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# Lack of Sleep and the Effects of Performance during Therapy Sessions in Acute Care

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# Lack of Sleep and the Effects of Performance during Therapy Sessions in Acute Care

Lena Siciliano and Erica Knight



## 1 Ask: Research Question

Does lack of sleep in acute care patients affect their performance during therapy sessions?

## 2a Acquire: Search Terms

**Databases:** PubMed, Clinical Key, Scopus, Proquest, Medline, Cochrane Library

**Search Terms:** Acute care, sleep, participation, poor sleep, sleep deprivation, sleep hygiene, recovery, therapy participation, Acute care and sleep, sleep restriction

## 2b Acquire: Selected Articles

**Redeker (2000):** An integrative review aimed to evaluate the factors that affect sleep in the acute care setting, how healthcare providers can help promote the best quality of sleep and the difficulties in promoting sleep.

**Freedman et al. (2001):** A case study reporting how ICU patients were affected by environment noise and if that affected their sleep/wake cycles to assist in characterizing sleep patterns in the acute care setting.

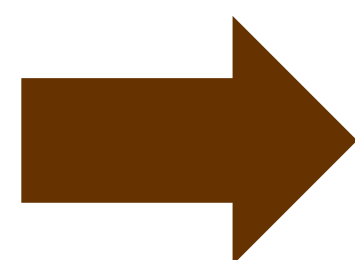
**Freedman, Kotzer, & Schwab. (1999):** A descriptive study assessing how 203 patients in the ICU perceived what disrupted their sleep the most as well as how they slept in the ICU overall.

## 3a Appraise: Study Quality

**Redeker (2000):** Level II. Strengths of this integrated review include its range of studies analyzed including descriptive studies of sleep using objective and subjective measures; correlational studies of personal, health status, and environmental variables and sleep; and intervention studies. This study excludes qualitative studies that could be a contributing factor to understanding sleep disturbances from patient's perspectives. Many of the studies compared in this integrative review have gathered results self-report questionnaire.

**Freedman et al. (2001):** Level III. Strengths include using a polysomnography to get a precise answer of how environmental factors can affect sleep in the ICU. Environmental factors may not impact sleep significantly as previously suggested. Limitations include the populations sample was based off of 22 patients in the ICU and generalization may not be assumed.

**Freedman, Kotzer, & Schwab. (1999):** Level II. Strengths in this study include a large sample size and a variety of diagnoses. Limitations include collecting only qualitative data. Severity of the clients were not assessed and anyone being discharged could participate in the study, leaving out those who are still admitted. The assessment results may be skewed due to the client being tired.



