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Smoking Behavior and Alcohol Consumption in Individuals With Panic Attacks

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Abstract

Individuals with anxiety often report greater smoking and drinking behaviors relative to those without a history of anxiety. In particular, smoking and alcohol use have been directly implicated among individuals experiencing panic attacks, diagnosed with panic disorder, or high on panic-relevant risk factors such as anxiety sensitivity. Less is known, however, about specific features of panic that may differentiate among those who do or do not use cigarettes or alcohol. The purpose of the current study was to replicate previous research findings of an association between panic symptomatology, cigarette smoking, and alcohol consumption, as well as extend findings by examining whether specific symptoms of panic attacks differentiated among those who do or do not use cigarettes or alcohol. Participants ($n = 489$) completed the Panic Attack Questionnaire-IV, a highly detailed assessment of panic attacks and symptoms, as well as self-report measures of smoking history and alcohol use. Consistent with previous research, participants who reported a history of panic attacks ($n = 107$) were significantly more likely to report current daily or lifetime daily cigarette smoking, and significantly greater hazardous or harmful alcohol use than participants with no panic history ($n = 382$). Although smoking and hazardous alcohol use were highly associated regardless of panic status, participants with panic attacks showed elevated hazardous alcohol use after controlling for daily or lifetime smoking. Surprisingly, although participants who reported having had at least one panic attack were more likely to smoke, panic attack symptoms, intensity, or frequency did not differentiate panickers who did or did not smoke. Furthermore, panic-related variables were not shown to differentially relate to problematic drinking among panickers. Implications for understanding the complex relationship between panic attacks and smoking and drinking behaviors are discussed.

Keywords

smoking; alcohol; panic attacks; comorbidity

There is a robust relationship between panic-spectrum disorders and substance use and its disorders (see Zvolensky, Feldner, Leen-Feldner, & McLeish, 2005; Zvolensky, Schmidt, & Stewart, 2003, for review). Individuals with panic disorder are more likely to smoke cigarettes than other anxiety disordered groups as well as the general population (Amering et al., 1999; Breslau, Kilby, & Andreski, 1991; Himle, Thyer, & Fischer, 1988; McCabe et al., 2004). Panic disorder also is highly comorbid with alcohol abuse and dependence (see Kushner, Abrams, & Borchardt, 2000, for review). Additionally, there is an acknowledgment among practitioners working with individuals with anxiety disorders that substance use disorders frequently co-occur (e.g., Barlow, 2002), and that each disorder can maintain or even exacerbate the other (see Kushner et al., 2000). Thus, elucidation of factors that may be related to smoking and drinking behaviors among those who experience panic is an important clinical issue.

Panic attacks are a subjective sense of extreme fear or impending doom accompanied by an autonomic surge and strong flight-or-fight action tendency (Barlow, Brown, & Craske, 1994). Features of panic attacks encompass many somatic, physiological, and cognitive symptoms that may vary significantly across individuals, establishing panic disorder as a heterogeneous entity (see Kircanski, Craske, Epstein, & Wittchen, 2009, for review). For example, individuals may vary in their experience of panic attack symptoms, with the most common symptoms being heart palpitations, shortness of breath, fear of dying, and dizziness (Segui et al., 1998), and also may vary in their interpretations of those symptoms (e.g., Reiss, Peterson, Gursky, & McNally, 1986).

Several models have been proposed to explain the co-aggregation of anxiety disorders and substance use. Some models suggest that those with anxiety disorders may use substances to “self-medicate” or reduce emotional distress or affect-relevant withdrawal symptoms (Kushner, Sher, & Beitman, 1990). For example, cigarette smoking may regulate emotional and bodily states by stimulating postsynaptic nicotinic receptors (Benowitz, 1996) or by reducing attentional capacity for negative emotional states (Callaway, Halliday, & Naylor, 1992; Kassel & Shiffman, 1997). Similarly, alcohol use could help manage physical sensations via stress response dampening (Levenson, Sher, Grossman, Newman, & Newlin, 1980) and/or by narrowing attention to external stimuli (vs. interoceptive stimuli) in a manner consistent with alcohol myopia theories (Steele & Josephs, 1990). Smoking and alcohol consumption can each be employed as a coping strategy to lessen—perceived or objectively—affective and interoceptive distress (Leyro, Zvolensky, Vujanovic, & Bernstein, 2008; Pomerleau & Pomerleau, 1987).

