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Panic Attacks and Panic Disorder in the American Indian Community

Craig N. Sawchuk, Ph.D.^{a,*}, Peter Roy-Byrne, M.D.^b, Carolyn Noonan, M.S.^c, Julia R. Craner, Ph.D.^a, Jack Goldberg, Ph.D.^c, Spero Manson, Ph.D.^d, Dedra Buchwald, M.D.^e, and the AI-SUPERPFP Team^d

^aDepartment of Psychiatry and Psychology, Mayo Clinic, 200 First Street SW, Rochester, MN 55905, United States

^bDepartment of Psychiatry and Behavioral Sciences, University of Washington, Seattle, WA 98104, United States

^cDepartment of and Epidemiology, University of Washington, Seattle, WA 98104, United States

^dAmerican Indian and Alaska Native Programs, University of Colorado Health Sciences Center, Denver, CO 80045 United States

^eDepartment of Medicine, Washington State University, Seattle, WA 98101, United States

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 = 3,084). 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 ($p = 0.001$). 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.

*Corresponding author. Craig N. Sawchuk, Ph.D., Department of Psychiatry and Psychology, Mayo Clinic, 200 First Street SW, Rochester, MN 55905; Phone: +1 507-284-0592; FAX: +1 507-266-0036; sawchuk.craig@mayo.edu.

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Keywords

American Indian; panic attacks; panic disorder; panic symptoms

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, et al. 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, Novins, Simpson, Spicer, & AI-SUPERPFP, 2005a). 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, et al., 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, 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, Salvador-Carulla, Garcia, Canet, Ortiz, & Farre, 1998) and India (Neerakai & 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 non-response 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

2.21 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.

2.22 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 et al., 2005a), 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 et al., 2005a).

2.23 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 respondent. The possible range for total number of symptoms in the cardio-respiratory domain was 0 – 8, the autonomic/somatic domain was 0 – 6, and the cognitive domain was 0 – 4.

Descriptive statistics included means and standard errors for continuous variables and proportions for categorical variables. We computed the prevalence for each panic symptom across men and women. We then calculated the mean number of symptoms experienced by

men and women for each of the three symptom domains. We used linear regression to test if the mean number of symptoms in each domain differed according to sex. All results were adjusted for age and tribe.

We then compared panic symptoms in respondents who met DSM-IV criteria for lifetime panic disorder to respondents with lifetime panic attacks only. We computed the prevalence for each panic symptom separately in the two groups. Similar to above, we calculated the mean number of symptoms in each domain experienced by respondents with panic disorder and those with only a lifetime panic attack history. We used linear regression to test if the mean number of symptoms in each domain differed according to diagnostic status. All results were adjusted for age, sex, and tribe.

To limit multiple comparisons, we used inferential statistics on the symptom domain analyses only. All statistical tests were 2-sided adjusted Wald tests. We set the threshold for significance at $\alpha = 0.05$. All analyses were conducted in Stata 9.1 for Windows (StataCorp LP, College Station, TX) using 'svy' commands to accommodate the weights for complex sampling and survey non-response.

3. Results

3.1 Sample Description

Among all AI-SUPERPPF respondents, a total of 8.5% (8% of men and 9% of women) met criteria for lifetime panic attacks. Lifetime panic disorder was detected in 2.6% of men and 4.1% of women. The average age of both men and women with lifetime panic attacks was 37 years. Eighty percent of men and 76% of women had attended the 12th grade or higher. More than half of both genders were currently married or cohabitating (men 52%, women 57%).

3.2 Gender Differences

Table 1 summarizes the clinical characteristics of men and women meeting criteria for lifetime panic attacks. Men were younger at the age of panic attack onset than women ($p = 0.05$). We did not find significant differences between men and women for lifetime number of panic attacks or attack severity. Rates of psychiatric comorbidity were high in both genders. Whereas women were more likely to meet diagnostic criteria for co-occurring PTSD ($p = 0.03$), comorbid alcohol abuse/dependence was higher among men ($p < 0.001$).

