



How Can We Assess Our Homes to Prevent Falls among Older Adults?: A Comparison between Self-Assessment Tools and Professionally-administered Tools

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Why Is Home Assessment Important in Fall Prevention?

- To identify environmental factors that increase the risk of falling
- To derive appropriate home modification intervention strategies
- To raise older adults' awareness about potential hazards in and around the home, and encourage them to collaborate with professionals regarding home modifications

Purpose of Study

- To review and summarize existing home assessment tools that are designed to identify potential fall hazards in the homes of community-dwelling older adults

Research Question & Hypotheses

- How do self-administered home assessment tools differ from professionally-administered home assessment tools?
 - Self-administered home assessment tools are not as comprehensive, reliable, or valid, but are more user-friendly than professionally-administered tools
 - Professionally-administered tools are more comprehensive, reliable, and valid than self-administered tools, but are more resource (e.g., personnel, cost, time) intensive

Methods

	Self-administered Assessment Tools	Professionally-administered Assessment Tools
Search Strategy	<ul style="list-style-type: none"> Online search (e.g., Google) Contact with NCOA 	<ul style="list-style-type: none"> Systematic literature search: PubMed, ProQuest Contact with experts in the field (e.g., researchers who developed the tool)
Inclusion Criteria	<ul style="list-style-type: none"> Designed for use by older adults to measure fall hazards at home Created/developed by major organizations or government agencies Availability via the Internet searches 9 assessment tools identified 	<ul style="list-style-type: none"> Designed for use by professionals to measure fall hazards at home Has been used in a research setting 8 assessment tools identified

- 17 assessment tools identified

Our Criteria for Comparison

- Comprehensiveness**
 - How comprehensively the tool covers hazards and areas in and around the home that may increase the risk of falling (i.e., # of items assessed)
 - How the assessment tool is organized (e.g., by room, features) & whether the assessment allows the assessor to investigate the interaction between the person and his/her environment
- User-friendliness**
 - Who administers the assessment
 - Availability of instruction regarding how to use it
 - Format of questions (Response format)
 - Time required to administer or complete
 - Recommendations and/or next steps offered
- Types of reliability and validity testing performed on assessments**
 - Reliability:**
 - Inter-rater reliability
 - Internal consistency
 - Validity:**
 - Construct validity
 - Content validity
 - Face validity

