Health, Healthcare Utilization, and Satisfaction with Service: Barriers and Facilitators for Older Korean Americans

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The present study assessed predictive models of subjective perception of health, healthcare utilization (hospital visits), and satisfaction with healthcare service using a sample of 230 older Korean Americans. Predisposing characteristics (age, sex, and education), health needs (chronic conditions, functional disability, and number of sick days), and a variety of enabling factors (health insurance, English speaking ability, transportation, living arrangement, trust in Western medicine, and reported experience of disrespect in medical settings) were considered. After controlling for predisposing and need factors, health insurance coverage was found to be a significant enabling factor for hospital visits. Subjective perception of health was found to be significant not only for healthcare utilization, but also for satisfaction with service. A greater likelihood of satisfaction was also observed in individuals with health insurance, better English-speaking ability, and greater trust in Western medical care. The reported experience of disrespect or discrimination in medical settings significantly reduced the odds of satisfaction with service. **J Am Geriatr Soc 53:1613–1617, 2005.**

Key words: healthcare utilization, older Korean Americans

A substantial body of literature has reported unfavorable health outcomes of older adults across all minority groups in the United States.[1,2] Over a wide range of health indicators, one source of health disparities may be disproportionate use of health services by racial/ethnic minorities.[3–5] Given the urgent societal need to eliminate racial/ethnic health disparities and to promote the quality of health services, the present study explored determinants of three health-related outcome variables (subjective perception of health, healthcare utilization, and satisfaction with healthcare service) using a sample of older Korean Americans.

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Koreans constitute one of the largest and fastest-growing segments of the Asian/Pacific Islander group in the United States, representing an increase of more than 1,500% since 1970.[6] Despite their continuous demographic growth, little is known about Korean Americans. Indeed, Korean Americans have been identified as one of the most understudied populations relative to their size.[7] The need for more research on this group is particularly urgent because of their greater risk of physical and mental health problems, as has been reported in the limited available literature.[8–10]

The behavioral health service model developed previously[11,12] has been widely used as a guideline for predicting healthcare utilization. The model categorizes influential factors for service utilization into three components: predisposing, need, and enabling factors. Predisposing factors include demographic characteristics such as age, sex, and education that influence the status of health and use of healthcare services. Physical health conditions, such as chronic diseases, functional disability, and the number of sick days, represent need for healthcare services. Enabling variables encompass a variety of resources that provide means to healthcare services, including socioeconomic status, health insurance coverage, living arrangement, and existence of spouse or social network. In applying the model to racial/ethnic minorities, the recommendation has been made to address the unique situational and cultural factors specific to each group.[7] Examples of the type of variable relevant to immigrant populations include length of time since immigration, acculturation, language skills, knowledge about the healthcare system, and use of traditional medicine.[10,13,14] Recent studies on minority populations identified distrust in Western medical care and perceived disrespect in medical settings as important factors affecting healthcare utilization.[1,15,16] According to a recent national survey, members of racial/ethnic groups report a high incidence of being treated unequally or with disrespect during patient–medical service provider interactions.[16] Trust in medical care and belief in its effectiveness may increase the use of services,[15] whereas the experience of disrespect or unfair treatment in medical settings may pose barriers to the use of health services.[1,16] The aforementioned sets of variables may predict not only healthcare utilization, but also subjective perception of health and satisfaction with health services.

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The goal of the present study was to explore the contribution of predisposing, health needs, and enabling factors to the health-related outcome variables, subjective perception of health, healthcare utilization, and satisfaction with healthcare service of older Korean Americans. Given that subjective perception of health may determine the way people respond to their health needs and seek healthcare services,[10] subjective perception of health was also considered as a potential determinant of other outcome variables, such as healthcare utilization and satisfaction with service.

METHODS

Participants

With approval from the institutional review board at the University of South Florida, a survey of older Korean-American immigrants was conducted during the fall of 2003 in two cities in Florida. Participants were recruited through a variety of sources, including local Korean churches, senior centers, and elder associations, because immigrant populations are often hard to identify using any single approach. An announcement about the project was made through fliers widely distributed in local Korean communities and businesses. To overcome the limitations of convenience sampling, efforts were made to reach socially isolated individuals by soliciting active referrals. Participants were required to be aged 60 and older and to have sufficient cognitive ability to understand and complete the interview. Trained interviewers conducted the interviews in Korean. Structured questionnaires used in data collection were developed using a back-translation method and pretested with 20 potential subjects. Consent forms were signed after the purpose of the study and use of the data were explained to the subjects. Data collection was conducted in locations convenient to the participants, such as their homes, churches, and senior centers. Respondents were paid $10 for their participation.

