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The healthcare experiences of Koreans living in North Carolina: a mixed methods study

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What is known about this topic

- Koreans constitute one of the fastest growing minority groups in American society.
- Few studies have examined health concerns of Korean immigrants in regions with relatively small immigrant populations.

What this paper adds

- Despite high educational levels, only half of the participants had health insurance, and most participants lacked English language skills to communicate with healthcare providers and to understand the U.S. healthcare system.
- There is a need for culturally appropriate healthcare services and community outreach programmes networking with Korean churches and Korean Associations.
- Healthcare workers should be trained to help Korean immigrants with their health literacy so that linguistically appropriate and accessible services can be provided to those with low health literacy.

Abstract

This study examined the healthcare experiences of Korean immigrants aged 40–64 living in the North Carolina Triangle area of the Southeastern United States. Using a mixed methods design, we collected quantitative data via a questionnaire from 125 participants and conducted a focus group with 10 interviewees from December 2010 to February 2011. The quantitative data were analysed using *t*-tests and chi-square tests, and a thematic analysis was used for the focus group study. Questionnaire findings showed that only 27.2% had sufficient English skills to communicate adequately. Participants with insurance were significantly more likely to be employed ($P < 0.001$), had higher incomes ($P = 0.011$) and higher education ($P < 0.001$), and had greater English-speaking ability ($P = 0.011$) than those without insurance. Participants who did not use healthcare services showed significantly less knowledge ($P < 0.001$) of and less satisfaction ($P = 0.034$) with the healthcare system than those using healthcare services. Sixty-two participants (49.6%) reported having no health insurance for one or more of the following reasons: high costs (75.8%), medical tourism (22.6%) and lack of information or knowledge (6.5%). The following themes emerged from the data collected during the focus group: (i) barriers to utilisation of healthcare services; (ii) facilitators of utilisation of healthcare services; and (iii) social support seeking for health management. Our mixed methods study findings indicate that healthcare disparities exist among Korean immigrants and that a number of factors, including health literacy, may contribute to their poor health outcomes. Continued collaboration among community members, healthcare professionals and academicians is needed to discuss the community's health concerns and to develop sustainable programmes that will ensure meaningful access to care for those with limited English proficiency and medically underserved populations.

Keywords: community health care, cultural sensitivity, ethnic minorities, ethnicity and health, health services, mixed methodologies

Introduction

According to the U.S. Census Bureau (2010), the Asian population has grown considerably over the last decade, and Koreans constitute one of the fastest growing Asian American subgroups. Notwithstanding, Koreans experience difficulty accessing healthcare services and are at risk of poor

health outcomes (Shin 2002, Sohn 2004, Jo *et al.* 2008, Eun *et al.* 2009, Lee *et al.* 2009, Kim & De Gagne 2012). In view of that, numerous studies have examined facilitators and barriers that affect utilisation of health services among Koreans living in the United States. Studies have found that the main barriers for Koreans using American health services were related to the absence of health insurance, high costs of health insurance premiums and health services, language barriers, lack of knowledge of the U.S. healthcare systems, mistrust about the U.S. healthcare system and experiences of disrespect or discrimination (Sohn 2004, Jang *et al.* 2005, Blendon *et al.* 2007, Jo *et al.* 2008, Kim & De Gagne 2012).

According to the U.S. Department of Health and Human Services report (2011), Korean immigrants were more than three times as likely as Caucasians to be uninsured. Korean immigrants who are not able to speak English well may not find it easy to get information about the U.S. healthcare system, which may result in a decrease in their potential to apply for health insurance and access to healthcare services. In addition, because many Korean immigrants are self-employed or employees in small businesses, they are not able to obtain health insurance through an employer. Furthermore, in many instances, Korean immigrants, especially the newcomers, lack eligibility for government programmes (Yoo & Kim 2008, U.S. Department of Health & Human Services 2011).

The differences between the Korean and American healthcare systems may negatively impact Korean immigrants' use of healthcare services in the United States. The Korean government provides universal access with nationwide health insurance programmes. Thus, all Korean citizens in their country receive routine and basic healthcare, which is financed through population taxes paid to the government (Jeong & Niki 2012). Contrarily, the United States has different payment, insurance and delivery mechanisms. Americans are responsible for choosing their health providers based on price and quality. The cost of healthcare services is financed both publicly (i.e. Medicare and Medicaid) and privately (i.e. employer-based or privately purchased health insurance) (Luft 2006, Blank 2012). Given that about 80% of Koreans living in the United States are foreign-born, first-generation immigrants, they may not be accustomed to utilisation of the U.S. health system (Ahn *et al.* 2007).

