Daily Association Between Sleep and Stressors: Role of Personality Traits

Angelina Venetto[1], Taylor F. D. Vigoureux[1] & Soomi Lee[1]

[1]School of Aging Studies, University of South Florida

SLEEP STRESS & HEALTH LAB

UNIVERSITY OF SOUTH FLORIDA

BACKGROUND

- Insufficient sleep → Greater perceived daily stressors
- Certain personality traits → Greater perceived daily stressors
- Nurses are prone to insufficient sleep and high levels of daily stress
- Examined how personality moderated the association between sleep characteristics and the perception of daily stressors in nurses.
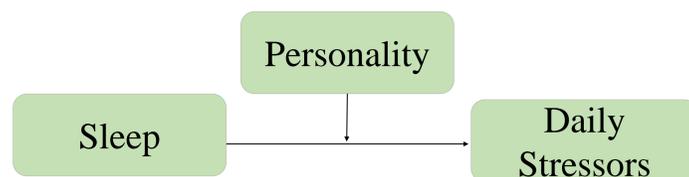

Figure 1. Conceptual research model

METHOD

Measures

Sleep (EMA, 1x/day except sleepiness 3x/day)

- 6 dimensions: *Sleep Duration*, *Sleep Sufficiency*, *Sleep Quality*, *Daytime Sleepiness*, *Insomnia Symptoms*
  - "Did you feel rested upon waking this morning?"
    1 (Not at all)   2   3   4 (Extremely)
  - "Did you wake up in the middle of the night or early in the morning?" (*yes/no*)

Sleep (Actigraphy)

- *Wake After Sleep Onset (WASO)*

Stress (EMA, 3x/day; daily sum)

- Experienced stressor since last prompt (*yes/no*)
- Severity of stressor since last prompt (*0-100*)

Measures (cont.)

Personality (Background Survey; at baseline)

- 45-item Midlife Development Inventory (MIDI) Personality Scale (Lachman & Weaver, 1997)
- 6 domains: *openness, conscientiousness, extraversion, agreeableness, agency, neuroticism*

Participants & Procedures

Oncology Nurses (n=61)

- 92% Female, 8% Male
- Age: $M = 35.26$, $SD = 11.69$ [Range: 21-62]
- Ecological Momentary Assessments (EMA) for 14 days

Statistical Analysis

- Multilevel modeling in SAS 9.4

RESULTS AND CONCLUSION

Longer sleep duration was associated with lower stressor severity for participants with lower neuroticism
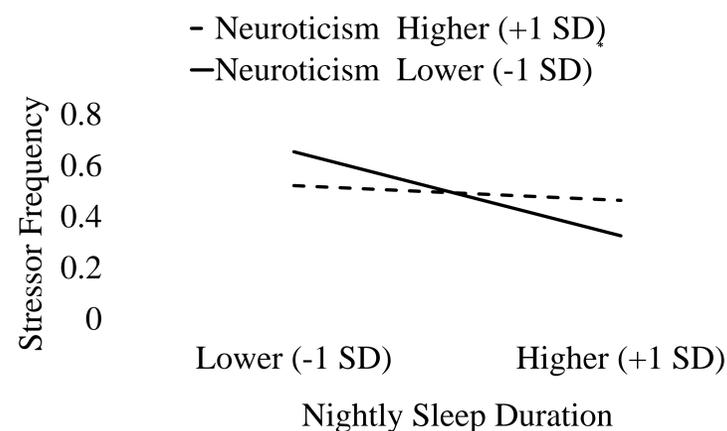

Figure 2. Represents how personality moderated the sleep duration—stressor frequency relationship. Longer sleep duration was associated with lower perceived daily stressor frequency in nurses with lower neuroticism. *$p < .05$.

Greater wake after sleep onset was associated with lower stressor severity for participants with lower extraversion
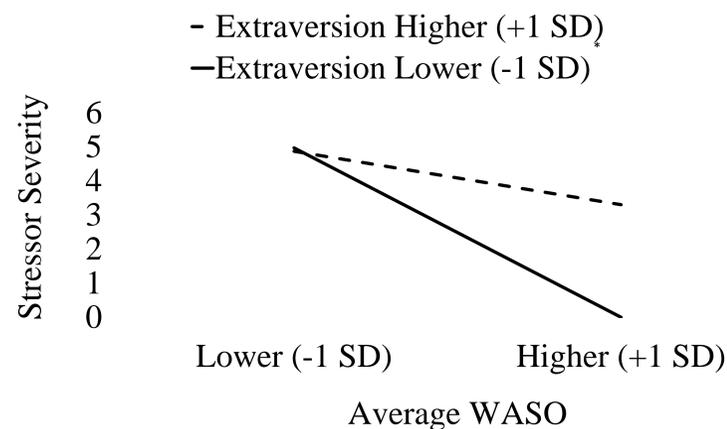

Figure 3. Represents how personality moderated the WASO—stressor severity relationship. Greater WASO was associated with lower perceived daily stressor severity in nurses with lower extraversion. *$p < .05$.

Conclusions

- Sleep—stress relationship may differ by personality traits
- Strengths
  - Sleep assessed daily, immediately upon waking
  - Multiple stress measurements per day
- Limitations
  - Small sample size
  - Only studied nurses from one hospital
- Future directions
  - Impact on patient care
  - Targeted interventions

Contact: Angelina Venetto
avenetto@usf.edu