Correlates of Mental Health Treatment Receipt Among Asian Americans with Perceived Mental Health Problems

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Abstract

Compared with other ethnic groups, Asian Americans report the lowest rates of mental health treatment and service utilization. This is true even among Asian Americans with mental illness, which indicates that the underutilization of mental health services is not due to the low prevalence of mental health disorders in this population. This study examined which sociodemographic factors, types of mental health problems, and barriers to treatment were associated with the treatment receipt among 126 Asian Americans who reported perceived mental health problems. Among sociodemographic factors, Chinese ethnicity and advanced English proficiency were associated with increased treatment receipt. Controlling for demographic variables, mental health problems such as psychosis, depression, and a history of abuse or trauma significantly increased the likelihood of receiving treatment, whereas addiction showed a tendency of decreased treatment receipt. Among reported barriers, difficulty finding a culturally appropriate therapist appeared to be an important barrier among Asian Americans with perceived mental health problems.

Introduction

Asian Americans have exhibited the lowest rates of service utilization and help-seeking behaviors for psychiatric problems among all ethnic groups in the United States (US).[1-3]

According to data from 2008 to 2012, National Survey on Drug Use and Health, Asian Americans reported the lowest rate (4.9%) of mental health service utilization when compared with Caucasian (16.6%), African (8.6%), and Hispanic (7.3%) Americans.[4] Among adults with a previously diagnosed mental illness, estimates of any mental health service utilization in the past year was lower among Asian Americans (18.1%) in comparison with Caucasian (46.3%), African (29.8%), and Hispanic (27.3%) Americans.[4, 5] Asian Americans tend to consider formal service utilization as a last resort and delay seeking professional help until the conditions become severe and chronic.[6-9] Untreated mental health issues contributed to a multitude of problems, such as longterm disability, loss of economic productivity, the perpetuation of further psychiatric problems (e.g., suicide), development of comorbidities, and an overall negative impact on health and wellbeing. [3, 10, 11] Therefore, it is imperative to identify and address the factors associated with observed low rates of mental health service use among underserved people with mental illnesses.

Research on the factors associated with lower levels of mental health treatment among Asian Americans has focused on identifying barriers to mental health service use, which includes stigma and shame, [12] the lack of knowledge about treatment options and the mental health system in the US,[13-15] culturally and linguistically competent services and providers,[16] and financial resources.[17] Studies indicated that among people with mental disorders, Asian Americans rely less on formal mental health services, such as psychological therapy or treatment, and more on support from their social networks, including family and friends. Noted differences were primarily attributed to cultural values and perceived stigma associated with mental disorders.[8, 18, 19] Thus, individuals who seek care are often those who have developed severe or chronic symptoms associated with their mental illness, often as a result of delayed care.

In addition to barriers, sociodemographic factors have been documented as another important contributing factor to the observed disparity in treatment use among Asian Americans. Immigration-related factors have been highlighted in the National Latino and Asian American Study (NLAAS), which is the first large-scale national epidemiological survey conducted among Asian Americans. Studies based on this epidemiological data have suggested that generational status, English proficiency, nativity status, and duration of residency in the US determine treatment use.[6, 20-24] For example, Asian Americans born in the US reported higher rates of mental health service utilization than their foreign-born counterparts.[20, 24] Additionally, Asian Americans with good English proficiency were twice as likely to have obtained treatment in their lifetime[7, 21] and individuals who immigrated to the US before the age of 13 had increased use of specialty mental health services.[22, 24]

However, there are inconsistent findings relating to the impact of age at immigration and English proficiency. For example, English proficiency was associated with lifetime treatment,[21] but not with mental health service use during a 12-month timeframe.[20] Also, those who had poor or fair English proficiency exhibited high rates of alternative service use such as seeking spiritual guidance, religious advisors, or healers, which made these individuals less likely to use formal specialty mental health services.[24] These mixed results indicate that the immigration-related factors may interact with other individual, problem-

related, or treatment-related characteristics and suggest that more studies are needed in this topic.

