Positive affect regulation in anxiety disorders

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ABSTRACT

Although individual differences exist in how people respond to positive affect (PA), little research addresses PA regulation in people with anxiety disorders. The goal of this study was to provide information about responses to PA in people with symptoms of social phobia, generalized anxiety disorder, panic disorder, agoraphobia, and obsessive-compulsive disorder. The tendency to dampen PA and the ability to savor PA were examined in an undergraduate sample. Analyses examined the unique links between these reactions and symptoms of anxiety disorders, controlling for a history of depression. Given the high comorbidity of depression and anxiety, exploratory analyses further controlled for generalized anxiety disorder. Results demonstrated that one or both measures of affect regulation made a unique and substantial contribution to predicting each anxiety disorder except agoraphobia, above and beyond prediction afforded by symptoms of depression and generalized anxiety disorder. Clinical implications and areas for future research are discussed.

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Robust individual differences exist in how people respond to positive affect (PA). Many people use strategies to enhance and sustain positive affective states; these include thinking about positive self-qualities, reflecting on how good life is, or focusing on the experience that triggered the PA. Somewhat counterintuively, though, it has also become clear that some people react in ways that are likely to dampen PA (Feldman, Joormann, & Johnson, 2008). An example of a dampening response to PA would be to reflect that "This will never last." Responses that sustain and amplify PA are related to higher self-esteem and confidence (Larsen & Prizmic, 2004; Martin & Tesser, 1996), whereas those that diminish PA are tied to lower self-esteem (Feldman et al., 2008). It has been suggested that people with low self-esteem may try to diminish their positive feelings because they do not believe they deserve to experience PA (Parrott, 1993; Wood, Heimpel, & Michela, 2003).

Dampening responses to PA may also be related to psycho-pathologies (Clark & Watson, 1991). The syndrome that has received the most attention in this regard is depression, which is known to be characterized by low levels of PA. People with depression report that they avoid PA, engage in less cognitive elaboration of positive mood states, savor their positive experiences less, and are more likely to dampen their positive moods, compared to persons who are less depressed (Bryant, 2003; Feldman et al., 2008; Min'er & Dejun, 2001). Thus, depression seems to be linked to reactions that dampen PA that naturally arises.

Less is known about how people with anxiety disorders respond to PA. However, indirect evidence suggests that a similar tendency may be at work in at least some anxiety disorders. For example, it is known that PA is low among people with social anxiety disorder, above and beyond what can be attributed to co-occurring depression (Brown, Chorpita, & Barlow, 1998; Kashdan, 2002, 2004, 2007). When people with social anxiety have opportunities to pursue activities that could generate PA, they seem not to exploit those opportunities, but instead are preoccupied by attempts to conceal or suppress their socially anxious feelings (Kashdan & Steger, 2006). Thus, the positive feelings fail to emerge. Also consistent with dampening of PA, social phobia and generalized anxiety disorder have both been linked to elevated fear of positive emotions and lower expression of positive emotions, compared to persons without these disorders (Roemer, Salters, Raffa, & Orsillo, 2005; Turk, Heimberg, Luterek, Mennin, & Fresco, 2005). Such responses to PA among persons with anxiety disorders do not appear to be explained by depression (Kashdan & Steger, 2006), suggesting that minimizing of PA may be an element in anxiety disorders even without comorbid depression.

These findings pertaining to anxiety suggest maladaptive responses to PA in social phobia and generalized anxiety disorder. Although other anxiety disorders are characterized by low levels of PA, little is known about how PA is regulated in these other anxiety disorders (Brown et al., 1998; Watson, Clark, & Carey, 1988). Thus, the goal of the study reported here was to provide information

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about responses to PA among people with symptoms of various kinds of anxiety disorders. Two measures of PA regulation were used: a measure designed to assess tendencies to amplify or to dampen PA and a measure designed to assess the ability to savor and sustain PA. Symptoms of social phobia, generalized anxiety disorder, panic disorder, agoraphobia, and obsessive-compulsive disorder were assessed. A measure of lifetime depression was included to provide additional evidence on the relationship between PA regulation and depression and to test whether any associations that emerged for anxiety symptoms did not depend on symptoms of comorbid depression. Finally, given that generalized anxiety disorder is highly comorbid with both depression and other anxiety disorders and shares similarities in emotion dysregulation with depression (Mennin, Holaway, Fresco, & Heimberg, 2007; Watson, 2005), exploratory analyses of maladaptive responses to PA were conducted controlling for generalized anxiety to determine whether any relationship between other anxiety disorders and PA regulation measures was unique.

1. Method

Participants were 248 undergraduate students (54% female) at the University of Miami. Measures were administered in large group sessions in partial fulfillment of a course requirement. Age and ethnicity information was not collected in connection with responses, but the sample presumably did not differ materially from the University of Miami's student body, which is ethnically diverse (23% Hispanic, 6% African American, 8% Asian, 55% non-Hispanic White, and 7% other).

