Imagery rescripting and exposure group treatment of posttraumatic nightmares in Veterans with PTSD

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ABSTRACT

This study details results of an open trial of a group psychological treatment for Veterans with post-traumatic stress disorder (PTSD) and chronic posttraumatic nightmares called "Imagery Rescripting and Exposure Therapy" (IRET). IRET is a variant of a successful imagery rescripting treatment for civilian trauma-related nightmares that was modified to address the needs of the Veteran population. Thirty-seven male U.S. Veterans with PTSD and nightmares attended 6 multicomponent group sessions. Findings indicated that the intervention significantly reduced frequency of nightmares and PTSD severity, as well as increased hours of sleep. Unlike the few open trials examining treatment of nightmares in Veterans, effect sizes in this study were similar to those that have been found in the civilian randomized controlled trial. These preliminary findings suggest that a nightmares treatment can be adapted to successfully reduce distress associated with combat Veterans' chronic nightmares. Clinical and research implications are discussed.

1. Introduction

Posttraumatic nightmares refer to or replicate traumatic experiences and are considered to be an integral feature of posttraumatic stress disorder (PTSD, Phelps, Forbes, & Creamer, 2008). Indeed, trauma-related nightmares have been referred to as the hallmark of PTSD due to the frequency with which traumatized individuals report them (Hartmann, 1996). Despite evidence indicating the efficacy of treatments including an imagery technique called imagery rescripting in reducing nightmares and related distress in the civilian population (Wittman, Schredl, & Kramer, 2006), treatment of nightmares in Veterans has been largely unexamined. The current study investigated the preliminary efficacy of Imagery Rescripting and Exposure Therapy (IRET), a Veteran adaption of a successful civilian imagery rescripting treatment, in reducing symptoms of nightmares and related distress in the Veteran population.

Nightmares in Veterans warrant special attention in the treatment of PTSD because sleep complaints are highly prevalent, have a generally severe effect on overall functioning, and often persist for decades after the original trauma (Schreuder, Kleeji, & Rooijmnas, 2000). Reported prevalence rates of chronic nightmares in the Vietnam Veteran population range from 53 to 88% (Fontana & Rosenheck, 2008), with approximately 70% of Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) Veterans diagnosed with PTSD reporting sleep disturbances (Seal, Bertenthal, Miner, Sen, & Marmar, 2007).

Despite the efficacy of cognitive-behavioral trauma-related therapies in treating global PTSD symptoms, sleep disturbances and nightmares are often resistant to front-line psychological (Galovski, Monson, Bruce, & Resick, 2009; Spoormaker & Montgomery, 2008; Zayfert & DeViva, 2004) and pharmacological (van Liempt, Vermetten, Geuze, & Westenberg, 2006) treatments of PTSD. Emerging evidence indicates that therapies targeting nightmares directly have been more successful in producing simultaneous improvement in nightmares and related distress than interventions that treat PTSD symptoms globally (Wittman et al., 2006).

Treatment outcome studies incorporating imagery rescripting have evidenced the greatest efficacy for reducing the frequency of nightmares and associated distress in civilians (Long & Quevillon, 2009; Wittman et al., 2006). During nightmare imagery rescripting treatment, the content of a distressing nightmare is modified to be

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less upsetting, with the rescripted nightmare then being read by the patient directly before going to sleep. According to cognitive-behavioral theorists, imagery rescripting techniques may reduce symptoms of PTSD through activation of the fear network, with exposure to the trauma images and related thoughts and feelings resulting in habituation (Long & Quevillon, 2009). It has also been hypothesized that imagery rescripting is therapeutic by identifying and modifying maladaptive beliefs, empowering the client through increased mastery over the images, and improving self-soothing abilities and imagery control.

Variants of imagery rescripting interventions have been examined as a treatment for civilians' idiopathic nightmares since the late 1970s (Long & Quevillon, 2009; Wittman et al., 2006). Davis and Wright (2005) tailored idiopathic imagery rescripting interventions to address the unique characteristics and issues raised by chronic trauma-related nightmares in civilians. In one of the few randomized controlled trials examining the use of imagery rescripting to treat civilian posttraumatic nightmares, the Davis and Wright intervention, Exposure, Relaxation, and Rescripting Therapy (ERRT, 2007), resulted in larger reductions in frequency of nightmares, sleep disturbance, and PSTD frequency at 3-months post-treatment than other imagery rescripting variants (with Cohen's d of .96, 1.04, and .83, respectively).

