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Gambling problem severity and psychiatric disorders among Hispanic and white adults: findings from a nationally representative sample

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ABSTRACT

Objective: To examine differences in the associations of gambling problem severity and psychiatric disorders among a nationally representative sample of Hispanic and white adults.
Method: Chi-square tests and multinomial logistic regression analyses were performed on data obtained from the National Epidemiologic Survey on Alcohol and Related Conditions from 31,830 adult respondents (13% Hispanic; 87% white), who were categorized according to three levels of gambling problem severity (i.e., no gambling or low-frequency gambling [NG], low-risk or at-risk gambling [LRG], problem or pathological gambling [PPG]).
Results: Hispanic respondents in comparison to white respondents were more likely to exhibit PPG. Problem gambling severity was associated with past-year Axis I and lifetime Axis II psychiatric disorders in both Hispanic and white respondents, with the largest odds typically observed in association with the most severe gambling pathology. A stronger relationship between subsyndromal gambling and a broad range of Axis I disorders (mood, anxiety and substance use disorders) and Axis II disorders (particularly cluster B) was observed in Hispanic respondents as compared to white ones.
Conclusions: Levels of problem gambling severity are associated with the prevalence of Axis I and Axis II psychiatric disorders in both Hispanics and whites. Differences in the patterns of co-occurring disorders between subsyndromal levels of gambling in Hispanic and white respondents indicate the importance of considering ethnicity/race-related factors related to subthreshold levels of gambling in developing improved mental health prevention and treatment strategies.

1. Introduction

Gambling and gambling problems are common among different ethnic and racial groups in the United States (Volberg, 2002; Westermeyer et al., 2005). Among public school students in Minnesota, Mexican Americans, as compared to whites, reported higher rates of weekly or daily gambling in 1992 (21.2% vs. 14.0%) and 1995 (21.6% vs. 12.3%), and higher rates of daily gambling in 1998 (9.5% vs. 4.0%) (Stinchfield, 2000; Stinchfield et al., 1997). Investigations that have compared the prevalence of problem or pathological gambling among Hispanics and whites in the United States have yielded mixed findings. One study found that, in comparison to whites, Hispanics exhibited higher past-year rates of problem or pathological gambling (7.9% vs. 1.8%) (Welte et al., 2001), whereas a more recent study that examined ethnicity and race differences in lifetime prevalence rates of problem or pathological gambling from the National Epidemiologic Survey on Alcohol and Related Conditions data found similar rates for Hispanics (1.0%) and whites (1.2%) (Alegría et al., 2009).

Recent research on gambling and psychopathology has emphasized the importance of systematically examining the psychiatric morbidity that may accompany a continuum of problem gambling severity (such as recreational or low-risk gambling, at-risk gambling, problem gambling, and pathological gambling) among different population subgroups—a perspective that is consistent with a public health approach to the study of gambling (Barry et al., 2008; Desai and Potenza, 2008; Shaffer and Korn, 2002). This approach may be particularly relevant for minority populations in the United States. For example, we recently found that in comparison to white adults, black adults were more likely to exhibit

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past-year problem or pathological gambling and a stronger relationship between subsyndromal gambling (i.e., gambling-related behaviors and problems that do not meet threshold for pathological gambling) and any mood disorder, hypomania, and any substance use disorder (Barry et al., 2008). Additionally, assessing past-year, rather than lifetime, estimates of gambling and accompanying psychopathology may hold particular relevance. In comparison to lifetime measures, past-year measures are more likely to yield a better test of psychiatric comorbidity because symptoms of the disorders being considered will have been present within 12 months of each other, less likely to be subject to recall bias, and are arguably more important to clinicians and public health officials (Desai and Potenza, 2008; Grant et al., 2004a). For these two reasons, we analyzed data from the National Epidemiologic Survey of Alcohol and Related Conditions (NESARC) study to examine the relationships between sociodemographic characteristics and psychiatric disorders accompanying varying levels of past-year gambling problem severity among Hispanic and white respondents. Given previous NESARC findings indicating a stronger relationship between subsyndromal levels of gambling and certain psychiatric disorders in black adults as compared to white ones (Barry et al., 2008), we hypothesized that although rates of psychiatric disorders would be associated with past-year gambling problem severity in both Hispanic and white respondents, the relationship between subsyndromal gambling and psychopathology would be stronger in Hispanic respondents as compared to white ones.

