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Health Vulnerability of Immigrants with Limited English Proficiency: A Study of Older Korean Americans

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Abstract

OBJECTIVES—To examine the extent to which limited English proficiency (LEP) poses a risk to physical and mental health, using older Korean Americans as a target population.

DESIGN—Cross-sectional survey.

PARTICIPANTS—Older Korean Americans (N = 1,301).

MEASUREMENTS—Health outcomes were indexed using binary variables covering activity limitation, self-rated health, and probable depression. Participants who reported that they spoke English less than very well were categorized as manifesting LEP.

RESULTS—Approximately 71% of the sample had LEP. Those with LEP scored lower on all measures of health than their English-proficient counterparts. In multivariate models, the risk of having activity limitations was 2.72 times as great (95% confidence interval (CI) = 1.72–4.29, $P < .001$), a fair or poor rating of health 2.59 times as great (95% CI = 1.91–3.49, $P < .001$), and probable depression 1.73 times as great (95% CI = 1.29–2.31, $P < .001$) in participants with LEP.

CONCLUSION—Limited English proficiency was identified as a critical source of health vulnerability. Systematic efforts should be made to reach out to older immigrants with LEP and include them in health-related research and prevention and intervention programs.

Keywords

limited English proficiency; older ethnic immigrants; health

Despite progress in health and health care in the United States, many racial and ethnic minority populations still experience disparities.¹ Older immigrants from non-English-speaking countries, in particular, experience disproportionate health burdens.^{2,3} The general

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sources of health disparities, such as socioeconomic status and access to care, have received much attention over the past few decades, and efforts have been made to improve understanding of the underlying mechanisms,^{1–3} but older ethnic immigrants face life circumstances that set them apart. To address their needs effectively, it is important to explore risk factors unique to their life situations, and one such factor is limited English proficiency (LEP).

The U.S. Census Bureau defines any person over age 5 who speaks English less than very well as having LEP.⁴ Speaking ability is highly related to other aspects of language skill, such as reading, writing, and comprehension,⁵ and it serves as an efficient proxy of overall language proficiency.⁴ According to the 2010 Census, 47 million Americans do not speak English as their primary language, and 25.2 million Americans, or 9% of the U.S. population, have LEP.⁴ The growth rate of the population with LEP between 1990 and 2010 was more than 80%, and continued increase is projected.⁴

Previous studies report sociodemographic and health disadvantages in individuals with LEP,^{1–3} but the documented disparities may be an underestimation of the broader concern because non-English speakers are often excluded from national surveys. For example, the National Health Interview Survey has language capacity only for English and Spanish,⁶ and the majority (>90%) of its respondents complete their interviews in English.⁷ The systematic exclusion of persons with LEP is a particular concern for the Asian-American population, whose rate of linguistic isolation is high.⁸ Given that LEP is strongly associated with socioeconomic disadvantages, findings based on English-proficient samples of Asian Americans may provide an inaccurate and biased representation;⁸ the “model minority” myth that Asian Americans are self-sufficient and problem-free may arise in part from this sampling artifact.

In recruiting hard-to-reach LEP populations, it is necessary to use nonprobability sampling and community-based approaches.⁸ Although limited in generalizability, such sampling approaches uniquely contribute to recruiting individuals with LEP and identifying their needs and challenges. Using culturally and linguistically sensitive methods, the present study focused on older Korean Americans. A majority of older Korean Americans are foreign-born and encounter substantial barriers to the language and culture of mainstream society.⁹ Korean is the fourth-most-common language of individuals with LEP in the United States.⁴ Furthermore, the National Healthcare Quality Survey shows that Koreans are the most likely of all ethnic immigrant groups to report having communication problems in healthcare settings.¹⁰

Various measures of physical and mental health, including activity limitation, self-rating of health, and probable depression, were used to explore the health vulnerability of older Korean Americans with LEP. The sociodemographic and context variables that have been shown to affect LEP and health guided the assessment. Certain sociodemographic characteristics (e.g., older age, female sex, unmarried status, socioeconomic disadvantages) represent lack of power, status, and resources, and they have been linked with LEP and adverse health status.^{2,3} Immigration-related variables should also be considered. Duration of residence in a host country is, for example, a good proxy for cultural adaptation. The

literature suggests the 10th year of immigration as a marker of adaptation in a host society.¹¹ Geographic location also provides different immigration experience. Living in areas with high concentrations of people from the same ethnic background may reduce the need for language acquisition and acculturation.¹² For example, New York offers a unique environment for Korean immigrants because of its high concentration of Koreans (>12% of all Koreans in the United States) and abundance in ethnic-oriented resources and services.¹³ Not only do older Korean Americans in New York have lower levels of acculturation than those living in areas with a low Korean population density, but their low level of acculturation also had a limited effect on health.¹⁴ Another important context variable is health insurance coverage. Because of the welfare reforms that bar newly arrived immigrants from receiving federal benefits, many older immigrants are not eligible for Medicare and Medicaid. This lack of public health insurance poses monumental barriers to health care and often results in unmet healthcare needs.¹⁵

The present investigation was designed to explore the extent to which LEP poses a risk to health using an array of health measures (activity limitation, self-rating of health, probable depression), with controls for sociodemographic (age, sex, marital status, education, financial status) and context (length of stay in the United States, geographic region, health insurance) variables.

