

# Role of Nativity in Mental Health Service Utilization among Asian Americans: A Weighted Analysis of Complex Survey Data

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## Background and Objective

Over 20% of adults in the United States suffered from some form of mental illness in the past year.<sup>1</sup> Regardless of the alarming prevalence of mental illness, a substantial gap between need and treatment exists, with less than half (46.0%) of the population diagnosed with a mental illness receiving treatment within the past year.<sup>1</sup> Among Asian Americans, who represent both the fastest-growing population and the lowest consumers of mental health services (MHS), the disparity is even more apparent.<sup>1,2</sup> The current study aimed to identify factors associated with MHS use and explore differences in MHS use by nativity among Asian Americans.

## Methods

- **Data Source:** National Health and Nutrition Examination Survey (NHANES), 2015 - 2018
- **Study Sampling and Study Population:** A multistage probability design is implemented to select the study sample, which is representative of the US noninstitutionalized civilian population.<sup>3</sup>
- **Data Management:** Data files from each wave of NHANES were combined across years, then merged by participant ID. Continuous variables such as age and PHQ-9 score were categorized, and levels of categorical variables were collapsed as necessary.
- **Statistical Analysis:**
  - Weighted analyses were conducted to account for the complex survey sampling design.
  - Descriptive analysis included calculating weighted percentages and unweighted frequencies.
  - Rao-Scott Chi-square tests were used in bivariate analysis.
  - Multivariate logistic regression was used to identify factors associated with past-year MHS use. Predictors for the final model were selected manually, primarily using the p-value method. Odds ratios (OR) and 95% confidence intervals (CI) were calculated.
  - Analyses were conducted in SAS Studio version 3.8 and alpha was set at  $p < 0.05$ .

## Results

### Descriptive Analysis:

- 86.71%, 95% CI [83.86%, 89.56%] of the study population was born outside of the United States.
- 4.54%, 95% CI [3.60%, 5.45%] reported past-year use of MHS.
- Sample characteristics are shown in Table 1.

### Bivariate Analysis:

- Past-year MHS use differed significantly by nativity, age, marital status, language spoken at home, general health condition, having a routine care source, and depression severity.

## Results

**Table 1. Weighted Prevalence and Unweighted Frequencies of Past-Year Mental Health Service (MHS) Use among Asian Americans by Demographic Characteristics, NHANES 2015-2018**

	Study Sample n (%)	Past-Year Use of MHS n (%)	95% Confidence Interval	p-value
Total	1476 (100.00)	69 (4.53)	(3.60%, 5.45%)	
Nativity				<b>&lt;0.001</b>
Born in the US	191 (13.29)	22 (11.18)	(6.57, 15.90)	
Born outside of the US	1284 (86.71)	47 (3.51)	(2.54, 4.48)	
Age Group				<b>0.0268</b>
18-24	161 (10.58)	14 (9.71)	(4.18, 15.25)	
25-34	304 (24.26)	14 (4.04)	(1.77, 6.31)	
35-44	252 (18.76)	11 (4.84)	(2.10, 7.58)	
45-54	286 (18.02)	15 (4.93)	(2.42, 7.44)	
55-64	245 (13.78)	9 (2.97)	(0.69, 5.24)	
65+	228 (14.60)	6 (2.15)	(0.13, 4.16)	
Gender				0.6955
Male	715 (46.50)	31 (4.28)	(2.73, 5.83)	
Female	761 (53.50)	38 (4.74)	(3.24, 6.25)	
Education Level				0.3008
Did Not Complete High School	237 (14.77)	11 (3.80)	(1.18, 6.41)	
High School or GED	217 (14.91)	11 (5.39)	(2.78, 7.99)	
Some College	258 (17.90)	9 (2.71)	(0.66, 4.76)	
College Graduate	763 (52.42)	38 (5.11)	(3.75, 6.47)	
Marital Status				<b>0.0040</b>
Married	1009 (69.69)	32 (3.08)	(2.01, 4.15)	
Not Married	349 (26.58)	28 (7.10)	(4.82, 9.39)	
Living with Partner	49 (3.73)	3 (10.17)	(0.00, 21.55)	
Annual Household Income				0.3222
Less than \$20,000	144 (9.90)	7 (4.29)	(0.88, 7.70)	
\$20,000 to \$34,999	205 (14.99)	8 (3.88)	(0.75, 7.02)	
\$35,000 to \$54,999	201 (14.22)	8 (3.58)	(0.58, 6.59)	
\$55,000 to \$74,999	179 (13.19)	6 (3.13)	(1.19, 5.06)	
Over \$75,000	614 (47.71)	38 (6.10)	(4.47, 7.74)	
Language Spoken at Home				<b>&lt;0.001</b>
No English	712 (47.23)	24 (3.08)	(2.20, 3.97)	
Some English	433 (29.95)	15 (3.29)	(1.71, 4.88)	
Only English	329 (22.82)	30 (9.16)	(6.13, 12.19)	
Health Insurance Coverage				0.1873
Yes	1324 (90.38)	65 (4.78)	(3.77, 5.79)	
No	148 (9.62)	4 (2.24)	(0.00, 4.88)	
General Health Condition				<b>&lt;0.001</b>
Poor	36 (2.21)	6 (18.62)	(3.77, 33.47)	
Fair	180 (11.79)	11 (5.90)	(3.03, 8.76)	
Good	522 (34.94)	30 (5.87)	(3.83, 7.91)	
Very Good	482 (33.64)	13 (2.27)	(1.07, 3.49)	
Excellent	256 (17.42)	9 (3.47)	(1.03, 5.90)	
Routine Source of Care				<b>0.0211</b>
Yes	1175 (79.29)	62 (5.09)	(3.89, 6.28)	
No	300 (20.71)	7 (2.39)	(0.97, 3.82)	
PHQ-9 Score				<b>&lt;0.001</b>
Minimal	1034 (84.91)	37 (3.45)	(2.39, 4.51)	
Mild	138 (11.27)	14 (10.83)	(5.39, 16.28)	
Moderate	32 (2.92)	8 (24.33)	(9.75, 38.91)	
Moderately Severe	8 (0.58)	1 (7.63)	(0.00, 23.67)	
Severe	4 (0.32)	2 (43.16)	(0.00, 96.89)	

