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Patients' Reports about Medical Doctors' Inquiries on Their Mental Health: Do Generational Status, Ethnicity and Mental Health/Substance Use Disorders Matter?

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Abstract: Immigrants are less likely than others to use mental health (MH) services. Physicians' limited time often precludes inquiry about MH. This study investigated the influence of generational status, ethnicity, and mental/substance use disorders on physicians' inquiries about Asian American (AA) MH. Data from the National Latino and Asian American Study were analyzed (n=1,853). The outcome was past year physician's inquiry regarding MH. Results revealed that AA with U.S.-born parents had significantly greater odds compared to AA born outside the U.S. to report that their doctors inquired about their MH (OR=2.18, 95% CI: 1.28, 3.73). Past year mental/substance use disorder increased the odds of AA reporting that their doctors inquired about their MH (OR=8.41; 95% CI: 3.28, 21.66). This increase differed by ethnicity, with Chinese less affected than Vietnamese (OR=0.17; 95% CI: 0.05, 0.59). The reasons for these associations warrant further exploration.

Key words: Asian Americans, mental health, provider inquiry, generational status.

Prior research suggests that immigrants are less likely than others in the U.S. to use mental health services.^{1,2} Since 69% of Asian Americans were not born in the U.S., it is imperative to understand how this population accesses mental health care.³ A robust body of literature demonstrates that Asian Americans are unlikely to access

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mental health services.⁴⁻⁶ In a nationally representative sample of Asian-Americans, 34% of those with a mental health disorder accessed care in the past year, which is a lower rate than the general population.² Despite this, there is a paucity of research investigating the different ways Asian Americans are referred to mental health services. One likely pathway to receiving appropriate mental health care is through a physician's inquiry into a patient's mental health status. In such a medical setting, Asian Americans are prone to expressing mental health symptoms in the form of somatic symptoms.⁷ Though physicians' limited time often prevents inquiry into a patient's mental health,⁸ an argument may be made that such inquiry should become standard when determining a patient's health and well-being for two main reasons. The first reason concerns how health is defined. The World Health Organization (WHO) defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"⁹[p.1] However, physicians have a number of competing medical concerns to attend to in a limited time; mental health is rarely the sole focus of a medical visit.^{10,11} One may argue that although the WHO's definition of health is widely known, it is not widely applied in U.S. health care settings.

Second, regardless of whether one concurs with the WHO's definition of health, strong evidence exists that a medical doctor's diagnosis of mental health in adults, particularly depression, is integral to their health. Indeed, lack of access to mental health care results in adverse outcomes.^{12,13} The U.S. Preventive Services Task Force recommends that providers screen for depression among adults when staff-assisted depression support is available to assure not only accurate diagnosis but also effective treatment and follow-up.¹⁴ Both considerations support the notion that medical doctors' inquiries into mental health should become commonplace.

It is important to note, however, the lack of studies examining the question of whether universal screening for mental health leads to relevant treatment. Though there is some lack of agreement or understanding on how to incorporate mental health screening in clinical settings effectively,^{14,15} mental health screenings could lead to more people getting effective mental health care.

Though research about medical doctors' inquiries about Asian Americans' mental health is scant, Asian Americans' likelihood of receiving mental health services has been shown to be influenced by ethnicity, generational status, sex, time spent in the United States, assimilation level, and mental health/substance use diagnosis.^{2,16-18} For example, Barry and Grilo conducted a study of Asian immigrants' willingness to use mental health services if depressed, and of the likelihood of their recommending such services to friends with mental health issues. Willingness to enter treatment or refer others to treatment did not differ by ethnic group (Chinese, Japanese, Korean); however, women and more assimilated individuals were more willing than their counterparts to use mental health services and refer friends to such services.¹⁶ Additionally, they found the longer people lived in the U.S., the less willing they were to seek treatment. The authors note that while assimilation and time spent in the U.S. are correlated, it is important to consider these two variables separately. In other words, one cannot infer assimilation from time spent in the United States, or *vice versa*. Time spent in the U.S. is a demographic variable whereas assimilation is tied to acculturation.

People from successive generations are increasingly willing to seek treatment. In a

Canadian study, Hsu and Alden examined first and second generation Chinese and non-Hispanic White students' willingness to seek mental health treatment for social anxiety.¹⁷ Regardless of background, participants did not differ in willingness to seek treatment for low and severe social anxiety. However, while first-generation Chinese students did not perceive social anxiety to be less debilitating than did their peers, they were less likely to seek treatment for moderate social anxiety. This indicates that different factors, such as acculturation, influence Asian immigrants' willingness to seek mental health treatment, and should be considered when engaging this population in mental health care.