Other models suggest that substance use may exacerbate anxiety symptoms and the co-occurrence is best explained by a complex transactional relationship. These explanations recognize that some forms of substance use can precipitate panic attacks. For example, prolonged tobacco use may contribute to the development of panic disorder by producing chronic withdrawal symptoms, reduced health impairment, or both (Breslau & Klein, 1999; McLeish, Zvolensky, Del Ben, & Burke, 2009). In addition, alcohol or nicotine withdrawal symptoms may trigger physiological or emotional symptoms that maintain panic psychopathology (Drummond, Tiffany, Glautier, & Remington, 1995). Thus, the co-aggregation of anxiety and substance use may, perhaps, be conceptualized as having bidirectional negative effects (e.g., Zvolensky, Schmidt, et al., 2003).

Implicit to the aforementioned models is that not all individuals who experience panic attacks or panic disorder engage in smoking behavior or hazardous and harmful drinking behavior, or vice versa. Thus, there may be subgroups of persons who are most vulnerable. One possible line of inquiry in this context may relate to panic symptoms that are more strongly associated with tobacco or alcohol use than other panic symptoms. For example,

respiratory symptoms may theoretically be more likely to co-occur with smoking behavior, either because respiratory panic symptoms result from smoking, or because smoking represents an attempt to suppress uncomfortable or distressing respiratory sensations (Zvolensky & Bernstein, 2005). Similarly, alcohol may be consumed to reduce panic attack symptoms such as trembling or shakiness, whereas recovery from excessive alcohol use (i.e., a hangover) may result in derealization, tremors, shakiness, and increased autonomic arousal (Kushner et al., 1990).

Given recent findings supporting a putative transactional relationship between anxiety and substance use (Kushner et al., 1990; Zvolensky, Schmidt, et al., 2003), it is plausible that panic attack symptoms may differentially correspond with the type or forms of substance use endorsed (e.g., severity). The purpose of the current study was to replicate previously supported associations between panic and substance use and examine whether specific symptoms of panic attacks may differentiate among those who do or do not use cigarettes or alcohol. Based on previous research, we expected to find significant intercorrelations between panic symptomatology, cigarette smoking, and alcohol consumption. Additionally, panic-related variables, including panic frequency, intensity, or symptoms; global measures of symptom severity; as well as related risk variables, such as anxiety sensitivity, were examined as possible predictors of increased substance use.

Method

Participants

The study sample was comprised of 489 undergraduate students (70.3% women) attending the University of Houston. Participants attended an in-person meeting with a research assistant and were given a short battery of questionnaires to complete and return. All participants received partial academic credit for their participation. The study was reviewed and approved by the University of Houston Committee for the Protection of Human Subjects, and informed consent was obtained from all participants.

Participants ranged in age from 17 to 43 ($M = 19.02$, $SD = 2.45$). The sample was ethnically diverse, with 25.4% of the sample being Hispanic, 23.1% African American, 19.7% Asian, 17.5% White, and 11.9% multiracial or other, with 10 participants (2.0%) not reporting their race/ethnicity. Most of the participants were freshmen (71.0%), 13.5% were sophomores, 9.6% were juniors, and 4.9% were seniors. Five participants (1.0%) did not report their academic level. Among the participants, 4.9% self-reported a history of treatment for anxiety, 5.7% treatment for depression, and 2.7% treatment for other psychological disorders. More than one-fifth of the sample (21.9%) reported some family history of panic attacks.

Measures

Panic Attack Questionnaire-IV (PAQ-IV)—The PAQ-IV (Norton, Zvolensky, Bonn-Miller, Cox, & Norton, 2008) is a self-report instrument designed to provide comprehensive quantitative and qualitative data on the specific features and symptoms of panic spectrum disorders. The PAQ-IV is divided into multiple sections, each assessing different aspects of panic. First, the measure assesses personal and family history of psychopathology (six Yes/No/Not Applicable items) and the respondent's treatment history for commonly co-occurring psychological and physical conditions (seven Yes/No items). The second section assesses for a history of panic (single Yes/No item) and, if affirmative, assesses frequency of panic attacks over the past year, month, and week. Next, onset and duration of typical, worst ever, and most recent panic attacks are assessed (three 5-point ordinal scales), followed by ratings of the intensity of symptoms during recent, worst, and typical attacks on a series of 0

(does not occur) to 4 (very severe) scales. Anticipatory anxiety over future panic attacks is assessed on three 0 (no anxiety) to 8 (total anxiety) scales, followed by a series of open-response questions querying the first, most severe, and most frightening symptoms, as well as feared consequences of the attack and symptoms. Next, agoraphobic situations are rated for likelihood that the respondent would panic in that situation and/or avoid each situation. Finally, a series of questions assess interference, distress, and controllability, followed by 20 items rating the use and effectiveness of various panic coping strategies. Although primarily a descriptive tool, indices of panic severity from the PAQ-IV were highly associated with other measures of panic in both student and community samples (Norton et al., 2008).

