A Comparative Review of Smart Walkers and Normal Walkers in Assistive Mobility Devices for Older Adults

Abigail Anokye[1], Mimi Trinh[1], and Wendy Rogers [1]

[1]Department of Health and Kinesiology

Rehabilitation and Engineering Research Center on Technologies to Support Aging-in-Place for People with Long-Term Disabilities

Background

Mobility assistive devices support independence and functional ability in older adults

Older adults aged 65 and older are projected to increase from 10% to 16% by 2050 (Bertolazzi et al., 2024).

With an increase in age, an increase of over 30%of fall risks are detected (Nickerson et al., 2023)

Technological advances have introduced smart walkers and other intelligent mobility aids

Differences in design, fall risks, usability, and clinical applicability remain understudied

This project aims to compare usability in traditional and smart walkers used by older adults

Types of walkers. American Family Physician Foundation (Senghal et al., 2021)

Methods

A comparative review was conducted in PubMed and Scopus from February to March 2026 to compare device characteristics, benefits, and limitations

Keywords include "*health technology","older adults", "smart walkers", "mobility limitations", "standard walkers",* and *"user experience"*

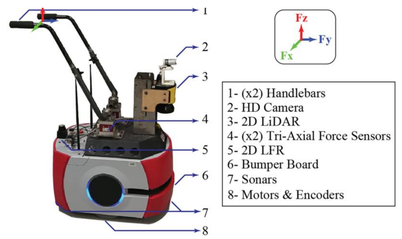
Results

Seven studies were analyzed of further studies to be optimal in device selection

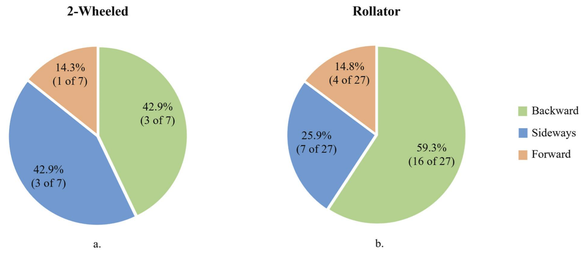
All 16 participants assessed at home used their devices incorrectly at times. Users were not provided with any clinical guidance on how to use their devices (Sibylle et al. 2020)

78.5% of older adults prefer smart walkers with high interaction visual cues during daily tasks (Sierra et al., 2024)

The NHATS detected walker adoption will arise with incidence rates of 61.7/1,000 older adults (Liu et al., 2024)



The Agora Smart Walker (Sierra et al., 2024)



Detection of Fall times (Nickerson et al., 2023)

Conclusion

- Smart walkers improve safety and independence through fall detection, navigation support, and offer enhanced monitoring for older adults in varied environments
- Traditional walkers maximize stability and ease of use for those who prefer low-maintenance mobility aids
- Smart walkers provide functional autonomy, and traditional walkers ensure foundational stability

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