Another important factor that can contribute to mental health treatment receipt involves the specific types of problems.[25] One study examined mental health service use by psychiatric disorders based on the data from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) and found the lifetime rates of mental health service utilization ranged from 10.5 to 38.8% depending on the psychiatric disorder (depression 38.8%; bipolar disorder 18.8%; anxiety disorder 24.3%; phobia 10.5%).[26]

With large-scale epidemiology data, knowledge about the factors associated with the low level of mental health treatment use among Asian Americans has slightly increased over the past few decades. However, there is still a limited understanding of the disparities in treatment receipt among Asian Americans who encounter mental health issues. A majority of the findings relating to the factors associated with mental health service use came from studies among general Asian Americans, including those who had a perceived need for treatment with potential mental health problems and those who did not. However, the perceived need for help with mental health concerns has been a key factor that initiates the decision for treatment and a mediator in the relationship between depression and treatment receipt.[7, 9, 21] Considering that Asian Americans tend to conceptualize mental health problems as a condition that can be overcome by strong will or effort, as opposed to a disorder that requires professional care, those who have a higher perception of need with an awareness of existing problems may be different from those with a lower perceived need.[9] Aggregating individuals who have an evident need for treatment with those who do not when assess mental health treatment receipt may mask differences in barriers and factors that exist between the two groups.

Although a few studies examined mental health service use among Asian Americans with mental disorders, it is not clear whether these individuals were aware of their mental health problems and have a perceived need.[7, 20, 24] In addition, no study examined immigration-related factors and types of mental health problems, as well as different kinds of barriers to treatment in a single study. Therefore, this study examined the impact of immigration-related factors, variants of mental health problems, and types of barriers to mental health treatment receipt among Asian Americans with self-awareness of their problems and perceived mental health needs in a community-based setting.

Methods

Participants and recruitment

Asian Americans aged 18 years or older residing in the greater Philadelphia region were recruited for a mental health and treatment need assessment from community-based organizations (CBOs). The Center for Asian Health has been collaborating with more than 300 Asian and other ethnic CBOs in Philadelphia, New Jersey, and New York. Based on the past collaboration history between the Center and Asian communities in the greater Philadelphia region, CBOs appropriate for this study were identified and approached. Recruitment and data collection was conducted in collaboration with CBO leaders who

arranged meetings or events to introduce the study to members. Research staff visited the CBOs on the day of a social, cultural, or religious event to provide further information about the study. Approximately 458 participants were recruited through CBOs including churches, temples, and local ethnic organizations from Chinese ($n = 159$), Korean ($n = 179$), and Vietnamese ($n = 142$) American communities. Out of the 458 who participated in the mental health and treatment needs assessment, 126 reported a need for treatment for different types of mental health problems and were included in this study. The 126 individuals who participated in the study experienced at least one of the following mental health problems: depression, anxiety, addiction, trauma/ abuse, and/or psychosis.

Measures

All surveys were translated into Korean, Mandarin, and Vietnamese languages and were collected from November 2016 to June 2017.

Sociodemographic information included gender, age, marital status, and education level. Reported age was stratified into three categories, 18–39, 40–64, and 65+ years old.

Immigration-related variables included country of origin, age at the time of immigration, years living in the US, and English proficiency. Age at the time of immigration and years in the US were measured as a continuous variable and then split into categories. Age of arrival was categorized into 0–17, and 18 or older. Years living in the US was categorized into 0–9 years, 10–19 years, and 20 or longer years. English Proficiency was assessed with the question "How well do you speak English?" and responses were separated into 2 categories: not at all/not well, and well/very well.

Perceived psychiatric problems and needs were assessed with the question, "In your lifetime, was there ever a time when you felt that you might need to see a professional because of problems with (1) depression (e.g., feeling sad/depressed/hopeless/worthless, lack of interest/pleasure in things), (2) anxiety (e.g., excessive worries, feeling nervous, restless or tense, panic attack with shortness of breath or heart palpitation), (3) addiction (e.g., alcohol, drug, gambling), (4) abuse or trauma (physical or psychological), and (5) psychotic symptoms (e.g., hallucinations, delusions)?". Participants were asked to check all the problems that applied to them and their responses were scored yes and no for each item.

