Journal of Anxiety Disorders 26 (2012) 233–238

Contents lists available at SciVerse ScienceDirect

Journal of Anxiety Disorders

The interactive effects of emotional clarity and cognitive reappraisal in Posttraumatic Stress Disorder☆

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ARTICLE INFO

Article history:
Received 9 September 2011
Received in revised form 7 November 2011
Accepted 10 November 2011

Keywords:
Emotional clarity
Cognitive reappraisal
PTSD
Emotional awareness
Emotion regulation
Alexithymia

ABSTRACT

The goal of this investigation was to examine how emotional clarity and a specific emotion regulation strategy, cognitive reappraisal, interact to predict Posttraumatic Stress Disorder (PTSD) symptom severity and positive affect among treatment seeking military Veterans ($N = 75$, 93% male) diagnosed with PTSD. PTSD is a highly relevant context because PTSD features include heightened stress reactivity, diminished ability to differentiate and understand emotions, and reliance on maladaptive forms of emotion regulation. We found that the combination of high levels of emotional clarity and frequent use of cognitive reappraisal were associated with (a) lesser total PTSD severity after accounting for shared variance with positive affect and the extent to which emotions are attended to (attention to emotions), and (b) greater positive affect after accounting for shared variance with total PTSD severity and attention to emotions. This is the first study to demonstrate interactive effects of emotional clarity and cognitive reappraisal.

Published by Elsevier Ltd.

1. Introduction

Posttraumatic Stress Disorder (PTSD) is a debilitating psychiatric condition prevalent in populations with high rates of trauma exposure, such as military veterans (Bremner, Southwick, Darnell, & Charney, 1996; Milliken, Aucterlonie, & Hoge, 2007). Current research on PTSD has demonstrated the underlying role of emotional disturbances, including a broad pattern of low emotional awareness and poor emotion regulation (Bonn-Miller, Vujanovic, Boden, & Gross, 2011; Frewen, Dozios, Neufeld, & Lanius, 2008; Kashdan, Breen, & Julian, 2010; Lanius et al., 2010; Tull, Barrett, McMillan, & Roemer, 2007). In the present study, our goal was to examine the interactive effects of one facet of emotional awareness (i.e., emotional clarity) and one type of emotion regulation (i.e., cognitive reappraisal) on PTSD symptom severity and positive affect among military Veterans with PTSD.

1.1. The role of cognitive reappraisal

Mounting evidence suggests that emotion regulation plays a crucial role in a wide range of psychological outcomes (Gross, 2007). One emotion regulation strategy that has received particular attention is cognitive reappraisal, which refers to altering how potentially emotion-eliciting situations are construed in order to change their emotional impact. Cognitive reappraisal is typically considered an adaptive strategy in that unpleasant emotions can be down-regulated following stressful events with minimal physiological and cognitive strain (Gross & John, 2003). Indeed, habitual use of cognitive reappraisal tends to be associated with greater mental health (Gross & John, 2003) and lower levels of psychopathology (Eftekhari, Zoellner, & Shree, 2009; Werner & Gross, 2010).

What is not yet clear is why some people are able to successfully engage in cognitive reappraisal while others are not. One explanation derives from the idea that successful self regulation is dependent on information about the intended target of regulation. Specifically, successful emotion regulation should require information about what is being felt from moment-to-moment (Feldman Barrett & Gross, 2001). Therefore, individual differences in emotional clarity (i.e., the extent to which one can identify, differentiate, and understand one's emotions; Gohm & Clore, 2000, 2002) might moderate the success of cognitive reappraisal.

☆ This work was supported by a Veterans Affairs Clinical Science Research and Development (CSR&D) Career Development Award – 2 and a California HIV/AIDS Research Program IDEA Award (163836), granted to Dr. Bonn-Miller. Todd B. Kashdan was financially supported as the senior scientist of the Center for Consciousness and Transformation, George Mason University.

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0887-6185/$ – see front matter Published by Elsevier Ltd.
doi:10.1016/j.janxdis.2011.11.007

1.2. The role of emotional clarity

Individual differences in emotional clarity underlies several higher order constructs such as emotional awareness, alexithymia, and emotional intelligence (Coffey, Berenbaum, & Kerns, 2003; Gohm & Clore, 2000, 2002). Individuals low (versus high) in emotional clarity are likely to be more limited in their ability to choose an adaptive emotion regulation strategy, such as cognitive reappraisal, and they may misinterpret and amplify physiological sensations that accompany emotional arousal (Pond et al., in press; Taylor, Bagby, & Parker, 1997). Consistent with this line of reasoning, a growing body of research has found that low emotional clarity (as indexed by individual difference measures, such as the Toronto Alexithymia Scale [TAS; Bagby, Parker, & Taylor, 1994]) strongly predicts a range of psychopathology, independent of other aspects of alexithymia and emotional awareness, such as the extent to which people attend to their emotions (e.g., Berenbaum et al., 2006; Berenbaum, Bredemeier, Thompson, & Boden, in press; Boden, Dizen, Baker, & Berenbaum, 2003). By contrast, individuals high in emotional clarity are likely to have increased ability to choose an adaptive emotion regulation strategy, such as cognitive reappraisal, and to be more successful in their efforts to manage emotions (Barrett, Gross, Christensen, & Benvenuto, 2001; Kang & Shaver, 2004; Kashdan, Ferssizidis, Collins, & Muraven, 2010) and to have greater mental health (e.g., Palmer, Donaldson & Stough, 2002). In summary, theory and research suggests that emotional clarity is a key factor influencing mental health and illness by direct and indirect, via emotion regulation, routes (also see Berenbaum, Raghavan, Le, Vernon, & Gomez, 2003).

