Case Series Utilizing Exposure, Relaxation, and Rescripting Therapy: Impact on Nightmares, Sleep Quality, and Psychological Distress

Joanne L. Davis and David C. Wright
Department of Psychology
University of Tulsa

Experiencing a traumatic event may initiate or exacerbate the occurrence of nightmares. Nightmares may impact sleep quality and quantity, posttraumatic stress symptoms, and depression. Recently, imagery rehearsal has gained attention in the treatment of trauma-related nightmares and is reported to be promising in the reduction of nightmares. On the basis of the vast literature describing the therapeutic benefits of exposure techniques for anxiety-related problems, the treatment was modified to enhance the exposure component. This article presents a case series using this modified version of imagery rehearsal, Exposure, Relaxation, and Rescripting Therapy, with 1 male and 3 female participants. Overall, the participants treated reported a reduction in nightmare frequency and severity; 3 out of 4 participants also reported a reduction in posttraumatic stress and depression symptomatology and an increase in sleep quality and quantity. Clinical implications and future research directions are discussed.

Impaired sleep and nightmares are common, central, and persistent complaints among individuals with posttraumatic stress disorder (PTSD; e.g., Krakow et al., 2001). Empirical findings suggest that trauma-related nightmares are associated with overall levels of reported distress and overall severity of reexperiencing symptoms (e.g., Schreuder, Kleijn, & Rooijmans, 1999). In recent years, treatments specifically targeting trauma-related nightmares have been developed.

Requests for reprints should be sent to Joanne L. Davis, Department of Psychology, 308G Lorton Hall, University of Tulsa, 600 South College Avenue, Tulsa, OK 74104. E-mail: joanne-davis@utulsa.edu
Treatments outlined by Forbes and colleagues (2003), as well as Krakow and colleagues (2001), use imagery rehearsal (i.e., rescripting or mastery, in which participants change some aspect of their dream) as the main therapeutic technique. Although the treatments described by both groups target trauma-related nightmares, exposure to trauma material is minimized. Krakow and colleagues (2001) curtailed the degree of exposure in their treatment by discouraging discussion of traumatic content of the nightmare and the trauma itself. Although Forbes et al. (2003) allowed for discussion of the most disturbing nightmare, which may be similar to the actual event, it does not appear that the trauma itself is addressed. The rationale for the diminished role of exposure techniques is unclear, particularly given the strong empirical evidence that supports their positive effect in reducing posttraumatic stress symptoms (e.g., Foa, Keane, & Friedman, 2000).

We modified the imagery rehearsal treatment protocol described by Thompson, Hamilton, and West (1995) to capitalize on exposure techniques. These modifications included a significant education component regarding trauma and its effects, allowing for discussion of the trauma itself throughout the treatment, identifying trauma-related themes evidenced in the nightmare, and discussing the relationship of the nightmare to the actual trauma. The present study examined the impact of this treatment, Exposure, Relaxation, and Rescripting Therapy (ERRT), on the intensity and frequency of trauma-related nightmares, associated sleep disturbances, and psychological distress in a case-series design of 4 trauma survivors. Participants were assessed pretreatment, posttreatment, and at 3- and 6-month follow-ups.

METHOD

Participants

Participants responded to flyers that were distributed in the community, responded to radio ads, or were referred from counselors practicing within the community. There were no restrictions on race or ethnic background. Those who met the eligibility criteria were provided with a $20 gift certificate to a local department store for completing the evaluation and were invited to participate in the treatment.

Measures

Measures administered to each participant included the trauma assessment for adults: self-report version (TAA; Resnick, Best, Kilpatrick, Freedy, & Falsetti, 1993) to assess trauma history; the Structured Clinical Interview for the DSM–IV: PTSD Module (SCID; Spitzer, Williams, & Gibbon, 1995); the Beck Depression Inventory (Beck, Ward, Medelsohn, Mock, & Erbaugh, 1961); the Pittsburgh
Sleep Quality Index—Modified (Buysse, Reynolds, Monk, Berman, & Kupfer, 1989) to assess sleep problems; and the Trauma Related Nightmare Scale (Davis, Wright, & Borntrager, 2001) to assess nightmares’ characteristics.