Several studies have reported that religion, employment, high income, longer stay in the United States, English language proficiency and knowledge about available services are key facilitators of utilisation of healthcare services among Koreans (Kim & Sarna 2004, Lee *et al.* 2009, 2010a,b, Song *et al.* 2010, Kim & De Gagne 2012). In particular, the Korean church facilitates the sharing of health information among church members and how to utilise healthcare resources (Kim & De Gagne 2012). Traditionally, Korean churches have played an important role in providing social and health services and health education and in minimising health disparities among Korean immigrants. Events or services, such as annual health fairs, monthly health clinics, smoking cessation programmes, parenting seminars, anger management seminars and counselling on employment, business, housing or children's education, have been provided to Korean immigrants through Korean churches (Min 1992, Kim & Sarna 2004, Han *et al.* 2007, Jo *et al.* 2010).

Over the past few decades, a number of studies have addressed health disparities among Korean populations living in states such as California, New York, Illinois and Washington, D.C. (Moon *et al.* 1998, Shin 2002, Song *et al.* 2010); however, few studies have explored the health concerns or problems of populations facing cultural and linguistic barriers to accessing healthcare services in regions with relatively small immigrant populations. In one of them, Kim and De Gagne (2012) conducted a preliminary study of healthcare utilisation among Koreans living in North Carolina. This study has revealed that even though many research participants were suffering from chronic illnesses, they did not visit a doctor routinely due to various barriers. These findings pointed to a fuller picture of the health status of Koreans living in this region. Hence, the purpose of the current study was to explore this population's experiences of healthcare utilisation, perceptions of the healthcare system and needs for health maintenance and promotion programmes in the community.

Theoretical framework

In our current study, Andersen *et al.*'s (1995) Behavioural Model of Health Services Use was used to understand Korean immigrants' experiences and perceptions of the healthcare services as well as the need for health programmes. This model has identified three factors that influence the use of healthcare services, which are predisposing, enabling and need factors. Predisposing factors include demographic characteristics such as gender, age, religion, education and marital status. Enabling factors encompass facilitators and barriers to the U.S. healthcare services such as family annual income, English language fluency, health insurance and length of stay in the United States. Need factors represent both perceived and actual need for healthcare services. Furthermore,

addressing unique cultural factors and understanding health beliefs are necessary (Andersen *et al.* 1995) when applying this model to a minority population like Korean immigrants. On the basis of this theoretical framework, we sought to understand situational and cultural factors specific and unique to Koreans living in North Carolina that have traditionally had small immigrant populations.

Methods

Collecting quantitative data through a survey and qualitative data through a focus group session, this study used a mixed methods design that encompasses a concurrent triangulation strategy (Tashakkori & Teddlie 2003). While a mixed methods procedure with triangulation can balance the weaknesses inherent in one method with the strengths of the other, quantitative and qualitative data can be generated and compared to determine their convergence, differences or combination thereof (Creswell & Plano Clark 2007).

With the rise of patient-centred perspectives of health services delivery, mixed methods research designs have gained popularity in health sciences. Recognising the needs of methodological evolution to address multiple causes of health issues, health science researchers are increasingly concerned with a rapid translation of research into practice. Mixed methods designs not only serve as more pragmatic approaches to study social determinants of health, they are also widely used for the study of individual behaviour or lifestyle factors in health and for the responsibility of researchers to build academic–community partnerships in health sciences (Forthofer 2003). Given the aims of this study, a mixed methods design was used to broaden the understanding of healthcare experiences and needs of the targeted population.

Participants

Koreans account for 11.1% of the Asians living in North Carolina (U.S. Census Bureau 2008). Although the exact number is unknown, it is estimated that about 4000 Koreans live in the North Carolina Triangle area (Hanmaum Church 2009); 16% are reported to be middle-aged adults (40–64 years old) (U.S. Census Bureau 2012). This study included those who were born in Korea, between 40 and 64 years of age and able to read and speak Korean or English. While older adults (aged 65 or older) were not included in our study because of their likelihood to have health insurance provided by the government, middle-aged adults were selected as they are likely to have more healthcare needs than younger adults. The study used the purposive sampling method. A sampling error formula (Fowler 1988) was used to determine how many participants would be needed. Using a rigorous standard of a 50–50 chance that the sample would be evenly divided on a question, an 8% sampling error and a 95% confidence interval, the required sample size for the study was estimated to be 122 (Raosoft, Seattle, WA, USA).

Measures

A questionnaire developed for the pilot study was modified for this study. The reliability of this tool was supported by a Cronbach's alpha of 0.64 (Kim & De Gagne 2012). Totalling 26 items, the instrument included closed-ended questions and Likert scale items. The participants completed the items on the measure to assess their sociodemographics, self-reported English proficiency, self-assessed health status and health effects from migration. The scale that assesses health insurance status and experiences in using healthcare services included yes or no questions, under which are offered four to five subchoices for each option. A 5-point Likert scale was used to examine knowledge of and satisfaction with the U.S. healthcare system. Higher scores indicated better knowledge and greater satisfaction. Respondents were also asked to check all that apply from a list of reasons for their satisfaction or dissatisfaction with the American healthcare system. The validity of the questionnaire was examined by four experts (three nursing professors and one doctoral candidate) and was revised following their recommendations. The Cronbach's alpha for five questions on knowledge, satisfaction and health status in this current study was 0.79.

