

Ethnic Group Differences in Health Outcomes Among Asian American Men in California

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Abstract

The numbers of Asian American men are continually increasing, yet limited research exists on this understudied population. Addressing this lack of research is necessary to better inform how best to improve quality of care. This study examined health outcome differences across ethnically diverse groups of Asian American men in California, compared with non-Hispanic White men. Using data from the 2007, 2009, and 2011–2012 California Health Interview Survey, distributions of health status and health-related characteristics across ($n = 43,030$) racial/ethnic groups of men (Chinese, Japanese, Korean, Filipino, Vietnamese, Other Asian Americans, and non-Hispanic Whites) were calculated. Compared with non-Hispanic Whites, odds of reporting fair or poor health were higher among Vietnamese, while odds of diabetes were higher among Korean, Filipino, and Other Asian Americans. Odds of high blood pressure were higher among Filipino and Vietnamese but lower among Other Asian Americans, while odds of disability were lower across all ethnic groups except Filipino and Vietnamese. This study's findings highlight the importance of understanding ethnic heterogeneity to develop culturally appropriate health interventions for Asian American men.

Keywords

Asian American men, health outcome, men's health, CHIS, minority health

Introduction

As of 2010, Asian Americans have surpassed Latinos as the fastest growing minority ethnic group in the United States (Hoeffel, Rastogi, Kim & Shahid, 2012; Pew Research Center, 2013). Numerically, the greatest growth of the Asian American population between 2000 and 2010 occurred in California, home to the largest Asian population in the United States (Brown, 2014; Hoeffel et al., 2012). Moreover, Asian Americans have often been viewed as the model minority when it comes to health (W. Kim & Keefe, 2010; Yi, Kwon, Sacks, & Trinh-Shevrin, 2016). However, like many other population groups, Asian Americans are also at risk for chronic conditions such as cancer, heart disease, and diabetes (Office of Minority Health, 2014). California is also home to one of the highest percentages of Asian American men (U.S. Census Bureau, 2014). Asian American men, in particular, have been identified to be at higher risk for heart disease and diabetes than women (Jose et al., 2014; Nguyen, Nguyen, Fischer, Ha, & Tran, 2015). Furthermore, heart disease leads mortality rates among Japanese, Filipino, and Asian Indian men (Hastings et al., 2015). The aggregation of Asian American

subethnic groups masks differences in the prevalence and risk of chronic health conditions among Asian American men (Hastings et al., 2015). Though multiple studies have examined health disparities across Asian subethnic groups, few have compared health status and health outcome differences among subethnic groups of Asian American men in comparison with non-Hispanic White men.

There is a growing body of research focusing on understanding the relationship between health status and subethnic groups of Asian American men. B. Huang, Appel, Nicdao, Lee, and Ai, (2013) identified heterogeneity across Chinese, Vietnamese, and Filipino men with regard to self-rated mental health status. However, to the authors' knowledge, no studies have specifically examined subethnic group differences in self-reported overall

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health status among Asian American men. Among findings on this topic that did not stratify by gender, one study indicated that Chinese, Koreans, Filipinos, and Vietnamese were more likely to report fair or poor health compared with non-Hispanic Whites (Kandula, Lauderdale, & Baker, 2007), while another was only able to replicate this finding for Koreans and Vietnamese (Kuo & Porter, 1998). Yet another was only able to replicate this finding for Vietnamese (Frisbie, Cho, & Hummer, 2001). Whether these findings hold true for Asian American men remains unknown.

