Full length article

Asian American and Pacific Islander substance use treatment admission trends

Ethan Sahker [a,b], Chi W. Yeung [b], Yunkyoung L. Garrison [b], Soeun Park [b], Stephan Arndt [a,c,d,*]

[a] Iowa Consortium for Substance Abuse Research and Evaluation, The University of Iowa, 100 MTP4 Room 102, Iowa City, IA 52242, USA
[b] Department of Psychological and Quantitative Foundations, Counseling Psychology Program, College of Education, The University of Iowa, 361 Lindquist Center, Iowa City, IA 52242, USA
[c] Department of Psychiatry, Carver College of Medicine, The University of Iowa, 200 Hawkins Drive, Iowa City, IA 52242, USA
[d] Department of Biostatistics, College of Public Health, The University of Iowa, 145 N. Riverside Drive, 100 CPHB, Iowa City, IA 52242, USA

ABSTRACT

Background: A national analysis of Asian Americans and Pacific Islanders (AAPI) substance use treatment admissions has yet to be studied. We sought to explore admission trends for AAPI, demographic and treatment variable change, and individual state admission change over time.
Methods: We used retrospective time-series logistic regression treating year as a predictor of yearly treatment admission trends, between-state test for heterogeneity of treatment effects among states' AAPI admissions, and percent-changes of AAPI demographic and treatment characteristics. Participants included AAPI (n = 135,356) and comparison non-AAPI (n = 8,938,982) treatment groups' first-time admissions (N = 9,074,338) in United States treatment centers receiving public funding from 2000 to 2012.
Results: AAPI demonstrated a greater increase in admissions than non-AAPI from 2000 to 2012 ($p < 0.0001$; OR = 1.02, 95% CI = 1.019–1.022). Large percent increases were demonstrated in multiple demographic and treatment characteristic, most notably in prescription opioids as a problem substance, age of first use for the oldest and youngest groups, and homelessness. In addition, trends are provided for individual states to help prioritize resource need.
Conclusions: The present demographic and treatment characteristics revealed specific variables that may help to improve a culturally competent understanding of increasing risk factors among AAPI clients. The present findings may help to demonstrate which states may need to increase AAPI-specific resources and interventions.

1. Introduction

Racial/ethnic disparities in substance use treatment customarily address group over-representation of people of color (Lê Cook and Alegría, 2015; Saloner and Lê Cook, 2013). However, it is unclear the extent to which Asian Americans and Pacific Islanders (AAPI) have effectively integrated into treatment services (Ja and Aoki, 1993; Niv et al., 2007). APPI have a lower prevalence of substance use compared to other racial/ethnic groups living in the United States (Mericle et al., 2012). APPI also have lower documented substance use treatment admissions compared to other racial/ethnic groups (Yu et al., 2014). However, low rates of substance use might be due to underreporting among APPI (Evans et al., 2012). In addition, AAPI with substance use disorders are less likely to receive treatment, which may be due to unmet needs (Mulvaney-Day et al., 2012; Substance Abuse and Mental Health Services Administration, 2013). In one state's treatment dataset, less than 1% of substance use treatment clients were APPI (Yu et al., 2014). This percentage is well below the proportion of AAPI in the general population among small samples. Therefore, it is important to know the national AAPI treatment admission trends.

Substance use treatment underutilization among APPI might be due to cultural or language barriers as an ethnic minority living the United States (Yu et al., 2009). For instance, cultural expectations for family members to contribute to the household may make it

* Corresponding author at: University of Iowa, 100 MTP4, Iowa City, IA 52245-5000, USA.
E-mail address: stephan-arndt@uiowa.edu (S. Arndt).

difficult for AAPI to take time off work for treatment (Masson et al., 2013). Additionally, cultural desires to keep substance use disorders within the family network may make it difficult for APPI to seek out services for fear of feeling shamed within the community (Fong and Tsuang, 2007). Moreover, distress is often masked by the "model minority myth" (Sue and Morishima, 1982). A model minority is a minority group, deemed by the majority, to exhibit beneficial and positive attributes (Sue and Morishima, 1982). Negative behaviors such as substance use may be overlooked because AAPI are assumed to be model citizens. Until the late 1990s, assumptions of AAPI being a model minority was considered as a factor leading to low AAPI substance use treatment admissions (Chow, 2002). Social expectations to conform to the model minority myth may be constraining AAPI help-seeking behaviors. For instance, Asian men (Liu and Iwamoto, 2007) and young adults (Lee et al., 2009) tend to engage in indirect coping strategies (e.g., substance use) instead of dealing with distressing situations. The model minority myth may be associated with low detection of substance use disorders and/or reluctance to seek treatment.

