

# Physical, Behavioral, and Mental Health Issues in Asian American Women: Results from the National Latino Asian American Study

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## Abstract

**Aims:** Asian American women's health has been understudied while the Asian American population is increasing. The purpose of this study was to examine the physical, behavioral, and mental health of Asian American women.

**Methods:** Using a nationally representative sample ( $n=1097$ ) from the National Latino Asian American Study (NLAAS), the first comprehensive epidemiologic survey in the United States, we examined the annual rates of behavioral, physical, and mental healthcare service use, including general medical, specialty mental health, and any medical services, in three major subgroups of Asian American women.

**Results:** Health problems varied with three major subgroups of Asian American women. In physical health, Chinese American women reported the highest rates of headache, other pain, hypertension, heart diseases, heart attacks, chronic lung diseases, and asthma. Vietnamese American women reported the highest rates of ulcer, stroke, and diabetes. Filipino American women had the highest rates of cancers and epilepsy. In behavioral health, Filipino women ranked highest on all types of drug use and cigarette smoking, compared with their counterparts. In mental health, Filipino American women reported significantly better mental health self-rating compared with their Chinese and Vietnamese American counterparts. Asian American women from each ethnic group sought health services at distinct rates. However, the help-seeking patterns of health services are similar.

**Conclusions:** Asian American women encountered various physical, behavioral, and mental health problems, yet they had low rates of seeking healthcare services. Hence, it is critical to further examine factors associated with the underestimation of physical and mental health problems and underuse of health services by Asian American women.

## Introduction

ASIAN AMERICANS IN THE UNITED STATES are less likely to seek help for physical, behavioral, and mental health issues compared with their European American counterparts.<sup>1</sup> There are a number of major factors contributing to this underuse pattern in Asian Americans. For example, Asian American patients rate their healthcare poorly.<sup>2</sup> They also report less positive interactions with healthcare providers.<sup>3</sup> Between 1990 and 2000, >65% of Asian Americans were not born in the United States, resulting in a cultural and linguistic diversity within this population.<sup>4</sup> However, healthcare providers often fail to recognize cross-cultural differences and

barriers that contribute to disparities in providing healthcare to ethnic minorities.<sup>5-7</sup> Compared to European Americans, ethnic minorities generally tend to have lower levels of trust and satisfaction with their physicians.<sup>8</sup> When providers learn Asian Americans' cultures and culture-based practices, however, Asian Americans perceive improved health services.<sup>9</sup> Asian Americans not only rate their healthcare experiences more positively when providers respect and learn about their traditions but also seek out providers who respect their culture-based health beliefs and practices.<sup>3</sup>

With respect to physical health service use, there are mixed findings about the predictive pattern of immigration variables.<sup>10,11</sup> Asian Americans born in the United States are more

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likely than those who immigrated to the United States to use healthcare services.<sup>12,13</sup> Obesity in Asian Americans (both foreign-born and U.S.-born), as measured by body mass index (BMI), was strongly associated with length of residence in the United States. In general, Asian Americans living in the United States have higher levels of abdominal fat at lower BMIs than do white people.<sup>14</sup> From 1999 to 2003, cardiovascular disease (CVD) was the leading cause of death in Asian Americans in the United States, accounting for almost a third of Vietnamese Americans' deaths.<sup>15</sup> In particular, 23% of Asian American women reported high blood pressure, and 20% had two or more risk factors for coronary heart disease.<sup>16</sup> Compared with their European American counterparts, Asian American women had lower mammography usage, suggesting the need for health education.<sup>17</sup> Asian American adults are less likely than white adults to have heart disease and hypertension.<sup>18</sup>

With respect to mental health services use, there is evidence suggesting many barriers to care-seeking faced by ethnic minorities, including lack of time, insurance, and English proficiency.<sup>19</sup> Acculturative stress has been found to be associated with mental health problems in Korean Americans living in the United States.<sup>20</sup> Chung and Kagawa-Singer<sup>21</sup> found that Vietnamese American and Lao American refugee women were more likely to experience distress than their male counterparts. Immigrant Asian American women who had been in the United States the least number of years reported higher depression scores than women who had lived in the United States longer and were more acculturated.<sup>22</sup> Research also shows that Asian refugees are more likely to report depressive symptoms than are Asian immigrants who voluntarily come to the United States.<sup>23,24</sup>