METHODS

Data Sets

The data were drawn from a series of surveys of older Korean Americans (aged 60). A team of investigators who shared the language and culture of the target population conducted surveys with the community-based samples. The team also worked in partnerships with ethnic community organizations and media. A multisource sampling strategy was used, with sources including local Korean churches, other religious groups, senior centers, elder associations, and a directory of Korean residents. Referrals were actively sought to solicit participation of individuals who were not affiliated with these groups or associations.

The survey instrument consisted of a standardized questionnaire in Korean developed using a back-translation and reconciliation method. Although the survey was designed to be self-administered, trained interviewers were available for anyone who needed assistance. Data collection was conducted in locations convenient to participants, such as meeting rooms and cafeterias in churches and community centers.

The initial data collection was conducted in central Florida in 2008 (n = 675), and the survey was replicated with older Korean Americans in the New York metropolitan area in 2010 (n = 433) and in the greater Austin area of Texas in 2013 (n = 209). Detailed information on sampling procedures is available elsewhere.¹⁶ After removal of those who had more than 5% of data missing, the final sample consisted of 1,301 participants.

Measures

Because the aim of the present study was to identify individuals with LEP and to explore their health vulnerabilities, all variables were dichotomized. Although dichotomization

reduces score variance, it allows calculation of odds ratios for health risk that LEP poses and efficiently identifies subgroups at particular risk. In each variable, an attribute representing more-advantageous characteristics was coded as 0 and served as the reference.

Sociodemographic Variables

Demographic information included age (0 = <75, 1 = ≥75), sex (0 = male, 1 = female), marital status (0 = married, 1 = unmarried), educational attainment (0 = high school, 1 = <high school), and perceived financial status (0 = average, 1 = <average).

Context Variables

Given that the literature suggests the 10th year after immigration as a marker of adaptation,¹¹ length of stay in the United States was dichotomized (0 = ≥10 years, 1 = <10 years). A binary variable (0 = New York, 1 = not New York) was used for geographic region because of the notable difference in Korean ethnic density and availability of ethnic resources between New York and the other areas where the surveys were conducted.^{13,14} Health insurance coverage (0 = yes, 1 = no) was also dichotomized.

English Proficiency

English proficiency was assessed using a question on how well the respondent spoke English using a 4-point response scale ranging from “not at all” to “very well.” Using the U.S. Census criteria,⁸ those who reported that they spoke English less than very well were categorized as having LEP (0 = English proficient, 1 = LEP).

Health Measures

Activity limitation, self-rating of health, and symptoms of depression were included as indicators of health. Activity limitation was indexed using an instrument that assesses activities of daily living (ADLs) and instrumental activities of daily living (IADLs).¹⁷ The scale included nine activities (e.g., walking, bathing, dressing, managing medication), and participants were asked to indicate, in a yes-or-no format, whether they needed help with performing each activity in the list. Cronbach alpha was 0.86 in the present sample. Activity limitation was coded in a binary format (0 = absence of any activity limitation, 1 = presence of activity limitation).

Self-rating of health has been widely used as a global health indicator. Using a single-item question, participants were also asked to rate their current health on a 4-point scale. Responses were dichotomized into very good or good (0) versus fair or poor (1).

The symptoms of depression were measured using the 10-item short form of the Center for Epidemiologic Studies-Depression Scale (CES-D).^{18,19} The frequency of experiencing depressive symptoms (e.g., loneliness, hopelessness, restless sleep) during the past week was assessed on a 4-point scale. Total scores range from 0 to 30, with those of a score of 10 or higher having probable depression.¹⁸ The CES-D has been translated into Korean, and its psychometric properties and cutoff have been validated.²⁰ Cronbach alpha was 0.80 in the present sample. A binary variable (0 = no depression, 1 = probable depression) was created using the established cutoff (≥10).²⁰

Analytical Strategy

Descriptive characteristics of the entire sample were reviewed, and comparisons between participants without and with LEP were conducted using chi-square analyses. Spearman correlations were used to assess the underlying associations between study variables. A series of logistic regression models was run separately for three health measures (activity limitation, fair or poor rating of health, probable depression). Each model was estimated controlling for sociodemographic (age, sex, marital status, education, financial status) and context (length of stay in the United States, region, health insurance) variables. All analyses were conducted using SPSS version 22 (IBM Corp., Armonk, NY).

