



Published in final edited form as:

*Ethn Health*. ; : 1–12. doi:10.1080/13557858.2018.1514457.

## Preference for patient–provider ethnic concordance in Asian Americans

Yuri Jang<sup>a,\*</sup>, Hyunwoo Yoon<sup>b</sup>, Miyong T. Kim<sup>c</sup>, Nan Sook Park<sup>d</sup>, and David A. Chiriboga<sup>e</sup>

<sup>a</sup>Steve Hicks School of Social Work, The University of Texas at Austin, Austin, TX, USA

<sup>b</sup>School of Social Work, Texas State University, San Marcos, TX, USA

<sup>c</sup>School of Nursing, The University of Texas at Austin, Austin, TX, USA

<sup>d</sup>School of Social Work, University of South Florida, Tampa, FL, USA

<sup>e</sup>Department of Child and Family Studies, University of South Florida, Tampa, FL, USA

### Abstract

**Objectives:** The present study examined factors associated with the preference for patient–provider ethnic concordance in Asian Americans.

**Design:** With data drawn from the 2015 Asian American Quality of Life Survey ( $N = 2535$ ), a logistic regression model of the preference for patient–provider ethnic concordance was tested with demographic (age, gender, ethnicity, marital status, education), health and access (chronic medical conditions, self-rated health, health insurance coverage), immigration-related (place of birth, length of stay in the US, English proficiency, acculturation), and adverse experience (perceived discrimination, communication problems in healthcare settings) variables.

**Results:** Over half (52.4%) of those in the sample preferred to be treated by a healthcare provider from their own ethnic background. In a multivariate model, the odds for preferring ethnic concordance were 1.52–1.64 times higher among individuals in earlier stages of immigration, language acquisition, and acculturation. Individuals who had experienced communication problems in healthcare settings presented 3.74 times higher odds for preferring ethnic concordance than did counterparts without such experience.

**Conclusions:** The results emphasized the value of paying attention to patient–provider concordance when treating Asian Americans either relatively new to the country or who have had

---

CONTACT Yuri Jang yjang12@austin.utexas.edu Steve Hicks School of Social Work, The University of Texas at Austin, 1925 San Jacinto Blvd., D 3500, Austin, TX 78712, USA.

\* Present address: Edward R. Roybal Institute on Aging, Suzanne Dworak-Peck School of Social Work, University of Southern California 1150 S. Olive Street, Suite 1400, Los Angeles, CA 90015, USA.

#### Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

#### Informed consent

Informed consent was obtained from all individual participants included in the study.

#### Disclosure statement

No potential conflict of interest was reported by the authors.

previous problems communicating with health professionals. The findings also provide implications for improving workforce diversity in healthcare delivery and medical education.

### Keywords

Patient–provider ethnic concordance; acculturation; communication problems in healthcare settings; Asian Americans

---

### Introduction

The patient–provider relationship, a key contributor to healthcare quality, is often compromised when dealing with ‘minority’ populations (Brennan et al. 2013; Cooper and Powe 2004; Smedley, Stith, and Nelson 2003; Sullivan and Ellner 2015). Studies consistently report that racial/ethnic minorities fare worse than non-Hispanic Whites in perceived trust in medical providers, effective communication, and overall fairness and respect in healthcare settings (Smedley, Stith, and Nelson 2003; Spooner et al. 2016). These findings call attention to patient–provider relationships as a source of health disparities and suggest a need for focused efforts to alleviate health gaps for racial and ethnic minorities.

One factor that can make a difference in patient–provider relationships is concordance. Many studies have demonstrated that patient–provider concordance in race, ethnicity, and language is linked with better healthcare processes (e.g. communication, adherence, and participatory decision-making) and greater patient satisfaction (Cooper and Powe 2004; LaVeist and Nuru-Jeter 2002; Meghani et al. 2009; Traylor et al. 2010). Although some studies have shown limited or no impact of racial concordance in healthcare outcomes (Phillips, Chiriboga, and Jang 2012; Schnittker and Liang 2006), there is a growing agreement that it may contribute to the overall quality of care by promoting empathic treatment, understanding of cultural health beliefs, and open communication (Cooper and Powe 2004; LaVeist and Nuru-Jeter 2002; Meghani et al. 2009; Traylor et al. 2010).

