ORIGINAL PAPER

Limited English Proficiency and Health Service Use in Asian Americans

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Abstract

The present study examined the extent to which limited English proficiency (LEP) poses a risk to health service use in Asian Americans. With data drawn from the 2015 Asian American Quality of Life Survey ($N = 2594$), logistic regression was used to model the odds for four outcomes (no usual place for care, no regular check-up, unmet needs for medical care, and communication problems in healthcare settings). More than 62% of the sample had LEP. In the group with LEP, the odds of not having usual place for care increased by 2.09 times, of not having regular check-up by 1.69 times, of having unmet needs for medical care by 1.89 times, and of having communication problems in healthcare settings by 4.95 times. The findings highlight the vulnerabilities of Asian Americans with LEP in health service use and provide implications for health planning and interventions.

Keywords Limited English proficiency · Access to healthcare · Service utilization · Asian Americans

Introduction

The coexistence of diverse languages and cultures in the U.S. is a cultural strength, but it presents major challenges to health care systems as they attempt to ensure equitable care for all. Recent increases in populations of foreign-born immigrants in the U.S. have been accompanied by growth in the number of individuals with language barriers or limited English proficiency (LEP), a term that applies to any person over age 5 who speaks English less than "very well" [1]. According to the 2010 Census, over 25 million Americans or 9% of the U.S. total population have LEP, with the majority of them being either Hispanics (63%) or Asians (21%) [2]. The reported rate of LEP among Asian American is 34% [2] and their LEP share deserves focused attention given their small proportion of the U.S. total population (5.7 vs. 17.8% for Hispanics) but wide-ranging linguistic diversity (> 100 languages/dialects are spoken by Asian Americans with LEP vs. Spanish as the dominant language spoken by 99% of

Hispanics with LEP) [3]. The fact that Asian Americans are the fastest growing racial/ethnic group with the 72% growth rate between 2000 and 2015 (from 11.9 to 20.4 million), whose members include many foreign-born immigrants [4, 5], suggests that we need to pay attention to their LEP issues.

A growing number of population-based studies have been done with surveys/interviews in both English and Spanish, facilitating participation of Hispanics with LEP. However, such efforts have rarely been made for Asian Americans. The California Health Interview Survey (CHIS) is unique in that it offers an Asian language option (Cantonese, Mandarin, Korean, Vietnamese, and Tagalog) [6]. However, the percentage of the participants interviewed in Asian languages in the 2015 CHIS was only 1.3% [6]. Given that the exclusion of non-English speaking Asian Americans results in an upward selection bias and an underestimation of the rate of LEP and health vulnerabilities [7, 8], it is imperative to use a sample that closely reflects this population's linguistic diversity and challenges. In addition, beyond language availability, targeted efforts such as the use of bilingual/bicultural recruiters and interview assistants and the establishment of community partnerships should be in place in order to reach out to Asian Americans with LEP.

The detrimental effect of language barriers on various aspects of immigrants' lives is compounded by the critical dimension of health service use. Numerous studies have demonstrated the benefits of having a usual place for care

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(i.e., a medical "home"), the use of preventive care, and the importance of receiving medical care when it is needed [9–12]. Individuals with LEP, however, are likely to encounter problems in obtaining such health services [13–15]. Yet another important dimension pertains to communication with care providers. Effective communication between provider and patient, even though it is integral to healthcare, can be a challenge for all individuals; but individuals with LEP bear added burdens for such communication [16–18].

In light of the urgent need for in-depth understanding of Asian American, the present investigation was designed to explore the extent to which LEP among Asian Americans might be associated with risks in health service use, employing an array of indicators (no usual place for care, no regular check-up, unmet needs for medical care, and communication problems in healthcare settings). The analysis was conducted with controls for background variables (age, gender, marital status, education, ethnicity, nativity, self-rated health, and health insurance) that are known to be related to LEP and health service use.

