## What is CBTI?
Cognitive Behavioral Therapy for Insomnia (CBTI) is a formal program designed to assist individuals to better focus on sleep. The goal is to help persons cognitively understand what obstacles, behaviors, and outside factors affect their sleep. Psychoeducation components such as relaxation techniques, biofeedback, and sleep hygiene are taught.

## Military Significance
Approximately 270,000 Servicemembers have been diagnosed with Posttraumatic Stress Disorder (PTSD) to date. Approximately 70% of individuals with PTSD report difficulty in initiating and maintaining sleep². If left untreated, insomnia can exacerbate mental health conditions including depression, PTSD, and suicidal intentions.

## Expanding the Role of the Mental Health Nurse
Mental health nurses can assume increasing clinical responsibilities to deliver CBTI in a group context. Their role can expand to an ambulatory setting to help alleviate shortages of providers in the DoD and the high prevalence of insomnia in Servicemembers.

## Potential Benefits
Brownlow et al.¹ and Capaldi et al.³ discuss the following benefits:
- Considered a “first line” treatment
- Large initial improvements in PTSD symptom severity
- Efficacious for insomnia; reduction in nightmares
- Found to be as effective, if not more, than pharmacology alone
- Significant progress on depression ratings, quality of life, and both qualitative and quantitative sleep measures
- Effects remained significant for up to 12 months

## Standardization
Training clinicians in a standard application is critical to ensure treatment fidelity and to ensure quality of care.

### Hypotheses

**1. Servicemembers will experience improved sleep**

**2. Servicemembers will experience a reduction in PTSD symptoms**

**3. Servicemembers will experience a decrease in sleep and anxiety medication usage and/or dosage**

### CBTI Curriculum

- **Sleep Restriction Therapy**: Goal is to educate individuals to stop taking daytime naps and reset their sleep/wake cycle
- **Stimulus Control**: Goal is to educate individuals on their current sleep habits to determine if there are any hindrances to sleep
- **Sleep Hygiene Education**: Goal is to educate individuals on what they should or should not do to obtain adequate sleep (i.e. avoid alcohol or tobacco before bed)
- **Relapse Prevention**: Goal is to educate individuals on what to do should they experience insomnia again in the future
- **Cognitive Therapy**: Goal is to educate individuals to challenge faulty beliefs about insomnia

### Challenges
- **Recall bias with sleep diary³**
- **Translational issues; requires time and mentorship of a provider skilled in CBTI⁴**
- **Groups tend to be heterogeneous in terms of life stage, comorbidity, and individual tendencies⁵**
- **Patients with complex insomnia or comorbidities may require greater expertise and time commitment⁵**
- **Patients hesitant to discontinue sleep medications⁶**

### Unique Population
- **Population of Residential Treatment Program (RTP) has substance abuse with other psychiatric comorbidities**
- **Captive audience with mandatory lights out, set wake up time, exercise regime, and sleep skills classes**

### Design, Methods, and Measurements

#### Design
Subjects participate in a pre-post quasi experimental study comprising of five classes over six weeks during their inpatient stay at the RTP. Data will be compared prior to CBTI training (baseline), at discharge post CBTI training, and at 4 weeks post discharge.

#### Methods
- Data collection from July 2016 to July 2017
- Weekly data collection
- 2 groups: (1) a retrospective usual care and (2) a prospective usual care plus CBTI training group

#### Measurements
- Insomnia Sleep Index (ISI)
- Pittsburgh Sleep Quality Index (PSQI)
- Pittsburgh Sleep Quality Index Addendum (PSQI-A)
- Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-S)
- Sleep Diary
- Sleep and anxiety medication changes
- In the retrospective arm, data will be collected from Essentri, and the Behavioral Health Data Platform (BHDSP)

#### Future Implications
- Randomized control trials
- Exploring different treatment modalities
- Expand to an outpatient setting

### Sponsorship
This research is sponsored by the TriService Nursing Research Program, Uniformed Services University of the Health Sciences; however, the information or content and conclusions do not necessarily represent the official position or policy of, nor should any official endorsement be inferred by, the TriService Nursing Research Program, Uniformed Services University of the Health Sciences, the Department of Defense, or the U.S. Government.

---

Disclaimer: the view expressed herein are those of the author(s) and do not reflect the official policy or position of the Brooke Army Medical Center, the U.S. Army Medical Department, the U.S. Army Office of the Surgeon General, the Department of the Army, Department of Defense or the U.S. Government.

---

References