Achieving concordance is particularly challenging for Asian Americans, that include more than two dozen ethnic subgroups with roots in East and Southeast Asia and the Indian subcontinent, each with unique histories, cultures, and languages (PRC 2013). Furthermore, a substantial proportion of the Asian American community comprises foreign-born immigrants who may face heightened cultural and linguistic challenges (Jang and Kim 2018; López, Ruiz, and Patten 2017). Despite being the fastest growing racial/ethnic group in the US, with a 72% growth rate from 2000 to 2015 (López, Ruiz, and Patten 2017), Asian Americans have been understudied, and their healthcare needs remain poorly understood (Islam et al. 2010; Jang et al. 2018). Given the linguistic diversity and high rates of limited English proficiency among Asian Americans, it is imperative to explore and respond to their needs for culturally, linguistically congruent healthcare.

The present study was designed to tap ethnic and linguistic diversity within the overall Asian American population. Its aims were (1) to explore the rate of preference for being treated by a healthcare provider of one’s own ethnic background (ethnic concordance) and (2) to identify factors associated with that preference. Focus was given to demographic (age, gender, ethnicity, marital status, education), health and access (chronic medical conditions,

self-rated health, health insurance coverage), immigration-related (place of birth, length of stay in the US, English proficiency, acculturation), and adverse experience (perceived discrimination, communication problems in healthcare settings) variables. Although the study was exploratory, we hypothesized that preferences for patient–provider ethnic concordance would be pronounced among those in earlier stages of the immigration experience and among those with adverse experiences in interpersonal relationships and communication. Our hypotheses were based on literature showing both the healthcare vulnerabilities of immigrants with language and cultural barriers (Derose, Escarce, and Lurie 2007; Jang and Kim 2018; Ngo-Metzger et al. 2007; Zong and Batalova 2015) and the critical role of prior experiences in shaping individuals’ perceptions and attitudes toward healthcare (Blanchard and Lurie 2004; Collins et al. 2002).

## Methods

### Sample

Data were drawn from the 2015 Asian American Quality of Life (AAQoL) survey, which was 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 to 115,000 Asians live in metropolitan Austin, and the Asian community is doubling in size approximately every 12 years (City of Austin 2013). Asian Indian, Chinese, Vietnamese, Korean, and Filipino are identified as the five largest Asian groups in Austin, and these groups comprise about 87% of the total Asian population in the area.

The target population comprised self-identified Asian Americans aged 18 and older living in Austin, Texas. The survey employed 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 population, 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 national languages of the five largest Asian subgroups living in Austin: Chinese (Chinese), Asian Indian (Hindi), Korean (Korean), Vietnamese (Vietnamese), and Filipino (Tagalog). Gujarati was also included as a sixth language because it is the most popular language being used by non-English-speaking Asian Indians (Pandya, McHugh, and Batalova 2011). 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 3–5 community members who were representatives of the respective target groups and spoke that group’s target language.

Participants completed the survey’s paper-and-pencil questionnaires in their preferred languages. Because Asian Americans are often difficult to locate with standard recruitment strategies, and because reliance on a single source to find participants can increase the

chances for bias (Islam et al. 2010; Jang et al. 2018), 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 designed to be self-administered, bilingual research assistants were available at each survey site to provide assistance. Although the study used a non-probability sample of convenience, a special effort was made to represent age and ethnicity break-downs of the Asian American population in Austin. It took about 20 minutes to complete the 10-page questionnaire, and respondents were each paid \$10 US for their participation. The AAQoL project was approved by the University of Texas at Austin's Institutional Review Board.

