Study reveals impact of sleep-disordered breathing in adults over 70

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A recent study by Monash University researchers found that even mild cases of sleep-disordered breathing (SDB), the most common type being obstructive sleep apnea (OSA), associate with lower physical health-related quality of life, and also with lower cognitive function.

In a baseline analysis of data from the sub-study of the ASPrin in Reducing Events in the Elderly (ASPREE), SNORE ASA (The Study of Neurocognitive Outcomes, Radiological and Retinal Effects of Aspirin in Sleep Apnoea), the study looked at 1,400 healthy Australians aged 70 years and over, finding that just over 80 percent of participants had a form of SDB and were unaware.

Twenty-five percent of women and 36 percent of men had moderate to severe SDB, while the OSA syndrome, defined by the presence of SDB with significant daytime sleepiness, was present in over seven percent and almost six percent of men and women respectively.

The findings are now published in *Respirology*.

Lead researcher Dr. Stephanie Ward, a Ph.D. candidate from the Monash School of Public Health and Preventive Medicine as well as a practicing geriatrician, said the study wanted to explore if SDB, common in older populations, is clinically significant in this age group. The study looked at associations with health measures that are important for older people, including mood, daytime sleepiness, quality of life, and cognitive function.

The latter is of particular interest, as dementia is a significant health issue for older people and one for which SDB is emerging as a potential risk factor. There is now recognition of the important role of sleep for brain health, especially as sleep has been shown to be integral to the clearance of neurotoxins. In SDB, not only may sleep be interrupted, but the repeated drops in blood oxygen levels that result from the SDB can have effects on blood vessel health, including in the cerebrovascular system. Yet, the role of SDB as a risk factor for dementia is not yet definitively established.

The SNORE ASA sub-study of ASPREE is aiming to shed more light on the association of SDB with cognition and dementia risk and will examine associations of SDB with change in cognition over time, as well as with neuroimaging and retinal biomarkers of vascular pathology.

This newly published study has examined cross-sectional, baseline associations, from this study. "SDB is so common as we get older. Understanding to what degree this matters clinically is important," Dr. Ward said. "SDB may be a risk factor for developing dementia as we get older. We already know about many other risk factors for dementia, such as being physically inactive, socially isolated, having a hearing impairment, hypertension and obesity. The results of this study do confirm an association of SDB with lower cognitive function, but, whether SDB increases the risk of decline in cognition over time, and importantly, whether treatment of SDB prevents dementia, remains to be seen."

More information: Stephanie A. Ward et al, Sleep-disordered breathing was associated with lower health-related quality of life and cognitive function in a cross-sectional study of older adults, *Respirology* (2022). DOI: 10.1111/resp.14279