It's Not Just a Matter of Speaking English: Linguistic Isolation among Older Immigrants in the U.S.

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Abstract

Population aging and continuing immigration resulted in increasing numbers of older foreign-born in the U.S. and growing concerns about their wellbeing. About 53.4% of older foreign-born report limited English-language proficiency (LEP), which is often exacerbated for individuals residing in a "linguistically isolated" household where no adult speaks English "very well". Using the 2010 American Community Survey and employing demographic decomposition techniques, we analyze the differences in linguistic isolation rates for the immigrants age 50 and over. Linguistic isolation rates range from 11% among older Filipino foreign-born to 53.8% among older immigrants from Russia. Although LEP is important for understanding linguistic isolation rates because it defines the population "at risk", it accounts for no more than 60% of the differences between the subgroups. The differences in linguistic isolation rates among the LEP are also substantial, and they are mostly explained by the differences in household size, headship and multigenerational status.

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Continuous immigration and population aging have led to an increase in the number of foreign-born older adults in the U.S. from 5.3 million in 1980 to 13.7 million in 2010 (Batalova, 2012). As these figures are projected to increase even more (U.S. Census Bureau 2012; Treas & Batalova, 2009), better understanding of the factors affecting wellbeing of this diverse demographic group is crucial for designing public policies that promote successful aging.

One of the factors related to older immigrants' wellbeing in the U.S. is their English-language proficiency (Burr & Mutchler, 2003; Espenshade & Fu, 1997; Mutchfer & Brallier, 1999). Inability to speak English is associated with poor mental and physical health, restricted access to healthcare, lower income and smaller social networks outside the family (e.g., Derose, Escarce, & Lurie, 2007; Diwan, 2008; M. Mora & Dávila, 2011; Ponce, Hays, & Cunningham, 2006). Especially when it comes to following instructions in case of emergency or accessing healthcare services (Wang & Luo, 2005), the problems of inability to speak English can be exacerbated if an immigrant resides in a household where no other adult speaks English. This consideration has led social science researchers in the early 1990s to develop the concept of "linguistic isolation" (Siegel, Martin, & Bruno, 2001). This measure has been widely used primarily as a control or an independent variable predicting other aspects of immigrant wellbeing (Capps, Fix, Ost, Reardon-Anderson, & Passel, 2005; Glick, Walker, & Luz, 2013; Hernandez, 2004; Kuebler & Rugh, 2013; M. T. Mora & Dávila, 2005; Nawyn, Gjokaj, Agbényiga, & Grace, 2012; Shihadeh & Barranco, 2010).

Surprisingly, very few studies have focused on the factors that predict linguistic isolation (Lestina, 2000; Siegel et al., 2001) or explain the differences in linguistic isolation between the

immigrant subgroups. Although it is clear from the definition that linguistic isolation is a household level measure, the characteristic is often assigned to individuals. Understandably, it is often assumed that poor English-language proficiency is responsible for high linguistic isolation rates. This paper uses data from the 2010 American Community Survey to test this assumption among older foreign-born adults in the U.S. We use demographic decomposition techniques and logistic regression models to identify factors that predict linguistic isolation of the foreign-born age 50 and over and explain the differences in the linguistic isolation rates between the subgroups by country of origin. We show that English-language proficiency is important as it defines the population "at risk" of being linguistically isolation. However, there are substantial differences in the rates of linguistic isolation among those who have limited English proficiency. These differences are primarily due to the differences in average size and type of households in which older immigrants reside. Even though other individual level factors, such as education and age at migration, predict linguistic isolation, they account only for a small percent of the differences between the immigrant subgroups. We discuss the implications of the results for research and public policy.

Decomposition of linguistic isolation rates

Linguistic isolation is a household-level measure derived from the census English language proficiency question that is asked of those who indicated speaking a language other than English in the household. The question asks: *How well does this person speak English? ("very well", "well", "not well", or "not at all")*. Household is classified as linguistically isolated if no adult (defined as 14 or older) speaks English "very well" (Siegel et al., 2001). By convention, this household-level characteristic is often assigned to all individuals belonging to

the household. Then linguistic isolation rates can be calculated by counting linguistically isolated individuals. Alternately, linguistic isolation is used as a control or independent variable in statistical models predicting various individual-level outcomes (Capps et al., 2005; DeSilva & Elmelech, 2012; Glick et al., 2013; Kuebler & Rugh, 2013; M. T. Mora & Dávila, 2005; Shihadeh & Barranco, 2010; Wong, Yoo, & Stewart, 2005).