Results

Title of Home Assessment	Creator (Developer)	Comprehensiveness		Administered by	Instruction for Using the Tool	User-friendliness		Recommendations or Further Instructions Offered by the Tool	Reliability/Validity Testing
		Number of Items	Organized by Room/Space/ Feature/Activity (Interaction)			Format of Questions (Response Format)	Time Required to Administer/Complete		
Check for Safety: A Home Fall Prevention Checklist for Older Adults	Centers for Disease Control and Prevention	17	Areas of the house	Self-assessment	Yes	Checklist	Unknown	Offers solutions/recommendations and other fall prevention & safety tips	Not tested
Community and Home Injury Prevention Project for Seniors (CHPPS) Home Safety Checklist	San Francisco Department of Public Health, CA	35	Areas of the house	Self-assessment	Yes	Yes/No/ Doesn't Apply/ Don't Know	Unknown	No solutions are offered, but older adults are encouraged to contact the CHPPS project for safety assessment information and referral services	Not tested
Fall Prevention Project	Pima Council on Aging, Tucson, AZ	37	Areas of the house	Self-assessment	Yes	Yes/No	Unknown	Offers solutions/recommendations; Encourage older adults to talk to a family member, friend, neighbor or senior organization	Not tested
Fall Prevention Home Safety Checklist	Minnesota Safety Council, MN	52	Areas of the house	Self-assessment	Yes	Yes/No	Unknown	Offers solutions/recommendations; Encourage older adults to check with a doctor, HMO, city or county public health department	Not tested
Home Environment Survey/Home Checklist	Adapted from the Home Environment Survey developed by Dr. Rodriguez et al.	73	Area of the house	Self-assessment	Yes	Yes/No/ Can't Answer	Unknown	No	Inter-rater reliability
Home Safety Checklist	Metropolitan Life Insurance Company, New York	12	Space	Self-assessment	No	Yes/No	Unknown	No	Not tested
Safe Steps Home Assessment Chart	Lifetime Learning Systems, Inc.	11	Features (e.g., room clutter)	Self-assessment	Yes	Yes/No	Unknown	No	Not tested
Fall Prevention Home Safety Checklist	Accident Compensation Corporation	35	Areas of the house	Self-assessment	Yes	Yes/No/Not Applicable (NA)/Action Taken	Unknown	Offers safety tips	Not tested
Falls Prevention Your Home Safety Checklist	North Coast Public Health Unit, Australia	49	Areas of the house	Self-assessment	Yes	Yes/No	Unknown	Offers solutions/recommendations; Encourage older adults to talk to health care professionals	Not tested
Environmental Assessment	Drs. Tinetti & Gill, Yale University	20	Areas of the house	Research nurse	Training is offered/No manual	Presence/ Absence/ NA	Unknown	No	Not tested
Farewell to Falls	Trauma Service, Stanford University Hospital	46	Areas of the house	Occupational therapist (OT)	Training is offered/No manual	Acceptable/ Needs Attention/ Does Not Apply	20-30 min	No standardized recommendations are provided by the tool because assessors rely on their own clinical expertise	Not tested
Safety Assessment of Function and the Environment for Rehabilitation (SAFER)	OT (C), Oliver et al., Community Occupational Therapists and Associates	128	Areas of the house & activity	OT	Training is offered/ Manual is available	Addressed/ NA/Problem	1 hour	No standardized recommendations are provided by the tool because assessors rely on their own clinical expertise	Internal consistency /Content validity
Home Falls and Accidents Screening Tool (HOME FAST)	Dr. Mackenzie et al., University of New Caste	25	Areas of the house & activity	OT, social worker	Training is offered/No manual	Presence/ Absence/ NA	20-30 min	No standardized recommendations are provided by the tool because assessors rely on their own clinical expertise	Inter-rater reliability /Content validity
Home Screen	Drs. Johnson & Cusick & Ms. Chang, University of Western Sydney	14	Features of the home & activity	Community nurse	Training is not needed/No manual	Items are rated from 1 to 10, with a score of 10 representing free of clutter	Unknown	No standardized recommendations are provided by the tool because assessors refer clients to specialist services (e.g., OT)	Internal consistency /Construct validity
No Falls! Home Hazard	Dr. Day, Monash University	220	Areas of the house	Trained assessor	Training is offered/No manual	Presence/ Absence	Unknown	Offers recommendations	Not tested
No Falls! No Fear! Project Home Safety Checklist	Dr. Peeli et al., University of Queensland	52	Areas of the house	Health professionals (e.g., OT, social worker, nurse)	Training is needed if not assessed by an OT/No manual	Presence/ Absence/ NA (Scored by the number of hazards)	Less than 1 hour	Offers recommendations	Not tested
Westmed Home Safety Assessment (WeHSA)	Dr. Clemson, University of Sydney	72	Areas of the house & activity	OT	Training is offered/ Manual is available	Relevant/ Not Relevant/ Hazard/ Not Hazard	1.5 hours	No standardized recommendations are provided by the tool because assessors rely on their own clinical expertise	Inter-rater reliability/ Content & Face validity

- Note:** Blue boxes=Professionally-administered assessment tools

Summary of Findings

- Self-administered home assessment tools are not as comprehensive, reliable or valid, but are more user-friendly:
 - Comprehensiveness: Organized only by areas/features of the house rather than by examining how a person perform tasks in the house
 - User-friendliness: Can be assessed by anyone at any time
 - Rarely tested for reliability/validity: 1 out of 9 tools was tested for reliability - unclear whether the person is appropriately identifying hazards
- Professionally-administered tools are more comprehensive, reliable, and valid, but are not as user-friendly:
 - Comprehensiveness: Evaluate the interactions of the person with his/her environment
 - User-friendliness: Require professionals to administer & Take 20 minutes to 1.5 hours to complete
 - Often tested for reliability/validity: 4 out of 8 tested for reliability/validity & Training is offered in 7 out of 8 tools to ensure reliability and consistency

Conclusion

- Self-administered home assessment tools can raise older adults' awareness about fall hazards in the home, but can be inaccurate and ineffective
- Professionally-administered home assessment tools, which evaluate the interactions of the person with his/her environment, are more comprehensive and effective in deriving intervention strategies, yet are more time- and resource intensive

Take Home Message

- A combination of self-assessment and professional assessment may yield the most accurate results (Gitlin, 1998), which can then be used to tailor individual-specific home modification strategies
- Professional assessments are highly recommended for populations at risk of falling (i.e., older adults with a history of falling and/or a number of fall risk factors such as balance/gait or health problems)