2. Methods

2.1. Sample

The National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) was conducted by the National Institute on Alcohol Abuse and Alcoholism and the US Census Bureau and sampled a nationally representative group of US non-institutionalized residents (citizens and non-citizens) aged 18 and older (Grant et al., 2003a,b). The NESARC was designed to over-sample Hispanic and African American households, as well as individuals aged 18–24, to allow sufficient statistical power to investigate patterns of alcohol use in minority populations and young people. Multi-stage cluster sampling was used to identify respondents: census sampling units, households, and then household members were sequentially sampled. While individuals residing in jails, prisons, or hospitals were not included, the sample was augmented with members of group living environments, such as group homes, shelters, dormitories, and facilities for housing workers. Weights have been calculated to adjust standard errors for these over-samples, the cluster sampling strategy, and non-responses (Grant et al., 2003b).

The final NESARC sample consisted of 43,093 respondents with an overall response rate of 81%. For the purposes of the current study, we restricted the sample to 31,830 respondents, 7402 of whom self-identified as Hispanic (12.54%) and 24,428 as white (87.46%) (percentages provided are weighted). Hispanic study participants did not endorse membership of any racial group, while white participants did not endorse Hispanic ethnicity membership. All participants provided written study consent. This study of publicly accessible, de-identified data from the NESARC was presented to the Yale Human Investigations Committee and exempted from review under federal regulation 45 CFR Part 46.101(b).

2.2. Measures

2.2.1. Sociodemographics

Participants provided information about their ethnicity or race (Hispanic, white), gender (male, female), marital status (married, previously married, never married), education (less than high school, high school graduate, some college, college or higher), employment (full time, part time, not working), age, and income.

2.2.2. Psychiatric disorders

Trained lay interviewers collected specific DSM-IV Axis I and II psychiatric disorder data using the Alcohol Use Disorder and Associated Disability Interview Schedule-DSM-IV version (AUDADIS-IV) (American Psychiatric Association, 1994; Grant et al., 2003a). The AUDADIS-IV is a structured diagnostic interview with demonstrated test–retest reliability and has been found to be a useful tool for detecting psychiatric disorders in a community sample (Grant et al., 2003a). Not all Axis I or Axis II psychiatric disorders were assessed in the NESARC due to concerns about subject burden and time constraints (Grant et al., 2005). The following DSM-IV-related Axis I and II diagnostic variables (derived from AUDADIS-IV), which are available on the publicly accessible NESARC database (http://pubs.niaaa.nih.gov/publications/NESARC_DRM/NESARCDRM.htm), were used in this study and—consistent with prior research (Grant et al., 2009)—grouped as follows: mood disorder (major depression, dysthymia, mania, hypomania); anxiety disorder (panic disorder with or without agoraphobia, social phobia, simple phobia, generalized anxiety); substance use disorder (alcohol abuse/dependence, drug abuse/dependence, nicotine dependence); and personality disorder cluster A (paranoid, schizoid), cluster B (histrionic, antisocial), and cluster C (avoidant, dependent, obsessive-compulsive).

We used past-year Axis I diagnoses with general medical condition and substance use exclusions; thus, research diagnoses can be viewed as orthogonal or “primary” as per DSM-IV/DSM-IV-TR guidelines (American Psychiatric Association, 1994; Desai and Potenza, 2008). Unlike Axis I psychiatric diagnoses, Axis II diagnostic criteria were not restricted to the past year. Instead, respondents were asked how they felt or acted most of the time, irrespective of the situation, throughout their lives.

Similar to previous research, respondents’ answers to the gambling-related items from the AUDADIS-IV were used to classify them into one of the three gambling groups: (a) “non-gamblers or low-frequency gamblers” (i.e., those reporting that they had never gambled more than five times per year in their lifetime); (b) “low-risk or at-risk gamblers” (i.e., those reporting gambling more than five times in a year but who exhibited 0 to 2 inclusionary criteria of pathological gambling in the previous year); and (c) “problem or pathological gamblers” (i.e., those reporting 3 or more inclusionary criteria of pathological gambling in the previous year) (Desai and Potenza, 2008). Respondents who indicated that they had gambled five or more times in at least 1 year of their life were asked about inclusionary criteria of DSM-IV pathological gambling. The AUDADIS-IV assessed the 10 DSM-IV diagnostic inclusionary criteria for pathological gambling (American Psychiatric Association, 1994). As previously done, problem gambling was operationally defined as meeting 3–4 DSM-IV inclusionary criteria for pathological gambling, and pathological gambling was operationally defined as meeting 5 or more gambling-related inclusionary criteria (American Psychiatric Association, 2000; Barry et al., 2007; Desai and Potenza, 2008). Respondents with problem or pathological gambling were grouped together in this study because of the low proportion of participants who met criteria for pathological gambling (less than 1% of the sample), a strategy that has been employed in previous gambling studies (Cunningham-Williams et al., 1998; Desai and Potenza, 2008; Grant et al., 2009; Slutske et al., 2000). Similarly, we grouped together low-risk or at-risk gamblers in order to have sufficient power to test