The focus group interview protocol was developed to generate qualitative data on perceptions and experiences of health disparities. An enquiry, 'What is your experience as an immigrant using healthcare services in America?' guided the discussion. Prior to the session, each participant was asked to answer the same sociodemographic questions that were asked in the survey.

Data collection

Data were collected from December 2010 to February 2011. One hundred and twenty-five Korean participants were recruited from the North Carolina Triangle area using a multilevel approach that included a local Korean newspaper, Korean churches, Korean

grocery stores and Korean community health events. Participants who met the inclusion criteria were provided, orally and in writing, with a copy of the consent form and an explanation of the study. Administration of the questionnaire lasted 30–45 minutes and was done on a one-to-one basis at a private place which the participant and a research team member had previously agreed upon. The questionnaire was designed to be anonymous to maintain privacy. Upon completion of the questionnaire, participants received $15 as compensation for their time.

At the end of the survey, potential participants were asked if they would be interested in participating in the focus group. Those who showed interest were sent an invitation by mail and were asked to return a postcard indicating their availability for a focus group session at a designated date and location. A group of 10 confirmed and attended the focus group session. Using a focus group interview guide, two of the authors co-moderated the session. The session was tape-recorded with written consent in participants' native Korean language. Each participant was given a pseudonym so that nobody outside the session would be able to link any information to anyone. The session lasted 75 minutes. At the end of the group interview, each participant received $25 as compensation. This research project was approved for human subject participation by a university Institutional Review Board.

Data analysis

Quantitative data analysis

Sociodemographic characteristics of the participants were summarised with descriptive statistics. Independent *t*-tests and chi-square (χ^2) tests were used to examine differences in categorical health insurance status and use of healthcare services. Frequencies and percentages were used to describe participants' experiences and perceptions of the U.S. healthcare services. All analyses were performed using SPSS for Windows, version 18.0 (SPSS Inc., Chicago, IL, USA).

Qualitative data analysis

Qualitative data collected from the audiotaped focus group were transcribed verbatim in Korean. A thematic and interpretive analysis method (Morse & Field 1995) was used, which involved careful reading of transcripts. The Korean text was translated into English only with full comprehension of the meanings. For some Korean words that are almost impossible to translate without losing the subtlety of their meaning, the authors sought and used equivalent English core concepts. For the first round of data analysis, two bilingual/bicultural researchers independently explored the data and formed initial codes and categories, and then compared their findings. Disagreements were resolved through discussion until consensus was reached. The translated and transformed English text and the Korean transcripts were shared with two bilingual/bicultural Korean Americans for further validation. Their suggestions and recommendations were incorporated into the analysis.

Integration of the two data sets

The next step was to integrate the qualitative and quantitative data. At this point in time, the research team agreed to review each data set again, reconsidering the themes that had emerged in the qualitative analysis in combination with the findings from the statistical analyses in the survey study. Through this triangulation process, the research member went back to literatures of mixed methods methodology and transcultural research to refine and organise the presentation of both congruent and incongruent findings in the two data sources.

Results

Quantitative findings

Participants' characteristics

The sample of 125 Korean immigrants consisted of 47 males (37.6%) and 78 females (62.4%) with a mean age of 49.7 years (SD: 6.4), who had lived in the United States for a mean of 14.4 years (SD: 9.5). All participants had high-school education, but only 27.2% said that they had sufficient English skills to communicate adequately. Nearly half (44.0%) were employed, 23.2% were self-employed and 32.8% unemployed; they included homemakers, students and retired persons. The participants reported having good physical health (46.4%), good mental health (61.6%) and positive health effects from migration (41.6%). The mean score on knowledge of the U.S. healthcare system was 2.66 (SD: 1.03) and the mean score on satisfaction with the U.S. healthcare system was 2.22 (SD: 0.92). Table 1 shows participants' characteristics and comparisons by insurance status and healthcare service utilisation.