A total of 2614 individuals completed the survey, with about half (48.5%) using questionnaires in languages other than English. After removing cases with more than 10% missing responses on the variables used in the present analysis ( $n = 79$ ), the final sample size was reduced to 2535. More information on survey procedures and sample characteristics is available elsewhere (Jang 2016).

## Measures

**Preference for patient–provider ethnic concordance**—Each participant was asked the following question: ‘If you could choose, would you prefer to be treated by a doctor of your ethnic group?’ The question was adopted from the 2001 Commonwealth Fund Health Care Quality Survey (PSRAI 2002). An affirmative response indicated a personal preference for ethnic concordance.

**Demographic variables**—Background information included age (0 = 18–39, 1 = 40–59, 2 = 60), gender (0 = male, 1 = female), ethnicity (0 = Chinese, 1 = Asian Indian, 2 = Korean, 3 = Vietnamese, 4 = Filipino, 5 = Other Asian), marital status (0 = not married, 1 = married), and education (0 = <12 years, 1 = >12 years).

**Health and access variables**—The total count from a checklist of 10 chronic diseases and conditions (e.g. diabetes, cancer, arthritis, heart disease, and high blood pressure) was dichotomized (0 = none, 1 = one or more). Respondents were also asked to rate their current health on a 5-point scale. Responses were then dichotomized into excellent/very good/good (0) and fair/poor (1). As a proxy for access, health insurance coverage was coded as not insured (0) or insured (1).

**Immigration-related variables**—Place of birth was coded as a binary variable (0 = US-born, 1 = foreign-born). The duration of residence in the US was dichotomized (0 = >10 years, 1 = <10 years) based on immigration literature suggesting the 10th year as a marker of adaptation (Beiser and Edwards 1994). English proficiency was assessed with a question on how well respondents spoke English, with responses ranging from not at all to very well. Using US census criteria (Pandya, McHugh, and Batalova 2011), those who reported that they spoke English less than very well were categorized as having limited English

proficiency (0 = English proficient, 1 = limited English proficiency). For an assessment of acculturation, participants were asked to rate their level of familiarity with the culture and custom of mainstream America on a 4-point scale, and responses were again dichotomized (0 = high/very high, 1 = very low/low).

**Adverse experience**—Participants were asked (1) whether there was a time when they had been treated unfairly because of their race or ethnic origin and (2) whether they had encountered a situation in which they could not understand what a doctor/nurse said. Affirmative responses indicated the experience of discrimination and communication problems in healthcare settings, respectively.

**Analytic strategy**—Descriptive characteristics of the overall sample were reviewed, and subgroup comparisons were made between those who preferred patient–provider ethnic concordance and those who did not have such a preference, using  $\chi^2$  analyses. Spearman’s rank-order correlations were tested to assess the associations among study variables. To explore factors associated with the preference, a logistic regression model was tested with demographic (age, gender, ethnicity, marital status, education), health and access (chronic medical conditions, self-rated health, health insurance coverage), immigration-related (place of birth, time in the US, English proficiency, acculturation), and adverse experience (perceived discrimination, communication problems in healthcare settings) variables. All analyses were performed using IBM SPSS Statistics 24.

## Results

### Characteristics of the sample

Characteristics of the overall sample are summarized in Table 1. The mean age was 42.6 years ( $SD = 16.9$ ), with a range from 18–98. About 49% of the participants were aged 18–39, and about 20% were aged 60 or older. More than half (55%) were female. The sample included Chinese (24.2%), Asian Indians (22.2%), Koreans (18.2%), Vietnamese (19.6%), Filipinos (10.2%), and individuals from other Asian groups (5.6%). The ethnicities specified by participants in the ‘other’ group included Nepalese, Pakistani, Malaysian, Cambodian, and Japanese. About 34% of the sample were not married, and 18.6% had less than a high school education. More than a quarter (27.8%) had at least one chronic medical condition. Over 10% rated their health either ‘fair’ or ‘poor,’ and about 15% had no health insurance coverage. About 91% of the sample were foreign-born. About 42% had lived in the US for less than 10 years, and more than 62% said they spoke English less than ‘very well.’ About one-third (32.5%) fell into the low-acculturation group. The reported rates of perceived discrimination and communication problems in healthcare settings were 30.4% and 28.5%, respectively. Finally, over half (51.4%) of those in the sample preferred to be treated by a healthcare provider with their own ethnic background.