Multiple studies report higher diabetes prevalence among Filipino American men (Choi, Liu, Palaniappan, Wang, & Wong, 2013; Z. J. Huang & Zheng, 2015; Nguyen et al., 2015; Staimez, Weber, Narayan, & Oza-Frank, 2013; Yi & Trinh-Shevrin, 2015), but disagree on diabetes prevalence among the other subethnic groups, with one study reporting higher prevalence for Japanese (Nguyen et al., 2015), while others report no significant differences for Japanese but identified a higher prevalence among South Asians (Choi et al., 2013; Staimez et al., 2013; Yi & Trinh-Shevrin, 2015). Similarly, while studies exist on cardiovascular disease mortality among Asian American subethnic groups (Jose et al., 2014), few comparatively explore subethnic group differences among men in key cardiovascular risk factors such as hypertension. One of the studies on this topic observed higher rates of high blood pressure among Filipino American men compared with Chinese and Vietnamese men, though this was a cross-ethnicity comparison among Asian Americans and was not conducted in comparison with non-Hispanic Whites (B. Huang et al., 2013). Various socioeconomic factors have been associated with subethnic differences in health outcomes, including insurance coverage, health literacy levels, English proficiency levels, and nativity (Kao, 2010; Sentell & Braun, 2012).

California has the highest proportion of Chinese, Japanese, Korean, Filipino, and Vietnamese residents in the country (Hoeffel et al., 2012). With the numbers of Asian American men continuing to grow, it is important to learn more about how to provide for and ensure their overall health and well-being. Successfully improving quality of care for this segment of the Asian population will require addressing the lack of sufficient research on this understudied group. Given that most existing studies on this population have only focused on a limited number of specific subethnic groups, the objective of this study was to examine similarities and differences in overall health status and health outcomes among six ethnically diverse groups of Asian American men living in California—Chinese, Japanese, Korean, Filipino, Vietnamese, and Other Asians, as compared with non-Hispanic White men.

Method

Study Sample

Data for the project came from the California Health Interview Survey (CHIS), a statewide telephone survey conducted via random-digit dialing, providing an in-depth, population-level overview of health status and health care access and use. Initiated in 2001, CHIS is conducted by the University of California Los Angeles (UCLA) Center for Health Policy Research in partnership with the Department of Health Care Services and the California Department of Public Health. CHIS is conducted in multiple languages to help ensure that all ethnic groups are able to contribute: Surveys are offered in English, Spanish, Chinese (Cantonese and Mandarin), Korean, Vietnamese, and Tagalog. For this project, the three most recent surveys of CHIS were pooled to ensure a sufficient sample size among the subethnic groups of Asian men. All CHIS data files published through 2009 follow a biennial survey model; CHIS has since transitioned to a continuous survey model to allow for more frequent release of data, beginning with its 2011-2012 data file (CHIS, 2013). Of the 141,597 respondents aged 18 years and older across the three surveys, the following respondents were excluded: women ($n = 83,814$), and Hispanic men, non-Hispanic African American men, and men of mixed race/ethnicity ($n = 14,753$). Analyses were limited to male respondents who self-identified as non-Hispanic Whites ($n = 36,896$) and Asians ($n = 6,134$), for a total sample size of 43,030. In this study, the Asian subethnic groups studied consisted of: Chinese ($n = 1,556$), Japanese ($n = 539$), Korean ($n = 845$), Filipino ($n = 722$), Vietnamese ($n = 1,375$), and Other Asian American ($n = 1,097$).

The weighting process for the 2011-2012 data set differs from past surveys. The 2011-2012 weight control totals were based on data from the 2010 census, whereas surveys through 2009 were based on the 2000 census (CHIS, 2013).

Measures

Outcome Variable. Four primary outcomes were selected for further analysis: self-reported health status, diabetes, high blood pressure, and disability. Self-reported health status was selected for further analysis given the dearth of data examining this variable among different subethnic groups of Asian American men. Asian American men have been identified to be at higher risk for diabetes, hence, the selection of diabetes as a variable for analysis (Jose et al., 2014; Nguyen et al., 2015). High blood pressure, or hypertension, was selected because both hypertension and diabetes are risk factors for heart disease, identified as the cause behind the highest mortality rates among certain subethnic groups of Asian American men

(Hastings et al., 2015; Ye, Rust, Baltrus, & Daniels, 2009). Assessing disability is important given the inevitable growth of older populations of Asian American men coupled with current growth patterns of Asian Americans in California (Fuller-Thomson, Brennenstuhl, & Hurd, 2011; Hoeffel et al., 2012; G. Kim et al., 2010).