**Disrupted sleep in acute care setting is common, but it's relationship with functional performance is unknown.**

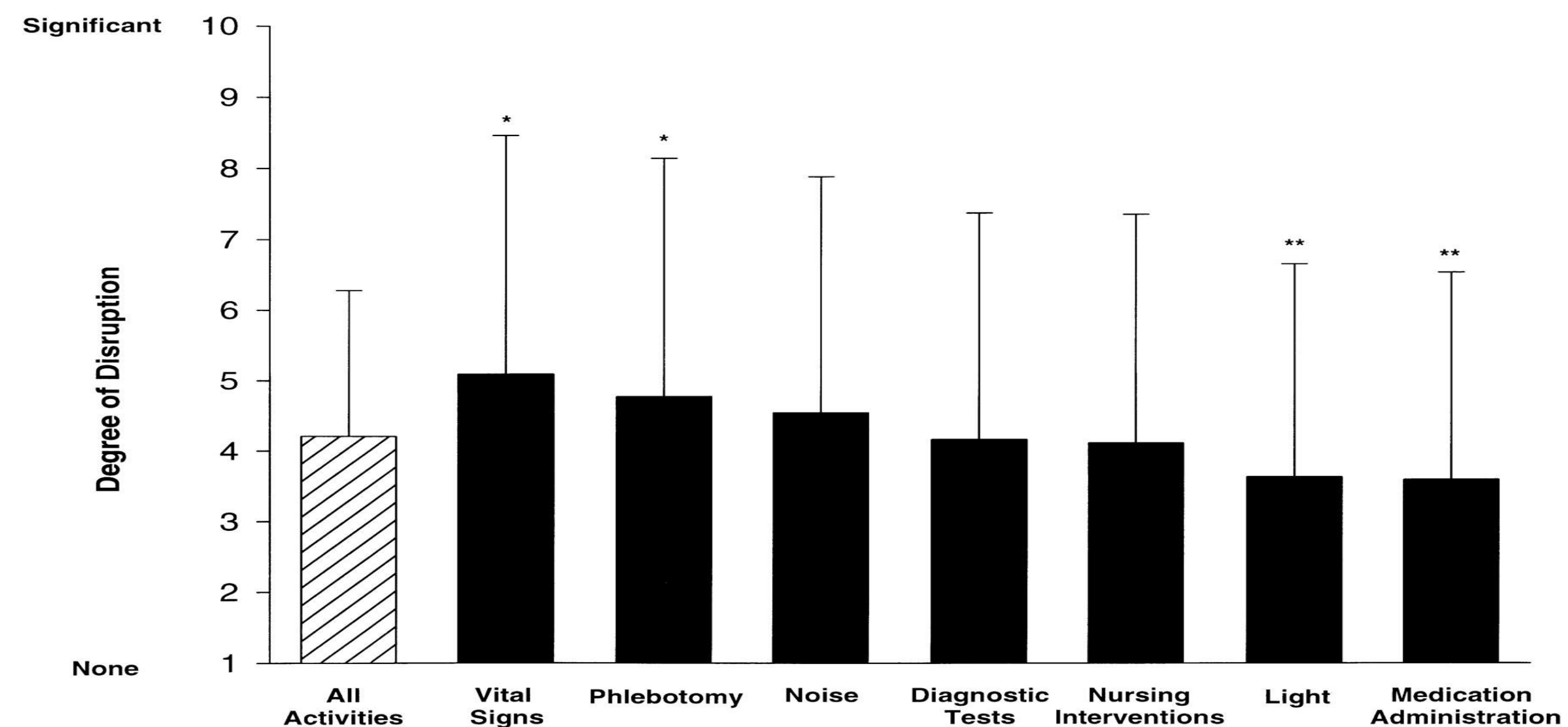
## 3b Appraise: Study Results

**Redeker (2000):** The conclusion of this study suggests that circadian patterns of activity and rest were associated with better functional status and shorter length of hospital stay. Pain was reported as affecting sleep by 63% of patients. Reports from patients indicate that primary sleeping disorders are common these include; excessive daytime somnolence (EDS), insomnia, snoring, restless leg syndrome. Noise and light were also reported to be factors in the disturbance of sleep in acute hospitalized patients.

**Freedman et al. (2001):** Most clients are receiving eight hours of sleep, however it is fragmented-sleep with most sleep occurring in stage 1 sleep (59%) with REM sleep occurring 6% of the time. Daytime sleep and nighttime sleep were split 50/50 implying sleep occurs throughout the day, not just at night. This creates sleep deprivation in clients which can lead to them feeling tired during the day.

**Freedman, Kotzer, & Schwab. (1999):** Sleep was significantly affected in acute care settings compared to sleep at home ( $p < 0.0006$ ). Checking of vital signs and phlebotomy were reported to be the most disruptive to patients. Weak correlation was found between length of stay and disturbances caused by light and noises ( $r = .19$   $p = 0006$ ).

Table 1. Graph on perceived sleep disruption from the ICU environment



## 4 Apply: Conclusions for Practice

Sleep disruptions are common in the acute care setting. A range of confounding variables are likely to impact sleep including specific patient and environmental factors. Although sleep disruptions have been documented, it's relationship to functional performance is unknown. Better understanding of the role of sleep in functional performance is critical for occupational therapist to optimize treatment results.

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