Treatment receipt was measured by asking if they had ever received treatment for any psychiatric/psychological problems that they experienced, from the following type of services: (1) primary care physician, (2) psychologist/counselor or other mental health professionals, (3) psychiatrist, or (4) religious spiritual leaders.

Barriers to treatment receipt were assessed by asking participants to check all reasons why they would or did not seek help for psychiatric/psychological problems they experienced among the given choices. Option items were created based on the literature on cultural, personal, and structural barriers to mental health treatment-seeking behaviors and service use, which included (1) financial burden, (2) language difficulties, (3) feeling shame about receiving mental health treatment, (4) difficulty finding a culturally informed therapist, (5) belief that one should resolve problems on their own, (6) lack of information about mental

health service resources, (7) belief that treatment would not help, and (8) worry about confidentiality.

Data analysis

The frequency of relevant variables was examined using descriptive statistics. Chi-square analyses were then conducted to compare those who received treatment and those who did not for the following factors: demographics, immigration-related factors, type of mental health problems, and treatment barriers. A series of logistic regression analyses were conducted to examine the predictors of treatment receipt in different models. Model 1 included sociodemographic and immigration-related factors; model 2 included the factors in model 1 and the types of mental health problems; model 3 included the factors in model 1 and barriers to treatment. SPSS version 25 was used to conduct the analysis. A p value of 0.05 was used to interpret whether the results were statistically significant. A value between 0.05 $p < 0.1$ illustrated non-significant trends.

Results

Participant characteristics

As illustrated in Table 1, more than half of the samples were female (68.8%), married (61.5%), and covered by insurance (61.3%). A majority of the participants were aged 40 or older (76.9%), came to the US at age of 18 or older (84.0%), and reported poor English proficiency (77%) despite that 62.2% of the participants had been in the US for 20 years or longer. With regard to education, almost half of the participants were high school graduates (47.5%), and slightly more than half (52.5%) received a college or graduate level of education. Concerning ethnicity, although a similar number of participants were recruited for the need assessments from three ethnic communities, almost 90% of the sample that reported perceived mental health problems consisted of Vietnamese (48.4%) and Koreans (41.3%), with only 10.3% being Chinese. When those who received treatment were compared with those who did not receive treatment by demographic characteristics, individuals who were divorced were more likely to be treated (χ^2 (2, $n = 122$) = 10.47, $p = 0.005$). Despite the low level of perceived mental health problems, Chinese Americans with mental health problems were more likely to belong to the group that received treatment (χ^2 (2, $n = 126$) = 8.96, $p = 0.011$).

Type of endorsed mental health problems and barriers to treatment receipt

As shown in Table 2, for the type of mental health problems, 73% endorsed experiencing excessive worry or anxiousness and 41.3% endorsed depressive symptoms. For addiction, abuse/trauma, and psychotic symptoms, 7.14%, 19.0%, and 12.7% endorsed these mental health problems, respectively. Concerning barriers to seeking help on mental treatment, a significant portion of participants reported various barriers. Half of the respondents had language difficulties. Approximately one-third of participants reported believing that they should resolve the mental health problems by themselves (30.2%) and more than a quarter of participants endorsed having a financial burden (27.8%). One-fifth reported feeling shame about receiving mental health treatment (19.8%) and having difficulty in finding a culturally competent therapist (19.8%).

Bivariate comparison between the treated and untreated

According to Table 2, among those who endorsed psychotic symptoms, significantly more people (56.3% vs. 17.3%) received treatment compared with those who did not endorse psychotic symptoms (χ^2 (1, $n = 126$) = 12.28, $p < 0.001$). Those who endorsed depressive symptoms showed a non-significant tendency to receive treatment (30.8% vs. 16.2%) compared with those who did not endorse depressive symptoms (χ^2 (1, $n = 126$) = 3.74, $p = 0.053$), but this was not statistically significant. Among all the barriers, none of the differences were significant, but the barrier "difficulty in finding a culturally tuned therapist" showed a non-significant trend in being different (χ^2 (1, $n = 126$) = 3.43, $p < 0.064$) between the two groups. Specifically, 36% of the respondents who had the difficulty in finding a culturally tuned therapist received treatment, while only 18.8% of those who did not have this difficulty received treatment.