Self-rated health was defined as respondents' rating of their general health on a 5-point Likert-type scale of *poor* to *excellent* and scored as 1 to 5, with higher scores indicating poorer health ratings. A binary variable was created to identify men who rated their health as fair or poor versus excellent/very good/good, coded as 1 and 0, respectively. Assessment of chronic disease was based on reported physician diagnoses of the following: asthma, diabetes, high blood pressure, and heart disease.

Obesity was assessed using body mass index (BMI) values calculated from respondents' self-reported height and weight. Following preestablished World Health Organization (WHO) guidelines (Jih et al., 2014; WHO Expert Consultation, 2004), separate variables were created to examine BMI in non-Asians versus Asians using three categories (18.5-24.9, 25-29.9, 30+ kg/m² in non-Asians, and 18.5-22.9, 23-27.4, 27.5+ kg/m² in Asians). Similar to Jih et al. (2014), respondents with BMI values under 18.5 kg/m² were excluded from obesity analysis. Obesity was defined as having a BMI of 30+ kg/m² if non-Asian, or 27.5+ kg/m² if Asian (Jih et al., 2014; WHO Expert Consultation, 2004).

Disability status was assessed based on participant responses to questions regarding difficulty or limitations in six areas: blindness, deafness, or severe problems with vision or hearing; learning, remembering, and concentrating; dressing, bathing, or getting around; going outside the home alone; working at a job; and having any condition that limits basic physical activity. Respondents who experienced difficulties in any of the six areas were classified as disabled, while those who indicated no difficulty were coded as not disabled (1 = *disabled*; 0 = *not disabled*).

Independent Variable. For the purposes of this study, categories for self-identified ethnicity included respondents who identified as non-Hispanic White, Chinese, Japanese, Korean, Filipino, or Vietnamese. Similar to previous investigators (G. Kim et al., 2010), a separate Other Asian American category was also created to represent those who identified as Asian but not as one of the five Asian ethnicities listed above. This group consisted of respondents who self-identified as Bangladeshi, Burmese, Cambodian, Hmong, Indian, Indonesian, Laotian, Malaysian, Pakistani, Sri Lankan, Taiwanese, Thai, or Other Asian American (self-specified). The creation of the Other Asian American category was necessary because of the small number of

respondents who self-identified as any of the ethnicities included in the preceding group.

Demographics. Demographic variables for this study included the following: self-identified race/ethnicity, marital status (1 = married; 0 = other than married), education attainment (0 = high school or lower; 1 = high school graduate; 2 = beyond high school), annual household income (0 = \$0-\$34,999; 1 = \$35,000-\$74,999; 2 = \$75,000+), health insurance status (1 = insured; 0 = uninsured), nativity (1 = foreign born; 0 = born within the United States), and spoken English proficiency. Respondents who rated their English-speaking ability as not well/not at all were considered to have limited English proficiency (1 = strong proficiency/English only; 0 = limited proficiency).

Health-Related Characteristics. Health-related characteristics were based on participant reports of whether they had a hard time understanding the doctor during their last visit (1 = difficulty; 0 = no difficulty) as well as self-reports of whether they saw a doctor within the past 12 months. Assessment was via numeric report ranging from 0 to 365 times. A binary variable was created to separate out participants who saw a doctor within the past year (and who thus responded to the question with any number greater than zero, coded as 1) from those who did not (i.e., participants who indicated they saw a doctor zero times in the past 12 months, coded as 0).

Statistical Analysis

Means and chi-square tests were used to test the mean and proportional differences for each of the variables by subethnic group. Multivariate logistic regression analyses were conducted to examine differences observed among racial/ethnic groups of men for the four selected outcome variables: self-reported health status, diabetes, high blood pressure, and disability. Non-Hispanic White men were the reference group for comparison purposes. All models controlled for age, marital status, educational attainment, annual household income, insurance status, nativity, spoken English proficiency, and obesity. CHIS-provided weights and a jackknife method were used for all analyses to account for the multistage, complex sample design (Cervantes et al., 2006; CHIS, 2013, 2014). All data were analyzed using STATA version 13 (StataCorp LP, College Station, TX).