Revised Anxiety Sensitivity Index (ASI-R)—The ASI-R (Taylor & Cox, 1998) is a 36-item self-report instrument that assesses the fear of anxiety-related sensations. Respondents indicate on a 5-point Likert scale the degree to which they are concerned about possible aversive consequences of anxiety symptoms. The ASI-R has shown good internal consistency and strong convergent validity in measuring anxiety sensitivity (Taylor & Cox, 1998; Zvolensky, Arrindell et al., 2003), and discriminates individuals with panic disorder from those with other anxiety disorder diagnoses. In the current sample, the ASI-R was highly internally consistent ($\alpha = .95$).

Bodily Sensations Questionnaire (BSQ)—The BSQ (Chambless, Caputo, Bright, & Gallagher, 1984) is a 17-item measure of how frightening people find particular body sensations that commonly occur with panic. Although individuals with other anxiety disorders show elevations on the BSQ, Chambless and Gracely (1989) reported that the BSQ discriminates panic disorder and agoraphobia from other anxiety disorders. The BSQ has demonstrated adequate to excellent psychometric properties (Chambless, 1989). In the current sample, the BSQ showed excellent internal consistency ($\alpha = .91$).

Beck Anxiety Inventory (BAI)—The BAI (Beck, Epstein, Brown, & Steer, 1988) is a 21-item self-report questionnaire designed as a general measure of anxiety symptom severity. The BAI has demonstrated good psychometric properties with nonclinical college populations (see Creamer, Foran, & Bell, 1995). Although purported to be a general measure of anxiety, Cox, Cohen, Dorenfeld, and Swinson (1996) and Norton (2006) have provided evidence that the BAI more closely assesses panic symptoms than general anxiety. The BAI showed excellent internal consistency in the current sample ($\alpha = .92$).

Alcohol Use Disorders Identification Test (AUDIT)—The AUDIT (Saunders, Aasland, Babor, La Fuente, & Grant, 1993) was developed by the World Health Organization as a brief written screening method to identify current harmful and hazardous drinking behavior. Scores at or higher than the established clinical cutoff score of 8 on the AUDIT indicate harmful and hazardous drinking behavior (Conigrave, Hall, & Saunders, 1995). The AUDIT has demonstrated good psychometric properties in a college sample (Fleming, Barry, & MacDonald, 1991).

Smoking History Questionnaire (SHQ)—The SHQ (Brown, Lejuez, Kahler, & Strong, 2002) is a self-report questionnaire used to assess smoking history and pattern. The SHQ includes items pertaining to smoking rate, age of onset of smoking initiation, and years of being a regular daily smoker. The measure has been successfully used in multiple studies to assess smoking history and patterns (Zvolensky, Leen-Feldner et al., 2004; Zvolensky, Lejuez, Kahler, & Brown, 2004).

Results

Preliminary Analyses

Among the total sample of 489 participants, 22.1% ($n = 107$) reported experiencing what they defined to be a panic attack within the past year. Of these, 21 (19.8%) met full *Diagnostic and Statistical Manual of Mental Disorders Fourth (Edition DSM-IV)* criteria for a panic attack, whereas the remainder did not meet rate of onset (i.e., less than 10 minutes; 60.7%) or the required 4 of 13 symptoms for a *DSM-IV*-defined panic attack (19.5%). Both Norton et al. (2008) and Scupi, Benson, Brown, and Uhde (1998) have reported evidence suggesting that the rate of onset criterion does not distinguish panic attacks from other anxious states, and Norton et al. (2008) reported few differences in panic symptoms or associated variables (e.g., anxiety sensitivity) between participants who self-reported panic attacks and met full *DSM-IV* criteria and those not meeting the criteria. Indeed, as noted by Norton et al. (2008), "Among those who typically experience *DSM-IV* panic attacks, most still classified this longer-onset experience as a panic attack" (p. 1169). Consequently, all participants reporting a panic attack were considered panickers for the purposes of this study. Panickers reported an average of 3.76 ($SD = 3.49$) panic attacks in the past year, and 1.17 ($SD = 1.55$) panic attacks in the past month. The most common symptoms reported by panickers as severe or very severe were heart pounding (29.9%), trembling/shaking (28.9%), racing heart (27.1%), sweating (20.6%), and shortness of breath (18.7%).

