



How older adults and their informal carers prevent falls: An integrative review of the literature



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ABSTRACT

Falls in older persons are prevalent and costly for the individual and the health system. Falls prevention guidelines have been developed from best evidence to minimise falls in older persons.

Aim: To synthesise the literature on falls prevention strategies used by community dwelling older persons and/or their informal carers and to compare the commonly adopted strategies with those recommended by falls prevention guidelines.

Data sources: Health sciences databases for full text articles published in English plus reference list searching of included articles.

Review method: An integrative review approach. Studies were included if they identified fall prevention management strategies used by community dwelling older adults and/or their informal carers. Quality appraisal was undertaken using appropriate Joanna Briggs Institute critical appraisal tools. Information relevant to the aim of the review were extracted and coded into categories then inductively sorted into sub-themes and themes.

Results: Of the seventeen studies included in the review, eleven identified older adults' falls prevention strategies, two investigated fall prevention strategies used by carers, and four explored perspectives of older persons together with their carers, representing the perspectives of an estimated 501 older persons and 102 carers. Strategies used by older adults arose because of self-awareness about their changing physical ability, and advice and support mainly from family or friends. Carer fall prevention strategy was predominantly around protection of the older adult from falling by discouraging independence.

Conclusions: The fall self-management strategies adopted by older adults and their carers to prevent falls, in the main, do not align with international best practice fall prevention guidelines.

What is already known about the topic?

- Falls are an ongoing issue for older adults, and are costly to the public health system.
- Evidence based guidelines for falls prevention exist.

What this study adds

- Many fall prevention strategies adopted older adults and their carers are not in line with current recommended guidelines.
- Older adults and their carers would like to be offered the opportunity to attend formal evidence based education about fall prevention guidelines.

- Nurses are well placed to optimise uptake and adherence to falls prevention interventions because of their presence and role in primary care settings.
- All healthcare professionals who work with older adults in community settings have an important part to play in reducing falls.

1. Introduction

The economic burden of falls ranges from 0.85 to 1.5% of the total global healthcare expenditure (Peel, 2011). Besides increasing age, many conditions, including the neurological conditions of multiple sclerosis, Parkinson's and stroke as well as other conditions such as arthritis (Gunn et al., 2013; Lim et al., 2012; Mat et al., 2015; Stolze

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et al., 2004), together with their medical management are associated with a high risk of falling (Zia et al., 2015). Estimates suggest 28–35% of persons over 65 years of age and 32–42% in the over 70 year age group sustain a fall each year (World Health Organisation, 2007), all with an increased risk of sustaining a second fall (O'Loughlin et al., 1993). Falls result in long term debilitating injury, loss of confidence and fall anxiety, and increased dependence on informal caregivers (Murphy et al., 2002; Schmid and Rittman, 2009; Tenetti and Williams, 1998). Thus, condition-and/or age-related falls poses an economic burden with many unintended social consequences (Roe et al., 2009).

Many falls management guidelines are available and these recommend screening, falls prevention education, and promote use of falls prevention self-management strategies. The NICE guidelines (United Kingdom) (2017) and the American Geriatrics Society/British Geriatrics Society Clinical Practice Guideline (2011) suggest assessment of current and future falls risk, assessment of home safety and vision, a medication review, and a monitored, individualised strength and balance training programme to promote and maintain independence (National Institute for Health and Care Excellence, 2017). The purpose of this integrative review of the literature (Whittemore and Knafl, 2005) was to identify strategies used by older adults and their informal carers to manage falls risk, with the aim of comparing these with those strategies recommended in current falls prevention guidelines to provide the potential to guide development of evidence-based healthcare policy and practice (Lockwood et al., 2015).

2. Methods

2.1. Search strategy

Electronic database search (CINAHL, Pubmed, Ovid, PEDRO, ERIC, Medline, PROQUEST, SCOPUS, EMBASE and Google Scholar) was undertaken from inception to November 2016. Combinations of MeSH headings and keywords (Table 1) were used to find full text, English language studies of any design addressing the research question.

Reference lists of potential articles were also hand searched. Duplicates were removed before articles were title and abstract screened by two members of the research team independently. The full text of an article was read if it was unclear if the article met the inclusion criteria.

