Generational Status and Family Cohesion Effects on the Receipt of Mental Health Services Among Asian Americans: Findings From the National Latino and Asian American Study

Van M. Ta, PhD, MPH, Peter Holck, PhD, MPH, and Gilbert C. Gee, PhD

Objectives. We investigated the relative strengths of generational status and family cohesion effects on current use of mental health services (past 12 months) among Asian Americans.

Methods. We conducted a secondary data analysis with data from the National Latino and Asian American Study, 2002 to 2003, restricted to Asian American respondents (n = 2087). The study's outcome was current use (past 12 months) of any mental health services. Respondents included Chinese, Filipino, Vietnamese, and other Asian Americans.

Results. Multivariate analyses suggest no significant interaction exists between second- versus first-generation Asian Americans and family cohesion. The impact of generational status on mental health service use was significant for third- or later-generation Asian Americans (versus first-generation Asian Americans) and varied with family cohesion score.

Conclusions. Family cohesion and generational status both affect the likelihood of Asian Americans to seek mental health services. Our findings also highlight the need for primary care and other providers to consistently screen for mental health status particularly among first-generation Asian Americans. Mental health service programs should target recent immigrants and individuals lacking a strong family support system. (*Am J Public Health.* 2010;100:115–121. doi:10.2105/AJPH.2009.160762)

Previous research has demonstrated that strong family cohesion, defined as affective involvement or bonding within the family,[1] may serve as a buffer to psychosocial stressors.[2] Persons from families who have high levels of cohesion are at lower risk of developing and experiencing psychological distress and depression, suicidal ideation, and drug use.[3–9] Low family cohesion is associated with refusal of the initial mental health treatment of a child, possibly because less cohesive families are "less committed to one another, and therefore, may be less likely to help and support one another in receiving treatment."[10(p113)] Further, children from families with high levels of economic stress and low cohesion are more likely to drop out of services compared with children from more cohesive families with lower levels of economic stress.[11] Moreover, strong family cohesion may be instrumental in supporting a family member to seek mental health services, especially with the presence of a "'discussion zone,' that is, a specific moment or space" where the primary members can speak.[12(p412)]

Although cohesive families may help encourage family members to seek mental health services, a counterargument is that highly cohesive families may be distrusting of nonkin members. Moreover, highly cohesive families may want to keep individual family members from embarrassing the family unit, which may potentially impede them from seeking help for stigmatizing conditions. These issues are particularly salient for Asian American families, who often view mental disorders as highly stigmatizing[13–17] and who may wish to avoid treatment to "save face."[18,19] Accordingly, we tested 2 competing hypotheses, one that suggests that family cohesion may be associated with increased use of mental health services, and another that suggests the opposite.

Given that 69% of all Asian Americans are recent immigrants, another consideration lies with nativity and generation.[20] Among immigrants, social networks tend to focus on the family and workplace.[21–23] However, among succeeding generations, social networks tend to become more diverse. Later generations tend to be influenced by a broad range of networks including their families, workplaces, and friends, and by "weak ties" to other networks (i.e., the networks of their immediate networks).[22–24] The diverse networks of second- and third-generation Asian Americans may be more encouraging of mental health service use than the family and work networks of the first generation. Also, keeping mental health problems in the family system, rather than in the service sector, might be important for more recent arrivals (i.e., those less familiar with Western conceptualizations of mental health). Understanding how the relationship between family cohesion and service use is moderated by generation provides important information from which to plan services. For instance, outreach programs may be tailored to specific generations and according to level of family cohesion. The hypothesis that generation moderates the association between family cohesion and service use, however, has not yet been empirically tested.

We investigated whether generational status and family cohesion have independent or joint effects with the use of current mental health services. This research has important public health implications because it is widely known that racial minorities, including Asians, underutilize mental health services compared with Whites in the United States.[13,14,16,25–28] By exploring the roles of generational status and family cohesion, for example, we may gain specific insights to the barriers to and facilitators of the receipt of mental health services among a growing racial minority population in the United States.[29]

METHODS

We drew data from the National Latino and Asian American Study (NLAAS), a household survey conducted in 2002 to 2003, and restricted our sample to Asian American respondents. The sampling design has been detailed elsewhere.[30,31] Briefly, the design included 3 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 by using the American Association for Public Opinion Research, Response Rate Method 3)[31] for primary and secondary respondents were 69% and 74%, respectively. We utilized sample weights to account for joint probabilities of selection for these 3 components and to allow the sample estimates to be nationally representative.[31]

Respondents were aged 18 years or older and resided in the United States. 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 data collection protocols is described elsewhere.[32]

Eight persons with missing family cohesion values were excluded from the original NLAAS sample resulting in 2087 adults included in our analysis. Our sample included 598 Chinese, 506 Filipino, 517 Vietnamese, and 466 "other Asian Americans" (e.g., Bangladeshi, Cambodian). The proportions of respondents who completed the interview in English were 50% for Chinese, 87.6% for Filipino, 24.6% for Vietnamese, and 98.6% for "other Asian Americans" ($P<.01$).