ERRT Protocol

Participants met for 2 hr once per week for 3 weeks. ERRT targets three systems in which anxiety may manifest: physiological (e.g., increased arousal close to the time one typically goes to bed), behavioral (e.g., using substances to aid in falling asleep), and cognitive (e.g., belief that one will have a nightmare if one falls asleep). The first session involved the provision of psychoeducation regarding trauma; development, maintenance, and impact of nightmares; and sleep hygiene. Progressive muscle relaxation (PMR) procedures were taught and practiced within this session. Homework throughout treatment included daily monitoring of symptoms of PTSD, nightmares, and quantity and quality of sleep, as well as practicing PMR. The second session included review of homework and provision of a rationale for exposure procedures. Participants then wrote out their nightmare (and were encouraged to choose the most frequent and disturbing nightmare) and read it aloud. The therapist and the participant then identified specific trauma themes (i.e., power, safety, trust, esteem, and intimacy; see Resick & Schnicke, 1993) incorporated in the nightmare and discussed their relation to the original trauma. Specifically, participants identified how the trauma themes evident in their nightmares were manifested at the time of the trauma and in the time since the trauma occurred. A rationale for altering the nightmare was provided, and participants rewrote their nightmare incorporating the trauma themes, read it aloud, and discussed it. Subjective units of distress ratings were obtained before and after writing the nightmare, reading it aloud, and reading the rescripted version. Additional homework following the second session included rehearsal of the changed dream. The third session of treatment involved reviewing homework, assessment of the frequency and severity of participant’s nightmares, problem solving any reported difficulties, anticipating future difficulties and discussing coping strategies for handling these difficulties, and teaching slow breathing.

CASE PRESENTATIONS

Participant 1: Allison

Allison was a 20-year-old Caucasian, unemployed woman with a high-school education. She denied previous diagnosis of a psychological disorder. Allison reported numerous traumatic events on the TAA, including multiple sexual and physical assaults (both with and without a weapon), as well as a serious car accident. Allison
reported experiencing “extremely” disturbing nightmares several times per week for the past 12 years that she described as almost exact replays of the rape and molestation by a family member, with only the external environment changing. Allison met criteria for lifetime and current PTSD based on the SCID. Allison reported that it took an average of 30 min to fall asleep each night and she typically slept 5 hr per night. At posttreatment, she reported having one nightmare in the past week and rated it as “mildly” disturbing. The SCID revealed that she no longer met criteria for PTSD (based on functioning only). She reported the same severity of sleep problems as in pretreatment and a significant reduction in depressive symptoms. At the 3-month assessment, Allison reported experiencing nightmares a few times per month (less frequent than once per week) and rated them as “moderately” disturbing. She again did not meet criteria for PTSD (based on functioning only), was within normal limits for depression, and reported an average of 6 hr of sleep per night and less severity of sleep problems. Attempts to contact Allison to conduct a 6-month follow-up evaluation were unsuccessful (see Table 1).

**Participant 2: Danielle**

Danielle was a 62-year-old Caucasian woman with a master’s degree in counseling and was employed full-time. She reported no previous psychiatric diagnoses. Her

<table>
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<th>Participant</th>
<th>PTSD Diagnosis</th>
<th>BDI</th>
<th>PSQI</th>
<th>Nightmare Frequencya</th>
<th>Nightmare Disturbanceb</th>
<th>MPSS Frequency</th>
<th>MPSS Severity</th>
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*Note.* PTSD = posttraumatic stress disorder; BDI = Beck Depression Inventory; PSQI = Pittsburgh Sleep Quality Index, Modified Score; MPSS = Modified PTSD Symptom Scale.

aNumber of nightmares per week. bDisturbance of nightmares: Scale ranges from 0 (not at all) to 4 (extremely distressing).
trauma history included a natural disaster, domestic violence, multiple rapes by acquaintances, and several car accidents. Danielle reported having nightmares throughout her life that occurred approximately four times per month and were rated as “extremely” disturbing. In terms of content, the nightmares were similar to her traumatic experience but were not reenactments. Danielle met criteria for current and lifetime PTSD, was within normal limits for depression, and reported an average of 6 hr of sleep per night. At the posttreatment assessment, Danielle reported no nightmares since the end of treatment, approximately the same PTSD symptoms (slight increase in frequency and decrease in severity) and depression, but a slight increase in sleep problems. She continued to meet criteria (based on functioning only) for PTSD. At the 3- and 6-month follow-up sessions, she reported reduced frequency and associated disturbance of nightmares, mild PTSD symptoms, and a decrease in sleep problems, and she had a depression score within normal limits and still met criteria for current PTSD but scored low on self-reported frequency and scored a zero for severity of PTSD symptoms.