Table 1 also compares the characteristics of the individuals who preferred patient–provider ethnic concordance ( $n = 1302$ ) with the characteristics of those who did not ( $n = 1233$ ). A statistically significant difference was obtained for most of the variables assessed. Those who preferred concordance were more likely to be older, female, married, and less educated. With regard to ethnicity, Chinese, Vietnamese, and Koreans were highly represented in the

group preferring ethnic concordance. A considerably higher proportion of the group with a preference for ethnic concordance had chronic medical conditions and fair/poor ratings of health but lacked health insurance. Those preferring ethnic concordance were also more likely to be foreignborn, to have stayed in the US for less than 10 years, to have limited English proficiency, and to be less acculturated than their counterparts. More than 45% of the group preferring ethnic concordance had experienced communication problems in healthcare settings, whereas the corresponding rate in the group without such preference was 10.6%.

### Correlations among study variables

Spearman's rank-order correlations among study variables were tested (not shown in tabular format). The preference for patient-provider ethnic concordance was significantly associated with older age groups ( $r_s = .21, p < .001$ ), female gender ( $r_s = .04, p < .05$ ), married status ( $r_s = .10, p < .001$ ), lower education ( $r_s = .19, p < .001$ ), presence of chronic medical conditions ( $r_s = .10, p < .001$ ), fair/poor ratings of health ( $r_s = .14, p < .001$ ), and health insurance ( $r_s = .06, p < .01$ ). Positive associations of concordance preference were also observed in the relationships with being foreign-born ( $r_s = .16, p < .001$ ), having stayed in the US less than 10 years ( $r_s = .09, p < .001$ ), limited English proficiency ( $r_s = .34, p < .001$ ), lower level of acculturation ( $r_s = .28, p < .001$ ), and having an experience of communication problems in healthcare settings ( $r_s = .39, p < .001$ ). The four immigration-related variables were interrelated ( $r_s = .18$  to  $.49, p_s < .001$ ); however, there was no concern of collinearity.

### Logistic regression model of the preference for patient-provider ethnic concordance

Logistic regression was used to model the preference for patient-provider ethnic concordance, and the findings are summarized in Table 2. In comparison with the young adult group (18–39), those in the middle-aged (40–59) and older adult (60 or older) groups presented higher odds for preferring ethnic concordance. Increased odds for ethnic concordance preference were also observed among those who were married. In comparison with the Chinese group, Vietnamese had higher odds for preferring ethnic concordance. On the other hand, reduced odds were observed in Asian Indians and the 'other Asian' group.

None of the health and access variables reached statistical significance, but three of the four immigration-related variables did. The odds for preferring ethnic concordance were 1.61 times as great in those who had lived in the US for less than 10 years (95% CI = 1.22–2.10,  $p < .01$ ), 1.64 times as great among those with limited English proficiency (95% CI = 1.28–2.09,  $p < .001$ ), and 1.52 times as great among those who were less acculturated (95% CI = 1.19–1.93,  $p < .01$ ). Prior experience of communication problems in healthcare settings increased the odds for preferring ethnic concordance by 3.74 times (95% CI = 2.88–4.85,  $p < .001$ ).

