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Does 'fear of dying' indicate a more severe presentation of panic disorder?

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ABSTRACT

Research suggests a relationship between the presence of fearful cognitions and panic disorder (PD) severity. With little exiting evidence addressing the clinical significance of individual panic-cognitions, the current study examined presentation and impairment differences among 331 outpatients with PD according to whether they experience 'fear of dying' (FOD) during panic attacks. Patients reporting FOD (n=153) were compared to patients denying FOD (n=178) on variables indicating PD severity (e.g., number of symptoms) and psychiatric impairment (e.g., hospitalizations). PD patients with FOD reported a greater number of panic symptoms, agoraphobia diagnoses, and were more likely to be seeking treatment primarily for PD. We found no clinical impairment or comorbidity differences between groups. Results suggest that panic attacks with FOD are related to a more acute presentation of PD. Such results substantiate past research connecting cognitive distress and PD severity and further suggest that FOD may be particularly relevant to this relationship.

Keywords: panic disorder; panic attacks; severity; fear of dying; cognitive model; catastrophizing

1. INTRODUCTION

Within the last twenty-five years, a considerable amount of research has supported the role of maladaptive cognitions in the onset and maintenance of panic disorder (PD). The cognitive model of panic disorder proposes that panic attacks occur when individuals construe benign somatic symptoms as dangerous, such as an impending heart attack or a loss of control (Clark, 1986; Rachman, Levitt, & Lopatka, 1987; Cox, 1996; De Cort, Hermans, Spruyt, Griez, & Schruers, 2008; Teachman, Marker, & Clerkin, 2010). Similarly, theory on anxiety sensitivity suggests that individuals with PD have a heightened fear of anxiety symptoms (i.e., "fear of fear"; McNally, 1990; Donnell & McNally, 1990; Donnell & McNally, 1990; McNally, 2002; Talkovsky & Norton, 2015). Evidence supporting these complementary cognitive theories have shown that individuals with PD uniquely interpret (McNally, 1994;Woud, Zhang, Becker, McNally, & Margraf, 2014), remember (Becker, Rinck, & Margraf, 1994; Amir, McNally, Riemann, & Clements, 1996; Neidhardt & Florin, 1998; Baños, Medina, & Pascual, 2001), and attend to (McNally, Riemann, & Kim, 1990; Reinecke, Cooper, Favaron, Massey-Chase, & Harmer, 2011) panic-related and threat-relevant stimuli. Such evidence suggests that PD patients exhibit information-processing biases favoring threatening stimuli that may contribute to a vulnerability for the development and persistence of PD.

In addition to their role in the onset and maintenance of PD, cognitive symptoms have been associated with a more severe clinical presentation of PD (Richards, Richardson, & Pier, 2002; Sandin, Sánchez-Arribas, Chorot, & Valiente, 2015; Talkovsky & Norton, 2015). *DSM-IV* and *DSM-5* list 13 possible panic-symptoms. 10 are purely somatic (e.g., racing heart, sweating), while three are cognitive fears: fear of dying, fear of losing control, and fear of going crazy. The literature has often made this distinction between physical and cognitive panic symptoms (Shioiri et al., 1996; Biber & Alkin, 1999; Mueret et al., 2006). Panic attacks with cognitive symptoms have been shown to be accompanied by a greater number of physical symptoms (Rachman, Levitt, & Lopatka, 1987; Westling & Öst, 1993;

Chen et al., 2013), a higher frequency of attacks (Westling & Öst, 1993), a greater number of comorbid Axis I diagnoses (Wilson, Sandler, & Asmundson, 1993; Goodwin & Hamilton, 2002; Chen et al., 2013), and a greater number of agoraphobic behaviors (Wilson et al., 1993; Chen et al., 2013; Berle, Starcevic, Milicevic, Hannan, & Moses, 2010). Additionally, one study showed that cognitive features, such as high anxiety sensitivity and agoraphobic fear, were related to later remission of PD (Park et al., 2012). Researchers comparing early-onset fearful panic attacks to early-onset non-fearful panic attacks found that fearful attacks had a stronger association with increased severity of psychopathology, suicidal ideation, and suicide attempts (Goodwin & Hamilton, 2002). Studies comparing panic disorder with agoraphobia (PDA) to panic disorder without agoraphobia (PDWA) also suggest that catastrophic cognitions may be involved in the development or maintenance of agoraphobia, a diagnosis that has been associated with increased cognitive biases than PDWA (Telch, Brouillard, Telch, Agras, & Taylor, 1989; Iketani et al., 2002). This is consistent with research indicating that PDA is more severe than PDWA (Grant et al., 2006). Given that the majority of past research indicates a relationship between cognitive fear during panic and higher symptom severity, one can infer that cognitive symptoms in PD do not merely serve etiological explanations of panic, but are also indicative of higher psychiatric impairment as a result of PD.