Results

The distribution of sample characteristics for the total sample of Asian American men, subethnic groups of Asian American men, and non-Hispanic White men is depicted in Table 1. The *p* values reported reflect

Table 1. Distribution of Sample Characteristics of Asian American and Non-Hispanic White Men (*n* = 43,030) from the 2007, 2009, and 2011-2012 California Health Interview Surveys.

Characteristic	Total Asian American (<i>n</i> = 6,134)	Chinese (<i>n</i> = 1,556)	Japanese (<i>n</i> = 539)	Korean (<i>n</i> = 845)	Filipino (<i>n</i> = 722)	Vietnamese (<i>n</i> = 1,375)	Other Asian American (<i>n</i> = 1,097)	Non-Hispanic White (<i>n</i> = 36,896)	<i>p</i>
Age, mean (SE): range 18-85 years	41.7 (0.3)	43.9 (0.6)	48.0 (1.1)	44.7 (1.2)	39.4 (0.8)	43.9 (1.1)	37.4 (0.5)	48.2 (0.1)	
Married, %	57.3	59.6	55.1	64.5	50.9	63.6	56.4	59.2	.01
Educational attainment, %									<.001
<High school	8.2	11.1	5.1	6.9	5.0	19.9	3.5	5.1	
High school graduate	20.7	19.4	17.2	23.6	25.4	24.8	15.2	24.9	
>High school	71.0	69.5	77.8	69.5	69.5	55.2	81.2	70.0	
Annual household income, %									<.001
\$0-\$34,999	26.8	28.6	17.2	29.0	23.6	47.1	19.8	18.2	
\$35,000-\$74,999	27.9	26.5	29.2	33.7	33.1	22.4	24.5	27.7	
\$75,000+	45.3	44.9	53.6	37.3	43.4	30.5	55.7	54.2	
Uninsured, %	14.6	12.7	7.2	35.2	14.3	16.4	11.8	11.8	<.001
Foreign born, %	68.3	74.7	20.3	81.5	58.9	84.0	72.1	9.2	<.001
Limited English proficiency, %	17.5	26.7	2.8	39.8	3.8	41.6	5.6	0.3	<.001

Note. SE = standard error. Other Asian American category includes the following: Bangladeshi, Burmese, Cambodian, Hmong, Indian, Indonesian, Laotian, Malaysian, Pakistani, Sri Lankan, Taiwanese, Thai, Other Asian American (self-specified). All *p* values reported are for comparing among all ethnic and subethnic groups listed, including Chinese, Japanese, Korean, Filipino, Vietnamese, Other Asian American, and non-Hispanic Whites.

a difference among the following variables across the different subethnic groups of Asian American men: marriage, educational attainment, annual household income, insurance status, nativity, and spoken English proficiency. Vietnamese men reported the lowest levels of post-high school education (55.2%, *p* < .001) and spoken English proficiency (41.6%, *p* < .001) as well as the lowest annual household incomes, with 47.1% reporting incomes below \$35,000 a year (*p* < .001). Japanese men had the highest rate of insurance coverage (92.8%, *p* < .001) of all groups, while Koreans had the lowest rate of coverage (64.8%, *p* < .001).

Table 2 displays the distribution of health characteristics in non-Hispanic White and Asian subethnic groups of men. Differences were noted across the different subethnic groups for the following variables, all with *p* < .001: fair or poor self-rated health, high blood pressure, heart disease, obesity, disability, difficulty understanding the doctor, and percentage who saw a doctor in the past year. Vietnamese men had the highest rates of reported fair or poor health (35.5%, *p* < .001) and had the most difficulty understanding the doctor (9.8%, *p* < .001). With regard to chronic diseases, Japanese (31.8%, *p* < .001) and Filipino men (29.8%, *p* < .001) reported the highest prevalence of high blood pressure. Obesity rates were highest among Filipino (34.5%, *p* < .001) men. Koreans reported the

lowest prevalence of heart disease (2.3%, *p* < .001), and were least likely to have sought care within the past 12 months (67.8%, *p* < .001).

