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Smoking prevalence and correlates among Chinese- and Filipino-American adults: Findings from the 2001 California Health Interview Survey

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Abstract

Objectives—We report prevalence rates and correlates of cigarette smoking among a population-based sample of Chinese- and Filipino-American adults together with rates found in other racial/ethnic groups in California.

Methods—All analyses are based on the 2001 California Health Interview Survey.

Results—The proportion of current smokers among males was lowest among Chinese Americans (14%), followed by Non-Hispanic Whites (19%), Hispanics (20%), African Americans (22%), Filipino Americans (24%), American Indians/Alaska Natives (29%), and Pacific Islanders (32%). The proportion of current smokers among females was lowest among Chinese Americans (6%), followed by Hispanics (8%), Filipino Americans (11%), Non-Hispanic Whites (17%), African Americans (20%), Pacific Islander (21%), and American Indians/Alaska Natives (32%). Smoking rates were higher among foreign-born versus U.S.-born Asian males. CHIS data show an opposite effect among Asian women: acculturation to the U.S. is associated with increased smoking prevalence rates. Multivariate analyses with Chinese and Filipino respondents showed that the likelihood of smoking varied among foreign-born versus U.S.-born men (OR 2.59 for Chinese, 1.42 for Filipino, 2.01 for all Asian men combined) and for foreign-born versus U.S.-born women (OR 0.41 for Chinese, 0.38 for Filipino, and 0.59 for all Asian women combined).

Conclusion—Public health intervention efforts should take into account Asian ethnic subgroup, gender, and acculturation status in targeting high-risk smoking groups.

Keywords

Population-based survey; Smoking; Asian American; Correlates

Introduction

Tobacco use among Asian Americans appears to be very common, but information on prevalence rates and on correlates of cigarette smoking among Asian Americans is lacking. In general, published studies are limited by one of two shortcomings: Some studies survey

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members of a specific Asian-American ethnic group using culturally and linguistically appropriate survey methodology but study participants are often recruited only in areas where they are highly concentrated [1–3]. This raises questions regarding the generalizability of their findings. Other studies such as the National Health Interview Survey or the Current Population Survey Tobacco Use Supplement use national probability samples from which results can be more confidently generalized. However, because these national surveys are not conducted in Asian languages, they represent only English-speaking Asians. In addition, they usually aggregate all Asian subgroup responses under the rubric “Asian” because the surveys lack sufficient sample sizes in specific Asian subgroups to permit reasonably precise prevalence estimates for Asian subgroups.

Lew and Tanjasiri recently reviewed the available literature on tobacco use among Asian-American populations [4]. In contrast to the low smoking rates found in national studies [5], smoking rates among Asian-American men ranged from 26% in South Asian and Hmong samples to more than 70% in Cambodian and Laotian samples. Smoking rates among Asian-American women ranged from 1% to 7% in many of the studies reviewed, but were substantially higher in Cambodian and Native Hawaiian samples. Most of the rates that were summarized in this review were found in localized studies: For example, the two studies with Chinese Americans were conducted in Oakland Chinatown and in Chicago Chinatown [3,6].

Several recent studies among Chinese-American men have assessed the influence of acculturation on smoking prevalence, using different measures of acculturation. Two studies found that low English proficiency was a significant predictor of smoking [3,7]. Another study found a higher smoking prevalence among foreign-born Chinese Americans residing in San Francisco than among their U.S.-born peers [2]. However, the effect of acculturation has not been explored among many other Asian groups (including Filipinos) and among Asian-American women.

The two largest Asian-American subgroups in the U.S. are Chinese (2.7 million) and Filipino (2.4 million). These two Asian subgroups also have the largest number of foreign-born populations. California, by far, has the largest Asian population (4.2 million), followed by New York (1.2 million) and Hawaii (0.7 million) [8,9]. In 2001, the California Health Interview Survey was conducted to provide statewide information about health practices and access to care for California’s ethnically diverse population.

The purpose of this paper is to report adult cigarette smoking rates among a population-based sample of Asian Americans and specifically for two large Asian subgroups, Filipinos and Chinese, together with rates found in other racial/ethnic groups in California. We are also comparing correlates of current cigarette smoking among racial/ethnic groups, including place of birth and length of stay in the United States for two population groups with large numbers of immigrants, Asian Americans and Hispanics. Finally, we constructed multivariate models to isolate the independent contributions of factors such as age, education, country of birth, years in the U.S., and level of spoken English on smoking status. All analyses are based on the 2001 CHIS.