Despite ample evidence that cognitive distress accompanying physical symptoms of panic indicates an acute presentation of PD, few studies have examined the clinical significance of individual panic-cognitions. It makes intuitive sense that ‘fear of dying’ (FOD) would be associated with severity; given the extremity of this thought and the notion that PD is characterized by fearing the consequences of anxiety symptoms, rather than another phobic stimulus (Murray, McHugh, & Otto, 2010). Indeed, certain findings suggest FOD during panic attacks may be a useful detector of severe panic attacks (Craske et al., 2010). Authors examining clinical severity difference in patients with non-fearful panic concluded that FOD during panic attacks may distinguish non-fearful and fearful panic subgroups

(Beitman et al., 1987). Another study investigating the positive-feedback model of suicidality showed that FOD in PD mediated between suicidal ideation and suicide attempts in individuals with comorbid major depressive disorder, suggesting an indirect relationship between FOD and severe clinical outcomes (Yaseen, Chartrand, Mojtabai, Bolton, & Galynker, 2013). Other researchers have found that FOD, paresthesia, and choking are most often reported when a panic attack is severe (Ietsugu, Sukigara, & Furukawa, 2007). However, no study has directly compared clinical differences between PD patients with FOD during panic attacks to those without this fear.

In the present report from the Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS) project, we compared outpatients diagnosed with current PD who did and did not report FOD during their panic attacks. These groups were compared on variables indicating PD severity and variables indicating overall psychiatric impairment. We predicted that the presence of FOD during panic attacks would indicate a more severe clinical presentation of PD, defined by a higher frequency of PD as a primary diagnosis (i.e., the disorder for which the patient is seeking treatment), more frequent diagnosis of agoraphobia, a greater number of reported panic symptoms, a greater number of agoraphobic avoidances, an earlier age of PD-onset, a greater number of panic attacks within the past month, and higher subjective and somatic anxiety ratings. We also predicted that PD patients with FOD would exhibit higher-risk psychiatric morbidity, compared to PD patients without FOD, such as a greater number of comorbid Axis I disorders, hospitalizations, more severe suicidal ideation, a greater number of lifetime suicide attempts, and increased impairment in social and occupational functioning. Although it is counterintuitive to predict that those whom experience FOD would be at greater risk for suicide, there is indirect evidence linking fearful cognitions and FOD with suicidality (Goodwin & Hamilton, 2002; Yaseen et al., 2013). Moreover, it is plausible for an individual to fear dying from a heart attack during a panic attack while concomitantly wishing for death more generally, or less unexpectedly, as a function of a depressive disorder. Therefore, we felt this was

an appropriate prediction of psychiatric impairment, regardless of the conceptual overlap with the panic symptom in question.

2.METHODS

2.1 Sample

The current study examined a sample of 331 outpatients meeting DSM-IV criteria for current panic disorder. This was a subset drawn from a larger sample of 3,800 outpatients presenting for treatment at Rhode Island Hospital's Department of Psychiatry. The current sample only included patients who met DSM-IV criteria for current panic disorder with agoraphobia or current panic disorder without agoraphobia. Within this subset, the majority of the sample was female (n= 205; 61.9%), Caucasian (n= 299; 90.3%), married or never married (n=228; 68.9%), and had a high school degree or some college (193; 58.3%; see table 1).

2.2 Procedure

Individuals seeking treatment for the first time at the Rhode Island Hospital Department of Psychiatry outpatient clinic were asked to participate in a comprehensive diagnostic evaluation prior to meeting with their treating clinician. Diagnostic interviewers obtained informed consent and administered the Structured Clinical Interview for *DSM-IV* (SCID; First, Spitzer, Williams, & Gibbon, 1996). Study procedures were approved by Rhode Island Hospital's institutional review board. Diagnostic interviewers were doctoral-level clinicians and research assistants with bachelor's degrees in the social and biological sciences. Research assistants were trained in making diagnostic ratings and administering the SCID for 3-4 months during which they observed for at least 20 evaluations and were supervised while administering 20 evaluations. Doctoral level clinicians observed five interviews and were observed administering 15-20. As a part of diagnostic training, the ratings for each item were reviewed for reliability between the senior diagnostician and the trainee. Trainees were then required to

demonstrate exact (or near exact) reliability with the senior diagnostician on five consecutive interviews following the initial 20 (Zimmerman & Mattia, 1999). Joint-interview reliability evaluations were conducted over the course of the project and have demonstrated excellent reliability for mood and anxiety disorders (Dalrymple & Zimmerman, 2007).