Table 2 presents the adjusted prevalence and mean number of panic symptoms in men and women with lifetime panic attacks. For the 8 cardio-respiratory symptoms, the median symptom prevalence was 60% for men (range: 38 – 95%) and 55% for women (range: 40 – 97%). The median symptom prevalence for the autonomic/somatic domain was 63% among men (range: 30 – 86%) compared to 56% among women (range: 26 – 71%). The median symptom prevalence for the cognitive domain was 57% for men (range: 53 – 87%) and 54% (range: 39 – 74%) for females. Although the mean symptom count for all 3 domains was consistently higher in men, only the cognitive symptom domain reliably differentiated the genders ($p = 0.04$). Exploratory analyses on the individual panic symptoms indicated that

sweating, time moving slowly/quickly, and fears of dying were more frequently endorsed by AI men than women ($p's < 0.05$).

3.3 Differences in Panic Disorder and Panic Attack Groups

Table 3 shows the clinical characteristics and comorbid psychiatric conditions for American Indians with lifetime panic disorder and those with a history of panic attacks without panic disorder. The 2 groups were similar in age of panic attack onset and lifetime number of panic attacks. Furthermore, compared to participants with only panic attacks, those with lifetime panic disorder more frequently met criteria for comorbid generalized anxiety disorder ($p < 0.03$) and any anxiety, mood, or alcohol-related disorder ($p < 0.05$).

Table 4 shows the adjusted prevalence and mean number of panic symptoms in the lifetime panic disorder and panic attack only groups. For respondents with panic disorder, the median symptom prevalence was 62% for the cardio-respiratory domain (range: 40 – 95%) compared to 54% (range: 39 – 97%) in respondents with panic attacks only. For the autonomic/somatic domain, the median symptom prevalence was 60% for both the panic disorder (range: 21 – 77%) and panic attack (range: 33 – 78%) groups. The median symptom prevalence for the cognitive domain was higher for respondents with panic disorder (60%, range: 57 – 75%) than for those with only panic attacks (51%, range: 40 – 85%). The mean symptom counts for the cardio-respiratory, autonomic/somatic, and cognitive domains were comparable across both groups. Exploratory analyses of individual panic symptoms revealed that dizziness and fears of dying were more frequently reported by the panic disorder group while trembling or shaking was more prevalent in the panic attack only group ($p's = 0.05$).

4. Discussion

This is the first study to examine and compare panic attacks and panic disorder in American Indians. The AI-SUPERPFP previously reported that anxiety disorders were highly prevalent in tribal communities, with lifetime estimates ranging between 15.9% and 19.1% (Beals et al., 2005a). We found that 8.5% of community-based AIs met lifetime criteria for a DSM-IV defined panic attack. Our findings are congruent with epidemiologic studies that report 4.3% to 9.7% of the general population suffer from panic attacks (Eaton et al., 1994; Kessler, McGonagle, Zhao, Nelson, Hughes, Eshelman, & Wittchen, 1994; Reed & Wittchen, 1998), but substantially less than the lifetime panic attack prevalence of 28.3% reported in the National Comorbidity Survey Replication (Kessler et al., 2006). Two possibilities may account for this discrepancy.

First, the AI-SUPERPFP and National Comorbidity Survey Replication used slightly different screening criteria for lifetime panic attacks. Specifically, the AI-SUPERPFP used the DSM-III-R CIDI, which was in use at the time the study started, and modified it to reflect both culturally relevant content and DSM-IV diagnostic standards (Beals et al., 2003). The National Comorbidity Survey Replication, on the other hand, used the DSM-IV version of the CIDI, which included more detailed stem questions for lifetime panic attack episodes (Kessler et al., 2006). It is uncertain if these changes to the CIDI resulted in more liberal screening criteria and an overestimation of panic attacks in the National Comorbidity

Survey Replication (Kessler et al., 2006), or if previously reported rates were underestimates. Second, cultural differences in the pattern of panic symptom responding or cultural expression of anxiety symptoms may have influenced our findings (Carter et al., 2012; Lewis-Fernandez et al., 2010). For instance, the prevalence of major depression was likely underestimated in the AI-SUPERPFP given that AI participants tended to endorse fewer than 9 criterion A symptoms and were less likely to report their concurrence over a sustained 2-week period when compared to National Comorbidity Survey respondents (Beals, Manson, Whitesell, Mitchell, Novins, Simpson, Spicer, & AI-SUPERPFP, 2005b). One explanation may be that the admission of depressed mood or anhedonia may be viewed as a sign of weakness among tribal members (Beals et al., 2005b).