The California Health Interview Survey (CHIS)

CHIS is the largest health survey that has ever been conducted in California or any other state. CHIS 2001 collected information by phone interview from 55,428 randomly selected households and oversampled another 1765 households of specific ethnic groups. CHIS telephone surveys were conducted in English, Spanish, Chinese (Cantonese and Mandarin), Korean, Vietnamese, and Khmer with an overall response rate of 43%. (See <http://www.chis.ucla.edu> for more information on sample selection, content of the survey, and protocols). Thus, CHIS is the first random-digit dial survey that includes a large number of

AAPIs, including many respondents who would not participate in a survey that was only available in English language. Previous reports have shown that the CHIS sample reflects the population residing in California with respect to ethnic distribution and household income [10].

Analysis

CHIS data obtained through the random-digit dial telephone survey that was conducted in 2001 were analyzed to compute rates of never smoking (smoked less than 100 cigarettes in entire life), former smoking (smoked at least 100 cigarettes in entire life and does not smoke at all now), and current smoking (smoked at least 100 cigarettes in entire life and smokes now every day or some days) by gender. Smoking status was assessed in the following racial/ethnic groups: Non-Hispanic Whites, Hispanics, African Americans, American Indian/Alaska Natives, Pacific Islander, Asian, Asian Chinese, and Asian Filipino. Next, we explored bivariate correlates of current smoking in the four largest racial/ethnic groups and the two largest Asian subgroups using *t* tests for continuous variables and chi-square tests for categorical variables. Correlates included age, marital status, education, employment, household income, country of birth, and, among foreign-born respondents, years in the U.S. and level of spoken English.

Descriptive and logistic regression analyses were weighted, using SUDAAN, to reflect the population composition using census data. Estimates for the standard errors were computed using the jackknife method [11].

Results

Sample characteristics

As shown in Table 1, smoking information was available from 53,907 randomly selected adults. Their ethnic breakdown was: 68% Non-Hispanic White, 18% Hispanic, 7% Asian, 5% Black, 1.4% American Indian/Alaska Natives, and 0.4% Pacific Islanders. About 41% of the sample were male. About 65% of Hispanics and 77% of Asians were foreign-born.

Smoking prevalence

The proportion of current smokers among males was lowest among Chinese Americans (14%), followed by Non-Hispanic Whites (19%), Hispanics (20%), African Americans (22%), Filipino Americans (24%), American Indians/Alaska Natives (29%), and Pacific Islanders (32%). Overall, 21% of Asian males were current smokers, with lower smoking rates among Chinese (14%) and higher smoking rates among Filipinos (24%). The proportion of current smokers among females was lowest among Chinese Americans (6%), followed by Hispanics (8%), Filipino Americans (11%), Non-Hispanic Whites (17%), African Americans (20%), Pacific Islander (21%), and American Indians/Alaska Natives (32%). Overall, about 8% of Asian females were current smokers, with lower rates among Chinese (6%) and higher rates among Filipino (11%). The number of cigarettes smoked per day was 10 or less in all Asian groups and among Hispanics, but exceeded 10 among Non-Hispanic Whites and among males of American Indian/Alaska Native heritage.

The proportion of former smokers was higher for males than for females in all racial/ethnic groups except Pacific Islanders. The proportion of never smokers was highest among Asian and Hispanic females. A comparison of the two Asian subgroups showed that both male and female Chinese had higher rates of never smokers than male and female Filipinos.

Factors associated with current smoking

As shown in Table 2, not being married, and having low levels of education (high school or less) and household income (US\$50,000 per year or less) were consistently related to smoking in almost all racial/ethnic groups. While younger age (under age 40), not being married, low levels of education and income and being employed predicted smoking among Non-Hispanic White males and females, the only predictor of smoking among Hispanic males was having a high school education or less. The only predictors among Hispanic females were not being married and being U.S.-born. Among African-American males and females, predictors of smoking were not being married, and having low levels of education and income.