Health insurance status

To examine differences in sociodemographic and health-related variables in relation to insurance status, the participants were divided into two groups: the insured and the uninsured. Sixty-three of the partici-

Table 1 Health insurance status and use of healthcare services by participants' characteristics (n = 125)

Variable	Mean [SD] *n* (%)	Coverage of health insurance			Use of healthcare services		
		Yes (n = 63) Mean [SD] *n* (%)	No (n = 62) Mean [SD] *n* (%)	t or χ^2 (P)	Yes (n = 88) *n* (%) Mean [SD]	No (n = 37) *n* (%) Mean [SD]	t or χ^2 (P)
Age	49.7 [6.4]	48.7 [6.2]	50.7 [6.4]	−1.70 (0.092)	49.6 [5.9]	50.1 [7.4]	−0.45 (0.681)
Length of U.S. stay (years)	14.4 [9.5]	16.0 [10.1]	12.7 [8.6]	1.96 (0.052)	16.6 [9.3]	9.08 [7.9]	4.29 (<0.001)
Total family members in household	3.3 [1.2]	3.3 [1.3]	3.4 [1.1]	−0.721 (0.472)	3.3 [1.2]	3.4 [1.0]	−0.32 (0.753)
Gender							
Male	47 (37.6)	23 (48.9)	24 (51.1)	0.07 (0.855)	32 (68.1)	15 (31.9)	0.19 (0.660)
Female	78 (62.4)	40 (51.3)	38 (48.7)		56 (71.8)	22 (28.2)	
Marital status							
Married	111 (88.8)	55 (49.5)	56 (50.5)	0.29 (0.401)	76 (68.5)	35 (31.5)	1.77 (0.228)
Single	14 (11.2)	8 (57.1)	6 (42.9)		12 (85.7)	2 (14.3)	
Religion							
Christianity	118 (94.4)	59 (50.0)	59 (50.0)	0.192 (0.908)	84 (71.2)	34 (28.8)	0.694 (0.707)
Others	2 (1.6)	1 (50.0)	1 (50.0)		1 (50.0)	1 (50.0)	
None	5 (4.0)	3 (60.0)	2 (40.0)		3 (60.0)	2 (40.0)	
Employment							
Employed	55 (44.0)	43 (78.2)	12 (21.8)	30.71 (<0.001)	47 (85.5)	8 (14.5)	10.96 (0.004)
Self-employed	29 (23.2)	7 (24.1)	22 (75.9)		16 (55.2)	13 (44.8)	
Unemployed	21 (32.8)	13 (31.7)	28 (68.3)		25 (61.0)	16 (39.0)	
Family annual income (dollar)							
Below 30,000	20 (16.4)	6 (30.0)	14 (70.0)	9.01 (0.011)	9 (45.0)	11 (55.0)	10.28 (0.006)
30,000–39,999	12 (9.8)	3 (25.0)	9 (75.0)		7 (58.3)	5 (41.7)	
Over 40,000	90 (73.8)	53 (58.9)	37 (41.1)		71 (78.9)	19 (21.1)	
Education level							
High school	20 (16.3)	7 (35.0)	13 (65.0)	15.60 (<0.001)	13 (65.0)	7 (35.0)	14.94 (0.001)
College	59 (48.0)	23 (39.0)	36 (61.0)		33 (55.9)	26 (44.1)	
Graduate	44 (35.7)	33 (75.0)	11 (25.0)		40 (90.0)	4 (9.1)	
Self-reported English proficiency							
Insufficient	37 (29.6)	13 (35.1)	24 (64.9)	9.10 (0.011)	19 (51.4)	18 (48.6)	13.49 (0.001)
Fair	54 (43.2)	26 (48.1)	28 (51.9)		38 (70.4)	16 (29.6)	
Sufficient	34 (27.2)	24 (70.6)	10 (29.4)		31 (91.2)	2 (8.8)	
Subjective physical health status							
Poor	17 (13.6)	4 (23.5)	13 (76.5)	7.32 (0.026)	12 (70.6)	5 (29.4)	0.25 (0.882)
Neutral	50 (40.0)	24 (48.0)	26 (52.0)		34 (68.0)	16 (32.0)	
Good	58 (46.4)	35 (60.3)	23 (39.7)		42 (72.4)	16 (27.6)	
Subjective mental health status							
Poor	12 (9.6)	6 (50.0)	6 (50.0)	0.01 (0.998)	10 (83.3)	2 (16.7)	3.965 (0.138)
Neutral	36 (28.8)	18 (50.0)	18 (50.0)		21 (58.3)	15 (41.7)	
Good	77 (61.6)	39 (50.6)	38 (49.4)		57 (74.0)	20 (26.0)	
Health effects from migration							
Positive	52 (41.6)	20 (38.5)	32 (61.5)	5.08 (0.030)	37 (71.2)	15 (28.8)	0.02 (0.876)
Negative	73 (58.4)	43 (58.9)	30 (41.1)		51 (69.9)	22 (30.1)	
Knowledge of the U.S. healthcare system	2.66 [1.03]	2.98 [0.96]	2.32 [0.99]	3.80 (<0.001)	2.92 [0.96]	2.03 [0.90]	4.84 (<0.001)
Satisfaction with the U.S. healthcare system	2.22 [0.92]	2.48 [0.95]	1.97 [0.81]	3.23 (0.002)	2.33 [0.94]	1.97 [0.80]	2.16 (0.034)

pants (50.4%) reported having health insurance. Korean immigrants with insurance were significantly more likely to be employed (P < 0.001), to have higher incomes (P = 0.011), a higher level of education (P < 0.001) and be more fluent at speaking English (P = 0.011) than those without insurance.