1.1. Responses to Positive Affect

The Responses to Positive Affect (RPA; Feldman et al., 2008) measure is a 17-item self-report scale that measures the use of strategies to respond to PA. It is modeled after the Response Styles Questionnaire (RSQ, Nolen-Hoeksema & Morrow, 1991). Exploratory and confirmatory factor analysis studies on the RPA revealed a 3-factor solution: (1) focusing on affective and somatic experiences of the PA (Emotion-focus: "I think about how happy I feel."), (2) focusing on cognitive and goal-oriented facets of the mood such as confidence (Self-focus: "I am living up to my potential."), and (3) cognitive responses that are likely to counter PA (Dampening: "I don't deserve this."). The Emotion and Self-focus scales demonstrated higher correlations with each other and modest associations with the Dampening subscale. A previous study related higher scores on the Emotion-focus and Self-focus positive rumination subscales to greater self-esteem (Feldman et al., 2008). In the current study, we were particularly interested in the Dampening subscale, as this has been found to relate to both current and lifetime depressive symptoms in previous research (Feldman et al., 2008). Internal consistency was good in this sample for all subscales (Emotion-focus, α = .77; Self-focus, α = .77; Dampening, α = .85).

1.2. Savoring Beliefs Inventory

The Savoring Beliefs Inventory (SBI; Bryant, 2003) is a 14-item questionnaire that measures an individual's beliefs about his or her capacity to savor positive experiences. The SBI has three subscales that assess anticipating upcoming positive events, savoring positive experiences, and reminiscing about past positive experiences. The Savoring the Moment subscale has 8 items and is the focus of this study. This subscale has correlated positively with measures of affect intensity, extraversion, optimism, internal locus of control beliefs, and dimensions of subjective well-being; it has correlated negatively with hopelessness, depression, neuroticism,

physical and social anhedonia, guilt and shame; and it was uncorrelated with measures of social desirability (Bryant, 2003). This subscale has adequate internal consistency in past studies (α's ranging from .69 to .89) as well as in the current study (α = .83).

1.3. Inventory to Diagnose Depression-Lifetime

The Inventory to Diagnose Depression-Lifetime (IDD-L; Zimmerman & Coryell, 1987) is a 45-item self-report scale to assess lifetime history of depressive symptoms. The questions are designed to parallel the symptoms required for DSM-IV diagnoses of major depression. Following endorsement of a symptom, participants are asked whether the symptom lasted for at least two weeks. The DSM symptoms are then summed to provide an index of severity. The IDD-L has been shown to have excellent agreement with structured diagnostic interviews for depression (97%; Zimmerman & Coryell, 1987). The IDD-L demonstrated high internal consistency in past studies (α = .92) and in this study (α = .90).

1.4. Psychiatric Diagnostic Screening Questionnaire

The Psychiatric Diagnostic Screening Questionnaire (PDSQ; Zimmerman & Mattia, 2001) is a 126-item questionnaire that was designed to screen for 13 of the DSM-IV disorders that have been found to be most prevalent in large epidemiological studies (Kessler et al., 1994). PDSQ items assess current symptoms, but the scale cannot be used to assess clinically significant diagnoses because it does not assess for functional impairment. Rather, the PDSQ captures symptom profiles. The subscales used in this study were symptoms of panic disorder (9 items), agoraphobia (11 items), generalized anxiety disorder (10 items), and social phobia (14 items). Items concerning panic disorder refer to the past 2 weeks. Items concerning agoraphobia, generalized anxiety disorder, and social phobia refer to the past six months.

The PDSQ has demonstrated that it is a valid instrument across several studies. In previous studies, the PDSQ subscales had good to excellent levels of internal consistency, with all subscales demonstrating alphas greater than .80 (Zimmerman & Mattia, 2001). In this study, Cronbach's α's ranged from .69 to .84. The subscales of the PDSQ also demonstrate adequate convergent and discriminant validity with other scales. Across all subscales, the mean correlation between PDSQ subscales and measures of the same construct was .66 compared to .25 between PDSQ subscales and measures of other symptom domains. At the item level, the mean item-parent subscale correlation was .59, and the mean item-other subscale correlation was .17 (Zimmerman & Mattia, 2001). The PDSQ subscales had an average specificity of 70%, sensitivity of 87%, and negative predictive value of 97% in conjunction with a structured clinical interview (Zimmerman & Chelminski, 2006). For every PDSQ subscale, people with the relevant DSM-IV diagnoses scored significantly higher on the corresponding subscale than people without diagnoses, and at the item level, 97% of symptoms on the PDSQ were endorsed significantly more frequently by persons with the relevant DSM-IV diagnosis than by those without a diagnosis (Zimmerman & Mattia, 2001).

1.5. Obsessive-Compulsive Inventory-Revised

The Obsessive-Compulsive Inventory-Revised (OCI-R; Foa et al., 2002) is a self-report measure that assesses symptoms of obsessive-compulsive disorder. It contains 18 items that load onto six factors: washing, obsessing, hoarding, ordering, checking, and neutralizing, and provides a more comprehensive screening of obsessive-compulsive disorder (OCD) than the PDSQ. The OCI-R is