Among foreign-born Asian males, only 23% were current smokers despite the fact that their countries of origin typically have male smoking rates above 60% [12,13]. Smoking rates were significantly lower among U.S.-born Asian-American males. The opposite was observed among Asian females: those who were U.S.-born had higher smoking rates than their foreign-born counterparts. Among foreign-born Asian and Hispanic females, smoking tended to be more likely with longer length of stay (>15 years) and among respondents who spoke English well or very well. Among foreign-born males, smoking tended to be more likely among Hispanics with longer length of stay but less likely among Asian men with longer length of stay. While few statistically significant correlates of smoking emerged in the two Asian subgroups, probably because of limited sample size (Table 3), we saw trends similar to those observed in the combined Asian sample: Smoking rates tended to be higher among U.S.-born Chinese and Filipino females than among those who were foreign-born. In contrast, among Chinese-American men, smoking rates tended to be higher among more recent immigrants and men who did not speak English well. However, this trend was less apparent among Filipino males.

A multivariate analysis was conducted to determine whether associations with age, marital status, education, and other factors persisted after adjusting for other variables. In general, findings of the multivariate analysis confirmed the bivariate findings described above. Factors that were most consistently associated with current smoking in most racial ethnic and gender groups were age, marital status, and education (Table 4). Being married was protective (e.g., lower smoking rates) in all racial ethnic and gender groups with the exception of Hispanic males. Having more than a high school education was protective in all racial ethnic and gender groups with the exception of Hispanic and Chinese females and Filipino males. Older respondents (over the age of 40+) who were white or Asian were generally less likely to smoke than younger respondents. However, older Hispanic females and African-American males were more likely to smoke than respondents under 40 years of age. Age did not affect smoking among Hispanic males and African-American females.

Foreign-born Asian males had higher odds of current smoking than their U.S.-born peers (OR 2.01 among Asian males, 1.42 among Filipino males, 2.59 among Chinese males) after controlling for other demographic characteristics. However, smoking rates were not different among foreign-born and U.S.-born Hispanic males. Country of birth was also associated with smoking among Asian and Hispanic females, but the association was the reverse of that observed in the men because foreign birth was associated with decreased prevalence of smoking compared to U.S.-born respondents (OR 0.55 among foreign-born Hispanics, 0.41 among foreign-born Chinese, 0.38 among foreign-born Filipino).

Discussion

The California Health Interview Survey provides much needed data to document smoking behavior among Asian Americans and among specific Asian-American subgroups. Asian Americans have been the target of ethnically-specific marketing strategies by tobacco

companies for some time now. To gauge the effect of these efforts and counterbalance them if these marketing efforts are successful recruiting Asians to the smoking habit, it would be useful to include Asian Americans in surveillance efforts. Precise estimation of ethnic subgroup-specific smoking prevalence rates and the identification of important demographic and behavioral correlates of smoking in surveys such as the California Health Interview Survey are important first steps to developing outreach recommendations and prevention strategies for the most vulnerable subgroups. Such information will also allow the public health community to focus limited resources for tobacco control programs to only the most needy of Asian populations.

Asian Americans are often portrayed as the model minority with relatively few health problems through middle age. Data from large national surveys reinforce this misconception. National data show low smoking rates among Asians (14%) [5]. However, this low rate is an artifact of relatively low rates among most Asian women (which lowers the combined estimate for males and females), an artifact of including only English-speaking Asians (where English-speaking males smoke much less than foreign-born Asian males) and of over-representing more educated Asians in surveys. CHIS data show that a relatively large proportion of Asian males are current smokers (21%) and that the smoking prevalence among Asian males exceeds that of Non-Hispanic Whites and Hispanics. An analysis of Asian subgroups showed that smoking rates are much higher for Filipino males as compared to Chinese males, confirming a prior report by Baluja and colleagues [14]. In addition, the smoking prevalence is higher among foreign-born versus U.S.-born Asian males, which has previously been found among Vietnamese and Chinese men residing in California [6].

Although it is clear that smoking is much more common in foreign-born Asian men than in Asian women, it is also important to assess smoking rates in Asian women and to understand how they are affected by increasing acculturation. Asian women have traditionally very low smoking rates [3], but the CHIS data show that acculturation to the U.S. can increase smoking prevalence rates among Asian women, whether using place of birth or English language fluency as the marker of acculturation.

The following information on the two largest Asian subgroups in California is especially useful for planning public health interventions.