Measures

Outcome Variables

Subjective perception of health, healthcare utilization (hospital visits), and satisfaction with health service served as dependent variables. Subjective perception of health was measured using three items from the Older Americans Resources and Services questionnaire.[17] The items include "How would you rate your overall health at the present time?" "How is your present health compared with five years ago?" and "How much do your health troubles stand in the way of your doing the things you want to do?" The total scores ranged from 0 (negative health perception) to 7 (positive health perception). Internal consistency for the scale was 0.77.

As an index of healthcare utilization, respondents reported the total number of hospital visits that they had for their physical health problems during the previous 6 months. Respondents were also asked whether they were satisfied with the healthcare service they had received, using a yes/no format.

Predisposing Factors

Age, sex, and educational level were selected as predisposing variables.

Health Needs

Instruments for health needs were drawn from the Older Americans Resources and Services questionnaire.[17] Chronic conditions were assessed using a checklist of nine conditions commonly found in older populations (e.g., heart problems, diabetes mellitus, arthritis, stroke, and cancer), using a yes/no format. The total number of reported conditions was used in the analysis.

Functional disability was assessed using a 20-item composite measure of activities of daily living (ADLs),[17] instrumental activities of daily living (IADLs),[17] Physical Performance Scale,[18] and Functional Health Scale.[19] Participants were asked whether they could perform each activity. The responses were coded as without help, with some help, or unable to do. Responses for individual items were summed for total scores, which ranged from 0 (no disability) to 40 (severe disability). Internal consistency for the measure was 0.89 in the present sample.

To measure the number of sick days, individuals were asked how many days they were so sick that they were unable to carry on usual activities such as going to work or working around the house during the previous 6 months. The response format included five categories: none, 1 week or less, more than 1 week but less than 1 month, 1 to 3 months, and 4 to 6 months.

Enabling Factors

A series of questions was administered that asked respondents whether they had health insurance, how well they spoke English (with responses ranging from not at all to very well), whether they drove a car, and whether they lived alone. The extent to which they trusted Western medical care was recorded with a response format of not at all, a little bit, and very much. Individuals were also asked whether they had experienced disrespect or discrimination in medical settings because of their ethnic background.

Analytical Strategy

Multiple linear regression analysis was conducted to assess the predictive models of subjective perception of health and hospital visits, and logistic regression analysis was used to estimate the odds for the binary variable of satisfaction with healthcare service. For both types of regression, sets of predictors were entered in the following hierarchical order: predisposing factors, health needs, and enabling factors. Subjective perception of health was entered as a final step for the models of hospital visits and satisfaction with healthcare service. Bivariate correlations between variables and variance inflation factor were assessed to detect multicollinearity. Analyses were performed using SPSS, version 13 (SPSS, Inc., Chicago, IL).

RESULTS

Descriptive Information of Sample and Study Variables

The sample consisted of 230 older adults ranging in age from 60 to 92, with an average age ± standard deviation of

69.8 ± 7.1. Most had spent a number of years in the United States (range 1–49, average 22.9 ± 10.9). Fifty-nine percent were female, and 73% were married. About 58% of the sample had received more than high school education.

Respondents averaged 1.36 ± 1.11 chronic conditions and 1.69 ± 3.52 functional disabilities. About 30% of the sample reported at least 1 sick day within the previous 6 months.

With regard to enabling factors, about 73% of the sample had health insurance coverage (23% for Medicare only, 7% for Medicaid only, 13% for private insurance, 18% for both Medicare and Medicaid, 12% for other types of combinations). Fewer than 4% spoke English very well, more than half were independent drivers, and 13% were living alone. A majority of the sample (84%) reported a high degree of trust in Western medical care, whereas approximately 5% reported that they did not trust Western medical care at all, and 11% trusted it "a little bit." A quarter of the sample reported that they had experienced disrespect or discrimination in medical settings because of their ethnicity.

