Fear of Falling among Seniors: A Target to Consider in Occupational and Physical Therapy Practice?

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\textbf{ABSTRACT.} Fear of falling, a frequent fear among community-dwelling seniors, can interfere with their activity level and social participation and negatively impact on their health and quality of life. Thus, it is an important factor to consider by occupational and physical therapists involved with this population. Based on the most recent studies in this field of research, this paper aims to provide occupational and physical therapists with a better understanding of the impact of fear of falling on seniors’ health and quality of life, and offer them guidance on how to assess fear of falling and other fall-related psychological factors and how to intervene on these factors.

\textbf{KEYWORDS.} Aging, fear of falling, activity restriction, falls, assessment, fall prevention

\textbf{INTRODUCTION}

The incidence and consequences of falls among community-dwelling seniors calls upon health professionals to implement fall prevention strategies (Milat et al.,...
Indeed, each year, approximately one third of community-dwelling adults aged 65 and older experience at least one fall (Masud & Morris, 2001). Falls represent a major cause of mortality and injuries among this population (Center for Control Disease and Prevention, 2012; Public Health Agency of Canada, 2005). The economic burden of falls is also substantial (Zezevic et al., 2012). According to Campbell (2002), more than a third of falls and their related injuries occurring among seniors could be avoided through falls prevention interventions. Fall prevention programs typically include exercises to improve seniors’ balance and strength and an educational component addressing home safety issues. However, recent research suggests that fear of falling should also be included among intervention targets (Cumming, Salkeld, Thomas, & Szonyo, 2000; Delbaere, Close, Brodaty, Sachdev, & Lord, 2010; Freiberger, Häberle, Spirduso, & Zijlstra, 2012; Zijlstra et al., 2007a). Increasing evidence supports that fear of falling and other fall-related psychological factors, such as low balance confidence or low falls efficacy, can lead to activity avoidance and subsequently interfere with seniors’ daily functioning and quality of life (Cumming et al., 2000; Lachman et al., 1998; Li, Fisher, Harmer, McAuley, & Wilson, 2003; Mendes de Leon, Seeman, Baker, Richardson, & Tinetti, 1996; Tinetti, Mendes de Leon, Doucette, & Baker, 1994). Moreover, longitudinal studies show that fear of falling and falls efficacy are independent predictors of falls among community-dwelling seniors (Cumming et al., 2000; Delbaere, Crombez, Vanderstraeten, Willems, & Cambier, 2004; Friedman, Munoz, West, Rubin, & Fried, 2002).

Occupational and physical therapists play an important role in fall prevention among community-dwelling seniors (Duez et al., 2003; Karinkanta, Piirtola, Sievänen, Uusi-Rasi, & Kannus, 2010; Lampiasi & Jacobs, 2010; Painter et al., 2012; Peterson, Finlayson, Elliott, Painter, & Clemson, 2012). Indeed, the identification of intrinsic, behavioral, and environmental fall risk factors and subsequent implementation of strategies to alleviate these risks are important components of their intervention, notably among seniors receiving home care services (Lampiasi & Jacobs, 2010).

The goal of this paper is to provide occupational and physical therapists with a better understanding of the impact of fear of falling on seniors’ health and quality of life, and offer them guidance on how to assess fear of falling and other fall-related psychological factors, and how to intervene on these factors. Based on the most recent studies in this field of research, this paper more specifically aims to (1) define fear of falling and other fall-related psychological concepts; (2) describe assessment tools in this domain; and (3) provide a general picture of available intervention strategies that have shown promising results to impact on fear of falling and other fall-related factors.

Why Fear of Falling is an Important Target for Intervention?

Fear of falling deserves a specific attention from health professionals because it is one of the most frequent fear reported by community-dwelling seniors (Howland et al., 1993). In a large-scale study conducted among 4,031 randomly selected seniors, nearly 55% of participants reported fear of falling (Zijlstra et al., 2007b). Although fear of falling is one of the potential consequences of a fall, it can also be found among seniors without a recent fall history. In a study conducted by Mendes...
da Costa and colleagues (2012) among 419 noninstitutionalized seniors, fear of falling was reported by 73% of seniors who experienced a fall and 50% of seniors without a fall history in the previous year.