Predictors of treatment receipt

Table 3 reports the logistic regression models for factors associated with treatment receipt among the respondents who had perceived mental health problems. Model 1 shows the effects of sociodemographic and immigration-related factors on the likelihood of receiving mental treatment. Chinese were much more likely to get treatment compared with Koreans, and this observation was statistically significant (AOR = 17.66; 95% CI 1.08–59.53; $p = 0.044$). Compared with those who spoke English well or very well, respondents whose English was not good were significantly less likely to receive treatment (AOR = 0.13; 95% CI 0.2–0.98; $p = 0.048$).

Those who were married showed a non-significant tendency of being less likely to get treatment compared with those divorced (AOR = 0.30; 95% CI 0.09–1.05; $p = 0.059$). Moreover, years in the US was another non-significantly potential predictor for treatment receipt. A non-significant trend was also reported for the finding that those who had been in the US for 0–9 years were less likely to receive treatment than those who had lived in the US for 20 years or more (AOR = 0.17; 95% CI 0.02–1.20; $p = 0.076$).

Types of mental health problems were added to model 2. Controlling for demographic variables, individuals who endorsed depression (AOR = 18.66; 95% CI 2.08–167.75, $p = 0.009$) and abuse/trauma (AOR = 9.75; 95% CI 1.48–64.25; $p = 0.018$) were much more likely to have received treatment compared with those who did not endorse them. The odds of getting treatment among people who perceived psychotic symptoms were 27.16 times higher compared with people who did not have psychotic symptoms (95% CI 2.43–203.93; $p = 0.007$). Respondents with addiction problems showed a non-significant tendency to be less likely to receive treatment in comparison with participants without addiction problems (AOR = 0.05; 95% CI 0.00–1.47; $p = 0.083$).

In model 3, the effects of the barriers to seeking help on treatment receipt were examined controlling for demographic variables. No barriers were statistically significant predictors for treatment receipt. Although not significant, there was a potential trend that respondents with difficulty in finding a culturally tuned therapist were less likely to receive treatment than those who did not have the barrier (AOR = 0.82; 95% CI 0.6, 1.04; $p = 0.097$).

Discussion

The present study examined factors associated with treatment receipt among Asian Americans with perceived mental health problems and need. Our findings, in general, are consistent with previous research, demonstrating that a majority of Asian Americans did not receive treatment even though they were aware of their problems and need for help. The treatment receipt rate of 22.2% in our sample is similar to the rate of 28% reported in an NLAAS study among Asian American adults with mental conditions.[24]

However, treatment receipt rates did vary by type of mental health problem. The rate of treatment receipt among those who endorsed psychotic symptoms was 56% and rates of treatment receipt among those who endorsed depression and abuse/trauma were also relatively high with 30.8% and 33.3% respectively. Controlling for other sociodemographic and immigration-related factors, psychotic symptoms, depression, and abuse/trauma were significantly associated with receiving treatment, whereas addiction was not statistically significantly associated with mental health treatment. Psychosis is generally categorized as a severe mental health problem due to the level of disability and burden that is associated with this condition.[27, 28] Our findings of high treatment rates among the individuals with psychotic symptoms and abuse/trauma are consistent with the literature suggesting the tendency with which Asian Americans delay treatment-seeking until the symptoms were chronic and severe. Relatively high rates of treatment among individuals with depression and low treatment rates among those with addiction are consistent with the studies indicating that mood or affective disorders increase the use of mental health services and substance use is associated with lower treatment use.[24, 26, 29]