AAPI with co-occurring substance use disorder and depressive symptomology have been found to have a significantly lower likelihood of treatment seeking behavior (Ta et al., 2008). These barriers may account for low reported treatment use, however, this area of research has been limited. In order to address barriers, an investigation of demographic and treatment variable change is needed. Many AAPI who seek treatment do so for problematic alcohol and methamphetamine use (Evans et al., 2012; Goebert et al., 2006). AAPI treatment initiation is mostly due to court mandate (Masson et al., 2013; Park et al., 2010). In addition, AAPI with multiple treatment admissions have comparable readmission rates to other racial/ethnic groups (Yu and Warner, 2013).

Research highlighting racial disparities for AAPI calls for further research to understand AAPI clients (Wong and Barnett, 2010). The majority of the extant literature focuses on small samples within one single state or treatment center. Thus, an exploratory analysis of AAPI substance use treatment admission yearly trends from a national database would contribute to the current understanding of treatment admission for this growing population. Therefore, the purpose of this study is to present an exploratory analysis of the national treatment admission trends for AAPI. The primary goal is to evaluate the overall AAPI treatment admissions from 2000 to 2012. It is expected that admissions will have increased over the study timeframe. In addition, individual demographic and treatment variable change will be described. Finally, a between state analysis of AAPI treatment admission change is investigated.

2. Materials and methods

2.1. Study participants

The Substance Abuse and Mental Health Services Administration (SAMHSA) requests admission information from all public and private treatment facilities receiving public funding in the United States. These data are available as the Treatment Episode Datasets – Admissions (TEDS-A United States Department of Health and Human Services. Substance Abuse and Mental Health Services Administration. Center for Behavioral Health Statistics and Quality, 2015). We used the concatenated dataset to analyze admission years 2000–2012 providing 13 years of admissions data (N = 24,292,776). The number of states and agencies reporting to TEDS was inconsistent in the early years of data collection, affecting the generalizability of the early data. Thus, we selected a range of more recent years, but long enough to identify trends. TEDS-A includes all admission episodes and one individual may have multiple admissions. By only including first-time admissions, we

ensure a non-duplicative group of individuals admitted to treatment. We selected only those records where the client indicated no prior treatment in a drug or alcohol program (n = 9,074,338). Because these data represent de-identified existing public information there was no informed consent and the University of Iowa Human Subjects Office, Institutional Review Board exempted this study from review.

2.2. Demographic variables

At admission, agency staff identified clients' demographic and treatment characteristics by interview. Individual treatment facility staff collected demographic characteristics at admission and reported data to SAMHSA. The current study analyzed race, age, sex, education, student status, employment, primary income, and living arrangements. TEDS-A categorized race into three separate AAPI identifiers that have changed over time and by each State's race categorization policies. These AAPI categories included "Asian or Pacific Islander" (n = 53,364), "Asian" (n = 48,209), and "Native Hawaiian or other Pacific Islander" (n = 33,783). Because one category included "Asian or Pacific Islander," we opted to combine all three categories into one AAPI group and categorized admissions into comparison groups of AAPI (n = 135,356) and non-AAPI (n = 8,938,982). Age was recoded into a categorical variable by SAMHSA for confidentiality purposes. Living arrangement was categorized as homeless, dependent, or independent. Dependent living included institutional housing, group homes, halfway houses, and, for clients 17 and younger, living with parents. Independent living included living alone, with roommates, and, for clients 18 and older, living with parents.

2.3. Use characteristic variables

Use characteristics employed in this study were problem substance (primary), specific drug flagged for use (included primary, secondary, and tertiary), use frequency, and age at first use (of primary problem substance). Primary problem substance (i.e., alcohol, marijuana, cocaine, heroin, and methamphetamine) was recorded on admission self-reports. Only the opioids flag was included in the results because of its large increase in incidence. The "Rx opioids and synthetics" subcategory includes opioid analgesics in addition to tramadol and other drugs with morphine-like effects. Use frequency was categorized as none past 30 days, 1–3 times per month, 1–2 times per week, 3–6 times per week, and daily use. Age at first use refers to the clients' first experience with their primary problem substance. In addition, several drug categories were collapsed for analysis due to low percentages. PCP was collapsed into one "hallucinogens" category. Other amphetamines were collapsed into the "other stimulants" category. Benzodiazepines, other non-benzodiazepine tranquilizers, barbiturates, and other non-barbiturate sedatives or hypnotics were collapsed into an "other sedatives" category. All other primary drugs and no primary substance were added to an "other" category.

2.4. Service characteristic variables

Service characteristics included referral source, service setting, and state. Referral source included seven categories: individual or self-referral, alcohol/drug abuse agency, healthcare professional, school, employer or employee assistance program (EAP), other community referral (e.g., shelters, religious organizations), and criminal justice agency. Service setting included eight categories: detox hospital, detox residential, detox ambulatory, rehab hospital, rehab short-term, rehab long-term, intensive outpatient, and outpatient. State included 49 states and Washington DC (DC). Mis-