Title

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Journal

Journal of the American Geriatrics Society, 56(8)

ISSN

0002-8614

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Publication Date

2008-08-01

DOI

10.1111/j.1532-5415.2008.01805.x

Peer reviewed

Self-Reported Health Status of Vietnamese and Non-Hispanic White Older Adults in California

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Vietnamese Americans are a rapidly growing minority group in the United States, yet little is known about their health status. Chronic medical conditions and self-rated health of older Vietnamese Americans were compared with those of non-Hispanic white adults living in California using the 2001 and 2003 California Health Interview Surveys (CHISs). The CHIS employed a random-digit-dial telephone survey, and its sample is representative of California's noninstitutionalized population. The sample included 359 Vietnamese and 25,177 non-Hispanic white adults aged 55 and older. Vietnamese and non-Hispanic white adults were compared in terms of limitations in activities of daily living, chronic medical conditions (diabetes mellitus, hypertension, heart disease, asthma), mental health care, and self-reported health, adjusting for age, sex, and education. Vietnamese were more likely than white participants to report needing help for mental health problems (adjusted odds ratio (aOR) = 2.1, 95% confidence interval (CI) = 1.4–3.1) but less likely to have had their medical providers discuss their mental health problems with them (aOR = 0.3, 95% CI = 0.1–0.5). In addition, Vietnamese participants reported significantly worse health than white adults on five of eight domains of the Medical Outcomes Survery 12-item Short Form survey ($P < .006$). Clinicians caring for older Vietnamese individuals should be aware of the high risk for mental health needs in this population and should initiate discussions about mental health with their patients. Further research is needed to better understand why older Vietnamese Americans are at higher risk for worse self-reported health than older white adults. **J Am Geriatr Soc 56:1543–1548, 2008.**

Key words: Vietnamese; aging; mental health; chronic diseases; older adults; SF-12; health

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DOI: 10.1111/j.1532-5415.2008.01805.x

Vietnamese Americans are one of the fastest-growing minority groups in the United States.[1] Demographers project that by 2030 there will be 3.9 million Vietnamese Americans living in the United States and that they will form the largest Asian-American subgroup in California, surpassing the number of Chinese, Japanese, or Filipino individuals,[2] yet little is known about the health status of older Vietnamese Americans.

Vietnamese refugees have come to the United States in multiple waves since the end of the Vietnam War. The first wave of refugees came in 1975, when many Vietnamese with ties to the U.S. government left their country for fear of reprisals from the new communist regime. The second phase occurred between 1978 and 1984, with the "boat people" fleeing religious and political persecution by escaping on small fishing boats. The third phase, from 1985 to 1990, consisted of Amerasian children of U.S. servicemen and Vietnamese mothers. The fourth phase of immigration began in 1990, when the U.S. government humanitarian operation allowed political prisoners recently released from Communist labor camps to immigrate to the United States, and continues to the present time.[1] Many older Vietnamese Americans migrated as political refugees under this last program.

These former political prisoners have been found to have problems adjusting to life in the United States, possibly because they migrated later in life.[3] They also have a higher risk for psychiatric disorders as a result of premigration trauma.[4] A high prevalence of posttraumatic stress disorder has been reported in Vietnamese refugees.[5] Fifty-two percent of Vietnamese refugees in a primary care setting were found to have depression, and those with depression were more likely to be older.[6] In addition, Vietnamese immigrants have a high prevalence of tuberculosis and hepatitis B.[7] Preventable cancers are among the leading causes of death in Vietnamese Americans, who have a higher than average rate of smoking and lower than average rates of breast and cervical cancer screening.[8] Data from the National Health Interview Survey show that 17% of Vietnamese individuals reported fair or poor health, compared with 9% of non-Hispanic white adults,[9] although most of these studies were conducted in younger Vietnamese immigrants. Little

0002-8614/08/$15.00

research has been conducted regarding the health status of older Vietnamese Americans.

This study evaluated the self-reported health of older Vietnamese Americans living in California using data collected in the California Health Interview Surveys (CHISs; 2001 and 2003).[10] The hypothesis that older Vietnamese Americans have worse health than non-Hispanic white adults of similar age, sex, and education level was examined. Self-reported health, including chronic diseases, physical health, and mental health, were evaluated.

