Scale, ESS), and fatigue (Multidimensional Assessment of Fatigue Scale, MAF). Participants also completed cognitive tests (Stroop, Digit Span, and Simple Reaction Time). Subjects participated in a short lecture about healthy sleep hygiene habits and the importance of sleep and then repeated the one-week observational study.
Results: Paired sample t-tests revealed a significant increase from baseline average sleep duration (M=5.83 hours) to post-intervention sleep duration (6.64 hours; t(13)=-2.532, p=.013). Sleep efficiency (actigraphy) and quality (PSQI) did not improve significantly. ESS scores decreased significantly (t(13)=3.76, p=.002 (pre M=9.29; post M=5.43) and MAF scores decreased significantly (t(13)=2.19, p=.047 (pre M=20.48; post M=15.60). A difference in reaction times for Stroop incongruent prompts approached significance (p=.083, pre M=979.46; post M=884.70), but no differences were found for errors, Digit Span, or Simple Reaction Times.
Conclusion: The results of this study suggest that one educational lecture about sleep hygiene may be a start to improving sleep in college students. Even a 48-minute increase resulted in decreased sleepiness and fatigue. However, no improvements were found in sleep quality or efficiency. Although a slight improvement was found in reaction time, no other cognitive benefits were noted. More research should be conducted on how to improve sleep habits in college students beyond an educational approach.
Support (If Any): None.

0123

THE IMPACT OF SLEEP, STRESS, AND ENVIRONMENTAL CONTEXT ON MEMORY PRE- AND DURING THE COVID-19 PANDEMIC IN THE UNITED STATES

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Introduction: The COVID-19 pandemic has disrupted the lives of many people. The risk and interpersonal cost of infection as well as the public health measures implemented to mitigate the spread likely have psychological costs. Yet, due to the ever-changing nature of the pandemic, psychological impact has been difficult to capture through research efforts. Here, we leveraged an on-going, geographically representative study to examine the relationship among sleep, stress, and memory function before and during the COVID-19 pandemic.
Methods: Participants (N=1958, aged=18+) were enrolled in a 21-day ecological momentary assessment study. All participants provided demographic information, including zipcodes, which were used to identify rural vs urban locale. Participants were instructed to complete up to three daily check-ins during set time windows—morning, afternoon, night--via a phone application. At each morning check-in, participants were asked about sleep duration and quality, and at every check-in, participants reported perceived stress ratings. Participants also completed a paired-associates memory task on Day 2 of the study. For the task, participants were instructed to encode a list of 20 unrelated word and picture pairs. Immediately after encoding, participants were tested on five picture-word pairs. Tests 2 and 3 occurred on a unique set of five words from the initial list three and six days after initial encoding, respectively. Pre- and during COVID assessments were defined as March 2019 to March 2020 and April 2020 to October 2021, respectively.
Results: Mixed effects binomial regressions revealed that pre-COVID, longer sleep durations were associated with better memory performance (ß=.09, p<.05), and counterintuitively, higher subjective sleep quality was associated with worse memory performance (ß=-.35, p<.001). During COVID, longer nighttime awakenings were associated with poorer memory performance (ß=-.01, p<.05) and living in a rural vs urban environment was associated with poorer memory performance (ß=.48, p<.01). Older age was associated with worse memory performance pre- and during COVID (ß=-.01, p<.01). Stress was not related to memory pre- or during COVID in these models.
Conclusion: Findings support that sleep difficulty before and during the pandemic likely impacts memory function. Additionally, those living in rural U.S. environments may be particularly vulnerable to cognitive changes in the pandemic context.
Support (If Any):

0124

DEXTROAMPHETAMINE BIASES THE BRAIN TOWARDS ENHANCED SPATIAL SELECTIVE ATTENTION COMPARED OVER WORKING MEMORY.

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Introduction: There is a growing trend in the non-medical use of prescription psychostimulant (PStim) in healthy adults One of the main reasons of increased usage of PStim is due to their perceived benefits on the cognitive capacity. However, evidences from empirical studies on healthy adults point to an inconclusive answer. There are various factors which could have contributed to these overall mixed findings. These factors range from differences in drug dosages, individual baseline variability and use of different tasks. However, one of the important factors that previous studies have not considered is the presence possible selective bias of PStim towards a specific cognitive domain over others which may lead to its selective enhancement at the cost of others' degradation.
Methods: To study this, we carried out a double blind, placebo-controlled study, with repeated measures design to investigate the differential influence of a stimulant drug (DEX vs PBO) on the cognitive skills of working memory (WM) and spatial selective attentive in the form multiple object tracking (MOT) across a period of a day. We compared the change in the performance of WM and MOT in DEX vs PBO conditions at 1) pre-drug baseline, 2) 75 minutes post-drug (peak concentration), 3) 12 hours post-drug intake (washout).
Results: First, we found that DEX did not have any overall significant effect on WM performance across a period of day compared to the placebo condition. We also found that MOT performance was rescued by DEX, unlike the placebo condition in which the MOT performance degraded over different testing periods across a wake day period. Importantly, we found that during the peak concentration of DEX in the body MOT performance was significantly superior to that of the WM performance. This superiority of MOT over WM was not present before the drug administration (baseline) and also returned to a level similar to baseline after a gap of 12hours.
Conclusion: Overall, our study findings suggest that DEX has a favorable bias towards MOT compared to WM and selectively enhances its performance when the brain is required to support both of these two cognitive domains concurrently.
Support (If Any):