



Published in final edited form as:

Addict Disord Their Treat. 2004 September 1; 61(9): 891–896.

The Co-Occurrence of Alcohol Abuse in Alcohol Dependence among a Treatment Sample of Asian/Pacific Islanders

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Abstract

Objectives—Alcohol abuse is not always linked to alcohol dependence in the general population, especially among minorities and women. These studies have excluded Asian and Pacific Islanders from analyses. We examine the prevalence of alcohol dependence with and without alcohol abuse among a treatment sample in Hawai'i.

Methods—225 participants were recruited from two major residential treatment programs in Hawai'i for an 89% response rate. Participants were interviewed as soon as possible after their admission, generally within the first week. Abuse and dependence criteria were assessed with the Diagnostic Interview Schedule.

Results—118 (52%) met criteria for alcohol dependence. Among respondents with current alcohol dependence, 17% did not additionally meet criteria for abuse among clients at facilities in Hawai'i. Current dependence without abuse occurred more frequently among Native Hawaiian clients (20%), and less frequently among Asian clients (11%). Although the number of women in the study was small, current dependence without abuse occurred more frequently among women (25%) compared to men (14%).

Conclusions—This study contributes to the current state of knowledge with regards to co-occurrence of alcohol abuse and dependence among ethnic groups in Hawai'i. It will help treatment facilities develop a better understanding of the individuals seeking treatment in an effort to develop a comprehensive treatment plan that will take into account ethnic considerations. Additionally, the use of alcohol abuse as a screening method for alcohol dependence in epidemiologic studies may underestimate the prevalence of dependence among Pacific Islanders, further limiting access to services for this underserved group.

Keywords

alcohol abuse; alcohol dependence; diagnostic criteria; Asian; Pacific Islander

Introduction

There is relatively more information on the prevalence of alcohol abuse and dependence among general population minority samples than there is on clinical samples of the same groups. Several studies indicate that minorities constitute the majority of clients in alcohol and drug treatment programs. Despite this over-representation in the population of these treatment programs, there seems to be a dearth of data regarding the alcohol abuse and dependence

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patterns for these patients. Data from the few studies that do exist have examined the characteristics of minorities in treatment suggest that individuals from these groups are at a greater disadvantage socially than clients from other ethnicities in treatment, and that their alcohol-related symptomatology was more severe. For example, several studies suggested that minorities are more socially disadvantaged than Caucasians at admission to treatment.¹⁻³ A more recent study shows that African Americans and Hispanics are less likely to complete publicly funded treatment for alcohol abuse in comparison to Caucasian patients. Additionally, this study shows that these minority populations would be less likely to be enrolled in residential treatment modalities and that their drug and alcohol usage patterns differ from Caucasian patients.⁴ Other studies reveal that, despite any social disadvantages, minorities respond to treatment as well as majority clients.¹⁻² While some data on Caucasians, Blacks and Hispanics in the U.S. mainland indicate there are some similarities in the clinical presentation for these three ethnic groups as they are admitted into treatment such as the level of severity of DSM-IV alcohol dependence and abuse³, there may also be differences between the groups. For example, these studies indicate a greater overlap between alcohol dependence and drug dependence among Blacks than among Caucasians and Hispanics. These differences in clinical presentation suggest that different treatment approaches may be needed when approaching patient from various ethnic backgrounds. Additionally, these differences observed in minorities on the U.S. mainland suggest that further studies need to be conducted with other minority groups such as Asians and Pacific Islanders, as any potential differences in clinical presentations for this group of minorities may also effect the approaches and techniques used in alcohol treatment for these patients.

The extent to which dependence occurs with or without abuse has been documented in the general population with data from the National Epidemiologic Survey on Alcohol and Related Conditions. Hasin and Grant reported that a substantial proportion of those with alcohol dependence did not manifest symptoms of alcohol abuse.⁵ Furthermore, they found that this varied considerably by population. Among respondents with current alcohol dependence, one third did not additionally meet criteria for abuse. Forty-six percent of all women with alcohol dependence did not meet criteria for abuse. Current dependence without abuse was especially common among minority women (48.5% among African Americans, 55.2% among Hispanics). While the numbers among Asians were very small, they suggested a similar pattern. Among respondents with lifetime diagnoses of dependence, proportions were highest among minorities that did not also meet criteria for abuse, e.g., 29.1% among Hispanic women and 19.2% among Hispanic men. They concluded that alcohol abuse does not always accompany alcohol dependence in the general population, especially among women and minorities. No study of the presentation of alcohol dependence has been conducted in Hawai'i and with the ethnic groups that are typically present in Hawai'i's population, Native Hawaiians and Asians (Japanese and Filipino). The cost of conducting such a study is prohibitive. Therefore, this presentation examines the prevalence of alcohol dependence with and without alcohol abuse among a treatment sample in Hawai'i.