### Discussion

In the present study, in response to the rapid growth of the Asian American population (López, Ruiz, and Patten 2017; PRC 2013) and the general scarcity of information on Asian Americans' healthcare needs (Islam et al. 2010; Jang et al. 2018), we explored the

preference for patient–provider ethnic concordance using data for multiple Asian American subgroups from the AAQoL survey. The AAQoL study used Asian language versions of the questionnaire, successfully administered at multiple survey sites. More than 10 ethnic groups participated, and almost one half of the participants completed non-English versions of the questionnaire. By closely addressing the characteristics of diverse ethnic and linguistic groups, the culturally and linguistically appropriate AAQoL survey offered an optimal opportunity to explore Asian Americans’ preferences for patient–provider ethnic concordance.

The results stand in contrast to those of previous studies, most of which did not include diverse Asian American subgroups in sufficient numbers to warrant statistical analysis. Although the literature on preference for racially and ethnically concordant providers is quite limited, the rate of actual race matching between US health service users and providers ranges between 36.6% and 46.7% (Jerant et al. 2011; LaVeist and Nuru-Jeter 2002). Racial/ethnic minorities consistently present a substantially lower concordance rate in comparison with non-Hispanic Whites, owing to the limited workforce diversity in the US healthcare system (Cooper and Powe 2004; Jerant et al. 2011; LaVeist and Nuru-Jeter 2002; Smedley, Stith, and Nelson 2003). In the present study, over half (51.4%) of those in the sample preferred to be treated by a doctor from their own Asian American subgroup. Of course, it should be noted that these results dealt with individuals’ personal preferences for ethnicity matching in the hypothetical situation that providers from diverse ethnic backgrounds would be available.

Those who preferred ethnic concordance with their provider were more likely to exhibit vulnerable characteristics than were those who did not prefer ethnic concordance. They were set apart by a lack of power and resources, as well as the presence of social disadvantages: advanced age, female gender, low education, poor health status, lack of health insurance, being foreign-born, limited English proficiency, low acculturation, and communication problems in healthcare settings. With regard to ethnicity, Chinese, Koreans, and Vietnamese, the three groups known to have a high rate of limited English proficiency (Jang 2016; Pandya, McHugh, and Batalova 2011), were highly represented in the group with a preference for ethnic concordance.

In a multivariate model, the odds for preferring ethnic concordance were 1.52–1.64 times higher among individuals in earlier stages of immigration, language acquisition, and acculturation. These findings are in line with previous literature showing that immigrants with language barriers and low acculturation face pronounced challenges in healthcare access (Derose, Escarce, and Lurie 2007; Ngo-Metzger et al. 2007; Zong and Batalova 2015) and have a strong desire for culturally and linguistically appropriate health services (Cooper and Powe 2004; Smedley, Stith, and Nelson 2003). The odds of preferring patient–provider ethnic concordance were significantly lower among Asian Indians and other Asians but higher among Vietnamese. Given that the finding is after controlling the effect of English proficiency and acculturation, other variables that might affect ethnic variations in the preference for ethnic matching should be further explored.

It was notable that individuals who had experienced communication problems in healthcare settings presented 3.74 times higher odds for preferring ethnic concordance than did their counterparts without such experience. Although effective communication between provider and patient is integral to healthcare, it has been a persistent challenge for the population in general and for racial/ethnic minorities in particular (Blanchard and Lurie 2004; Collins et al. 2002; Ngo-Metzger et al. 2007). The frustration of having communication difficulties during medical visits seems to make Asian Americans desire treatment by doctors who share their ethnicity, language, and culture.

Some limitations to the present study should be noted. In particular, given its cross-sectional design and non-representative, geographically restricted sample, the present study is limited for drawing causal inferences and generalizing the findings to the larger population of Asian Americans in other geographic and social settings. In addition, the AAQoL study did not contain information on the existing concordance between patients and providers or on the availability of local doctors with specific ethnicities. Given that one's desire and expectation for health service is shaped not only by personal satisfaction with current service but also by the health service environment and available resources, future studies should consider those factors.