Measures

Dependent variable. The study's primary outcome was current use (past 12 months) of any mental health services. Eligible types of mental health services included at least 1 visit to a psychiatrist, psychologist, medical doctor, social worker, counselor, other psychotherapist, mental health nurse, or religious or spiritual person or healer, or use of mental health self-help, hotline, or Internet resources.

Independent variables. We assessed family cohesion through a 3-item subscale of the Family Cohesion Scale developed by Olson et al.[30,33] The items were: (1) "Family members like to spend free time with each other"; (2) "Family members feel very close to each other"; and (3) "Family togetherness is very important." Possible responses to each item were 1=strongly agree, 2=somewhat agree, 3=somewhat disagree, and 4=strongly disagree. We transformed the scale of the resulting score such that possible scores ranged from 1 to 10, with higher scores indicating stronger family cohesion.

We divided generational status into 3 categories: first generation (i.e., respondent was an immigrant), second generation (i.e., respondent born in the United States to at least 1 foreign-born parent), and third generation or later (respondent and both of his or her parents were born in the United States).

To ascertain self-rated mental health, respondents were asked, "How would you rate your overall mental health—excellent, very good, good, fair, or poor?" The presence of any mental disorder within the past 12 months was assessed with the World Health Organization Composite International Diagnostic Interview,[34] a structured interview that follows the criteria of the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (*DSM-IV*)[35] and that is designed to be administered by lay interviewers. Any *DSM-IV* disorder included presence (yes or 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, and drug dependence.

We assessed social desirability with 9 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] The items included: "I never met a person that I didn't like"; "I always win at games"; "I have never been bored"; "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"; "My table manners at home are as good as when I eat out in a restaurant"; "I have never lost anything"; "No matter how hot or cold it gets, I am always quite comfortable"; and "It doesn't bother me if someone takes advantage of me." Affirmative responses (yes=1 or no=0) were summed. The total score range is 0 to 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 "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 sociodemographic characteristics included self-identified ethnicity (Chinese, Filipino, Vietnamese, or "other Asian Americans"), nativity status (US-born or foreign-born), years lived in the United States (0–5 years, 6–10 years, 11–20 years, >20 years), age at time of immigration in years (12 years or younger, 13–17 years, 18–34 years, 35 years or older), current public or private health insurance (yes or no), gender, age (based on dates of birth and interview), marital status (married or cohabiting; divorced, separated, or widowed; or never married), current employment (yes, no, or not in labor force), education (less than a high-school diploma, high-school graduate, some college education, or college graduate or beyond), household income, household size, per capita income, and region (Northeast, Midwest, South, West).

Analyses

We computed weighted descriptive statistics for all Asian NLAAS respondents. Our analyses accounted for the complex sample design to calculate appropriate standard error estimates.

Current use of mental health services was our primary outcome. We calculated descriptive statistics to estimate population parameters. We performed bivariate analysis (for each explanatory variable), and multiple logistic regressions (with adjustments for effect modification between family cohesion and generational status). The final multivariate model included family cohesion, generational status, ethnicity, social desirability, variables that were found to be significant in the bivariate analyses ($P<.05$), or variables that were found in previous research to be significantly associated with mental health services. We controlled for any *DSM-IV* disorders in the past 12 months to account for need for services. Individuals who have *DSM-IV* disorders are the ones who require services. Though self-rated mental health was found to be significantly associated with the study's outcome in the bivariate analyses, it was excluded from the multivariate model because of its collinearity with the presence of a *DSM-IV* disorder. All analyses were performed with Stata version 10.0 (StataCorp, College Station, TX) and R version 2.7.2 (R Foundation for Statistical Computing, Vienna, Austria).