Participant 3: Sara

Sara was a 40-year-old Caucasian–Native American with a master’s degree and was employed part-time. Sara denied previous psychiatric diagnoses. Her trauma history included multiple car accidents, sexual abuse, and rape. Sara reported experiencing “extremely” disturbing nightmares approximately 3 to 4 nights per week for the past 22 years, which consisted of a variation of the rape she experienced in that the perpetrator was the same but the location and specific acts differed. Sara met criteria for lifetime and current PTSD based on the SCID. She reported a moderate severity of PTSD symptoms, mild depression, significant sleep difficulties, and sleeping approximately 4½ hr per night. At the posttreatment assessment, Sara reported no trauma-related nightmares in the previous week. She no longer met criteria for current PTSD (based on functioning only). The number and frequency of her sleep problems had decreased. At the follow-up evaluations, Sara reported maintenance of treatment gains. She reported no nightmares, no longer being afraid to fall asleep, greater average number of hours slept, feeling more rested on wakening, and decreased time to go to sleep, and she was within normal limits in terms of depressive symptoms.

Participant 4: Steven

Steven was a 32-year-old Caucasian man with a bachelor’s degree and was employed full-time. He reported a previous diagnosis of bipolar disorder. Steven’s trauma history included a serious car accident, child sexual abuse, and physical assault. Steven reported experiencing “moderately” disturbing nightmares approximately 2–3 nights per week for as far back as he could remember. His nightmares
were similar in theme, generally involving being trapped or hiding from someone who was after him. Steven met lifetime criteria for PTSD based on the SCID, was subthreshold for current PTSD, and reported mild depression and moderate sleep difficulties. At the 1-week posttreatment assessment, Steven reported having no trauma-related nightmares in the previous week. The SCID was administered and revealed that he did not meet criteria for current PTSD (based on functioning). The number and frequency of his sleep problems had remained approximately the same as pretreatment. At the 3- and 6-month follow-ups, Steven’s functioning remained essentially the same as at posttreatment.

**DISCUSSION**

ERRT, with its increased emphasis on exposure, appears to be promising for reducing the frequency and severity of trauma-related nightmares. It is notable that ERRT also appears to be somewhat effective for decreasing the frequency and intensity of nightmares not targeted in the treatment, increasing the quality and quantity of sleep, decreasing the number of sleep-related problems, and decreasing the frequency and severity of PTSD symptoms and depressive symptoms. These findings are consistent with those of other studies that have examined similar treatments for trauma-related nightmares (e.g., Forbes et al., 2003; Krakow et al., 2001). Further, many of the participants’ reported symptoms were within normal limits at follow-up.

The specific mechanism of change for this treatment and other imagery rehearsal treatments is unclear at this time. A number of components involved in the treatment may be responsible for the positive changes observed. For example, exposure techniques are a significant component of ERRT (although imagery rehearsal treatments differ considerably in the degree of exposure utilized) in that participants wrote out their nightmare, read it aloud, discussed it with the therapist, identified trauma-related themes, and discussed them in relation to the original trauma and aftermath of the trauma. It is possible that the addition of the exposure components may enhance treatment efficacy through habituation to the feared material, increased understanding of the impact of the trauma related to the identified traumatic themes in the nightmares, and decreased subsequent avoidance of trauma material. Additional mechanisms could include the rescripting of the nightmare, the modification of maladaptive sleep habits, the reduction in arousal via relaxation procedures, or the full package of techniques and support offered. Future research will require comparison and dismantling studies to determine the specific mechanism of change.

The current study adds to a growing empirical literature indicating the efficacy of imagery rehearsal treatments for trauma-related nightmares. Because of the small number of participants, there are obvious limitations to the generalizability
of the findings. Also, although all participants reported multiple traumas, sexual assault was the index event for 3 participants. A randomized clinical trial is currently under way to address issues related to small sample size and lack of a control group. However, the findings are consistent with larger scale studies of similar treatments, lending credence to the current study’s findings.

ACKNOWLEDGMENTS

The activities described were supported by an Oklahoma Health Research Program award for project number HR02–002S from the Oklahoma Center for the Advancement of Science and Technology and by The University of Tulsa’s Office of Research and Sponsored Programs internal funding. Portions of this article were presented at the Association for the Advancement of Behavior Therapy, Reno, NV, in November 2002.

We express our appreciation to the members of the Trauma Research: Assessment, Prevention, and Treatment Center for their assistance with this project.

REFERENCES


