

Sensory loss rehabilitation among people with dementia: a low-risk strategy to enhance quality of life



Dementia is a costly condition that affects health, quality of life, and relationships with family and friends. For decades, extensive resources have been dedicated to the development of pharmacological interventions to prevent, treat, or cure dementia-associated symptoms. However, the absence of a cure for dementia necessitates continued focus on the prevention of dementia or delaying of symptom progression. Although pharmacological interventions remain a major area of focus in dementia research and for the allocation of resources, attention is growing on risk factors and non-pharmacological interventions for all levels of dementia prevention.

International consensus emphasises the crucial role of modifiable risk factors in the development of dementia, with continued focus on hearing and vision management as essential components of dementia prevention and care.¹ Best practice recommendations for hearing and low vision rehabilitation are well established for the general adult population and, in recent years, considerable advances have been made in the understanding of sensory loss management to help to prevent dementia.² However, the application of sensory interventions for people already affected by dementia remains elusive and undervalued.³ As many as 60% of people living with dementia have hearing loss, and an estimated 30% of people with dementia have visual impairment.^{4,5} The co-occurrence of hearing loss and visual impairment presents unique challenges for addressing dementia symptomatology or providing dementia prevention strategies and best practice recommendations for sensory care. Individuals with dementia or cognitive deficits are less likely to engage in sensory rehabilitation within current models of care.^{4,6}

Most previous studies focused on sensory intervention to prevent or delay dementia onset.¹ Only recently has there been attention on sensory rehabilitation as a novel approach to address dementia symptomatology and improve quality of life. In *The Lancet Healthy Longevity*, Iracema Leroi and colleagues⁷ reported the SENSE-Cog trial, the first randomised controlled trial of an at-home multifaceted sensory rehabilitation intervention for vision and hearing loss among people with dementia. Leroi and colleagues observed a modest benefit in dementia-related quality of life at 18 weeks after sensory

intervention compared with care as usual; however, the benefit was not observed at 36 weeks. Challenges encountered during the study because of the COVID-19 pandemic, including heterogeneity among study sites, extended recruitment period, and difficulties associated with implementing a home-based intervention programme for related but distinct senses, have limited inferences based on the study findings. Without the added complexity of a global pandemic, a more sustained and systematic home-based intervention could improve the quality of life of people living with dementia and vision and hearing loss. Quality of life is not a primary outcome in many clinical trials on dementia, especially pharmacological trials.⁸ The incorporation of quality-of-life tools, such as the Dementia Quality of Life instrument, in clinical trials provides information on outcomes that are important to patients and families, including the effects of palliative care and the responsiveness of scales to perceived treatment benefits in future studies.^{9,10}

Improving the quality of life of people with dementia in measurable ways is challenging. Although Leroi and colleagues⁷ did not observe a long-term effect of the sensory support intervention, the study provided valuable insights into potentially meaningful changes to the lives of people affected by sensory loss and dementia. The self-reported benefit of sensory intervention observed in the study suggests potential for sensory rehabilitation strategies to extend and improve quality of life. The benefit observed at 18 weeks after intervention is useful for developing rehabilitation strategies. Importantly, compared with other pharmacological interventions for dementia, the low-risk and non-invasive nature of sensory interventions and relatively accessible cost make continued innovations, such as the SENSE-Cog trial, of practical and public health importance.¹ Trials, including the one reported by Leroi and colleagues, provide valuable secondary data to examine characteristics of people who benefit from the intervention versus those who do not, thus informing the development of targeted low-risk sensory interventions.

The individual-level risk for dementia progression due to sensory loss might be small. However, given the high prevalence of sensory loss in older adults, including among

Lancet Healthy Longev 2024

Published Online
<https://doi.org/10.1016/j.janhl.2024.100640>

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<https://doi.org/10.1016/j.janhl.2024.07.008>

those with dementia, the potential effect of non-pharmacological interventions such as the sensory rehabilitation intervention in the study by Leroi and colleagues could be monumental at the population level.¹ In complex study environments, the intervention still showed acceptable adherence and self-reported improvements in communication ability of approximately two-thirds of the participants. These findings strengthen the understanding of sensory rehabilitation strategies that are meaningful for people affected by dementia and sensory loss. Future studies that incorporate measures of treatment adherence and quality of life, thereby humanising dementia interventions, are fundamental to inform tertiary prevention strategies.

In conclusion, although the work by Leroi and colleagues had challenges that limited inferences, the findings suggest that non-pharmacological interventions, such as sensory support, could play a central role in dementia prevention. At the very least, sensory support does not appear to have any negative effects.

DSP reports no conflicts of interest. NSR reports being on the advisory board for Neosensory. DSP is supported by the Alzheimer's Association (23AARF-1030303), and NSR is supported by NIA/NIH (K23AG065443).

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