

The Sleep Study Seasonal Newsletter - Fall

The Official Newsletter of the Neurocognitive Development Laboratory at the University of Maryland, College Park



The first publication from our sleep study!

In October, the Neurocognitive Development Lab published its first paper from the Sleep Study in the Journal of Visualized Experiments (JoVE). JoVE is a peer reviewed journal that illustrates innovative scientific methods using short instructional videos. This is critical to the scientific process because it enables other scientists to see our method and better understand how we assess sleep and memory in early childhood.

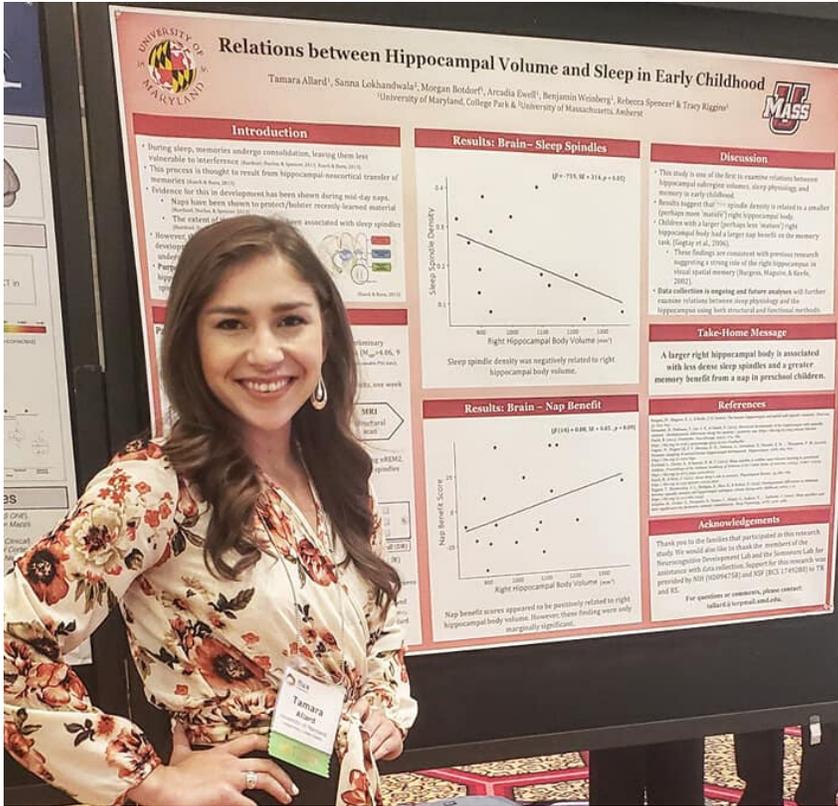
If you are interested in understanding more about the methods we used in your home you can watch the video or read the corresponding published work here: <https://ter.ps/lm1>

This Issue's Top Articles:

The first publication from our sleep study! - 1

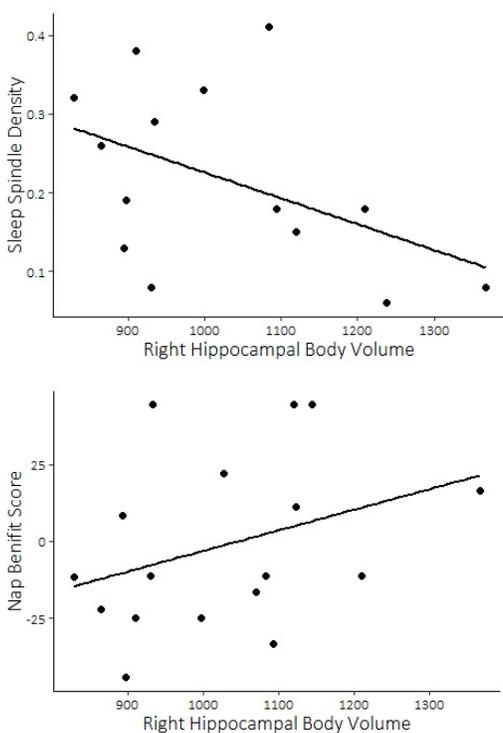
Flux Congress: Preliminary results from the sleep study - 2

Washington Post: Why sleep is important - 3



We took to New York City in August for the annual Flux Congress hosted by the Developmental Cognitive Neuroscience Society! Graduate Student, Tamara Allard presented preliminary results from the Sleep Study.

