and somatization was greater in individuals who do not suffer from insomnia. Thus, exercise was noted to be beneficial to those in the general population and those suffering from insomnia as it can potentially reduce the severity of somatization and headaches. Of course, this research was cross sectional and correlational, so the directionality of the effects cannot be inferred. For future research, it would be instrumental to use experimental methods to help determine the duration and type of exercise that may optimize its potential benefits on headaches and somatic symptoms.

Categories: Sleep and Sleep Disorders
Keyword 1: sleep disorders
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73 Changes in Sleep Negatively Impacts Next Day Inhibition Performance Among College Females

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Objective: Sleep is a restorative function that supports various aspects of well-being, including cognitive function. College students, especially females, report getting less sleep than recommended and report more irregular sleep patterns than their male counterparts. Inadequate and irregular sleep are associated with neuropsychological deficits including more impulsive responding in lab-based tasks. Although many lab-based experiments ask participants to report their sleep patterns, few studies have analyzed how potential changes in sleep affect their findings. Utilizing data from a previously collected study, this study aims to investigate relations between sleep (i.e., sleep duration and changes in sleep duration) and performance-based measures of inhibition among female college students.
Participants and Methods: Participants (n = 39) were majority first-year students (M_{age} = 19.27) and Caucasian (51%). Participants were recruited to participate in a larger study exploring how food commercials affect inhibitory control. Participants were randomized to each study condition (watching a food or non-food commercial) over two visits to the lab (T1 and T2). During both visits, they completed questionnaires asking about their 1) sleep duration the night before and 2) their "typical" sleep duration to capture *changes* in sleep duration. They also completed a computer-based stop signal task (SST) which required them to correctly identify healthy food images (stop signal accuracy [SSA] healthy) and unhealthy food images (SSA unhealthy) while inhibiting their response during a stop signal delay (SSD) which became increasingly more difficult (or delayed) as they successfully progressed. Since the main aim of the study was to explore the impact of sleep, analyses controlled for study condition. Analyses involving changes in sleep also accounted for sleep duration the night before the study visit.
Results: On average, students reported being under slept the night before the lab visit, reporting that they got 38 minutes less sleep than their "typical" sleep (7 hrs 3 min). Hierarchical regression analyses demonstrated that sleep duration the night before the lab visit was not associated with inhibition (i.e., SSA unhealthy, SSA healthy, SSD). In contrast, a greater change in sleep, or getting less sleep than "typical," was associated with worsened inhibition across inhibition variables (SSA healthy, SSA unhealthy, SSD) above and beyond sleep duration at T1. At T2, only one analysis remained significant, such that getting less sleep than "typical" was associated with lower accuracy of appropriately identifying unhealthy images (SSA unhealthy) whereas other analyses only approached statistical significance.
Conclusions: These findings suggest that changes in sleep, or getting less sleep than typical, may impact inhibition performance measured in a lab, even when accounting for how much sleep they got the night before. Specifically, getting less sleep than typical was associated with reduced accuracy in selecting unhealthy images, a finding that was consistent across two visits to the lab. These preliminary findings offer opportunities for lab-based experiments to investigate the role of sleep when measuring inhibition performance. Further, clinicians conducting neuropsychological assessments in clinical settings may benefit

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from assessing sleep the night before the appointment and determine if this represents a change from their typical sleep pattern.

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Keyword 3: executive functions
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74 Neurobehavioral Symptoms of Dementia as a Risk Factor for Poor Caregiver Sleep Quality

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Objective: Caregivers to persons with dementia (PWD) consistently report lower sleep quality than non-caregiving controls. Low sleep quality, in addition to being unhealthy for the caregiver, may also impact the quality of care provided to the PWD. One factor that may contribute to poor sleep among caregivers is neurobehavioral symptoms (NBS) of the PWD. NBS, such as mood changes, lack of motivation, and disinhibition, are consistently rated as some of the most distressing symptoms by caregivers. Furthermore, they can include some symptoms related to sleep, such as nighttime wandering and REM sleep behaviors. Prior correlational research indicates a very strong association between NBS of the PWD and sleep quality of the caregiver. However, there are third variables, particularly demographics of the caregiver, which may better explain this relationship. When these variables are controlled in research, findings on the association between PWD NBS and caregiver sleep quality are mixed. Thus, we sought to investigate the relation between PWD NBS and caregiver sleep quality while controlling for caregiver demographics.
Participants and Methods: Fifty caregivers to PWD completed a survey containing the Mild Behavioral Impairment Checklist as a measure of PWD NBS, the Pittsburgh Sleep Quality Index as a measure of caregiver sleep quality, and caregiver demographics. The relationship between PWD NBS and caregiver sleep quality was assessed using hierarchical linear regression. First, we examined the relationship between caregiver demographics (age, gender, income) and caregiver sleep quality. Second, we added NBS to the model to assess for incremental predictive utility by examining change in R^2.
Results: A significant correlation was found between PWD NBS and caregiver sleep quality, with higher PWD NBS associated with worse caregiver sleep quality ($r(48) = .34$, $p = .014$). A hierarchal regression found that caregiver demographics explained a non-significant proportion of variance in reported caregiver sleep quality ($F(3, 44) = 1.05$, $p = .382$, $R^2 = .07$). When PWD NBS was added in model two, there was a significant change in variance explained in the overall model ($F(1,43) = 2.65$, $p = .046$, $\Delta R^2 = .13$, $R^2 = .20$). Across both models, PWD NBS was the only variable significantly associated with caregiver sleep quality (B = .08, $p = .011$).
Conclusions: In line with previous studies, these results indicate a moderate relationship between PWD NBS and caregiver sleep quality. Furthermore, findings suggested that PWD NBS is a risk factor for poor caregiver sleep quality, above and beyond caregiver demographic characteristics. Individuals designing interventions aimed at improving caregiver sleep quality should consider including PWD NBS as an intervention target. Future research should replicate these findings in a longitudinal sample to further evaluate causality.

Categories: Sleep and Sleep Disorders
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Keyword 3: dementia - Alzheimer's disease
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75 Early Childhood Sleep Quantity, but not Parent-Reported Sleep Problems, Predict Impulse Control in Children at Age 8 years

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