To date, most nightmare treatment outcome trials have been conducted only with civilians, with just one randomized and five non-randomized Veteran nightmare studies being published to date (Cook et al., 2010; Forbes et al., 2003; Harb, Cook, Gehrman, Gamble, & Ross, 2009; Lu, Wagner, Van Male, Whitehead, & Boehnlein, 2009; Moore & Krakow, 2007; Nappi, Drummond, Thorp, & McQuaid, 2010). All studies used imagery rescripting and evidenced reductions in nightmare frequency and related sleep disturbances; however, the studies evidenced smaller effect sizes in these primary outcomes than similar studies with the civilian population (with post-treatment Cohen's d effect sizes ranging from .09 to .70 for nightmare frequency and −.001 to .57 for sleep quantity, and not all differences resulting in a significant α level). Reduction in overall PTSD symptoms was also smaller than in civilian nightmare studies (ranging from .27 to .74 for PTSD frequency); and, unlike the Davis and Wright civilian study (2007), most Veterans retained their PTSD diagnosis after treatment (Lu et al., 2009).

The current study details the findings of an open trial of Imagery Rescripting and Exposure Therapy (IRET). IRET is the first multi-component group treatment modified from Davis and Wright's (2005) Exposure, Relaxation, and Rescripting Therapy (ERRT) to meet the needs of Veterans with posttraumatic stress disorder (PTSD) and trauma-related nightmares. The hypotheses were that Veteran participation in the IRET treatment would result in a significant improvement in the primary outcome measures (frequency of nightmares and quantity of hours slept), as well as decreases in PTSD frequency, that were similar to the civilian treatment outcome effects.

IRET for Veterans modifies ERRT by increasing the number of sessions, augmenting exposure to the original nightmare, and providing extra practice in nightmare rescripting. These modifications were made in order to address the PSTD treatment-resistance often found in the Veterans (Creamer & Forbes, 2004), as well as to improve on previous nightmare treatment results with this population. Previous imagery rescripting treatments for Veteran nightmares may not have been as effective as with civilians because of many Veterans' resistance to discuss or modify their nightmares and/or sleep behavior (e.g., due to long-standing negative sleep habits and the frequent long-term, chronic, and replicative nature of their nightmares (Phelps et al., 2008). In order to address this resistance, the number of group treatment sessions was increased from three to six. The lengthier treatment

allowed for enhanced focus on sleep management skills, an augmented nightmare exposure component, and extra description and practice of nightmare rescripting. The exposure component of the civilian treatment was augmented in order to capitalize on the effectiveness of exposure therapy in habituating patients to distressing images and related thoughts/feelings (Bisson et al., 2007), and consequently reducing resistance to subsequent discussing and rescripting their nightmares in proceeding sessions.

2. Method

2.1. Participants

Participants were 37 male Veterans aged between 40 and 72 years who were enrolled in a specialty mental health program for PTSD in a large VA hospital and who completed the IRET group treatment between October 2008 and October 2009. All participants reported a long history of nightmares (i.e., more than 3 decades for the majority of participants), with onset of symptomatology occurring typically during or shortly after returning from deployment. The majority of participants had not participated in PTSD-specific psychosocial interventions prior to entering the group, with PTSD-specific treatment being operationalized as individual or group participation in currently approved front-line psychosocial interventions for Veteran PTSD (e.g., prolonged exposure, cognitive-processing therapy, or anxiety-management skills training). Demographic information for the sample is summarized in Table 1.

Participants were referred to the group treatment by their primary mental health providers and all expressed an interest in participating in psychosocial group treatment for their sleep and nightmare disturbance. All patients received a description and rationale for the treatment by phone by the facilitator and were screened for nightmare frequency, sleep quantity/quality, safety to self and others, active substance dependence or psychosis, and motivation for treatment prior to signing up for the group. Eligible participants were adult Veterans enrolled in the PTSD program reporting at least one combat-related nightmare weekly. Exclusion criteria for the group included patients who were actively suicidal, substance dependent, or psychotic.

2.2. Measures

2.2.1. PTSD Checklist-Military Version (PCL-M) (Weathers, Litz, Huska, & Keane, 1994)

The PCL-M is a 17-item Likert-type self-report measure that corresponds to the PTSD criteria in the *Diagnostic and Statistical Manual of Mental Disorder-Fourth Edition (DSM-IV)* (American Psychiatric and Association, 2000). Participant's completed the PCL-M at the beginning of the first and last sessions in order to assess PTSD frequency at the different time points. The PCL's psychometric properties are compelling, with excellent internal consistency (α = .94) (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996; Ruggiero, Del Ben, Scotti, & Rabalais, 2003), and excellent test-retest reliability of .88 for a 1-week interval (Ruggiero et al., 2003). Weathers et al. (1993) found a cutoff score of 50 yielded a sensitivity of .82 and specificity of .83 in a combat Veteran sample.

2.2.2. Daily sleep activities log (DSAL) (Thompson, Hamilton, & West, 1995)

The DSAL is a daily diary of 10-items that assesses quantity of sleep and occurrence of nightmares for the previous night that was adapted for the Veteran IRET open trial. Participants completed the DSAL each morning during the course of the study. Convergent validity of the original DSAL with the Trauma Related Nightmare