Immigration status presents significant challenges for mental health systems in minority communities, particularly in determining if current services can adequately meet the needs of diverse Asian American groups. Asian immigrants may have unique help-seeking patterns and may receive a different quality of care from mental service providers compared to their U.S.-born counterparts.<sup>4,25</sup> Also, Asian Americans are deterred from seeking mental healthcare and following appropriate treatment guidelines.<sup>26</sup> Previous studies have indicated that Asian immigrants frequently report fear of rejection and stigma associated with mental disorders and are concerned that their confidentiality would not be maintained if they seek mental health services.<sup>18,25,27</sup>

Asian women are much less likely than white women to seek mental health services.<sup>28</sup> This is in part because of gender or race/ethnicity discrimination, causing lower levels of satisfaction with mental health service seeking.<sup>29</sup> The satisfaction of service use among Asian American women is positively associated with age, education, and duration in the United States. These findings point to a need for more in-depth studies on Asian American mental health.<sup>29</sup> Evidence suggests that Asian American women's health behavior differs from that of Asian men. Compared with Asian American men, more women suffer from depression within this subpopulation.<sup>30</sup> Asian women also have higher depression scores<sup>1</sup> and engage in fewer physical activities than Asian males.<sup>31</sup> Korean American women are four times more likely than men to be exposed to smoking in the home.<sup>32</sup> In fact, foreign-born status, lower acculturation, female gender, and large family size have been associated with smoking at home.<sup>33</sup> Also, the study by Coronado et al.<sup>34</sup> conducted in the

Seattle area found that Vietnamese American women are less engaged in physical activities and also found a positive association between smoking and acculturation.

It is evident that the manifestations of distress, negative emotion, and depression in Asians, including Asian American women, are more somatic than emotional.<sup>35</sup> National data suggest that Asian immigrants generally have lower rates of major depression than do U.S.-born Asians.<sup>35,36</sup> In their respective cultures, however, somatic symptoms of mental health problems are generally accepted.<sup>37,38</sup> Depression tends to be masked by psychosomatic symptoms, and chronic illnesses tend to be overlooked in these populations, which could lead to underdiagnosis of such problems.<sup>39,40</sup> Other studies showed that Asian Americans are underrepresented in mental hospitals and outpatient clinics.<sup>41,42</sup> Chinese Americans who lack social support, who rated their health as poor, and who reported high levels of life stress are at an increasing risk of experiencing depression.<sup>43</sup> Korean American immigrants reported higher depression scores than whites on symptom scales.<sup>44,45</sup> In addition, being female and being older are associated with poor self-rated health in a study of Asian Indian immigrants.<sup>46</sup>

To date, most studies on Asian American women have used local samples. As insufficient national data are available on their physical, behavioral, and mental health issues, it is difficult to establish culturally appropriate physical and mental health services for these groups. To bridge the gap, this study aims to provide an overall estimate of the physical, behavioral, and mental health-related issues facing Asian American women, as well as their general healthcare-seeking pattern, using the first nationally representative data from the National Latino Asian American Study (NLAAS).<sup>47,48</sup> In addition, we examined annual use of mental health-related services and the associations among different facets of immigration, including nativity, length of residency, age of arrival, and generational status based on data from the NLAAS.