Methods

Sample

Data were drawn from the 2015 Asian American Quality of Life (AAQoL) survey. The survey is part of the City of Austin's AAQoL initiative to improve response to the rapid growth of the Asian American population. An estimated 110,000–115,000 Asians live in metropolitan Austin, and the Asian community is doubling in size approximately every 12 years [19]. Self-identified Asian Americans aged 18 and older living in the Austin area were eligible to participate. To reach the broadest possible audience, the survey was conducted with culturally and linguistically sensitive approaches that included (1) providing both English and Asian language versions of the survey questionnaire, (2) using research personnel (e.g., recruiters and survey assistants) who shared the languages and cultures of the target populations, and (3) building a strong partnership between the research team and key individuals and organizations within local ethnic communities.

The 10-page questionnaire for the AAQoL was originally developed in English and then translated into the languages of several major Asian groups (e.g., Chinese, Vietnamese, Korean, Hindi, Gujarati, and Tagalog). In the case of Chinese, both traditional and simplified versions were prepared. The initial translations were conducted by eight professional translators and graduate-level bilingual researchers. For each language, the translated version was reviewed for accuracy by two or more bilingual volunteers. Upon refinement of the questionnaire, each language version was pilot tested with three to five community members who were representatives of the respective target groups and spoke that group's target language.

The surveys were completed using paper-and-pencil questionnaires in the participants' preferred languages. Recognizing that Asian Americans are often difficult to locate with standard recruitment strategies and that reliance on a single source to find participants can increase the chances for bias, multiple potential survey sites were contacted. In addition, the project was publicized through media and ethnic community sources, and referrals for individuals, groups, and organizations were actively sought. A total of 76 survey sessions took place at various locations and events across the city of Austin (e.g., churches, temples, grocery stores, small group meetings, and cultural events) from August to December, 2015. Although the surveys were self-administered, bilingual research assistants at each survey site provided survey assistance. It took about 20 min to complete the 10-page questionnaire, and respondents were each paid $10 U.S. for their participation. Of a total of 2614 individuals who participated in the AAQoL survey, about half (48.5%) used survey questionnaires in languages other than English. After removing five participants who had missing information on more than 30% of the entire survey items and 15 participants with missing responses on English proficiency, the final sample size was 2594. More information on survey procedures and sample characteristics is available elsewhere [20].

Measures

Limited English Proficiency

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

Health Service Use

As indicators of health service use, four binary items adapted from population-based surveys [9–12] were included. Participants were asked (1) whether there was a place that they usually went to when they got sick, (2) whether they had received a routine physical check-up in the past 12 months, (3) whether there was a time in the past 12 months when they had needed medical care but could not get it, and (4) whether they had undergone an experience in which they could not understand what a doctor/nurse said. Endorsement of the absence of the usual place of care, no use of regular check-up, and the experiences of unmet healthcare needs

and of communication problems in healthcare settings were coded as "1."

Covariates

Background information included age (0 = 18–39, 1 = 40–59, 2 = ≥ 60), gender (0 = *male*, 1 = *female*), marital status (0 = *not married*, 1 = *married*), education (0 = < 12 years, 1 = ≥ 12 years), ethnicity (0 = *Chinese*, 1 = *Asian Indian*, 2 = *Korean*, 3 = *Vietnamese*, 4 = *Filipino*, 5 = *Other Asian*), nativity (0 = *U.S.-born*, 1 = *foreign-born*), self-rated health (0 = *excellent/very good/good*, 1 = *fair/poor*), and health insurance (0 = *insured*, 1 = *not insured*).

Analytic Strategy

Descriptive characteristics of the overall sample were reviewed, and subgroup comparisons between those who were proficient in English and those with LEP were made. To explore the risks posed by LEP for each of the four measures of health service use (no usual place for care, no regular check-up, unmet needs for medical care, and communication problems in healthcare settings), a separate logistic regression model was tested. A set of background variables (age, gender, marital status, education, ethnicity, nativity, self-rated health, and health insurance) was controlled for the analyses. All analyses were performed using IBM SPSS Statistics 24, and missing data were handled by using pairwise deletion. Given the large sample size, significance was determined at .01 level.