Fear of falling can be an appropriate reaction leading to safe behaviors when performing activities of daily life (e.g., avoid walking on icy sidewalks). However, it can sometimes lead to undue activity restriction. In large-scale studies conducted among community-dwelling seniors, up to 44% of seniors who reported being afraid of falling acknowledged avoiding activities because of this fear (Fletcher & Hirdes, 2004; Murphy, Williams, & Gill, 2002). Activity restriction can contribute to a premature decline of a person’s physical condition and lead to a loss of independence and quality of life (Cumming et al., 2000; Li et al., 2003; Yardley & Smith, 2002). Ultimately, such decline can increase a senior’s risk for falls. As illustrated in Figure 1, seniors can then find themselves in what is typically described as the vicious circle of fear of falling. It is of particular interest to note that some longitudinal studies have shown that fear of falling is an independent predictor of falls among community-dwelling seniors and support the inclusion of fear of falling among fall risk factors (Cumming et al., 2000; Friedman et al., 2002; Delbaere et al., 2004).

**Defining and Assessing Fear of Falling, Falls Efficacy, and Balance Confidence**

A range of tools are now available to measure fear of falling and other fall-related psychological factors, as well as activity restriction associated with fear of falling (Hadjistravropoulos, Delbaere, & Fitzgerald, 2011). As illustrated in Figure 2, these assessment tools can be categorized in two domains: psychological and behavioral. Assessment tools pertaining to the psychological domain typically focus on three constructs: (1) fear of falling; (2) falls efficacy; and (3) balance confidence. Although these three constructs have often been classified under the same umbrella
FIGURE 2. Domains, constructs, and examples of tools for the assessment of fall-related psychological factors and activity restriction associated with fear of falling.

term (i.e., fear of falling), more recently, researchers have suggested that they are not isomorphic concepts and that they should not be used interchangeably (Jørstad, Hauer, Becker, & Lamb, 2005; Hadjistavropoulos et al., 2011; Li et al., 2002). Thus, one cannot pretend to measure fear of falling while using a balance confidence or falls efficacy scale. Assessment tools pertaining to the behavioral domain are typically designed to measure activity restriction resulting from fear of falling. The constructs and assessment tools related to each domain are presented below.

**Psychological Domain**

**Fear of Falling**

Fear of falling or post-fall syndrome was initially described by Murphy and Isaacs (1982). It has been defined as an ongoing concern about falling that ultimately leads a person to avoid activities that he or she remains capable of performing (Tinetti & Powell, 1993). Like falls, it is associated with several factors. Factors found to be associated with fear of falling and subsequent activity curtailment include sociodemographic variables (e.g., old age, being a female) and health-related variables (e.g., poor perceived health, chronic morbidity, functional limitations, falls, impaired vision, anxiety symptoms, loneliness and depression) (Cumming et al., 2000; Deshpande et al., 2008; Filiatrault, Desrosiers, & Trottier, 2009; Friedman et al., 2002; Kempen, van Haastregt, McKee, Delbaere, & Zijlstra, 2009; Murphy et al., 2002; van Haastregt, Zijlstra, van Rossum, van Eijk, & Kempen, 2008; Zijlstra et al., 2007b). A study conducted among 288 community-dwelling seniors showed that environmental factors, such as the availability of support from a spouse and type of residential area, are also associated with fear of falling, suggesting that an ecological approach should be used to guide interventions addressing this issue (Filiatrault et al., 2009).

The simplest way to assess fear of falling is to ask the person a single question: “Are you afraid of falling?” (Jørstad et al., 2005). This method is useful to screen out seniors that are the most at risk. However, this single question has been criticized...
Fear of Falling among Seniors

for its lack of sensitivity, particularly when it is accompanied by a dichotomous (yes/no) rating scale (Tinetti, Richman, & Powell, 1990). Moreover, this question could be less valid for men, as they are less inclined than women to admit that they are afraid to fall (Myers et al., 1996). Fear of falling could also be underreported as some seniors may worry about stigmatization or institutionalization. To overcome these limitations, some researchers, including Howland and colleagues (1993), have suggested formatting the question in a way that is less associated with phobias. For example, instead of using the question “Are you afraid of falling?”, one can use the question: “Are you concerned about falling?” Others have proposed ordinal scales (with 3, 4, or 5 response levels) allowing to measure the intensity or frequency of fear of falling (Hatch, Gill-Body, & Portney, 2003; Howland et al., 1993; Zijlstra et al., 2007b).