## Materials and Methods

### Data source

The NLAAS is the first national population-based mental health study of Latino and Asian Americans, with data collected from May 2002 to December 2003. The questionnaire was available in six languages: English, Spanish, Cantonese, Mandarin, Tagalog, and Vietnamese. The sampling procedure for the NLAAS was previously documented, and weights were developed to correct for sampling bias for the total sample and for the four Asian American subgroups (Chinese, Filipino, Vietnamese, and other, which includes Koreans, East Indians, Japanese, Laotian).<sup>47,48</sup> The three stages of sampling have been documented previously and included (1) core sampling, in which primary sampling units (defined as metropolitan statistical areas or county units) and secondary sampling units (formed from contiguous groupings of census blocks) were selected with probability proportionate to size; from the primary and secondary units, housing units and household members were sampled; (2) high-density supplemental sampling to oversample census block groups with >5% density of target ancestry groups; and (3) second respondent sampling to recruit participants from households in which one eligible member had already been interviewed.<sup>47,48</sup> Individuals of Asian ancestry who did not

belong to the target groups under which these geographic areas were classified were still eligible to participate. All NLAAS participants were interviewed by trained bilingual interviewers. For quality control, a random sample of participants who had completed interviews was recontacted to validate the data.

The NLAAS was designed in coordination with and as a part of the Collaborative Psychiatric Epidemiology Studies (CPES), which includes NLAAS, the National Survey of American Life, and the National Comorbidity Survey Replication. This is to compare the association of immigration factors with the use of mental health services across three major racial and ethnic categories: African Americans, Asian Americans, and Latino Americans. The sample for NLAAS consists of primary sampling units selected with probabilities proportional to size. In cases where a member of the survey population reported belonging to more than one Asian American target population, the following order of priority was used to assign individuals to a single group for the purpose of the stratified sample selection: (1) Vietnamese, (2) Filipino, (3) Chinese. Using the interval estimates from other CPES studies, the NLAAS uses Bayesian methods to produce weighted estimates.

The NLAAS identified the three major ethnic groups (Chinese, Filipino, and Vietnamese Americans) and amalgamated other Asian Americans into a single category labeled other. The total sample size of the NLAAS was 4649, including 2554 Latinos and 2095 Asian Americans. Our study sample comprised 1097 Asian American women aged  $\geq 18$  years residing in the United States, including 316 Chinese, 273 Filipino, 277 Vietnamese, and 231 other Asians. The remaining 998 were males  $>18$  years old and were excluded from this study.

#### Measures and variables

The NLAAS data included social demographics, mental health screening and diagnosis, health service usage, and evaluations, among other data.

**Chronic conditions.** The participants were asked if they had had any health problems at any time in their lives. The list of problems included arthritis, back problem, frequent headaches, chronic pain, allergies, stroke, heart disease, high blood pressure, asthma, chronic lung disease, diabetes, ulcer, epilepsy, and cancer. These were all self-reported.

**Behavioral health and drug and substance use.** BMI was computed according to BMI World Health Organization (WHO) and Asian guidelines: WHO standards: underweight (BMI  $< 18.5$ ), normal (BMI 18.5–25), overweight (BMI 25–30), obese (BMI  $\geq 30$ )<sup>49</sup>; Asian standards: underweight (BMI  $< 18.5$ ), normal (BMI 18.5–22.9), overweight (BMI 23–24.9), obese (BMI  $\geq 25$ ).<sup>50</sup> Height and weight were self-reported. Smoking and other drug use also were assessed and were self-reported. The substance use items we examined were self-reported, and all of them involved recreational drugs (other drug use), such as marijuana and cocaine.

**Mental health issues.** A battery of mental health measurements based on the *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. (DSM-IV)<sup>51</sup> were included in the

questionnaire, administered by the interviewer, and also self-rated. We studied the prevalence of 12-month depression and the self-rating in this article. The World Mental Health Survey Initiative version of the WMH-CIDI<sup>52</sup> was used to assess 12-month presence of depression using criteria from DSM-IV.<sup>51</sup>

**Service seeking frequency.** The participants were asked about mental health service use and visits both to physicians and to mental health professionals.

#### Statistical analysis

Descriptive analyses were performed for all variables of interest. The actual number of cases was reported for the three ethnic groups, as well as the whole and other groups, and their representative percentage in the population was computed and reported using weights to correct potential sampling bias. Chi-square tests were used to compare differences in categorical variables among the selected Chinese, Filipino, Vietnamese, and other Asian American women. All analyses were performed using SPSS version 18 (IBM Corporation, Somers, NY). Statistical significance was determined at an alpha level of 0.05 for all tests.