1.3. Cognitive reappraisal, emotional clarity, and PTSD

One promising context within which to examine the interactive effects of emotional clarity and cognitive reappraisal is among individuals with PTSD. First, a large body of research has documented associations between PTSD and alexithymia, which is characterized in part by a combination of low attention to emotions and low emotional clarity (Frewen et al., 2008). Furthermore, research has found that low levels of emotional clarity strongly predict PTSD symptom severity above and beyond other aspects of alexithymia, emotional awareness, and emotion dysregulation (Tull et al., 2007). Third, features of PTSD include abnormal, heightened stress reactivity (Yehuda & McFarlane, 1995), and the corresponding use of avoidance-oriented coping strategies (Hepp, Moergeli, Buchi, Wittmann, & Schnyder, 2005; Jacobsen et al., 2002). In fact, PTSD has been characterized in part as a disorder of emotional avoidance (Feeny & Foa, 2005; Marx & Sloan, 2005), which further suggests that individuals with PTSD under-utilize active emotion-regulation strategies, such as cognitive reappraisal. Two studies investigating the use of cognitive reappraisal in the context of PTSD support this hypothesis, finding that less frequent use of cognitive reappraisal was associated with higher levels of PTSD symptom severity (Eftekhari et al., 2009; Ehring & Quack, 2010).

Moving beyond symptoms of PTSD, recent work has sought to understand the processes that contribute to well-being and positive adjustment following the experience of trauma (e.g., Kashdan, Breen, et al., 2010; Kashdan, Ferssizidis, et al., 2010; Tedeschi & Calhoun, 2004). It might reasonably be assumed that a combination of strong emotional clarity and frequent use of cognitive reappraisal would not only predict fewer and less severe PTSD symptoms, but, based on a growing body of evidence finding that psychopathology is relatively independent from positive experience (e.g., Carver, Sutton, & Scheier, 2000; Keyes, 2005), would also predict well-being among individuals with PTSD. This hypothesis follows from theories of psychological flexibility, which posit that the ability to match a given emotion regulation strategy with situational demands and goals is of more importance to psychological health than the particular strategy used (Kashdan & Rottenberg, 2010). Emotional clarity provides information that allows for the optimal selection and use of emotion regulation strategies to modulate emotions in a manner consistent with current goals (e.g., Feldman Barrett & Gross, 2001). Therefore, the benefits of cognitive reappraisal on well-being would in part dependent upon when and under what circumstances it is used to regulate emotions, which is largely influenced by emotional clarity. Findings addressing this hypothesis are especially important in terms of the treatment of PTSD, as: (1) evidence-based interventions that attempt to increase adaptive emotion regulation (e.g., cognitive processing therapy; Resick & Schnicke, 1992) have been shown to lead to reductions in PTSD symptoms (Monson et al., 2006); and yet, (2) a significant number of Veterans do not optimally respond to these treatments and retain diagnoses of PTSD following treatment (Monson et al., 2006).

1.4. The present study

The goal of the present investigation was to examine the interaction of emotional clarity and cognitive reappraisal in predicting PTSD symptom severity and positive affect among military Veterans seeking treatment at a Department of Veterans Affairs (VA) Medical Center. It was hypothesized that veterans with PTSD who frequently used cognitive reappraisal would report less symptom severity and more positive affect, especially if they also had high levels of emotional clarity. Furthermore, it was hypothesized that these interactive effects would be significant even after accounting for shared variance with the extent to which participants attended to their emotions (i.e., attention to emotions). Attention to emotions is a second facet that underlies alexithymia and emotional awareness (Coffey et al., 2003; Gohm & Clore, 2000, 2002). Thus, we attempted to demonstrate that significant effects were specific to the interaction of emotional clarity and cognitive reappraisal, and not to emotional awareness or alexithymia more broadly.

2. Method

2.1. Participants

A total of 75 military Veteran patients (93% male; M_{age} = 45.2 years, SD = 14.4; range = 21–66) participated in this study. All participants had a primary diagnosis of PTSD. Diagnoses were provided by VA staff clinicians prior to treatment entry and confirmed upon entry into PTSD treatment at the residential rehabilitation programs (see next paragraph). The majority of the sample identified their racial/ethnic composition as Caucasian (59.5%), followed by Hispanic/Latino/a (23.0%), African American (12.2%), Pacific Islander (2.7%), Native American/Alaskan Native (1.4%), and "Other" (1.4%). Almost all participants (88.1%) were exposed to some form of combat. The majority reported combat experiences in Iraq/Afghanistan (45.4%), followed by Vietnam (36.0%) and the Persian Gulf (12.0%).

Participants were admitted for PTSD treatment at the residential rehabilitation programs of the VA Palo Alto Health Care System between 2008 and 2010. This program admits veterans and active-duty military personnel with military-related PTSD and related problems. The program has a national catchment area, receiving referrals from VHA hospitals/clinics, Vet Centers, and private practitioners around the country. Veterans are referred to the residential program when a more intensive, residential treatment environment is indicated. Often, this means that PTSD symptoms have been treatment-refractory in outpatient but referrals are also made