



Fall Prevention
Community of Practice
ADULT+JUNIOR

Loop Evidence Summary: Fear of Falling

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PURPOSE

The following Loop Evidence Summary focuses on fear of falling among adults. It defines fear of falling, the populations at greatest risk of fear of falling and associated risk factors. In addition, it provides an overview of screening tools utilized to identify and assess fear of falling and describes program and policy interventions that practitioners and clinicians can take to reduce fear of falling.

SUMMARY OF EVIDENCE

Fear of falling (FOF) refers to persistent concern about sustaining a fall that, in turn, causes an individual to avoid daily activities.(1) FOF often becomes a barrier to walking and participation in physical activities, leading to an abnormal gait and a loss of confidence in walking ability.(2,3) Persistent FOF has been associated with deconditioning, social isolation, depression, more frequent falls, greater frailty, decline in mobility and increased mortality.(4-7)

Increasing age appears to be the predominant risk factor for FOF, with a considerable proportion of older adults reporting FOF irrespective of whether they have experienced a fall or not.(8-9) For example, a study focusing on fear of outdoor falling among community dwelling older adults found that 58.8% of respondents with prior fall(s) reported FOF, while 40% with no fall history reported FOF.(8)

Although age is a key risk factor for FOF, the condition is not restricted to the older adult population. A population-based panel study of 998 middle aged (i.e., 49-65 years) African Americans found that the proportion of participants reporting FOF with and without activity restrictions, such as dressing, get in/out of a chair, and climbing stairs, were 12.6% and 13.2% respectively. These results were not sufficiently explained by a prior history of falls or a lack of confidence in the ability to perform daily activities without falling (aka low falls efficacy).(10) Another study found high reported levels of FOF among obese women under 50 years of age, which appears to be associated with low levels of physical activity.(11)

Middle aged and older adults reporting a FOF are more likely to have functional limitations, experience higher levels of anxiety or depression, use walking aids, and report lower levels of physical activity.(12-13) FOF is also associated with limited life space mobility, which is the spatial area people move through over the course of their daily living activities.(14) The presence of certain chronic conditions, such as Parkinson's Disease, Multiple Sclerosis and chronic obstructive pulmonary disease, are associated with higher rates of FOF.(15,16,17)

There is some evidence that socio-demographic risk factors may contribute to FOF. For example, a cross sectional study of community dwelling older adults (= or > 65 years) found that FOF was associated with lower educational levels, lower household income, difficulty in using public transport, belonging to a black or minority ethnic group, use of a walking aid, poorer physical health and self-reported balance problems.(9) There is also increased evidence that neighbourhood conditions are independently associated with FOF among older adults. An online survey of older adults (age 50+) in Christchurch, New Zealand found positive associations between reported FOF and neighbourhood conditions that made walking difficult.(18) Another survey of community dwelling older adults found that traffic speeds, damaged sidewalks and the presence of drainage ditches were all associated with self-reported FOF.(19)

ASSESSING FOF

The Falls Efficacy Scale International (FES-I), a sixteen item instrument and the Short Falls Efficacy Scale International (Short FES-I), a seven-item instrument, are the most widely used measures to assess FOF in research and clinical practice. Both instruments assess degree of FOF through self-report measures of perceived concern about ability to perform basic daily activities without falling (e.g., going up or down stairs, getting in or out of a bath or shower). Both the FES-I and Short FES-I have been translated from the English into many other languages, and are available free of charge for use by researchers and clinicians providing they are appropriately referenced.(20) The FES-I and Short FES-I have been demonstrated to have good reliability and validity, and have been validated for use in FOF assessments among older adults with and without cognitive impairment.(21)

Another FOF assessment tool, the Iconographical Falls Efficacy Scale (Icon-FES), was developed specifically for older adults with cognitive impairments. Unlike the FES-I, the Icon-FES compensates for reduced cognitive abilities by using pictures instead of verbal descriptions. A study conducted by Delbaere et al. supports the reliability and validity of the Icon-FES as a means of assessing FOF among individuals with moderate cognitive impairment or dementia.(22)

IMPLICATIONS FOR POLICY AND PRACTICE

Evidence suggests that reductions in FOF are best achieved through multi-factorial interventions. These include measures to create safer physical environments for walking in conjunction with evidence-based exercise, educational and therapeutic interventions aimed at managing the physical and psychological risk factors contributing to FOF.(14, 19)

Environmental interventions targeting perceived safety, traffic levels, and structural conditions (e.g., uneven sidewalks) have been identified as critical for reducing FOF among community dwelling middle-aged and older adults.(19) These interventions could be applicable in retirement communities as well as age-friendly communities with a large proportion of independent, older adult residents.(23)