## Results

### Demographics

Among the Asian American women in our analysis, age ranges from 18 to 88, with a median at 41; education level ranges from 4th grade to 17 years, with a median of 13 years; income is measured using the 2001 Census household income/needs ratio. The average English proficiency was 2.74 (range 1–4), with 4 being the most proficient. In our study sample, the mean of years in the United States was 3.19 (range 1–5), with 1 = U.S.-born, 2 = 0–5 years, 3 = 6–10 years, 4 = 11–20 years, 5  $\geq 21$  years (Table 1).

### Physical health and chronic conditions

Chronic conditions reported by Asian American women were significantly different in allergies/hay fever ( $p = 0.029$ ), back/neck pain ( $p = 0.016$ ), diabetes ( $p = 0.033$ ), headaches ( $p = 0.001$ ), and high blood pressure ( $p < 0.001$ ) among ethnic

TABLE 1. DEMOGRAPHIC AND ACCULTURATION VARIABLES FOR ASIAN AMERICAN WOMEN, NATIONAL LATINO AND ASIAN AMERICAN STUDY, 2002–2003 (N = 1097)

Variable	Mean	SD	Minimum	Maximum
Demographic variables				
Age	41.19	14.45	18	88
Education (years)	13.39	3.42	4	17
Employment	0.59	0.49	0	1
Income	5.29	4.83	0	17
Acculturation variables				
Acculturation stress	0.20	0.17	0	1
Birthplace (US-born, 1)	0.21	0.41	0	1
Discrimination	1.69	0.68	1	6
English proficiency	2.74	1.06	1	4
Years in United States (categorical)	3.19	1.33	1	5

SD, standard deviation.

subgroups (Table 2). Among Asian American women, high blood pressure, arthritis, back pain, headache, and allergies were reported at the highest rates, whereas chronic lung disease, heart attack, and stroke were reported at the lowest (Table 2). There are differences among the major subgroups in terms of both the number of chronic conditions and individual diseases. Of Filipino American women, 47% reported having at least two chronic diseases, compared with 38% of Chinese American and 29% Vietnamese American women, who reported at least two or more chronic diseases. Concerning chronic conditions, Chinese American women reported the highest rate of high blood pressure (23.5%), headache (22.8%), arthritis (20.7%), chronic lung diseases (1.3%), and asthma (9.2%) compared with Vietnamese American and Filipino American women. Both Chinese American and Filipino American women also reported higher rates of cancers (2.1% and 2.5%, respectively) and chronic back/neck problems (21.4%) compared with Vietnamese American women (13.2%). Comparatively, Filipino American women had the highest rates of cancer (2.5%), whereas Vietnamese had higher prevalence of stroke (1.7%) and ulcer (6.9%). All three subgroups reported similar rates of diabetes and allergies.

**Behavioral health and substance use**

Based on the WHO standard of BMI categories, the study population comprises 7.1% underweight, 64.0% normal weight, 17.6% overweight, and 9.2% obese. According to the BMI (Asian) categories, 7.1% are underweight, 44.3% are normal weight, 19.7% are overweight, and 26.8% are obese. Among the ethnic groups, of Filipino American women, about 23% were overweight (BMI  $\geq 25$  kg/m<sup>2</sup>, using WHO standard), whereas

Vietnamese and Chinese American women had lower BMIs, 11%–12% (Table 3) ( $p < 0.001$ ). Filipino women also had the highest proportion of overweight and obesity.