Participants with insurance also reported having significantly better physical health ($P = 0.026$) and more positive health effects from migration ($P = 0.030$) than those without insurance. Those without insurance had significantly less knowledge of ($P < 0.001$) and less satisfaction with the healthcare system ($P = 0.002$) than those who had insurance. There were no significant differences between the insured and the uninsured in age, gender, marital status, religion, length of U.S. stay, number of family members and subjective mental health status.

Healthcare service utilisation

The participants were divided into two groups: healthcare services users and non-users to examine associations between utilisation and sociodemographic and health-related variables. The majority (70.4%) of the participants reported that they used healthcare services. Participants who used healthcare services were significantly more likely to have lived in the United States for a longer period of time ($P < 0.001$), more likely to be employed ($P = 0.004$), with higher incomes ($P = 0.006$) and education ($P = 0.001$) and had greater English-speaking ability ($P = 0.001$) than those who did not use healthcare services. Participants who did not use healthcare services showed less knowledge of ($P < 0.001$) and less satisfaction with the healthcare system ($P = 0.034$) than those using healthcare services. However, there were no significant differences between users and non-users in age, gender, marital status, religion, number of family members, subjective physical and mental health status and health effects of migration.

Experiences and perceptions

The participants' experiences and perceptions of the U.S. healthcare services are summarised in Table 2. Among the 63 participants with insurance, 74.6% had employer insurance, 19% purchased their own plan and 6.4% obtained insurance through Medicaid or another public programme. Sixty-two participants (49.6%) reported having no health insurance for one or more of the following reasons: high costs (75.8%), medical tourism, i.e. travel to Korea for health services (22.6%), lack of information or knowledge (6.5%) and insurance considered unnecessary because of good health status (3.2%). The reasons why participants, with and without health insurance, did not use healthcare services included high costs (40.5%), the perception that this was unnecessary because of good health status (24.3%), lack of information or knowledge (21.6%), language barriers (18.9%) and medical tourism (8.1%). Among those using the U.S. healthcare system, reasons for dissatisfaction included high costs (75.2%), long waiting period to see a doctor (44.0%), difficulty of access (38.4%) and language barrier (34.7%), while the reasons for satisfaction were advanced medical technology (14.4%) and doctors who spent sufficient time with their patients (12.0%). No participants reported affordable costs as being one of the reasons for satisfaction. Sixty-four participants (51.2%) gathered their health information from Korean mass media, 45.6% from relatives, friends and neighbours, 36.0% from English mass media and 17.6% from religious communities. When participants were asked about the kinds of programmes or services that should be provided, they mentioned health screening services (52.0%), regular and multi-faceted health education (51.2%), special clinics targeted towards Korean immigrants (48.8%), healthcare providers speaking Korean (44.8%) and interpreter services (41.6%).

Qualitative findings

Focus group participants included five males and five females who ranged in age from 42 to 64 years. The following themes evolved from the analysis of the focus group: (i) barriers to utilisation of healthcare services; (ii) facilitators of utilisation of healthcare services; and (iii) social support seeking for health management. Table 3 shows how comments were coded, categorised and grouped into these themes. Their experiences with healthcare services are briefly described below.

Barriers to utilisation of healthcare services

Within this theme, participants mentioned high healthcare costs, insufficient language skills, problems in accessing healthcare services, lack of information or knowledge, lack of trust in healthcare services and cultural and system differences. Due to such barriers, some of the group members said that travelling to Korea seemed to be a better option for seeking medical treatments because of high insurance premiums. The following comment reflects the situation of one participant:

> Medical costs are unbelievably too high in the U.S. The consultation fees were way higher than the fees for the treatment itself; so, I thought it would be better to get the treatment in Korea.

Language barriers added to the obstacles to using healthcare services. Participants stated that they preferred to be seen by Korean healthcare providers for easier communication, but they were not easy to find

Table 2 Experiences and perceptions of the U.S. healthcare services (n = 125)

