

Background

- Despite the growing body of research applying AI in healthcare, particularly generative AI-based approaches, limited evidence exists regarding how generative AI has been used in the care of older adults with dementia.
- Additionally, despite growing interest in generative AI-enabled approaches in care, how person-centered care is conceptualized and operationalized in dementia care remain insufficiently explored.

Study Aims

- This review aimed to (1) provide a timely and comprehensive overview of the current applications of generative AI in the care of older adults with dementia and (2) evaluate whether the included studies incorporated these person-centered care elements.

Methods

- **Data sources**
 - ✓ PubMed, CINAHL, Scopus, grey literature
 - ✓ Search terms used included “older adults”, “chronic diseases”, “caregivers”, and “artificial intelligence”
- **Inclusion criteria:** Empirical studies which:
 - ✓ Involved older adults with dementia or their caregivers that applied or evaluated AI-based approaches, such as machine learning and natural language processing, including applications utilizing generative AI or its output
- **Data selection**
 - ✓ Among 1,060 studies initially identified, 13 studies were included in the review using PRISMA guideline.
- **Data Synthesis**
 - ✓ To examine person-centered care, elements proposed by Grover et al. (2022) were used.

Results

- **Types of Generative Artificial Intelligence**
 - ✓ Most studies examined generative artificial intelligence systems, with a strong emphasis on large language model (LLM)-based technologies. (e.g., the GPT families)
- **Purpose of Generative AI in Dementia Care**
 - (1) Emotional and psychosocial support
 - (2) education and resource support for patients and caregivers, and
 - (3) facilitation of cognitive stimulation and reminiscence
- **Person-centered Elements in Included Studies**
 - ✓ Based on the person-centered care elements proposed by Grover et al. (2022), following elements were identified across patients, providers, and system levels:
 - Biopsychosocial care (n=13)
 - Patient Individuality (n=8)
 - Empathy (m=5)
 - Provider training and characteristics (n=4)
 - Respect (n=4)
 - Communication (n=4), etc

Summary and Conclusion

- The findings of this study indicated that current generative AI applications in dementia care are predominantly oriented toward interactional and supportive functions.
- When examining person-centered elements in the included studies, some of the person-centered elements were addressed, but not all were met.

Healthcare professionals should continue to prioritize the human dimensions of care in the design and evaluation of AI interventions.