Table 3 also shows the proportion of the study population using substances: 7.1% were current smokers, 9.0% were former smokers; 14.6% ever used marijuana; 4.2% were cocaine; 5.3% ever abused prescription medication; and 3.3% ever used other drugs. There were group differences ( $p < 0.001$ ): 8.2% of Filipino American women were current smokers, compared with 6.0% and 2.3% of Chinese American and Vietnamese American women, respectively. Filipino American women had the highest rate of marijuana use (21.7%), cocaine use (6.4%), prescription drug abuse (9.1%), and other drug use (7.1%). Vietnamese American women had the lowest rates. Filipino women also had the highest BMIs.

**Mental health status and ratings**

Table 4 shows that among Asian American women, 28.8% rated their mental health status as excellent and 32% as very good, and 10.2% rated theirs as fair or poor. Reporting of DSM-IV major depressive disorder in the past 12 months was 5%. In subgroup analyses, 78% of Filipino American women rated their mental health as excellent/very good, compared with 45% for Chinese and 50% for Vietnamese. On the other hand, only 7% of Filipinos reported fair, compared with 13% of Vietnamese American women and 17% of Chinese American women.

**Health service seeking**

Table 5 shows that among Asian American women, 171(15.6%) had ever sought help from healthcare service

TABLE 2. NUMBER AND WEIGHTED PERCENTAGES OF CHRONIC CONDITIONS REPORTED BY ASIAN AMERICAN WOMEN BY ETHNIC SUBGROUP, NATIONAL LATINO AND ASIAN AMERICAN STUDY, 2002–2003

Self-reported chronic conditions	Asian ethnic subgroups										p <sup>b</sup>
	Total		Chinese		Filipino		Vietnamese		Other <sup>a</sup>		
	n=1097	%	n=316	%	n=273	%	n=277	%	n=231	%	
Allergies/hay fever	354	31.4	121	32.1	89	31.4	81	30.1	63	28.5	0.029
Arthritis	199	18.4	62	20.7	54	18.4	55	13.5	28	16.3	0.061
Asthma	85	8.4	23	9.2	29	8.4	13	4.1	20	10.8	0.068
Back/neck pain	230	21.7	75	21.4	66	21.7	40	13.2	49	22.5	0.016
Cancer	18	2.5	5	2.1	6	2.5	2	0.8	5	4.6	0.499
Chronic lung disease	5	0.5	2	1.3	3	0.5	0	0.0	0	0.0	0.169
Diabetes	82	8.4	12	8.2	24	8.4	24	9.8	22	12.5	0.033
Epilepsy	7	1.0	1	0.4	2	1.0	1	0.5	3	1.7	0.497
Headaches	195	17.6	43	22.8	64	17.6	37	13.5	51	20.2	0.001
Heart disease	8	0.7	2	0.9	3	0.7	1	0.5	2	0.7	0.769
Heart attack	38	3.0	9	4.8	15	3.0	11	3.8	3	2.6	0.066
High blood pressure	155	15.7	30	23.5	64	15.7	38	13.2	23	15.8	0.000
Other chronic pain	87	6.7	30	6.4	26	6.7	20	6.4	11	3.5	0.146
Stroke	12	0.8	3	1.3	4	0.8	4	1.7	1	0.2	0.647
Ulcer	63	4.6	17	9.4	16	4.6	21	6.9	9	3.4	0.352

These are raw numbers. The percentages are the weighted %. The weights are created based on demographic, social, and economic variables to correct for sampling bias. Weighting was previously reported by Alegria et al.,<sup>47</sup> and Heeringa et al.<sup>48</sup>

<sup>a</sup>Other: East Indians, Japanese, Koreans, Laotians.

<sup>b</sup>p reported here from chi-square cross-tabs used to compare difference in percentages of self-reported chronic conditions between Asian ethnic subgroups.

$p < 0.05$  is statistically significant and indicates that comparison of the subgroup difference is significant at 0.05.