The demographic and clinical features among participants with panic attacks were similar to findings among the majority population. As in other studies, we found the age of panic attack onset was typically in the mid-20s (Goodwin, Faravelli, Rosi, Cosci, Truglia, de Graff, & Wittchen, 2005; Sheikh et al., 2002; Weissman, Bland, Canino, Faravelli, Greenwald, et al., 1997), men presenting earlier than women (Clayton, Stewart, Fayyad, & Clary, 2006; Sheikh et al., 2002), and an equal distribution of panic attack frequency among men and women (Chambless & Mason, 1986). We also noted psychiatric comorbidity was frequent, suggesting panic attacks are a marker for generalized psychopathology and not restricted to panic disorder (Goodwin, Lieb, Hofler, Pfister, Bittner, Beesdo, & Wittchen, 2004; Goodwin & Hamilton, 2001; Kinley, Walker, Enns, & Sareen, 2011; Turgeon et al., 1998). Among our sample with panic attacks, the overall prevalence of PTSD in women was more than double and, among men, the rates of alcohol-related disorders were 3 times higher than comparable rates reported for the overall AI-SUPERPFP study (Beals et al., 2005a). Finally, similar to previous research (Craske, Kircanski, Epstein, Wittchen, Pine, et al., 2010; Grant et al., 2006; Hollifield et al., 2003; Sheikh et al., 2002), we found heart pounding was the most commonly endorsed panic symptom, followed by shortness of breath, dizziness/lightheadedness, sweating, trembling/shaking, and altered perceptions of time. Choking/swallowing and gastrointestinal complaints were less commonly endorsed relative to other panic symptoms (Grant et al., 2006; Sheikh et al., 2002). Only sweating, time moving quickly/slowly, and fears of dying were endorsed more often by AI men than women. These findings may be helpful in designing screening measures to identify panic-relevant symptoms among AIs.

The use of specific interoceptive exposure exercises that focus on these high frequency panic symptoms may be particularly relevant from a clinical standpoint. The incorporation of the origin and meaning of symptoms, partnering with traditional medicine persons, and comprehensively processing treatment outcomes may be important cultural adaptations of cognitive behavioral interventions for AI populations (Coteau, Anderson, & Hope, 2006; Gone, 2004). However, differences in acculturation and significant cultural variations across tribes need to be considered in case conceptualization and treatment design (Carter et al., 2012).

The prevalence of panic disorder was comparable to findings in other community investigations (Eaton et al., 1994; Kessler et al., 1994, 2006), including those samples containing AIs (Grant et al., 2006). Like previous investigations (Grant et al., 2006; Kessler

et al., 2006; Reed & Wittchen, 1998; Sheikh et al., 2002), we found women were more likely than men to meet full criteria for the disorder. Panic attacks are often comorbid with other psychopathology (Goodwin et al., 2004; Kinley et al., 2011), as it was in our sample. Lifetime psychiatric comorbidity was higher among those with panic disorder than those with panic attacks, even after controlling for age, gender, and tribe; this is consistent with an elevated association between panic and other psychiatric disorders (Grant et al., 2006; Kessler et al., 2006). More specifically, the rates of PTSD and alcohol-related disorders were higher, major depression prevalence was similar, and generalized anxiety disorder was considerably lower than in other samples of individuals with panic disorder (Kessler et al., 2006). A more detailed analysis of the age-of-onset in the AI-SUPERPFPP will be necessary to determine if panic attacks or disorder precedes or post-dates the onset of PTSD and alcohol abuse/dependence, although this may be difficult due to recall bias. Recurring, intense somatic symptoms coupled with poor access to treatment may also place AIs with panic symptoms at particular risk for substance and nicotine use (Isensee, Wittchen, Stein, Hofler, & Lieb, 2003; Sawchuk, Roy-Byrne, Noonan, Bogart, Goldberg, et al., 2016; Zvolensky, Feldner, Leen-Feldner, & McLeish, 2005). Additional research is warranted to clarify these relationships.