A key point is that only those adults who speak English less than "very well" can be linguistically isolated, but not all of them are. Those living with English speakers are not defined as linguistically isolated. Thus, speaking English less than "very well" defines the population "at risk" of being linguistically isolated, and the linguistic isolation rates for a group can be expressed as a product of the proportion of the population "at risk" and the percent of linguistically isolated among the LEP.

$$\%LI = \text{Proportion of LEP} \times \%LI \text{ among LEP}$$

Then, using demographic decomposition techniques (Gupta, 1978, 1991) the differences between the groups can be decomposed into the parts that are due to each of the components.

Linguistic isolation among LEP

What predicts linguistic isolation among the LEP? Explanations focus on both the characteristics of the household and individual level characteristics that predict the acculturation associated with English language proficiency.

Household characteristics. Linguistic isolation depends on English-language proficiency of all adult members of the household. The larger the household size, the higher the chance that

it will contain at least one adult who speaks English very well (Burr & Mutchler, 2003). By definition, all LEP older foreign-born who live alone are linguistically isolated. Living with one's adult children, a common arrangement for older immigrants, is likely to decrease the probability of linguistic isolation. Adult children may be long-time US residents who have mastered English. Similarly, being a part of multigenerational household increases chances of including native-born Americans. Of course, these characteristics are correlated but each is apt to predict linguistic isolation.

Acculturation. Probability of linguistic isolation is likely to depend on the degree of acculturation which may serve as a proxy for other household members' ability to speak English. Older age at migration is associated with slower acculturation and difficulties learning English (Angel, Angel, Lee, & Markides, 1999). It also signals that adult children are immigrants who may not be able to speak English well enough to protect older immigrants from being linguistically isolated. Although inability to speak English should not have a direct effect on probability of linguistic isolation among the LEP, it may approximate the level of acculturation of other household members, especially a spouse. Citizenship should reduce the chances of linguistic isolation because it of the five year residence requirement and the English-language exam during the naturalization interview. Because having a native-born spouse or children increases the probability of naturalization, citizenship may also signal that one or several of the household members (e.g., spouse) are native-born.

Other demographic characteristics, such as age, sex, marital status and education, need to be taken into account primarily because they are related to the type of living arrangements. The relationship, however, is not always clear. For example, older people are more likely to live alone which increases the probability of linguistic isolation. On the other hand, the older

foreign-born are also apt to live with adult children which should decrease their probability of linguistic isolation. Married people are likely to live with their spouses, but widowed and divorced are more likely to live alone or with others. Women are tend to outlive their spouses, and thus, live in these other household types. The better educated are less likely to be linguistically isolated, if only because their other household members, especially adult children, are likely to be educated English speakers. Similarly, it is not clear how health limitations might affect the probability of linguistic isolation.

Overall, we expect that household characteristics will be the strongest determinants of linguistic isolation among those older foreign-born who are at risk by virtue of their limited English-language proficiency.

Data and Method

We use data from the 2010 American Community Survey (Ruggles et al., 2010). The sample includes non-institutionalized, foreign-born adults age 50 and over. In addition to the pooled sample, we look at the 10 largest subgroups of the older foreign-born by countries/region of birth – those born in Philippines, India, West Indies, South America, Central America, Mexico, China, Korea, Cuba, and Russia/USSR.

First, using a variable created and released by IPUMS (Ruggles et al., 2010), we calculate the linguistic isolation rates for each group and for the entire sample. Then we decompose the linguistic isolation rates into two major components. The first component is the percent of those who are "at risk" of being linguistically isolated because they do not speak English at all or speak English less than "very well". These individuals are classified as having limited English-language proficiency (LEP). The second component is the proportion linguistically isolated

among the LEP older foreign-born adults. We present the linguistic isolation rates for each subgroup as a product of these two components (Gupta, 1978, 1991) and calculate each components' contribution to the observed differences in the rates as compared to the subgroup with the highest percent of linguistically isolated older adults.