METHODS

Surveys

California Health Interview Survey

CHIS is a random-digit-dial (RDD) telephone survey of California households and is representative of the state's noninstitutionalized population. CHIS interviews one sample adult in each household.[10] Interviews were conducted in English, Spanish, Mandarin, Cantonese, Vietnamese, Korean, and Khmer. The questionnaire underwent extensive cultural adaptation and refereed translation processes to maximize cross-cultural equivalence across questionnaire items. Detailed information about the sampling methodology and cultural adaptation and translation of the survey are available elsewhere.[11–13]

The data set used for this study comes from the CHIS Public Use Files 2001 and 2003. Data for CHIS 2001 were collected between November 2000 and October 2001 and included 55,428 adults. Data for CHIS 2003 were collected between August 2003 and February 2004 and included 41,818 adults. The sample for these analyses was restricted to adults aged 55 and older who reported their race or ethnicity as Vietnamese or non-Hispanic white. Thus, the analytical sample consisted of 25,536 participants aged 55 and older, with 359 Vietnamese (221 from CHIS 2001 and 138 from CHIS 2003) and 25,177 non-Hispanic participants (14,023 from CHIS 2001 and 11,154 from CHIS 2003). The sample is weighted to account for the complex sample design and to be representative of California's population in terms of age, sex, race and ethnicity, and rural–urban residence.[10]

Measures

Survey items consisted of demographic characteristics including age, sex, country of birth, years living in the United States, marital status, health insurance status, level of education, English language proficiency, and language spoken at home. Age was recoded into four categories (55–64, 65–74, 75–84, and $\geq$85). Country of birth was recoded into two categories (United States and another country). The number of years living in the United States was recoded into five categories (1 year, 2–4 years, 5–9 years, 10–14 years, and $\geq$15 years). Marital status was recoded into married or other. Having any type of health insurance was coded as yes or no. Those who had health insurance were asked whether their insurance covered mental health treatment (yes, no, don't know). Level of education was recoded into three categories ($<$high school, high school graduate, and $\geq$some college). Self-reported English proficiency was dichotomized into very well or well versus not well or not at all.

Limitations in activities of daily living (ADLs) was assessed by asking respondents whether they needed "special equipment or someone to help with eating, dressing, bathing, getting out of chairs, moving around the house, or using the toilet because of a health problem or condition?" Having an ADL limitation was coded as yes or no. Limitations in ADLs were asked in 2003 but not in 2001 in CHIS. Chronic medical conditions were assessed in 2001 and 2003 by asking the respondent, "Has a doctor ever told you that you have diabetes, high blood pressure, heart disease, or asthma?" Answer categories were yes or no for each question.

Three questions assessed information about respondents' need for mental health care. The first asked respondents whether they thought they "needed help for emotional or mental health problems, such as feeling sad, blue, anxious, or nervous" in the previous 12 months. Those who responded affirmatively to this question were then asked whether any medical provider (e.g., doctor, family physician, nurse, other health clinic staff) had discussed their emotional or mental health problems with them. Respondents also were asked whether they had received treatment from a specialist (psychiatrist, psychologist, social worker, or counselor) for emotional or mental problems in the previous 12 months. Answer categories were yes or no for each question. These items were assessed in the 2001 survey only.

The survey also included the Medical Outcome Study 12-item Short-Form Health Survey (SF-12 Version 1).[14] The SF-12 is a subset of the Medical Outcomes Study 36-item Short-Form Survey[15] and assesses eight health domains: physical functioning, role limitations due to physical health problems, pain, general health perceptions, energy and fatigue, social functioning, role limitations due to emotional problems, and psychological distress and well-being.[14] The SF-12 general health question (In general, would you say that your health was excellent, very good, good, fair, or poor?) was asked in CHIS 2001 and 2003. The remaining 11 SF-12 questions were asked in CHIS 2001 but not in CHIS 2003. The SF-12 domains were all scored on a 0 to 100 possible range, with a higher score indicating better health. Individual SF-12 items were scored using a standard *T*-score metric relative to the U.S. general population.[16]

Statistical Analyses

All analyses were performed using SAS Callable SUDAAN Release 8.0.2 (Research Triangle Institute, Research Triangle Park, NC) to account for the CHIS complex sampling design and to obtain proper variance estimations. Chi-square tests and *t*-tests were conducted to examine differences in the sociodemographic and clinical characteristics of the two groups. Logistic regression was used to investigate the adjusted odds of having any ADL limitations and having specific chronic diseases (diabetes mellitus, hypertension, heart disease, asthma), adjusting for sex, age, and education. Logistic regression was conducted to examine the odds of having mental health needs; discussing them with a medical provider; and receiving treatment from a mental health specialist, with adjustment for sex, age, education, and having mental health insurance. Ordinary least square regression analyses were conducted to compare

SF-12 scores of Vietnamese and non-Hispanic white participants, adjusting for sex, age, and education.

