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Comprehensive Sleep Program for Active-Duty Special Operators in the US Military

Hope Brew, OTD-S

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Figure 1. Napping soldier. Adapted from "Lazy" by T. McKittrick, 2017, retrieved from <https://www.armytimes.com/news/your-army/2022/04/27/pushups-run-plank-and-tactical-nap-soldiers-need-more-sleep-army-research-says/>

Introduction

The American Occupational Therapy Association (AOTA) defines rest and sleep as a restorative occupation to support healthy, active engagement in other occupations (AOTA, 2020). Occupational therapists' (OT) scope of practice allows them to address sleep and provide targeted interventions to improve this occupation for their patients. Sleep has been heavily disregarded in military settings in favor of keeping higher operational tempos. Active-duty (AD) service members and veterans often have sleep issues arising from their experiences while serving in the military.

Site Description

- **Site:** US Department of Veterans Affairs (VA) - James A. Haley Veterans Hospital (JAHVH) in Tampa, FL
- **Setting:** Post-Deployment Rehabilitation and Evaluation Program (PREP) - a mild traumatic brain injury (mTBI) inpatient rehabilitation program serving AD service members and veterans
- **Role:** PREP OTs primarily treat upper extremity (UE) dysfunction



Figure 2. James A. Haley Veterans Hospital. Adapted from "JAHVH SCI Entrance" by U.S. Department of Veterans Affairs, n.d., retrieved from <https://www.va.gov/tampa-health-care/>

Summary of Needs Assessment

- The impacts of poor sleep on overall health and occupational performance are not often addressed while individuals are actively serving in the US military.
- AD service members experience sleep deprivation, which may influence the development of several sleep disorders, some of which go undiagnosed and untreated.
- PREP patients receive typical pharmacological and non-pharmacological, however their knowledge on sleep is lacking.
- To complement the current work, education on sleep and the importance of this occupation would benefit these individuals. There is a need to deliver targeted occupational therapy services to address rest, sleep preparation, and sleep participation.

Literature Review Summary

Sleep is a complex occupation that affects numerous physiological processes, including cognition, memory formation, immune function, cardiovascular health, conservation of metabolic energy, and mood (Patel, Reddy, & Araujo, 2022). Sleep needs vary; however, the American Academy of Sleep Medicine (2021) found that adults who sleep less than seven hours a night may be at increased risk for adverse health outcomes. The consequences of obtaining insufficient sleep can have severe detriments to the health and daily functioning of a person.

Sleep Knowledge, Attitudes, and Performance in the US Military

Historically, sleep in the US armed forces has not been prioritized, with loss of sleep being expected during training and combat missions (Mantua et al., 2022). During their service, soldiers may need to participate in guard duty, combat operations, or tasks requiring complex analysis and decision-making. Soldiers are often pressed to perform highly functional physical and mental tasks, although they are deprived of sleep. Their unique demands make it challenging to treat sleep problems due to their job expectations, schedules, and military culture. A study was conducted to understand service members' attitudes, beliefs, and quality of sleep and their perceived impact on occupational performance (Bell, 2020). The results revealed a significant relationship between poor sleep quality, a rise in dysfunctional beliefs and attitudes about sleep, and decreased perceived daily functioning, with a majority of the sample reporting poor sleep quality.



Figure 3. Navy SEAL training. Adapted from "Navy SEAL candidates perform rock portage" by A. Walker, 2020, retrieved from <https://www.defense.gov/News/Feature-Stories/Story/Article/2212861/safety-standards-uncompromised-as-navy-restarts-seal-training/>



Figure 4. Army Rangers training. Adapted from "A helicopter hovers over a building. Service members descend from the helicopter" by M. Bottom, 2017, retrieved from <https://www.defense.gov/News/News-Stories/Article/Article/3016652/parent-services-integration-a-top-priority-for-special-operations-components/>