Note: p-values in **bold** are significant at the alpha level of 0.05.

### Multivariate Analysis:

- Controlling for other covariates, nativity was significantly associated with past-year use of MHS. The odds of past-year use of MHS were 0.42, 95% CI [0.18, 0.98] times lower among those born outside of the US than those born in the US.
- In addition, analyses indicated that controlling for other covariates, past-year use of MHS was also significantly associated with marital status, general health condition, having a routine source of care, and depression severity.

## Results

**Table 2. Weighted and Adjusted Odds Ratios (ORs) and 95% Confidence Intervals (CIs) Associated with Multivariate Logistic Regression Model of Predictors of Mental Health Service Utilization among Asian Americans, NHANES, 2015-2018**

	Odds Ratio (95% CI)	p-value
Nativity		
Born in the US	REF	REF
Born outside of the US	0.42 (0.18, 0.98)	<b>0.0450</b>
Education Level		
Did Not Complete High School	REF	REF
High School or GED	1.68 (0.51, 5.53)	0.3794
Some College	0.543 (0.10, 3.06)	0.4768
College Graduate	2.60 (0.77, 8.79)	0.1204
Marital Status		
Married	REF	REF
Not Married	2.00 (1.14, 3.50)	<b>0.0174</b>
Living with Partner	2.40 (0.63, 9.18)	0.1920
Language Spoken at Home		
No English	REF	REF
Some English	0.74 (0.32, 1.71)	0.4665
Only English	1.85 (0.86, 3.98)	0.1127
General Health Condition		
Poor	REF	REF
Fair	0.34 (0.14, 0.86)	<b>0.0233</b>
Good	0.35 (0.12, 1.00)	<b>0.0497</b>
Very Good	0.09 (0.03, 0.24)	<b>&lt;0.001</b>
Excellent	0.15 (0.03, 0.63)	<b>0.0119</b>
Routine Source of Care		
Yes	REF	REF
No	0.41 (0.17, 0.97)	<b>0.0430</b>
Depression Severity		
Minimal	REF	REF
Mild	2.41 (1.05, 5.53)	<b>0.0381</b>
Moderate	8.27 (2.89, 23.63)	<b>0.0003</b>
Moderately Severe	2.27 (0.10, 50.63)	0.5937
Severe	3.44 (0.17, 68.81)	0.4065

## Conclusion

- Our findings suggest that nativity and other factors may impact access to and utilization of mental health services among Asian Americans.
- Findings from this analysis also corroborate existing literature regarding factors significantly associated with MHS use including marital status and mental health need.
- Future research may aim to improve MHS utilization in this population through mental health education or the development of culturally sensitive treatment.

## References

1. Substance Abuse and Mental Health Services Administration. (2021). *2020 National Survey on Drug Use and Health Detailed Tables*. <https://www.samhsa.gov/data/sites/default/files/reports/rpt35320/NSDUHDetailedTabs2020/NSDUHDetailedTabs2020/NSDUHDetTabsSect8pe2020.htm>
2. Budiman, A., Cilluffo, A., & Ruiz, N. G. (2019). Key facts about Asian origin groups in the US. *Washington, DC: Pew Research Center*.
3. Center for Disease Control and Prevention. (n.d.). *NHANES 2017-2018 Overview*. <https://wwwn.cdc.gov/nchs/nhanes/continuousnhanes/overview.aspx?BeginYear=2017>