Then, we further decompose the differences in the proportions linguistically isolated among the LEP. First, we run logistic regression models predicting linguistic isolation among the LEP older foreign-born adults to test the effects of predictors. We predict the probability of being linguistically isolated as a function of age, sex, marital status, household characteristics, education, age at migration, ability to speak English, citizenship status and health limitations. Age is measured in years. Sex is a dummy variable with females coded as "1". Marital status is measured in categories: single/never married (reference), married, divorced or separated, widowed. A separate variable indicate whether a respondent was widowed last year. Education is measured in categories ranging from 0 (no schooling) to 11 ("graduate degree") which we treat as a continuous variable. Three variables capture household characteristics: household size (ranging from 0 to 6), whether respondent is parent (or parent in-law) of the household head, and whether respondent's household is multigenerational. Age at migration is measured in years. Naturalized citizens are coded as "1" with non-citizens ("0") as the reference category. Those who do not speak English at all are coded as "1". Respondents are coded as having a health limitation if they reported having any sensory or functional limitation on one of the six disability questions. We run these models on the pooled sample, as well as for the two national-origin subgroups with the lowest and highest proportion of linguistically isolated older foreign-born.

Finally, we perform Oaxaca-Binder decomposition (Jann, 2008) for the differences in linguistic isolation rates between the origin subgroups with the highest and the lowest rates. This

technique algebraically decomposes the difference between the two subgroups into the part resulting from difference in demographic characteristics (means) and the part resulting from the different effects of those characteristics (coefficients). This allows us to test whether the differences in linguistic isolation rates among the LEP older foreign-born are primarily due to the differences in the demographic composition of the two groups or primarily due to the differences in the effects of the predictors. Allowing us to estimate the relative contribution of each predictor to the observed differences in linguistic isolation rates, we test our hypothesis that the differences in household characteristics of the subgroups explain most of the difference between the linguistic isolation rates among the LEP.

Results

Figure 1 plots the linguistic isolation rates and the rates of LEP by country/region of birth. It shows clearly that linguistic isolation rates are not determined entirely by LEP or even native language. First, older foreign-born from Mexico, Cuba and Latin America – all Spanish-speaking countries – have notably different rates of linguistic isolation. Second, even though the groups with higher rates of LEP tend to have higher linguistic isolation rates, the relationship is not perfect, and there are some interesting differences. For example, older foreign-born from Mexico have the highest rates of LEP (80.7%), but their linguistic isolation rates are in the middle of the ten countries (33.7%). The LEP rates of older foreign-born adults from Central America are higher than the LEP rates of their Cuban counterparts (69.5% and 66.7%, respectively), yet the rates of linguistic isolation are comparatively higher among the Cubans (30.6% and 43.1%). The linguistic isolation rate is the highest among the older foreign-born

from Russia/USSR (53.8%), even though their rates of LEP are only slightly higher than those of Korean and Chinese older foreign-born (76.5%, 74.6% and 73.6%, respectively).

Table 1 presents the results of the decomposition analysis. The first column shows the proportion of those who are "at risk" of being linguistically isolated because they speak English less than "very well" (LEP). The LEP proportion ranges from a low of .380 among Filipinos to .807 among Mexicans. The second column shows the percent of linguistically isolated among the LEP. Filipinos are the least isolated (28.9%) and Russians the most (70.3%). For each origin group, the third column presents the overall percent linguistically isolated, calculated as the product of the first two columns. Although only 11.0% of all older Filipino foreign born are linguistically isolated, the figure ranges up to 53.8 percent for their Russian counterparts. The next column presents the difference between each group's linguistic isolation rate and the highest linguistic isolation rate (i.e., the 53.8% among older Russian foreign-born). Although Cubans, Koreans, and Chinese are only slightly more linguistically isolated, Filipinos differ markedly from the Russian reference group. The next two columns decompose this difference into the part that is due to the differences in the proportion of LEP and the part that is due to the differences in the percent of linguistically isolated among the older foreign-born LEP adults. Finally, the last two columns present the share of these two components in percentages. Only the small difference for Cubans is due more to LEP than to linguistic isolation among the LEP.

Overall, high rates of linguistic isolation among the older foreign-born are due to both high rates of LEP and high linguistic isolation among the LEP, but the relative importance of these two components varies across origin groups. Older foreign-born Mexicans have even higher rates of LEP than Russians, so more than 100% of the difference between these two groups is due to the difference in linguistic isolation rates among the LEP. If Mexicans had LEP

rates similar to Russians, their linguistic isolation rates would have been even higher than those among Russians. On the other hand, the larger share of the difference in linguistic isolation rates between older Russians and Cubans or West Indians is due to the lower rates of English-language proficiency among older foreign-born from Russia (62.2% and 60.4%, respectively). But as 44.6% of the difference from the group with the lowest linguistic isolation rate, Filipinos, is due to the difference in the proportion of LEP while 55.4% is due to the difference in the percent of linguistically isolated among the LEP; both factors matter considerably.