Cardio-respiratory, autonomic/somatic, and cognitive symptom groups failed to differentiate panic disorder from panic attacks in AIs. Previous studies identified specific symptoms that are more strongly associated with panic disorder than panic attacks (Foot & Koszycki, 2004; Sheikh et al., 2002; Sunderland, Hobbs, Andrews, & Craske, 2012; Vickers & McNally, 2005). At the level of individual symptoms, exploratory analyses indicated that only dizziness and fears of dying were reported more frequently by persons with panic disorder than those with panic attacks. Conversely, trembling/shakiness sensations were more commonly endorsed by those with a history of panic attacks only relative to those meeting full criteria for panic disorder. A larger sample of AIs suffering from panic symptoms would be needed to determine whether specific symptoms can differentiate individuals with panic attacks from those with panic disorder. However, given the expense, size, and rigor of the AI-SUPERPFPP study, a larger epidemiologic study with AIs is unlikely.

Anxiety sensitivity, an underlying mechanism thought to be involved in the development and maintenance of panic disorder, may contribute to panic risk in this population. Anxiety sensitivity is defined as the fear of physical anxiety symptoms and belief that these symptoms may have dangerous consequences (Esteve & Camacho, 2008; Reiss, 1991). Although this construct is particularly associated with risk for panic disorder, it is transdiagnostic in nature and may help explain why panic attacks may be a generalized risk factor for other mental health conditions (Allan, Norr, Capran, et al., 2015). Furthermore, anxiety sensitivity accounts for significant variance in panic symptom severity (Talkovsky & Norton, 2015). Accordingly, future research should examine the extent to which anxiety sensitivity is associated with rates of panic attacks, panic disorder, and other anxiety disorders, as well as observed gender differences, in the American Indian population. Additionally, behavioral treatments targeting anxiety sensitivity may prove to be a helpful transdiagnostic mechanism towards understanding how panic attacks and panic disorder can be better managed among American Indians.

This study is limited by the modest number of participants with lifetime panic attacks and those meeting diagnostic criteria for lifetime panic disorder. Due to concerns over respondent burden during the AI-SUPERPFP, other anxiety disorders commonly associated with panic attacks were not assessed (Beals et al., 2005a). Unfortunately, the lack of an assessment for agoraphobia, in particular, represents a missed opportunity for a more refined assessment of panic severity in this study. Very few studies have assessed agoraphobia in AIs, with one study suggesting rates being higher than other ethnic groups (Grant et al., 2006), whereas another study noting comparable rates (Ritsher, Struening, Hellman, & Guardino, 2002). Incomplete respondent data was also observed in the study (see Table 3). This may have been due to a variety of factors, such as the use of lay persons conducting the interviews and the logistical challenges of conducting national surveys in tribal areas. Furthermore, the cross-sectional study design does not permit inferences about the direction of associations. Additionally, interviews are subject to recall bias, which may be common among panic populations (Craske & Tsao, 1999). Lastly, our results cannot be generalized to all AIs, as considerable diversity exists across tribes in terms of geography, urbanization, acculturation, and access to care.

Only recently have rates of psychiatric disorders derived from the AI-SUPERPFP been published that can be compared with other epidemiologic studies. This study is the first in-depth analysis of panic attacks and panic disorder in AIs, and suggests that rates of panic attacks and panic disorder are comparable to those documented for the general population. Although considerable data support the effectiveness of cognitive behavioral and pharmacologic treatments for panic (Katzman, Bleu, Blier, et al., 2014), no treatment outcome data exist for AIs (Carter et al., 2012). This population faces the greatest degree of disparity in health care access, higher morbidity, mortality, and reduced life expectancy relative to non-Indigenous populations (Epsey, Jim, Bartholomew, Becker, Haverkamp, & Plescia, 2014; Wharton, et al., 2015). Efforts must therefore be invested toward developing practical and culturally relevant methods for reducing these health-care disparities and increasing access to evidence-based treatments for anxiety.