TABLE 3. BEHAVIORAL RISK FACTORS (OBESITY AND SUBSTANCE USE) IN ASIAN AMERICAN WOMEN BY ETHNIC SUBGROUP, NATIONAL LATINO AND ASIAN AMERICAN STUDY, 2002–2003

Risk factors	Asian ethnic subgroups										p <sup>b</sup>
	Total		Chinese		Filipino		Vietnamese		Other <sup>a</sup>		
	n=1097	%	n=316	%	n=273	%	n=277	%	n=231	%	
BMI (WHO standard) <sup>c</sup>											0.000
Underweight	81	7.1	36	14.1	7	1.8	22	8.5	16	4.2	
Normal	732	64.0	224	70.3	159	57.2	214	78.1	135	58.2	
Overweight	190	17.6	40	11.7	68	23.0	68	23.0	46	21.4	
Obese	78	9.2	14	3.3	31	14.0	31	14.0	30	13.9	
BMI (Asian standard) <sup>c</sup>											0.000
Underweight	81	7.1	36	11.1	7	1.8	22	8.5	16	4.2	
Normal	527	44.3	170	54.6	102	35.5	171	62.5	84	35.0	
Overweight	205	19.7	54	15.8	57	25.7	43	15.7	51	23.1	
Obese	268	26.8	54	15.0	99	37.1	39	11.6	76	35.4	
Smoking											0.000
Current smoker	68	7.1	18	6.0	21	8.2	7	2.3	22	9.0	
Ex-smoker	93	9.0	17	4.0	41	15.2	5	2.9	30	11.4	
Never smoked	936	83.9	281	90.0	211	76.6	265	94.8	179	79.6	
Used marijuana	152	14.6	33	9.8	67	21.7	7	3.0	45	18.3	0.000
Used cocaine	43	4.2	8	2.1	17	6.4	2	0.7	16	5.8	0.000
Abused prescription drugs	60	5.3	9	2.3	24	9.1	9	3.5	18	6.0	0.002
Used other drugs	36	3.3	8	2.1	18	7.1	2	0.7	8	3.0	0.001

The percentages are the weighted %. The weights are created based on demographic, social, and economic variables to correct for sampling bias. Weighting was previously reported by Alegria et al.<sup>47</sup> and Heeringa et al.<sup>48</sup>

<sup>a</sup>Other: East Indians, Japanese, Koreans, Laotians.

<sup>b</sup>These are raw numbers. *p* reported here from chi-square cross-tabs used to compare difference in percentages of self-reported body mass index (BMI) and substance use between Asian subgroups. *p* < 0.05 is statistically significant and indicates that comparison of the subgroup difference is significant at 0.05.

<sup>c</sup>BMI calculations: World Health Organization (WHO) standard: underweight (BMI < 18.5), normal (BMI 18.5–24.9), overweight (BMI 25–29.9), obese (BMI ≥ 30).

Asian standard: underweight (BMI < 18.5), normal (BMI 18.5–22.9), overweight (BMI 23–24.9), obese (BMI ≥ 25).

providers for mental health-related issues. The proportion of women who had ever sought mental health services was statistically different among groups (*p* < 0.001). The three major subgroups, however, had different healthcare use patterns of healthcare services. Chinese American and Filipino

American women saw mental health professionals most frequently, and Vietnamese American women visited them least frequently. There was no difference in terms of the type of health professional they received help from in the last 12 months.

TABLE 4. ASIAN AMERICAN WOMEN'S MENTAL HEALTH RATINGS BY ETHNIC SUBGROUP USING NATIONAL LATINO AND ASIAN AMERICAN STUDY, 2002–2003

Self-rating of mental health <sup>b</sup>	Asian ethnic subgroups										p <sup>c</sup>
	Total		Chinese		Filipino		Vietnamese		Other <sup>a</sup>		
	n=1097	%	n=316	%	n=273	%	n=277	%	n=231	%	
Rating categories											0.000
Excellent	304	28.8	54	16.1	92	31.5	76	26.7	82	38.0	
Very good	361	32.0	93	28.7	124	46.4	69	24.5	75	28.6	
Good	303	29.0	115	38.2	41	15.1	91	36.2	56	27.4	
Fair	102	8.7	49	15.4	16	7.0	21	6.5	16	5.4	
Poor	27	1.5	5	1.6	0	0.0	20	6.2	2	0.6	
12-month DSM-IV for depression	55	5.0	21	6.4	12	4.4	9	2.4	13	5.2	0.264

The percentages are the weighted %. The weights are created based on demographic, social, and economic variables to correct for sampling bias.

