

Abstract

One in three Americans aged 65+ experience unanticipated falls requiring medical care annually. Falls are associated with physical and psychological morbidities, decreased quality of life, and high health care costs. From a review of the falls literature published from 2002-2012, three distinct interrelated dimensions of falls emerged: (1) Prevention; (2) Risk factors; and (3) Intervention strategies.

Studies on falls among older community-dwelling adults dominated the literature, although residents of care facilities generally have greater risks of falling.

Findings suggest the need for interdisciplinary approaches for fall prevention and intervention that focuses on common risk factors as well as individual circumstances.

Methods

The initial search of the scientific literature and professional reports on falls published between 2002-2012 was conducted in July-December, 2012. The search engines used included psychNET, GoogleScholar, PubMed, Ageline, and EBSCOhost.

Search terms used included the word *fall* in conjunction with *risk, assessment, prevention, older adults, elderly, fear of falling, self efficacy, and intervention*.

Fifty-four empirical articles were identified, in addition to 27 literature reviews and 31 professional reports. Several articles covered multiple topics and were coded to represent the various areas addressed.

Prevention (n = 37)

Preventing falls is essential for the physical and emotional well-being of aging adults, with the potential to enhance overall, long-term quality of life. Fall risk assessment measures were used to identify individuals at greatest risk in order to reduce fall-related injury and mortality, and the high medical costs associated with falls in late life.

Community-dwelling adults were typically less frail than residents of long term care facilities and encouraged to maintain appropriate physical exercise to reduce their risk for falls. Facility-based prevention measures educated both healthcare professionals and residents about the complexity of common risk factors.

Regardless of residence, recommended prevention activities:

- Educate individuals/caregivers about risk factors and behavioral strategies to reduce risk
- Assess balance and mobility
- Discuss fall risks, behaviors, fears, anxieties, and medication use with healthcare providers and family/caregiver



Risk Factors (n = 58)

Risk factors for falls are complex and multifactorial. Individuals were at greater risk for falls when multiple risk factors were present. Although physical changes, lifestyle factors, and environmental hazards were all associated with fall risk, environmental hazards tended to be the most modifiable.

Physical Changes:

- Chronic health conditions (Lung disease, heart disease, stroke, arthritis, osteoporosis, depression)
- Cognitive decline, dementia
- Gait and balance problems
- Impaired vision and hearing

Lifestyle Factors:

- History of falls; sedentary lifestyle; activities of daily living (ADL) limitations
- Medication
 - Polypharmacy: the use of 3+ medications
 - Type: benzodiazepines, antidepressants, sedatives, hypnotics
 - Modification: dosage change; discontinuation; adverse side effects
- Fear of falling (an exaggerated concern/belief about falling)
 - An exaggerated belief about falling
 - Higher risk among females with previous falls, depression, anxiety, social isolation (rural lifestyle, living alone), limited social support

Environmental Hazards:

- Incorrect size, type, or use of assistive devices (walkers, canes, wheelchairs)
- Improper shoes (slick bottom, raised heel)
- Lack of supportive household features (grab bars, hand rails)
- Physical obstacles (loose rugs, cords, slippery/uneven surfaces, poor lighting)
- Congested or crowded areas (household clutter, hallways)

Intervention (n = 28)

Effective interventions incorporated strategies that:

- Targeted multiple risk factors
- Identified individuals with greatest risk
- Educated the entire healthcare team and resident about the complexity of common risk factors
- Encouraged collaboration between healthcare professionals to create an interdisciplinary team
- Involved individuals and/or caregivers in decision-making
- Emphasized the importance of exercise based programs (Tai chi) for community-dwelling adults to promote include balance, mobility, and muscle strength
- Individualized interventions developed specifically for a resident

Discussion

Reducing falls in late life is an integral component of improving the wellbeing of older adults and maintaining a high quality of life. The most common challenges for fall prevention and intervention include:

- Overlooking the complexity and interrelatedness of fall risk factors
- Designing “one-size fits all” programs
- Failing to differentiate between the needs and risks of community-dwelling adults and residents of facilities
- Addressing excessive worry (fear of falling)
- Finding a balance between staying actively engaged with their normal routines as much as possible and implementing reasonable, proactive safety measures to prevent falls

Implications

To address the challenges of falls in late life, there is a need for interdisciplinary initiatives for fall prevention and intervention that:

- Strive for individualized intervention to address the complexity of fall risk factors
- Place equal emphasis on community-dwelling adults and residents of facilities
- Include staff education, environmental modifications, and assessment of all residents to determine individuals with greatest risk
- Involve older adults, caregivers, family members, and healthcare professionals in developing programs, including new technologies, with on-going outcome evaluation to assess effectiveness
- Coordinate efforts between researchers and practitioners to improve the long term health outcomes and quality of life of older adults