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Highlights

- Lifetime panic attacks (9%) and panic disorder (4.1%) among American Indian women
- Lifetime panic attacks (8%) and panic disorder (2.6%) among American Indian men
- Panic attacks were associated with significant psychiatric comorbidity
- Dizziness and fears of dying were common symptoms for those with panic disorder

Table 1

Clinical characteristics of AI-SUPERPPF respondents who met DSM-IV criteria for lifetime panic attacks¹

Characteristic	Men (n = 103)			Women (n = 131)		
	%	Mean	(95% CI)	%	Mean	(95% CI)
Age at onset of panic attacks ^{*2}		21.4	(19.0 – 23.8) [*]		24.5	(22.6 – 26.5)
Lifetime number of panic attacks ³		11.6	(8.5 – 14.7)		13.6	(9.4 – 17.8)
Panic attack severity ⁴		6.3	(5.5 – 7.1)		6.1	(5.5 – 6.6)
Posttraumatic stress disorder ^{*5}	28		(20 – 37)	43		(34 – 52) [*]
Generalized anxiety disorder	10		(6 – 18)	15		(10 – 23)
Major depressive disorder ⁶	34		(25 – 45)	33		(25 – 42)
Alcohol abuse/dependence ^{**7}	69		(59 – 77) ^{**}	32		(24 – 41)
Any comorbid psychiatric disorder ^{*8}	85		(76 – 91)	70		(61 – 77)

^{*} $p < 0.05$;

^{**} $p < 0.001$;

¹ Adjusted for age and tribe;

² n=69 missing;

³ n=13 missing;

⁴ n=71 missing;

⁵ n=20 missing;

⁶ n=1 missing;

⁷ n=9 missing;

⁸ n=8 missing;

AI-SUPERPPF = American Indian Service Utilization, Psychiatric Epidemiology, Risk and Protective Factors Project; CI = confidence interval

Adjusted⁷ prevalence and mean number of panic symptoms in AI-SUPERPPF men and women who met DSM-IV criteria for lifetime panic attacks.

Table 2

Symptom	Men (n = 103)			Women (n = 131)		
	%	Mean	95% CI	%	Mean	95% CI
<i>Cardio-respiratory</i>						
Shortness of breath	68		(58 – 77)	63		(54 – 71)
Heart pounding	95		(87 – 97)	97		(93 – 99)
Dizziness/lightheadedness	65		(56 – 74)	57		(47 – 66)
Chest pain	64		(54 – 74)	53		(44 – 62)
Fingers or feet tingling/numb	55		(45 – 64)	45		(36 – 54)
Choking/difficulty swallowing	38		(29 – 48)	40		(32 – 50)
Feeling faint	53		(44 – 62)	59		(49 – 68)
Feeling smothered	51		(41 – 60)	42		(33 – 51)
Total # of symptoms, range 0 – 8		4.9	(4.5 – 5.3)		4.6	(4.3 – 4.9)
<i>Autonomic/somatic</i>						
Sweating *	86		(77 – 92) *	65		(56 – 74)
Trembling or shaking	74		(64 – 82)	71		(62 – 78)
Hot flashes or chills	66		(56 – 75)	54		(46 – 63)
Nausea	32		(23 – 42)	43		(34 – 52)
Stomach or belly pain	30		(22 – 40)	26		(19 – 35)
Dry mouth	61		(51 – 70)	58		(49 – 66)
Total # of symptoms, range 0 – 6		3.7	(3.4 – 4.1)		3.5	(3.2 – 3.7)
<i>Cognitive</i>						
Things seemed unreal	53		(42 – 64)	53		(45 – 62)
Time seemed quick/slow *	87		(79 – 92) *	74		(65 – 81)
Fear of dying *	56		(46 – 65) *	39		(30 – 48)
Fear of acting improperly or crazy	57		(46 – 66)	55		(45 – 63)
Total # of symptoms ² range 0 – 4		2.5	(2.3 – 2.7) *		2.2	(2.0 – 2.4)

* $p < 0.05$;

