



Application number/Title: 36328 - Associations between sleep and cognition in middle-aged and older adults: mediating effects of demographic and mental health factors and resting state brain-connectivity

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Keywords provided by the Applicant PI to describe the research project:

Cognition, cognitive ageing, resting-state, sleep

Application Lay Summary:

Whereas it is well-documented that sleep influences cognitive functions in young adults, studies on middle-aged and older adults have produced conflicting results. Age-related alterations in sleep duration and quality might help explain cognitive deficits with aging. On the other hand, there is also evidence that sleep-cognition associations diminish in older ages. We aim to examine the associations between different aspects of sleep and cognitive performance and determine when and for whom sleep has a strong impact on cognition and cognitive decline. In particular, we will investigate whether associations are modified by age, sex, or mental health status. Sleep may also affect brain efficiency, and thereby affect cognition. We will examine resting-state brain connectivity as a potential mediator in sleep-cognition association. The project will inform about the role of sleep for cognitive functioning in middle-aged and older adults and about the potential for improved sleep duration and quality as a possible intervention against age-related cognitive decline. Cross-sectional analyses will be performed on the whole cohort, including exploring the role of potential modifiers (age, sex, or mental health status). In subsequent parts of the project, the effect of sleep on cognitive decline will be explored for those who have follow-up data and resting-state brain connectivity as a possible mediator in the brain-cognition associations will be examined in the neuroimaging sample.