The relationships between ethnicity and the four selected primary health outcomes: fair or poor self-reported health, diabetes mellitus, high blood pressure, and disability, are displayed in Table 3. Compared with non-Hispanic White men, Vietnamese men had greater odds (*OR* = 2.57, 95% confidence interval [CI: 1.84, 3.59]) of reporting fair or poor health. Men in all other Asian subethnic groups examined had similar odds of fair or poor self-reported health as non-Hispanic White men. Korean men (*OR* = 1.65, 95% CI [1.07, 2.55]), Filipino men (*OR* = 2.24, 95% CI [1.26, 4.00]), and Other Asian American men (*OR* = 1.95, 95% CI [1.33, 2.87]) had higher odds of being diagnosed with diabetes than non-Hispanic White men. No other differences were observed across racial/ethnic groups with regard to reports of diabetes diagnoses. Compared with non-Hispanic White men, Filipino (*OR* = 1.74, 95% CI [1.31, 2.32]) and Vietnamese men (*OR* = 1.43, 95% CI [1.08, 1.89]) had greater odds of being diagnosed with high blood pressure. Men identifying as Other Asian American (*OR* = 0.72, 95% CI [0.57, 0.92]) had lower odds of being diagnosed with high blood pressure than non-Hispanic White men. Chinese, Japanese, and

Table 2. Distribution of Health Characteristics in Asian American and Non-Hispanic White Men ($n = 43,030$) from the 2007, 2009, and 2011-2012 California Health Interview Surveys.

Health characteristics	Total Asian American ($n = 6,134$)	Chinese ($n = 1,556$)	Japanese ($n = 539$)	Korean ($n = 845$)	Filipino ($n = 722$)	Vietnamese ($n = 1,375$)	Other Asian American ($n = 1,097$)	Non-Hispanic White ($n = 36,896$)	p
Fair or poor self-rated health, %	16.5	17.8	10.5	20.7	14.4	35.5	7.8	12.5	<.001
Chronic diseases, %									
Diabetes mellitus	7.7	5.8	8.9	8.7	10.1	7.9	6.5	7.4	.10
High blood pressure	23.2	21.9	31.8	25.5	29.8	27.2	12.6	28.6	<.001
Heart disease	4.1	3.8	6.9	2.3	5.1	4.3	2.9	9.1	<.001
Obese (BMI 30+ in non-Asians, BMI 27.5+ in Asians)	21.3	14.9	29.2	16.8	34.5	13.4	18.0	23.3	<.001
Disability, %	18.2	14.3	17.9	14.3	21.4	32.1	13.8	27.5	<.001
Difficulty understanding doctor, %	3.5	4.5	1.2	4.3	1.8	9.8	1.2	2.2	<.001
Saw doctor within past year, %	72.3	70.5	76.2	67.8	73.0	75.0	72.7	79.5	<.001

Note. BMI = body mass index. Other Asian American category includes the following: Bangladeshi, Burmese, Cambodian, Hmong, Indian, Indonesian, Laotian, Malaysian, Pakistani, Sri Lankan, Taiwanese, Thai, Other Asian American (self-specified). All p values reported are for comparing among all ethnic and subethnic groups listed, including Chinese, Japanese, Korean, Filipino, Vietnamese, Other Asian American, and non-Hispanic Whites.

Table 3. Odds Ratios and 95% Confidence Intervals Identifying Differences in Health Status and Disability Outcomes by Non-Hispanic White Men and Asian American Sub ethnic Groups of Men.