In the overall sample, 6.1% ($n = 30$) of participants indicated that they were regular daily cigarette smokers, whereas 10.2% ($n = 50$) indicated that they had been regular daily cigarette smokers at some point in their life. Sixty-five participants (13.3%) had clinically elevated scores (8 or higher) on the AUDIT. The mean AUDIT score was 2.87 ($SD = 4.09$). Regular current daily smoker status and AUDIT scores were significantly associated, $r = .34$, $p < .001$, as were lifetime smoker status and AUDIT scores, $r = .36$, $p < .001$.

Association Between Panic History and Substance Use

We first sought to examine whether a history of panic attacks was associated with overall use of cigarettes and alcohol, as well as the frequency and amount of substance use. Next, we examined whether substance use was associated with other anxiety measures, including the ASI-R, BSQ, and BAI.

Smoking—Consistent with expectation, chi-square analyses indicated that those reporting a history of panic attacks were significantly more likely to be current regular daily smokers (12.1% vs. 3.8%), $\chi^2 = 10.93$, $p < .001$, and lifetime regular daily smokers (19.6% vs. 6.7%), $\chi^2 = 15.86$, $p < .001$. This effect remained significant after controlling for AUDIT scores, for both current $F(1, 465) = 5.03$, $p = .025$, and lifetime smokers $F(1, 465) = 8.38$, $p = .004$. Among current regular daily smokers, panickers ($M = 7.38$, $SD = 6.68$) and nonpanickers ($M = 6.43$, $SD = 10.51$) did not differ in the average number of cigarettes smoked daily. Among panickers who were current regular daily smokers, very strong associations between past-year panic frequency and number of cigarettes smoked in the past week, $r = .75$, $p = .019$, and duration of smoking, $r = .91$, $p < .001$, were observed. In the full sample, current smoker status (0 = nonsmoker, 1 = current regular daily smoker) was not significantly associated with the ASI-R, $r = .07$, $p = .116$; or BSQ, $r = .06$, $p = .156$, although there was an association with BAI scores, $r = .11$, $p = .015$. Similarly, lifetime smoker status was not associated with the ASI-R, $r = .04$, $p = .426$; or BSQ, $r = .05$, $p = .222$, but was significantly related to the BAI, $r = .11$, $p = .023$.

Alcohol Use—Between-groups analysis of variance (ANOVA) indicated that those reporting a history of panic attacks also reported significantly higher scores on the AUDIT

($M = 4.25$, $SD = 4.76$) than did those reporting no history of panic attacks ($M = 2.46$, $SD = 3.80$), $F(1, 466) = 16.07$, $p < .001$. Panic status and AUDIT scores remained significantly associated after controlling for current smoking status, $F(1, 465) = 8.76$, $p = .003$. More specifically, panickers were significantly more likely to endorse current alcohol consumption (AUDIT Item 1 > 0), $\chi^2 = 20.90$, $p < .001$, greater volume of consumption when drinking (AUDIT Item 2), $F(1, 409) = 8.64$, $p = .003$, and more frequently exceeded the recommended AUDIT cutoff of 8 (22.9%) than were nonpanickers (11.0%), $\chi^2 = 9.67$, $p = .002$. Among panickers who reported current problematic drinking (AUDIT > 8), significant associations were observed between past-year panic frequency and frequency of binge drinking episodes, $r = .46$, $p = .043$, but not frequency of nonbinge alcohol use, $r = .02$, $p = .926$. AUDIT scores were significantly associated with ASI-R, $r = .10$, $p = .033$; BSQ, $r = .09$, $p = .046$; and BAI scores, $r = .19$, $p < .001$.

Panic Characteristics and Substance Use

We next sought to examine if panic-related variables, including panic frequency, intensity, or symptoms, were differentially related to smoking status or alcohol use. As 20 panic-related dependent measures were investigated, critical alpha was Bonferroni corrected to $.05/20 = .0025$. Despite this correction, subsequent analyses were sufficiently powered (.80) to detect effect sizes of .38 or larger.

