Cognitive Behavioral Therapy for Insomnia for Sleep Disturbance in Posttraumatic Stress Disorder

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Q. What is cognitive behavioral therapy for insomnia?

A. There are several different treatment manuals for cognitive behavioral therapy for insomnia (CBT-I). Most treatments utilize similar cognitive and behavioral components (Trauer, Qian, Doyle, Rajaratnam, & Cunnington, 2015). These include cognitive therapy, stimulus control, sleep restriction, sleep hygiene, and relaxation. Treatment begins by collecting a baseline of current sleep patterns. Psychoeducation is often provided on healthy sleep habits (sleep hygiene) and patients are encouraged to identify what habits they are willing to change (stimulus control). A standardizing sleep/wake schedule is agreed upon. The provider determines a time in bed prescription which changes across sessions as sleep time increases (sleep restriction). Various cognitive techniques can also be implemented based on client need. These often include cognitive restructuring and refocusing, constructive worry, distraction, paradoxical interventions, and problem solving. A recent systematic review of cognitive therapy techniques in CBT-I identifies which elements are evidence based (Jansson-Fröjmark & Norell-Clarke, 2018). CBT-I has also been found to be effective for reducing the symptoms of co-occurring psychiatric disorders (Taylor & Pruiksma, 2014).

Q. What is the theoretical model underlying CBT-I?

A. CBT-I was developed based on Spielman's classic theory of primary insomnia (Spielman, Saskin, & Thorpy, 1987). According to Spielman, sleep problems develop due to predisposing biological factors and stressful life events, and are maintained by poor sleep practices. This theory postulates that some have predisposing vulnerabilities to a dysfunctional sleep system. At times of stress, these vulnerabilities manifest in acute sleep problems. Such problems are then maintained through poor sleep hygiene (e.g., daytime napping, watching TV in bed, drinking alcohol or caffeine before bed, etc.). Although biological factors might predispose an individual to sleep problems, problematic sleep habits are theorized to sustain sleep issues. Therefore, treating such habits can help resolve insomnia.

Q. Is CBT-I recommended as a front-line treatment for sleep disturbance in PTSD in the Military Health System (MHS)?

A. Yes. The *2017 VA/DoD Clinical Practice Guideline (CPG) for the Management of Posttraumatic Stress Disorder and Acute Stress Disorder* gives a *"Strong For"* strength of recommendation to CBT-I for treating insomnia in patients with PTSD, unless an underlying medical or environmental etiology is identified or severe sleep deprivation warrants the immediate use of medication to prevent harm.

The MHS relies on the VA/DoD CPGs to inform best clinical practices. The CPGs are developed under the purview of clinical experts and are derived through a transparent and systematic approach that includes, but is not limited to, systematic reviews of the literature on a given topic and development of recommendations using a graded system that takes into account the overall quality of the evidence and the magnitude of the net benefit of the recommendation. A further description of this process and CPGs on specific topics can be found on the VA clinical practice guidelines website.

Q. Do other authoritative reviews recommend CBT-I as a front-line treatment for sleep disturbance in PTSD?

A. No. Other reviews have not substantiated the use of CBT-I for sleep disturbance in PTSD.

Several other recognized organizations conduct systematic reviews and evidence syntheses on psychological health topics using similar grading systems as the VA/DoD CPGs. These include the Agency for Healthcare Research and Quality (AHRQ) and Cochrane.

- AHRQ: A 2018 systematic review update of psychological and pharmacological treatments for adults with PTSD includes disturbed sleep as an adverse event, but does not include studies focused exclusively on sleep-related outcomes, and does not report on CBT-I as a treatment for sleep disturbance in PTSD (Forman-Hoffman et al., 2018).
- Cochrane: No Cochrane reviews of CBT-I for sleep disturbance in PTSD were identified.

Q. What conclusions can be drawn about the use of CBT-I for sleep disturbance in PTSD in the MHS?

A. The *2017 VA/DoD Clinical Practice Guideline (CPG) for the Management of Posttraumatic Stress Disorder and Acute Stress Disorder* strongly recommends CBT-I for insomnia in patients with PTSD. Though little research explicitly evaluating the treatment of sleep disturbance in PTSD has been done (Ho, Chan, & Tang, 2016), the VA/DoD PTSD CPG Work Group states that CBT-I "offers the strongest evidence and greatest promise," and that the risks are quite low (VA/DoD, 2017). More research is needed to determine whether sleep disturbance should be treated as a stand-alone condition or as a component of PTSD (VA/DoD, 2017).

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