Ethnicity	Fair or poor self-reported health	Diabetes mellitus	High blood pressure	Disability
Non-Hispanic White	1.00	1.00	1.00	1.00
Chinese	1.18 [0.88, 1.58]	0.99 [0.69, 1.44]	1.00 [0.76, 1.33]	0.42 [0.31, 0.57]
Japanese	0.76 [0.51, 1.18]	1.21 [0.86, 1.70]	1.17 [0.90, 1.52]	0.53 [0.39, 0.73]
Korean	1.36 [0.83, 2.23]	1.65 [1.07, 2.55]	1.32 [0.91, 1.90]	0.45 [0.27, 0.74]
Filipino	1.21 [0.87, 1.67]	2.24 [1.26, 4.00]	1.74 [1.31, 2.32]	0.85 [0.64, 1.13]
Vietnamese	2.57 [1.84, 3.59]	1.25 [0.79, 1.98]	1.43 [1.08, 1.89]	1.14 [0.81, 1.60]
Other Asian American	0.80 [0.56, 1.14]	1.95 [1.33, 2.87]	0.72 [0.57, 0.92]	0.65 [0.48, 0.88]

Note. Model is multivariate logistic regression. Data are from the California Health Interview Survey, 2007, 2009, and 2011-2012. Reference group is non-Hispanic Whites. Other Asian American category includes the following: Bangladeshi, Burmese, Cambodian, Hmong, Indian, Indonesian, Laotian, Malaysian, Pakistani, Sri Lankan, Taiwanese, Thai, Other Asian American (self-specified). Model adjusts for age, marital status, educational attainment, annual household income, insurance status, nativity, spoken English proficiency, and obesity.

Korean men had similar odds for high blood pressure diagnoses as non-Hispanic White men. With the exception of Filipino and Vietnamese men, Asian American men had lower odds of reporting disability than non-Hispanic White men. Chinese men ($OR = 0.42$, 95% CI [0.31, 0.57]), Japanese men ($OR = 0.53$, 95% CI [0.39, 0.73]), Korean men ($OR = 0.45$, 95% CI [0.27, 0.74]), and Other Asian American men ($OR = 0.65$, 95% CI [0.48, 0.88]) all had statistically significant lower odds of disability than non-Hispanic White men.

Although the focus of this article was to examine health outcome differences among subethnic groups of Asian American men relative to non-Hispanic White men, a supplemental analysis was conducted to compare only among subethnic groups of Asian American men with respect to the four primary health outcomes. Vietnamese men had greater odds of reporting fair or poor health compared with Chinese ($OR = 2.34$, 95% CI [1.35, 4.06]), Japanese ($OR = 3.90$, 95% CI [1.62, 9.41]), and Filipino ($OR = 2.26$, 95% CI [1.18, 4.34]) men. Other Asian American men ($OR =$

0.29, 95% CI [0.16, 0.55]) had lower odds of self-reported fair or poor health compared with Vietnamese men. Filipino ($OR = 2.69$, 95% CI [1.30, 5.56]) and Other Asian American ($OR = 2.40$, 95% CI [1.18, 4.91]) men had greater odds of being diagnosed with diabetes compared with Chinese men. Men identifying as Other Asian American had lower odds of being diagnosed with high blood pressure compared with Korean ($OR = 0.53$, 95% CI [0.29, 0.97]), Filipino ($OR = 0.42$, 95% CI [0.26, 0.66]), and Vietnamese ($OR = 0.49$, 95% CI [0.29, 0.84]) men. Filipino ($OR = 2.01$, 95% CI [1.15, 3.53]) men had greater odds of reporting disability compared with Chinese men. Greater odds of reporting disability were also observed for Vietnamese men compared with Chinese ($OR = 2.78$, 95% CI [1.51, 5.12]), Japanese ($OR = 2.03$, 95% CI [1.00, 4.10]), and Korean ($OR = 2.84$, 95% CI [1.23, 6.54]) men, while Other Asian American men ($OR = 0.53$, 95% CI [0.29, 0.96]) had lower odds of reporting disability relative to Vietnamese men.

