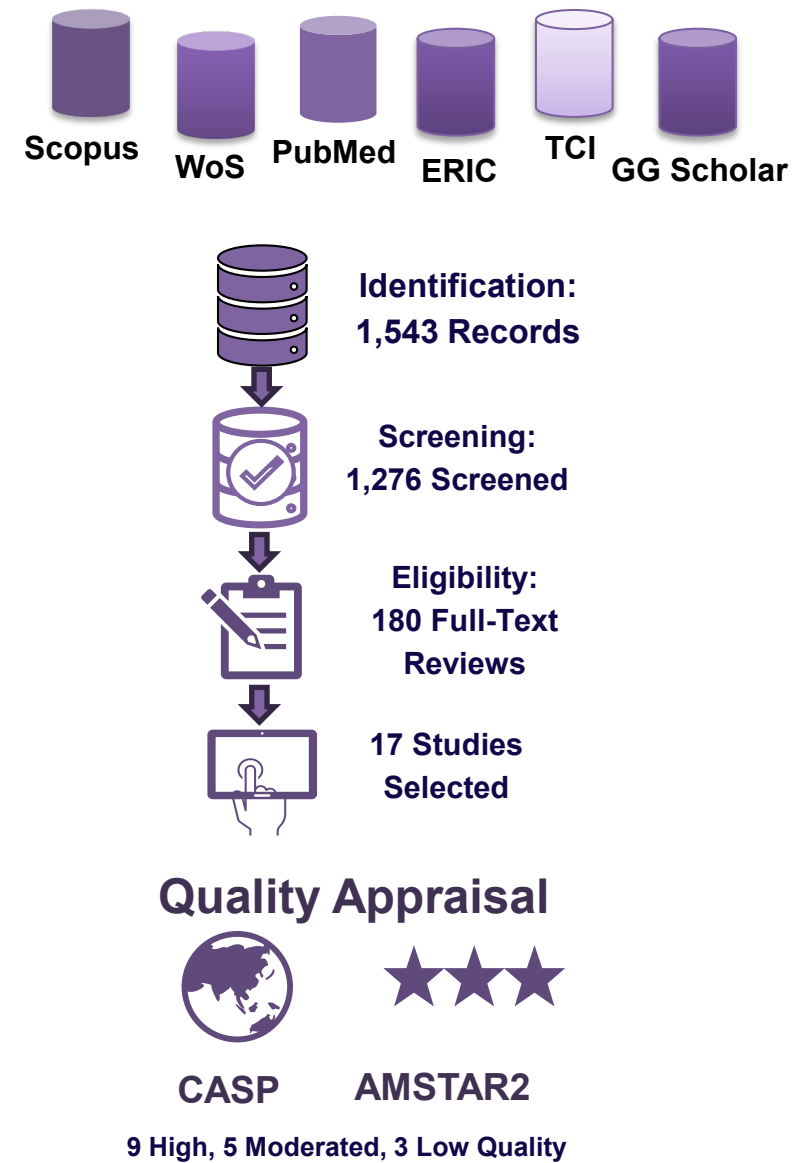


# Digital Learning Assistant Using Artificial Intelligence for Elderly Health Literacy: A Systematic Review

## RESEARCH STUDY



## 3 KEY FINDINGS

**17** Studies reviewed  
6 Databases  
2011–2025  
PRISMA 2020

**Target population**  
Older adults aged 60+ with low health literacy

**Intervention types**  
Chatbots – Voice assistants  
Virtual coaches  
Robotic systems

**01 AI-based DLAs enhance health literacy and self-care**

Medication adherence Chronic disease  
Reduced loneliness

McDonald et al. (2011, 2012), Bickmore et al. (2010), Azevedo et al. (2018), Wei et al. (2021), and Ali et al. (2020)

**02 Geragogy-informed design drives effectiveness**

Cultural tailoring Co-design Geragogy principles

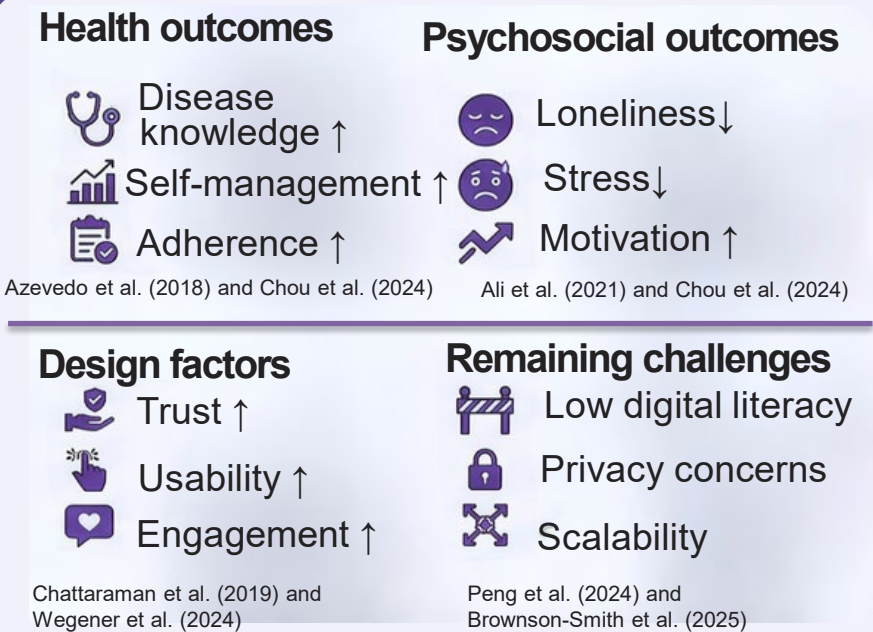
Chattaraman et al. (2019), Wegener et al. (2024), and Peng et al. (2024)

**03 Community integration is the path forward**

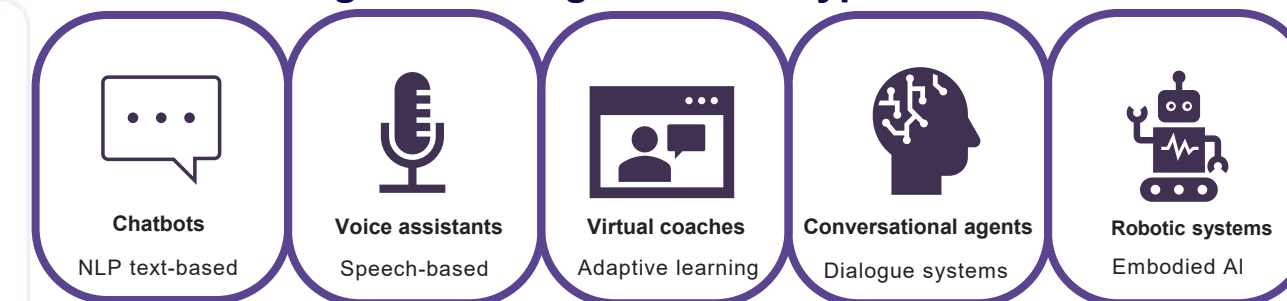
Community health centers Supportive role  
Longitudinal RCTs

Brownson-Smith et al. (2025), Quinn et al. (2024), and Liang et al. (2025)

## OUTCOME MAPPING



## AI-Based- Digital learning Assistant Types



**Keywords:** artificial intelligence, digital learning assistants, elderly, health literacy, systematic review

## CONCLUSION



AI-based DLAs can meaningfully reduce health literacy gaps in aging populations through geragogy-informed, culturally tailored, community-integrated design — with older adults actively involved in the process.