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Predicting anxiety: The role of experiential avoidance and anxiety sensitivity

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ABSTRACT

Anxiety sensitivity (AS), the tendency to fear arousal-related body sensations based on beliefs that they are harmful, is a strong psychological risk factor for development of anxiety psychopathology; however, in most studies AS explains only a portion of the variability in anxiety symptoms. Recent theoretical and research work has suggested that experiential avoidance (EA), unwillingness to endure unpleasant internal experiences (e.g., thoughts, emotions, memories), is related to anxiety disorders. The current study examined independent contributions of EA and AS in the prediction of anxiety symptoms in a sample of 42 adults with DSM-IV anxiety disorders. Participants completed measures of AS, EA, anxiety, and depression. Correlational analyses indicated associations between AS, EA, and anxiety, yet more conservative regression analyses indicated that the Physical Concerns dimension of AS predicted anxiety symptom severity independently of EA. Theoretical and treatment implications of the results are discussed.

One widely researched conceptual framework for understanding anxiety disorders is the cognitive-behavioral approach, which proposes that emotional disorders arise from dysfunctional beliefs (Clark, 1999). For example, social phobia is thought to arise from exaggerated beliefs about being evaluated negatively (e.g., "People will think I am stupid if I make a mistake"; Clark & Wells, 1995). Panic and agoraphobia are thought to arise from catastrophic beliefs about the dangerousness of internal (arousal-related) sensations (e.g., "When my heart beats rapidly, I believe I'm having a heart attack"; Clark, 1986). These dysfunctional cognitions lead to catastrophic misinterpretations of danger cues, giving rise to situational anxiety and fear. Escape and avoidance behavior performed in response to feared negative outcomes paradoxically maintain the anxiety disorder by preventing the disconfirmation of dysfunctional cognitions (Clark, 1999). A large body of research provides support for the cognitive-behavioral approach and for cognitive-behavioral therapy (CBT), which aims to correct dysfunctional beliefs and eliminate maladaptive escape and avoidance behavior (e.g., Barlow, 2002).

Within the cognitive-behavioral framework, anxiety sensitivity (AS) is a set of trait-like dysfunctional beliefs about harmful consequences of anxious arousal (Reiss & McNally, 1985). Consistent evidence demonstrates that AS is a strong psychological risk factor for the development of anxiety psychopathology (e.g., Schmidt, Lerew, & Jackson, 1997; Schmidt, Buckner, & Keough, 2007; Zvolensky, Schmidt, Bernstein, & Keough, 2006). Studies (e.g., Taylor et al., 2007) have identified three dimensions of AS, including (a) Physical Concerns (e.g., "When I feel pain in my chest, I worry that I'm going to have a heart attack"), (b) Social Concerns (e.g., "I worry that other people will notice my anxiety," and (c) Cognitive Concerns (e.g., "It scares me when I am unable to keep my mind on a task"). According to cognitive-behavioral theory, AS is a cognitive diathesis such that individuals high in AS will become anxious in the presence of a feared stimulus not only due to their specific fear of the stimulus itself, but also because of their fear of the physiologic sensations associated with anxiety. For example, someone with a snake phobia may fear confronting a snake because of the threat of being poisoned, but also because of the discomfort associated with feeling very anxious in the snake's presence.

Although strongly predictive of anxiety psychopathology, the construct of AS does not completely explain the variability in anxiety symptoms (Schmidt et al., 1997). Thus, it is worth attending to theoretical proposals that offer unique perspectives on psychological factors that might also be predictive of anxiety disorders. One approach that has garnered attention recently is *experiential* (emotional) *avoidance* (EA), a key component in acceptance and commitment therapy (ACT). EA involves an unwillingness to endure upsetting emotions, thoughts, memories, and other private experiences. Such unwillingness is thought to

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lead to maladaptive efforts to resist, escape, and avoid such experiences (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). Authors have posited that EA underlies and plays an important role in various psychological disorders, including anxiety disorders (e.g., Hayes et al., 1996; Orsillo & Roemer, 2005).

In the EA framework, anxiety disorders are conceptualized as problems in which the individual uses ineffective strategies in an attempt to suppress negative affect (e.g., fear, worry), uncomfortable physiologic sensations (e.g., racing heart, breathlessness), unwanted thoughts (e.g., obsessional intrusions, memories of traumatic events), and other negative cognitions (e.g., anticipation of dangerous outcomes; Hayes et al., 1996). Thus, the "EA model" of anxiety disorders departs from the cognitive-behavioral model, in that EA is focused not on one's interpretation of events or surroundings, but rather how he or she tolerates anxious affect in the presence of fear cues. ACT incorporates EA by helping anxious patients accept and endure the negative experiences described above (i.e., develop greater "psychological flexibility"), rather than resort to avoidance and escape strategies (Eifert & Forsyth, 2005). Several studies have shown efficacy of ACT in the treatment of anxiety disorders (Powers, Vording, & Emmelkamp, 2009), lending support to validity of EA as a model for conceptualizing the psychopathology and treatment of anxiety.