Medical services as a pathway to mental health services have been briefly studied.^{8,19} One study examined the degree to which primary care doctors were able to recognize psychiatric distress among an ethnically diverse sample, including Asian Americans.¹⁹ While 42% of Asian American patients in the studied population displayed psychiatric distress symptoms, the doctors identified only 24% as being psychiatrically distressed. In contrast, when 47% of Latino patients had psychiatric distress symptoms the doctors identified 44% as psychiatrically distressed. Patients with lower acculturation status were less likely to be identified as psychiatrically distressed. Notably, 90% of Asian American patients experienced language congruence (primarily Chinese) with their Asian American doctors, whereas 65% of Latino patients had Spanish-speaking Latino doctors.

Research suggests that Asian Americans are underscreened for mental health problems and/or underutilize mental health services. One study examined use of mental health and substance abuse services by Asian American, Native Hawaiian/Other Pacific Islander, and non-Hispanic White mothers.²⁰ Results revealed that Asian American mothers who screened positive for depression were significantly less likely than non-Hispanic White mothers who also screened positive for depression to report receiving mental health/substance use services. It is plausible that these mothers were not aware of their depression status given that this screening was conducted as part of their participation in a child abuse and neglect prevention program (Healthy Start Program), and did not occur at a medical office. Another study that examined generational status and family cohesion effects on use of mental health services among Asian Americans²¹ indicated that while almost 13% of participants had a Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) disorder in the past 12 months, less than 9% received mental health/substance use services. Again, it is plausible that the study participants were not aware of their mental health status given that this screening was conducted as part of their participation in National Latino and Asian American Study (NLAAS), and did not occur at a medical office. These studies suggest that there is a portion of Asian Americans with unmet mental health treatment needs, but whether this is an issue of treatment engagement or retention *versus* screening at a medical office is unclear.

Social desirability is also an important concept to consider when thinking about Asian American mental health. Research has shown that ethnic minorities, such as Asian Americans, are more likely than non-Hispanic Whites, African Americans, and Hispanics to respond in socially desirable responsible ways.²² Additionally, people that come from more collectivist cultures are more inclined than people from more

individualistic cultures to score higher on social desirability scales due to a desire to save face and maintain social approval.²³ Furthermore, previous research included social desirability in their statistical models in their analyses of the NLAAS data,^{21,24,25} the same data source for this paper. Since research suggests that social desirability will be of particular relevance in this population, this variable was included in this study's analyses.

Poverty is an important variable to consider as well. Poverty is defined in terms of household income as well as household size.²⁶ (An examination of Asian Americans household income alone artificially inflates Asian Americans socioeconomic status and contributes to the Model Minority Myth.²⁷ Briefly, the Model Minority Myth extols stereotypical positive attributes of Asian Americans such as how hard-working and studious the population is without acknowledging the heterogeneity and diverse experiences of the population.²⁸) Since poverty is a more accurate socioeconomic status indicator, it will be included in this study's analyses.

To the authors' knowledge, studies investigating the roles of generational status, ethnicity, and mental/substance use disorders on self-reported medical doctors' inquiries about Asian American patients' mental health status are nonexistent. Given that recent immigrants are less likely than U.S.-born people to use mental health services,^{1,2} it is hypothesized that recent Asian American immigrants are less likely than U.S. born Asian Americans to be asked about their mental health status. Additionally, there is a larger proportion of Vietnamese (76%) than of other Asian Americans (i.e., 70% of Chinese; 68% of Filipino) who are recent immigrants;³ thus, it is hypothesized that Vietnamese are less likely than others to be asked about their mental health status.

Asian Americans comprise diverse ethnic groups and people with varying generation and nativity backgrounds.^{3,29} Findings from this study can provide researchers, practitioners, and consumers a better understanding of the specific needs and priorities of this heterogeneous population in the U.S.

Methods

Sample. Data were drawn from the National Latino and Asian American Study (NLAAS), a household survey conducted in 2002–03, and restricted to Asian American respondents. The sampling design has been detailed elsewhere.^{30,31} Briefly, the design included three components: 1) a core sampling of primary sampling units (metropolitan statistical areas and counties) and secondary sampling units (from continuous groupings of census blocks) with probability proportional to size, from which housing units and household members were sampled; 2) high-density supplemental sampling of census block groups in which the targeted ethnic groups made up more than 5% of the population; and 3) second respondent sampling to recruit participants from households where a primary respondent had already been interviewed. The response rates (calculated using the American Association for Public Opinion Research, Response Rate Method 3—or AAPOR-RR3 method)³¹ for primary and secondary respondents were 69% and 74%, respectively. Sample weights were utilized to account for joint probabilities of selection for these three components and designed to allow the sample estimates to be nationally representative.³¹