The World Health Organization Composite International Diagnostic Interview (WMH-CIDI) was used to assess 12-month presence of depression using criteria from DSM-IV.

<sup>a</sup>Other: East Indians, Japanese, Koreans, Laotians.

<sup>b</sup>Mental health self-rating categories: excellent = 5, very good = 4, good = 3, fair = 2, poor = 1.

<sup>c</sup>*p* reported here is from chi-square cross-tabs used to compare difference in percentages of self-reported mental health rating and depressive episodes in the past 12 months between Asian ethnic subgroups. *p* < 0.05 is statistically significant and indicates comparison of the subgroup difference is significant at 0.05.

TABLE 5. ASIAN AMERICAN WOMEN'S MENTAL HEALTH SERVICE SEEKING BY ETHNIC SUBGROUP USING NATIONAL LATINO AND ASIAN AMERICAN STUDY, 2002–2003

Type and frequency of mental health service seeking <sup>a</sup>	Asian American subgroups										p <sup>c</sup>
	Total		Chinese		Filipino		Vietnamese		Other <sup>b</sup>		
	n=1097	%	n=316	%	n=273	%	n=277	%	n=231	%	
Lifetime-ever seek mental health service	171	15.6	58	17.3	49	16.7	26	6.8	38	16.6	0.011
Last 12 months, general practitioner	31	2.8	9	2.9	7	2.3	9	2.7	6	3.0	0.961
Last 12 months, specialist	36	2.9	11	3.7	6	1.9	10	3.0	9	3.0	0.701
Last 12 months, other health provider	38	3.6	10	3.2	12	5.1	7	2.8	9	3.2	0.648

The percentages are the weighted %. The weights are created based on demographic, social, and economic variables to correct for sampling bias.

<sup>a</sup>Lifetime-ever seek, includes all types of providers: General practitioner: family/general practice medical doctor; Specialist: psychiatrist, psychologist; Other health provider: D.O., R.N., O.T./P.T., M.S.W., counselor, other mental health provider, religious or spiritual healer.

<sup>b</sup>Other: East Indians, Japanese, Koreans, Laotians.

<sup>c</sup>p reported here is from chi-square cross-tabs, to compare difference in percentage of self-reported help-seeking behaviors among Asian ethnic subgroups.

p < 0.05 is statistically significant and indicates comparison of the subgroup difference is significant at 0.05.

## Discussion

This study may be among the first of its kind to examine the differences and similarities among the three major ethnic subgroups of Asian American women, Chinese, Filipino, and Vietnamese in regard to physical, behavioral, and mental health issues using a national dataset. This article examines the differences and similarities among major subgroup Asian American women in regard to physical, behavioral, and mental health issues. Our study findings confirm that the members of each subgroup encounter physical, behavioral, and mental health issues, but in different ways. The present study also shows different service use patterns with respect to health service seeking. The reasons for different use patterns could be a matter of cultural factors, barriers to receiving mental health help, use of nonprescription drugs for mental health problems, language barriers, and varying language proficiency among the three ethnic subgroups. Filipinos present an example of this in that they have higher rates of depression but lower rates of seeking help. This could be explained by their higher rate of religious attendance, which is associated with greater social support,<sup>53</sup> or their higher self-rating for mental health, as shown in this study. Filipinos in a collectivist culture prefer to seek help from their faith-based network rather than from mental health professionals.