Materials and Methods

Sample

Participants were recruited from the two primary residential treatment programs in Hawai'i. Participants were selected from among those clients consecutively admitted to treatment during the study period. Two hundred twenty five clients were recruited.

Procedures

Participants were asked upon intake or at the first orientation to the program, through staff members, if they were interested in speaking to a research staff member about the project.

Interested participants' names were then given to research staff members who then met with the participants as soon as possible (after admission) to minimize the program influence on the participant's perception of their history of alcohol and drug abuse/dependence. Trained research staff members explained the project, obtained consent from the participants and administered a questionnaire as well as the DIS program. Participants were interviewed as soon as possible after their admission, generally within the 1st week, in order to minimize program influence on clients' perception of their history of substance use. The response rate was 89%. Data was collected in face-to-face interviews carried out by trained interviewers. The interviews averaged one and a half hours in length, and were conducted in the facility where clients were being treated. The study was approved by a local institutional review board.

Measures

The identification of DSM-IV alcohol abuse and dependence was based on diagnostic criteria as implemented in the Diagnostic Interview Schedule, DSM-IV version.⁶ The Diagnostic Interview Schedule is a standardized structured interview developed by the National Institute for Mental Health to diagnose psychiatric disorders. This operationalization covers the criteria for alcohol abuse and dependence. It allows for estimates of severity when discussing abuse or dependence.

In addition to the section on alcohol dependence and abuse, the demographic section was administered in full. Participants were asked to self-identify their ethnicity by responding to the question "Which racial or ethnic groups best describes you?" Participants were categorized by ethnic group as follows: Hawaiian = some Hawaiian ancestry (because the large majority of Hawaiians are of mixed ancestry,⁷ a "Hawaiian" is typically defined as someone with any Hawaiian heritage). Therefore, as defined in this study, Hawaiian adults could be mixed with other ancestries such as Filipino, Japanese, Spanish, Chinese, Samoan, and Caucasian. The Asian group consisted of individuals who were of Filipino and Japanese ancestries, with six individuals reporting having 2 or more ethnicities (i.e., 2 Filipino and Spanish, 1 Filipino and Puerto Rican, 1 Filipino and Caucasian, 1 Japanese, Korean, and Portuguese, and 1 Puerto Rican and Japanese). The Caucasian group primarily consisted of full Caucasian individuals, with 2 individuals reporting two ethnicities (e.g., 1 individual reported being of Caucasian and Mexican ancestry, and 1 individual responded with French and Puerto Rican ancestry). The Asian and Caucasian group did not consist of anyone with Hawaiian ancestry. The sample consisted of significantly more males than females and more Hawaiians and Caucasians than Asians. This is to be expected as the treatment facilities typically have more females than males within their facilities and higher rates of Hawaiians and Caucasians in comparison to Asians.

Results

One hundred eighteen clients (52%) met criteria for alcohol dependence. Of those, there were 91 males (77%) and 27 females (23%). Women with alcohol dependence were less likely to meet criteria for alcohol abuse when compared to men with alcohol dependence ($X^2=2.8$, $p=0.08$). Relatively few Asian Americans (27 individuals) in comparison to Native Hawaiians (71 individuals) and Caucasians (71 individuals) participated in the study and completed the diagnostic interview. Eleven Asians (41%) met criteria for alcohol dependence, 39 Native Hawaiians (56%) met criteria and 68 Caucasians (96%) met criteria. There were no significant differences in proportions of alcohol dependence clients with and without alcohol abuse.

There were few trends detected in comparing maladaptive patterns among alcohol dependent cases with and without abuse by gender. Females without alcohol abuse were slightly more likely to neglect responsibilities and have problems at work or school. They were slightly less likely to use alcohol in hazardous situations.

There were few trends detected in comparing maladaptive patterns among alcohol dependent cases with and without abuse by ethnicity. Native Hawaiians without alcohol abuse had slightly fewer role interferences and traffic accidents but got into more physical fights while drinking. Caucasians with abuse were slightly less likely to have neglected responsibilities.