Since the focus of this paper is on linguistic isolation, and the differences in English-language proficiency among older immigrants warrant a separate investigation, we investigate factors that predict linguistic isolation among those who speak English less than very well. As the descriptive statistics presented in Appendix Table A show, the subgroups of older foreign-born LEP adults differ in their demographic composition. Older LEP adults from Russia, for example, are older, migrated at older ages, live in smaller households, are less likely to reside in multigenerational households or to be a parent (or parent-in law) of the household head, but they are also better educated, more likely to be citizens and more likely to have health problems. Despite the obvious differences, it is unclear which of these characteristics matter the most and which of these indicators explain the differences in linguistic isolation rates between the subgroups.

Table 2 presents the results from the logistic regression models predicting linguistic isolation among older foreign-born LEP adults. Model 1 is run on the pooled sample and Models 2 and on the subsamples of older foreign-born from Russia (the group with the highest rate of linguistic isolation) and the Philippines (the subgroup with the lowest rate of linguistic isolation), respectively. The results are generally consistent with our expectations. Even controlling for

many factors, the large and statistically significant country coefficients in Model 1 indicate that the differences in linguistic isolation between older LEP foreign-born from Russia and the Philippines remain substantial. All other coefficients in Model 1 are also statistically significant, which is due, at least in part, to the large pooled sample size, so we mainly focus on the results from Model 2 and Model 3.

Age and marital status do not predict linguistic isolation once other factors are taken into account, but older age at migration is strongly associated with higher probability of being linguistically isolated. Females and the widowed are less likely to be linguistically isolated, although the differences are statistically significant only in the Filipino subsample. Recent widowhood, however, is associated with higher likelihood of being linguistically isolated (again, significant only in the Filipino subsample). As expected, the strongest and the most consistent predictors of linguistic isolation are household characteristics. Larger household size, being a parent or parent-in-law of the household head and being part of a multigenerational household are all associated with lower probability of being linguistically isolated. Higher levels of education and citizenship are also associated with lower chances of being linguistically isolated. Health problems, on the other hand, can work in both directions. Having a health limitation is positively associated with linguistic isolation for older Russian foreign-born but negatively associated for older Filipino immigrants.

To better understand which factors are primarily responsible for the observed difference in linguistic isolation rates among the older LEP foreign-born from Russia and the Philippines, we present the results of Binder-Oaxaca decomposition in Table 3. As we showed in Table 1, the proportion of linguistically isolated among the older foreign-born LEP adults from the Philippines and Russia are 0.289 and 0.538, respectively, which results in the difference of -

0.248. Consistent with our expectations, this difference is almost entirely (98%) due to the difference between the means of the important predictors of linguistic isolation listed in Table 3. Only about 17% of the difference is due to the difference in the coefficients, and many of them work to offset one another. Furthermore, about 43.2% of the difference that is due to the Russian-Filipino difference in demographic composition (the means) is due to the differences in the mean household size; 39.5% is due to the difference in the proportion of the households that are multigenerational; and another 11.5% is due to the difference in the proportion of the households headed by a child or child-in law of an older immigrant. Taken together the household characteristics account for 94.2% of the difference that is due to the means, which in turns accounts for 98% of the difference in linguistic isolation rates between older foreign-born LEP adults from Russia and the Philippines.

Discussion and Conclusion

Inability to speak English among the older foreign-born is associated with poor mental and physical health, restricted access to healthcare, lower income and smaller social networks outside family (e.g., Derose et al., 2007; Diwan, 2008; M. Mora & Dávila, 2011; Ponce et al., 2006). However, inability to speak English can be either attenuated or exacerbated depending on English language proficiency of other adult household members. Older immigrants who are "linguistically isolated," that is, reside in a household where no other adult speaks English, are especially vulnerable. They may be unable to access health care services (Wang & Luo, 2005) or even participate in health assessment surveys (Link, Mokdad, Stackhouse, & Flowers, 2006). Thus, it is important to understand the factors linked to linguistic isolation as well as the factors responsible for the differences in linguistic isolation between the immigrant subgroups.

Using data from the 2010 American Community Survey, this paper shows that that linguistic isolation rates are not determined entirely by English language proficiency. Even though the groups with higher rates of LEP tend to have higher linguistic isolation rates, the relationship is not perfect, and there are some interesting differences. The lowest linguistic isolation rates are found among older Filipino and Indian immigrants (11% and 13.7%), and these are the groups with the lowest LEP (28.9% and 30.2%, respectively). But despite having the highest LEP (80.7%), the older foreign-born from Mexico have middling linguistic isolation rate (33.7%). Among the ten largest national origin groups for foreign born older adults, linguistic isolation is the highest among immigrants from Russia/USSR (53.8%), even though their LEP rate is only slightly higher than for their Korean and Chinese counterparts (76.5%, 74.6% and 73.6%, respectively).