Results

Characteristics of the Sample

Characteristics of the overall sample are summarized in Table 1. More than 62% had LEP. The mean age of the overall sample was 42.6 years (*SD* = 16.9), with a range from 18 to 98. About 49% of the participants were aged between 18 and 39, and about 20% were aged 60 or older. More than half (55%) were female. About 34% were not married, and 18.4% had less than 12 years of education. The sample included 626 Chinese (24.5%), 557 Asian Indians (21.8%), 469 Koreans (18.4%), 502 Vietnamese (19.7%), 257 Filipinos (10.1%), and 142 individuals from other Asian groups (5.6%). The ethnicities specified by participants in the "other" group included Nepalese, Pakistani, Cambodian, and Japanese. More than 90% of the participants were foreign-born. Approximately 11% of the sample rated their health either fair or poor, and about 15% had no health insurance coverage. The rates of having no usual place for care, no regular check-up, unmet needs for medical care, and

communication problems in healthcare settings were 38.1, 32.4, 11.5, and 28.8%, respectively.

Table 1 also compares the characteristics between the individuals who were proficient in English (*n* = 976) and those with LEP (*n* = 1618). A statistically significant difference was obtained for all variables of assessment. The group with LEP was more likely to be older, female, married, and less educated. With regard to ethnicity, the LEP group was highly represented by Chinese (28.2%), Vietnamese (23%), and Koreans (22.9%). The high proportions of Vietnamese and Koreans in the LEP group were particularly notable. A considerably higher proportion of the LEP group was foreign-born, had a fair/poor rating of health, and lacked health insurance coverage. Those with LEP also differed substantially from those who were proficient in their rates of having no usual place for care (42.2 vs. 31.4%), no regular check-up (35.6 vs. 27%), unmet needs for medical care (14.6 vs. 6.4%), and communication problems in healthcare settings (42.1 vs. 6.9%). It is noteworthy that the prevalence of communication problems was six times greater among individuals with LEP than among English-proficient counterparts.

The Effect of LEP on Health Service Use

Four independent logistic regression models were used to estimate health service use, the findings of which are summarized in Table 2. LEP increased the odds of having negative health service use outcomes. After controlling for covariates, the risk of having no usual place for care was 2.09 times greater in these with LEP (95% CI 1.67–2.61, *p* < .001); of no regular check-up, 1.69 times as great (95% CI 1.34–2.11, *p* < .001); of unmet needs for medical care, 1.89 times as great (95% CI 1.31–2.74, *p* < .001); and of communication problems in healthcare settings, 4.95 times as great (95% CI 3.66–6.70, *p* < .001).

Among the covariates, age, gender, marital status, and health insurance coverage were common predictors for no usual place for care and no regular check-up. The odds of having no usual place for care and no regular check-up were reduced among those who were older, female, married, and covered by health insurance. For unmet needs for medical care, fair/poor ratings of health and a lack of health insurance were identified as risk-promoting factors. Low education, being foreign-born, and fair/poor ratings of health contributed to an increasing risk of communication problems in healthcare settings. Compared with Chinese, Asian Indians had the higher odds of not having a usual place for care. The odds of not having regular check-up were particularly high for Koreans, and the odds of having unmet needs for medical care were high for Vietnamese. Both Asian Indians and Filipinos had reduced odds of having communication problems in medical settings. When the analyses were repeated with the initial sample including those individuals

Table 1 Characteristics of the sample

	%			χ²
	Overall sample (N=2594)	Non-LEP (n=976)	LEP (n=1618)	
English proficiency				
Proficient	37.6	–	–	–
Limited English proficiency (LEP)	62.4			
Background variable				
Age				
18–39	48.6	64.8	38.8	197.2
40–59	31.2	26.4	34.0	
≥60	20.3	8.8	27.3	
Gender				
Male	45.0	50.5	41.6	19.3
Female	55.0	49.5	58.4	
Marital status				
Not married	33.5	42.9	27.8	61.9
Married	66.5	57.1	72.2	
Education				
<12 years	18.6	6.8	25.8	143.5
≥12 years	81.4	93.2	74.2	
Ethnicity				
Chinese	24.5	18.4	28.2	274.7
Asian Indian	22.1	32.4	15.8	
Korean	18.0	9.9	22.9	
Vietnamese	19.7	14.1	23.0	
Filipino	10.1	17.5	5.7	
Other	5.6	7.6	4.4	
Nativity				
U.S.-born	9.2	22.4	1.2	325.4
Foreign-born	90.8	77.6	98.8	
Self-rated health				
Excellent/very good/good	89.4	95.3	85.8	57.4
Fair/poor	10.6	4.7	14.2	
Health insurance				
Insured	85.2	91.9	81.6	42.9
Not insured	14.8	8.9	18.4	
Health service use				
No usual place for care	38.1	31.4	42.2	29.4
No regular check-up	32.4	27.0	35.6	20.2
Unmet needs for medical care	11.5	6.4	14.6	39.9
Communication problems in healthcare settings	28.8	6.9	42.1	365.9