Discussion

This study explored the association of race/ethnicity with health outcomes and health-related characteristics among Asian American men participating in the 2007, 2009, and 2011–2012 CHIS studies. In particular, the study examined differences in specific health outcomes across diverse groups of Asian American men in California, in comparison with non-Hispanic White men. This is thought to be the first study that has extensively studied health status and health outcome differences among Asian American men compared with non-Hispanic White men for all five major Asian subethnic groups in California. The observed subethnic group variations in demographics, nativity, English proficiency, and physical health characteristics support the need to disaggregate the different groups in order to obtain a more accurate portrayal of their health status (Holland & Palaniappan, 2012). Generalizing findings across all Asian American men may hinder them from accessing and receiving appropriate health care.

The evidence suggests variation among subethnic groups of Asian American men with respect to reports of fair or poor health. Vietnamese men had higher odds of reporting fair or poor health than non-Hispanic White men, with no significant differences across all other Asian ethnicities. No previous data on health status differences among Asian American men compared with non-Hispanic White men were available for comparison. Compared with studies on such differences among subethnic groups as a whole, not accounting for gender, the current findings are consistent with previous research reporting that the Vietnamese were more likely to rate their health poorly (Cho & Hummer, 2001; Frisbie et al.,

2001; Kandula et al., 2007; Tran, Nguyen, Chan, & Nguyen, 2013). However, other researchers observed Vietnamese health reports to be similar to those of the Chinese (Zhang & Ta, 2009), whereas in this study, Vietnamese men were almost twice as likely than Chinese men to report fair or poor health compared with non-Hispanic Whites. Existing research suggests that Vietnamese do not have significantly lower odds of having a usual source of health care compared with all other Asian ethnic groups (Chang, Chan, & Han, 2014), though per current findings, Vietnamese men had lower educational attainment, average annual household incomes, and lower spoken English proficiency than the other groups. Given the link between health status and resource availability, the lack thereof among Vietnamese men could explain this disparity in self-reporting of health status.

Korean, Filipino, and Other Asian American men had higher odds of reporting diabetes than non-Hispanic White men, consistent with existing findings of higher odds of reporting diabetes among Filipino and South Asian men compared with non-Hispanic Whites (Choi et al., 2013; Staimez et al., 2013; Wang et al., 2011; Yi & Trinh-Shevrin, 2015). Studies have identified that the observed disparity in diabetes reporting across groups remains even after controlling for differences in lifestyle and other risk factors (Choi, Chow, Chung, & Wong, 2011). This suggests that adopting a single approach to treating diabetes for all Asian American men will not sufficiently address the needs of each subethnic group (Nguyen et al., 2015). The findings from the current study further support and highlight the need to develop culturally appropriate strategies for diabetes-related health interventions across subethnic groups of Asian American men.

Compared with non-Hispanic White men, Filipino and Vietnamese men had higher odds of being diagnosed with high blood pressure, while Other Asian American men had lower odds of high blood pressure diagnosis. This adds to existing literature indicating higher odds of high blood pressure among Filipino men (B. Huang et al., 2013; Klatsky & Armstrong, 1991; Klatsky, Tekawa, & Armstrong, 1996; Zhao et al., 2015), which further supports national data indicating a higher likelihood of hypertension among Filipinos (Ye et al., 2009). Jose et al. (2014) observed similar ethnic heterogeneity in hypertension prevalence among the Vietnamese, Filipino, and Japanese populations, though findings were not specific to men. However, previous studies that controlled for nativity identified higher odds of hypertension only among U.S.-born Chinese men, suggesting that odds of high blood pressure may be affected by immigrant status (Klatsky & Armstrong, 1991; Klatsky et al., 1996). The current study did not stratify by nativity, so further research is needed to confirm these findings. Since hypertension is a risk factor for various chronic conditions, particularly heart disease, which

has a high prevalence among Asian American men and leads mortality rates among Japanese, Filipino, and South Asian men, (Aoki, Yoon, Chong, & Carroll, 2014; Hastings et al., 2015), the current findings underscore the importance of specialized hypertension and heart disease treatment and prevention strategies directed toward specific Asian subethnic groups of men.