In addition to the specific mental health problems, immigration-related factors, particularly a higher level of English proficiency, were associated with greater treatment receipt when controlling for other variables. Longer years of residence (> 20) in the US and age at immigration were not associated with treatment receipt. The positive impact of a higher level of English proficiency on treatment use is in line with the previous study about lifetime treatment use among individuals with a mental health problem.[21] Although there is a study indicating no significant association between English proficiency and mental health service use during 12 months, it is evident that English proficiency is a dominant independent immigration-related factor in determining individuals' treatment-seeking behaviors during their lifetime from either specialty or non-specialty professionals when they have perceived mental health needs.[20] A non-significant association between age at immigration and treatment receipt is consistent with the previous studies that age at immigration was associated with "specialty" mental health service but not "any type" of mental health services use in that our study assessed both specialty (e.g., psychiatrist, psychologist) and non-specialty (e.g., primary care physician, spiritual leaders) mental health professionals. [20, 24]

Based on these findings from previous studies and the current study, age at immigration may be particularly associated with specialty mental health treatment. Years of residence in the US and treatment use have shown mixed findings in prior studies. Some studies from NLAAS data found that the duration of residence in the US was associated with neither

specialty mental health treatment nor general medical treatment among Asian Americans with mental health problems.[2, 20] However, other studies reported that longer residence in the US was associated with lower willingness and a lower likelihood to use mental health service[5, 9, 16] among general Asian Americans. The conflicting results may stem from the difference in study samples. For example, the NLAAS data included mainly Chinese, Filipino, and Vietnamese Americans with other Asian groups, whereas more than 40% of our study sample were Korean Americans that may have a distinct pattern of mental health problems and treatment-seeking behaviors among diverse Asian American groups.

There were also subgroup ethnic differences in treatment use, with Chinese Americans having much higher odds of seeking treatment for their mental health problems compared with Vietnamese and Korean Americans. In contrast, a study that used NLAAS data found that Chinese Americans were less likely to utilize mental health services compared with Vietnamese Americans.[1] However, the study included both those with and without mental health problems. Given that our results came from the individuals with perceived problems and treatment needs, the different findings could be understood as indicating that once they realize their problems and perceive needs for treatment, Chinese Americans may be more likely to seek treatment than Korean Americans, although the general Chinese population has a lower rate of mental health service use. Alternatively, variations in mental health service use by the ethnic group may be due to geographic differences where studies were conducted, as differences in location and neighborhoods in which ethnic groups reside can affect the availability of mental health services. Differences in demographic characteristics may be another reason for the higher rate of treatment utilization in Chinese Americans with mental health needs. For example, in this study, Chinese participants had significantly higher insurance coverage rates than Korean participants (84.6% vs. 17.3%), which may be the factor that encouraged Chinese Americans to seek professional help at a higher rate than their Korean counterparts.

In regard to the barriers to treatment, language difficulty was the highest cited barrier followed by the belief in solving problems by self and financial burden. However, in our study, there was no significant difference in the levels of barriers reported by individuals who received treatment and those who did not. Only the difficulty in finding a culturally tuned therapist had a non-significant tendency of having an impact on the treatment use. Potential reasons that contribute to these findings involve the importance of the perceived need for treatment and recognition of problems in treatment-seeking and mental health service use. Researchers have found that the failure in recognizing the need for psychological help is a major barrier to mental treatment for first-generation Asian Americans.[9, 21, 23, 30] Ethnic minorities generally exhibit a low perceived need for seeking mental health treatment and discordant views of perceived severity of one's condition.[6, 22] However, our study sample consisted of only those who have high levels of perceived need; thus, there is a possibility that for Asian Americans who are already aware of their mental health problems and have perceived needs, traditional barriers may not play a key role in deciding to receive treatment. However, the non-significant tendency in the association between the difficulty in finding a culturally tuned therapist and mental health treatment implies that individuals who are highly motivated to receive treatment may still experience barriers to find a proper therapist and this may hinder their progression to receiving

treatment. This notion is consistent with other studies demonstrating that there is a lack of culturally and linguistically appropriate services available for mental health service use. [1, 6, 18, 20] Furthermore, since treatment receipt included those who sought help from spiritual and religious leaders, those who reported using these services may not face similar barriers to specialty mental health service use, as these services may be of preference to individuals with lower reported barriers. In the future, distinguishing between the types of mental health service users can better identify how specific barriers affect different types of treatment use.