RESULTS

Sociodemographic characteristics for the two groups are presented in Table 1. The Vietnamese respondents were significantly younger than the non-Hispanic white respondents (mean 64.6 vs 68.4). Ninety-nine percent of the Vietnamese respondents were born outside of the United States, whereas only 9% (1,928) of the non-Hispanic white respondents were born outside of the United States. Seventy-four percent of the Vietnamese sample had lived in the United States for at least 10 years. Older Vietnamese adults also reported significantly lower levels of education than non-Hispanic white adults. Forty-eight percent of the older Vietnamese adults reported less than a high school education, compared with 11% of non-Hispanic whites ($P<.001$). Eighty percent of the Vietnamese respondents reported having limited English-speaking proficiency. Older Vietnamese adults were also less likely to have health insurance ($P<.001$), and those with insurance were less likely to have insurance that covered mental health services ($P<.001$).

Table 2 shows the unadjusted prevalence rates and the adjusted odds ratios (aORs) for having limitations in ADLs, chronic diseases, and mental health care concerns. Although Vietnamese respondents reported a higher prevalence of hypertension compared to non-Hispanic white respondents (54% vs 47%, $P<.005$), this finding did not remain significant after adjusting for sex, age, and education (aOR = 1.2, 95% confidence interval (CI) = 0.9–1.6). However, there were significant differences between the Vietnamese and non-Hispanic white respondents in their reports of mental health care. Older Vietnamese adults had twice the odds of needing help for mental or emotional problems over the previous year (aOR = 2.1, 95% CI = 1.4–3.1) compared to older non-Hispanic white respondents, although they had 70% lower odds of having a medical provider discussed their mental or emotional problems with them (aOR = 0.3, 95% CI = 0.1–0.5). Furthermore, they were not more likely to see a mental health specialist (aOR = 1.5, 95% CI = 0.8–2.9) than white respondents, even after adjusting for sex, age, education, and having mental health insurance.

Finally, Vietnamese respondents reported significantly worse health than non-Hispanic white respondents on

Table 1. Sociodemographic Characteristics of Non-Hispanic White and Vietnamese Respondents (N = 25,739)

Characteristic	Older Non-Hispanic White Adults (n = 25,177)	Older Vietnamese Adults (n = 359)
	n (%)	
Age[§]		
55–64	9,884 (42.3)	192 (56.6)
65–74	7,716 (27.7)	121 (29.8)
75–84	5,934 (23.2)	38 (12.0)
≥85	1,643 (6.8)	8 (1.6)
Male	9,812 (45.7)	189 (46.7)
Country of birth[§]		
United States	23,249 (91.2)	2 (0.6)
Another country	1,928 (8.8)	357 (99.2)
Years living in the United States		
≤1	NA	4 (1.6)
2–4	NA	9 (3.5)
5–9	NA	79 (20.6)
10–14	NA	103 (30.7)
≥15	NA	159 (43.6)
Marital status		
Married	12,481 (61.3)	223 (64.4)
Other	12,662 (38.7)	135 (35.6)
Level of education[§]		
<High school	1,943 (10.6)	137 (47.7)
High school graduate	6,731 (23.6)	103 (24.7)
≥Some college	16,494 (65.8)	11 (27.6)
English-speaking proficiency		
Very well or well	NA	84 (19.9)
Not well or not at all	NA	270 (80.1)
Health insurance status[§]		
Currently insured	24,358 (96.8)	314 (83.9)
Currently not insured	819 (3.2)	45 (16.1)
Insurance coverage for mental health[§]		
Yes	7,395 (56.1)	97 (39.0)
No	1,398 (9.0)	52 (28.8)
Don't know	5,188 (34.9)	71 (32.1)

[§] $P<.001$.

Note: Insurance coverage for mental health was assessed only in 2001 (N = 14,201).

NA = not applicable.