Articles were included if study participants were described as community dwelling older adults with a history of falls or at risk of falling, and if the article described falls prevention strategies used by the older adult and/or their informal carer. Studies were excluded if they presented a healthcare professional's perspective on what the older adult did to manage falls risk and if study participants were not community dwelling. Discrepancies between researchers were resolved by the team as a whole.

Table 1
MeSH terms and keywords.

MESH terms:

Accidental Falls; Aged; Care givers; Chronic disease; Frail elderly; Home care services; Home nursing; Health Personnel; Perception; Rehabilitation; Self care; Self efficacy

Combined with keywords:

Behaviour; Cerebellar stroke; Cerebrovascular accident; Cerebral palsy; Chronic illness; Chronic condition; Confidence; Caregiver; Carer; Diabetes Mellitus; Disability; Fall*; Fall belief; Fall perception; Falls risk; Falls self-management; Falls Strateg*; Family; Family support; Home; Home care; Home nursing; Home programme; Independent; Independent living; Intervention; Long term illness; Long term condition*; Long term disease; Management; Multiple Sclerosis; Neurological condition; Nervous system disease; Parkinson*; Prevention; Residential Community; Self-management; Services; Slip*; Spouse; Stroke; Supportive assistance; Support worker*; Trip*; View*

2.2. Quality assessment

The methodological quality of studies was critically appraised using the appropriate Joanna Briggs Institute (JBI) critical appraisal tool for each study design (The Joanna Briggs Institute, 2016). Studies were appraised independently by two members of the research team, with disagreements resolved by a third. As there is no set cut-off point described by JBI for inclusion of studies after critical appraisal, the reviewers determined in advance that a study would be deemed to be of low quality methodologically, and therefore excluded, if it scored less than 50%.

2.3. Data extraction and analysis

Data was extracted from included studies and tabulated by researchers working in pairs to identify relevant information from each study. An inductive process (Braun and Clarke, 2006) was then undertaken to code the statements (direct statements) from each study as these related to self-management strategies for falls prevention. A third researcher checked this process to ensure thorough data retrieval and consistent coding. Coded statements were then manually grouped together into similar categories. These categories were then inductively sorted into possible sub-themes and reviewed before the sub-themes were grouped into overarching themes.

3. Results

3.1. Description of studies

The search strategy yielded 1295 potential articles, with 17 studies remaining after duplicate removal, screening and quality appraisal (Fig. 1). A summary of data from the studies, their quality appraisal scores and their themes is displayed in Table 2. There were 14 qualitative and three mixed methods studies, undertaken in the United Kingdom (5), Sweden (3), America (3), Australia (2), Denmark (2), and one each in Canada and the Netherlands. Studies explored either the older adult fall prevention strategies (11), carer strategies (2) or both perspectives (4). Some studies did not report the exact number of participants, and others only provided a sample size range (focus groups). By adding the actual number of participants (where reported) to the means of the sample sizes (when reported as ranges), we have estimated the total number of participants to be 312 females and 206 males. Four studies reported on ethnicity of participants. Of the studies that reported age, some reported mean age and others age range (55–98 years). Most included studies scored well above the 50% on quality. Themes relating to self-management of falls are presented in two parts – i) strategies used by older adults, and ii) strategies used by carers. Via discussions amongst research team members, we selected quotes from the individual studies that we felt most clearly represented the essence of the two themes in order to represent and authenticate the themes for the reader.

3.1.1. Fall self-management strategies used by older adults

A total of 220 statements that represented strategies used by older adults to manage their falls risk were identified. These are displayed in Table 3 with distributions of the statements shown numerically. Synthesis of these statements resulted in one main theme 'Self-awareness', which developed from taking into and more account of physical ability, their personal environment, and advice and support from others (see Table 3).

Older adults were more aware of their changed or declining physical ability and thus of their risk of falling in their home or external environments. To compensate for these changes, older adults altered their physical actions to reduce their falls risk and used strategies such as slowing down, taking their time and not rushing. They had become more attentive and vigilant about their environment and used this as a

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