RESULTS

More than half of the respondents were women, 64% were employed, and the mean age was 41.3 years. Nearly 7 out of 10 respondents were married or living with a partner, almost 23% had never been married, and the remaining were divorced, separated, or widowed (Table 1). Most respondents resided in the Western regions of the United States (67.9%), followed by the Northeast (15.6%), Midwest (8.6%), and South (7.9%). The majority of respondents reported having health insurance (87%). The proportion of respondents who had less than a high-school education, were high school graduates, had attended some college, and had a college degree or more were 14.3%, 17.8%, 25.2%, and 42.8%, respectively. The mean household income was $72 622 and mean household size was 2.9 members. Approximately 17% of the sample lived in poverty.

Nearly 24% of the sample was US-born. Among immigrants, the proportion of respondents who had lived in the United States for 5 or fewer years was 13.7%, 6 to 10 years was

TABLE 1—Weighted Sample Characteristics of Asian Americans: National Latino and Asian American Study, 2002–2003

		Receipt of Mental Health Services[a]		
	Total (n = 2087), % or Mean (SE)	Yes (n = 179), % or Mean (SE)	No (n = 1908), % or Mean (SE)	*P*
Weighted %	100	8.6	91.4	
Gender				.16
Women	52.5	9.7	90.3	
Men	47.5	7.4	92.6	
Age, y	41.3 (0.8)	40.8 (1.5)	41.4 (0.8)	.74
Marital status				.02
Married or cohabiting	68.8	6.7	93.2	
Divorced, separated, or widowed	8.3	13.1	86.9	
Never married	22.9	12.7	87.3	
Current health insurance				.24
Yes	87.0	8.0	92.0	
No	23.0	12.5	87.5	
Education				<.01
≥ College degree	42.8	7.6	92.3	
Some college	25.2	5.9	94.1	
High school graduate	17.8	10.1	89.9	
< High school graduate	14.3	9.2	91.8	
Employed				<.01
Yes	64.0	6.5	93.4	
Unemployed or not in labor force	36.0	12.3	87.7	
Household income, $	72 622 (2210)	65 656 (6564)	73 278 (2270)	.29
Household income				.10
> $100 000	27.3	6.8	93.2	
$65 000–$100 000	17.6	11.7	88.3	
$30 000–$64 999	27.7	6.5	93.5	
< $30 000	27.4	10.7	89.3	
Household size	2.9 (0.1)	2.5 (0.1)	2.9 (0.1)	<.01
Per capita income, $	34 895 (1382)	33 108 (3930)	35 064 (1365)	.63
Poverty				.36
Yes	17.4	10.9	89.1	
No	82.6	8.1	91.9	
Region				.26
Northeast	15.6	12.9	87.1	
Midwest	8.6	9.4	90.6	
South	7.9	9.0	91.0	
West	67.9	7.5	92.5	
English-language proficiency				.47
Excellent or good	66.9	9.1	90.9	
Fair or poor	33.1	7.7	92.3	
US-born				.03
Yes	23.8	12.5	87.5	
No	76.2	7.4	92.6	

Continued

TABLE 1—*Continued*

Years in the United States				.18
US-born	23.8	12.5	87.5	
0–5	13.7	8.1	91.9	
6–10	12.1	8.7	91.3	
11–20	26.0	5.9	94.1	
>20	24.4	8.1	91.9	
Age at immigration, y				<.01
US-born	23.8	12.5	87.5	
≤12	12.7	9.0	91.0	
13–17	5.2	9.7	90.3	
18–34	41.7	6.3	93.7	
≥35	16.6	8.2	91.8	
Generational status				.04
First	76.3	7.4	92.6	
Second	14.1	8.1	91.9	
Third or later	9.7	18.9	81.1	
Family cohesion	9.0 (0.1)	8.3 (0.2)	9.1 (0.1)	<.01
Has any *DSM-IV* disorder				.17
Yes	12.9	32.4	67.6	
No	87.1	5.1	94.9	
Self-rated mental health				<.01
Excellent	32.8	5.1	94.9	
Very good	32.4	6.7	93.3	
Good	26.3	12.0	88.0	
Fair	7.4	14.4	85.6	
Poor	1.1	44.1	55.9	
Social desirability	7.8 (0.1)	7.9 (0.02)	7.7 (0.1)	.34

Note. DSM-IV = Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Percentages might not equal 100% because of rounding.
[a]Use of mental health services in past 12 months.
[b]*Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (*DSM-IV*), past 12 months.