Filipino-American smoking data

To our knowledge, CHIS provides the first ever smoking prevalence data for Filipino-American men. Recent national data reported a prevalence rate of 6.9% (95% CI = 3.7, 12.4) for Filipino adult women and a prevalence rate of 14.8% (95% CI = 9.6, 22.0) for Filipinos combined across sex [15]. However, the National Survey on Drug Use and Health on which this estimate is based had an insufficient number of Filipino men to provide reliable estimates. CHIS data indicate that smoking rates among Filipino-American males are higher than those of many other ethnic groups, including Non-Hispanic Whites, Hispanics, African Americans, and Chinese-Americans. Smoking rates among Filipino-American females are also relatively high compared to rates found in Chinese-American women. Rates are especially high among U.S.-born Filipino-American women and among foreign-born Filipino-American men. A recent study with Filipino patients at Northern California Medical Centers suggests the same trends among Filipino women, although males and females were combined in that analysis due to small numbers. Among Filipinos, 82% of whom were females, foreign-born respondents were significantly less likely to have ever smoked than their U.S.-born peers [16]. Future research should focus on Filipino Americans to better understand their smoking behavior and determinants, if optimally effective smoking cessation programs are to be tailored to their needs.

Chinese-American smoking data

Several surveillance efforts have been conducted in various Chinese-American communities in New York City [17], Chicago's Chinatown [3], Philadelphia's Chinatown [7], Pennsylvania and New Jersey [18,19], and San Francisco [2]. Smoking prevalence among Chinese-American men has ranged in these studies from 34% [3] to 16% [2]. This relatively wide range of smoking prevalence estimates can be attributed to differences regarding the locations of the studies (e.g., East Coast versus California), methods of survey administration (telephone surveys, self-administered surveys, face to face surveys by interviewers canvassing a neighborhood), and demographic characteristics of respondents such as levels of education and income and length of stay in the United States. The CHIS finding of 14% current smokers among Chinese-American males is closest to the finding of the only other study conducted in California, in which 16.5% of Chinese-American respondents were current smokers [2]. These studies have found that smoking in Chinese-American males was highest among foreign-born as compared to U.S.-born Chinese-Americans, and highest among the more recent immigrants, among those with lowest levels of education and income [2], and among those with low English proficiency [3,7]. CHIS data confirm these findings and suggest that less acculturated Chinese-American males have the greatest need for smoking cessation programs. The low smoking prevalence of 14% among California Chinese males who participated in the 2001 CHIS may be attributable to their relatively high level of education (76% had more than high school), the many legal restrictions regarding smoking in California, the relatively high cigarette prices in California, and the adoption of relatively strong anti-smoking norms abetted by an aggressive anti-smoking state media campaign [20].

Smoking among Chinese-American females has ranged from 2.6% [2] to 4% [17] and is 6% in the CHIS sample. Our analysis presented here is the first to describe demographic and social determinants of smoking in Chinese-American adult females and it is interesting that there is a trend that is opposite of that seen among Chinese-American males: Smoking rates tend to be higher among U.S.-born Chinese-American females than among those who are foreign-born. This suggests that U.S.-born Chinese-American females are more likely to adopt the smoking behavior of their non-Asian peers and to ignore Chinese traditional cultural values that prevent most of the more traditional foreign-born Chinese-American women from smoking. A recent analysis among a Chinese sample (72% female) found a lower odds ratio for ever smoking among foreign-born versus U.S.-born respondents, suggesting the same trend [16]. Since smoking rates among many Asian women including those of Chinese descent, are increasing with increasing acculturation, it would be useful for public health policymakers to target U.S.-born Asian women with interventions that discourage this trend of increasing smoking prevalence with increasing acculturation.

Limitations of the study are that all data are based on self-report, that they are cross-sectional, that only households were reached that had a telephone, and that only respondents who spoke one of the seven survey languages were included. Because the data were cross-sectional, assumptions about the impact of acculturation on current smoking prevalence need confirmation in longitudinal studies. Additionally, only few items were available to assess acculturation (country of birth, length of residency in the U.S., and a single question on English fluency). As in other telephone surveys, respondents who were most likely to be missed were those with low levels of education and income and more recent immigrants who did not speak any of the languages in which the survey was offered. Nevertheless, as stated above, the CHIS sample did reflect the population residing in California with respect to ethnic distribution and household income [10]. Additionally, CHIS only assessed cigarette smoking and no questions were asked about other tobacco products (such as bidis and paan) that might be popular in some ethnic groups [12].

