



## AAN 76<sup>th</sup> ANNUAL MEETING ABSTRACT

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**Abstract Title:** Sleep Apnea Symptoms are associated with Memory and Cognitive Symptoms in a Nationally-Representative Sample of U.S. Adults

**Press Release Title:** Sleep Apnea Symptoms Linked to Memory and Thinking Problems

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**Objective:** The aim of this study was to investigate the relationship between sleep apnea symptoms and cognitive symptoms in a nationally-representative sample of U.S. adults.

**Background:** Sleep apnea is a prevalent sleep disorder characterized by breathing interruptions during sleep. It is associated with a range of adverse health outcomes, including impaired cognitive performance. However, many people with sleep apnea remain undiagnosed.

**Design/Methods:** In this cross-sectional study, we analyzed data from the 2017-18 National Health and Nutrition Examination Survey, a nationally-representative cohort of U.S. adults. Participants completed questionnaires covering sleep, memory, cognition, and decision-making abilities. Those who reported snoring, gasping, or breathing pauses during sleep were categorized as experiencing sleep apnea symptoms. Individuals who reported difficulty remembering, periods of confusion, difficulty concentrating, or decision-making problems were classified as having memory or cognitive symptoms. The statistical analyses were run on Stata/IC 15.1.

**Results:** There were 4,257 adults, aged 20 to  $\geq 80$  years, who had complete data for demographics and questionnaires about snoring, gasping, or breathing pauses during sleep, difficulty remembering, periods of confusion, difficulty concentrating, and decision-making problems. We found that participants who had sleep apnea symptoms had greater odds of having memory or cognitive symptoms [Odds Ratio (95% Confidence Interval) = 1.88 (1.48, 2.37)] ( $p < 0.001$ ). This relationship retained its statistical significance after adjusting for age, gender, race (Non-Hispanic White), and education (at least some college education) [OR (95% CI) = 2.02 (1.58, 2.59)] ( $p < 0.001$ ).

**Conclusions:** These findings support the importance of early screening and intervention for sleep apnea, and suggest a relationship between sleep apnea and cognitive function, an area of increasing public health importance. Further work should study the relationship between sleep apnea and cognitive impairment. Given the prevalent underdiagnosis and undertreatment of sleep apnea, proactive measures in screening and managing sleep apnea are needed.