These discrepancies are due to the fact that the rates of English language proficiency define the population "at risk" of being linguistically isolated, but they do not account for the differences in linguistic isolation rates among LEP. The results for the simple demographic decomposition of linguistic isolation rates show that both of these components are important. For example, if we compare each group to the group with the highest linguistic isolation rate (Russians), linguistic isolation among those who have limited English language proficiency accounts from 37.8% to over 100% of the difference.

The decomposition analysis of linguistic isolation among the LEP points to the importance of living arrangements and household characteristics. The strongest predictors of linguistic isolation are household size, headship status and generational status of the household. Older immigrants who live in larger multigenerational households and who are parents (or parents-in law) of the household head are less likely to be linguistically isolated, regardless of

their own English language proficiency. Older age at migration, not speaking English and being a non-citizen increase the probability of being linguistically isolated. But because linguistic isolation is a household-level measure, most individual-level socio-demographic characteristics predict linguistic isolation only indirectly. Even though acculturation measures are significant in the statistic models, they likely serve as proxy for certain types of household structure and the unobserved (or missing from the models) characteristics of other household members. Also, socio-demographic characteristics account only for a small percent of the differences in linguistic isolation between the subgroups.

These findings have important policy implications. First, immigrants' living arrangements are no less important that English-language proficiency for understanding the patterns of linguistic isolation. Many older immigrants are not linguistically isolated, because it is culturally prescribed or at least more accepted to live in extended households. Similarly, lower linguistic isolation does not necessarily that mean that the immigrants have better English-language skills; need assessment for language courses and translation services should not be based on the measure of linguistic isolation alone. Second, the individual socio-demographic characteristics are not as important for understanding linguistic isolation as living arrangements or native language. Since the country of birth is a good proxy for both native language and patterns of living arrangements, it is a good criterion for targeting population at need. Finally, linguistic isolation at the household level can be attenuated or exacerbated by linguistic isolation of the neighborhood and community. Being a part of ethnic community has been found to be beneficial for health and wellbeing of older immigrants. Future research should focus on the interaction of linguistic isolation at different levels and its effect on older immigrants' health and wellbeing.

References

Angel, R. J., Angel, J. L., Lee, G.-Y., & Markides, K. S. (1999). Age at Migration and Family Dependency Among Older Mexican Immigrants: Recent Evidence From the Mexican American EPESE. *The Gerontologist, 39*(1), 59-65. doi: 10.1093/geront/39.1.59

Batalova, J. (2012). Senior Immigrants in the United States. *Migration Policy Institute*, *http://www.migrationinformation.org/USfocus/display.cfm?ID=894*.

Burr, J. A., & Mutchler, J. E. (2003). English Language Skills, Ethnic Concentration, and Household Composition: Older Mexican Immigrants. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 58*(2), S83-S92. doi: 10.1093/geronb/58.2.S83

Capps, R., Fix, M. E., Ost, J., Reardon-Anderson, J., & Passel, J. S. (2005). The Health and Well-Being of Young Children of Immigrants: Urban Institute.

Derose, K. P., Escarce, J. J., & Lurie, N. (2007). Immigrants And Health Care: Sources Of Vulnerability. *Health Affairs, 26*(5), 1258-1268. doi: 10.1377/hlthaff.26.5.1258

DeSilva, S., & Elmelech, Y. (2012). Housing inequality in the United States: explaining the white-minority disparities in homeownership. *Housing Studies, 27*(1), 1-26.

Diwan, S. (2008). Limited English Proficiency, Social Network Characteristics, and Depressive Symptoms Among Older Immigrants. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 63*(3), S184-S191.

Espenshade, T. J., & Fu, H. (1997). An Analysis of English-Language Proficiency among U.S. Immigrants. *American Sociological Review, 62*(2), 288-305.

Glick, J. E., Walker, L., & Luz, L. (2013). Linguistic isolation in the home and community: Protection or risk for young children? *Social science research, 42*(1), 140-154.

Gupta, P. D. (1978). A general method of decomposing a difference between two rates into several components. *Demography, 15*(1), 99-112.

