Enhancing RN Knowledge on Sleep in the ICU

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Introduction & Purpose

Intro: Sleep insufficiency in the intensive care unit is a common, but often neglected problem that can lead to a host of negative physiological and psychological outcomes.

Purpose: The purpose of this project was to educate nurses on sleep insufficiency, its outcomes, and sleep improvement interventions to increase utilization sleep promoting interventions. Through a literature review these interventions were categorized into three goals: to persevere the circadian rhythm, optimize sleep, and maintain sleep.

Aims

Aim 1: Educate nurses about the common causes of sleep insufficiency and sleep architecture in the ICU setting, through communication-centered methods to improve nurses' knowledge

Aim 2: Educate nurses about nurse-driven non-pharmacological sleep improving interventions to maintain sleep, optimize the patient for sleep during the day, and preserve the patients' circadian rhythm using communication-centered methods and toolkits to improve the nurses' knowledge

Aim 3: Increase the frequency of nurse reported implementation of nurse-driven sleep improvement interventions

**Aim 4**: Improve patient's sleep quality measured with the Richards-Campbell Sleep Questionnaire

Methods

Baseline nurse knowledge levels and frequency of use were collected through am survey through Qualtrics. Baseline levels of patient subjective quality of sleep were collected using the Richards-Campbell Sleep Questionnaire. Baseline nurse knowledge levels and frequency of use were collected through a survey through Qualtrics. Baseline levels of patient subjective quality of sleep were collected using the Richards-Campbell Sleep Questionnaire.