Table 1. Descriptive Information of Sample and Study Variables (N = 230)

Variable	Value
Predisposing factors	
Age, mean ± SD (range 60–92)	69.8 ± 7.05
Female, %	59.4
Education ≥high school, %	58.6
Health needs	
Chronic conditions, mean ± SD (range 0–5)	1.36 ± 1.11
Functional disability, mean ± SD (range 0–21)	1.69 ± 3.52
Amount of sick time, %	
None	70.9
≤1 week	20.3
>1 week but <1 month	4.0
1–3 months	3.5
4–6 months	1.3
Enabling factors, %	
Health insurance (yes)	73.2
English-speaking ability	
Not at all	27.5
Not very well	47.6
Well	21
Very well	3.9
Transportation (independent driver)	60.7
Living arrangement (living alone)	13.2
Trust in Western medical care	
Not at all	4.7
A little bit	11.2
Very much	84.1
Experience of disrespect (yes)	25.0
Outcome variables	
Subjective perception of health, mean ± SD (range 0–7)	3.34 ± 1.76
Hospital visits, mean ± SD (range 0–20)	1.16 ± 2.29
Satisfied with healthcare service, %	72.6

SD = standard deviation.

Scores for subjective perception of health averaged 3.34 ± 1.76 (range 0–7). The mean number of hospital visits within the previous 6 months was 1.16 ± 2.29, and approximately 73% reported satisfaction with the healthcare service that they had received.

As might be expected, the correlation coefficients between English-speaking ability and the number of years lived in the United States (correlation coefficient (r) = 0.58, $P<.001$) and between marital status and living arrangement ($r = 0.53$, $P<.001$) were high. Because of issues concerning multicollinearity, only English-speaking ability and living arrangement were included in the predictive models. The major characteristics of the sample and study variables are described in Table 1.

Multivariate Models

Table 2 summarizes the results of regression models in which subjective perception of health, hospital visits, and satisfaction with healthcare service were the outcome variables. The total variance of subjective perception of health explained by the model was 51%. Individuals who were older, female, and less educated were more likely to have negative perceptions of health. After controlling for the predisposing variables, chronic conditions and functional disability were found to be significant factors. Those with more chronic conditions and greater levels of disability were more likely to exhibit negative health perceptions. After controlling for predisposing factors and health needs, English-speaking ability, transportation, and trust in Western medical care were identified as significant. Those who were able to speak English well and to drive independently and who had a greater level of trust in Western medicine were more likely to have positive perceptions of their own health.

For the second dependent variable, the number of hospital visits, female sex and more chronic conditions were significantly associated with more visits. After controlling for the latter predisposing and need variables, health insurance was found to be a significant enabling factor. At the final step, subjective perception of health contributed significantly to the explained variance, with results indicating that those who perceived their health in a more negative manner were more likely to visit hospitals. The estimated model accounted for 22% of the total amount of the variance in hospital visits.

The logistic regression model of satisfaction with healthcare service demonstrated no significant effects of predisposing and need factors but did reveal an important role for enabling factors associated with immigrant situations. Specifically, having no health insurance coverage, poorer English-speaking ability, lower trust in Western medicine, and experiences of disrespect significantly reduced the likelihood of satisfaction with healthcare service. In the final model, a positive health perception was shown to be significant in predicting satisfaction with healthcare service.

DISCUSSION

The present study assessed predictive models of subjective perception of health, healthcare utilization (hospital visits), and satisfaction with healthcare service, using a sample of 230 older Korean Americans. Adapting Andersen's beha-

Table 2. Regression Models of Subjective Perception of Health, Hospital Visits, and Satisfaction with Healthcare Service (N = 230)