12.1%, 11 to 20 years was 26%, and more than 20 years was 24.4%. About two thirds of the sample reported having excellent or good English-language proficiency. The proportions of respondents who immigrated at age 12 years or younger, age 13 to 17 years, age 18 to 34 years, and age 35 years or older were 12.7%, 5.2%, 41.7%, and 16.6%, respectively; the remaining respondents were US-born. More than three quarters of the sample respondents were first-generation (76.3%), and the remaining were second-generation (14.1%) or third- or later-generation (9.7%) respondents.

The mean family cohesion score was 9.4 (standard error=0.1). Almost 13% of the respondents reported having any *DSM-IV* disorder in the past 12 months. Most respondents had self-rated their mental health as "excellent" (32.8%), "very good" (32.4%), or "good" (26.3%) with the remaining as "fair" (7.4%) or "poor" (1.1%). The mean social desirability score was 7.8 (standard error=0.1).

The weighted percentage of Asian respondents who received mental health services was 8.6%. There were significant differences in the proportions of respondents who received mental health services by marital status, education, and employment. There were also significant differences in receipt of mental health services by mean household size and social desirability score. There were significantly higher proportions of US-born respondents (versus not US-born), respondents who immigrated to the United States at a younger age (versus an older age), persons from successive generations, and persons who self-rated their mental health as poor who reported receiving mental health services. Also, those who received mental health services had a significantly lower mean family cohesion score (weaker family cohesion) compared with those who did not.

Bivariate Analyses

As hypothesized, each 1-point increase in family cohesion corresponded to lower odds of receiving mental health services (odds ratio [OR]=0.79; 95% confidence interval [CI]=0.73, 0.85; Table 2). Further, third-generation participants had higher odds of using mental health services compared with first-generation participants (OR=2.91; 95% CI=1.58, 5.38). However, first- and second-generation participants did not significantly differ from one another (OR=1.11; 95% CI=0.61, 2.01).

Persons who had any *DSM-IV* disorder in the past year had a nearly 9-times-greater odds of receiving mental health services (95% CI=5.76, 13.93) compared with persons who did not have a *DSM-IV* disorder. In supplemental analyses, we evaluated whether individuals from low-cohesion families had more need for services. Accordingly, we examined the association between family cohesion and any *DSM-IV* disorders. We found that decreasing family cohesion was associated with increased odds of any *DSM-IV* disorders (OR=1.29; 95% CI=1.21, 1.38).

Persons who self-rated their mental health as less than "excellent" had greater odds of receiving mental health services, compared with persons who self-rated their mental health as "excellent." The results were significant among persons who self-rated their mental health as "good" (unadjusted OR=2.54; 95% CI=1.25, 5.17), "fair" (unadjusted OR=3.15; 95% CI=1.50, 6.60), and "poor" (unadjusted OR=14.72; 95% CI=4.02, 53.89).

Also, persons who were divorced, separated, or widowed (unadjusted OR=2.09; 95% CI=1.27, 3.42) or never married (unadjusted OR=2.01; 95% CI=1.13, 3.59) were significantly more likely to have received mental health services in the past year compared with persons who were married or living with a partner. Persons who were unemployed were significantly more likely to have received mental health services in the

TABLE 2—Bivariate Analyses of Current Use (Past 12 Months) of Mental Health Services Among Asian Americans: National Latino and Asian American Study, 2002–2003

	OR (95% CI)
Family cohesion	0.79* (0.73, 0.85)
Generational status	
First (Ref)	1.00
Second	1.11 (0.61, 2.01)
Third or later	2.91* (1.58, 5.38)
Ethnicity	
Chinese (Ref)	1.00
Filipino	1.09 (0.65, 1.81)
Vietnamese	1.23 (0.59, 2.59)
Other Asian Americans	1.18 (0.63, 2.21)
Any *DSM-IV* disorder[a]	
No (Ref)	1.00
Yes	8.96* (5.76, 13.9)
Self-rated mental health	
Excellent (Ref)	1.00
Very Good	1.33 (0.76, 2.30)
Good	2.54* (1.25, 5.17)
Fair	3.15* (1.50, 6.60)
Poor	14.72* (4.02, 53.89)
Gender	
Men (Ref)	1.00
Women	1.36 (0.88, 2.09)
Age, y	0.99 (0.98, 1.01)
Marital status	
Married or cohabiting (Ref)	1.00
Divorced, separated, or widowed	2.09* (1.27, 3.42)
Never married	2.01* (1.13, 3.59)
Current health insurance	
Yes (Ref)	1.00
No	1.63 (0.81, 3.28)
Education	
≥College degree (Ref)	1.00
Some college	1.11 (0.65, 1.90)
High school graduate	0.63 (0.32, 1.23)
<High school graduate	0.82 (0.44, 1.54)
Employed	
Yes (Ref)	1.00
No	2.02* (1.26, 3.22)
Poverty	
No (Ref)	1.00
Yes	1.38 (0.73, 2.59)
Region	
Northeast (Ref)	1.00
Midwest	0.70 (0.32, 1.53)
South	0.67 (0.21, 2.15)
West	0.55 (0.36, 0.84)
English-language proficiency	
Excellent or good (Ref)	1.00
Fair or poor	1.21 (0.73, 2.00)
Years in the United States	
US-born (Ref)	1.00
0–5	0.62 (0.30, 1.25)
6–10	0.66 (0.28, 1.55)
11–20	0.44 (0.24, 0.79)
>20	0.61 (0.36, 1.04)
Age at immigration, y	
US-born (Ref)	1.00
≤12	0.69 (0.35, 1.36)
13–17	0.75 (0.30, 1.86)
18–34	0.47 (0.27, 0.83)
≥35	0.62 (0.37, 1.06)
Social desirability	1.05 (0.95, 1.15)