Sleep Disorders and Related Conditions

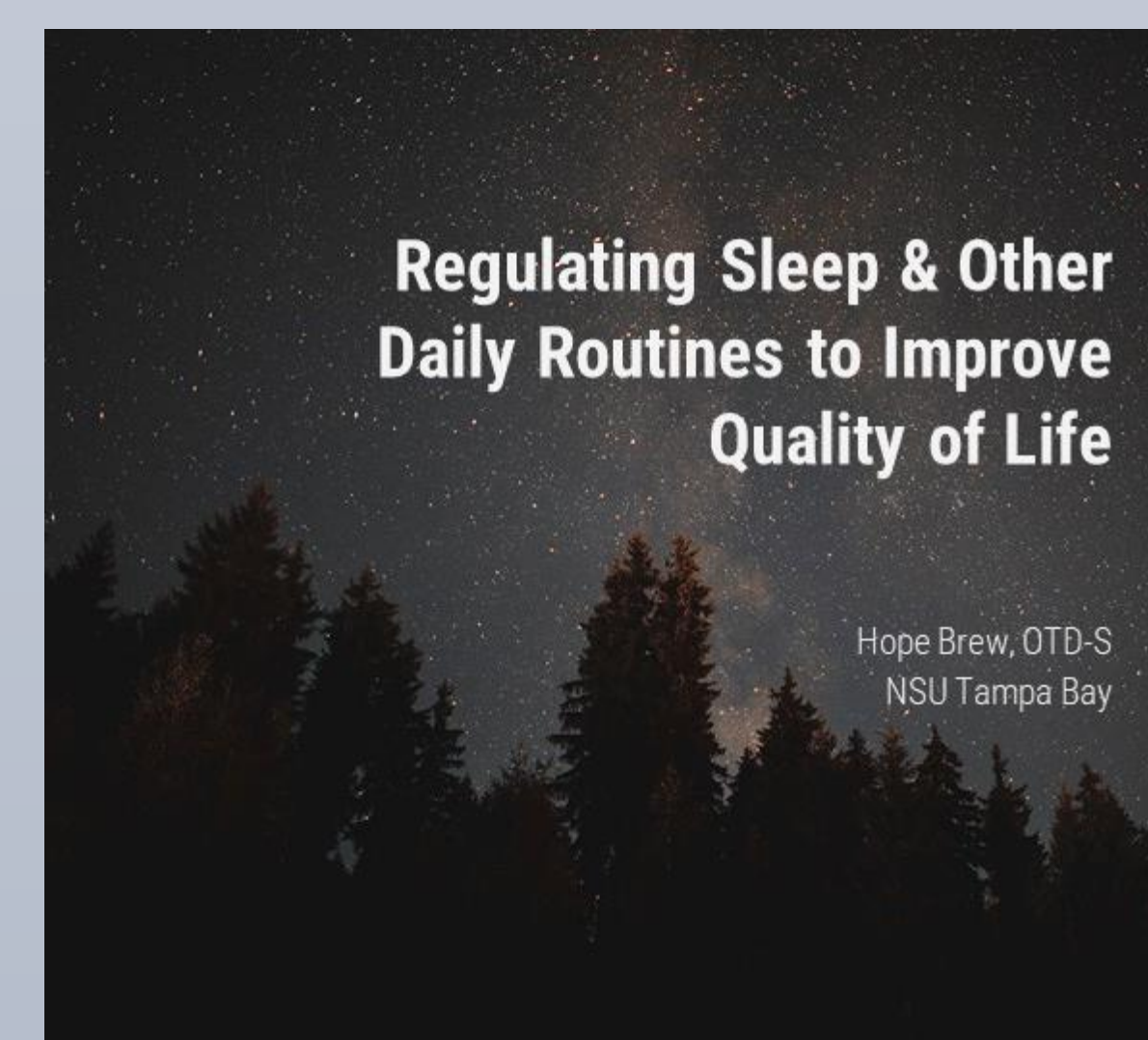
Common sleep issues experienced by this population include insomnia, obstructive sleep apnea, sleep deprivation. Other issues affecting sleep include symptoms from mTBI, posttraumatic stress disorder (PTSD), tinnitus, and acute & chronic pain.

Military Initiatives & Occupational Therapy Interventions

The Department of Defense has released a report in 2021 with their findings on sleep deprivation in the armed forces. Each branch has launched initiatives to optimize sleep and operational performance. However, these initiatives may not have been implemented throughout the entire force. Cognitive behavioral therapy for insomnia and aspects of the program, including sleep hygiene, have been used by OTs in the VA system.