As shown in Table 1, current smoking status was unrelated to any panic-relevant variables among those reporting a history of panic attacks. Furthermore, current smoking status among panickers was not significantly related to the ASI-R, $F(1, 105) = 0.01$, $p = .918$; BSQ, $F(1, 105) = 0.29$, $p = .590$; and BAI, $F(1, 100) = 0.56$, $p = .456$. Lifetime smoking status was also shown to be unrelated to panic-relevant variables. Regarding alcohol use among panickers, AUDIT scores were not significantly related to any panic-related variables after Bonferroni correction (see Table 2). There was a nonsignificant trend ($p < .05$) for the following panic characteristics to be related to AUDIT scores: choking/smothering, nausea, dizziness/lightheadedness, fear of going crazy, and chills/hot flushes. Among panickers, AUDIT scores were also unrelated to the ASI-R, $r = .05$, $p = .585$; BSQ, $r = .07$, $p = .508$; and BAI, $r = .18$, $p = .068$.

Discussion

Results of the current study support that, consistent with the existing literature (Amering et al., 1999; Breslau et al., 1991; Himle et al., 1988; Kushner et al., 2000; McCabe et al., 2004), individuals experiencing panic attacks show significantly higher rates of smoking, alcohol use, and hazardous or harmful alcohol use. Among individuals reporting a history of panic attacks, daily and lifetime smoking were roughly three times more prevalent, and harmful and hazardous alcohol use (as defined by AUDIT scores of 8 or greater) was roughly twice as prevalent than among those without a history of panic. Also consistent with previous literature (e.g., Segui et al., 1998), individuals varied in their report of predominant panic symptoms. Contrary to expectations, however, neither panic severity variables nor any specific symptoms significantly associated with smoking and problematic alcohol use. These findings were unexpected because smoking and alcohol use could, theoretically, be suppressors or amplifiers of different panic symptoms. For example, cigarette use is frequently cited as having a calming effect, but also could increase breathing-related symptoms. Similarly, as a depressant, alcohol use could decrease the experience of a racing heart but, in turn, amplify sensations of lightheadedness or dizziness. However, the current data suggest that the experience of panic attacks, but not their specific symptoms, is associated with smoking and problematic alcohol use. Consequently, future research should emphasize the global arousal dampening or exacerbating effects of substance use among

panickers as opposed to symptom-specific hypotheses regarding the relationships between panic attacks and both alcohol and nicotine use.

Although this study did not find any symptom-specific associations with cigarette or alcohol use, it does not discount the self-medication or transactional/mutual maintenance models of the interplay between panic and substance use. As we did not examine whether each symptom was specifically feared (e.g., fearing heart palpitations because it could signal a heart attack) versus being an unfeared consequence of the panic attack, it is possible that associations between feared symptoms and substance use were suppressed. Additionally, it is possible that the global arousal suppressing, mood altering, or symptom-inducing effects of alcohol and nicotine supersede any symptom-specific effects among panickers. Similarly, this study did not assess motives or expectations for smoking or drinking. It may be that only those panickers with particular symptoms use substances as a means to dampen specific characteristics of their panic attacks, placing them at risk for regular daily smoking or hazardous drinking.

Several limitations should be taken into account in considering the current results. First, despite the use of well-developed and frequently used measures of panic attacks, alcohol use, and smoking, these data were all derived from self-report. Future studies should endeavor to confirm these self-reported indices using corroborating data sources, including diagnostic confirmation of panic attacks. Second, qualities of the study sample may limit generalizability of results to different groups. Despite racial and ethnic diversity, participants in this study were predominantly young adults and all were college students. In addition, smoking rates and hazardous drinking levels were relatively low in the current sample. The extent to which these results may generalize to samples of different age or educational status, or higher levels of substance use, is unclear. For example, it is quite possible that individuals with a longer history of alcohol use, smoking, or panic may show differential associations between their substance use and panic symptoms. Although the overall sample size was large, some of the subgroup analyses (e.g., current smokers with panic attacks) were likely underpowered and need to be replicated. Finally, because of the cross-sectional nature of this study, no assumptions of the causal or possible transactional relationships between substance use and panic can be made.

Many directions for future research can be drawn from this study. It may be relevant for future researchers to assess for cognitive factors (e.g., motivation, self-efficacy) in the further study of substance use and panic. Additionally, the use of a longitudinal design may be helpful in elucidating the complex temporal relationship between panic symptoms and smoking and drinking behavior. Finally, future research is needed to clarify the potential clinical utility of subtyping panic disorder by external validators (e.g., family history, comorbidity, course, treatment response; Kircanski et al., 2009).