Categories	Responses	n (%)
Sources of health insurance (n = 63)	Employers	47 (74.6)
	Self-purchased	12 (19.0)
	Medicaid or other public programmes	4 (6.4)
Reasons for not having health insurance* (n = 62)	Too expensive	47 (75.8)
	Can go to Korea to get services	14 (22.6)
	Do not know how to buy or use	4 (6.5)
	Unnecessary because I am healthy	2 (3.2)
Reasons for not using healthcare services* (n = 37)	Too expensive	15 (40.5)
	Unnecessary because I am healthy	9 (24.3)
	Do not know how to use	8 (21.6)
	Language barrier	7 (18.9)
	Can go to Korea to get services	3 (8.1)
Reasons for satisfaction with the U.S. healthcare system* (n = 125)	Advanced medical technology	18 (14.4)
	Doctors spend sufficient time with patients	15 (12.0)
	Affordable costs	0 (0.0)
Reasons for dissatisfaction with the U.S. healthcare system* (n = 125)	High costs	94 (75.2)
	Long waiting period to see a doctor	55 (44.0)
	Complicated and difficult to access and use	48 (38.4)
	Language barrier	43 (34.7)
Information sources on healthcare management* (n = 125)	Korean mass media (TV, newspapers, books, the Internet)	64 (51.2)
	Relatives, friends or neighbours	57 (45.6)
	English mass media (TV, newspapers, books, the Internet)	45 (36.0)
	Religious community (programmes through church or co-parishioners)	22 (17.6)
	Ethnic community (health fairs, etc.)	16 (12.8)
Type of health-related supporting services* (n = 125)	Health screening	65 (52.0)
	Regular and multi-faceted health education	64 (51.2)
	Clinics targeted at our ethnic group	61 (48.8)
	Healthcare providers speaking Korean	56 (44.8)
	Interpreter services	52 (41.6)

*More than one answer.

in the United States. The difficulty of communicating with American healthcare providers was exemplified in the following statement:

> The only way for me to communicate in hospitals is to take my children with me … I am afraid that I will not be answering correctly if native-speaking doctors ask me questions.

Another barrier to using services was problems with access, which included complicated health insurance rules and regulations, complex prescription plans, difficulty finding hospitals run by Korean Americans and no consultation services during weekends or after-work hours. One participant said:

> We expected that health services provided in America would be superb. However, drug prescriptions are generally more expensive and it is complicated to buy them to begin with.

There were also remarks about a lack of knowledge and difficulty getting information about the U.S. healthcare services and system. For example:

> We just did not know, but later we learned that there are good ways to pay off the bills.

> My husband and I, and even my mother-in-law, would like to apply for Medicare or Medicaid, but there are not many sources to get information from.

A lack of trust towards both the American system and Korean American doctors was perceived as another obstacle to utilising healthcare services. Participants also hoped for a better system for the middle class. For example:

> I think that [Korean doctors] are not educated enough to understand the Medicare and Medicaid system. So they do not provide the service that beneficiaries need.

> I wish the U.S. had a better healthcare system … If you are a low-income person, you have more privileged benefits, but those of us who have medium income, work honestly and pay all their taxes always have to be the ones who have to save every penny.

Finally, some participants noted cultural and system differences in healthcare services; in particular,

Table 3 Codes, categories and emerging themes in the thematic and interpretive analysis

Codes	Categories	Themes
Expensive costs of medical treatments High prices of consultations with Korean American doctors High health insurance premiums Personal financial hardship Medical or health tourism (travelling to Korea to obtain healthcare)	High healthcare costs	Barriers to utilisation of healthcare services
Communication difficulties with American healthcare providers Dependence on children who can speak English Dependence on an interpreter or interpretation services Preference for Korean healthcare providers for easier communication	Insufficient language skills	
Complicated health insurance rules or regulations Complex prescription plans and primary care system Difficulty finding hospitals run by Korean Americans No consultation services during weekends or after-work hours	Problems in accessing healthcare services	
Lack of knowledge about paying medical bills and getting discounts Lack of knowledge about getting Medicare Part D prescription drug benefits Lack of knowledge about applying for a health insurance programme for low-income individuals (i.e. Medicaid)	Lack of information or knowledge in healthcare services	
Perceived unfairness or distrust of the American health services Perceived mistrust of Korean American doctors Perceived doubt of Korean American doctors' knowledge of the U.S. healthcare system	Lack of trust in healthcare services	
Fantasy about the U.S. welfare and healthcare Differences in primary and preventive healthcare in the United States Disappointment with the U.S. healthcare system	Cultural and system differences	
Getting information from churches Getting information from workplaces Getting information from neighbours or community members	Networks of Korean churches and community members	Facilitators of utilisation of healthcare services
Healthcare services sponsored by Korean churches Collaborative efforts among Korean American professors and Korean American nurses Community-based activities sponsored by the local Korean Association	Korean community outreach programmes	
Korean newspapers or Korean television American TV programmes Internet sites in English Internet sites in Korean	Mass media and the Internet	
Positive perception of the quality of American healthcare services Acceptance of American food and lifestyle Feeling of the United States becoming hometown	Assimilation to American culture	
Decrease in physical health status Increase in stress levels	Changes in health status	Social support seeking for health management
Lack of time for self-care management Self-care and self-monitoring being top priorities in life	Need for self-management	
Strengthening of the Korean community leadership Better organisation or structure of Korean services Availability of fitness facilities for Korean Americans Accessibility to Korean nursing homes or hospitals	Need for social support for health management	

they mentioned cultural shock at American healthcare and welfare.