All χ² values are significant at .001 level

who were deleted due to missing (n=15), the same findings were observed.

Discussion

With the increase of foreign-born immigrants, LEP has emerged as a critical factor in planning and executing health interventions or healthcare system changes in the U.S. [1, 2]. Together, Hispanics and Asian Americans constitute the major proportion of the LEP population, but LEP is more

Table 2 Logistic regression models of health service use

	Odds ratio (95% confidence interval)			
	No usual place for care	No regular check-up	Unmet needs for medical care	Communication problems in healthcare settings
English proficiency				
Proficient	1.00	1.00	1.00	1.00
Limited English proficiency	2.09[b] (1.67, 2.61)	1.69[b] (1.34, 2.11)	1.89[b] (1.31, 2.74)	4.95[b] (3.66, 6.70)
Age				
18–39	1.00	1.00	1.00	1.00
40–59	.48[b] (.39, .62)	.58[b] (.46, .74)	.89 (.63, 2.74)	.98 (.76, 1.26)
≥ 60	.35[b] (.26, .46)	.25[b] (.19, .34)	1.04 (.72, 1.49)	1.28 (.97, 1.68)
Gender				
Male	1.00	1.00	1.00	1.00
Female	.69[b] (.58, .83)	.57[b] (.47, .68)	1.05 (.80, 1.36)	1.06 (.86, 1.30)
Marital status				
Not married	1.00	1.00	1.00	1.00
Married	.68[b] (.56, .85)	.69[a] (.55, .85)	.77 (.57, 1.04)	1.12 (.88, 1.42)
Education				
< 12 years	1.00	1.00	1.00	1.00
≥ 12 years	.88 (.69, 1.14)	.94 (.72, 1.23)	.71 (.52, .97)	.50[b] (.39, .64)
Ethnicity				
Chinese	1.00	1.00	1.00	1.00
Asian Indian	2.31[b] (1.76, 3.03)	.92 (.69, 1.21)	.65 (.40, 1.05)	.25[b] (.18, .36)
Korean	1.39 (1.06, 1.82)	1.66[b] (1.26, 2.18)	1.51 (1.03, 2.19)	1.29 (.98, 1.70)
Vietnamese	.90 (.68, 1.21)	.88 (.59, 1.19)	1.94[a] (1.33, 2.83)	.93 (.70, 1.24)
Filipino	.80 (.55, 1.16)	.81 (.56, 1.17)	1.25 (.73, 2.12)	.29[b] (.18, .48)
Other Asian	1.28 (.84, 1.96)	1.06 (.69, 1.63)	.89 (.46, 1.74)	.63 (.39, 1.01)
Nativity				
U.S.-born	1.00	1.00	1.00	1.00
Foreign-born	1.18 (.83, 1.68)	1.26 (.88, 1.80)	.99 (.57, 1.71)	2.50[a] (1.35, 4.61)
Self-rated health				
Excellent/very good/good	1.00	1.00	1.00	1.00
Fair/poor	1.15 (.85, 1.57)	.97 (.71, 1.34)	2.45[b] (1.73, 3.47)	1.98[b] (1.45, 2.69)
Health insurance				
Insured	1.00	1.00	1.00	1.00
Not insured	5.66[b] (4.36, 7.37)	5.63[b] (4.34, 7.30)	2.36[b] (1.75, 3.18)	1.21 (.93, 1.59)

[a] $p < .01$; [b] $p < .001$

complicated among Asian Americans because of their linguistic diversity. The fact that more than 100 languages/dialects are spoken by Asian Americans with LEP poses a significant challenge to accommodating their linguistic needs [3]. It is noteworthy that the national statistics on LEP in Asian Americans are based only on those who are able to respond to surveys in English. This systematic exclusion of non-English speaking individuals results in upward selection bias and underestimation of the rate of LEP in Asian Americans [7, 8].

