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Racial disparity in mental disorder diagnosis and treatment between non-hispanic White and Asian American patients in a general hospital

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ABSTRACT

Purpose: The present study sought to examine the diagnosis and treatment of mental disorders comparing Asian American (AA) and non-Hispanic Whites (WNH) drawn from a population accessing a large general hospital for any reason. Socio-demographic predictors of diagnosis and treatment were also explored.

Methods: Data were obtained from de-identified medical records in the Partner Health Care System's Research Patient Data Registry.

Results: The final sample included 345,070 self-identified WNH and 16,418 self-identified AA's between January 1, 2009 and December 31, 2009. WNH patients were more likely than AA patients to carry a diagnosis of a mental disorder (18.1% vs. 8.6%, $p < 0.0001$) and were more likely to receive psychotropic medication treatment (15.0% vs 8.5%, $p < 0.0001$). Logistic regression analyses of the AA cohort identified several risk factors (i.e. language, religion, gender, age) predicting the diagnosis of a mental disorder or use of psychotropic medication.

Conclusions: Our findings on the racial disparity in mental disorder diagnosis and treatment between AA and WNH patients suggest that mental disorders are under-recognized and mental health services are under-utilized in the AA community. There remains a need for health care providers to improve screening services and to gain a better understanding of the cultural barriers that hinder mental health care among AA patients.

1. Introduction

Asian Americans (AA) represent the fastest growing minority group in the United States, numbering approximately 14 million in 2010 and expected to reach 38 million by 2050 (Ortman and Guarneri, 2009). Enormously heterogeneous with regards to language, religion, and culture, the AA community's biggest constituents originate from China, followed by the Philippines, India, Vietnam, Korea, and Japan (Reeves et al., 2004). Nonetheless, in accordance with the collection of demographic information set by the United States Census Bureau, this diverse population remains aggregated under the umbrella term of AA or Asian-Pacific American. The present study focuses on addressing a disparity observed in mental health care for patients self-identifying as AA.

The annual prevalence of mental disorders in the general American population is about 21%, with the prevalence amongst minorities is similar to that of WNH (United States, 1999). However, prevalence in the AA population appears to differ. Data from the National Latino and Asian American Study (NLAAS) described the lifetime prevalence of mental disorders in AA populations to be 17.3% (Takeuchi et al., 2007). A study on elderly populations reported similar rates of mental health needs between AA and WNH patients, but found AA patients to access help at a lower rate (Sorkin et al., 2009). The National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) also reported a lower 12-month prevalence of mental disorders among AA compared with WNH (22.3% and 35.7% respectively) (Xu et al., 2011).

Another study using data from the NLAAS found that AA patients used mental health-related services at lower rates than the general population; however, the rate of mental health-related service usage and satisfaction with care received was higher for US-born AA when compared with immigrant AA (Abe-Kim et al., 2007). Higher levels of education and birth in the US were also found to be related to higher rates of mental illness and mental health care (Barreto and Segal, 2005, Hong et al., 2014, Jimenez et al., 2010). Thus, determinants of socio-economic status and nativity have been shown to influence mental disorder diagnosis and treatment in the AA population. Even so, the NLAAS data only classified AA populations as Chinese, Filipino, Vietnamese, or other, and limited the classification of mental disorders to mood, anxiety, and/or substance abuse disorders, ignoring other mental

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diagnoses such as psychotic disorders. These studies lacked disaggregated data on ethnic minorities within the AA population (i.e. Koreans, Cambodians) and on psychotic disorders.

Substantial literature exists on cultural stigma and somatization of mental symptoms among AA patients believed to contribute to the racial disparity in mental disorder diagnosis and treatment observed in AA populations. Collectivist attitudes and a strong emphasis on emotion control, family image, and honor in Confucian philosophy have been reported to hinder these AA from seeking help and conceptualizing Western perceptions of mental disorders (Chen et al., 2015, Cheng, 2015, Yeung et al., 2004, Parker et al., 2001, Kleinman, 1986, Karasz et al., 2007).

However, a study conducted on a large Californian cohort measuring mental health services used by AA reported that East Asians (Chinese, Japanese, and Koreans) utilized more mental health services than other AA and WNH (Barreto and Segal, 2005). Consequently, conclusions based on aggregated data of AA populations or individual AA subgroups may not be reflective of all subgroups within the AA community. The study, including a disproportionate number of patients with schizophrenia, noted that AA patients seemed more likely to seek help when diagnosed with more debilitating, harder to mask, mental disorders (Barreto and Segal, 2005). Variables such as religion and language (outside of English speaking ability), known to influence mental health and suggestive of ethnicity and acculturation, remain in need of study in the AA population (Kim et al., 2011, Hong et al., 2014, Ai et al., 2013, Abe-Kim et al., 2007).