2.3 Measures

A modified version of the *Structured Clinical Interview for DSM-IV* (SCID-IV; First et al., 1996) was used to diagnose current panic disorder and other Axis I disorders. We defined principal diagnosis as the disorder for which the patient was seeking treatment. In addition to diagnoses, we collected the following variables using the SCID: demographic characteristics, panic attack symptoms, agoraphobia symptoms, psychiatric hospitalizations, and lifetime suicide attempts. Diagnosticians measured the following variables using the S*chedule for Affective Disorders and Schizophrenia* (SADS: Spitzer 1977): current suicidal ideation (past two weeks), subjective anxiety symptoms (past week), somatic anxiety symptoms (past week), and past (adolescent) psychosocial functioning. Time out of work (in the past 5 years) was rated by diagnosticians on a Likert scale ranging from 0 (not expected to work) to 9 (worked none or practically none due to psychopathology). Patients not expected to work (e.g., student, disability, etc.) were excluded from this analysis. Out of work ratings were merged into two categories: “virtually no time” out of work versus “up to 1 month” or more out of work. Past psychosocial functioning was rated by diagnosticians on Likert scales ranging from 1 (superior) to 7 (grossly inadequate). Past psychosocial functioning ratings were merged into two categories: “fair” or worse and “good” or better. Current suicidal ideation and subjective and somatic anxiety symptoms were also merged into two categories: “none” through “mild” and “moderate” through “extreme.” Diagnosticians rated overall clinical impairment using the Global Assessment of Functioning Scale (GAF). It should be noted that the aforementioned diagnoses, panic symptom, and

other variables were obtained based on retrospective self-reports.

2.4 Statistical Analyses

The sample was divided into two groups based on the presence or absence of reported FOD during panic attacks. PD patients with FOD were compared to PD patients without FOD on demographic variables, whether PD was the principal diagnosis, the presence of an agoraphobia diagnosis, age of onset of PD, number of panic attacks within the past month, number of panic symptoms during a panic attack, and number of agoraphobic avoidance behaviors (patients diagnosed with PD without agoraphobia were excluded from the lattermost analysis). FOD groups were compared on the aforementioned variables using two-tailed chi-square tests and *t*-tests as appropriate. Fisher's exact test was used instead of a chi-square test if an expected contingency table cell-value was less than 5. Both groups were also compared on number of lifetime suicide attempts, past (adolescence) psychosocial functioning, number of past psychiatric hospitalizations, time out of work in the past five years due to psychopathology, and the presence of additional current comorbid Axis I disorders. Comorbidity rates across various diagnostic categories were also compared between FOD groups.

3. RESULTS

Out of 331 patients with current PD, 153 (46.2%) patients reported FOD during their panic attacks and 178 (53.8%) denied FOD. As shown in Table 1, post-hoc analyses revealed that the two groups differed on race, with significantly higher percentage of Hispanic patients in the FOD group, compared to the no-fear group, and significantly more Caucasian patients in the no-fear group, compared to the FOD group. Groups did not differ on any other demographic variables.

As shown in table 2, the presence of FOD was associated with PD being the patients' principal diagnosis (as opposed to a comorbid diagnosis). A diagnosis of agoraphobia was also significantly

more frequent in the fear of dying group, compared to the no-fear group. Additionally, patients reporting FOD had a significantly earlier age of onset of PD and a significantly greater number of symptoms present during their panic attacks. Among agoraphobic patients in both groups, PD patients with FOD reported a significantly greater number of agoraphobic avoidance behaviors, compared to the no-fear group.

Contrary to our expectations, the two groups did not differ on SADS ratings on subjective or somatic anxiety within the past week, number of Axis I diagnoses, number of lifetime psychiatric hospitalizations, suicidal ideation, suicide attempts, GAF, past social functioning, or time out of work (see table 3). Additionally, PD patients with FOD did not have significantly higher rates of comorbidity with specific diagnostic categories, such as anxiety disorders, mood disorders, and substance use disorders, compared to PD patients without FOD (see table 4).