In summary, the data presented here are consistent with previous observations about the impact of immigration and acculturation on tobacco use rates in Asian populations living in the U.S. They also add new information by reporting for the first time ever on smoking behaviors of adult Filipino-American men as well as of adult Chinese-American women. Findings confirm that important differences in smoking behavior exist between Asian-American adult subgroups, that have not been apparent in previous regional or national surveys because the researchers reported only tobacco use for all Asian Americans combined. Findings also confirm the importance of immigration status on smoking behavior, in addition to well-known demographic characteristics such as income, education, and marital status. Finally, our findings suggest that acculturation may have opposite effects on the prevalence of current smoking among male and female members of various Asian subgroups.

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Table 1
Smoking behavior among California's diverse adult population: CHIS 2001 data

Ethnic/gender group	N	Smoking status (% \pm SD) ^a			Current	# Cigarettes per day, mean \pm SD (N)
		Never	Former	Current		
Non-Hispanic White/male	15,193	46.6 \pm 0.9	34.0 \pm 0.9	19.4 \pm 0.9	15.0 \pm 0.6 (2800)	
Non-Hispanic White/female	21,536	54.9 \pm 0.9	28.2 \pm 0.8	16.9 \pm 0.8	12.3 \pm 0.4 (3695)	
Hispanic/male	3983	57.7 \pm 1.9	22.8 \pm 1.6	19.5 \pm 1.6	7.2 \pm 0.9 (779)	
Hispanic/female	5475	81.4 \pm 1.4	10.8 \pm 1.1	7.8 \pm 0.9	5.3 \pm 0.7 (464)	
African-American/male	1011	53.0 \pm 3.9	25.0 \pm 3.2	22.0 \pm 3.3	10.6 \pm 1.1 (223)	
African-American/female	1753	62.2 \pm 2.9	18.2 \pm 1.8	19.6 \pm 2.6	8.9 \pm 0.8 (346)	
American Indians, Alaska Natives/male	351	41.7 \pm 7.9	29.1 \pm 6.4	29.2 \pm 7.3	14.9 \pm 3.0 (126)	
American Indians, Alaska Natives/female	430	47.8 \pm 6.6	20.7 \pm 5.2	31.5 \pm 5.9	10.4 \pm 1.3 (139)	
Pacific Islander/male	101	54.2 \pm 15.3	13.5 \pm 8.5	32.3 \pm 13.0	10.3 \pm 4.5 (28)	
Pacific Islander/female	118	62.3 \pm 13.4	16.3 \pm 9.7	21.4 \pm 12.3	6.5 \pm 2.6 (26)	
Asian/male ^b	1717	55.2 \pm 3.2	23.4 \pm 2.4	21.4 \pm 2.3	10.0 \pm 1.2 (353)	
Asian/female ^b	2239	85.3 \pm 2.0	6.9 \pm 1.1	7.8 \pm 1.6	7.8 \pm 1.1 (167)	
Asian Chinese/male	505	61.3 \pm 5.2	24.4 \pm 4.9	14.3 \pm 3.2	9.6 \pm 3.3 (74)	
Asian Chinese/female	758	89.2 \pm 2.8	4.6 \pm 1.6	6.2 \pm 2.3	7.5 \pm 2.2 (41)	
Asian Filipino/male	351	52.8 \pm 7.4	23.0 \pm 4.4	24.2 \pm 6.5	9.1 \pm 2.1 (92)	
Asian Filipino/female	568	78.2 \pm 3.9	11.2 \pm 3.2	10.6 \pm 2.7	7.9 \pm 1.8 (65)	

^a All percentages and number of cigarettes per day are weighted to account for different selection probabilities.

^b All Asian subgroups combined, including Chinese and Filipino.