Despite these limitations, this study clearly indicates that Asian Americans overall demonstrate high levels of preference for patient-provider concordance and that within the larger category of Asian Americans, three subgroups stand out as most desirous of a match: Chinese, Koreans, and Vietnamese. Given that patient-provider concordance was found to be strongly associated with individuals' personal and social disadvantages, more resources should be offered to disadvantaged and underserved linguistic minorities so that they can achieve effective communication with healthcare providers and obtain better quality of services. The findings also suggest implications for ways to improve workforce diversity in healthcare delivery and medical education.

## Acknowledgements

The support for data collection was provided by the City of Austin's Asian American Quality of Life initiative. Editorial support with manuscript development was provided by the Cain Center for Nursing Research and the Center for Transdisciplinary Collaborative Research in Self-Management Science at The University of Texas at Austin School of Nursing.

### Funding

This work was supported by a grant from the National Institute on Aging [R01AG047106] and City of Austin [Contract No. 26-8275-39].

## References

- Beiser CM, and Edwards RG. 1994 "Mental Health of Immigrants and Refugees." *New Directions for Mental Health Services* 61: 73-86.
- Blanchard J, and Lurie N. 2004 "R-E-S-P-E-C-T: Patient Reports of Disrespect in the Health Care Setting and Its Impact on Care." *The Journal of Family Practice* 53 (9): 721-730. [PubMed: 15353162]

- Brennan N, Barnes R, Calnan M, Corrigan O, Dieppe P, and Entwistle V. 2013 “Trust in the Health-Care Provider-Patient Relationship: A Systematic Mapping Review of the Evidence Base.” *International Journal for Quality in Health Care* 25 (6): 682–688. [PubMed: 24068242]
- City of Austin. 2013 Resolution No. 20131024–056 <http://www.austintexas.gov/edims/document.cfm?id=200017>.
- Collins KS, Hughes DL, Doty MM, Ives BL, Edwards JN, and Tenney K. 2002 *Diverse Communities, Common Concerns: Assessing Health Care Quality for Minority Americans* Washington, DC: The Commonwealth Fund.
- Cooper L, and Powe N. 2004 *Disparities in Patient Experiences, Health Care Processes, and Outcomes: The Role of Patient-Provider Racial, Ethnic, and Language Concordance* Washington, DC: The Commonwealth Fund.
- Deroose KP, Escarce JJ, and Lurie N. 2007 “Immigrants and Health Care: Sources of Vulnerability.” *Health Affairs* 26 (5): 1258–1268. [PubMed: 17848435]
- Islam NS, Khan S, Kwon S, Jang D, Marguerite R, and Trinh-Shevrin C. 2010 “Methodological Issues in the Collection, Analysis, and Reporting of Granular Data in Asian American Populations: Historical Challenges and Potential Solutions.” *Journal of Health Care for the Poor & Underserved* 4: 1354–1381.