I thought that the U.S. government guaranteed a public welfare and social security system. But it is totally the opposite of what I expected.

Facilitators of utilisation of healthcare services

Participants were asked where they obtained most of their healthcare information regarding diseases, prevention and treatment. Networks of Korean churches and community members, Korean community outreach programmes and mass media and the Internet were also thought to facilitate use of healthcare services. Participants responded:

Recently, a Korean church sponsored a health programme. At this event, I got information and was able to give out information as well.

I mainly collect it from Korean newspapers and Korean television programmes because I do not watch American TV here.

I usually get information from the Internet. I search in both English and Korean. Korean sites have more resources, and they are easier for me to understand.

Networking included getting information from churches, workplaces or community members. Korean community outreach activities comprised healthcare services sponsored by Korean churches and collaborative efforts among Korean American professors and Korean American nurses, as well as community-based services sponsored by the local Korean Association. Although Korean mass media were preferred as a communication medium for obtaining health-related information, both American and Korean media or Internet sites were identified as information sources as well. Contrary to the negative perceptions of the U.S. healthcare system, assimilation to the American culture seemed to play a facilitative role in the use of healthcare services in the United States. Participants reported that they were trying to accept American food and lifestyle, which helped them to become more accustomed to their new surroundings.

Social support seeking for health management

Several participants in the focus group noted the importance of managing their healthcare and pointed to changes in health status, such as decreased physical health and increased stress levels. Two male participants shared their views on changes in health status:

Most Korean immigrants operate dry cleaning stores or run office-cleaning services for their living, which demands hard physical work … I get more trouble when I try to use parts of my body I never used before.

In America, both of us have to work to make a living. It is hard to be a housewife in this culture. Korean women get sick at one point because of the demanding physical work here.

While participants highlighted the importance of self-care and active self-monitoring of health, they also called for enhancing Korean community leadership, providing better organised and structured health services in the community and building facilities, including nursing homes and hospitals for Korean Americans. Several participants noted how social support should be provided in their particular community:

Since we are Koreans, I think that Korean professionals who work in the medical fields in the U.S. should get together and provide some services for us.

My concern is that there is no Korean nursing home or hospital just for Korean seniors … I worry about my senior life so I have to prepare since I will be a senior in 10–20 years. I am not ready like the Americans who have assisted living apartments and nursing homes. I would like Korean Associations to think about building facilities for Korean seniors, people with disability and low-income workers.

Integration of quantitative and qualitative data

The results from the independent analyses of the quantitative and qualitative data provided both overlapping and differing information on the healthcare experience of Koreans living in the Southeastern United States. General descriptions of the survey data, such as sociodemographic characteristics, self-reported English proficiency, self-assessed health status, health effects from migration and experiences in using healthcare services, were enriched by contextually rich accounts of the themes from the focus group study. The results from the focus group, perceived unfairness or distrust in the American healthcare services along with perceived mistrust about Korean American doctors also provided new insights into participants' experiences. Indeed, the survey results did not reveal either trust or lack of trust in healthcare services. Such characteristics seemed unique and context-specific to participants facing barriers to utilisation. Themes from the focus group, cultural differences and understanding, as well as social support seeking for health management, were not explicitly presented in the survey results; however, these two themes offered an enriched understanding of the participants' challenges and recommendations to mobilise and maximise the resources available for community partnership and support opportunities.

Interestingly, needs assessment in the survey showed high demands for the provision of regular and multifaceted health education programmes (51.2%), whereas the focus group participants called more for on-site interpreter services rather than education programmes that would take longer to improve their healthcare utilisation. Using the integrated quantitative and qualitative data results, we sought to substantiate our findings into further discussions and implications for future research.

Discussion

The results of this mixed methods study provide information on the healthcare utilisation, perceptions of the U.S. healthcare system and needs for health education programmes of Korean Americans. The 125 participants in the survey and the 10 interviewees in the focus group faced numerous barriers to using U.S. healthcare services, although they also noted some facilitators that helped to overcome such obstacles. We were unable to compare the main characteristics of our participants with those of the global Korean population living in the study area due to a lack of relevant U.S. Census data. However, we have found that our participants' characteristics were similar to those in another region of the United States (Song *et al.* 2010). In their study, Song *et al.* (2010) reported that the mean age of 445 Korean immigrants aged between 40 and 64 was approximately 52 years (SD: 5.7) with an average of 16 years (SD: 8.9) of residence in the United States. As noted, our study has shown a mean age of 50 with an average of 14 years of U.S. stay. Both studies have reported that most of the participants were married, well-educated and employed.

