

OFFICIAL ABSTRACT and CERTIFICATION

Sleep Restriction Leads to Increased Production of False Memories

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Objective: Previous studies have focused upon the effects of sleep deprivation on the student learning process. The novel purpose of this study was to determine the effects of sleep restriction on the production of false memories within suburban highschool students.

Methods: 10 suburban high school students participated in the experiment. Subjects were randomly divided into a well-rested (WR) group (8 hours of sleep) or a sleep-restricted (SR) group (4 hours of sleep). The morning after rest, the subjects undertook the Deese-Roedigger-McDermott (DRM) false memory task, which consisted of listening to a recording, a free recall test, and a recognition test.

Results: The results of the recall test were not significantly different, indicating that neither group simply wrote down random words. For the recognition test, the SR group circled a significantly higher percentage of critical lures, suggesting the formation of more false memories. However, the SR group did not have a significantly different percentage of studied words nor foil words circled, allowing for the conclusion that the increase in false memories were generated due to the sleep restriction.

Conclusions: There were a few limitations within this study. In addition to the small sample size, the subjects were not randomly chosen, nor was the quality of sleep monitored. However, these can be remedied with the use of a sleep lab in a future study. Nonetheless, these results add to the growing body of research regarding the importance of sleep to the learning process of students.

1. As a part of this research project, the student directly handled, manipulated, or interacted with (check ALL that apply):

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