RN Scores
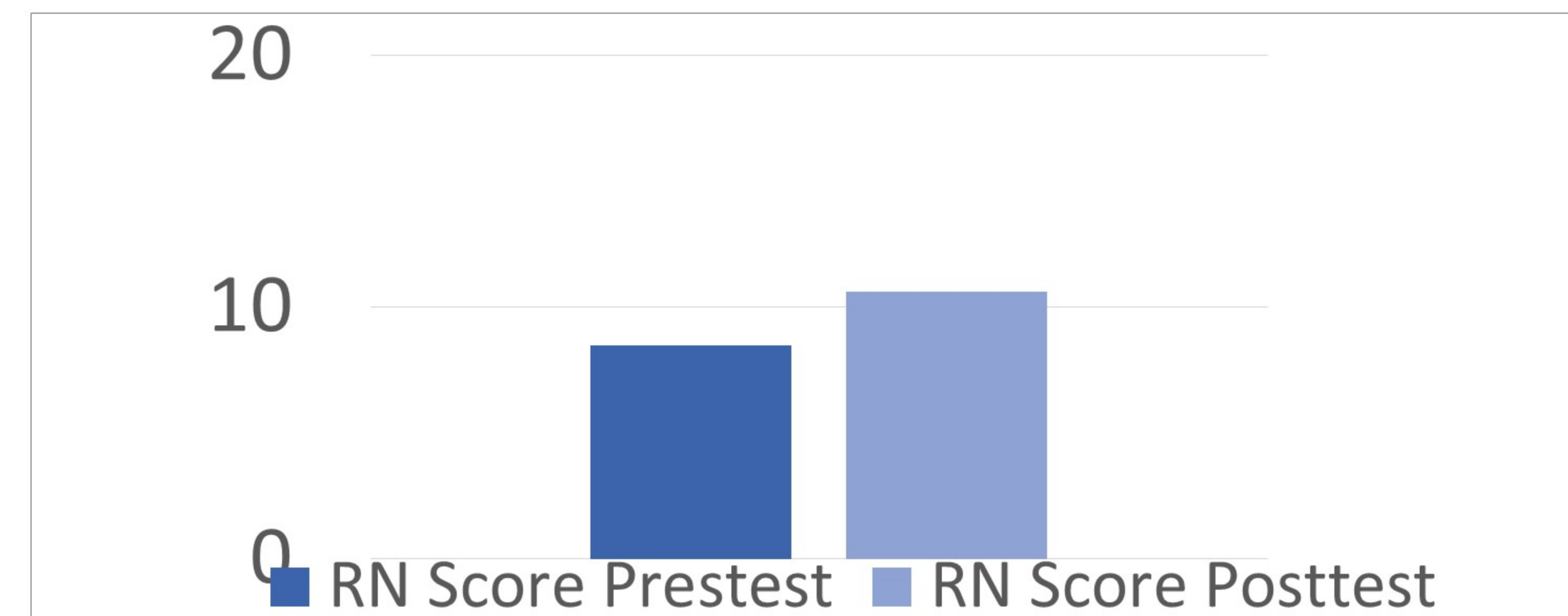
Frequency of Use
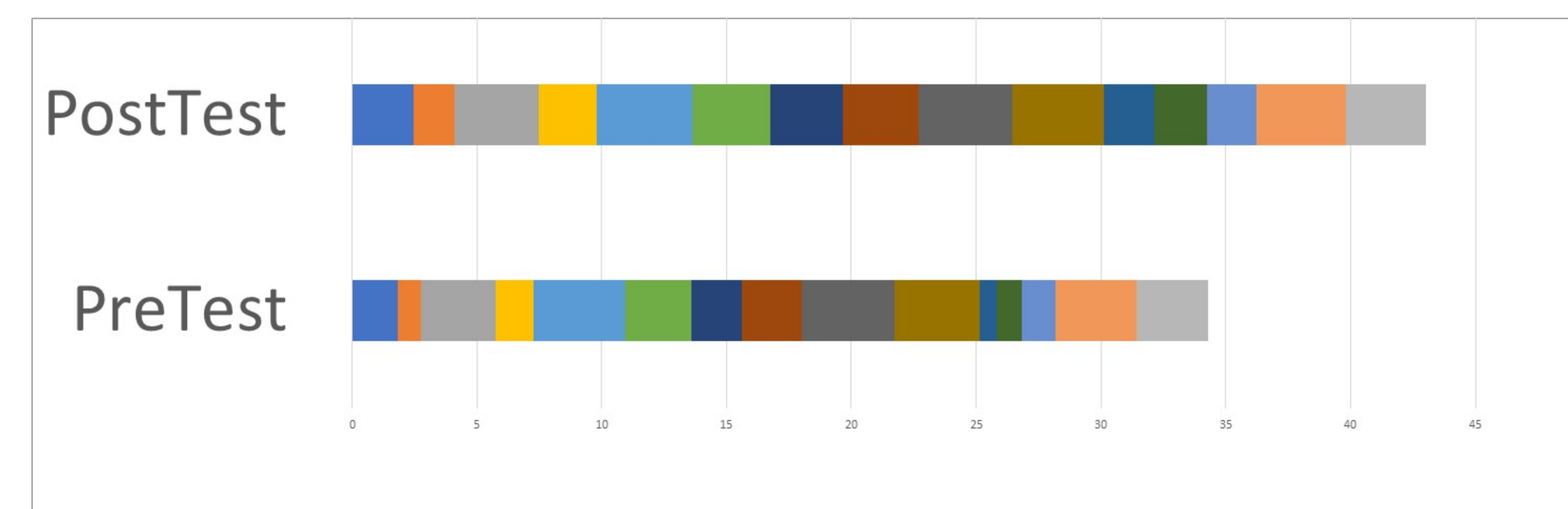
RCSQ Scores

Significance & Themes

Significance
- Up to **100% reports of sleep** disturbances in the ICU
- Physiological and Psychological effects
- Long Term effects up to 1 year at follow up
- Association with delirium
- Poor correlation of RN assessment of sleep in the ICU compared to Gold standard PSG

Themes Through Literature Review

Preserving the Circadian Rhythm
  Day and Night light exposure, reminders about time, mentally stimulating activities, mobilization

Optimizing Sleep
  Addressing pain, warm beverages, avoiding caffeine in the evening, temperature, music, calming activities

Maintaining Sleep
  Eye masks, ear plugs, quiet hours, clustering care, limiting disrupting activities

Conclusion & Limitations

The average nurse knowledge test scores, frequency of use, and patient subjective reports of sleep all improved. However, the results were not statistically significant.

Limitations: Compliance in rate of implementation may have been affected by the various new protocols enacted due to the pandemic, decrease in staffing, and/or staff burnout, and small sample size.

Future Implications

Formation of a Multi-disciplinary Teams for collaboration
  MD
    To assess less frequent blood pressures
  PT/OT
    To mobilize and also provide mental stimulating activities
  Pharmacy
    Help cluster or reschedule medications safely
Choosing the right assessment tool in the future
  - RCSQ for patients able to answer questions
  - Actigraphy for patient who are unable to self report