There is some evidence that exercise programs may be an effective means of reducing FOF among older community dwelling adults. A Cochrane systematic review and meta-analysis conducted by Kumar and colleagues assessed thirty trials (2,878 participants) of 36 exercise interventions, including tai chi and yoga (9), balance training (19) and strength and resistance training (8). Meta analyses indicated a small to moderate effect of exercise interventions on reduced FOF immediately post intervention, and a small, but not statistically significant effect longer-term. While the authors conclude that exercise interventions likely yield modest reductions in FOF immediately post intervention, they note that findings should be interpreted with caution due to the high risk of bias in most of the included trials. Higher quality trials are required to strengthen the evidence base on the impact of exercise programs on FOF.(24-25)

Cognitive behavioural therapy (CBT), a psychotherapeutic intervention that aims to improve mental health by challenging negative thoughts, beliefs and attitudes (aka cognitive distortions) has been applied to reduce FOF among older adults.(26) A systematic review and meta-analysis assessed six CBT interventions (1,626 participants) to reduce FOF among older adults. Core components of these interventions, which ranged in length from 4 to 20 weeks, included cognitive restructuring, personal goal setting and physical activity promotion. The analysis found that the CBT interventions appeared to be effective in reducing FOF up to twelve months post intervention as well as improving balance up to six months post intervention.(27)

A combination of educational, exercise and therapeutic (e.g., CBT) approaches to reducing FOF among community dwelling older adults were included in a meta-analysis of 50 intervention groups conducted by Kruisbrink and colleagues.(28) Interventions involving holistic exercise, supervision by a tai chi instructor and delivery in a community setting were more effective in reducing FOF than interventions without those characteristics. By contrast, interventions delivered at home or with written materials and tailoring were significantly less effective in reducing FOF.(28)

SUMMARY

In summary, FOF is a serious condition that can negatively impact both the health and quality of life of middle aged and older adults. It is also a significant predictor of falls among adults with low to moderate mobility limitations.(20) FOF can be reduced through modifications to the built environment, cognitive behavioural therapy and, to a lesser extent, exercise. An increased focus on strategies to prevent FOF is warranted in light of the current COVID-19 pandemic, as emerging evidence indicates that the increased social isolation of older adults during the pandemic, combined with decreased access to physical activity opportunities and FOF, may lead to declines in both physical and mental health.(29)

KEY LOOP RESOURCES ON FEAR OF FALLING

Webinars

Understanding the Relationship Between Fear of Falling and Mobility in Older Adults. This webinar was delivered to the Loop Fall Prevention Community of Practice by Dr. Mohammed Auais, Assistant Professor in the School of Rehabilitation Therapy, Queen's University, on April 3, 2019. The webinar provides an overview of FOF, including relevant terminology, adverse outcomes associated with FOF, FOF assessment tools and evidence-based interventions to reduce FOF. Dr. Auais also provides an overview of his FOF-related research, which focuses on FOF and mobility disability, FOF and life space mobility and FOF and the incidence of functional disability. The webinar can be viewed on [YouTube](#).

Loop Discussion Threads

[Fear of Falling in Sensory Impaired in Nursing Homes](#) (June 26, 2019)

This discussion thread provides a link to an [article](#) by Lach et al. on factors associated with FOF among 225 nursing home residents with vision, hearing or dual sensory impairment.

[A resolution: No More Falling Down in 2019](#) (January 7, 2019).

This discussion thread focuses on a [Globe and Mail opinion piece](#). The author, Sandra Martin, discusses her personal experiences with FOF along with relevant statistics and interview excerpts from key informants.

Primary Health Care - Are you afraid to fall? (July 3, 2018)

A Loop member located a January 2018 New York Times article about Dutch fall prevention courses facilitated by physio and occupational therapists that utilized obstacle courses to teach older adults how to navigate treacherous ground without having to worry about falling, and how to fall if they did. In the same month, CBC news reported on a Manitoba fitness course that gives seniors a healthy fear of falling, using an approach related to the Netherlands one. The member posted a discussion request for other members to share similar courses in Canada. Suggestions provided by Loop members included:

- Quebec Public Health Stand Up / P.I.E.D. Programme intégré d'équilibre dynamique
- The Canadian Fall Prevention Curriculum course
- The Building Balance program provided by the South Georgian Bay Community Health Centre

Learning to 'fall before you fly' (September 29, 2015)

Loop members shared wide-ranging experiences of how they have taught (or have been taught) to fall and how these strategies may be useful in reducing the incidence/severity of falls.

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