Falls Efficacy

Another fall-related psychological construct that is frequently referred to in studies on fear of falling is falls efficacy. This construct is derived from the self-efficacy theory developed by Bandura (1977) and refers to a person's confidence in his/her capacity to avoid falling. Tinetti and colleagues (1990) developed the first tool to assess falls efficacy, called the Falls Efficacy Scale (FES). The FES is a 10-item validated questionnaire that can be self-administered or completed during an interview. The person is asked to indicate on a 10-level rating scale his/her level of confidence in his/her capacity to accomplish a variety of activities of daily life (e.g., going up and down the stairs, taking a bath or shower) without falling. A FES score is calculated by adding up the score of each item. The initial psychometric study of the FES indicates that this scale has high internal consistency (Cronbach $\alpha = 0.90$), acceptable test-retest reliability ($r = 0.71$) and good convergent validity with walking performance ($p < .0001$) and anxiety ($p < .0001$) (Tinetti et al., 1990). The FES average score is also a good predictor of functional capacity decline and falls among seniors (Cumming et al., 2000; Mendes de Leon et al., 1996). However, this tool is subject to a ceiling effect when used with independent community-dwelling seniors (Lusardi & Smith, 1997). For this reason, modified versions of the FES and other questionnaires including more complex activities in terms of balance have been proposed (Buchner et al., 1993; Hill, Schwarz, Kalogeropoulos, & Gibson, 1996; Powell & Myers, 1995; Tinetti et al., 1994; Yardley et al., 2005). For example, members of the Prevention of Falls Network Europe (ProFaNE) have developed the Falls Efficacy Scale-International (FES-I) (Yardley et al., 2005). The FES-I includes the 10 original items of the FES and six additional items related to more complex activities of daily life (e.g., walking on an irregular surface) and social activities (e.g., visiting friends). It must be noted that even though its name suggests that the FES-I assesses falls efficacy, the key question in this tool has been reformatted in terms of levels of concern regarding the possibility of falling when performing each activity. The FES-I has demonstrated very high internal consistency (Cronbach $\alpha = 0.96$), excellent test-retest reliability (intraclass correlation coefficient (ICC) = 0.96), and good validity for predicting falls ($p < .001$) (Yardley et al., 2005). The tool has been validated in many European countries (Kempen et al., 2007) and is available in 15 languages. A shorter version of the FES-I (Short FES-I), including only 7 items rather than 16, was later developed to facilitate its use in a clinical
context (Kempen et al., 2008). The internal consistency of this short version is also very high (Cronbach $\alpha = 0.92$) and its test-retest reliability is good (ICC = 0.83). Results from a validation study also showed that the Short FES-I is highly comparable to the 16-item FES-I with respect to discriminative power (Kempen et al., 2008).

**Balance Confidence**

Balance confidence is another psychological fall-related factor that is often considered in studies investigating fear of falling among seniors. The first tool developed for measuring this construct was the *Activities-specific Balance Confidence Scale* (*ABCS Scale*) (Powell & Myers, 1995). The ABC Scale allows assessing seniors’ confidence in not losing their balance when performing activities of daily life through a questionnaire including 16 items that can be self-administered or administered by an interviewer. These items correspond to tasks that are performed within the home environment (e.g., walking in the house, sweeping the floor) and in the community environment (e.g., going in and out of the car). For each item, the person must provide an appreciation of his/her balance confidence on a scale ranging from 0% to 100%. The ABC Scale has very high internal consistency (Cronbach $\alpha = 0.96$), very good test-retest reliability (CCI = 0.92), and good convergent validity with measurements of falls efficacy ($r = 0.84–0.86$) and mobility ($r = 0.78$) when used among community-dwelling seniors (Myers et al., 1996; Powell & Myers, 1995).