Both AS and EA relate to emotional difficulties, yet there are distinctions between the two concepts. For example, whereas EA concerns negative private experiences in general, AS is specifically concerned with arousal-related body sensations. Also, whereas AS is described as a set of trait-like dysfunctional *beliefs* (Taylor, 1999), EA is conceptualized as a psychological *process* (Hayes et al., 1996). Some authors (Hayes, Luoma, Bond, Masuda, & Lillis, 2006) suggest that EA/ACT represents a new approach for conceptualizing and treating problems such as anxiety disorders. Others, however, have challenged this notion, arguing that the EA/ACT model does not improve upon the cognitive-behavioral framework (Hofmann & Asmundson, 2008). Given lack of empirical data on this issue, we designed the present study to examine the relationship between EA and AS, and the independent and relative contributions of these constructs in the prediction of clinically significant anxiety symptoms. As AS involves the catastrophic misinterpretation of anxiety symptoms and EA involves the tendency to avoid such internal experiences, we hypothesized that these two variables would be positively correlated. On the basis of clinical observation and previous research, we also predicted that both EA and AS would be associated with anxiety symptoms. Given the absence of research on the relative contributions of EA and AS in the prediction of anxiety symptoms, we undertook an exploratory approach to examine this question.

1. Method

1.1. Participants

Participants included 42 adults (22 women, 20 men) with a mean age of 27.21 years (SD = 13.06; range = 18–63 years). Of the sample, 91% identified as Caucasian. All 42 participants received the Anxiety Disorders Interview Schedule (ADIS; Di Nardo, Brown, & Barlow, 1994) at one of the following sites: the Anxiety and Stress Disorders Clinic at the University of North Carolina (Chapel Hill, NC) and the OCD and Related Disorders Program at Alexian Brothers Behavioral Health Hospitals (Hoffman Estates, IL). To be included in the current sample, participants must have received a primary diagnosis of an anxiety disorder. Primary diagnoses within this group included OCD (n = 12, 29%), panic disorder with or without agoraphobia (n = 6, 14%), social phobia (n = 10, 24%), specific phobia (n = 1, 2%), GAD (n = 5, 12%), and other anxiety (e.g., PTSD, Anxiety NOS; n = 8, 19%).

1.2. Procedure

All individuals presenting for evaluation and treatment at the two sites completed a packet of self-report questionnaires that included the measures described below. Each participant was then given a diagnostic interview by a trained assessor. After completing the initial interview and formulating a diagnosis, the first interviewer presented the assessment data to a more expert clinician (i.e., the director or senior clinician at each site), who subsequently met and reviewed the assessment data with the patient. Although formal inter-rater reliability checks were not conducted, only patients for whom both interviewers agreed on diagnostic status were included in the study (i.e., 100% inter-rater agreement).

1.3. Measures

The following measures were included in the present study:-

Acceptance and Action Questionnaire-II (AAQ-II; Bond et al., 2007). The AAQ-II is a 10-item revision of the original 9-item AAQ (Hayes, 2000). The scale assesses EA, also known as "psychological flexibility," which is a core construct of the ACT model of psychopathology (Hayes et al., 2006). The AAQ-II has been shown to have good psychometric properties and good convergent, discriminant, and incremental validity. Factor analytic findings suggest the AAQ-II is a unidimensional measure (Bond et al., 2007). Higher scores on the AAQ-II indicate greater psychological flexibility (less pathology).

Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988). The BAI is a self-report instrument that assesses 21 common symptoms of clinical anxiety (e.g., sweating, fear of losing control). Respondents indicate the degree to which they have recently been bothered by each symptom during the past week. The BAI was designed to assess anxiety symptoms independently from depression symptoms, which it does successfully (Beck et al., 1988). It has excellent internal consistency in anxiety disorder samples (range of Cronbach's alpha = .85–.93; Beck et al., 1988).

Although it continues to be widely used as a measure of anxiety symptoms in general (e.g., Abramowitz, Khandker, Nelson, Rygwall, & Deacon, 2006; Schmidt et al., 1997), some authors have noted that many items on the BAI assess physiologic correlates of anxiety, and argue that this measure is confounded with, or actually measures, panic attack symptoms rather than anxiety in general (Cox, Cohen, Direnfeld, & Swinson, 1996). Other authors (Steer & Beck, 1996) point out that panic symptoms are present across the anxiety disorders (American Psychiatric Association, 2000), and that 11 of the 21 BAI items are reflective of symptoms of generalized anxiety disorder (GAD). As the BAI was used as the main dependent measure in the present study, we considered the implications of this conceptual issue in our data analyses and conclusions.

Anxiety Sensitivity Index-3 (ASI-3). The ASI-3 (Taylor et al., 2007) is an 18-item version of the original ASI (Reiss, Peterson, Gursky, & McNally, 1986) that measures beliefs about the feared consequences of symptoms associated with anxious arousal (e.g., "It scares me when I become short of breath"). Respondents indicate their agreement with each item from "very little" (coded as 0) to "very much" (coded as 4). Total scores range from 0 to 72. The ASI-3 contains three empirically established subscales relating to fears of social concerns (e.g., It is important for me not to appear nervous), fears of physical symptoms (e.g., It scares me when my heart beats rapidly), and fears of cognitive dyscontrol (e.g., It scares me when I am unable to keep my mind on a task). The measure possesses excellent psychometric properties (Taylor et al., 2007).

Beck Depression Inventory (BDI-II; Beck, Steer, & Brown, 1996). The BDI-II is a 21-item self-report scale that assesses the severity of affective, cognitive, motivational, vegetative, and psychomotor