Gupta, P. D. (1991). Decomposition of the difference between two rates and its consistency when more than two populations are involved. *Mathematical Population Studies, 3*(2), 105-125. doi: 10.1080/08898489109525329

Hernandez, D. J. (2004). Demographic change and the life circumstances of immigrant families. *The Future of Children*, 17-47.

Jann, B. (2008). The Blinder-Oaxaca decomposition for linear regression models. *Stata Journal, 8*(4), 453-479.

Kuebler, M., & Rugh, J. S. (2013). New evidence on racial and ethnic disparities in homeownership in the United States from 2001 to 2010. *Social science research, 42*(5), 1357-1374.

Lestina, F. (2000). Analysis of the linguistically isolated population in Census 2000: Census.

Link, M. W., Mokdad, A. H., Stackhouse, H. F., & Flowers, N. T. (2006). Race, ethnicity, and linguistic isolation as determinants of participation in public health surveillance surveys. *Prev Chronic Dis, 3*(1), 1-12.

Mora, M., & Dávila, A. (2011). The LEP Earnings Penalty Among Hispanic Men in the US: 1980 to 2005. In D. L. Leal & S. J. Trejo (Eds.), *Latinos and the Economy* (pp. 153-167): Springer New York.

Mora, M. T., & Dávila, A. (2005). Ethnic group size, linguistic isolation, and immigrant entrepreneurship in the USA. *Entrepreneurship & Regional Development, 17*(5), 389-404. doi: 10.1080/08985620500275612

Mutchfer, J. E., & Brallier, S. (1999). English Language Proficiency Among Older Hispanics in the United States. *The Gerontologist, 39*(3), 310-319. doi: 10.1093/geront/39.3.310

Nawyn, S. J., Gjokaj, L., Agbényiga, D. L., & Grace, B. (2012). Linguistic Isolation, Social Capital, and Immigrant Belonging. *Journal of Contemporary Ethnography, 41*(3), 255-282. doi: 10.1177/0891241611433623

Ponce, N. A., Hays, R. D., & Cunningham, W. E. (2006). Linguistic Disparities in Health Care Access and Health Status Among Older Adults. *Journal of General Internal Medicine, 21*(7), 786-791. doi: 10.1111/j.1525-1497.2006.00491.x

Ruggles, S., Alexander, J. T., Genadek, K., Goeken, R., Schroeder, M. B., & Sobek, M. (2010). *Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]*. Minneapolis: University of Minnesota.

Shihadeh, E. S., & Barranco, R. E. (2010). Latino Immigration, Economic Deprivation, and Violence: Regional Differences in the Effect of Linguistic Isolation. *Homicide Studies, 14*(3), 336-355. doi: 10.1177/1088767910371190

Siegel, P., Martin, E., & Bruno, R. (2001). Language use and linguistic isolation: Historical data and methodological issues. *US Census Bureau: February, 12*.

Treas, J., & Batalova, J. (2009). Immigrants and Aging. In P. Uhlenberg (Ed.), *International Handbook of Population Aging* (pp. 365-394). New York: Springer Verlag.

Wang, F., & Luo, W. (2005). Assessing spatial and nonspatial factors for healthcare access: towards an integrated approach to defining health professional shortage areas. *Health & place, 11*(2), 131-146.

Wong, S. T., Yoo, G. J., & Stewart, A. L. (2005). Examining the types of social support and the actual sources of support in older Chinese and Korean immigrants. *The International Journal of Aging and Human Development, 61*(2), 105-121.

U.S. Census Bureau. 2012. "2012 National Population Projections."

Figure 1. Linguistic Isolation and Limited English-language Proficiency Rates: Non-institutionalized Foreign-born Age 50 and over, 2010 ACS