A shortened version of the original ABC Scale including only six items (ABC-6) was developed by Peretz and colleagues (2006) to address the time constraint issue of some clinicians and researchers. It includes the six items from the original ABC Scale that are the most challenging for seniors. The ABC-6 has similar qualities compared to the original version and showed good discriminating validity ($p < .0001$) between three groups of seniors (seniors with Parkinson disease, seniors having mobility problems, and healthy seniors) (Peretz, Herman, Hausdorff, & Giladi, 2006).

Later, a simplified version of the ABC Scale (the ABC-S) has also been developed and studied among 200 community-dwelling seniors (Filiatrault et al., 2007). Modifications of the original scale include a change in the cue question and response format, and the deletion of one item of the original scale. The original cue question of the ABC Scale, which uses a negative format (i.e., confidence in not losing balance), has been reformatted in a positive way that is easier to interpret by seniors (i.e., confidence in maintaining balance). In addition, the continuous rating scale of the original ABC Scale was replaced by a four-level rating scale (from 0 = not at all confident to 3 = very confident), a scale that is simpler to use for seniors (Buchner et al., 1993; Lachman et al., 1998). Finally, the last item of the original ABC Scale (i.e., walk outside on icy sidewalks) was removed since being questioned about balance confidence when walking on icy sidewalks may convey a message to seniors that is inconsistent with public health fall prevention strategies. The simplified version of the ABC Scale has shown high internal consistency (Cronbach $\alpha = 0.86$) and good convergent validity reflected through significant associations with perceived balance ($p < .001$), balance performance ($p < .05$), fear of falling ($p < .001$), as well as fall history within the previous 12 months.
Fear of Falling among Seniors

The ABC-S Scale is available in English and French versions.

Behavioral Domain

Activity Restriction Associated with Fear of Falling

Another relevant category of assessment tools available to clinicians and researchers are those pertaining to activity restriction associated with fear of falling (see Figure 2, behavioral domain). Like fear of falling, the most basic way to assess activity restriction is to ask a simple question such as “Do you limit your activities because you are afraid you might fall?” However, this question does not allow identifying the specific activities that are limited due to fear of falling. Alternatively, multi-item tools can be used to overcome this limitation. Lachman and colleagues (1998) have developed a tool addressing both fear of falling and associated activity restriction called the Survey of Activities and Fear of Falling in the Elderly (SAFFE). It includes a question about fear of falling (using a four-level rating scale) and two questions about activity restriction associated with fear of falling (dichotomous rating scales). In a second section, seniors are asked to indicate on a three-level ordinal scale, if they avoid specific activities of daily life due to fear of falling. This section includes items concerning basic (e.g., taking a bath) and instrumental (e.g., preparing a simple meal) activities of daily life, as well as items related to mobility and social activities. A study of the psychometric properties of the SAFFE indicated that it has high internal consistency (Cronbach $\alpha = 0.91$) and that the SAFFE fear score has good convergent validity with responses to the FES ($r = -0.76$) (Lachman et al., 1998). However, researchers and clinicians have complained that the SAFFE was timely to administer. The required presence of an interviewer was also reported as an inconvenient (Lamb, Jørstad-Stein, Hauer, & Becker, 2005; Moore & Ellis, 2008). To overcome these limitations, a modified version of the SAFFE (mSAFFE), simpler to use and meant to be self-administered, was developed by Yardley and Smith (2002). The mSAFFE has high internal consistency (Cronbach $\alpha = 0.91–0.92$) and good test–retest reliability ($r = 0.75$) (Yardley & Smith, 2002).

More recently, Landers, Durand, Powell, Dibble, and Young (2011) developed a tool called the Fear of Falling Avoidance Behavior Questionnaire or FFABQ. This questionnaire was developed to identify which activities a person limits due to fear of falling. It includes a list of 14 activities and uses a five-level ordinal rating scale. The first psychometric study of this instrument conducted among 63 community-dwelling seniors showed that it has good test-retest reliability (ICC $= 0.81$) and that it could discriminate seniors with or without a fall history in the previous year.