Note. CI = confidence interval; OR = odds ratio.
[a]*Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*, past 12 mo.
*$P \leq .01$ via Wald test of hypothesis that coefficients of regression term are zero.

past year (unadjusted OR=2.02; 95% CI=1.26, 3.22) compared with those who were employed.

Bivariate analyses revealed no significant differences in current use of mental health services by ethnic group, gender, age, current health insurance, education, poverty, region of residence in the United States, English-language proficiency, years lived in the United States, age at time of immigration, and social desirability.

Multivariate Analyses

Compared with first-generation Asian Americans, second-generation Asian Americans of identical family cohesion scores were estimated to have a 1.70-times-greater odds of receiving mental health services (95% CI=0.32, 9.00) and third-generation Asian Americans were estimated to have a 2.67-times-greater odds (95% CI=1.08, 6.15; Table 3). The odds ratio for receipt of mental health services associated with a 1-point increase in family cohesion was 0.79 (95% CI=0.70, 0.88) among those with identical generational status.

Additionally, respondents who had any *DSM-IV* disorder in the past year had nearly an 8.25-times-greater odds of receiving mental health services (95% CI=5.04, 13.52) compared with persons who did not have a *DSM-IV* disorder. Persons who were unemployed were significantly more likely to have received mental health services in the past year (adjusted OR=1.94; 95% CI=1.28, 2.96) compared with those who were employed. There were no significant differences in receipt of mental health services by gender, age, marital status, and social desirability.

The effect of generational status on mental health service is modified by family cohesion. Although this estimated interaction was not found to be statistically significant between first- and second-generation comparisons, the interaction estimate between first- and third- or later-generation was significant.

DISCUSSION

The goal of this study was to investigate the association between family cohesion and mental health services among Asian Americans, and to examine whether these associations varied by generation. Two key findings emerged from this investigation. First, participants reporting greater family cohesion were less likely to use mental health services, even after we controlled for mental illness and other sociodemographic factors. Second, we found that the effect of generational status on use of mental health services modifies the effect of family cohesion. In particular, family cohesion appears to play an important role for first-generation Asian Americans in seeking mental health services compared with third- or later-generation Asian Americans, and that immigrant Asian Americans with strong family cohesion have lower odds of receiving mental health services.

Numerous prior studies have found that Asian Americans are less likely to use mental health services.[13,14,16,25–28] Our findings suggest that use of mental health services by Asian American immigrants—or even those who are US-born but who have at least 1 immigrant parent—are particularly influenced by their

TABLE 3—Multivariate Analyses of Current Use (Past 12 Months) of Mental Health Services Among Asian Americans: National Latino and Asian American Study, 2002–2003

	OR (95% CI)
Generational status	
First (Ref)	1.00
Second	1.70 (0.32, 9.00)
Third or later	2.67** (1.08, 6.15)
Family cohesion	0.79** (0.70, 0.88)
Interaction: Generational status × family cohesion	
First generation (Ref)	1.00
Second generation	1.18 (0.88, 1.58)
Third generation	1.28* (1.01, 1.61)
Ethnicity	
Chinese (Ref)	1.00
Filipino	1.53 (0.97, 2.41)
Vietnamese	2.02* (1.01, 4.01)
Other Asian Americans	1.40 (0.82, 2.42)
Any *DSM-IV* disorder[a]	
No (Ref)	1.00
Yes	8.25** (5.04, 13.52)
Gender	
Men (Ref)	1.00
Women	1.20 (0.80, 1.80)
Age, y	1.01 (0.99, 1.02)
Marital status	
Married or cohabiting (Ref)	1.00
Divorced, separated, or widowed	1.26 (0.71, 2.22)
Never married	1.45 (0.80, 2.64)
Employed	
Yes (Ref)	1.00
No	1.94** (1.28, 2.96)
Social desirability	0.95 (0.86, 1.06)

