Drug and Alcohol Dependence 155 (2015) 147–153

Contents lists available at ScienceDirect

Drug and Alcohol Dependence

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

Posttraumatic stress disorder symptoms and risky behaviors among trauma-exposed inpatients with substance dependence: The influence of negative and positive urgency

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ARTICLE INFO

Article history:
Received 24 April 2015
Received in revised form 24 July 2015
Accepted 28 July 2015
Available online 2 August 2015

Keywords:
Posttraumatic stress disorder
Substance use disorder
Risky behaviors
Negative urgency
Positive urgency
Emotion dysregulation

ABSTRACT

Background: Posttraumatic stress disorder (PTSD) among inpatients with substance use disorders (SUDs) is associated with heightened engagement in a variety of risky, self-destructive, and health-compromising behaviors (e.g., risky sexual behavior, aggression). Extant research provides support for the role of emotion dysregulation in the PTSD-risky behavior relation among inpatients with SUD; however, this research has been limited by a focus on emotion dysregulation involving negative (versus positive) emotions. The goal of the current study was to extend past research on the PTSD-risky behavior relation by examining the potential mediating roles of negative and positive urgency (two domains of emotion dysregulation defined by the tendency to engage in risky behavior in the context of negative and positive emotions, respectively).
Methods: Participants were 158 trauma-exposed inpatients with (n = 91) and without (n = 67) lifetime PTSD consecutively admitted to a residential SUD treatment facility (M age = 34.34; 59.5% White, 50.6% female). Patients were administered diagnostic interviews and completed self-report questionnaires.
Results: Significant positive associations were found among lifetime PTSD symptoms, negative and positive urgency, and risky behaviors. Moreover, findings revealed significant indirect effects of lifetime PTSD symptoms on risky behaviors through the pathways of both negative and positive urgency.
Conclusions: Results provide initial support for the mediating roles of both negative and positive urgency in the PTSD-risky behavior relation, highlighting the potential utility of teaching trauma-exposed inpatients with PTSD-SUD skills for tolerating negative and positive emotional states without engaging in maladaptive behaviors.

1. Introduction

Posttraumatic stress disorder (PTSD) is a serious psychiatric disorder characterized by symptoms of intrusion, avoidance, negative cognition/mood, and arousal/reactivity following direct or indirect exposure to a traumatic event (American Psychiatric Association (APA), 2013). Whereas 8–14% of the general population will meet criteria for PTSD at some point in their lifetime (e.g., Breslau et al., 1998; Kessler et al., 1995), heightened rates of PTSD have been found among inpatients with a substance use disorders (SUDs), with approximately 36–50% of individuals seeking treatment for SUD meeting criteria for lifetime PTSD (see Brady et al., 2004 for a review). The co-occurrence of PTSD and SUD is clinically-relevant. Co-occurring PTSD-SUD (versus SUD alone) has been associated with heightened engagement in a wide range of risky, self-destructive, and health-compromising behaviors, such as risky sexual behavior (e.g., Weiss et al., 2013b), deliberate self-harm (e.g., Gratz and Tull, 2010b), aggressive behavior (e.g., Weiss et al., 2014), and disordered eating (e.g., Cohen et al., 2010). Moreover, inpatients with PTSD-SUD report more severe patterns of substance use than inpatients with SUD alone (e.g., Back et al., 2000). Notably, engagement in these risky behaviors has been linked to numerous deleterious consequences (e.g., disease/injury, crime and criminal

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http://dx.doi.org/10.1016/j.drugalcdep.2015.07.679
0376-8716/

justice system costs, decreased worker productivity; Cawley and Ruhm, 2011; Zohrabian and Philipson, 2010), as well as worse SUD outcomes (e.g., SUD treatment dropout; Patkar et al., 2004). However, despite the clear clinical relevance and public health significance of risky behaviors among inpatients with PTSD-SUD, little research has investigated the potential mechanisms underlying the PTSD-risky behavior relation within this population.

An emerging body of literature highlights the role of emotion dysregulation in the development, maintenance, and/or exacerbation of risky behaviors (see Weiss et al., 2015b, in press for reviews). Emotion dysregulation is a multi-faceted construct involving maladaptive ways of responding to emotions, regardless of their intensity or reactivity (Gratz and Roemer, 2004; Gratz and Tull, 2010a). The heightened emotion dysregulation reported by inpatients with co-occurring PTSD-SUD (e.g., Weiss et al., 2012, 2013a,c) is theorized to underlie the elevated rates of risky behaviors within this population; however, the precise nature of this relation remains unclear (see Tull et al., in press, for a review). Risky behaviors may have an emotion regulating function, serving to escape or avoid the heightened levels of emotional distress common among individuals with PTSD (e.g., Baker et al., 2004; Khantzian, 1997) or to elicit, maintain, or enhance positive emotional states (e.g., Cox and Klinger, 1988; Nock and Prinstein, 2004). Alternatively, the elevated levels of emotion dysregulation among inpatients with co-occurring PTSD-SUD may interfere with the ability to control behaviors in the context of intense emotions (Baumeister et al., 1998).

Consistent with this theoretical literature, preliminary empirical evidence supports the relevance of emotion dysregulation to risky behaviors within SUD samples. For example, levels of emotion dysregulation among inpatients with SUD have been found to be significantly positively associated with overall risky behaviors (e.g., Weiss et al., 2012), as well as the specific risky behaviors of substance use (e.g., Axelrod et al., 2011), risky sexual behavior (e.g., Tull et al., 2012), deliberate self-harm (e.g., Gratz and Tull, 2010b), aggressive behavior (e.g., Long et al., 2014), and disordered eating (e.g., Lavender et al., 2015). Further, and of particular relevance to the present study, results of Weiss et al. (2012) provide initial support for the mediating role of emotion dysregulation in the PTSD-risky behavior relation among inpatients with SUD. Notably, however, no studies have examined the role of specific dimensions of emotion dysregulation in the association between PTSD and risky behaviors.