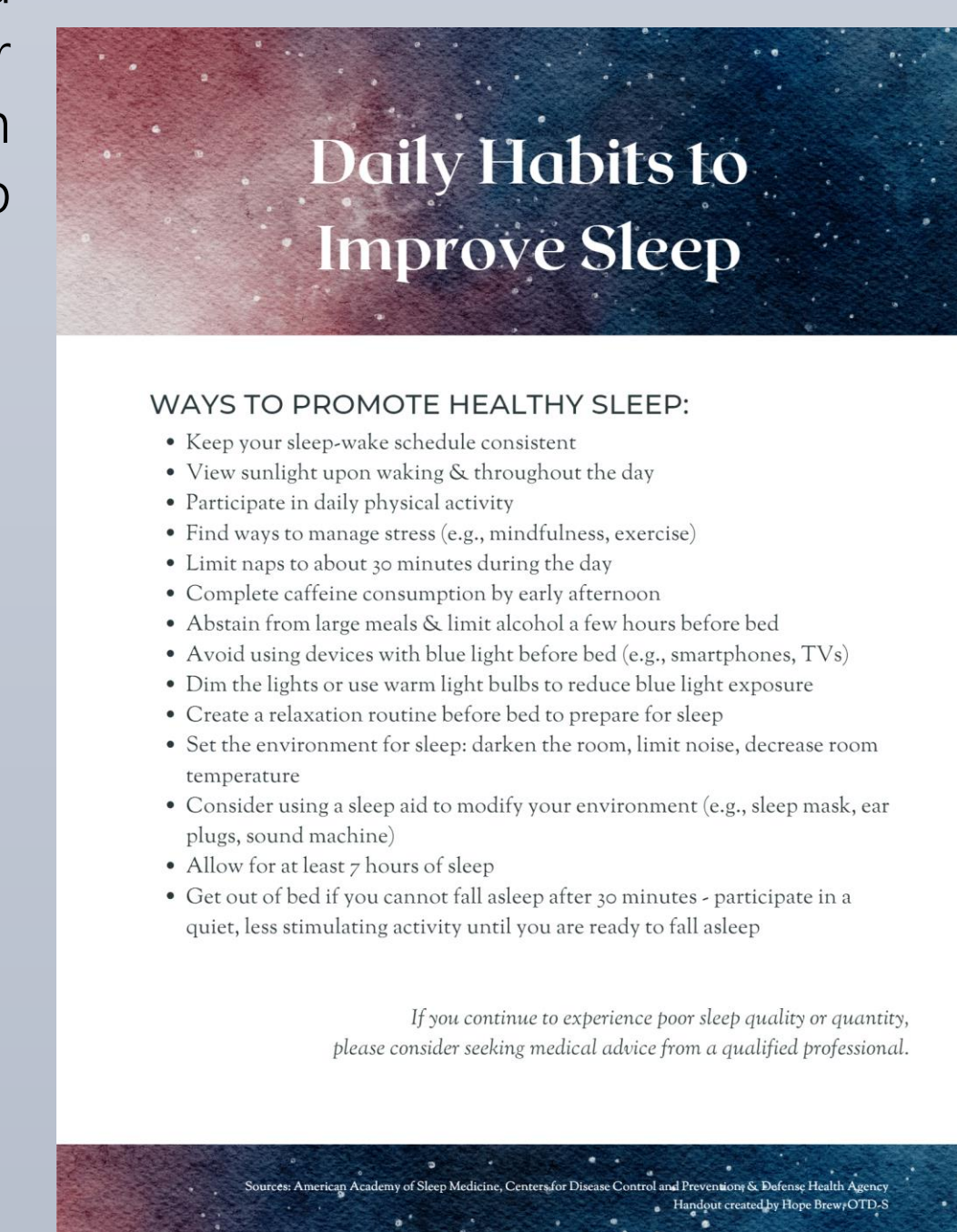
Capstone Project Description

This project aimed to create a sleep program to address the needs of AD service members and gain clinical practice skills with the military population. Through my doctoral capstone experience (DCE), I provided a comprehensive program for PREP patients that enabled them to make positive changes to improve their daily occupational performance and support them during the remainder of their military career. In-depth education was provided on the physiological functions of sleep, circadian rhythms, chronotypes, and sleep disorders. I also provided documents with strategies to improve sleep and overall daily functioning.



For my clinical experience component, I had exposure to assessing and treating UE dysfunction common to the military population, including peripheral nerve conditions and shoulder pathologies. Some conditions were sustained during traumas, while others had conditions develop throughout the patients' careers.

During my 16-week experience, a research study was being conducted on the effects and dosage of a cranial electrical stimulation device with an inpatient military population. I learned about the device and how to educate patients on how to use Alpha-Stim.



Learning Objectives Achieved

1. Gained better understanding of the function of sleep, sleep disorders, and evidence-based interventions to create a thorough sleep program for PREP patients.
2. Further developed my clinical practice skills related to common conditions experienced by the military population to independently evaluate and treat patients in PREP.
3. Independently developed a comprehensive sleep program to administer to PREP patients during their inpatient hospital stay.

Implications for OT Practice

- Continued use of this program would benefit from creating a pre- and post-treatment survey to assess patients' knowledge of sleep and satisfaction with the program.
- OTs may have the opportunity to facilitate collaborative efforts between disciplines and foster the development of more client-centered programs to address the daily occupation of sleep.
- OTs must continue to advocate for their profession. Although they contribute to PREP patient care in a distinct role, they may be utilized to assess beyond UE orthopedic care.
- Clinicians must be considerate of patients, especially with this specialized population within the military community. Applying a strengths-based approach and enabling patients to view themselves from that perspective may allow for more personal and professional growth. This may also equip patients with more tools once they finish their treatment in PREP.



REFERENCES & ACKNOWLEDGMENTS

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