Note. CI = confidence interval; OR = odds ratio.
[a]*Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (*DSM-IV*), past 12 mo. No second-generation Vietnamese Americans received mental health services. There was no third-generation Vietnamese American in the sample.
*$P \leq .05$; **$P \leq .01$.

cohesion with their families. This implies that immigrants with strong family cohesion may be keeping their "problems" within the family unit and reluctant to seek help outside their family network, perhaps to avoid shaming their families with stigmatizing problems such as mental illness.

Although preliminary, these findings suggest that providers should consider outreach efforts that target entire families and not simply individual Asian Americans. Indeed, 1 major difference between the second- and third-generation Asian Americans in our sample was related to at least 1 parent being foreign-born, suggesting that educational programs targeting the immigrant parent may be particularly helpful in encouraging utilization of mental health services.

Of course, another potential explanation is that immigrants from cohesive families were less likely to use mental health services because they require fewer services. That is, the families may provide the needed supports or provide traditional healing practices. We are unable to evaluate this explanation, and research should further investigate these issues of need versus underutilization versus actual benefit from families.

We found a positive association between family cohesion and any *DSM-IV* disorders, such that respondents with high levels of family cohesion were less likely to have a disorder, a finding echoed in the literature.[2–9] This suggests that participants with low levels of family cohesion had greater need for mental health services, and, hence, it was important that we control for presence of any *DSM-IV* disorders in the past 12 months (and, more generally, psychological symptoms). However, even after controlling for these disorders, we found an association between family cohesion and mental health service use.

Our findings and suggestions should be seen in the context of several caveats. First, because we utilized cross-sectional data, the temporal sequence of cause and effect cannot be established. Thus, it is possible that mental health care itself caused family conflicts, rather than the mental health problems (which led to seeking mental health care). It is also unclear whether low family cohesion causes a person to have a *DSM-IV* disorder, or if a disorder (e.g., major depressive disorder) was first present, which is then a potential cause for disagreements, stress, etc. within the family unit. Longitudinal research is required to confirm the direction of these temporal associations. Second, we can only generalize our findings to the noninstitutionalized, nonhomeless Asian American population. Third, our data are self-reported and subject to reporting biases. Controls for desirability temper concerns with responses that portray a positive image (i.e., individuals may overstate family cohesion and health service use and understate mental illness), but a future study can improve our design with the inclusion of external measures (e.g., clinician assessments of mental illness, assessments of cohesion by other family members).

These caveats are balanced by several strengths. To our knowledge, this is the first study to empirically investigate the associations between family cohesion, generation, and mental health service use among a nationally representative sample of Asian Americans. Furthermore, the standard instruments that were utilized in the NLAAS should permit comparisons to future studies.

These results highlight the need for primary care providers and other providers to consistently screen for mental health status as it appears that those who need treatment might not be detected. Alternatively, mental health stigma may affect an individual's help-seeking behavior or willingness to receive treatment. We did not directly investigate mental health stigma, but a key area for further research is to determine if stigma is indeed one reason why individuals from cohesive families are less likely to use mental health services. If this is the case, then providers may consider outreach programs particularly designed to reduce the stigma of mental illness among Asian American immigrant families. ■

About the Authors

At the time of the study, Van M. Ta and Peter Holck were with the Office of Public Health Studies, University of Hawai'i at Mānoa. Gilbert C. Gee is with the School of Public Health, University of California, Los Angeles.

Correspondence should be sent to Van M. Ta, PhD, MPH, Assistant Professor, Department of Health Science, San Jose State University, One Washington Square, MH 514, San Jose, CA 95192 (e-mail: vta@casa.sjsu.edu). Reprints can be ordered at http://www.ajph.org by clicking the "Reprints/Eprints" link.

This article was accepted March 28, 2009.

Contributors

V.M. Ta originated the study, led the writing, and assisted with the analysis. P. Holck conducted the analysis. G.C. Gee assisted with the conceptualization and writing.

