

Home Modifications to Reduce Fall Hazards among People Aging with Long-Term Physical Disabilities

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Fall prevention programs are needed for people aging with long-term physical disabilities

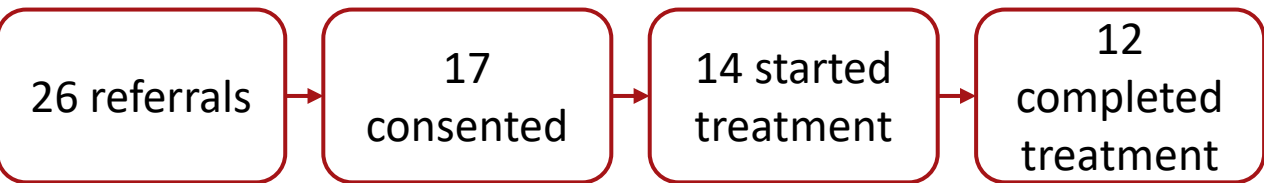
- Fall prevention programs, such as the Home Hazard Removal Program (HARP), have been shown to reduce falls for older adults.
- There is a lack of evidence regarding fall prevention programs for people who experienced early and mid-life disability onset.

Purpose: To examine the feasibility of delivering an evidence-based fall prevention intervention (HARP) designed for older adults to people aging with long-term physical disabilities

Methods

- Pilot feasibility study with community-dwelling adults 45-65 years old with long-term physical disability (5+ years) recruited from Centers for Independent Living and Area Agencies on Aging in MO
- Occupational Therapist provided HARP, consisting of home modifications over 2-3 home visits
- Measures collected at baseline and one month post-intervention:
 - Westmead Home Safety Assessment, number of falls in 12 months before intervention, number of falls, adherence to home modifications
 - Feasibility included ability to recruit and retain participants, ability to install home modifications, and number of home modifications installed
- Analysis:** Descriptive analysis of adherence to home modifications; Thematic analysis of open-ended responses regarding adherence to home modifications

Results



Participant Characteristics	N=14
Age, in years, mean (SD)	58.7 (5.1)
Years since disability onset, mean (SD)	20.6 (17.9)
Female, n (%)	11 (79%)
Westmead Home Hazards, mean (SD)	25.4 (8.5)
Falls in past 12 months, median (range)	4.0 (0-35)
Fell one month post-intervention*, n (%)	4 (33%)

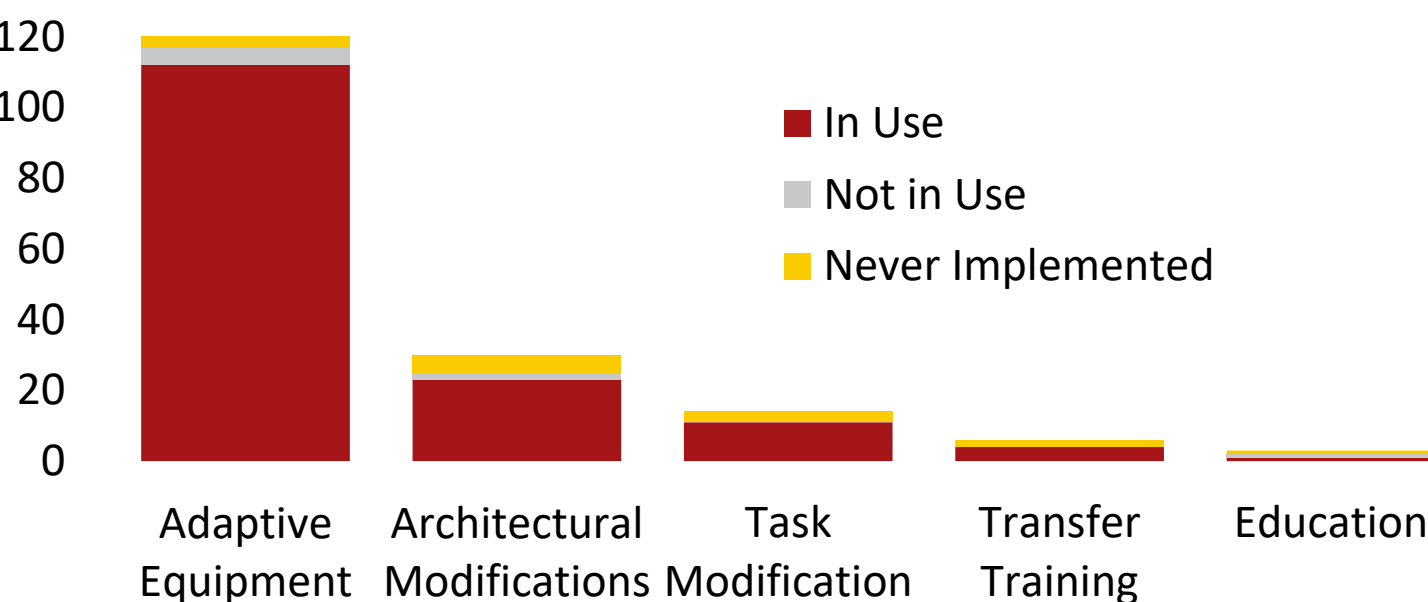
*n=12

Home Modifications Provided

Home modifications per person, mean (SD)	15.7 (6.2)
Cost of modifications per person, median (range)	\$579.3 (221.4-2029.5)

Number of Modifications In Use after One Month By Type

Participants continued using 86% of the modifications, 4% were not in use, and 10% were never implemented.



Home Modification Examples



Hazard: Presence of cords, rug, and lack of lighting



Solution: Secured cords and rug; added lighting



Hazard: Lack of safe transfer device and presence of clutter



Solution: Added slide board; marked wheelchair "parking spot" on floor

Themes: why modifications were not implemented/used

Environmental Restrictions

Structural Restrictions	A threshold ramp "did not work due to the slope being too steep"
Adaptive Equipment not Working as Desired	A motion sensor rechargeable overhead light "ended up not holding charge"

Participant Factors

Readiness	Participant "might implement the idea in the future"
Cognition	Participant "forgets and needs more repetition and practice"

Lack of Landlord Responsiveness

Slow Response Time	"Communication with apartment complex took too long to install a grab bar"
Lack of Approval	"Landlord did not approve" tub cut

HARP is feasible to people aging with disability

- Participants adopted and used the majority of home modifications.
- Future research is needed to explore whether HARP reduces falls among people aging with long-term physical disabilities.
- This study provides promising evidence that home hazard removal is practical and feasible for people aging with long-term physical disabilities and can be used by Occupational Therapists in the community.

Interested in training to be certified in HARP?

Contact us at peplab@wustl.edu

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