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Gender and race/ethnicity differences for initiation of alcohol-related service use among persons with alcohol dependence☆

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ABSTRACT

Background: Prior studies on treatment for alcohol-related problems have yielded mixed results with respect to gender and race/ethnicity disparities. Additionally, little is known about gender and racial differences in time to first alcohol-related service contact amongst persons with alcohol dependence. This study explored gender and race/ethnicity differences for first alcohol-related service utilization in a population-based sample.
Methods: Primary analyses were restricted to Blacks, Whites and Hispanics, ages 18–44, with lifetime alcohol dependence ($n = 3311$) in Wave 1 of the National Epidemiologic Survey on Alcohol and Related Conditions. We compared time to service use among men and women within and across race/ethnicity strata using multivariable Cox proportional hazard methods.
Results: In the sample of individuals age <45 with alcohol dependence, only 19.5% reported alcohol-related service use. Overall, women were less likely than men to receive alcohol-related services in their lifetime. However, women who did receive treatment were younger at first service utilization and had a shorter interval between drinking onset and service use than men. Gender differences were consistent across racial/ethnic groups but only statistically significant for Whites. There were no appreciable race/ethnicity differences in hazard ratios for alcohol-related service use or time from drinking initiation to first service contact. Results of sensitivity analyses for persons ≥45 years old are discussed.
Conclusions: There are important gender differences in receipt of and time from drinking initiation to service utilization among persons with alcohol dependence. Increased recognition of these differences may promote investigation of factors underlying differences and identification of barriers to services.

1. Introduction

Despite the high prevalence and substantial associated medical, psychiatric and socioeconomic burden, only a minority of persons with alcohol dependence receive treatment (Cohen et al., 2007; Grella et al., 2009; Schmidt et al., 2007; Substance Abuse and Mental Health Services Administration, 2011). A study using data from the National Epidemiologic Survey of Alcohol and Related Conditions (NESARC) found that only about one-quarter of those with alcohol dependence reported treatment utilization (Cohen et al., 2007). Research has demonstrated that specialty alcohol treatment, 12-Step facilitation, and non-specialty alcohol-related community services are all effective in achieving long-term abstinence or reductions in alcohol consumption (Dawson et al., 2006; Weisner et al., 2003a,b). Thus, a better understanding of who is accessing treatment for alcohol and in what settings is important for design of services.

There appear to be differences in alcohol-related service use by gender and race/ethnicity, though the results of past research are inconsistent. An earlier study by Weisner and colleagues (1995) using data from three nationally representative samples found that

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the odds for treatment for men were twice that of women, after controlling for alcohol dependence symptoms and social consequences. This finding was corroborated in a more recent analysis of the NESARC (Cohen et al., 2007). However, another analysis of NESARC data found that this gender difference was reversed after adjustment for sociodemographic characteristics, general medical condition and psychiatric disorders (Oleski et al., 2010). Other studies of local treatment samples and a general population-based sample found no gender differences (Kessler et al., 2001; Weisner et al., 2002; Wu et al., 2003). Some of the inconsistency in gender differences may be explained by cohort differences in the pursuit and receipt of alcohol services. Recent studies have shown increased drinking and alcohol use disorders in younger birth cohorts with differences more pronounced in women, resulting in decreased gender differences for these outcomes (Grucza et al., 2008a; Keyes et al., 2008a).

Findings of past research regarding racial/ethnic differences also vary with some studies reporting that minorities, particularly Blacks and Hispanics, are more likely (Oleski et al., 2010; Weisner et al., 2002), equally likely (Cohen et al., 2007; Keyes et al., 2008b) or less likely (Schmidt et al., 2007; Wu et al., 2003) than Whites to receive alcohol-related services. Sample differences may explain these findings: Hispanics are under-represented in specialty alcohol treatment settings, whereas, both Blacks and Hispanics are over-represented in public sector and criminal justice systems (Chartier and Caetano, 2010; Schmidt et al., 2006).

In addition to disparities in alcohol-related services, there may also be gender or racial/ethnic differences in time from drinking onset to treatment entry. Several studies have shown gender differences in drinking careers with women progressing faster than men from drinking initiation to the onset of first alcohol-related problem, alcohol dependence and treatment entry (Hernandez-Avila et al., 2004; Piazza et al., 1989; Randall et al., 1999; Schuckit et al., 1998). This "telescoping" effect was demonstrated in earlier clinical research and substance disorder treatment samples; however, more recent analyses of the NESARC found no gender differences in time to progression from drinking initiation to development of alcohol dependence (Alvanzo et al., 2011; Keyes et al., 2010). Yet, little is known about gender differences within race/ethnicity strata or racial/ethnic differences within gender strata in the course from onset of drinking to treatment entry in the general population. The assessment of these utilization patterns may aid our understanding of and potential improvement in access and treatment utilization for individuals with alcohol dependence.