Acknowledgments

The National Latino and Asian American Study was funded by the National Institute of Mental Health (grants U01 MH62209 and U01 MH62207), with additional support from the Office of Behavioral and Social Science Research and the Substance Abuse and Mental Health Services Administration.

We gratefully acknowledge David Takeuchi who provided insightful and invaluable feedback in the writing of the article.

Human Participant Protection

Institutional review board approvals were granted by the University of Washington, University of Michigan, and Cambridge Health Alliance for all study procedures, and by the University of Hawai'i at Mānoa for data analysis purposes.

References

1. Olson DH, Russell CS, Sprenkle DH. Circumplex model of marital and family systems: VI. Theoretical update. *Fam Process.* 1983;22(1):69–83.

2. Laursen B, Collins WA. Interpersonal conflict during adolescence. *Psychol Bull.* 1994;115(2):197–209.

3. Meyerson LA, Long PJ, Miranda R Jr, Marx BP. The influence of childhood sexual abuse, physical abuse, family environment, and gender on the psychological adjustment of adolescents. *Child Abuse Negl.* 2002; 26(4):387–405.

4. Aydin B, Oztutuncu F. Examination of adolescents' negative thoughts, depressive mood, and family environment. *Adolescence.* 2001;36(141):77–83.

5. Harris TL, Molock SD. Cultural orientation, family cohesion, and family support in suicide ideation and depression among African American college students. *Suicide Life Threat Behav.* 2000;30(4):341–353.

6. Reinherz HZ, Paradis AD, Giaconia RM, Stashwick CK, Fitzmaurice G. Childhood and adolescent predictors of major depression in the transition to adulthood. *Am J Psychiatry.* 2003;160(12):2141–2147.

7. Crane DR, Ngai SW, Larson JH, Hafen MH. The influence of family functioning and parent-adolescent acculturation on North American Chinese adolescent outcomes. *Fam Relat.* 2005;54(3):400–410.

8. Vega WA, Zimmerman RS, Warheit GJ, Apospori E, Gil AG. Risk factors for early adolescent drug use in four ethnic and racial groups. *Am J Public Health.* 1993;83(2): 185–189.

9. Zhang J, Jin S. Determinants of suicide ideation: a comparison of Chinese and American college students. *Adolescence.* 1996;31(122):451–467.

10. Keeley ML, Wiens BA. Family influences on treatment refusal in school-linked mental health. *J Child Fam Stud.* 2008;17:109–126.

11. Armbruster P, Fallon T. Clinical, sociodemographic, and systems risk factors for attrition in a children's mental health clinic. *Am J Orthopsychiatry.* 1994;64(4):577–585.

12. Carpentier N, White D. Cohesion of the primary social network and sustained service use before the first psychiatric hospitalization. *J Behav Health Serv Res.* 2002;29(4):404–418.

13. US Dept of Health and Human Services. *Mental Health: Culture, Race, and Ethnicity–A Supplement to Mental Health: A Report of the Surgeon General.* Rockville, MD: Substance Abuse and Mental Health Services Administration, Center for Mental Health Services; 2001. Report no. SMA-01-3613.

14. The fundamentals of mental health and mental illness. In: *Mental Health: A Report of the Surgeon General.* Rockville, MD: US Dept of Health and Human Services; 1999.

15. Chow JC, Jaffee K, Snowden L. Racial/ethnic disparities in the use of mental health services in poverty areas. *Am J Public Health.* 2003;93(5):792–797.

16. Herrick CA, Brown HN. Underutilization of mental health services by Asian Americans residing in the United States. *Issues Ment Health Nurs.* 1998;19(3):225–240.

17. Leong FTL, Wagner NS, Tata SP. Racial and ethnic variations in help-seeking attitudes. In: Ponterotto JG, Casas JM, Suzuki LA, Alexander CM, eds. *Handbook of Multicultural Counseling.* Thousand Oaks, CA: Sage Publications; 1995:415–438.

18. Zane N, Yeh M. The use of culturally-based variables in assessment: studies on loss of face. In: Kurasaki KS, Okazaki S, Sue S, eds. *Asian American Mental Health: Assessment Theories and Methods.* New York, NY: Kluwer Academic/Plenum Publishers; 2002:123–138.

19. Gong F, Gage S-JL, Tacata LA. Helpseeking behavior among Filipino Americans: a cultural analysis of face and language. *J Community Psychol.* 2003;31(5):469–488.

