Personality and Individual Differences 50 (2011) 588–592

Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

Impulsivity and alcohol use coping motives in a trauma-exposed sample: The mediating role of distress tolerance

Erin C. Marshall-Berenz [a,*], Anka A. Vujanovic [b], Laura MacPherson [c]

[a] University of Vermont, 2 Colchester Avenue, Burlington, VT 05405-0134, USA
[b] National Center for PTSD – Behavioral Sciences Division, VA Boston Health Care System and Boston University School of Medicine, 150 South Huntington Avenue, (116B-2) Boston, MA 02130, USA
[c] University of Maryland, College Park, MD 20742-5241, USA

ARTICLE INFO

Article history:
Received 5 August 2010
Received in revised form 18 November 2010
Accepted 24 November 2010
Available online 30 December 2010

Keywords:
Impulsivity
Alcohol
Coping
Distress tolerance
PTSD

ABSTRACT

The present investigation examined the mediating role of distress tolerance in the association between impulsivity and alcohol use coping motives among trauma-exposed individuals. Participants were 86 adults (64.3% women; M_{age} = 23.4, SD = 9.3) who met the *DSM-IV-TR* posttraumatic stress disorder (PTSD) Criterion A for at least one traumatic life event and endorsed alcohol use in the past month. Distress tolerance at least partially mediated the association between impulsivity and alcohol use coping motives, after controlling for the variance explained by PTSD symptom severity and alcohol use problems. Clinical implications and future directions related to this line of inquiry are presented and discussed.

1. Introduction

Significant associations have been documented between posttraumatic stress disorder (PTSD) symptoms, including PTSD diagnosis, and alcohol use disorders (e.g., McFarlane et al., 2009; Stewart, 1996). Recent efforts have focused on elucidating the mechanisms underlying the co-occurrence of these clinical problems. The examination of motivations for alcohol use is promising in understanding the association between PTSD and problematic alcohol use. Coping motives, in particular, are significantly related to alcohol consumption and alcohol use problems (Cooper, 1994). Emerging research has indicated that trauma-exposed individuals with or without PTSD are especially likely to demonstrate enhanced motivation to drink alcohol to cope with negative affective states (e.g., Dixon, Leen-Feldner, Ham, Feldner, & Lewis, 2009), and drinking to cope has been shown to mediate the relationship between alcohol consumption rate and PTSD symptoms (Kaysen et al., 2007). Given the associations between PTSD symptoms and alcohol use coping motives, it is pertinent to improve our understanding of cognitive-affective factors that may underlie this relationship to inform clinical interventions. Impulsivity and distress tolerance are two promising factors in this domain, as both possess associations to PTSD symptoms and problem alcohol use.

Impulsivity, the tendency to opt for immediate reward regardless of long-term consequences (Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001), is associated with PTSD (Casada & Roache, 2005), binge drinking (James & Taylor, 2007), and shorter duration of alcohol abstinence (Charney, Zikos, & Gill, 2010). Impulsivity may function as a risk and maintenance factor for PTSD symptoms. Specifically, greater impulsivity may predispose individuals to engage in high-risk behaviors (e.g., substance use), which may lead to increased risk for trauma exposure (e.g., Stewart & Israeli, 2002). Moreover, greater impulsivity post-trauma theoretically may predispose individuals with PTSD symptoms to act upon their symptoms in a risky manner to alleviate the associated distress. Finally, theory and emerging empirical evidence suggest that individuals high in certain forms of impulsivity (e.g., "negative urgency," or the tendency to "act rashly in response to distress," Cyders et al., 2007) may more immediately select negative reinforcement opportunities, such as coping-oriented alcohol use, when faced with high levels of negative affect (Cyders & Smith, 2008).

Distress tolerance, the perceived or actual ability to withstand aversive physical or emotional stimuli (Simons & Gaher, 2005), is another promising explanatory factor in the association between PTSD and alcohol use coping motives. Distress tolerance is a theoretically malleable factor (e.g., Linehan, 1993) that has been inversely related to PTSD symptoms (Marshall-Berenz, Vujanovic,

* Corresponding author. Address: The University of Vermont, Department of Psychology, 2 Colchester Avenue, John Dewey Hall, Burlington, VT 05405-0134, USA. Tel.: +1 802 656 3831; fax: +1 802 656 8783.
E-mail address: Erin.Marshall@uvm.edu (E.C. Marshall-Berenz).

0191-8869/$ - see front matter © 2010 Elsevier Ltd. All rights reserved.
doi:10.1016/j.paid.2010.11.033

Bonn-Miller, Bernstein, & Zvolensky, 2010), alcohol use problems (Buckner, Keough, & Schmidt, 2007), duration of substance use abstinence attempts (Daughters, Lejuez, Kahler, Strong, & Brown, 2005), and coping motives for alcohol use (Buckner et al., 2007). Trauma-exposed individuals with lower levels of distress tolerance may perceive their abilities to withstand emotional distress as compromised, and may be more motivated to use alcohol to regulate negative mood states. Consistent with this perspective, recent work has demonstrated that lower levels of distress tolerance partially mediated the association between PTSD symptoms and alcohol use coping motives among trauma-exposed adults (Vujanovic, Marshall-Berenz, & Zvolensky, in press).