We considered the possibility that we did not detect differences in psychiatric impairment and comorbidity between groups because we examined all patients with PD, and not just those with PD as a principal diagnosis. We repeated the analyses on the subsample of patients in each group with a principal diagnosis of PD. A significantly greater number of principal PD patients with FOD had one or more psychiatric inpatient hospitalization (13.0%), compared to principal PD patients without FOD (1.9% ; X^2 =6.21, $p<0.05$).

4. DISCUSSION

Patients with FOD during their panic attacks were more frequently diagnosed with PD as their principal diagnosis (i.e., the diagnosis for which they are seeking treatment), were more frequently diagnosed with agoraphobia, reported more symptomatic panic attacks, more agoraphobic avoidance behaviors, and an earlier age of onset, compared to PD patients who do not experience FOD. Despite differing in both diagnosis and symptomatology, there were no significant differences between groups

on comorbidity or psychiatric impairment, such as number of additional Axis I diagnoses, suicidal ideation, number of lifetime suicide attempts, psychiatric hospitalizations, past social functioning, and time out of work due to psychopathology.

The current study extends past evidence that links cognitive symptoms of PD to a greater number of panic symptoms and agoraphobic behaviors by suggesting that such differences can be detected from the presence of a single cognitive feature. The present findings also reveal a potential relationship between FOD and panic attack intensity, which is consistent with past evidence that FOD is reported more often when panic attacks are severe. Given that significantly more patients with FOD were seeking treatment primarily for PD (as opposed to another disorder), compared to patients without this symptom, FOD may be positively associated with subjective distress in panic. Additionally, finding that a single cognitive feature is related to PD-severity corroborates recent critiques that current DSM-5 descriptions of PD place inadequate emphasis on cognitive-behavioral models of PD, compared to neurobiological explanations (Asmundson, Taylor, & Smits, 2014).

Consistent with past research, the present study found that PD patients experiencing FOD were more frequently diagnosed with PDA (as opposed to PDWA), compared to the no-fear group. Additionally, among agoraphobic patients in both groups, those with FOD reported significantly more agoraphobic avoidance behaviors than those without FOD. These results further elucidate the relationship between agoraphobia and catastrophic cognitions by suggesting that the presence of FOD alone may be an important contributor to the development and maintenance of agoraphobia, rather than cognitive symptoms more generally. Furthermore, our finding that FOD was related to more frequent agoraphobia diagnoses and a greater number of agoraphobia symptoms suggests that individuals with PD and comorbid agoraphobia may fear the consequences of panic symptoms (i.e., dying), rather just the panic symptoms themselves. This serves to extend recent criticism of DSM-5's guideline that "cognitive ideation" (e.g., feared consequences) distinguishes specific phobia from agoraphobia

(Asmundson et al., 2014).

Contrary to our expectations, and despite the aforementioned differences between the groups, the FOD-groups did not differ in comorbidity (e.g., additional diagnoses, number of comorbid anxiety disorders etc.) or psychiatric impairment (e.g., lifetime suicide attempts, psychiatric hospitalizations etc.). In a sample of patients presenting for treatment, comorbidity with other psychiatric disorders is the rule rather than the exception. Comorbid disorders also result in psychosocial morbidity, thereby possibly masking differences between PD patients with and without FOD. Too few patients were diagnosed with PD as their only disorder to examine the importance of FOD in a "pure" PD sample. We reanalyzed these variables with a subsample of patients who were seeking treatment primarily for PD (i.e., a principal diagnosis of PD). With the exception of past psychiatric hospitalizations, no significant differences in psychiatric impairment or comorbidity were observed between FOD groups with PD as a primary diagnosis. However, even this subsample may have wide variability in comorbidity that could influence results related to psychiatric impairment. Future research that uses a "pure" PD sample that controls for comorbidity may provide insight into impairment differences based on FOD.

Interestingly, there were significantly more Hispanic patients in the FOD group. There is evidence that panic symptoms are conceptualized and reported differently between cultural groups (Craske et al., 2010), which may explain this difference. However, while studies have found an increased prevalence of FOD among African-Americans and Arabs (Friedman & Paradis, 2002; Wagner, Pietrzak, & Petry, 2008), to our knowledge, there is no existing evidence for this difference in Hispanic populations.