Respondents were at least 18 years of age and resided in the U.S. Trained interviewers

with linguistic and cultural backgrounds similar to those of the respondent, administered the survey with computer-assisted software in the respondent's chosen language (English, Cantonese, Mandarin, Tagalog, Vietnamese, or Spanish). Instruments were translated into these languages through standard techniques (translation of the instrument to a given language, followed by translation back to English for verification). Interviews were conducted face-to-face unless respondents requested a telephone interview. A further description of the NLAAS's data collection protocols is described elsewhere.³²

The NLAAS sample comprised 2,095 persons; however, the 11.5% of the respondents who reported that they did not see a medical doctor in the past year were excluded from the sample. The sample (N=1,853) included 28.0% Chinese, 22.2% Filipino, 12.6% Vietnamese, and 37.3% "Other Asian Americans" (e.g., Indian, Japanese, Korean, Laotian). The proportions (weighted) of respondents who completed the interview in English were 52.7% for Chinese, 89.2% for Filipino, 24.3% for Vietnamese, and 99.0% for Other Asian Americans ($p < .01$). According to the U.S. Census 2000, the top three largest Asian ethnic groups in the U.S. included Chinese, Filipino, and Vietnamese.³

Sample characteristics (Table 1). The sample included 1,853 respondents. Nearly 55% of the respondents are female, 64% were employed, 90% had health insurance, and the mean age was 41.7 years. Most respondents were married or living with a partner (69.7%), 22.1% had never been married, and 8.3% were divorced, separated, or widowed. Education levels varied, with 13.1% having less than a high school education, 17.2% being high school graduates, 25.3% having some college or more, and 44.4% having a college degree or more. The median household income was \$62,500 (mean \$75,311) and median household size was three members (mean 2.9). More than 16% of the respondents lived in poverty.

The majority of the respondents resided in the Western regions of the U.S. (68.0%), followed by the Northeast (15.6%), Midwest (8.7%) and South (7.7%). About a quarter of the sample was U.S.-born. Among immigrants, 12.3% of the respondents had lived in the U.S. for five years or less, 11.4% for 6–10 years, 26.3% for 11–20 years, and 25.2% for 20 years or more. About 69% of the sample reported having excellent or good English-language proficiency. Age at time of immigration varied with 12.3% immigrating at the age of 12 years or younger, 5.0% at 13–17 years old, 41.6% at 18–34 years, and 16.2% at 35 years old or older (the remaining respondents were U.S.-born). Three-quarters of the sample were first generation, 14.6% were second and 10.2% were third generation or later. Nearly 13% of the respondents had one or more past year mental/substance use disorder. The mean social desirability score was 7.8 ($se = 0.1$).

The weighted proportion of respondents who reported that their medical doctor inquired about their mental health is 11.2%.

Measures. *Dependent variable.* The study's outcome consisted of binary responses (yes/no) to the following question: In the past 12 months, did a medical doctor ask you about your emotions, nerves, or mental health?

Independent variables. Self-reported ethnicity included Chinese, Filipino, Vietnamese, and Other Asian Americans. Generational status was divided into three categories: first generation (i.e., respondent was an immigrant), second generation (i.e., respondent born in the U.S. and at least one parent was foreign-born), and third generation or later (both parents and the respondent were born in the U.S.).

Table 1.**WEIGHTED SAMPLE CHARACTERISTICS OF
ASIAN AMERICANS: NATIONAL LATINO AND
ASIAN AMERICAN STUDY, 2002–2003**

| | Provider Inquiry of Mental Health ^{a,b} | | | p value |
|-----------------------------------|--|----------------|----------------|---------|
| | | Yes | No | |
| Total sample (#) | 1,853 | 199 | 1,654 | |
| Weighted percentage | 100 | 11.2 | 88.8 | |
| Ethnicity | | | | |
| Vietnamese | 12.6 | 7.3 | 92.7 | .01 |
| Chinese | 28.0 | 11.8 | 88.2 | |
| Filipino | 22.2 | 10.4 | 89.6 | |
| Other Asian Americans | 37.3 | 12.6 | 87.4 | |
| Sex (%) | | | | |
| Female | 54.5 | 12.7 | 87.3 | .02 |
| Male | 45.5 | 9.4 | 90.5 | |
| Age, mean (SE) | 41.7 (0.8) | 39.5 (1.1) | 42.0 (0.1) | .12 |
| Marital status (%) | | | | |
| Married/Cohabiting | 69.7 | 11.0 | 89.0 | .80 |
| Divorced/Separated/Widowed | 8.3 | 12.8 | 87.2 | |
| Never Married | 22.1 | 11.2 | 88.8 | |
| Current health insurance (%) | | | | |
| Yes | 90.0 | 11.7 | 88.3 | .15 |
| No | 10.0 | 6.8 | 93.2 | |
| Education (%) | | | | |
| College or more | 44.4 | 12.0 | 88.0 | .30 |
| Some college or more | 25.3 | 12.9 | 87.1 | |
| High school | 17.2 | 7.4 | 92.3 | |
| Less than high school | 13.1 | 10.5 | 89.5 | |
| Employed (%) | | | | |
| Yes | 63.7 | 10.9 | 89.1 | .68 |
| Unemployed/Not in labor force | 36.3 | 11.8 | 88.2 | |
| Household income (\$), mean (SE) | 75,311 (2,376) | 80,841 (5,262) | 74,612 (2,457) | .25 |
| Household income (%) | | | | |
| >\$100,000 | 28.9 | 11.7 | 88.3 | .11 |
| \$65,000–\$100,000 | 18.0 | 15.2 | 84.8 | |
| \$30,000–\$65,000 | 27.3 | 10.2 | 89.8 | |
| <\$30,000 | 25.9 | 9.1 | 90.0 | |
| Household size, mean (SE) | 2.9 (0.1) | 2.5 (0.1) | 2.9 (0.1) | <.01 |
| Per capita income (\$), mean (SE) | 36,155 (1,534) | 40,008 (2,757) | 35,669 (1,640) | .16 |