The current study sought to confirm and expand upon findings from prior studies by collecting a large database of information on AA and WNH patients in a general hospital setting. The current study compared WNH and AA patients accessing care at a large urban general hospital for any reason over the course of twelve months with respect to a range of major mental disorder diagnoses and psychotropic medication treatments. We hypothesized that mental disorders would be underdiagnosed and under-treated in the AA population. Socio-demographic predictors for mental disorder diagnosis or treatment, such as age, gender, marital status, religion, and language were also explored. To our knowledge, this is the first study to report findings from disaggregated data on the prevalence and treatment of mental disorders in essential AA ethnic and religious populations such as Cambodians and Hindus.

2. Methods

2.1. Study sample

The cross-sectional study compared percentages of mental disorder diagnoses between AA and WNH patients. The study also compared the percentage of patients diagnosed with mental disorders receiving psychotropic agent treatment in the two groups. Relevant data was obtained in a onetime extraction of outpatient information from the Research Patient Data Registry (RPDR), an electronic clinical data registry that stores medical records from patients billed by the hospital, including data from the hospital's main and satellite campuses. The demographic information obtained was limited to gender, age, language, marital status, and religion. The sample set was restricted to adult patients over 18 years-old self-identified as AA or WNH. The final sample included 361,488 patients (16,418 AA and 345,070 WNH) treated at the hospital between January 1, 2009 and December 31, 2009. The study was approved by the Partners Institutional Review Board.

2.2. Measures

All psychiatric diagnoses were identified and classified based on ICD-9 codes. The ICD-9 codes used were (1) 296, 300.4, 309, 311 for Depressive Disorders, (2) 300, with the exception of 300.4, for Anxiety Disorders, (3) 290–295 and 297 for Psychotic Disorders, (4) 303 and 305.0 for Alcohol abuse or dependence, and (5) 304 and 305.1-8 for Drug abuse and dependence. To estimate rates of psychotropic agent treatment received among patients diagnosed with a mental disorder, the prescription of antidepressants, anxiolytics, sedative-hypnotics, antipsychotics and central nervous system (CNS) stimulants were obtained from the medical record.

2.3. Statistical analyses

Statistical analyses were performed using SPSS version 20.0 (SPSS Inc., Chicago, IL). The percentages of mental disorder diagnoses and psychotropic medication treatments were compared between AA and WNH patients using Chi-square tests. Within AA patients diagnosed with a mental disorder, demographic predictors for mental disorder diagnosis and prescription of psychotropic agents were identified using logistic regression analyses. Statistical significance was determined by a 0.05 alpha-level (two-tailed).

3. Results

Among selected patients, 345,070 identified as WNH and 16,418 as AA. WNH patients were found more likely to have a mental disorder diagnosis (18.1% vs. 8.6%, $p < 0.0001$). WNH patients were more likely to carry a diagnosis across all age, gender and marital status groups ($p's < 0.0001$, Table 1), and across different diagnostic

Table 1
Percentages of mental disorders: a comparison between non-Hispanic White and Asian American patients.

Variable	Non-Hispanic White		Asian American		P
Age					
18–34 years old	12,537/68,148	(18.4%)	499/5,769	(8.7%)	< 0.0001
35–44 years old	9,162/51,941	(17.6%)	329/3,870	(8.5%)	< 0.0001
45–54 years old	12,387/65,137	(19.0%)	283/2,597	(10.9%)	< 0.0001
55-64 years old	11,841/66,662 (17.8%)	(17.8%)	217/1,980	(11.0%)	< 0.0001
≥ 65 years old	16,543/93,182	(17.8%)	287/2,202	(13.0%)	< 0.0001
Gender					
Male	26,192/146,992	(17.8%)	680/6,457	(10.5%)	< 0.0001
Female	36,278/198,078	(18.3%)	935/9,961	(9.4%)	< 0.0001
Marital Status					
Separated, divorced, or widowed	11,456/44,306	(25.9%)	157/949	(16.5%)	< 0.0001
Single	23,913/104,781	(22.8%)	627/5,524	(11.4%)	< 0.0001
Married, partners	25,680/184,950	(13.9%)	803/9,396	(8.6%)	< 0.0001

Note: values are expressed as the numbers of patients diagnosed with mental disorders divided by the total numbers of non-Hispanic White or Asian American patients. Values in parentheses represent percentages. P values are based on the chi-square analysis.