Table 2

Correlates of current smoking in selected racial/ethnic and gender groups

Racial/ethnic group	Non-Hispanic White		Hispanic		African-American		Asian								
	M (N = 15,193)	OR ± SD	F (N = 21,536)	OR ± SD	M (N = 1011)	OR ± SD	F (N = 1753)	OR ± SD	M (N = 1717)	OR ± SD	F (N = 2239)	OR ± SD			
Gender (M/F), N															
Age															
<40	24.7 ± 1.9		20.6 ± 1.4		19.4 ± 2.2		7.2 ± 1.2		18.9 ± 4.3		19.3 ± 3.8		25.6 ± 3.8		10.5 ± 2.8
40+	16.1 ± 0.8		15.0 ± 0.7		19.9 ± 2.4		8.8 ± 1.4		24.4 ± 4.3		19.7 ± 3.3		16.8 ± 2.8		5.0 ± 1.5
Marital status															
Married	14.3 ± 0.9		12.4 ± 0.9		19.1 ± 2.1		5.0 ± 0.9		16.0 ± 3.9		13.1 ± 4.0		19.0 ± 2.7		4.7 ± 1.5
Other	27.1 ± 1.7		22.2 ± 1.3		20.1 ± 2.7		10.9 ± 1.7		26.7 ± 4.6		22.5 ± 3.4		25.5 ± 4.5		12.7 ± 3.6
Education															
≤High school	28.2 ± 2.0		22.5 ± 1.4		21.6 ± 2.0		7.5 ± 1.1		28.8 ± 6.2		24.7 ± 4.3		27.9 ± 5.2		10.2 ± 3.4
>High school	15.6 ± 1.0		14.2 ± 0.8		14.0 ± 2.5		8.5 ± 2.0		18.0 ± 3.5		16.1 ± 3.2		18.7 ± 2.6		6.5 ± 1.5
Employment															
Yes	20.5 ± 1.1		18.7 ± 1.1		19.2 ± 2.0		8.8 ± 1.4		18.9 ± 4.1		17.7 ± 3.0		22.9 ± 2.7		8.1 ± 2.0
No	16.7 ± 1.4		14.9 ± 0.9		21.1 ± 3.8		6.7 ± 1.2		27.5 ± 6.2		21.8 ± 4.3		17.7 ± 3.4		7.3 ± 2.3
Household Income															
≤US\$50,000	25.5 ± 1.5		21.2 ± 1.1		20.3 ± 1.9		7.8 ± 1.0		26.3 ± 4.4		22.6 ± 3.2		26.4 ± 3.7		8.8 ± 2.1
>US\$50,000	15.2 ± 1.1		12.4 ± 0.9		16.5 ± 3.5		7.8 ± 2.5		16.0 ± 4.4		11.4 ± 3.1		17. ± 3.1		6.6 ± 2.1
Country of birth															
US	N/A		N/A		19.0 ± 2.7		11.3 ± 2.2		N/A		N/A		14.8 ± 4.1		13.5 ± 4.6
Other					19.7 ± 2.1		6.1 ± 1.0						23.5 ± 2.9		6.3 ± 1.6
Years in the U.S. ^a															
<15 years	N/A		N/A		18.7 ± 2.9		5.3 ± 1.4		N/A		N/A		26.2 ± 4.5		5.1 ± 1.9
≥15 years					20.7 ± 2.8		7.1 ± 1.5						20.8 ± 3.6		7.3 ± 2.3
Level of spoken English ^d															
Very well/well	N/A		N/A		19.5 ± 2.7		6.7 ± 1.4		N/A		N/A		21.1 ± 3.5		7.8 ± 2.1
Not well/not at all					20.4 ± 3.3		5.3 ± 1.6						24.3 ± 7.7		2.9 ± 2.0

M = males, F = females; CI = 95% confidence interval computed based on weighting provided in the CHIS. Values in boldface indicate statistically significant differences at $P < 0.05$.^a Only computed for foreign-born Hispanic subsample $N = 2558$ males, 3556 females and foreign-born Asian subsample $N = 1277$ males, 1737 females.