Particularly noteworthy is that Chinese American women ranked poorer in itemized physical health problems than did their Filipino American and Vietnamese American counterparts. Not surprisingly, they also reported poorer mental health than did the two other groups. Most importantly, among all chronic conditions, nearly one fourth of Chinese American women reported hypertension, which was clearly associated with their higher rates of several CVDs, as the number one killer of Americans. This is consistent with their having the highest rate of use of general and specialized healthcare. For example, over the past decade, more than 100 reviews and numerous meta-analyses associated depression with CVD, although rates of the former vary with the instrument used. However, these interpretations are speculative and remain to be confirmed by actual health-related in-depth survey data.<sup>53</sup>

Similar to Vietnamese American women, Chinese American women reported the worst mental health on their self-rating scales, which is in line with their highest rate of CVD. This evidence lends support to other studies that have linked poor mental health with CVD in mainstream Americans.<sup>53,54</sup> Filipino American women reported the highest behavioral risk factors, that is, obesity, smoking, and substance abuse, despite their best self-rating for mental health. Whether their substance use has skewed their report of symptoms or whether better physical health support is at work, Filipino Americans' superior mental health remains an interesting subject to explore.

A previous study found poor English proficiency and discrimination to be major risk factors for depression.<sup>55</sup> Compared with their Filipino counterparts as native English speakers, both Chinese American and Vietnamese American groups appeared more disadvantaged in acculturation. This could well affect their successful adaptation to a new culture and lead to more perceived culturally based discrimination, racism, and social isolation. These potential risks for the two major Asian American subgroups of women warrant more research in order to identify protective factors and better mental healthcare for them. Because Filipinos are descendants of Pacific Islanders, they may have significant differences in culture, socioeconomic status, immigration history, and genetic makeup from the other two Asian subgroups. Clearly, future studies should explore differential protective and risk factors in different Asian subgroups.

It is critical for health providers to recognize and understand the importance of culturally sensitive treatments for ethnic minorities. Such treatment approaches are needed to eliminate disparities in physical and mental health.<sup>3</sup> Our findings suggest that cultural sensitivity should include an awareness of the potentially positive role of faith in Asian Americans and a willingness to recommend faith to mental health clients as one potential resource.<sup>54</sup> Such sensitivity might bring about increased service use by Asian Americans. Healthcare systems must develop culturally sensitive services for the various needs of different minority groups in order to provide efficient and cost-effective healthcare.

Although the study provides general information on major health issues facing Asian American women, it uniquely presents marked differences among the major ethnic groups that warrant further investigation. Therefore, it is imperative that we learn more about the differences and long-term issues facing Asian American women, including the causes and triggers. Researchers should also examine whether such variables as health insurance play a role in seeking health-care services for behavioral, physical, and mental health services and if discrimination plays a role as well in self-reported mental health.

### Limitations

Our study has several limitations. First, our findings could be subject to recall bias. The data do not reveal whether any causal relationship exists. However, our findings are consistent with the literature on the adverse effects of racial discrimination.<sup>56,57</sup> Second, because the NLAAS was the first national study of Asian Americans, relatively large samples of certain Asian ethnic groups (Chinese, Filipino, and Vietnamese) were included. We are aware that other Asians were integrated into a single category even though they represent a variety of languages, ethnicities, cultures, and practices. Other Asian ethnic groups, such as Korean, Japanese, and East Indian, three major socioeconomically successful Asian American groups, were underrepresented and included in the other Asian category. This allowed for a national estimate of psychiatric disorders for Asian Americans. However, we were not able to perform any detailed analyses with the other Asian category, and the current findings cannot be generalized to these three subgroups. This fact points to the need for more diverse sampling and recruitment procedures in future studies.

Lastly, NLAAS was based on psychiatric disorders defined by the western DSM-IV, which allowed us to compare mental disorders within the same measure. However, rates of mental disorders may have been underestimated, as immigrants might express their mental health problems in distinctive ways not identified in the DSM-IV.

Despite previously mentioned limitations, our study is timely because there is increasing awareness of minority health and mental health needs that are understudied and underrecognized. Our study represents an initial effort to present a national picture of physical, behavioral, and mental health of Asian American women. The information from this study may have implications for future health practice on physical and mental health issues encountered by Asian Americans. Future studies should also address these issues because of the increasing diversity within many Asian subgroups.

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The authors have no conflicts of interest to report.

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