The current study's findings should be understood in the context of certain limitations. We did not directly measure patients' subjective panic attack intensity, and therefore the any difference in panic attack intensity between these groups can only be inferred from differences in reported panic

symptoms. Patient's retrospective self-reports during diagnostic interviews may be subject to bias. For instance, one study has indicated that patients report a greater number of panic-symptoms during retrospective self-reports, compared to self-monitoring (Margraf, et al., 1987), suggesting over-reporting bias is more likely during diagnostic interviews. Moreover, patients in the present study may have experienced fear of dying with differing frequencies. Finally, we did not control for the other cognitive symptoms (i.e., fear of losing control or going crazy) because this would have left us with too few patients with FOD only. Therefore, the degree to which we can attribute these findings to the presence of FOD alone is limited.

Future studies may clarify whether patients experience FOD as a response to higher-intensity panic attacks, whether FOD exacerbates panic attack intensity, or both. Subsequent studies may also assess the direction of this relationship. Researchers should also investigate whether FOD predicts scores on other measures of transdiagnostic vulnerabilities for anxiety disorders, such as anxiety sensitivity and intolerance of uncertainty. Although we know that individuals with panic attacks often use emergency medical services (Fleet et al., 1996; Worthington et al., 1997; Huffman & Pollack, 2003), there is little data on the differences between panic sufferers who do and do not inappropriately use these services. Researchers should explore whether FOD or fear of having a heart attack during panic attacks are potential predictors of this behavior.

4.1 Conclusions

The current findings bolster existing evidence that catastrophic cognitions during panic attacks are associated with severity of PD symptoms. The current study extends this notion by finding that patients with a single cognitive feature of panic experience more panic symptoms and more subjective distress. As a result, FOD may be a detector of more severe PD pathology and increased treatment seeking for PD. However, more evidence is needed to strengthen this conclusion. The present findings

and future work on the role of FOD in PD may assist researchers and clinicians in quickly identifying patients experiencing severe panic attacks or greater distress related to PD.

TABLES

Table 1.
Demographic characteristics of outpatients diagnosed with current panic disorder with and without FOD during panic attacks

Variable	Total Sample (n=331)	FOD (n=153)	No Fear (n=178)	Statistic	*p*
Age, M, (*SD*)	36.0 (10.99)	35.9 (10.56)	36.0 (11.38)	t = -0.05	0.96
Sex, n (%)				χ^2 = 1.71	0.19
Female	205 (61.9)	89 (58.2)	116 (65.2)		
Male	126 (38.1)	64 (41.8)	62 (34.8)		
Race, n (%)				--	***<0.05[a]***
Caucasian	***299 (90.3)***	***130 (85.0)***	***169 (94.9)***		
Hispanic	***13 (3.9)***	***10 (6.5)***	***3 (1.7)***		
African Amer.	12 (3.6)	8 (5.2)	4 (2.2)		
Other	7 (2.1)	5 (3.3)	2 (1.1)		
Marital Status, n (%)				--	0.95
Married	128 (38.7)	58 (37.9)	70 (39.3)		
Living together	25 (7.6)	11 (7.2)	14 (7.9)		
Widowed	4 (1.2)	2 (1.3)	2 (1.1)		
Separated	18 (5.4)	7 (4.6)	11 (6.2)		
Divorced	56 (16.9)	29 (19.0)	27 (15.2)		
Never Married	100 (30.2)	46 (30.1)	54 (30.3)		
Education, n (%)				χ^2 = 5.69	0.06
Less than HS	45 (13.6)	28 (18.3)	17 (9.6)		
HS/GED	229 (69.2)	102 (66.7)	127 (71.3)		
College	57 (17.2)	23 (15.0)	34 (19.1)		

Note: College = 2- or 4-year college degree.
Variables with significant findings are italicized.
[a] Significant difference on post hoc comparison between FOD and no-fear groups between Hispanic and Caucasian patients.

