

Predictors of Technology Interest and Memory in Older Adults: Results from CFAS-II

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1 INTRODUCTION

In the UK, over 1.5 million people are expected to be living with dementia by 2040, doubling today's statistics due to population ageing, as people are living longer.¹ Given the projected rise in population ageing and lack of curative treatment, the number of people with dementia is predicted to increase. Various technologies have the potential of being effective in improving cognition and memory, a core characteristic of dementia. However, we do not know what affects the interest in this type of technology and if this is associated with better memory. This is important for successful dissemination should such technologies be proven effective.

2 METHODS

1. Secondary statistical analysis of third-wave data from Cognitive Function and Ageing Study-II (CFAS-II).
2. Participants over 60 years of age and from Newcastle, Nottingham and Cambridge.
3. CFAS-II third-wave interviews - 2018-2019.
4. Assessed physical, cognitive, and sociodemographic variables, and technology interest and access.

Who wants technology for memory?

3 RESULTS

Total sample size was 541, mean age of 81.3, and 52% male.

65% were interested in technology to improve their memory, and had **better memory** compared to those that did not want it.

Of all correlated variables, only *three* remained significant and predicted technology interest:

- **Females** and **frequent loneliness** = less likely to be interested in technology to improve memory.
- **Access to technologies** (laptops, computers, tablets) = more likely to be interested in technology for memory.

HOWEVER memory did not predict the interest in technology for memory improvement. *So what affects memory?*

MMSE:

Walking four to five days per week, technology confidence, being married, and mid-high socioeconomic position predicted higher MMSE scores.

Immediate and Delayed Recall:

Moderate exercise, walking, ICT confidence, being married, a relatively younger age, higher socioeconomic position and being a woman predicted higher immediate and delayed recall.

Subjective Memory:

Technology confidence and self-reported health predicted better better rated subjective memory.

Not included in the final models were comorbidities, age, education, technology ownership, loneliness, accommodation, vigorous exercise, and ADL/IADL impairment.

4 CONCLUSIONS

Being female, experiencing frequent loneliness, and having less access to technology predict less interest in technology that can improve memory. However, these particular characteristics are linked to greater dementia risk.^{2,3,4,5} Psychosocial activities (e.g. exercise and technology) may improve memory and cognition. While memory did not predict technology interest, various sociodemographic variables and technology-related variables predicted objective and subjective memory performance. Effective technologies should be targeted to those with greater dementia risk, accounting for the associated variables that influence interest in such technologies.

1. Wittenberg, R., Hu, B., Barraza-Araiza, L. F. & Rehill, A. Projections of Older People with Dementia and Costs of Dementia Care in the United Kingdom, 2019-2040. CPEC Working Paper 5 1-79 (2019).
2. Duplaga, M. The association between Internet use and health-related outcomes in older adults and the elderly: a cross-sectional study. BMC Med Inform Decis Mak 21, 1-12 (2021).
3. Freak-Poli, R. et al. Loneliness, Not Social Support, Is Associated with Cognitive Decline and Dementia Across Two Longitudinal Population-Based Cohorts. Journal of Alzheimer's Disease 85, 295-308 (2022).
4. Jin, Y., Jing, M. & Ma, X. Effects of Digital Device Ownership on Cognitive Decline in a Middle-Aged and Elderly Population: Longitudinal Observational Study. J Med Internet Res 2019;21(7):e14210 https://www.jmir.org/2019/7/e14210 21, e14210 (2019).
5. Podcasy, J. L. & Epperson, C. N. Considering sex and gender in Alzheimer disease and other dementias. https://doi.org/10.31887/DCNS.2016.18.4/cepperson18, 437-446 (2022).

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