Table 3
Correlates of current smoking in selected Asian ethnic and gender groups

Racial/ethnic group Gender (M/F), <i>N</i>	Asian Chinese		Asian Filipino	
	Males (<i>N</i> = 505)	Females (<i>N</i> = 758)	Males (<i>N</i> = 351)	Females (<i>N</i> = 568)
	CI	CI	CI	CI
Age				
<40	16.6 ± 6.3	8.9 ± 5.0	28.3 ± 10.2	13.8 ± 5.4
40+	12.4 ± 4.8	3.6 ± 2.0	18.8 ± 6.8	7.6 ± 3.5
Marital status				
Married	13.0 ± 4.5	3.1 ± 1.6	19.0 ± 6.3	7.0 ± 3.1
Other	17.2 ± 7.2	10.7 ± 5.0	31.0 ± 11.5	14.8 ± 5.6
Education				
≤High school	20.4 ± 8.9	5.7 ± 3.8	26.2 ± 10.6	20.4 ± 8.4
>High school	12.1 ± 4.0	6.5 ± 3.3	23.3 ± 6.8	6.9 ± 2.2
Employment				
Yes	14.7 ± 3.9	6.3 ± 3.2	24.7 ± 6.4	9.9 ± 3.0
No	13.5 ± 7.3	6.0 ± 3.0	22.9 ± 11.5	12.2 ± 6.2
Household Income				
≤US\$50,000	18.6 ± 5.9	6.7 ± 2.5	30.9 ± 9.0	12.8 ± 3.4
>US\$50,000	11.3 ± 5.1	5.7 ± 3.7	18.6 ± 8.3	7.1 ± 3.6
Country of birth				
US	7.7 ± 4.2	13.0 ± 7.5	23.8 ± 9.8	19.1 ± 7.7
Other	6.6 ± 4.2	4.0 ± 2.2	24.6 ± 7.2	6.8 ± 2.6
Years in the U.S. ^a				
<15 years	20.7 ± 6.4	4.1 ± 2.6	22.4 ± 10.4	4.6 ± 3.1
≥15 years	12.2 ± 6.7	3.9 ± 2.6	26.1 ± 9.3	8.1 ± 3.7
Level of spoken English ^a				
Very well/well	13.2 ± 5.6	4.5 ± 3.7	25.0 ± 7.5	7.0 ± 2.7
Not well/not at all	18.4 ± 9.6	2.2 ± 2.5	—	—

CI = 95% confidence interval computed based on weighting provided in CHIS. Values in boldface indicate statistically significant differences at $P < 0.05$.

^aOnly computed for foreign-born Chinese subsample $N = 362$ males, 567 females and foreign-born Filipino subsample $N = 246$ males, 241 females.

Table 4
 Predictors of current smoking in selected racial/ethnic and gender groups (multivariate analyses): CHIS 2001

Racial/ ethnic group Gender	Non-Hispanic White			Hispanic			African-American			Asian			Chinese			Filipino		
	M	F	OR	M	F	OR	M	F	OR	M	F	OR	M	F	OR	M	F	OR
N	15,193	21,536		3983	5475		1011	1753		1717	2239		505	758		351	568	
	%	%	OR	%	%	OR	%	%	OR	%	%	OR	%	%	OR	%	%	OR
Age																		
<40	28	27	1.00	59	57	1.00	35	38	1.00	45	44	1.00	44	43	1.00	46	43	1.00
40+	72	73	0.74 *	41	43	1.41 *	65	62	1.77 *	55	56	0.60 *	56	57	0.51	54	57	0.64
Marital status																		
Married	57	47	1.00	57	53	1.00	41	26	1.00	61	59	1.00	61	56	1.00	61	58	1.00
Other	43	53	1.64 *	43	47	2.15 *	59	74	1.58 *	39	41	1.30	39	44	2.35 *	39	42	1.32
Education																		
≤High school	30	33	1.00	71	71	1.00	35	39	1.00	25	30	1.00	24	31	1.00	27	25	1.00
>High school	70	67	0.61 *	29	29	0.60 *	65	61	0.68 *	75	70	0.64 *	76	69	1.10	73	75	0.37 *
Employment																		
Yes	66	51	1.00	79	52	1.00	62	55	1.00	69	57	1.00	67	57	1.00	74	70	1.00
No	34	49	0.68 *	21	48	0.82	38	45	1.31	31	43	0.60 *	33	43	0.71	26	30	1.13
Household income																		
≤\$50,000	46	58	1.00	79	85	1.00	59	73	1.00	48	56	1.00	45	55	1.00	49	60	1.00
>\$50,000	54	42	0.62 *	21	15	0.92	41	27	0.56 *	52	44	0.59 *	55	45	0.67	51	40	0.76
Country of birth																		
US	N/A	N/A	1.00	36	35	1.00	N/A	25	1.00	22	28	1.00	25	30	1.00	26	26	1.00
Other	A	A		64	65	0.55 *	A			75	78	2.01 *	72	75	2.59 *	70	74	0.38 *

M = males, F = females.

* OR significant at $P < 0.05$.