Table 2.
Clinical presentation characteristics of outpatients diagnosed with current panic disorder with and without FOD during panic attacks

Variable	FOD (n=153)	No Fear (n=178)	Statistic	*p*
Principal PD diagnosis, n (%)	***63 (41.2)***	***44 (24.7)***	***χ^2 = 10.19***	***0.001***
AG diagnosis, n (%)	***131(85.6)***	***128 (71.9)***	***χ^2 = 9.40***	***<0.05[a]***
Number of PD symptoms, M(SD)	***9.90 (2.25)***	***7.94 (2.26)***	***t = 7.86***	***<0.001***
Number of AG behaviors, M(SD)[b]	***6.67 (3.18)***	***5.33 (3.12)***	***t = 2.96***	***<0.005***
Age of Onset, M(SD)[c]	***23.28***	***29.87***	***t = -2.51***	***<0.05***
P.A. frequency, M(SD)[d]	13.16	14.67	***t*** = -0.313	0.75
Subjective Anxiety, n (%)[e]			χ^2 =0.001	0.97
Non to mild	51 (33.3)	59 (33.1)		
Moderate to extreme	102 (66.7)	119 (66.9)		
Somatic Anxiety, n (%)[f]			χ^2 = 0.03	0.86
None to mild	63 (41.2)	75 (58.8)		
Moderate to extreme	90 (58.8)	103 (57.9)		

Note: PD= panic disorder; AG= agoraphobia; P.A. frequency= number of panic attacks in the past month
Variables with significant findings are bold italicized.
[a] Significant difference on post hoc comparison between FOD and no-fear groups.
[b] PD without AG excluded. Total sample size reduced to 260 (FOD n= 90; No Fear n = 106).
[c] Total sample size reduced to 100 (FOD n= 53; No Fear n = 47).
[d] Total sample size reduced to 46 (FOD n= 25; No Fear n = 21).
[e,f] Anxiety symptom ratings within the past week obtained from the Schedule for Affective Disorders and Schizophrenia (SADS).

Table 3.
Clinical morbidity of outpatients diagnosed with current panic disorder with and without FOD during panic attacks

Variable	FOD (n=153)	No Fear (n=178)	Statistic	*p*
Additional diagnoses, M(*SD*)	2.92 (1.80)	2.70 (1.87)	t = -1.085	0.28
Suicide attempt, n (%)	39 (25.5)	43 (24.2)	χ^2 = 0.78	0.78
Current SI, n (%)				
None to mild	125 (81.7)	147 (82.6)	χ^2 = 0.44	0.83
Moderate to extreme	28 (18.3)	31 (17.4)		
Hospitalizations, n (%)	44 (28.8)	53 (29.8)	χ^2 = 0.04	0.84
GAF, M(*SD*)	48.11 (10.05)	48.30 (8.54)	t = -0.19	0.85
Past social functioning, n (%)			χ^2 = 1.15	0.28
Fair or worse	54 (35.3)	53 (29.8)		
Good or better	99 (64.7)	125 (70.2)		
Time out of work, n (%)[a]			χ^2 = 0.25	0.88
Virtually none	37 (25.9)	44 (26.8)		
1 month or more	106 (74.1)	120 (73.2)		

Note: Additional diagnoses = number of additional Axis I diagnoses; GAF=Global Assessment of Functioning Scale; suicide attempt = presence of at least one prior suicide attempt; current SI=suicidal ideation within the past two weeks; inpatient hospitalization = presence of at least one prior inpatient hospitalization.
Variables with significant findings are bold italicized.
[a] Participants not expected to work excluded. Total sample size reduced to 307 (FOD n = 143 No Fear n =164)
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-
-

Table 4.
Current comorbidity of PD patients with and without FOD

Variable	Total Sample (n=331)	FOD (n=153)	No Fear (n=178)	χ^2	*p*
Any anxiety disorder	230 (69.5%)	109 (71.2%)	121 (68.0%)	0.41	0.52
Any mood disorder	225 (68.0%)	101 (66.0%)	124 (69.7%)	0.50	0.48
Any personality disorder	21 (6.3%)	9 (5.9%)	12 (6.7%)	0.10	0.75
Any impulse-control disorder	21 (6.3%)	9 (5.9%)	12 (6.7%)	0.10	0.75
Any eating disorder	4 (1.2%)	2 (1.3%)	2 (1.1%)	--	1.0
Any somatoform disorder	35 (10.6%)	21 (13.7%)	14 (7.9%)	2.99	0.08
Any ADHD	10 (3.0%)	4 (2.6%)	6 (3.4%)	NA	0.78
Any alcohol use disorder	20 (6.0%)	8 (5.2%)	12 (6.7%)	0.33	0.57
Any drug use disorder	16 (4.8%)	8 (4.5%)	8 (5.2%)	0.10	0.76

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