20. Reeves T, Bennett C. We the people: Asians in the United States. In: *Census 2000 Special Reports.* Washington, DC: US Census Bureau; 2004.

21. Lee MA, Ferraro KF. Neighborhood residential segregation and physical health among Hispanic Americans: good, bad, or benign? *J Health Soc Behav.* 2007; 48(2):131–148.

22. Mena F, Padilla AM, Maldonado M. Acculturative stress and specific coping strategies among immigrant and later generation college students. *Hisp J Behav Sci.* 1987; 9(2):207–225.

23. Wierzbicki S. *Beyond the Immigrant Enclave: Network Change and Assimilation.* New York, NY: LFB Scholarly Publishing LLC; 2004.

24. Ajrouch KJ. Arab American elders: network structure, perceptions of relationship quality, and discrimination. *Res Hum Dev.* 2005;2(4):213–228.

25. Ta VM, Juon H, Gielen AC, Steinwachs DM, Duggan A. Disparities in use of mental health and substance abuse services by Asian and Native Hawaiian/other Pacific Islander women. *J Behav Health Serv Res.* 2008;35(1): 20–36.

26. Snowden LR, Cheung FK. Use of inpatient mental health services by members of ethnic minority groups. *Am Psychol.* 1990;45(3):347–355.

27. Zhang AY, Snowden LR, Sue S. Differences between Asian and White Americans' help seeking and utilization patterns in the Los Angeles area. *J Community Psychol.* 1998;26(4):317–326.

28. Bui K-VT, Takeuchi DT. Ethnic minority adolescents and the use of community mental health care services. *Am J Community Psychol.* 1992;20(4):403–417.

29. US interim projections by age, sex, race, and Hispanic origin. Washington, DC: US Census Bureau; 2004.

30. Alegria M, Vila D, Woo M, et al. Cultural relevance and equivalence in the NLAAS instrument: integrating etic and emic in the development of cross-cultural measures for a psychiatric epidemiology and services study of Latinos. *Int J Methods Psychiatr Res.* 2004;13(4):270–288.

31. Heeringa SG, Wagner J, Torres M, Duan N, Adams T, Berglund P. Sample designs and sampling methods for the Collaborative Psychiatric Epidemiology Studies (CPES). *Int J Methods Psychiatr Res.* 2004;13(4):221–240.

32. Pennell BE, Bowers A, Carr D, et al. The development and implementation of the National Comorbidity Survey Replication, the National Survey of American Life, and the National Latino and Asian American Survey. *Int J Methods Psychiatr Res.* 2004;13(4):241–269.

33. Olson DH. Circumplex Model VII: validation studies and FACES III. *Fam Process.* 1986;25(3):337–351.

34. *Disability Assessment Schedule II (WHO-DAS II).* Geneva, Switzerland: World Health Organization; 1998.

35. *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition.* Washington DC: American Psychiatric Association; 1994.

36. Zuckerman M, Link K. Construct validity for the sensation-seeking scale. *J Consult Clin Psychol.* 1968; 32(4):420–426.

37. Zuckerman M, Eysenck S, Eysenck HJ. Sensation seeking in England and America: cross-cultural, age, and sex comparisons. *J Consult Clin Psychol.* 1978;46(1): 139–149.

38. Zuckerman M, Kuhlman DM. Personality and risk-taking: common biosocial factors. *J Pers.* 2000;68(6): 999–1029.

39. Zuckerman M, Bone RN, Neary R, Mangelsdorff D, Brustman B. What is the sensation seeker? Personality trait and experience correlates of the Sensation-Seeking Scales. *J Consult Clin Psychol.* 1972;39(2):308–321.

40. Zuckerman M. *Behavioral Expressions and Biosocial Bases of Sensation Seeking.* New York, NY: Cambridge University Press; 1994.

41. Zuckerman M. *Psychobiology of Personality.* Cambridge, England: Cambridge University Press; 1991.

42. Loranger AW, Sartorius N, Andreoli A, et al. The International Personality Disorder Examination. The World Health Organization/Alcohol, Drug Abuse, and Mental Health Administration international pilot study of personality disorders. *Arch Gen Psychiatry.* 1994;51(3): 215–224.

43. Loranger A, Sartorius N, Janca A. *Assessment and Diagnosis of Personality Disorders: The International Personality Disorder Examination (IPDE).* New York, NY: Cambridge University Press; 1996.

44. Poverty thresholds in 2000, by size of family and number of related children under 18 years. Washington, DC: US Census Bureau, Housing and Household Economic Statistics Division; 2007.