RESULTS

Descriptive Characteristics of the Sample

Sample characteristics are summarized in Table 1. Average participant age was 70.5 ± 7.2 (range 60–96, 27.9% ≥ 75), 57.3% were female, 29.0% were unmarried, 31.6% had less than a high school education, and 27.5% perceived their financial status as below average.

All participants were foreign born, and their length of stay in the United States ranged from 1 to 54 years. Eleven percent of the participants had lived in the United States for less than 10 years, and 22.3% were residents of the New York metropolitan area. One-quarter of the sample had no health insurance coverage. The rate of LEP was high, with 70.9% of the sample reporting that they spoke English less than very well.

About 18% had limitation in performing at least one of the nine listed activities, and 43.9% rated their health as fair or poor. Depressive symptom scores were high (8.3 ± 4.8). When the suggested cutoff score (≥ 10) was applied, 38.0% of the sample scored in the range indicative of probable depression.

Comparison of Characteristics Between Participants with and without LEP

Table 1 also presents the differences between participants with ($n = 922$) and without ($n = 378$) LEP. Those with LEP were more likely to be older, female, and unmarried and had lower education and financial status than their English-proficient counterparts. They also had a shorter length of stay in the United States and were more likely to be uninsured. The rate of LEP was higher in the sample from the New York metropolitan area. Those with LEP differed substantially from those who were proficient in prevalence rates of activity limitation (21.5% vs 7.4%), fair or poor health (52.1% vs 23.8%), and probable depression (42.9% vs 26.8%).

At the bivariate level, all correlations were in the expected direction (not shown in tabular format). The highest coefficient was observed in the relationship between fair or poor health and probable depression (correlation coefficient = 0.32, $P < .001$), and no problem with collinearity was identified. Table 2 summarizes the multivariate logistic models. Older and unmarried individuals were more likely to have activity limitation, and those who were unmarried, had lower financial status, did not reside in the New York area, had lived for a shorter time in the United States, and did not have health insurance were more likely to have

fair or poor health and probably depression. Female sex was found to be a significant risk factor only for fair or poor health. After controlling for covariates, the risk of having activity limitation was 2.72 times as great, fair or poor health 2.59 times as great, and probable depression 1.73 times as great in those with LEP.

DISCUSSION

Given the continuous growth of persons with LEP in the United States^{4,5} and the effect of LEP on the lives of older ethnic immigrants,^{2,3} the present study examined the extent to which LEP poses a risk to physical and mental health in older Korean Americans. Findings identified LEP as a major source of health vulnerability, demonstrating its unique contribution to the risk of activity limitation, fair to poor health, and probable depression.

A substantial proportion of the present sample (71%) had LEP. This proportion is notably higher than the 9% reported in the U.S. population older than 5.⁴ The 2007 California Health Interview Survey (CHIS) reported an LEP rate of 14% in adults aged 18 and older and 20% in those aged 65 and older.²¹ The LEP rate specific to Korean Americans in the 2007 CHIS is 39.3% in the overall adult sample, but those aged 65 and older have a substantially lower rate (20%). This seemingly contradictory finding may result from a selection bias wherein English-proficient older Koreans were more likely to participate in the survey than their age peers with LEP.

The present sample of older Koreans included 3.6 times as many individuals with LEP as in the 2007 CHIS sample (71% vs 20%), suggesting that culturally appropriate outreach strategies enabled those with language barriers to be included in the survey. In addition to the use of a survey questionnaire in the native language of the target group, bilingual interviewers, community partnerships with ethnic organizations, and presentations in the media were all critical in building trust and rapport between the research team and community members. The discrepancy with the previously reported estimates of LEP suggests that current knowledge on the role of LEP as a source of health disparity in older immigrants may be underestimated in the literature and indicates the need for caution in generalizing LEP-related findings from many of the existing population-based samples.

Consistent with previous findings,^{9,16,22} the physical and mental health profiles of older Korean Americans were unfavorable. Furthermore, when the sample was divided according to LEP, the health vulnerability in those with LEP was pronounced. The group with LEP also had adverse characteristics in nearly all sociodemographic and context variables. LEP was much more likely in the sample from New York. Because of the high population density of Koreans and the abundance in Korean-oriented resources, the need and motivation to acquire the language of the host society might not be high for older Koreans living in New York.^{13,14} The social and environmental context may affect the prevalence and significance of LEP.

