

Eyes Open, Minds Shut: Consequences of Sleep Deprivation in Nursing Students

Samantha Stong, MSN, RN & Kari Wade, EdD, MSN, RN, CNE

Nebraska Methodist College, Omaha, NE

Problem & PURPOSE

Problem

- Nursing students experience fatigue and burnout due to high stress, limited sleep, and rigorous academic demands
- Burnout contributes to withdrawal and academic failure (Aktan et al., 2020)
- This issue is concerning amid the ongoing nursing shortage driven by burnout and workforce retirements
- Campus support services often address study skills and mental health, but sleep hygiene is frequently overlooked

Purpose

The purpose of this project was to use evidence-based strategies to improve sleep hygiene practices and knowledge for undergraduate nursing students at a private Midwestern college to improve engagement in the classroom and sleep quality amongst students.

Available Knowledge

- Demand for nurses is increasing as baby boomers retire, leading to expanded nursing program enrollment (AACN, 2024)
- Student retention and success remain critical alongside workforce expansion
- Nursing students experience high stress from rigorous academics, clinical demands, and patient safety responsibilities (Dogham et al., 2024; Thomas et al., 2017)
- Internal and external stressors can disrupt sleep, negatively affecting academic and clinical performance (Bezerra Bandeira et al., 2020)
- Existing resources support study skills and mental health, but sleep hygiene is underemphasized
- Poor sleep is associated with burnout, impaired decision-making, and decreased quality of care
- Sleep-focused interventions have been shown to improve student and clinical outcomes (Aktan et al., 2020; Gipson et al., 2019; Hayli et al., 2024)
- Theoretical frameworks (Restoration Theory; Self-Determination Theory) highlight: Sleep as essential for cognitive function & motivation as key to behavior change (Sammons, n.d.; Reid & Dautovich, 2023)
- Adequate sleep is foundational for engagement, academic success, and professional readiness

Methods

Design

- Quantitative pre/post intervention study

Setting & Sample

- Small Midwestern college
- Undergraduate nursing students (BSN & PN programs)
- N = 21 total participants

Intervention

- 60-minute session including:
 - Sleep hygiene education
 - Interactive discussion
 - Teach-back activity
- Follow-up survey at 4 weeks

Measures

- UWES-S (Engagement)
 - 9-item Likert scale
 - Higher scores = increased engagement
- ISI (Sleep Quality)
 - 5-item Likert scale
 - Higher scores = worse sleep

Data Analysis

- Independent t-tests conducted to identify differences between pre- and post-survey scores of UWES-S and ISI
- Independent t-tests selected due to:
 - Voluntary participation
 - Scheduling constraints during rigorous academic coursework
 - Aim to minimize participant burden

Results

Engagement (UWES-S)

Pre: $M = 3.84$ ($SD = 1.28$, $n=15$)

Post: $M = 4.65$ ($SD = 1.17$, $n=6$)

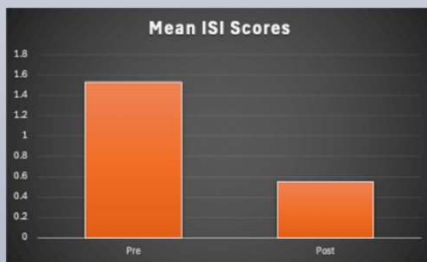
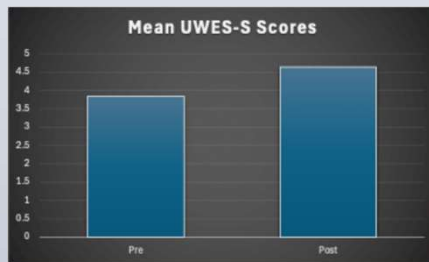
$t = 2.49$, $p = .022$

Sleep Quality (ISI)

Pre: $M = 1.53$ ($SD = 1.18$, $n=15$)

Post: $M = 0.55$ ($SD = 0.70$, $n=6$)

$t = 2.27$, $p = .035$



Discussion

- Low-cost, brief intervention improved sleep quality and classroom engagement among nursing students
- Students reported increased awareness and understanding of sleep hygiene practices
- Findings support Oswald's Restoration Theory (sleep enhances cognition, memory, and learning)
- Findings align with Self-Determination Theory, suggesting intrinsic motivation supports behavior change
- Implications for nursing education:
 - Sleep education is practical, scalable, and cost-effective
 - Can be integrated into curricula or student support services
- Strengths:
 - Use of evidence-based interventions
 - Validated assessment tools (UWES-S, ISI)
 - Faculty collaboration supporting implementation
- Limitations:
 - Small sample size
 - Low post-survey response rate
 - Short follow-up period
 - Reliance on self-reported data
 - Limited ability to identify most effective sleep strategies
- Overall, findings support sleep hygiene education as a feasible and impactful approach to improving student well-being, engagement, and academic success

Conclusions

- Sleep hygiene education can improve sleep quality and student engagement in undergraduate nursing students
- Adequate sleep is essential for academic success, clinical safety, and workforce retention
- Even brief, low-cost interventions can produce meaningful improvements in student outcomes
- Future Directions:
 - Expand to larger and more diverse populations
 - Incorporate objective academic outcomes (e.g., exam performance)
 - Further examine the relationship between sleep, stress, and mental health
 - Conduct long-term follow-up studies to assess sustained impact

References

Please scan the QR code for the full list of references:

