immigrated aged 45 to 59				2.39***
Immigrated aged 60 plus				4.37***
Gateway metro area (referent)	—	—	—	—
Mini-gateway metro area	—	—	—	0.89***
Dispersed area	—	—	—	0.71***
Log likelihood	-751,489***	-714,104***	-706,367***	-700,243***
Pseudo R ²	.04	.08	.10	.11
N	1,957,049	1,957,049	1,957,049	1,957,049
Likelihood ratio test ^b	5,147***	51,214***	22,870***	10,808***

^a Both native- and foreign-born Asians and Hispanics are included in the estimated models. For Puerto Ricans, the foreign born are persons born in Puerto Rico. The reference group for the ethnic categories is native Whites.

^b The likelihood ratio test calculates the relative importance of the set of covariates introduced in each model against the full model (Model 4) based on a reestimation of the full model that excluded the covariate set added in each column and contrasted the log likelihood for the reestimated model with that of the full model. The likelihood ratio test statistics are given at the bottom of each column and represent the tests, sequentially, of origin, demographic characteristics, resources, and assimilation.

* p < .05.

** p < .01.

*** p < .001.

Table 4
Logistic Regression of Extended Living for Asian, Hispanic, and Native White Elders (Odds Ratios), 2000^a

	Sex	Age	Age squared	Divorced or separated	Widowed	Never married	High school, graduate/ some college	College graduate	No Social Security	Log of income	Number of disabilities	English well	English only	Arrived < 16	Arrived 16 to 29	Arrived 30 to 44	Arrived 45 to 59	Arrived 60+	Mini-gateway	Dispersed	Pseudo R ²
Chinese	1.01	1.10*	0.99*	1.33**	2.24***	1.46**	0.80***	.60***	1.06	.87***	1.02	0.66***	.70***	0.80	0.63***	1.02	1.82***	3.08***	1.00	1.11	.16***
Japanese	1.26***	1.07	1.00	1.79***	2.27***	3.13***	0.79***	.56***	0.90	.97*	1.16***	0.85	.89	1.16	0.50***	0.44***	0.72	1.89**	0.47***	0.59***	.10***
Filipinos	1.13**	1.16**	0.99*	1.46***	2.26***	2.14***	0.88*	.69***	1.19***	.90***	1.04*	0.70***	.41***	0.90	0.70***	0.89	1.81***	2.86***	1.04	0.74***	.18***
Koreans	0.97	0.96	1.00	1.18	3.14***	2.65***	1.20*	.95	0.96	.88***	1.04	0.73***	.61***	1.23	0.39***	0.84	1.27	1.64**	1.24*	1.14	.15***
Indians	0.87	1.26*	0.99	0.83	3.40***	1.17	0.83	.59***	1.01	.85***	1.05	0.50***	.21***	1.01	1.00	0.97	3.30***	7.32***	0.82	0.71***	.38***
Vietnamese	1.34***	1.11	1.00	0.95	2.19***	1.70**	0.96	.91	1.19	.90***	1.02	0.82*	.75	1.26	1.08	1.14	1.53	1.82*	0.70***	0.68***	.12***
Mexicans	1.07**	1.14***	0.99***	1.73***	2.40***	2.68***	0.82***	.59***	1.04	.92***	1.04***	0.76***	.70***	1.05	1.23***	1.41***	2.42***	4.50***	0.76***	0.57***	.13***
Cubans	1.25***	0.93	1.00*	1.49***	1.99***	1.96***	1.02	.92	1.11*	.94***	1.04**	0.88**	.80**	1.08	1.04	1.23	1.57***	2.54***	0.95	0.70***	.07***
Dominicans	1.34**	1.02	1.00	1.20	1.74***	1.54**	1.03	.53**	1.10	.92***	1.00	0.71**	.66**	1.01	1.13	1.33	2.21***	4.25***	0.91	0.81	.10***
Colombians	1.01	1.14	0.99	2.08***	3.40***	2.69***	0.94	.64**	1.05	.90***	0.95	0.65***	.77	3.07*	1.40	1.69	2.84**	6.20***	0.91	0.67**	.18***
Puerto Ricans	1.30***	0.99	1.00	1.70***	2.13***	1.73***	0.89	.80	1.03	.93***	1.08***	1.00	.72***	0.71***	0.74***	0.93	1.21	1.98***	1.12*	0.96	.08***
Native Whites	1.16***	1.07***	0.99***	2.15***	2.47***	3.51***	0.81***	.56***	0.95***	.96***	1.20***	0.96	.77***	—	—	—	—	—	0.90***	0.71***	.07***

^aThe group models are identical to the full model in Table 3 except origin is omitted and the reference category includes only native born from the same origin. The reference categories are men, currently married, less than high school, has Social Security income, speaks poor or no English, native born, and gateway residence.

* p < .05.

** p < .01.

*** p < .001.