In summary, the results of this study support the previously reported association between panic attacks and both cigarette and alcohol use. These data, in conjunction with extant literature supporting a robust relationship between panic and smoking and/or alcohol-related problems (see Zvolensky, Schmidt, et al., 2003; Zvolensky et al., 2005, for review), hold important implications for the efficacious treatment of panic and related conditions. Augmenting smoking cessation or alcohol use treatments with panic or anxiety reduction strategies may be an effective way to increase abstinence rates, because panic-related variables such as anxiety sensitivity are associated with an increased rate of early smoking lapse and relapse following a quit attempt (Brown et al., 2001; Brown, Kahler, Zvolensky, Lejuez, & Ramsey, 2001; Mullane et al., 2008; Zvolensky, Stewart, Vujanovic, Gavric, & Steeves, 2009), and comorbid panic is associated with higher rates of relapse after alcohol use treatment (Tomasson & Vaglum, 1996). Thus, development of targeted treatments for

individuals with panic disorder, as well as substance use problems, is an important direction of future research.

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TABLE 1

Panic Variables by Smoking Status Among Panickers

Variable	Nonsmoker (<i>n</i> = 94)	Smoker (<i>n</i> = 13)	<i>p</i>	<i>F</i>
# Past year panics	3.94 (3.65)	2.50 (1.58)	.224	1.50
# Past week panics	1.24 (1.67)	0.80 (0.42)	.936	0.01
Anticipatory anxiety (0–8)	2.35 (1.93)	2.64 (2.29)	.661	0.19
Symptom intensity (0–4)				
Racing heart	2.08 (1.23)	2.27 (1.10)	.624	0.24
Heart pounding	2.20 (1.15)	2.36 (0.50)	.645	0.21
Sweating	1.52 (1.21)	1.82 (1.40)	.468	0.53
Trembling/shaking	1.94 (1.36)	2.18 (1.08)	.574	0.32
Shortness of breath	1.75 (1.08)	1.91 (0.54)	.642	0.22
Choking/smothering	0.85 (0.99)	1.09 (0.94)	.447	0.58
Chest pain	1.55 (1.30)	1.00 (1.00)	.183	1.81
Nausea	1.42 (1.29)	1.50 (1.27)	.859	0.03
Dizziness/lightheadedness	1.66 (1.09)	2.27 (0.65)	.077	3.22
Derealization	1.29 (1.30)	1.18 (1.25)	.793	0.07
Fear of losing control	1.23 (1.43)	0.81 (1.08)	.366	0.83
Fear of going crazy	1.06 (1.37)	0.82 (1.08)	.577	0.31
Fear of dying	0.75 (1.19)	0.82 (1.25)	.869	0.03
Numbness/tingling	0.83 (1.07)	1.18 (1.40)	.339	0.93
Chills/hot flushes	1.02 (1.15)	1.55 (1.29)	.170	1.92
Perceived occur. control (0–8)	4.61 (2.39)	3.64 (1.43)	.192	1.73
Perceived sev. Control (0–8)	3.94 (2.66)	4.18 (2.23)	.779	0.08

Note. Perceived occur. control = perceived control over the occurrence of a panic attack; perceived sev. control = perceived control over the severity of a panic attack. Both variables come from the Panic Attack Questionnaire-IV.

TABLE 2**Panic Characteristics and Problematic Alcohol Use Among Panickers**

Variable (Ns = 98–100)	Corr. with AUDIT Total	p
# Past year panics	.17	.087
# Past week panics	.09	.361
Anticipatory anxiety (0–8)	.14	.237
Symptom intensity (0–4)		
Racing heart	.14	.178
Heart pounding	.09	.361
Sweating	.14	.178
Trembling/shaking	.08	.445
Shortness of breath	.17	.087
Choking/smothering	.22	.027
Chest pain	.11	.279
Nausea	.26	.009
Dizziness/lightheadedness	.24	.019
Derealization	.15	.131
Fear of losing control	.08	.456
Fear of going crazy	.24	.018
Fear of dying	.15	.144
Numbness/tingling	.04	.722
Chills/hot flushes	.27	.006
Perceived occur. control (0–8)	–.16	.172
Perceived sev. control (0–8)	.09	.425

Note. Perceived occur. control = perceived control over the occurrence of a panic attack; perceived sev. control = perceived control over the severity of a panic attack. Both variables come from the Panic Attack Questionnaire-IV.