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Panic attacks and panic disorder in the American Indian community

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ABSTRACT

Panic disorder is a common mental health condition, but little is known about panic disorder in non-Caucasian populations. The purpose of this study is to describe the epidemiology, clinical features, and comorbidities of panic attacks and panic disorder in two large American Indian (AI) tribes (N = 3084). A culturally-adapted version of the Composite International Diagnostic Interview assessed panic attacks, panic disorder, and various psychiatric comorbidities. After adjusting for age, gender, and tribe, linear and logistic regression analyses were conducted to compare AIs with panic disorder to those with panic attacks only on clinical characteristics and panic symptoms. Approximately 8.5% (N = 234) of American Indians reported a lifetime history of panic attacks. Among individuals with panic attacks, comorbid posttraumatic stress disorder was higher in females ($p = 0.03$) and comorbid alcohol-related disorders were higher in males ($p \leq 0.001$). The prevalence and clinical features of panic attacks and panic disorder in American Indians were similar to epidemiologic studies with majority populations. However, in contrast to earlier research, panic symptoms were similar in both males and females, and different patterns of comorbidity emerged. Future research should examine the availability and accessibility of evidence-based panic treatments for this traditionally underserved population.

1. Introduction

Anxiety disorders such as panic disorder are among the most common mental health conditions in the United States (Kessler, Berglund, Demler, Jin, & Walters, 2005), but limited information exists about these disorders in non-Caucasian racial/ethnic groups (Carter, Mitchell, & Sbrocco, 2012). Several studies suggest the lifetime prevalence of panic disorder among American Indians (AIs) approximates rates found in majority populations (Eaton, Kessler, Wittchen, & Magee, 1994; Grant, Hasin, Stinson, Dawson, & Goldstein, 2006; Kessler et al., 2005; Kessler, Chiu, Jin, Ruscio, Shear, & Walters, 2006). For instance, the lifetime prevalence of panic disorder in the American Indian Service Utilization, Psychiatric Epidemiology, Risk and Protective Factors Project (AI-SUPERPFP) was 4.5% and 2.4% in the Southwest and Northern Plains tribes, respectively (Beals, Manson, Whitesell, Mitchell et al., 2005). Furthermore, a national survey of over 43,000 participants found that Native American was the only racial category associated with increased risk for 12-month and lifetime panic disorder relative to Asians, Hispanics, African-Americans, and Caucasians (Grant et al., 2006). Yet, only a single publication has described the clinical features of panic attacks and panic disorder in AIs (Neligh, Baron, Braun, & Czamecki, 1990). Findings from this study are seriously limited, however, due to a small sample size (n = 7), presence of comorbid psychiatric conditions, outdated diagnostic criteria, and absence of panic symptom information.

A closer evaluation of panic attack symptoms in non-Caucasian samples highlights the importance of recognizing cultural differences in the manifestation of anxiety (Lewis-Fernandez, Hinton, Laria, Patterson, & Hofmann, 2010). For example, Caucasians report predominantly cardiac and respiratory symptoms during panic episodes (Grant et al., 2006; Hollifield, Finley, & Skipper, 2003; Sheikh, Leskin, & Klein, 2002) while Cambodian refugees endorse symptoms focused on the head and neck (Hinton, Chhean, Pich, Um,

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Fama, & Pollack, 2006) and gastrointestinal areas (Hinton, Chhean, Fama, Pollack, & McNally, 2007). African-American patients with panic disorder commonly report intense sensations of numbing in their extremities, fears of dying, and thoughts of going crazy (Smith, Friedman, & Nevid, 1999). In contrast, patients from Spain (Segui et al., 1998) and India (Neerakal & Srinivasan, 2003) infrequently endorse cognitive symptoms, and depersonalization is uncommon among Japanese patients (Shiori, Someya, Murashita, & Takahashi, 1996).

Panic attack symptoms are also differentially reported among men and women. The National Comorbidity Survey found women with panic disorder were more likely to endorse respiratory symptoms, such as shortness of breath, smothering sensations, and faintness, whereas men more often reported gastrointestinal pain and sweating (Sheikh et al., 2002). Other studies suggest the age of panic onset and frequency of attacks do not differ by gender (Chambless & Mason, 1986), but women endorse more symptoms during panic attacks (Dick, Bland, & Newman, 1994), and have more severe agoraphobic avoidance (Turgeon, Marchand, & Dupuis, 1998), greater physical concerns (Foot & Koszycki, 2004), and higher overall functional impairment (Sachs, Amering, Berger, & Katschnig, 2002) than men.

Types of panic symptoms also reliably differentiate individuals meeting criteria for panic disorder from those experiencing panic attacks but not meeting criteria for panic disorder. For instance, patients meeting DSM-IV criteria for lifetime panic disorder more frequently endorse fears of dying, derealization, stomach pain, and chest pain during panic episodes than their counterparts with only panic attacks (Sheikh et al., 2002). Even after controlling for total number of symptoms, fears of dying, hot flashes/chills, and stomach pain reliably identified patients with panic disorder (Sheikh et al., 2002; Vickers & McNally, 2005).

Understanding culture-specific features of anxiety may improve how panic disorder and panic attacks are detected and managed. No publication to date has carefully examined panic attack symptoms and panic disorder among AIs. The goals of this study are to 1) describe the demographic, clinical features, and comorbidities of panic attacks; 2) determine if groups of panic symptoms differentiate men and women who have a history of panic attacks; and, 3) determine if patterns of psychiatric comorbidity and specific symptoms distinguish adults meeting criteria for lifetime panic disorder from those experiencing only panic attacks.

2. Methods

2.1. Study design, sample, and procedures

The primary objective of the AI-SUPERPFP was to estimate the prevalence of psychiatric disorders and health service use among tribal members residing on a Southwest and a Northern Plains reservation. A sample of individuals listed on tribal rolls (the legal record of tribal membership) who were between the ages of 15 and 54 in June 1997 and lived on or within 20 miles of their reservation at the time of the study were selected for an interview. The sample was stratified by age (4 strata: 15–24 years, 25–34 years, 35–44 years, ≥45 years) and gender (2 strata) using stratified random sampling procedures (Cochran, 1977). Sample weights were used to account for differential probabilities of selection and nonresponse within strata (Kish, 1965). The AI-SUPERPFP study design and sampling methods are described in greater detail elsewhere (Beals, Manson, Mitchell, Spicer, & AI-SUPERPFP, 2003). For our analyses, only participants who met DSM-IV criteria for lifetime panic attacks and had complete data for all panic symptom variables were included (Southwest: N = 122; Northern Plains: N = 112).

Considerable efforts were made by the AI-SUPERPFP team during the project development phase to involve AI communities in constructing content-valid, culturally relevant interview questions. A computerized, structured, comprehensive interview was administered by lay members of the tribal communities who were intensively trained in research methods. Data were collected from July 1997 to August 1999. The AI-SUPERPFP obtained the necessary tribal and university approvals. Written informed consent was obtained from each participant after the nature of the study procedures had been fully explained.

2.2. Measures

2.2.1. Demographics

Sociodemographic information included gender, age, marital status, and education. Age was measured continuously in years. Marital status was dichotomized as currently married or cohabitating versus all other categories. Education was categorized as attending school less than 12 years or 12 years or more.

2.2.2. Psychiatric disorders

A version of the University of Michigan Composite International Diagnostic Interview adapted for use in the AI-SUPERPFP study (AI-SUPERPFP-CIDI). Adaptations were based on feedback from community focus groups, with particular emphasis on revising the wording of CIDI instructions and questions in order to provide further descriptions of infrequently used terms in AI communities (Beals et al., 2003). The modified CIDI was used to determine the presence of lifetime panic attacks and panic disorder. Panic attack history was established by experiencing at least 4 out of 18 symptoms during the "worst attack" episodes. These attacks were noted to begin suddenly and then to worsen within the first few minutes of the attack. Examples of culturally modified panic attack symptom items included referring to nausea as stomach or belly pain, and adding the perception of time passing much more quickly or slowly than usual. Consistent with CIDI criteria (Beals, Manson, Whitesell, Spicer et al., 2005), the presence of lifetime panic disorder involved experiencing 4 or more defined, uncued panic attacks within a 1-month period and endorsing being "constantly afraid that you might have another attack." Panic attacks due to illness, injury, or the result of substance use were not included in establishing panic attack criteria. For both age of onset and number of lifetime panic attacks, an exact or range response was accepted. In the case of a range response, we used the midpoint of the range in the analyses. Lifetime PTSD, generalized anxiety disorder, major depression, and alcohol abuse/dependence were also established using the AI-SUPERPFP-CIDI. Agoraphobia, specific phobia, social phobia, and obsessive compulsive disorder were not assessed due to concerns over respondent burden (Beals, Manson, Whitesell, Mitchell et al., 2005).

2.2.3. Panic symptoms

Respondents were asked about 18 specific symptoms they may have experienced during their "worst attacks of suddenly feeling very frightened or very uneasy." Responses were recorded as *yes* or *no*.

2.3. Statistical analyses

Our limited sample size and statistical correction for multiple comparisons precluded the formal investigation of group differences in the endorsement of individual panic symptoms. In order to maximize statistical power in our analyses, we categorized the 18 panic attack symptoms into three domains: cardio-respiratory, autonomic/somatic, and cognitive. For each symptom domain, we computed the total number of symptoms experienced by each

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