- Jang Y 2016 *Asian American Quality of Life City of Austin*. [http://austintexas.gov/sites/default/files/files/Communications/4.2\\_FINAL\\_AA\\_in\\_Austin\\_report\\_from\\_UT.pdf](http://austintexas.gov/sites/default/files/files/Communications/4.2_FINAL_AA_in_Austin_report_from_UT.pdf).
- Jang Y, and Kim MT. 2018 “Limited English Proficiency and Health Service Use in Asian Americans.” *Journal of Immigrants and Minority Health* doi:10.1007/s10903-018-0763-0.
- Jang Y, Park NS, Yoon H, Huang Y, Rhee M, Chiriboga DA, and Kim MT. 2018 “The Risk Typology of Healthcare Access and its Association with Unmet Healthcare Needs in Asian Americans.” *Health & Social Care in the Community* 26 (1): 72–79. [PubMed: 28620950]
- Jerant A, Bertakis KD, Fenton JJ, Tancredi DJ, and Franks P. 2011 “Patient-Provider Sex and Race/Ethnicity Concordance: A National Study of Healthcare and Outcomes.” *Medical Care* 49 (11): 1012–1020. [PubMed: 22002644]
- LaVeist TA, and Nuru-Jeter A. 2002 “Is Doctor-Patient Race Concordance Associated with Greater Satisfaction with Care?” *Journal of Health and Social Behavior* 43 (3): 296–306. [PubMed: 12467254]
- López G, Ruiz NG, and Patten E. 2017 *Key Facts About Asian Americans, A Diverse and Growing Population* Pew Research Center <http://www.pewresearch.org/fact-tank/2017/09/08/key-facts-about-asian-americans/>.
- Meghani SH, Brooks JM, Gipson-Jones T, Waite R, Whitfield-Harris L, and Deatrick JA. 2009 “Patient-Provider Race-Concordance: Does it Matter in Improving Minority Patients’ Health Outcomes?” *Ethnicity & Health* 14 (1): 107–130. [PubMed: 19012091]
- Ngo-Metzger Q, Sorkin DH, Phillips RS, Greenfield S, Massagli MP, Clarridge B, and Kaplan SH. 2007 “Providing High-Quality Care for Limited English Proficient Patients: The Importance of Language Concordance and Interpreter Use.” *Journal of General Internal Medicine* 22: 324–330. [PubMed: 17957419]
- Pandya C, McHugh M, and Batalova J. 2011 *Limited English Proficient Individuals in the United States: Number, Share, Growth, and Linguistic Diversity* Washington, DC: Migration Policy Institute.
- Phillips KL, Chiriboga DA, and Jang Y. 2012 “Patients’ Perceptions of the Interpersonal Sensitivity of Their Healthcare Providers: The Potential Role of Patient-Provider Racial/Ethnic Concordance.” *The Patient* 5 (3): 175–183. [PubMed: 22804830]
- PRC (Pew Research Center). 2013 *The Rise of Asian Americans* Washington, DC: Pew Research Center.
- PSRAI (Princeton Survey Research Associates International). 2002 *Survey on Disparities in Quality of Health Care* The Commonwealth Fund <http://www.commonwealthfund.org/grants-and-fellowships/grants/2000/dec/survey-on-disparities-in-quality-of-health-care>.
- Schnittker J, and Liang K. 2006 “The Promise and Limits of Racial/Ethnic Concordance in Physician-Patient Interaction.” *Journal of Health Politics, Policy and Law* 31 (4): 811–838.