The current study extends the literature by exploring both gender and race/ethnicity subgroups simultaneously to evaluate age differences for time of first alcohol-related service utilization and time from drinking initiation to first alcohol-related service use. Using data from the first wave of the NESARC, we compared a nationally representative sample of White, Black and Hispanic men and women with lifetime alcohol dependence. As has been done in previous studies, the primary sample was restricted to persons younger than 45 years in an effort to minimize recall bias and the possibility of differential alcohol-related mortality (Alvanzo et al., 2011; Keyes et al., 2010; Wagner and Anthony, 2007). Additionally, sensitivity analyses were conducted with persons ≥45 years old.

2. Methods

2.1. Sample

The sample consisted of participants in Wave 1 of the NESARC, a nationally representative, multi-stage probability survey of 43,093 non-institutionalized adults 18 years and older conducted in 2001–2002 (Grant et al., 2004). Blacks, Hispanics, and young adults were oversampled and the overall response rate was 81%. Detailed sampling, training and quality control procedures are reported elsewhere (Grant et al., 2004; Hatzenbuehler et al., 2008). The primary analyses were restricted to persons who were self-identified as Black, White, or Hispanic under age 45 years who met criteria for lifetime alcohol dependence ($n = 3311$). Additional sensitivity analyses were completed for those ≥45 years.

2.2. Measures

Alcohol initiation, alcohol dependence, and lifetime alcohol-related service utilization were assessed using the Alcohol Use Disorder and Associated Disabilities Interview Schedule-DSM IV Version (AUDADIS-IV), via a structured computer-assisted personal interview (Grant et al., 2003, 1995; Hatzenbuehler et al., 2008). Alcohol-related service utilization was assessed by a question asking whether the respondent had ever gone anywhere or seen anyone for a reason related to their drinking. Persons endorsing alcohol-related service utilization were subsequently asked about types of services, ranging from 12-step facilitation to inpatient hospitalization.

Drinking initiation and age at first alcohol-related service utilization were assessed from questions regarding age of first alcohol use ("not counting small tastes or sips") and age when the respondent first sought help because of drinking, respectively. The time between age at drinking initiation and age at first alcohol-related service utilization was calculated as the difference in years.

Race/ethnicity was assessed from self-reports. Individuals reporting Hispanic or Latino ethnicity were classified as Hispanic regardless of race. The current analyses included persons identified as non-Hispanic White, non-Hispanic Black, and Hispanic.

Multivariable analyses controlled for age, age of alcohol dependence onset or age of alcohol abuse onset if age of dependence onset was missing, education level, income, insurance status, urbanicity, family history of alcohol problems (first degree relative identified as "ever an alcoholic or problem drinker"), alcohol consumption (typical number of daily drinks during the heaviest drinking period) and lifetime diagnosis of mood/anxiety, personality and drug use disorders, excluding nicotine.

Psychiatric and drug use disorders included in the analyses were disorders of mood (major depressive disorder, dysthymia, mania, hypomania), anxiety (panic, social phobia, specific phobia, generalized anxiety disorder), personality (antisocial, avoidant, histrionic, obsessive-compulsive, paranoid, schizoid), abuse and/or dependence involving amphetamines, cannabis, cocaine, hallucinogens, inhalants, opioids (heroin and/or prescription "painkillers"), sedatives, and tranquilizers.

2.3. Data analysis

Initial analyses compared mean ages at first alcohol-related service utilization and mean years from drinking initiation to first service contact after dividing the sample into strata. For the first set of analyses, the sample was evaluated by race/ethnicity, and men were compared to women of the same race/ethnicity group. The second set of analyses explored race/ethnicity differences within gender strata. All analyses took into account the variation in analytical weights and clustering within sample strata using Taylor linearization implemented via STATA survey commands (StataCorp, 2009). Mean ages at first alcohol-related service utilization and mean time in years from drinking initiation to first service use were compared using adjusted Wald tests.

Hazard ratios of service utilization were examined using unadjusted and adjusted Cox proportional hazard models. For the estimation of the cumulative probability of treatment utilization, we set two time perspectives: since birth, and since first alcohol use. Years for persons not reporting service use were calculated by subtracting initiation age from the individuals' age at the time of interview. Individuals whose first treatment was at the same age as alcohol initiation were set at 0.5 to reflect halfway through the year ($n = 28$). To assess for potential differences with the primary analyses due to truncating the sample at age 45, we also conducted sensitivity analyses for those ≥45 years at the time of interview.

3. Results

3.1. Prevalence and mean years from drinking initiation to service utilization

3.1.1. Prevalence of lifetime alcohol-related service utilization. Of the 3311 persons <45 years with lifetime alcohol dependence, only 19.5% reported ever seeking alcohol-related services. The prevalence of service utilization and use of different types of alcohol-related services, stratified by race/ethnicity and gender, is presented in Table 1. Overall, a greater proportion of men than women received alcohol services ($F_{2,\ 2600} = 10.28$; $p < 0.001$). Men in each race/ethnicity group had higher rates of service use when compared to women of the same race/ethnicity, with approximately 7%, 9% and 10% higher for White, Black, and Hispanic men, respectively. However, only the difference for Whites ($F_{2,\ 2393} = 8.64$; $p < 0.001$) and Hispanics ($F_{2,\ 2550} = 3.93$; $p < 0.020$) achieved statistical significance. There were no statistically

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