In a series of logistic regression models, the effect of LEP on various measures of health was confirmed. Even after controlling for sociodemographic and context variables, LEP remained a significant risk factor, making the likelihood of activity limitation 2.72 times as

great, fair or poor ratings of health 2.59 times as great, and probable depression 1.73 times as great. These findings are in line with the literature, which generally shows a greater health risk for older immigrants with LEP than for their English-speaking counterparts.^{2,3,15,21} The findings emphasize the need for service providers to develop competence in working with older immigrants who are not fluent in English. This need may be accentuated in areas where there are limited ethnic-oriented resources. Given that individuals with LEP are faced with socioeconomic and health disadvantages, concerted efforts should be made to improve resources and services for these vulnerable individuals.

Some limitations of the present study should be noted. Although the use of a large sample from various geographic regions is one of the strengths of the study, the generalizability of the findings to the overall elderly immigrant population is limited. In future efforts, sampling strategies should be based on a comprehensive sampling frame of regions with varying degrees of Korean population density. Caution should also be exercised in interpreting the findings because of the nonrepresentative sample and the cross-sectional nature of the study. The directionality of relationships between LEP and its related factors could be reverse or reciprocal. Future studies should also attend to the interrelations, overlaps, and causalities between the diverse measures of physical and mental health.

Despite these limitations, this study is the first of its kind to examine the relationship between LEP and the health of older Korean Americans across multiple sites. In addition, the use of culturally and linguistically sensitive community-based approach enabled the study to recruit many individuals with LEP who otherwise might have been excluded. The findings not only advance the current knowledge on LEP, but also have practical implications. By highlighting the health vulnerabilities associated with LEP, the present study suggests that LEP is an intervening agent to be targeted in health planning and interventions for older ethnic immigrants. Of particular value would be efforts to assist them in overcoming linguistic and cultural barriers, such as provision of translation or interpretation services and enhancement of community support systems.

Acknowledgments

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Table 1

Sample Characteristics

Characteristic	Total Sample, N = 1,301 (%)	Proficient, n = 378 (%)	Limited English Proficiency, n = 922 (%)	Chi-Square
Sociodemographic				
Aged ≥ 75	27.9	19.1	31.5	20.4 ^b
Female	57.3	51.1	59.8	8.42 ^a
Unmarried	29.0	19.3	33.0	24.2 ^b
<High school education	31.6	10.7	40.1	106.7 ^b
Financial status <average	27.5	11.4	34.1	69.5 ^b
Context				
Lived in United States <10 years	11.0	1.9	14.8	45.3 ^b
Region not New York	67.7	80.2	62.6	37.9 ^b
No health insurance	25.0	15.9	28.7	23.6 ^b
Limited English proficiency	70.9	–	–	–
Health measures				
Activity limitation	17.5	7.4	21.5	37.0 ^b
Self-rated health fair or poor	43.9	23.8	52.1	86.9 ^b
Probable depression (Center for Epidemiologic Studies Depression Scale score ≥ 10)	38.1	26.8	42.9	29.3 ^b

^a*P* < .01.^b*P* < .001.

Table 2

Effects of Limited English Proficiency on Health Measures

Health Measure	Odds Ratio (95% Confidence Interval)		
	Activity Limitation	Fair or Poor Health	Probable Depression
Limited English proficiency	2.72 (1.72–4.29) ^c	2.59 (1.91–3.49) ^c	1.73 (1.29–2.31) ^c
Aged 75	2.83 (2.05–3.92) ^c	1.12 (0.84–1.48)	.97 (0.73–1.27)
Female	1.10 (0.78–1.56)	1.36 (1.04–1.77) ^a	.85 (0.66–1.10)
Unmarried	1.43 (1.00–2.03) ^a	1.58 (1.19–2.11) ^b	1.66 (1.25–2.21) ^c
Education <high school	1.21 (0.86–1.72)	1.19 (0.90–1.59)	0.98 (0.74–1.31)
Financial status <average	1.25 (0.89–1.76)	2.03 (1.53–2.70) ^c	1.48 (1.12–1.95) ^b
Region not New York	1.15 (0.81–1.63)	0.65 (0.50–0.86) ^b	0.72 (0.55–0.95) ^a
Length of stay <10 years	1.09 (0.68–1.76)	0.66 (0.44–0.97) ^a	0.57 (0.38–0.85) ^b
No health insurance	0.92 (0.63–1.35)	1.46 (1.08–1.96) ^a	1.35 (1.01–1.81) ^a
Summary statistics			
–2 Log likelihood	1,054.7	1,539.5	1,573.9
Chi-square(degrees of freedom)	110.0 (9) ^c	180.1 (9) ^c	71.8 (9) ^c

^a*P* < .05.^b*P* < .01.^c*P* < .001.