- Smedley BD, Stith AY, and Nelson AR, eds. 2003 Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care Washington, DC: National Academies Press.
- Spooner KK, Salemi JL, Salihu HM, and Zoorob RJ. 2016 “Disparities in Perceived Patient–Provider Communication Quality in the United States: Trends and Correlates.” *Patient Education and Counseling* 99 (5): 844–854. [PubMed: 26725930]
- Sullivan EE, and Ellner A. 2015 Strong Patient-Provider Relationships Drive Healthier Outcomes *Harvard Business Review* <https://hbr.org/2015/10/strong-patient-provider-relationships-drive-healthier-outcomes>.
- Traylor AH, Schmittiel JA, Uratsu CS, Mangione CM, and Subramanian U. 2010 “Adherence to Cardiovascular Disease Medications: Does Patient-Provider Race/Ethnicity and Language Concordance Matter?” *Journal of General Internal Medicine* 25 (11): 1172–1177. [PubMed: 20571929]
- Zong J, and Batalova J. 2015 *The Limited English Proficient Population in the United States* Washington, DC: Migration Policy Institute.

**Table 1.**

Descriptive Characteristics of the Sample.

	Overall sample (N = 2535)	No preference for patient– provider ethnic concordance (n = 1233)	Preference for patient– provider ethnic concordance (n = 1302)	$\chi^2$
Demographic variables				
Age (%)				
18–39	48.9	58.7	39.7	110.3***
40–59	31.2	28.4	33.8	
60+	19.9	13.0	26.5	
Gender (%)				
Male	45.1	47.2	43.1	4.39*
Female	54.9	52.8	56.9	
Ethnicity (%)				
Chinese	24.2	21.8	26.5	143.2***
Asian Indian	22.2	28.5	16.3	
Korean	18.2	13.9	22.2	
Vietnamese	19.6	14.8	24.3	
Filipino	10.2	13.5	7.0	
Other Asian	5.6	7.5	3.8	
Marital status (%)				
Not married	33.6	38.6	28.8	26.9***
Married	66.4	61.4	71.2	
Education (%)				
<12 years	18.6	10.9	25.9	93.1***
12 years	81.4	89.1	74.1	
Health and access variables				
Chronic medical condition (%)				
None	72.2	76.8	67.8	25.1***
1	27.8	23.2	32.2	
Self-rated health (%)				
Excellent/very good/good	89.6	94.2	85.3	53.2***
Fair/poor	10.4	5.8	14.7	
Health insurance coverage (%)				
Not insured	14.9	12.7	17.1	9.64**
Insured	85.1	87.3	82.9	
Immigration-related variables				
Place of birth				
US-born	9.4	14.3	4.7	68.8***

	Overall sample (N = 2535)	No preference for patient– provider ethnic concordance (n = 1233)	Preference for patient– provider ethnic concordance (n = 1302)	$\chi^2$
Foreign-born	90.6	85.7	95.3	
Time in the US (%)				
10 years	58.2	62.7	53.8	20.3***
<10 years	41.8	37.3	46.2	
English proficiency				
Proficient	37.9	54.7	22.0	287.6***
Limited	62.1	45.3	78.0	
Acculturation (%)				
High	67.5	78.4	57.1	130.6***
Low	32.5	21.6	42.9	
Adverse experience				
Perceived discrimination				
No	69.6	69.9	69.3	.12
Yes	30.4	30.1	30.7	
Communication problems in healthcare settings				
No	71.5	89.4	54.6	377.0***
Yes	28.5	10.6	45.4	
Preference for patient–provider ethnic concordance (%)				
No	48.6	–	–	–
Yes	51.4	–	–	–

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$ .

**Table 2.**

Logistic regression model of the preference for patient–provider ethnic concordance.

	Odds ratio [95% confidence interval]
Age	
18–39	1.0 [reference]
40–59	1.49 [1.13–1.95] **
60+	2.07 [1.45–2.94] ***
Gender	
Male	1.0 [reference]
Female	0.96 [0.78–1.17]
Ethnicity	
Chinese	1.0 [reference]
Asian Indian	0.63 [0.46–0.87] **
Korean	1.07 [0.79–1.46]
Vietnamese	0.75 [0.51–1.09]
Filipino	0.49 [0.30–0.79] **
Marital status	
Not married	1.0 [reference]
Married	1.29 [1.02–1.63] *
Education	
<12 years	1.0 [reference]
12 years	0.78 [0.57–1.05]
Chronic medical condition	
None	1.0 [reference]
1	1.04 [0.81–1.34]
Self-rated health	
Excellent/very good/good	1.0 [reference]
Fair/poor	1.39 [0.95–2.03]
Health insurance coverage	
Not insured	1.0 [reference]
Insured	1.11 [0.82–1.50]
Place of birth	
US-born	1.0 [reference]
Foreign-born	1.18 [0.78–1.76]
Time in the US	
10 years	1.0 [reference]
<10 years	1.61 [1.22–2.10] **
English proficiency	
Proficient	1.0 [reference]
Limited	1.64 [1.28–2.09] ***
Acculturation	

	Odds ratio [95% confidence interval]
High	1.0 [reference]
Low	1.52 [1.19–1.93] **
Perceived discrimination	
No	1.0 [reference]
Yes	1.14 [0.91–1.43]
Communication problems in healthcare settings	
No	1.0 [reference]
Yes	3.74 [2.88–4.85] ***
Summary statistic	–2 Log likelihood = 2375.3 $\chi^2(19) = 530.6$ ***

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$ .