The AAQoL survey was designed in response to a compelling need to accommodate the linguistic and cultural diversity of Asian Americans. Our culturally and linguistically appropriate approaches include the use of (1) Asian language versions of the questionnaire, (2) bilingual and bicultural research personnel, and (3) community partnerships. By offering the option to use native languages and by building trust and rapport between community members and our research team, we have been able to reach out to many non-English speaking Asian Americans in the community. It is noteworthy that over half of the participants in the AAQoL survey responded on non-English versions of the questionnaire.

The AAQoL sample included almost twice as many Asian American individuals with LEP as does the U.S. Census (62 vs. 34%). This discrepancy suggests that current knowledge about the role of LEP as a source of disparities in health and healthcare may be underestimated, and it calls for caution in generalizing LEP-related findings from population-based studies. When the sample was divided according to LEP, the vulnerabilities in those with LEP were pronounced. The group with LEP had adverse characteristics in all background variables and health service use outcomes. The variables represented by a lack of power and resources and social disadvantages seem to be associated with LEP [8–13]. As in previous reports, Chinese, Vietnamese, and Koreans were highly represented in the group with LEP [1, 4]. It is notable that individuals with LEP were unfavorably positioned in terms of their access and utilization of health services across all measures employed in the present investigation.

In a series of logistic regression models, the effects of LEP on health service use outcomes were confirmed. Even after controlling for background variables, LEP remained a significant risk factor, increasing the odds of not having usual place for care by 2.09 times, of not having a regular check-up by 1.69 times, of having unmet needs for medical care by 1.89 times, and of having communication problems in healthcare settings by 4.95 times. These findings are in line with previous literature, which generally shows a greater challenge in health service use for individuals with LEP than for their English-speaking counterparts [13–18]. The overall findings emphasize the need for service providers to develop linguistic or cultural competence in working with Asian Americans who are not fluent in English. Findings on covariates were also in line with previous studies, demonstrating varying degrees of risks to health service use posed by disadvantaged social status and a lack of personal resources [8–13]. With regard to ethnicity, it was interesting to note that Asian Indians and Filipinos presented a low rate of LEP and reduced odds of having communication problems in healthcare settings.

Some limitations to the present study should be noted. First, given its use of a cross-sectional design and a non-representative, geographically defined sample, the present study is limited for drawing causal inferences and generalizing the findings to the larger population of Asian Americans. Future studies should also attend to the environmental context of LEP and health services. Ethnic density, community support, and the availability of health service providers who offer culturally and linguistically appropriate services play a critical role in shaping the experience of ethnic minorities with LEP in their use of health services. Further attention should also be paid to ethnic variations to develop tailored interventions for the targeted groups. Although the 10-page questionnaire used in the AAQoL survey generated useful data on various topics, it was quite lengthy. Future studies should attend to optimal formats and procedures of survey data collections.

Despite these limitations, however, the culturally and linguistically appropriate strategies employed in the AAQoL survey enabled the participation of many individuals with LEP who might otherwise have been excluded from the sample. The findings not only advance the current knowledge about LEP and health service use but also have practical implications. By highlighting the vulnerabilities associated with LEP, the present study suggests that LEP should a focus in health planning and interventions for Asian Americans. Efforts should be made to assist individuals with LEP with overcoming linguistic and cultural barriers (e.g., by providing translation or interpretation services and enhancing community support systems [21, 22]). Suggested strategies at the provider and system levels might include the use of bilingual staff as well as provider education and training in communication with LEP populations and cultural competency. It is also recommended that future studies explore individual/interpersonal/environmental factors that might intervene the negative health and health service-related outcomes in LEP populations.

Compliance with Ethical Standards

Conflict of interest There are no potential conflicts of interest for either of the authors.

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