(Continued on p. 1375)

Table 1. (continued)

| | Provider Inquiry of Mental Health ^{a,b} | | | p value |
|--|--|-----------|-----------|---------|
| | | Yes | No | |
| Poverty (%) | | | | |
| Yes | 16.4 | 9.7 | 90.3 | .37 |
| No | 83.6 | 11.5 | 88.5 | |
| Region (%) | | | | |
| Northeast | 15.6 | 11.7 | 88.3 | .08 |
| Midwest | 8.7 | 14.4 | 85.6 | |
| South | 7.7 | 18.2 | 81.8 | |
| West | 68.0 | 9.9 | 90.1 | |
| English-language proficiency (%) | | | | |
| Excellent/good | 69.3 | 12.5 | 87.5 | .05 |
| Fair/poor | 30.7 | 8.3 | 91.7 | |
| U.S.-born (%) | | | | |
| No | 75.2 | 15.9 | 84.1 | <.01 |
| Yes | 24.8 | 9.7 | 90.3 | |
| Years in the U.S. (%) | | | | |
| 0–5 | 12.3 | 12.4 | 87.6 | <.01 |
| 6–10 | 11.4 | 7.3 | 92.7 | |
| 11–20 | 26.3 | 10.6 | 89.4 | |
| ≥20 | 25.2 | 8.4 | 91.6 | |
| U.S.-born | 24.8 | 15.9 | 84.1 | |
| Age at time of immigration (years) | | | | |
| (%) | 24.8 | 15.9 | 84.1 | .08 |
| U.S.-born | 12.3 | 12.3 | 87.7 | |
| ≤12 | 5.0 | 9.0 | 91.0 | |
| 13–17 | 41.6 | 7.9 | 92.1 | |
| 18–34 | 16.2 | 12.2 | 87.8 | |
| ≥35 | | | | |
| Generational status (%) | | | | |
| First | 75.2 | 9.7 | 90.3 | <.01 |
| Second | 14.6 | 12.2 | 87.8 | |
| Third or later | 10.2 | 21.2 | 78.8 | |
| Has any mental/substance use disorder ^c (%) | 12.8 | 23.5 | 76.5 | <.01 |
| Yes | 87.2 | 9.4 | 91.6 | |
| No | | | | |
| Social desirability, mean (SE) | 7.8 (0.1) | 8.1 (0.2) | 7.8 (0.1) | .26 |

^aPercentages might not equal 100% due to rounding.

^bIn the past 12 months, did a medical doctor ask you about your emotions, nerves, or mental health (yes/no)?

^cAssessed using the Diagnostic and Statistical Manual of Mental Disorders, Fourth Version (DSM-IV), past 12 months.

The presence of any mental/substance use disorder within the past year was assessed using the World Health Organization Composite International Diagnostic Interview,³³ a structured interview that follows the criteria of the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)³⁴ and was designed to be administered by lay interviews. Any DSM-IV disorder included presence (yes/no) of the following disorders within the past 12 months: major depressive disorder, dysthymia, panic disorder, agoraphobia without panic, social phobia, generalized anxiety disorder, posttraumatic stress disorder, alcohol abuse, alcohol dependence, drug abuse, drug dependence, bulimia, anorexia, and panic disorder. Mental disorders were not separated from substance use disorders because having a substance use disorder increases the risk of having a mental disorder.³⁵ Moreover, there was only a small proportion (1%) of Asian Americans with a substance use disorder in the NLAAS sample.

Social desirability was assessed using nine items from the social desirability scale of the Zuckerman Personality Scales and a subset of the screening questions from the screening scale developed in conjunction with the International Personality Disorder Examination.^{36–43} Examples of such items include: “I never get annoyed when people cut ahead of me in line”; “I never get lost, even in unfamiliar places”; “I have always told the truth.” Affirmative responses (yes/no) were summed. The total score range is 0–10, with higher scores indicating more social desirability (Kuder-Richardson Formula 20=0.71).

