

## Authors

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## Introduction

The growing aging population has increased the need for caregiver support for older adults with functional limitations and chronic conditions. Digital caregiver training interventions, including telehealth, mobile applications, and online education platforms, have emerged as promising approaches to improve caregiver support and promote healthy aging. These interventions may enhance functional independence, caregiver confidence, and overall health outcomes among older adults. However, evidence regarding the effectiveness of digital caregiver training interventions remains limited and requires further evaluation.

## Objective

To evaluate the effectiveness of digital caregiver training interventions in promoting functional independence, medication adherence, and healthy aging outcomes among older adults.

## Results

- Digital caregiver training interventions showed improvements in caregiver support, functional independence, and quality of life among older adults.
- A meta-analysis of 16 studies involving 2,716 caregivers reported reduced caregiver burden and stress following digital interventions.
- ICT-based integrated care interventions were associated with reduced emergency department visits and improved patient engagement.
- Telehealth interventions demonstrated potential cost savings ranging from USD 223 to USD 3,846 per event.
- Common barriers included digital literacy challenges, lack of standardized frameworks, and limited inclusion of oral health training components.



## Methodology

A literature review was conducted using PubMed, Scopus, and CINAHL databases to identify peer-reviewed studies published between 2015 and 2024. Studies evaluating digital caregiver training interventions, including telehealth, mobile applications, and web-based programs, were included. Outcomes related to functional independence, medication adherence, quality of life, and caregiver burden among older adults were examined. Findings were synthesized qualitatively across intervention design, patient outcomes, cost-effectiveness, and implementation feasibility.

## Discussion

Digital caregiver training interventions demonstrated positive effects on caregiver support, functional independence, and quality of life among older adults. Telehealth and technology-assisted programs improved caregiver engagement and reduced caregiver burden while supporting healthy aging outcomes. However, variability across intervention designs, digital literacy barriers, and the absence of standardized implementation frameworks continue to limit broader adoption and long-term evaluation.

## Conclusion

- Digital caregiver training interventions improved caregiver support and functional independence among older adults.
- Telehealth and web-based programs demonstrated positive effects on medication adherence and patient engagement.
- Technology-assisted caregiver education may help reduce caregiver burden and healthcare utilization.
- Barriers such as digital literacy challenges and lack of standardized frameworks limit broader implementation.
- Future research should focus on scalable, multidisciplinary caregiver training models for sustainable healthy aging.

## Key Sources & Acknowledgements

Primary references and supporting materials can be accessed via the QR code.

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