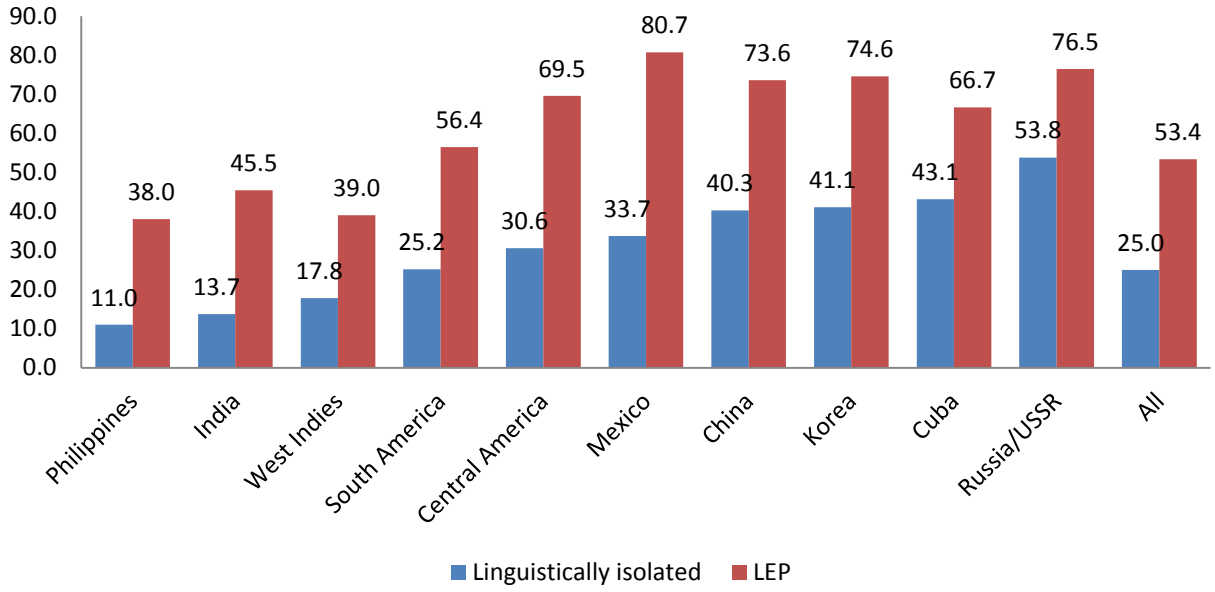

Table 1. Decomposition of Linguistic Isolation Rates: Non-institutionalized Foreign-born Age 50 and over, 2010 ACS

Country/Region of birth	A. Proportion of those who speak English less than very well	B. Percent Linguistically isolated among those who speak English less than very well	C. Percent Linguisticall y Isolated (C=A*B)	Total difference from Russia	Difference due to A	Difference due to B	% due to A	% due to B
Philippines	0.380	28.9	11.0	-42.8	-19.1	-23.7	44.6	55.4
India	0.455	30.2	13.7	-40.1	-15.6	-24.5	38.9	61.1
West Indies	0.390	45.6	17.8	-36.0	-21.7	-14.3	60.4	39.6
South America	0.564	44.6	25.2	-28.6	-11.5	-17.1	40.3	59.7
Central America	0.695	44.0	30.6	-23.2	-4.0	-19.2	17.1	82.9
Mexico	0.807	41.8	33.7	-20.0	2.4	-22.4	-11.8	111.8
China	0.736	54.7	40.3	-13.5	-1.8	-11.8	13.2	86.8
Korea	0.746	55.1	41.1	-12.7	-1.2	-11.5	9.4	90.6
Cuba	0.667	64.7	43.1	-10.7	-6.6	-4.0	62.2	37.8
Russia/USSR	0.765	70.3	53.8					
All	***0.534***	***46.9***	***25.0***	***-28.7***	***-13.5***	***-15.2***	**47.1**	**52.9**

Table 2. Log odds coefficients from the logistic regression models of linguistic isolation: Non-institutionalized foreign-born age 50+ with Limited English language Proficiency (LEP), ACS 2010

	(Model 1) All	(Model 2) Russia	(Model 3) Philippines
Russia	0.372***	-	-
	(0.034)		
Philippines	-0.555***	-	-
	(0.035)		
Age	-0.008***	0.001	0.006
	(0.001)	(0.005)	(0.004)
Age at migration	0.030***	0.036***	0.016***
	(0.001)	(0.004)	(0.003)
Female	-0.373***	-0.111	-0.265***
	(0.014)	(0.086)	(0.067)
Married	-0.329***	-0.237	-0.247
	(0.031)	(0.343)	(0.126)
Divorced	-0.146***	-0.398	-0.249
	(0.034)	(0.351)	(0.140)
Widowed	-0.247***	-0.537	-0.362*
	(0.037)	(0.358)	(0.152)
Widowed last year	0.225***	0.542	0.399*
	(0.057)	(0.405)	(0.168)
No English	0.804***	0.927***	0.193
	(0.021)	(0.165)	(0.230)
HH size	-0.447***	-0.656***	-0.570***
	(0.007)	(0.073)	(0.029)
Parent (in-law) of HH head	-0.984***	-1.410***	-0.699***
	(0.026)	(0.179)	(0.111)
Multigenerational HH	-1.620***	-2.047***	-0.847***
	(0.019)	(0.132)	(0.071)
U.S. citizen	-0.054***	-0.340**	-0.154*
	(0.016)	(0.113)	(0.078)
Education	-0.054***	-0.053***	-0.028**
	(0.002)	(0.015)	(0.011)
Health limitations	-0.021	0.476***	-0.217**
	(0.017)	(0.101)	(0.079)
Constant	2.409***	2.634***	1.402***
	(0.063)	(0.497)	(0.294)
Pseudo R-square	0.290	0.432	0.223
Observations	190,328	7,807	9,214