Flux Congress: Preliminary results from the sleep study presented in New York, NY

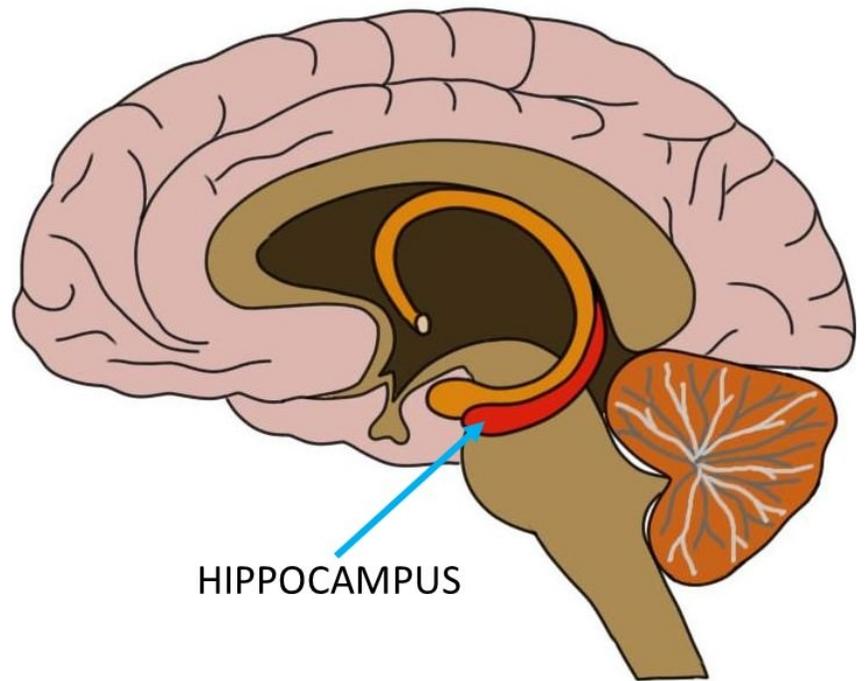


Research shows that sleep is critical for the long-term storage of memories. During sleep we exhibit brain waves called sleep spindles which are short, high frequency burst of energy in the cortex. These sleep spindles have been related to increased memory performance after a nap, but only in habitual nappers. Until now sleep physiology (like spindles) has not been connected to the hippocampus (see picture on page 3), a brain region critical for the formation of new memories. This structure is developing through early childhood as children are transitioning out of their nap. Importantly, the hippocampus is lateralized, meaning there are essentially two: one on the left side and one on the right side. Furthermore, it has anatomical subunits that develop at different rates. They are called head, body, and tail.

Preliminary results from the sleep study show a negative relation between right hippocampal body and sleep spindles (top figure). Right hippocampal body volumes were also positively related to nap benefit score on the memory task (bottom figure). This could suggest that children with a larger, potentially less mature hippocampus, exhibit less sleep spindles during sleep and therefore benefit more from a nap.

ATTENTION:

The Neurocognitive Development Lab is still looking for participants to partake in the Sleep Study! If you know of someone aged 3-4 years who is a regular napper, please feel free to send their parents our email address: kidbrainstudy@umd.edu



The Washington Post: Why sleep is important

The Washington Post
Democracy Dies in Darkness

Health & Science

Go to bed! Brain researchers warn that lack of sleep is a public health crisis.



Za'miya New, 4, at her home in Indian Head, Md., this month. She was participating in a study by University of Maryland researchers on napping. They put a helmet on Za'miya to simulate how she might feel in an MRI scanner. (Calla Kessler/The Washington Post)

By Carolyn Y. Johnson

Jan. 24, 2019 at 4:50 p.m. EST

As you may have seen on our Facebook page, the Sleep study was recently highlighted in the Washington Post. The article includes interviews from Dr. Tracy Riggins and our collaborator at the University of Massachusetts, Dr. Rebecca Spencer. It highlights the importance of sleep across the life span. You can read the article here: <https://ter.ps/lm2>