Regarding the impact of sociodemographic factors on treatment receipt among individuals with a high perceived need for treatment, there was a non-significant tendency that married Asian Americans with perceived mental health treatment needs were less likely to seek treatment compared with those divorced. This result suggests that those who were divorced may have little support and resources to deal with problems and thus seek professional help. [23] Alternatively, given that the tendency disappeared when the type of problems or barriers to treatment were entered in the models, it is possible that being divorced itself may be one of the contributory sources of developing mental health problems or perceived barriers.

This study has several limitations. First, perceived mental health problems and needs were measured by a single-item question to determine participants' subjective judgment as opposed to using a validated scale. This assessment method was deemed as appropriate for evaluating participants' awareness and perceptions of their problems, given that a one-item measure of self-rated mental health (SRMH) was found to be reliable as a population health measure and that subjective distress was consistently associated with mental treatment-seeking behaviors. [31, 32] However, one needs to be cautious about directly comparing the findings of this study with studies that assess different mental health problems using structured diagnostic criteria or validated symptom severity measures. Second, this study focused on Chinese, Vietnamese, and Korean Americans who reside in the Greater Philadelphia Region. Although they represent three out of the five largest Asian ethnic groups, other Asian subgroups that have also been shown to experience mental health service utilization barriers were not included in our study. Given the unique cultural difference in various Asian ethnic groups, caution is needed when generalizing the findings of the present study to other Asian ethnic groups and to those who live in other regions of the US. Additionally, since this study did not examine potential environmental- and access-related factors beyond the individual level, future studies can investigate the impact of macro-level determinants of mental health service use in Asian Americans. The sample size was another limitation. Since the lifetime prevalence of any mental disorder among Asian American adults (23.5%) was generally lower than that in the US (43.3%),[33] it was challenging to recruit Asian Americans with a lifetime prevalence of mental illness who were willing to participate in a community setting. Therefore, future studies with larger sample sizes are anticipated. Finally, the study assesses the lifetime prevalence of mental disorders but did not examine when and where the Asian immigrants developed mental health problems and how the barriers to mental treatment could have varied in different locations and periods. Addressing this limitation is one of the future directions of this study.

Implications for behavioral health

Despite the limitations, our study sheds light on the factors associated with treatment receipt among Asian Americans who have perceived mental health problems and needs for treatment. A low level of treatment receipt among the study sample indicates a strong need for future interventions that can enhance treatment uptake among Asian Americans with unmet needs. The use of community leaders (e.g., church leaders) as stakeholders to mental health referrals may be one strategy for addressing challenges with treatment uptake in this population. The findings of differences in treatment receipt among Asian Americans subgroups suggest the importance of considering the subethnic cultural and environmental differences in helping those who have mental health problems to be treated. Behavioral health providers should be more sensitive to the subgroup differences in help-seeking patterns and preferred treatment types among individuals who have different cultural and ethnic backgrounds.

Future studies can also investigate how Asian Americans navigate the mental health system and which professional service providers they prefer. In the NLAAS data, when breaking down the use of mental health service type, 28% utilized specialty services (e.g., psychiatrist, psychologist), 16% used primary care services, and 11% used alternative services (e.g., religious/spiritual leader).[24] Examining underlying mechanisms that lead Asian Americans to utilize each service type and interactions between relevant associated factors may be the important research topics for future studies.