*** p<0.001, ** p<0.01, * p<0.05. Robust standard errors in parentheses.

Table 3. Decomposition of the difference in linguistic isolation rates between the older foreign-born from the Philippines and Russia

	Crude rates	%	Means	%	Coefficients	%	Interaction	%
Philippines	0.289***							
Russia/USSR	0.538***							
Difference	-0.248***	100	-0.243***	98.0	-0.042***	17.0	0.036***	-15.0
				(100)		(100)		(100)
Age			0.002*	-0.8	0.284***	-676.2	-0.002*	-5.6
Age at migration			-0.016***	6.6	-0.375***	892.9	0.013***	36.1
Female			-0.000	0.0	-0.018*	42.9	-0.001	-2.8
Married			-0.000	0.0	-0.031	73.8	0.003	8.3
Divorced			-0.001	0.4	-0.001	2.4	-0.000	0.0
Widowed			-0.000	0.0	-0.002	4.8	-0.000	0.0
Widowed last year			0.000	0.0	0.001	-2.4	0.000	0.0
No English			-0.013***	5.3	-0.012*	28.6	0.010*	27.8
HH size			-0.105***	43.2	-0.043*	102.4	-0.027*	-75.0
Parent (in-law) of HH head			-0.028***	11.5	0.007*	-16.7	0.011*	30.6
Multigenerational HH			-0.096***	39.5	0.029***	-69.0	0.031***	86.1
U.S. citizen			0.001	-0.4	-0.007	16.7	0.001	2.8
Education			0.024***	-9.9	0.094***	-223.8	-0.017***	-47.2
Health limitations			-0.011***	4.5	-0.050***	119.0	0.014***	38.9

Robust standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05

Table. Descriptive statistics: Non-institutionalized foreign-born age 50+ with Limited English language Proficiency (LEP), ACS 20010.

	Age	Age at migration	Female	Married	Divorced	Widowed	Widowed last year	No English	HH size	Parents of HH head	2+ generations HH	Citizen	Education	Health limitations	N
Philippines	64.9	43.1	0.61	0.57	0.18	0.20	0.02	0.03	3.86	0.27	0.64	0.65	6.52	0.25	9,214
India	62.0	44.7	0.55	0.69	0.12	0.17	0.01	0.17	4.05	0.38	0.72	0.56	6.14	0.23	7,307
West Indies	62.2	37.7	0.60	0.40	0.33	0.13	0.01	0.27	3.43	0.20	0.62	0.53	4.34	0.26	8,548
South America	62.2	39.6	0.59	0.52	0.28	0.12	0.01	0.18	3.17	0.19	0.54	0.51	5.90	0.19	12,448
Central America	60.2	35.6	0.59	0.46	0.28	0.11	0.01	0.26	3.63	0.20	0.61	0.46	4.02	0.20	11,242
Mexico	60.8	32.4	0.51	0.60	0.20	0.12	0.01	0.36	3.80	0.19	0.66	0.39	2.77	0.24	50,921
China	63.9	41.7	0.55	0.68	0.15	0.13	0.02	0.29	3.20	0.23	0.53	0.68	5.80	0.18	17,589
Korea	62.4	37.9	0.60	0.70	0.15	0.13	0.02	0.13	2.74	0.14	0.43	0.68	7.00	0.14	7,943
Cuba	68.4	39.9	0.56	0.49	0.23	0.20	0.01	0.34	2.76	0.17	0.39	0.65	5.12	0.33	10,355
Russia/USSR	66.1	48.2	0.59	0.61	0.16	0.21	0.02	0.19	2.39	0.11	0.31	0.74	7.74	0.40	7,807
All	***64.6***	***37.5***	***0.55***	***0.62***	***0.16***	***0.18***	***0.02***	***0.14***	***3.06***	***0.18***	***0.48***	***0.68***	***5.11***	***0.26***	***46,954***