To our knowledge, no studies have examined the association between impulsivity and distress tolerance, although extant models of impulsivity hypothesize key relationships between these constructs (Cyders & Smith, 2008). Further, no empirical work to date has examined the relationships among impulsivity, distress tolerance, and alcohol use coping motives among trauma-exposed adults in one overarching model. Among trauma-exposed individuals, lower levels of perceived distress tolerance (i.e., cognitive self-appraisals of one's ability to tolerate distress) may help to explain the association between impulsivity and the tendency to opt for negative reinforcement (e.g., alcohol use) without regard for long-term consequences (Cyders & Smith, 2008). In so doing, these individuals may develop or maintain the perception that they cannot tolerate negative affective states without engaging in a behavior to alleviate those states. Lower perceived distress tolerance may thus partially mediate the relationship between impulsivity and coping motives for alcohol use, such that impulsive individuals may experience increased motivation to drink to cope by way of learning that they cannot tolerate episodes of negative affect but rather require immediate relief of the distressing affective state.

The aim of the current study was to investigate the mediating role of perceived distress tolerance in the relationship between self-reported impulsivity and coping-oriented alcohol use motives in a trauma-exposed community sample. Consistent with formal tests of mediation, it was hypothesized that: (1) impulsivity would be positively associated with alcohol use coping motives; (2) impulsivity would be negatively associated with distress tolerance; and (3) distress tolerance would mediate the relationship between impulsivity and alcohol use coping motives (please see Fig. 1). All proposed effects were examined after accounting for the variance contributed by alcohol use problems and PTSD symptom severity.

2. Method

2.1. Participants

Participants were 86 adults (64.3% women; M_{age} = 23.4, SD = 9.3) who met the *Diagnostic and Statistical Manual-IV*(*DSM-IV-TR*)PTSD Criterion A1 and Criterion A2 (American Psychiatric Association [APA], 2000, p. 467) for at least one traumatic life event. Consistent with the Vermont state population (State of Vermont Department of Health, 2007), approximately 94.0% of the sample identified as White/Caucasian, 2.4% as Hispanic/Latino, 1.2% as Asian, 1.2% as Biracial, and 1.2% as "other". With regard to educational status, approximately 64.3% completed some college, 17.9% completed high school/GED, 9.5% completed college, 2.4% completed some graduate school, 4.8% completed a graduate degree, and 1.2% completed less than a high school degree.

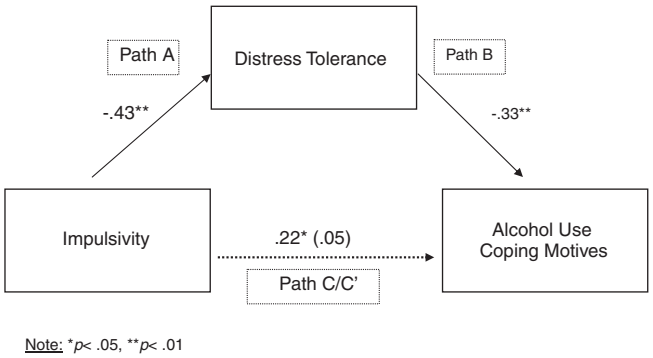

Fig. 1. Proposed model: distress tolerance as mediator of the association between impulsivity and alcohol use coping motives.

2.2. Measures

2.2.1. Structured clinical interview for DSM-IV – Non-patient version (SCID-I/NP; First, Spitzer, Gibbon, & Williams, 1994)

The SCID-I/NP was administered to assess current (past month) axis I mood and anxiety disorders, current (past 6 months) substance use disorders, suicidal ideation, and psychotic-spectrum symptoms. Each SCID administration was reviewed by the PI (E.M.-B.) to ensure inter-rater agreement. No instances of diagnostic disagreement between the CAPS interviewers and the PI were noted.

2.2.2. Clinician-administered PTSD scale (CAPS; Blake et al., 1995)

The CAPS was employed to assess the frequency and intensity of current (past month) PTSD symptoms and a PTSD diagnosis. All individuals met the DSM-IV-TR PTSD Criterion A (APA, 2000, p. 467) for at least one traumatic event. The CAPS Life Events Checklist was used to index number of traumatic events. All events endorsed on the Life Events Checklist are not assessed for Criterion A status, only the target/worst event. Past work has found that the Life Events Checklist has good test–retest reliability and convergent validity (Gray, Litz, Hsu, & Lombardo, 2004). Consistent with prior research (Weathers, Ruscio, & Keane, 1999), symptom severity was defined as the sum of the frequency and intensity ratings. CAPS administrations were conducted by trained clinical assessors and reviewed by the PI (E.M.-B.) to ensure agreement on PTSD symptom ratings and diagnosis. No instances of diagnostic disagreement between the CAPS interviewers and PI were noted.

2.2.3. Alcohol use disorders identification test (AUDIT; Babor, de la Fuente, Saunders, & Grant, 1992)

The AUDIT is a 10-item self-report screening measure developed by the World Health Organization to identify individuals with alcohol problems (Babor et al., 1992). There is a large body of literature attesting to the psychometric properties of the AUDIT (e.g., Saunders, Aasland, Babor, de la Fuente, & Grant, 1993). The current study utilized: (1) a composite of the frequency item and quantity item (items 1 and 2) to index alcohol consumption; and (2) the total score to measure alcohol use problems (Babor et al., 1992). Individuals scoring an eight or higher on the AUDIT total likely meet criteria for at least "moderate" alcohol problems (Babor et al., 1992).

2.2.4. Barratt impulsiveness scale (BIS-11; Patton, Stanford, & Barratt, 1995)

The BIS-11 is a 30-item self-report measure, on which respondents indicate, on a 4-point Likert-type scale (1 = rarely/never to 4 = almost always/always), the extent to which they behave impulsively (e.g., "I do things without thinking"). The BIS is a well-established measure of impulsive personality traits with good psychometric properties (Stanford et al., 2009). The total BIS-11 score (α = .83) was computed in the current study to index general levels of impulsivity.