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Table 1

Demographic characteristics of participant ($n = 126$)

Variables	Overall (n (%))	Treated (n (%))	Not treated (n (%))	χ^2
Age (years)	126	28	98	1.27
18–39	29 (23.0)	5 (17.9)	24 (24.5)	
40–64	41 (32.5)	8 (28.6)	33 (33.7)	
> 65	56 (44.4)	15 (53.6)	41 (41.8)	
Gender	125	28	97	0.02
Male	39 (31.2)	9 (32.1)	30 (30.9)	
Female	86 (68.8)	19 (67.9)	67 (69.1)	
Marital status	122	26	96	10.47 **
Single	26 (21.3)	4 (15.4)	22 (22.9)	
Married	75 (61.5)	12 (46.2)	63 (65.6)	
Divorced/widowed	21 (17.2)	10 (38.5)	11 (11.5)	
Education	120	27	93	0.99
High school or below	57 (47.5)	15 (55.6)	42 (45.2)	
College	45 (37.5)	9 (33.3)	36 (38.7)	
Graduate	18 (15.0)	3 (11.1)	15 (16.1)	
Insurance	124	28	96	2.11
Yes	76 (61.3)	20 (71.4)	56 (58.3)	
No	48 (38.7)	8 (28.6)	40 (41.7)	
Ethnicity	126	28	98	8.96 *
Chinese	13 (10.3)	7 (25.0)	6 (6.1)	
Vietnamese	61 (48.4)	13 (46.4)	48 (49.0)	
Korean	52 (41.3)	8 (28.6)	44 (44.9)	
English proficiency	122	27	95	
Not at all/not well	94 (77.0)	18 (66.7)	76 (80.0)	
Well/very well	28 (23.0)	9 (33.3)	19 (20.0)	
Age to US (years)	125	28	97	0.08
0–17	20 (16.0)	4 (14.3)	16 (16.5)	
18 or older	105 (84.0)	24 (85.7)	81 (83.5)	
Years since moved to the US	119	28	91	2.56
< 10	26 (21.8)	4 (14.3)	22 (24.2)	
10–19	19 (16.0)	3 (10.7)	16 (17.6)	
> = 20	74 (62.2)	21 (75.0)	53 (58.2)	

[†] (1) $p < 0.10$

[*] $p < 0.05$

[**] $p < 0.01$

[***] $p < 0.001$

Table 2

Univariate comparison between treated and not treated

	Overall (*n* = 126 (%))	Treated (*n* = 28 (%))	Not treated (*n* = 98 (%))	χ^2
Type of disorder				
Depression				3.74[†]
Yes	52 (41.3)	16 (57.1)	36 (36.7)	
No	74 (58.7)	12 (42.9)	62 (63.3)	
Anxiety				2.77[†]
Yes	92 (73.0)	17 (60.7)	75 (76.5)	
No	34 (27.0)	11 (39.3)	23 (23.5)	
Addiction				0.69
Yes	9 (7.1)	1 (3.6)	8 (8.2)	
No	117 (92.9)	27 (96.4)	90 (91.8)	
Abuse/trauma				2.12
Yes	24 (19.0)	8 (28.6)	16 (16.3)	
No	102 (81.0)	20 (71.4)	82 (83.7)	
Psychotic symptoms				12.28[***]
Yes	16 (12.7)	9 (32.1)	7 (7.1)	
No	110 (87.3)	19 (67.9)	91 (92.9)	
Barriers to Seeking help				
Financial burden				0.34
Yes	35 (27.8)	9 (32.1)	26 (26.5)	
No	91 (72.2)	19 (67.9)	72 (72.5)	
Language difficulties				0.18
Yes	63 (50.0)	13 (46.4)	50 (51.0)	
No	63 (50.0)	15 (53.6)	48 (49.0)	
Shame				0.60
Yes	25 (19.8)	7 (25.0)	18 (18.4)	
No	101 (80.2)	21 (75.0)	80 (81.6)	
Therapist				3.43[†]
Yes	25 (19.8)	9 (32.1)	16 (16.3)	
No	101 (80.2)	19 (67.9)	82 (83.7)	
Solve by own				0.04
Yes	38 (30.2)	8 (28.6)	30 (30.6)	
No	88 (69.8)	20 (71.4)	68 (69.4)	
Lack of Information				0.24
Yes	23 (18.3)	6 (21.4)	17 (17.3)	
No	103 (81.7)	22 (78.6)	81 (82.7)	
Not helpful				1.13
Yes	19 (15.1)	6 (21.4)	13 (13.3)	