Table 2. Number of Limitations in Activities of Daily Living (ADLs; N = 25,739), Chronic Diseases (N = 25,536), and Mental Health Concerns (N = 14,142)

Health and Health Care	Older Non-Hispanic White Adults	Older Vietnamese Adults	Adjusted Odds Ratio (95% Confidence Interval)[†]
	%		
Any ADL limitations	4.7	7.7	1.4 (0.5–3.4)
Chronic diseases			
Diabetes mellitus	11.1	15.6	1.3 (0.8–2.0)
High blood pressure[‡]	46.8	54.0	1.2 (0.9–1.6)
Heart disease	19.9	17.4	0.9 (0.6–1.3)
Asthma	11.9	11.6	0.9 (0.6–1.6)
Mental health concerns			
Needed help for mental health problems[‡]	9.8	20.9	2.1 (1.4–3.1)*
Had a discussion with a medical provider[‡]	45.0	20.2	0.3 (0.1–0.5)*
Visited a mental health specialist	5.5	7.3	1.5 (0.8–2.9)

Note: Analyses examining ADLs and chronic diseases are adjusted for sex, age, and education. Analyses examining mental health concerns are adjusted for sex, age, education, and having mental health insurance.

* $P<.001$.

[†] Non-Hispanic white is the reference group.

[‡] Significant ethnic or racial difference in the unadjusted prevalence rates.

Table 3. Medical Outcomes Study 12-item Short Form Survey (SF-12) Scores for Older Non-Hispanic White and Vietnamese Respondents

SF-12 Domain	Older Non-Hispanic White Adults (Mean)	Older Vietnamese Adults (Mean)	Adjusted *P*-Value*
General health perceptions	50.2	38.5	<.001
Physical functioning	50.4	46.3	.003
Role-physical	50.3	47.3	.03
Role-emotional	50.1	45.2	.002
Bodily pain	50.4	46.1	.03
Mental health	50.2	44.0	.002
Vitality	50.2	48.5	.95
Social functioning	50.1	44.3	<.001

Note: Scores range between 0 (lowest) and 100 (highest), with higher scores representing better health. Means transformed using standard *T*-score metric relative to the U.S. general population.

The sample size was larger for general health perceptions (N = 25,517; Non-Hispanic white, n = 25,158; Vietnamese, n = 359) because this survey item was include in both the California Health Interview Survey (CHIS) 2001 and 2003, but the remaining survey items were included only in the CHIS 2003 (N = 13,919).

*Regression analyses were adjusted for age, sex, and education.

many of the SF-12 domains, including general health perceptions, physical functioning, social functioning, mental health, and role limitations due to mental health problems ($P < .005$), adjusting for sex, age, and education (Table 3). Bodily pain, role limitations due to physical health, and energy levels (vitality) were not significantly different between Vietnamese and whites (using the conservative Bonferroni adjusted P-value $< .006$).

DISCUSSION

This study found that older Vietnamese Americans living in California were more likely than white respondents to report needing help for mental or emotional problems but less likely to have discussions with their primary care providers about these problems and thus may not be getting the mental health care that they need. Vietnamese respondents also reported worse health than white respondents on several SF-12 domains.

The finding of high rates of mental health needs in older Vietnamese Americans is consistent with previous research in younger populations of Vietnamese refugees that showed high prevalence rates of depression and posttraumatic stress syndrome.[4–6] Although older Vietnamese respondents reported greater need than older white respondents, their medical providers were less likely to have discussed their mental health problems with them, and they were not more likely to have seen a specialist for mental health care than whites, even after adjustment for having mental health insurance. This finding is consistent with results from a national study showing that providers were less likely to discuss mental health concerns with Asian Americans.[17] The older Vietnamese respondents in this study were primarily foreign born and had limited proficiency in English. Other studies of younger individuals have shown that Asian Americans tend to underuse mental health services[18,19] and that those who are immigrants (foreign born) tend to use services less than those born in the United States.[20] Furthermore, studies have found that language barriers represent a formidable obstacle to individuals with limited English proficiency obtaining needed general medical[21] and mental health care.[22]

In addition, this study found that older Vietnamese Americans reported worse health status than non-Hispanic white respondents. Research done among Vietnamese refugees in Australia found similar findings, with Vietnamese adults reporting more disability from mental health problems as measured according to the SF-12 than white Australians.[23]

Further study is needed to elucidate the reasons for the substantially poorer self-reported health in Vietnamese older adults. It is possible that other chronic diseases not directly measured in this study (e.g., arthritis, hepatitis B) contribute to the lower self-reported health status of Vietnamese Americans. Furthermore, Vietnamese Americans have been found to underuse health services because of barriers such as language, medical insurance, and transportation.[24,25] It may be that the lower health status of older Vietnamese immigrants is the result of inadequate access to healthcare services in the United States, along with premigration physical and psychological trauma during the war years and in Communist re-education camps.[26]

