

Poster presentation

## Objectively measured sleep quality and functional impairment in family caregivers of older adults with memory disorders

Adam Spira\*<sup>1</sup>, Leah Friedman<sup>2,4</sup>, Laura Haagenon<sup>2,4</sup>, Javaid Sheikh<sup>2,3,4</sup> and Jerome Yesavage<sup>2,3,4</sup>

Address: <sup>1</sup>Division of Geriatrics and Department of Psychiatry, University of California, San Francisco, USA, <sup>2</sup>Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, Palo Alto, CA, USA, <sup>3</sup>Veterans Affairs Palo Alto Health Care System, CA, USA and <sup>4</sup>Department of Veterans Affairs Sierra Pacific Mental Illness Research, Education, and Clinical Center (MIRECC)

\* Corresponding author

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### Background

Poor sleep quality has been linked to functional impairment in several populations [1-4] but this association has not been investigated widely in family caregivers of older adults with memory disorders. We investigated the association between objectively measured sleep and functional status in a sample of family caregivers.

### Materials and methods

Participants were 42 caregiver-patient dyads. Caregivers completed the Beck Depression Inventory (BDI-II) [5] and the Medical Outcomes Study SF-36 [6]. The "physical function" subscale of the SF-36 measures difficulty lifting groceries, climbing stairs, etc. Scores range from 1 to 100; higher scores indicate better function. Caregivers completed 1 week of actigraphy—an objective means of measuring sleep by recording movement. We calculated their total sleep time (TST; mean time asleep while in bed) and sleep efficiency (SE; mean percentage of time asleep while in bed).

### Results

Caregivers' mean age was 69.4 ± 13.6 years. Patients' mean age was 79.8 ± 7.6 years; their mean Mini-Mental State Exam [7] score was 21.3 ± 4.9. Caregivers' mean physical function score was 72.6 ± 23.2. In regression analyses (adjusted for age, self-rated health, and BDI-II), each 1-hour increase in TST was associated with a 5.7-point increase in physical function (Beta=5.71, p=.001, R-

squared=.75), and each 10% increase in SE predicted a 3.8-point increase in physical function (Beta=3.79, p=.02, R-squared=.69).

### Conclusions

In family caregivers, greater TST and SE were independently associated with better physical function after controlling for potential confounders. Future, longitudinal studies are needed to establish the directions of these relationships and to evaluate whether poor sleep might be a preventable cause of disability in caregivers.

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