Discussion

This study contributes to the current state of knowledge with regards to co-occurrence of alcohol abuse and dependence among Asian and Pacific Islander ethnic subgroups. Health disparities place a disproportionate burden on minority populations within our nation.⁸ The need for research on substance use disorders among minorities is underscored by findings that members of many ethnic minorities in the United States report higher rates of substance use and related problems than do whites.³ We confirm findings of ethnic and gender differences in the reporting of symptoms for abuse and dependence.⁵ These differences have implications for inferences about the relationship of dependence to comorbidity, time trends in prevalence, age at onset, or longitudinal course. Additionally, the use of alcohol abuse as a screening method for alcohol dependence in epidemiologic studies may underestimate the prevalence of dependence among women and Pacific Islanders, further limiting access to services for this underserved group. Research in the field is moving away from single-factor explanations of substance use patterns and is beginning to develop and test theories focusing on the complex interplay of psychological, historical, cultural, and social factors that describe and explain substance use among minorities and their subgroups.⁹ By recognizing the heterogeneity within each ethnic group, it will be easier for researchers and clinicians to identify the subpopulations that are truly at risk and which should be targeted by intervention and prevention programs.¹⁰

The findings will also help treatment facilities develop a better understanding of the individuals seeking treatment in an effort to develop a comprehensive treatment plan that will take into account ethnic considerations. Alcohol abuse is a maladaptive pattern of behavior in which the patient's usage patterns leads to recurrent adverse consequences which may include failure to fulfill major roles obligations, usage in dangerous situations (e.g. driving), legal, social, or occupational problems. While these elements can also be seen in patients with alcohol dependence, the illness that afflicts patients with alcohol dependence is characterized by a loss of control over usage and compulsive usage; as several studies have shown that not all patients who have alcohol abuse will go on to develop alcohol dependence. Additionally, there are some studies that call into question the validity of the alcohol abuse criteria. These studies suggest that the two diagnoses may actually reflect components of the same disorder.¹¹ Additionally, there are some studies that raise concern regarding the usage of the diagnosis of alcohol abuse as a screening measure for alcohol dependence as alcohol abuse does not always accompany alcohol dependence, particularly in women and minorities and may greatly underestimate the prevalence of dependence in various subgroups of the population as there may be genetic heterogeneity among patients with alcohol dependence.⁵

Patients with substance dependence have brain function and neurological changes that extend to the genetic and molecular level of the neuron and these behavioral changes may persist for months, if not years. For example, the transcription factor CREB, which is thought to be required for the formation of long-term behavioral memory, is thought to be activated by acute administration of stimulants and opioid drugs; CREB activity is thought to increase with repeated drug exposure.¹¹ These changes in gene expression have been shown to occur in the regions of the brain that are found to be involved in the compulsive behavioral aspects seen in the addiction process, including relapse. A possible future direction for these studies may be to further characterize these differences in clinical presentation among various ethnic populations and different genders using the various neuroimaging methodologies that are currently available for research.

While this study examined a treatment population, it is the first to study alcohol abuse in alcohol dependence among a sample of Asian and Native Hawaiian groups. More research must be conducted to understand the impact other factors (including environmental, social, cultural, and economic factors) have upon individuals seeking treatment for substance-related disorders in Hawai'i.

Acknowledgments

This research was supported the National Institute for Alcohol Abuse and Alcoholism (NIAAA) and NIH Center on Minority Health and Health Disparities (NCMHD).

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Table 1

Alcohol Abuse Criteria Maladaptive Patterns by Gender

Patterns	Males with abuse	Females with abuse	Males without abuse	Females without abuse
Role Interference				
Family	88.3%	89.5%	57.1%	62.5%
Friends	80.5%	84.2%	42.9%	37.5%
Work/School	68.8%	68.4%	35.7%	62.5%
Neglect responsibilities at home	88.3%	89.5%	42.9%	62.5%
Neglect responsibilities at work	85.7%	68.4%	42.9%	75.0%
Neglect responsibilities at school	63.6%	63.2%	42.9%	50.0%
Hazards				
Fights	76.6%	68.4%	50.0%	25.0%
Traffic accident	54.5%	57.9%	35.7%	12.5%
Possibly cause fight or accident	93.5%	89.5%	64.3%	75.0%
Legal Problems (Arrested)	50.6%	42.1%	50.0%	25.0%
Persistent problems	100%	100%	0%	0%

Table 2

Alcohol Abuse Criteria Maladaptive Patterns by Ethnicity

Patterns	Caucasians with abuse	Native Hawaiians with abuse	Caucasians without abuse	Native Hawaiians without abuse
Role Interference				
Family	91.2%	86.7%	63.6%	55.6%
Friends	87.7%	80.0%	45.5%	44.4%
Work/School	66.7%	73.3%	54.5%	33.3%
Neglect responsibilities at home	89.5%	93.3%	63.6%	33.3%
Neglect responsibilities at work	78.9%	90.0%	63.6%	44.4%
Neglect responsibilities at school	54.4%	73.3%	45.5%	44.4%
Hazards				
Fights	68.4%	83.3%	27.3%	55.6%
Traffic accident	61.4%	43.3%	36.4%	22.2%
Possibly cause fight or accident	93.0%	96.7%	81.8%	55.6%
Legal Problems (Arrested)	49.1%	50.0%	45.5%	44.4%
Persistent problems	100%	100%	0%	0%