

8-16-2024

## Technology in Dementia Care: An Analysis using the NASSS Framework

Zhengyang Feng

*University of Technology Sydney, zhengyang.feng@student.uts.edu.au*

Jayan Chirayath Kurian

*University of Technology Sydney, jayanchirayathkurian@uts.edu.au*

Mukesh Prasad

*University of Technology Sydney, Mukesh.Prasad@uts.edu.au*

Nimish Bioria

*University of Technology Sydney, Nimish.Bioria@uts.edu.au*

Follow this and additional works at: [https://aisel.aisnet.org/treos\\_amcis2024](https://aisel.aisnet.org/treos_amcis2024)

---

### Recommended Citation

Feng, Zhengyang; Kurian, Jayan Chirayath; Prasad, Mukesh; and Bioria, Nimish, "Technology in Dementia Care: An Analysis using the NASSS Framework" (2024). *AMCIS 2024 TREOs*. 26.

[https://aisel.aisnet.org/treos\\_amcis2024/26](https://aisel.aisnet.org/treos_amcis2024/26)

This material is brought to you by the AIS TREO Papers at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 2024 TREOs by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

# Technology in Dementia Care: An Analysis using the NASSS Framework

TREO Talk Paper

**Zhengyang Feng**

University of Technology Sydney  
zhengyang.feng@student.uts.edu.au

**Mukesh Prasad**

University of Technology Sydney  
mukesh.prasad@uts.edu.au

**Jayan Chirayath Kurian**

University of Technology Sydney  
jayanchirayathkurian@uts.edu.au

**Nimish Bioria**

University of Technology Sydney  
nimish.bioria@uts.edu.au

## Abstract

In recent years, Australia has been grappling with an alarming surge in dementia cases, which is the second leading cause of death nationwide and able to become the primary cause soon (Australian Institute of Health and Welfare, 2022). The scale of the issue is overwhelming, with over 421,000 Australians currently living with dementia, whereas the number is projected to be more than double by 2054 without significant medical breakthroughs (Dementia Australia, 2023). Distressingly, this trend has also extended to the younger demographics, with nearly 29,000 individuals experiencing early onset dementia, the figure is expected to climb substantially over the coming decades (Dementia Australia, 2024). The burden extends beyond those directly affected, with an estimated 1.6 million Australians involved in dementia care, underscoring the widespread societal impact of the condition (Dementia Australia, 2024). In addressing the complex challenges posed by dementia in Australia, Information Technologies play a crucial role in providing innovative solutions to support people living with dementia, their caregivers, and healthcare professionals (Bhargava & Baths, 2022). The rising prevalence of dementia has sparked a technological revolution in dementia care, with a focus on both patient-centric and caretaker-centric solutions. The patient-centric solution contains various technologies, such as wearable devices, virtual reality (VR), augmented reality (AR), interactive games and robots. Additionally, embedded sensors and health monitoring systems could be the major examples of caretaker-centric solutions (Bhargava & Baths, 2022). The absence of theory-driven research in current studies highlight a research gap in understanding the adaptability and adoption of technologies in dementia care. Hence, the aim of this study is to shed insights into the intersection of technology and dementia care using the lens of NASSS framework (Greenhalgh et al. 2017) which will examine theorizing and evaluating Non-adoption, Abandonment, Scale-up (e.g. local settings), Spread (e.g. application used in a new setting) and Sustainability (e.g. long-term use of an application) of healthcare technologies.

## References

- Australian Institute of Health and Welfare. 2022. Dementia in Australia. AIHW, Australian Government.
- Bhargava, Y., and Baths, V. 2022. "Technology for dementia care: benefits, opportunities, and concerns". *Journal of Global Health Reports*, (6), e2022056.
- Dementia Australia. 2023. 2024-2054 Dementia Prevalence Data Estimates and Projections.
- Dementia Australia. 2024. Key facts and statistics. Dementia Australia.
- Greenhalgh, T., Wherton, J., Papoutsi, C., Lynch, J., Hughes, G., A'Court. C., Hinder, S., Fahy, N., Procter, R., Shaw, S. 2017. "Beyond Adoption: A New Framework for Theorizing and Evaluating Nonadoption, Abandonment, and Challenges to the Scale-Up, Spread, and Sustainability of Health and Care Technologies", *J Med Internet Res* (19:11), e367.