Step	Predictor	Subjective Perception of Health	Hospital Visits	Satisfaction with Healthcare Service
		Standardized Coefficient		Odds Ratio
1	Predisposing factors			
	Age	– 0.20†	0.11	1.00
	Female	– 0.23†	0.20*	1.93
	≥High school	0.19*	– 0.04	1.59
2	Health needs			
	Chronic conditions	– 0.32‡	0.27‡	1.12
	Functional disability	– 0.33‡	0.03	0.96
	Number of sick days	– 0.10	0.13	0.75
3	Enabling factors			
	Having health insurance	0.01	0.18*	2.41*
	English-speaking ability	0.15*	– 0.06	1.82*
	Independent driver	0.16*	0.01	1.43
	Living alone	– 0.02	– 0.09	0.95
	Trust in Western medical care	0.16†	– 0.04	2.20*
	Having experience of disrespect	0.02	0.05	0.25†
4	Subjective perception of health	—	– 0.20*	1.34*
	Summary statistics	R^2 = 0.51	R^2 = 0.22	– 2 log likelihood = 182.3
		F = 15.8‡	F = 3.82‡	Chi-square = 42.6‡

$P <$ * .05; † .01; ‡ .001.
R^2 = coefficient of determination.

vioral health model,[11,12] predisposing factors (age, sex, and education), health needs (chronic conditions, functional disability, and number of sick days), and enabling factors (health insurance, English-speaking ability, transportation, living arrangement, trust in Western medicine, and reported experience of disrespect) were considered as potential predictors.

Consistent with previous literature about more mainstream American groups,[2,3,5] older Korean Americans, who were older and female; who had less education, more chronic conditions, a greater level of functional disability; and who were dependent for their transportation needs were more likely to perceive their health status in a negative manner. Poorer English-speaking ability and lower trust in Western medical care were also associated with more-negative self-perceptions of health. In turn, it was notable that subjective perception of health played a significant role in the predictive models of healthcare utilization and satisfaction with healthcare service.

It was found that sex, chronic conditions, and health insurance coverage influenced use of health services, measured as the number of hospital visits. It is generally known that women are more likely to be attentive to their health conditions and to seek medical care for their conditions.[20,21] Chronic conditions have also been a major predictor of greater healthcare utilization in previous research. Of the several enabling factors, health insurance coverage was a key determinant in use of health services. The latter finding is parallel to previous studies that highlighted lack of health insurance as the most significant barrier to the use of healthcare services by immigrant populations.[14,22] Studies suggest that expanding health insurance coverage may be an important strategy to reduce racial/ethnic disparities in health and healthcare utilization.[22,23]

More than one-quarter of the present sample were uninsured—a rate similar to that found in other older Korean Americans.[10,14] It has been consistently shown that racial/ethnic minority groups are less likely to have health insurance coverage than whites.[21–23] Minority older adults who were self-employed, were employees of small businesses, or held low-wage jobs might not have had health insurance as a retirement benefit.[14,21,24] Another factor is that, because of residency requirements, newly arrived older immigrants are not eligible for public health insurance programs such as Medicare and Medicaid.[22–24] In a supplementary analysis, a significant mean difference in the number of years since immigration was found between the insured and uninsured ($t = -7.298$, $P < .001$), indicating that those with health insurance had lived longer in the United States than those who were not insured. The structural barriers to health insurance seem to make access to healthcare system more difficult for older immigrants, particularly newly immigrated ones.

One of the unique aspects of the present study was its inclusion of satisfaction with service as an outcome. One study[7] identified the lack of research on perceived health outcomes and quality of service as a limitation of the existing literature on healthcare utilization. In the present sample, the likelihood of satisfaction with service was considerably greater when respondents had health insurance coverage. It is also quite notable that culturally relevant variables made an impressive contribution to the model; better English skills, greater trust in Western medical care, and no experience of disrespect or discrimination in

medical settings were all associated with greater levels of satisfaction with health service.

Coupled with the relatively high incidence of discrimination in medical settings of racial/ethnic minorities reported in a recent national survey,[16] the findings of the current study call attention to the matter of cultural competency of medical professionals. The adverse experiences of being treated unequally or with disrespect during patient–medical service provider interactions may lead to noncompliance with doctors' advice and follow-ups and discourage help-seeking behaviors of disadvantaged populations.[16] The findings highlight the importance of training medical professionals to be respectful and culturally sensitive when interacting with and delivering services to patients with diverse racial/ethnic backgrounds.

Some limitations of the present study should be noted. Because the study was based on a cross-sectional design, caution must be exercised in drawing causal inferences. Also, because of the small and nonrepresentative sample, the findings are only suggestive, although the study suggests avenues of research that may enhance understanding of health and healthcare utilization of racial/ethnic minority older populations and invite further investigation with diverse groups.

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