Good sleep continuity leads to better days for people with dementia

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Not only does how well people with dementia sleep affect their symptoms the following day, but of particular significance is their sleep continuity, or the extent which they can stay asleep after initially falling

asleep, according to a new study by Brighton and Sussex Medical School (BSMS), the University of Surrey and University of Sussex.

Dr. Sara Balouch, former Dementia Research Fellow from the Centre for Dementia Studies at BSMS and lead author of the paper, says that their "research shows that night-to-night variations in sleep predict day-to-day variations in symptoms of dementia, more so than in people without cognitive impairment. We suggest that it may be possible to optimize time in bed and sleep continuity, to improve daytime symptoms in people living with dementia."

Over a two-week period, researchers assessed sleep in people living with dementia and assessed their daytime cognition and dementia symptoms, such as everyday memory problems. Sleep was assessed both by self-report and objectively by activity monitors placed on the wrist, for this two-week period. Researchers not only asked the people living with dementia about their sleep but also asked their partners/caregivers to comment on their daily patterns of behavior.

Detailed analyses of the sleep data indicated that sleep continuity was among the most predictive aspects of next day symptoms. Sleep continuity refers to the extent which one can stay asleep after initially falling asleep. When we spend too much time in bed, however, sleep continuity actually decreases. It was found that increased sleep continuity was related to feeling more alert, fewer everyday memory errors and fewer caregiver reported memory and behavioral problems. However, it was also related to reduced ability to conduct a subtraction task the next morning, which the researchers believe might have something to do with sleep inertia (a state of impaired cognitive performance immediately following sleep).

One interpretation of these results is that there is an optimal time in bed such that sleep is sufficiently long and continuous. This interpretation

can be tested in interventional studies in which for each person living with dementia the optimal time in bed is assessed and implemented.

The findings were published in the journal *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring.*

More information: Sara Balouch et al, Night-to-night variation in sleep associates with day-to-day variation in vigilance, cognition, memory, and behavioral problems in Alzheimer's disease, *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring* (2022). DOI: 10.1002/dad2.12303

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