



Optimizing Sleep: Sensory Integration Strategies Before Bedtime in Children

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Introduction

- Sleep is an important occupation that supports emotional regulation and physical health.
- Children with sensory processing difficulties face challenges in appropriately interpreting and responding to sensory information within their environment.²
- Sensory processing challenges can lead to bedtime anxiety, delayed sleep onset, nighttime awakenings, and caregiver stress.²
- Occupational therapy practitioners (OTPs) address sensory regulation, environmental supports, and routines to support healthy sleep hygiene.¹
- A structured sensory bedtime routine may help children achieve a calmer, more organized state before sleep, improving sleep, improving sleep quality for both the child and the caregiver

Methods

Study Site:

- Able Me OT, which focuses on nature-based interventions. Staying true to their mission, the study explored how incorporating nature-based sensory techniques and structured bedtime routines can improve the occupation of sleep.

Population:

- Children ages 5-10 seen at Able Me OT with sensory processing issues or sleep and their caregivers.
- English-speaking; no restrictions based on demographic factors.

Recruitment:

- Flyers at Able Me OT with QR link to the survey and consent page.
- Participation was voluntary and participants may withdraw at any time

Study Design:

- Pre-post quantitative study via Qualtrics to measure caregiver-perceived sleep changes after a 6-week sleep intervention with their child.

Intervention:

- Participants were provided a sensory toolkit focusing on the occupation of sleep to implement at home for 6 weeks
- Educational sessions were conducted with the participants regarding a nature-inspire sensory toolkit for sleep.
- The toolkit focused on multiple senses to promote smoother bedtime transitions:
 - Proprioception (body sock)
 - Tactile (warm stuffed animal)
 - Olfactory (lavender spray/soap)
 - Visual (bubble fish tank)
 - Auditory (nature sounds/soft music)

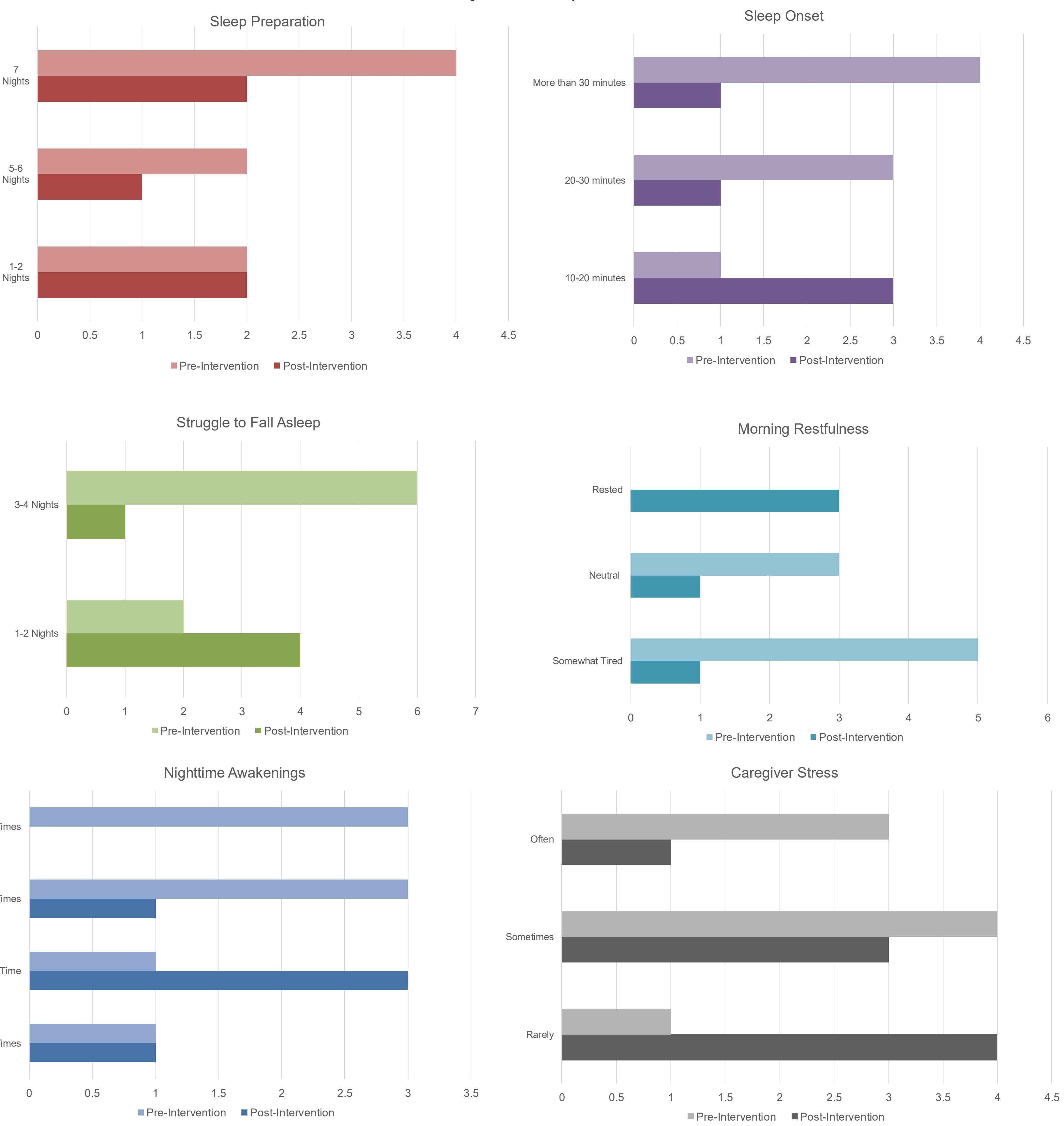
Data Collection and Analysis:

- Descriptive statistics were analyzed for Likert-scale and close-ended questions.
- Pre/Post- sleep intervention quality scores were analyzed to determine effectiveness of nature-based sensory routine and potential changes for the future.

Results

PARTICIPANTS:

- N = 8
- 3 girls, 5 boys



Discussion

Pre-Intervention Findings:

- Caregivers reported...
 - Moderate challenges with sleep preparation and sleep participation, specifically with their child's sleep onset and nighttime awakenings.
 - Moderate to high stress levels before and during their child's bedtime.
 - Limited understanding of strategies to use for their child's sleep habits and routines.

Post-Intervention Findings

- Caregivers reported...
 - Being particularly satisfied with the sleep toolkit and the ease of implementation with their child.
 - Better understanding of how sleep is affected by the various senses and felt comfortable with choosing and implementing the proper tools to address the appropriate senses for sleep.
 - Notable reduction in child's frequency of nighttime awakenings, decreased time to fall asleep, and smoother transitions with less restlessness.
 - Low stress levels before and during their child's bedtime.

Conclusion

- Implementation of the nature-based sensory sleep toolkit resulted in improved sleep-related behaviors for the participants.
- The toolkit's ease of supported caregivers in creating predictable and calming bedtime environments, which reduced overall stress for caregivers related to their child's occupation of sleep.
- Findings support the use of sensory-based, caregiver directed interventions is an effective approach within pediatric populations.
- This specific sleep toolkit is a low-cost, accessible resource that can be easily used at home and has strong ties to occupational therapy practice.
- Due to the small sample size, results cannot be generalized to the entire pediatric population who have sleep challenges and further research is needed.

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