AI-SUPERPPP = American Indian Service Utilization, Psychiatric Epidemiology, Risk and Protective Factors Project; CI = confidence interval

$2p < 0.05$;

I Adjusted for age and tribe;

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Table 3

Clinical characteristics of AI-SUPERPPF respondents who met DSM-IV criteria for lifetime panic disorder or lifetime panic attacks without panic disorder¹

Characteristic		Panic disorder (n = 94)			Panic attacks without panic disorder (n = 140)		
		%	Mean	(95% CI)	%	Mean	(95% CI)
Age at onset of panic attacks ²			23.8	(21.5 – 26.1)		22.7	(20.7 – 24.7)
Lifetime number of panic attacks ³			13.6	(8.4 – 18.7)		12.2	(9.1 – 15.2)
Posttraumatic stress disorder ⁴	43			(33 – 54)	31		(23 – 40)
Generalized anxiety disorder [*]	19			(12 – 27)	9		(5 – 15)
Major depressive disorder ⁵	33			(24 – 43)	34		(26 – 43)
Alcohol abuse/dependence ⁶	46			(35 – 57)	50		(40 – 59)
Any comorbid psychiatric disorder ^{*,7}	85			(75 – 91)	72		(64 – 80)

^{*} p 0.05;

^{**} p 0.001;

¹ Adjusted for age, gender, and tribe;

² n=69 missing;

³ n=13 missing;

⁴ n=20 missing;

⁵ n=1 missing;

⁶ n=9 missing;

⁷ n=8 missing;

AI-SUPERPPF = American Indian Service Utilization, Psychiatric Epidemiology, Risk and Protective Factors Project; CI = confidence interval

Adjusted⁷ prevalence and mean number of panic symptoms in AI-SUPERPPF respondents who met DSM-IV criteria for lifetime panic disorder or lifetime panic attacks without panic disorder.

Table 4

Symptom	Panic disorder (<i>n</i> = 94)		Panic attacks without panic disorder (<i>n</i> = 140)	
	%	Mean (95% CI)	%	Mean (95% CI)
<i>Cardio-respiratory</i>				
Shortness of breath	64	(53 – 74)	66	(57 – 74)
Heart pounding	95	(88 – 98)	97	(93 – 99)
Dizziness/lightheadedness*	69	(58 – 79)*	55	(45 – 63)
Chest pain	60	(49 – 70)	57	(48 – 66)
Fingers or feet tingling/numb	48	(38 – 59)	50	(41 – 58)
Choking/difficulty swallowing	40	(30 – 51)	39	(31 – 48)
Feeling faint	63	(52 – 72)	52	(43 – 62)
Feeling smothered	46	(35 – 58)	45	(37 – 54)
Total # of symptoms, range 0 – 8	4.8	(4.5 – 5.2)	4.6	(4.3 – 5.0)
<i>Autonomic/somatic</i>				
Sweating	77	(67 – 85)	75	(66 – 83)
Trembling or shaking*	63	(52 – 73)	78	(70 – 85)
Hot flashes or chills	57	(46 – 68)	62	(53 – 70)
Nausea	34	(25 – 45)	40	(32 – 50)
Stomach or belly pain	21	(13 – 32)	33	(25 – 41)
Dry mouth	63	(51 – 72)	57	(48 – 65)
Total # of symptoms, range 0 – 6	3.5	(3.2 – 3.9)	3.6	(3.4 – 3.9)
<i>Cognitive</i>				
Things seemed unreal	58	(47 – 68)	50	(42 – 59)
Time seemed quick/slow	75	(64 – 83)	85	(77 – 90)
Fear of dying*	57	(45 – 67)*	40	(31 – 48)
Fear of acting improperly or crazy	61	(50 – 71)	52	(43 – 61)
Total # of symptoms, range 0 – 4	2.5	(2.3 – 2.7)	2.3	(2.1 – 2.5)

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$p < 0.05$;
*
Adjusted for age, gender, and tribe;

AI-SUPERPPP = American Indian Service Utilization, Psychiatric Epidemiology, Risk and Protective Factors Project; CI = confidence interval