English language proficiency was assessed by the question, “How well do you speak English?” Responses were coded as excellent/good or fair/poor. Poverty was dichotomized as yes or no, to indicate whether the household income was below the federal poverty level for the corresponding family size in the year 2000.⁴⁴ Other socio-demographic characteristics were also assessed from the respondents: nativity status (U.S.-born/foreign-born), years lived in the U.S. (0–5, 6–10, 11–20, 20 or more), age at immigration in years (12 or younger, 13–17, 18–34, 35 or older), current public/private health insurance (yes/no), sex, age (based on dates of birth and interview), marital status (married/cohabiting, divorced/separated/widowed, never married), current employment (yes or no/not in labor force), education (less than a high school diploma, high school graduate, some college education, and college graduate or beyond), household income, household size, *per capita* income, and region (Northeast, Midwest, South, West).

Analyses. Weighted descriptive statistics were computed for all Asian NLAAS respondents. The analyses accounted for the complex sample design when calculating appropriate standard error estimates.

The study outcome was medical doctors' inquiries on mental health in the past year (yes/no). Descriptive statistics were calculated to estimate population parameters. Bivariate analysis (for each explanatory variable; Wald tests used for evaluating statistical significance), and multiple logistic regressions (with adjustments for effect modification between ethnicity and mental/substance use disorders) were performed. The resulting multivariate model included age, sex, ethnicity, mental/substance use disorders, generational status, and social desirability—variables that were found to be significant in the bivariate analyses ($p < .05$), and/or variables that were found in previous research to be significantly associated with mental health services. Where possible, continuous measures were utilized; in other words, continuous data were not converted to categori-

cal data. However, the analyses were restricted to the form the data were gathered in the survey. All analyses were performed using Stata 10.0⁴⁵ and R 2.7.2.⁴⁶

Results

Bivariate analyses (Table 2). Compared with first-generation respondents, the unadjusted odds ratios (OR) for Asian Americans' report of medical doctor inquiry of mental health was not significant for second but was significant for third-generation respondents (unadjusted OR=2.5). Additionally, Filipino (unadjusted OR=1.7) and Other Asian Americans (unadjusted OR=1.8) had significantly higher odds of reporting medical doctors' inquiry of mental health than Vietnamese, however the similar observed difference between Chinese and Vietnamese only approached statistical significance.

Respondents with any mental/substance use disorder had nearly three times greater unadjusted odds of reporting that their medical doctor inquired about their mental health. Female respondents had 1.4 higher odds of reporting medical doctor inquiry of mental health compared with males.

Table 2.

BIVARIATE ANALYSES OF PATIENT-REPORTED MEDICAL DOCTOR OF MENTAL HEALTH AMONG ASIAN AMERICANS^a

| | Bivariate OR [95% CI] |
|---|-----------------------|
| Generational status (First)** | |
| Second | 1.29 (0.81, 2.07) |
| Third or later | 2.50 (1.45, 4.30)* |
| Ethnicity (Vietnamese)** | |
| Chinese | 1.47 (0.94, 2.33) |
| Filipino | 1.69 (1.11, 2.58)* |
| Other Asian Americans | 1.84 (1.28, 2.64)* |
| Any mental/substance use disorder ^a (No)** | 2.95 (2.02, 4.32)* |
| Gender (Male)** | |
| Female | 1.39 (1.07, 1.82)* |
| Age | 0.99 (0.98, 1.00) |
| Marital status (Married/Cohabiting)** | |
| Divorced/Separated/Widowed | 1.19 (0.67, 2.09) |
| Never Married | 1.01 (0.65, 1.57) |
| Current health insurance (Yes)** | 0.55 (0.24, 1.25) |
| Education (College or more)** | |
| Some college or more | 1.09 (0.72, 1.66) |
| High school | 0.58 (0.30, 1.14) |
| Less than high school | 0.87 (0.57, 1.32) |

(Continued on p. 1378)

Table 2. (continued)

| | Bivariate OR [95% CI] |
|--|--------------------------------|
| Employed (Yes ^{**}) | 1.10 (0.71, 1.70) |
| Poverty (No) | 0.83 (0.54, 1.26) |
| Region (Northeast) ^{**} | |
| Midwest | 1.27 (0.57, 2.83) |
| South | 1.67 (0.70, 3.97) |
| West | 0.83 (0.44, 1.58) |
| English-language proficiency (Excellent/good) ^{**} | |
| Fair/poor | 0.63 (0.40, 1.01) |
| U.S.-born (Yes) ^{**} | 0.57 (0.38, 0.84) [*] |
| Years in the U.S. (U.S.-born) ^{**} | |
| 0–5 | 0.75 (0.39, 1.42) |
| 6–10 | 0.42 (0.23, 0.74) [*] |
| 11–20 | 0.63 (0.37, 1.09) |
| ≥20 | 0.48 (0.32, 0.73) [*] |
| Age at time of immigration (years) (U.S.-born) ^{**} | |
| ≤12 | 0.74 (0.44, 1.25) |
| 13–17 | 0.52 (0.22, 1.24) |
| 18–34 | 0.46 (0.26, 0.82) [*] |
| ≥35 | 0.74 (0.45, 1.21) |
| Social desirability | 1.07 (0.95, 1.21) |