Nonetheless, a growing body of research underscores the relevance of the specific dimension of emotion dysregulation involving difficulties controlling behaviors in the context of intense emotions (i.e., urgency) to both PTSD (Weiss et al., 2013a,c) and risky behaviors (see Cyders and Smith, 2007, 2008 for reviews). With regard to the relation between urgency and PTSD among inpatients with SUD, Weiss et al. (2013a) found significantly higher levels of urgency among inpatients with co-occurring PTSD-SUD (versus SUD only). Moreover, urgency emerged as a unique predictor of PTSD status (present versus absent) among inpatients with SUD, above and beyond other dimensions of emotion dysregulation (Weiss et al., 2013c). As for the urgency-risky behavior relation, literature reviews focused on the UPPS (the most widely-used measure of urgency; Cyders et al., 2007; Whiteside and Lynam, 2001) suggest that urgency is a stronger predictor of risky behaviors than the other constructs assessed by the UPPS (i.e., sensation seeking, lack of premeditation, and lack of perseverance; Cyders and Smith, 2007, 2008). Similarly, meta-analyses indicate that urgency in particular (relative to sensation seeking, lack of premeditation, and lack of perseverance) is more strongly related to a range of risky behaviors, including substance use and negative alcohol-related outcomes, self-injurious behaviors, disordered eating, and aggression (Berg et al., in press; Coskunpinar et al., 2013). Although studies provide support for the urgency-risky behavior relation, it warrants mention that this research has focused almost exclusively on non-clinical populations, and no studies have explored the precise interrelations among PTSD, urgency, and risky behaviors in general or among inpatients with SUD in particular. Such investigations may elucidate specific treatment targets for reducing risky behaviors within a population at high risk for these behaviors.

An additional limitation of extant research on the relations among PTSD, emotion dysregulation, and risky behaviors is its primary focus on emotion dysregulation involving negative (versus positive) emotions. Individuals can experience dysregulation across both negative and positive emotional systems (e.g., Cyders and Smith, 2008; Gruber et al., 2011; Weiss et al., 2015a), and research has identified the relevance of several difficulties in the regulation of positive emotions to PTSD and/or risky behaviors, including nonacceptance of positive emotions, low positive emotion differentiation, and difficulty controlling risky behaviors and engaging in goal-directed behaviors when experiencing positive emotions (e.g., Dixon-Gordon et al., 2014; Roemer et al., 2001; Tull and Roemer, 2007; Weiss et al., 2015a). However, no studies have examined the role of difficulties in the regulation of positive emotions in the PTSD-risky behavior relation in general or among inpatients with SUD. In particular, despite past studies both linking difficulties controlling behaviors in the context of intense positive emotions (i.e., positive urgency; see Cyders et al., 2007) to numerous risky behaviors in non-PTSD populations (e.g., substance use, risky sexual behavior, disordered eating, and gambling; Anestis et al., 2007; Cyders et al., 2009; Cyders and Smith, 2008; Cyders et al., 2007; Fischer et al., 2007; Zapolski et al., 2009) and highlighting the relevance of difficulties controlling behaviors in the context of intense negative emotions (i.e., negative urgency; see Whiteside and Lynam, 2001) to PTSD (Weiss et al., 2013a,c), no research has examined the relevance of positive urgency to the PTSD-risky behavior relation in inpatients with SUD.

Thus, the goal of the current study was to examine the potential mediating roles of both negative and positive urgency in the relation between PTSD symptoms and risky behaviors in a sample of trauma-exposed inpatients with SUD. We hypothesized that PTSD symptoms would be significantly positively associated with negative urgency, positive urgency, and risky behaviors. Furthermore, we predicted that negative and positive urgency would be significantly positively associated with risky behaviors. Finally, we hypothesized that both negative and positive urgency would mediate the relation between PTSD symptoms and risky behaviors.

2. Methods

2.1. Participants

Participants were 158 trauma-exposed inpatients admitted to a residential SUD treatment facility in central Mississippi. Standard treatment at this treatment facility involves a mix of strategies from Alcoholics Anonymous and Narcotics Anonymous, as well as groups that cover a variety of topics, including coping skills and relapse prevention. This treatment center requires complete abstinence from drugs and alcohol, with the exception of nicotine and caffeine. Methadone maintenance is not available at this treatment facility, and no patients were receiving medication-assisted treatment for their SUD at the time of this study. Aside from scheduled activities, residents are not permitted to leave the treatment facility. Participants ranged in age from 18 to 59 (M age = 34.34, SD = 9.99) and just over half were female (n = 80, 50.6%). In terms of racial/ethnic background, 59.5% of participants (n = 94) self-identified as White, 36.7% as Black/African American (n = 58), 1.9% as Latino/a (n = 3), 1.3% as Native American (n = 2), and 0.6% as Asian/Southeast Asian (n = 1). Almost half of the participants reported an annual income under $10,000 ($n$ = 76, 48.7%), and 62.7% (n = 99) had no higher than a high school education. Most participants were single (n = 133; 84.2%).

2.2. Measures

2.2.1. Clinical interviews. The SUD module of the *Structured Clinical Interview for Diagnostic DSM-IV Axis I Disorders* (SCID-I/P; First et al., 1996) was used to determine the presence of current substance dependence across a variety of different