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Exploring the relationship between positive and negative emotional avoidance and anxiety symptom severity: The moderating role of attentional control

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ABSTRACT

Background and objectives: Emotional avoidance has been found to be associated with higher levels of anxiety. However, no research to date has differentiated between the avoidance of positive and negative emotions in relation to anxiety. Additionally, no studies have examined the extent to which attentional control moderates the relation between the avoidance of emotions and anxiety. Thus, the purpose of this study was to (a) clarify relations between both positive and negative emotional avoidance and anxiety, and (b) examine attentional control as a moderator of the relations between both positive and negative emotional avoidance and anxiety.
Methods: A community sample of adults ($N = 93$) completed a series of questionnaires, as well as a laboratory-based measure of attentional control.
Results: Greater avoidance of both positive and negative emotions was associated with higher levels of anxiety. Additionally, attentional control moderated the relationship between negative (but not positive) emotional avoidance and anxiety. Specifically, the avoidance of negative emotions was associated with higher levels of anxiety for those with lower attentional control.
Limitations: Limitations include a cross-sectional design, use of self-report measures, and the examination of hypotheses within a non-clinical sample.
Conclusion: Findings are consistent with a growing body of research demonstrating the moderating role of attentional control in the relation between risk factors and negative outcomes. Findings also suggest that empirically-based treatment approaches that contain attention-based components may be beneficial for emotionally avoidant individuals with poor attentional control abilities.

1. Introduction

According to the National Comorbidity Survey Replication, anxiety disorders are the most commonly occurring psychiatric disorders in the United States, affecting approximately 18% of the general population in a given year (Kessler, Chiu, Demler, & Walters, 2005). In addition to the high level of psychological distress associated with severe levels of anxiety, anxiety disorders result in substantial impairment in social, occupational, and family functioning, as well as poorer physical health and an overall reduced quality of life (Hoffman, Dukes, & Wittchen, 2008). Moreover, the economic burden (e.g., treatment costs, work performance costs) of anxiety disorders is estimated to be over forty-two billion dollars per year, or more than 1/3 of the total yearly mental health bill of the United States (Kessler & Greenberg, 2002). Given the substantial burden associated with anxiety, considerable effort has been directed toward identifying risk and resiliency factors for the development and maintenance of anxiety pathology.

One factor that has received increasing attention for its role in the development of anxiety is the tendency to avoid emotions (Campbell-Sills & Barlow, 2007; Salters-Pedneault, Tull, & Roemer, 2004; see also Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). Although the vast majority of the research in this area has focused exclusively on the avoidance of negative emotions, theoretical and empirical literature suggests that the avoidance of both positive and negative emotions may contribute to anxiety pathology. For example, it has been suggested that individuals at high risk for

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problems with anxiety (e.g., individuals high in anxiety sensitivity) may view any internal experience associated with heightened physiological arousal as aversive, including both positive and negative emotions. As a result, these individuals may learn to fear these emotions and be motivated to avoid them (Tull & Roemer, 2007; Williams, Chambless, & Ahrens, 1997). Further, although the avoidance of emotions may result in temporary relief, it tends to have paradoxical effects in the long-term, increasing physiological arousal, worsening emotional distress, and motivating future avoidance (e.g., Campbell-Sills, Barlow, Brown, & Hofmann, 2006; Levitt, Brown, Orsillo, & Barlow, 2004). Moreover, the chronic reliance on emotional avoidance as a regulation strategy may interfere with adaptive cognitive and emotional processing, contributing to the maintenance or worsening of anxiety (Foa & Kozak, 1986).

Consistent with this literature (and in support of the relevance of positive emotional avoidance to anxiety as well), Tull and Roemer (2007) found that individuals who had experienced an uncued panic attack within the past year reported greater use of emotionally-avoidant regulation strategies in response to a positive emotion-inducing film clip, relative to individuals with no history of panic attacks. Likewise, Roemer, Litz, Orsillo, and Wagner (2001) found that combat Veterans with (vs. without) posttraumatic stress disorder reported the suppression of both positive and negative emotions. Finally, several studies have demonstrated that the combined avoidance of both positive and negative emotions is associated with anxiety-related pathology (including PTSD symptoms and general anxiety symptoms) in both clinical and nonclinical samples (Naifeh, Tull, & Gratz, 2012; Tull, Hahn, Evans, Salters-Pedneault, & Gratz, 2011; Wildes, Ringham, & Marcus, 2010). Despite increasing support for the role of positive emotional avoidance in anxiety-related pathology, additional research is needed to explore the separate (and potentially unique) roles of positive and negative emotional avoidance in anxiety. Furthermore, additional research is needed that examines factors that may moderate the relation between positive and negative emotional avoidance and anxiety.