*p≤.05
**Reference group
^aAssessed using the Diagnostic and Statistical Manual of Mental Disorders, Fourth Version (DSM-IV), past 12 months.
OR = Odds Ratio
CI = Confidence Interval

Non-U.S.-born respondents had significantly lower odds of reporting that their medical doctor inquired about their mental health compared with U.S.-born respondents (unadjusted OR=0.57). Furthermore, respondents who lived in the U.S. for 6–10 or 20 or more years had significantly lower odds of reporting that their medical doctor inquired about their mental health than had U.S.-born respondents (unadjusted OR=0.42; and, unadjusted OR=0.48, respectively); however, this observed difference in odds was not significant when compared with respondents who lived in the U.S. 0–5 years or 11–20 years. Additionally, those who immigrated to the U.S. at 18–34 years old had significantly lower odds of reporting that their medical doctor had inquired about their mental health compared with U.S.-born respondents (unadjusted OR=0.46); however, this association was not significant for respondents who immigrated at other ages.

There were no significant differences in Asian Americans' report of medical doctor inquiry of mental health by age, marital status, health insurance, education, employment, poverty, region of residence in the United States, English language proficiency, and social desirability.

Multivariate analyses. Table 3A presents results of a multivariate analysis of main effects. Asian Americans with U.S.-born parents had significantly greater odds compared to Asian Americans born outside the U.S. to report that their doctors inquired about their mental health (OR=2.15); though little difference was observed between Asian Americans born outside the U.S. and U.S.-born Asian Americans with non-U.S.-born parents.

Female respondents had 1.36 times greater odds of reporting that their doctors inquired about their mental health compared to males. No significant associations were found by age or by social desirability.

While the results in Table 3A of the main effects model suggest significantly different odds of medical doctor inquiry depending on presence of a mental health or substance abuse disorder (OR=2.6), a closer examination of effects by the addition of an interaction term to the model (Table 3B) indicates a more subtle and complex determination of medical doctor inquiry. In the model with interactions presented, significant differences exist among ethnicities in the likelihood of provider inquiry about their mental health (as well as the other significant covariates indicated in the main effects model). However, the effects of mental health disorder are significantly modified by ethnicity (or equivalently, the effect of ethnicity on odds of provider inquiry significantly differs

Table 3A.

**MULTIVARIATE ANALYSES OF PATIENT-REPORTED
MEDICAL DOCTOR INQUIRY OF MENTAL HEALTH AMONG
ASIAN AMERICANS—MAIN EFFECTS MODEL^a**

| | Multivariate OR [95% CI] |
|---|--------------------------|
| Generational status (First)** | |
| Second | 1.13 (0.67, 1.90) |
| Third or later | 2.15 (1.26, 3.68)* |
| Ethnicity (Vietnamese)** | |
| Chinese | 1.46 (0.91, 2.35) |
| Filipino | 1.30 (0.79, 2.13) |
| Other Asian Americans | 1.49 (0.94, 2.35) |
| Any mental/substance use disorder ^a (No)** | 2.60 (1.76, 3.85)* |
| Gender (Male)** | |
| Female | 1.36 (1.04, 1.79)* |
| Age | 0.99 (0.98, 1.01) |
| Social desirability | 1.01 (0.90, 1.14) |

* $p \leq .05$

**Reference group

^aAssessed using the Diagnostic and Statistical Manual of Mental Disorders, Fourth Version (DSM-IV), past 12 months.