This study adds to the scant literature available regarding the health status of older Vietnamese Americans. It also highlights the discrepancy of the "Model Minority Myth" that Asian-American Pacific Islanders (AAPIs) are all healthy.[27] The AAPI population is a heterogeneous group with respect to demographic factors and health risk factors.[27] One study found that a greater age-adjusted percentage of Vietnamese respondents reported fair or poor health compared to individuals of Chinese, Filipino, and Japanese descent.[9] Similarly, other studies have found that Vietnamese immigrants report worse health status and more disability than other Asian subgroups and white respondents,[26,28] although these studies focused on younger individuals (aged ≥ 25) and not on older Vietnamese adults, as in this study.

The results of this study are consistent with previous research on the health status of some minority groups in the United States. Older African-American, Mexican, and Korean adults have reported poorer health than older non-Hispanic white adults.[29–31] Data from the Behavioral Risk Factor Surveillance System showed that 40% of older African Americans, 41% of the older Latinos, and 35% of other minority groups reported fair or poor health, compared with 24% of non-Hispanic white adults.[32]

This study has several limitations. First, CHIS is a population-based sample drawn from the civilian, noninstitutionalized adult population in California living in households with access to a residential telephone. Excluded from the study are individuals without residential telephones, those unable to answer the telephone, and those living in group quarters of unrelated adults (a common situation among recent immigrants with limited income). It is likely, therefore, that these findings underestimate the health disparities between older Vietnamese and non-Hispanic white adults. Furthermore, individuals who have limited

English-language proficiency are less likely to participate in research,[33] although the CHIS was offered in English and Vietnamese by telephone interview. In addition, because the CHIS samples are located in California, these findings may not be generalizable to older Vietnamese adults in other areas of the United States, although California is home to the largest Vietnamese population in the world outside of Vietnam.[34]

Another limitation of the study is that participants' health status was self-reported, although studies have found that self-reported health is a strong prognostic indicator of subsequent morbidity and mortality.[35–37] Finally, this study included only participants' education levels and not income levels. Health status has been found to be associated with lower education and income levels in other minority groups.[30,38,39]

The findings from this study suggest that older Vietnamese Americans are at greater risk for having unmet mental health needs and worse self-reported health than older non-Hispanic white adults. Clinicians who care for these patients need to be cognizant of the mental health needs of their older Vietnamese patients. Research has shown that Vietnamese patients are more likely than white patients to receive mental health treatment from their primary care providers, as opposed to visiting mental health specialists.[23] Thus, it is especially critical that primary care providers bring up and discuss mental health concerns with their patients. Vietnamese patients' perceptions of having access to mental health services play a role in their help-seeking behavior.[40] Therefore, clinicians' initiating conversations about mental health may lead to patient's disclosure of their mental health needs.[41] In addition, making culturally and linguistically appropriate mental health services available to older Vietnamese individuals may be a cost-effective way to decrease functional disability in this population. The experiences of Vietnamese refugees resettled in Australia have shown that mental health–related disability may decrease over time with appropriate treatment.[23,42]

Nevertheless, more studies are needed to confirm and to better understand the physical and mental health status and health utilization patterns of older Vietnamese adults in the United States. Furthermore, additional surveillance and targeted interventions of health promotion and disease prevention are needed to care for this vulnerable population.

ACKNOWLEDGMENTS

Conflict of Interest: The authors have no financial disclosures and no conflict of interests to disclose related to this manuscript. Drs. Ngo-Metzger, Hays, and Mangione received support from the University of California at Los Angeles Center for Health Improvement in Minority Older Adults/Resource Centers for Minority Aging Research, National Institutes of Health, National Institute on Aging (NIA), under Grant AG-02-004. Dr. Hays also was supported in part by Grant P01-AG020679 from the NIA.

Author Contributions: Sorkin: study concept and design, data analysis, interpretation of data, and critical revision of manuscript. Tan: study concept and design, interpretation of data, drafting of manuscript. Hays: study concept and design, interpretation of data, critical revision of manuscript, and acquisition of funding. Mangione: study concept and design, critical revision of manuscript, and acquisition of funding. Ngo-Metzger: study concept and design, acquisition of funding, acquisition of data, interpretation of data, and drafting and critical revision of manuscript.

Sponsor's Role: The funding agencies were not involved in the design, methods, subject recruitment, data collection, analysis, or preparation of the manuscript.

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