One factor that may hold promise in this regard is attentional control (i.e., the skilled control of higher-order executive attention to regulate, or override, more automatic dominant response tendencies). In Gross's (1998) process model of emotion regulation, the ability to flexibly control attention is considered essential for maintaining psychological well-being, with attention deployment theorized to be the gatekeeper of emotion regulation. Indeed, research provides support for attentional control as a protective factor for psychopathology, with lower attentional control associated with negative emotionality, poor social adaptation, and externalizing behaviors (Derryberry & Reed, 2002; Eisenberg, Fabes, Guthrie, & Reiser, 2000) and higher attentional control associated with positive emotionality and faster mood recovery following exposure to a trauma cue (Bardeen & Read, 2010; Derryberry & Reed, 2002). Consistent with Gross' process model, empirical research has shown that anxiety may be maintained and exacerbated through prolonged attentional engagement with threat information (Constans, 2005; Elzinga & Bremner, 2002), and that the flexible use of attentional control to disengage and shift attention away from threat-related stimuli may reduce distress (Bardeen & Orcutt, 2011; Bardeen & Read, 2010). As a result, greater attentional control may allow one to remain in a threatening or anxiety-provoking environment, facilitating habituation rather than the deployment of less adaptive secondary regulation strategies, such as emotional avoidance. Consistent with this premise, recent research provides support for the protective role of attentional control in the relation between putative risk factors for anxiety and anxiety-related pathology. For example, studies have found that attentional control protects against (a) higher levels of anxiety among individuals prone to using maladaptive and avoidance-oriented coping behaviors (Fergus, Bardeen, & Orcutt, 2012), (b) decrements in speech performance among those with public-speaking anxiety (Jones, Fazio, & Vasey, 2012), and (c) fearful responding to a CO_2 challenge among those with higher levels of trait anxiety (Richey, Keough, & Schmidt, 2012).

Despite increasing support for the moderating role of attentional control in psychopathology, one limitation of the extant research in this area is the primary reliance on self-report measures of attentional control (i.e., Attentional Control Scale; Derryberry & Reed, 2002). Some researchers have suggested that the Attentional Control Scale may measure beliefs about attentional control rather than providing an index of actual attentional control abilities (Spada, Georgiou, & Wells, 2010). Moreover, research has shown that the moderating effect of attentional control processes can take place in as little as 150 ms (Bardeen & Orcutt, 2011); thus, it may be especially difficult for individuals to report on cognitive processes that occur so rapidly. As such, the use of more objective measures of attentional control, such as laboratory-based behavioral tasks, may be an important next step in advancing this line of research.

Extending past research in this area, the goals of the present study were to a) differentiate between the avoidance of positive emotions and negative emotions in relation to anxiety symptom severity and b) examine the moderating role of attentional control (assessed in the laboratory) in these relations. We predicted that both positive and negative emotional avoidance would be uniquely positively associated with anxiety. In addition, we expected that attentional control would moderate the relations between positive and negative emotional avoidance and anxiety, with emotional avoidance evidencing a significant association with anxiety symptoms only among individuals with lower (vs. higher) attentional control.

2. Method

2.1. Participants

This study was conducted as part of a larger study investigating emotion regulation deficits across a range of clinical disorders. Adult participants (aged 18–60) were recruited via advertisements for a study on "emotional and cognitive functioning" posted online and throughout the community. Participants experiencing "emotional difficulties" were specifically targeted in the advertisements. Exclusion criteria for the larger study focused on the presence of psychopathology that could influence responses to the laboratory tasks, including current (past two weeks) manic, hypomanic, or depressive mood episodes (but not lifetime history of mood disorders), current (past-month) substance dependence, and/or primary psychosis.

The initial sample of participants included 99 adults. Of these, data from six participants were excluded from analyses due to (a) an inflated error rate on the behavioral measure of attentional control ($n = 5$; i.e., >-2.5 SD from the mean error rate; as per Ishigami & Klein, 2009), and (b) undue influence on the analytic model ($n = 1$; i.e., multivariate outliers > 1 $DFFITS_i$; Cohen, Cohen, West, & Aiken, 2003). The final sample ($N = 93$; 63.4% female) had a mean age of 23.7 years ($SD = 9.4$) and was ethnically/racially diverse (53.8% White; 21.5% Black/African-American; 9.7% Asian/Asian-American; 14.0% other racial/ethnic background).

2.2. Measures

2.2.1. Emotional Avoidance Questionnaire (EAQ)

Avoidance of positive and negative emotions was assessed using the Avoidance of Positive Emotions (EAQ-Positive; e.g., "*If I start*