OR = Odds Ratio

CI = Confidence Interval

Table 3B.**MULTIVARIATE ANALYSES OF PATIENT-REPORTED MEDICAL DOCTOR INQUIRY OF MENTAL HEALTH AMONG ASIAN AMERICANS—INTERACTION INCLUDED^a**

| | Multivariate OR [95% CI] |
|---|--------------------------|
| Generational status (First)** | |
| Second | 1.14 (0.68, 1.93) |
| Third or later | 2.18 (1.28, 3.73)* |
| Ethnicity (Vietnamese)** | |
| Chinese | 2.27 (1.24, 4.14)* |
| Filipino | 1.65 (0.90, 3.03) |
| Other Asian Americans | 1.98 (1.10, 3.57)* |
| Any mental/substance use disorder ^a (No)** | 8.41 (3.28, 21.66)* |
| Interaction: Ethnicity X DSM-IV disorder (Vietnamese)** | |
| Chinese | 0.17 (0.05, 0.59)* |
| Filipino | 0.39 (0.10, 1.48) |
| Other Asian Americans | 0.32 (0.10, 1.05) |
| Gender (Male)** | |
| Female | 1.38 (1.06, 1.81)* |
| Age | 0.99 (0.98, 1.01) |
| Social desirability | 1.02 (0.91, 1.15) |

* $p \leq .05$
**Reference group
^aAssessed using the Diagnostic and Statistical Manual of Mental Disorders, Fourth Version (DSM-IV), past 12 months.
OR = Odds Ratio
CI = Confidence Interval

depending on the existence of previous year mental health/substance abuse disorder). As illustrated in Figure 1 (and presented in Table 3B), among those with no mental/substance use disorder, all ethnicities had greater odds of reporting that their doctors inquired about their mental health than did the reference Vietnamese group. Any past year mental/substance use disorder increased the odds of Asian Americans reporting that their doctors inquired about their mental health status, although the magnitude of the increase varied widely depending on the ethnic group. The largest effect is observed among Vietnamese respondents with past year mental/substance use disorder, who had an estimated 8.4 times greater odds of reporting that they had received doctor inquiries than did their Vietnamese counterparts without a past year mental/substance use disorder. Conversely, those odds within the Chinese group were only 1.4 times as great when comparing respondents with and without past year mental/substance use disorder.

Discussion

The study's objective was to examine factors influencing the likelihood of Asian Americans' report of being inquired by their doctors about their mental health. It was found that Asian Americans' report of medical doctor's inquiries about mental health do vary in this population with generational status, ethnicity, and/or presence of mental/substance use disorder(s). Specifically, two major findings result from the study. First, Asian Americans with U.S.-born parents had odds twice as great as those of Asian Americans born outside the U.S. of reporting that their doctors inquired about their mental health; hence, the hypothesis that recent immigrants would be less likely to report that their doctors asked about their mental health compared to others was supported.

Second, results show that among those with any mental/substance use disorder in the past 12 months, the odds of reporting that one was asked about one's mental health are highest among Vietnamese. These findings remain after adjustment for potential confounders including age, gender, generational status and social desirability. Contrary to the authors' hypothesis, it is striking that having a mental/substance use disorder in the past 12 months affected the likelihood of reporting that a medical doctor asked about the mental health among Chinese less than it did among Vietnamese. The interaction of any mental/substance use disorder in the past 12 months and ethnicity is substantial; having a previous mental/substance use disorder in the past 12 months changes the odds of reporting about being inquired differently depending on the ethnicity. This

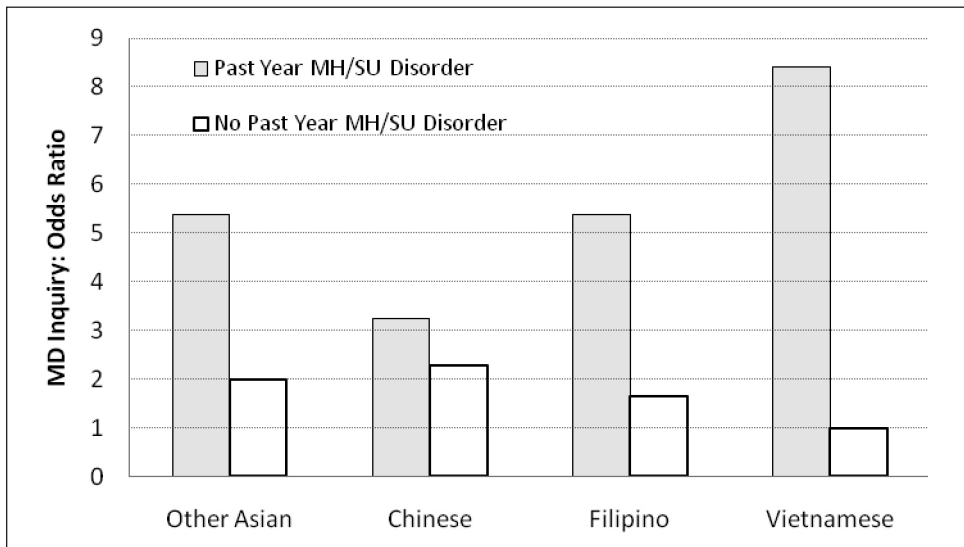


Figure 1. An illustration of the estimated odds ratios based on a multivariate model, adjusted for generational status, gender, age and social desirability. Reference group: Vietnamese with no past year MH/SU disorder.