	Overall (n = 126 (%))	Treated (n = 28 (%))	Not treated (n = 98 (%))	χ^2
No	107 (84.9)	22 (78.6)	85 (86.7)	
Confidentiality				0.02
Yes	19 (15.1)	4 (14.3)	15 (15.3)	
No	107 (84.9)	24 (85.7)	83 (84.7)	

†(1) $p < 0.10$

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

Table 3

Logistic regression on treatment receipt among Asian Americans with perceived psychiatric health problems

Variables	Model 1	Model 2	Model 3
	AOR (95% CI)	AOR (95% CI)	AOR (95% CI)
Age			
Age 18–39	3.19 (0.26–40.40)	3.92 (0.46–45.03)	1.61 (0.06–26.24)
Age 40–64	1.85 (0.48–7.17)	2.83 (0.50–16.04)	1.14 (0.22–5.91)
65 or older (ref)	1	1	1
Gender			
Male	0.58 (0.16–2.08)	0.63 (0.14–2.88)	0.51 (0.11–2.42)
Female (ref)	1	1	1
Marital status			
Single	0.16 (0.02–1.57)	0.15 (0.01–3.21)	0.15 (0.01–2.57)
Married	0.30 (0.09–1.05) [†]	0.39 (0.08–1.98)	0.37 (0.09–1.52)
Divorced (ref)	1	1	1
Education			
High school	1.52 (0.17–13.66)	0.64 (0.04–11.72)	2.28 (0.16–33.50)
College	1.84 (0.23–14.94)	1.11 (0.07–19.08)	1.91 (0.13–29.30)
Graduate (ref)	1	1	1
Insurance			
Yes	1.43 (0.18–11.22)	1.44 (0.04–28.70)	4.09 (0.21–58.21)
No (ref)	1	1	1
Ethnicity			
Chinese	17.66 (1.08–59.53) [*]	24.18 (4.18–78.68) [*]	32.62 (0.63–83.52) [†]
Vietnamese	2.05 (0.24–17.47)	3.10 (0.50–25.98) [†]	1.45 (0.06–34.92)
Korean (ref)	1	1	1
English proficiency			
Not at all/not well	0.13 (0.2–0.98) [*]	0.56 (0.04–7.71)	0.06 (0.00–0.74) [*]
Well/very well (ref)	1	1	1
Age to US			
0–17 years	0.24 (0.02–3.75)	0.27 (0.01–8.52)	0.16 (0.00–5.54)
18 or older (ref)	1	1	1
Years in US			
0– years	0.17 (0.02–1.20) [†]	0.12 (0.01–1.09) [†]	0.14 (0.02–1.30) [†]
10–19 years	0.26 (0.03–2.16)	0.04 (0.00–0.95) [*]	0.53 (0.00–1.17) [†]
20 or longer (ref)	1	1	1
Types of psychiatric health problems			
Depression		18.66 (2.08–167.75) [**]	
Anxiety		2.06 (0.32–13.23)	
Addiction		0.05 (0.00–1.47) [†]	

Variables	Model 1	Model 2	Model 3
	AOR (95% CI)	AOR (95% CI)	AOR (95% CI)
Abuse/trauma		9.75 (1.48–64.25) [*]	
Psychotic symptoms		27.16 (2.43–203.93) [**]	
Barriers to seeking help			
Financial burden			0.91 (0.73–1.14)
Language difficulties			1.00 (0.81–1.24)
Shame			0.93 (0.74–1.17)
Therapist			0.82 (0.64–1.04) [†]
Solve by own			0.88 (0.71–1.10)
Lack of information			1.35 (0.94–1.93)
Not helpful			0.97 (0.75–1.25)
Confidentiality			1.05 (0.72–1.53)

[1] *AOR* adjusted odds ratio

[2] †
$p < 0.10$

*
$p < 0.05$

**
$p < 0.01$

***
$p < 0.001$