A surprising finding was that despite high educational levels, only half of the participants had health insurance and most participants described their English language skills as not good enough to communicate with other people and their knowledge as not adequate to understand the U.S. healthcare system. A number of factors, including health literacy, may contribute to poor health outcomes of Korean immigrants. Consistent with previous studies (Lee *et al.* 2010a,b, Song *et al.* 2010), our findings suggest that a lack of health insurance and English proficiency are main barriers to utilisation of healthcare services. Past research has shown that between 46% and 55% of Koreans have health insurance coverage, the lowest rate among all racial and ethnic groups in the United States (Yoo & Kim 2008). Our study also found a considerably higher rate of uninsured individuals (49.6%) than the national rate (18%) (Kaiser Family Foundation 2012a), which is consistent with the past research. This study found that the U.S. health system was unfamiliar to many Korean immigrants, resulting in confusion and dissatisfaction on their part.

Special attention should be paid to Korean immigrants without health insurance and/or marginal English to bridge the health literacy gap. The Institute of Medicine (2004) defines *health literacy* as:

> The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions. (p. 4)

Lee and Choi (2012) investigated predictors of and pathways to health literacy among Korean American immigrants residing in New York City, and they found that education and English proficiency were the most significant predictors of health literacy. Healthcare providers should consider adding ancillary services to their practices, such as trained interpreters and better multilingual communication (e.g. written signage, pictograms, materials, staff, etc.). A team approach involving community leaders and Korean American health professionals is most likely to change the dissatisfaction with healthcare services that was pervasive among these study participants.

As reflected in our focus group interviews, language barriers and knowledge deficits can be overcome through community support, including mobilising Korean churches or agencies to create social networks for Korean community members. Nearly 96% of our respondents had a religion. They used healthcare services and participated in health education programmes sponsored by Korean churches. Focus group members said that regular church attendance helped them to maintain cultural traditions and attain spiritual support when they experienced physical and emotional difficulties in their life. Our findings are consistent with the results of Lee *et al.* (2010a,b); in their study, 91.3% of the middle-aged Korean American women reported going to church not only for religious purposes but also for social networking. Our study also indicates that Korean churches have become a place for community members to obtain health information and education.

Over the past few decades, healthcare researchers and policy makers in the United States have made great efforts to eliminate health disparities across populations and communities. With the Patient Protection and Affordable Care Act, the U.S. government expects that by 2019, a total of 32 million uninsured Americans will have affordable health insurance; however, some immigrants will still be ineligible for Medicaid (Kaiser Family Foundation 2012b), which means that many of these uninsured immigrants will

have to pay for costly treatments in emergency rooms, clinics and other settings. The findings from our study suggest that health education programmes should be designed to enhance Korean immigrants' knowledge of how to obtain health insurance and how to utilise healthcare resources. Our findings also show that churches facilitate sharing health information among church members. Researchers and Korean healthcare professionals should consider partnering with Korean churches and training community liaison members for health programme and service delivery activities.

Limitations

Although we used a mixed methods design to combine and compare survey and interview data, this study relied on a small sample, which limits the scope of the conclusions that can be drawn from the quantitative analysis. Also, a sample made up of Koreans living in the North Carolina Triangle area limits generalisation of the results to Korean immigrants living in other areas. In future, studies with larger samples and a broader range of the Korean population can address these limitations.

Conclusions

Despite these limitations, the study clearly points to the need for linguistically and culturally appropriate healthcare services and community outreach programmes networking with Korean churches and Korean Associations. Continued collaboration among community members and healthcare professionals should include open forums to discuss the community's health concerns. Such collaboration should aim at cultivating sustainable programmes that will ensure meaningful access for individuals with limited English language proficiency and medically underserved populations. Korean immigrants with limited skills in English may benefit from the availability of Korean media or newspapers as well as Korean written health information materials in Korean churches, social gatherings and Korean grocery stores. Community healthcare workers are encouraged to get actively involved in reducing health disparities in vulnerable populations by helping them to better understand the U.S. healthcare system. They should be trained to help Korean immigrants with their health literacy so that linguistically appropriate and accessible services can be provided to those with low health literacy. Policy makers, practitioners or other groups involved in health disparities should consider working with cultural navigators fluent in both language and culture. As advocates, the cultural navigators can help people new to the culture, and those with limited English skills, find vital resources and available services. State legislators at all levels should also be charged with narrowing ethnic and racial health disparities and collaborating with community healthcare workers and researchers who can bring practical and evidence-based strategies for targeted populations.

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Conflict of interest

None of the authors has any actual or potential conflict of interest including any financial, personal or other relationships with people or organisations that could inappropriately influence or be perceived to influence this work.

Author contribution

J.D.G. and S.K. designed this study and drafted the first version of the manuscript. J.D.G., J.O. and A.S. performed the analysis and interpretation of the data, and revised the manuscript collaboratively.

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