MD = Medical doctor

MH = Mental health

MH/SU = Mental health/substance use

study suggests that additional research in this area needs to be conducted to better understand why screening differs by ethnicity and mental health status.

An example of an area that requires further exploration is patient-provider concordance, which is defined as “a state of agreement or harmony”^{47[p.3]} between the patient and the provider in various characteristics such as race and language. Cooper and Powe reported that health care disparities are persistent among racial and ethnic minorities, and research “links patient-physician race and ethnic concordance with higher patient satisfaction and better health care processes.”^{47[p.ii]} Indeed, research suggests that patients who are race-concordant with their medical providers generally report higher satisfaction with their providers along with higher ratings of care.^{48,49} However, research among Asian Americans is limited; therefore, additional research is needed including those examining the extent to which racial, ethnic and/or language concordance between the provider and patient play a role in the likelihood that a medical provider would inquire about a patient’s mental health especially among recent immigrants. For example, it is plausible that Vietnamese individuals with a mental/substance use disorder are more likely to be screened for mental health by a medical doctor because the medical doctor is also Vietnamese; thus, there is racial/ethnic concordance between the patient and provider which may be important in that language, for instance, does not serve as a communication barrier to *ask* about one’s mental health.

An additional important question to include is to what extent does the role of patient-provider racial, ethnic and language concordance affect the likelihood of Asian American patients disclosing mental health needs to their medical doctors? Unfortunately, this study was limited in its ability to explore these questions because there were no data regarding the medical doctors’ racial, ethnic or language background; however, the primary author of this study does have a study in its early stage exploring these questions.

As mentioned earlier, it is important to understand the pathways to mental health/substance use services utilization especially among populations that underutilize mental health/substance use services. This study is particularly relevant because it investigates the relative roles of generational status, ethnicity and mental/substance use disorder in patients’ self-reports about a doctor asking them about their mental health—one of the pathways to the use of mental health services. The study results indicate that patients’ reports of medical doctors’ inquiry of mental health do differ by these factors. Future research should examine whether the medical doctors’ responses to this question are similar to the patients’ responses in order to determine whether the results are a difference in perception or reflect what actually happened.

Furthermore, this study is particularly significant and timely given its relevance to the 2010 *Patient Protection and Affordable Care Act*. This legislation stipulates that individuals can access preventive services for free (in other words, with no cost-sharing) through their health plans, effective September 23, 2010 for new insurance plans (January 1, 2011 for many plans).⁵⁰ Among the covered preventive services for adults are depression screening and alcohol misuse screening and counseling.

It is assumed that given this new mandate, there will be an increase in the number of adult patients who will be screened for depression and alcohol use. However, future research should investigate whether the rates of depression and alcohol misuse screening will be observed similarly across ethnic groups and generational status. For example,

although it is speculated that Asian Americans as a group may benefit from this law, it is unknown to what extent providers are adequately trained to inquire about depression and alcohol use among Asian American patients and, if asked, whether the patients will even disclose their depression status and alcohol use due to culturally salient factors such as fear of loss of face, as previously discussed. Moreover, though the provision of free depression screening and alcohol misuse screening and counseling are applauded, it is yet to be determined whether (1) Asian American patients screened to be depressed and/or misuse alcohol will actually accept their diagnosis and seek treatment; (2) there are additional financial barriers to accessing treatment because there may exist cost-sharing for depression treatment; and, (3) the health care system is equipped to care for this patient population that has conventionally not received such services. As noted previously, effective mental health treatments exist; however, the questions about whether such treatments are available in the appropriate languages and culturally competent remain. It would be unethical to advocate for universal screening if treatment is indeed unavailable for culturally diverse populations such as Asian Americans. Finally, it should be noted that this new legislation does not include free screening for other mental/substance use disorders; thus, there still exists a segment of a population that may potentially be missed in terms of screening and therefore treatment not accessed.

These study findings should be interpreted with the following limitations in mind. First, the NLAAS is a cross-sectional study, thus, it is plausible that certain Asian Americans with mental disorders are seeking out care and/or selecting those medical doctors who are likely to inquire more about their mental health. One could better understand these relations by including in interviews with Asian Americans, inquiries about their medical history, including their pattern of selection of medical doctors (e.g., referral source, if any). Second, these findings can only be generalized to non-institutionalized, non-homeless Asian Americans. Third, it is possible that self-reporting bias exists in the NLAAS data responses, although the authors attempted to mitigate this possibility by controlling for social desirability in the analyses.

This study also has strengths. First, to the authors' knowledge, this is the first study to investigate empirically the associations among ethnicity, generation, and mental/substance use disorders in self-reported medical doctors' of mental health among a nationally representative, large sample of Asian Americans. Moreover, because NLAAS was administered using standardized instruments it will be possible to compare these study findings with results of future studies, including those examining other racial/ethnic groups.

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