Data from this study indicate statistically significantly lower odds of disability across all Asian American groups with the exception of Filipino and Vietnamese men, compared with non-Hispanic Whites. Vietnamese men had higher odds of disability, consistent with existing literature on this topic (Cho & Hummer, 2001; Fuller-Thomson et al., 2011; G. Kim et al., 2010). This could be attributable to various factors such as income and educational differences and immigration history, as well as effects from prior exposure to disability-enabling conditions (e.g., war, refugee camps, etc.; Fuller-Thomson et al., 2011). Though multiple studies have examined and identified intergroup differences in disability rates among elderly Asian Americans ages 65 and older as compared with non-Hispanic White men, the current study is one of few to have focused on disability among all adult Asian American males older than the age of 18 years by subethnic group (Cho & Hummer, 2001; Coustasse, Bae, Arvidson, & Singh, 2008; G. Kim et al., 2010). Aggregating data to represent Asian Americans as one group overlooks this variability and could potentially hinder Asian American men, particularly those who are older or at higher risk for disability, from accessing adequate care.

Several limitations of the study should be addressed. Since CHIS is only conducted in California, limited generalizations can be made, and further research is needed to compare current findings with national data. Moreover, because data were collected using a cross-sectional sample survey, assumptions about causality cannot be made. This study also did not discuss the effects of the control variables on subethnic group differences, though this is an important topic that should be examined in a separate study. Additional studies are also needed to examine ethnic group differences in chronic health outcomes beyond the four that were profiled in this study. Because of insufficient sample sizes from Asian American subethnic groups of men beyond the five major ones studied in this article (i.e., all groups included in the Other Asian American category—Bangladeshi, Burmese, Cambodian, Hmong, Indian, Indonesian, Laotian, Malaysian, Pakistani, Sri Lankan, Taiwanese, Thai, and Other Asian American [self-specified]), additional research is needed to examine differences in health outcomes between the aforementioned Asian American subethnic groups of men and non-Hispanic White men.

Notwithstanding, this study also has several strengths. The current study combined three CHIS data sets spanning

6 years of data collection, whereas most existing studies using CHIS to examine health outcome differences across Asian American ethnic groups and men in particular have only examined one data set (Maxwell, Crespi, Alano, Sudan, & Bastani, 2012; Paek & Lim, 2012). Combining multiple data sets ensured that each of the Asian American subethnic groups studied would have a sufficient number of men. While subethnic group differences among Asian American men have been previously examined at the national level (B. Huang et al., 2013), the authors believe that the current study's findings provide more recent estimates that reflect the change in the diversity of the United States, and more important, California, given that California houses both the largest population of Asians in the United States as well as one of the highest percentages of Asian American men (Hoeffel et al., 2012; U.S. Census Bureau, 2014). Moreover, given the paucity of research extensively comparing differences in self-reported overall health among the five major subethnic groups of Asian American men in comparison with non-Hispanic White men, this study provides important information that contributes to and builds on existing research highlighting the need to disaggregate health data on Asian American men.

Conclusion

Considering that a very high percentage of Asian American men reside in California, it is important to understand how the health status of Asian American men in this region differs by subethnic group compared with non-Hispanic White men. This study highlights the existence of heterogeneity in self-reported health status and health outcomes across racial/ethnic groups of Asian American men. Each subethnic group is unique in how social and cultural factors influence the health status of its members. Generalizing findings across all Asian Americans may overlook group-specific health factors that could hinder access to adequate care and affect the quality of current and future policies surrounding Asian American health. Given that Asian Americans are currently the fastest growing minority ethnic group in the United States and particularly in California, identifying and understanding the subethnic heterogeneity in health outcomes among Asian American men compared with non-Hispanic White men is important to successfully improve the overall health of this population. In addition, a tailored approach to developing culturally appropriate health promotion and prevention strategies among Asian American men is recommended.

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