Several tools are now available to assess fear of falling and other fall-related psychological factors, as well as activity restriction associated with fear of falling among seniors. These tools can be helpful for occupational and physical therapists working toward early detection of seniors that are at risks for falls and loss of independence and quality of life. They can also be helpful in measuring the impact of occupational and physical therapy interventions, including fall prevention interventions. For more information about the characteristics of the tools presented herein, readers are invited to consult the systematic reviews of Jørstad and colleagues (2005) and Moore and Ellis (2008).
Strategies to Intervene on Fear of Falling and Other Fall-Related Psychological Factors

Several studies have been conducted in the last two decades and provide growing evidence that the fear of falling and other fall-related psychological factors can be influenced by interventions. A few systematic reviews and meta-analyses on the topic have notably been conducted during the past years and support the idea that fall-related psychological factors are amenable to change among community-dwelling seniors (Filiatrault, 2008; Jung, Lee, & Lee, 2009; Logghe et al., 2010; Rand, Miller, & Eng, 2011; Sjösten, Vaapio, & Kivela, 2008; Zijlstra et al., 2007a). Results of these studies are useful as they can provide some guidance for intervening with community-dwelling seniors who are afraid to fall. The following section of this paper presents the prominent findings on this topic. The section is organized around two categories of intervention strategies, namely (1) exercise interventions and (2) multifactorial fall prevention interventions. A particular attention is devoted to cognitivo-behavioral interventions designed to limit fear of falling and associated activity restriction among community-dwelling seniors.

Exercise Programs

Exercise programs are among the strategies that are typically used to maintain and improve seniors’ physical condition and reduce falls incidence among this population. In recent years, researchers have shown increased interest in examining the impact of exercise programs on fall-related psychological factors such as fear of falling, falls efficacy, and balance confidence. These programs include Tai Chi offered in a group format, as well as individual- and group-based exercise programs specifically designed to improve balance, strength, or general physical fitness. A few systematic reviews and meta-analyses support that exercise programs not only have benefits on the physical condition of community-dwelling seniors, but can also have a positive impact on fall-related psychological factors among this population (Filiatrault, 2008; Rand et al., 2011; Sjösten et al., 2008; Zijlstra et al., 2007a).

According to the meta-analysis of Rand and colleagues (2011), group and individualized exercise programs combining muscular strengthening and balance exercises can have a positive impact on balance confidence of adults aged 60 and older. For example, an individually tailored home exercise program involving four home visits by a physical therapist and follow-up phone calls has shown benefits on fall-related psychological factors (Campbell et al., 1997). There is also growing evidence that Tai Chi can have a positive impact on fall-related psychological factors. For example, in a randomized controlled trial conducted by Li and colleagues (2005) among 256 sedentary community-dwelling seniors, a program including three weekly sessions of 60 minutes of Tai Chi showed a positive impact on fall-related psychological factors. The study participants were randomly assigned to the Tai Chi program or a stretching exercise program over a 6-month period. This study showed a greater reduction of fear of falling among seniors who participated to the Tai Chi program, compared to those who participated to the stretching exercise program ($p < .001$). This difference between groups remained statistically significant at the 12 months follow-up ($p = .05$).
Multifactorial Fall Prevention Programs

Multifactorial falls prevention interventions have also shown promising results in terms of psychological fall-related outcomes (Rand et al., 2011; Sjösten et al., 2008; Zijlstra et al., 2007a). Most multifactorial fall prevention interventions that have been studied are designed to be offered on an individual basis and combine exercises with education about specific fall risk factors (Rand et al., 2011). The number of fall risks addressed varies considerably from one program to another and may cover topics such as exercise, medication, vision, nutrition, osteoporosis, environmental safety, behavioral safety, footwear, and fall recovery techniques just to name a few (Filiatrault, 2008).

One of the multifactorial fall prevention interventions that have showed positive fall-related psychological outcomes among seniors is particularly relevant for occupational and physical therapists. This intervention is a home-based program combining exercises, home modifications and education on fall risk factors (Gitlin et al., 2006). This 6-month intervention includes five occupational therapy contacts (four home visits and one phone contact) and a home visit by a physical therapist. It focuses on the following intervention components: (1) education and problem solving; (2) home modifications; (3) energy conserving techniques; and (4) balance and muscle strengthening and teaching of fall-recovery techniques. It also includes payment for and installation of home adaptations (e.g., grab bars, rails, raised toilet seat) and three phone calls over the 6 months post-intervention to reinforce and generalize the use of intervention-derived strategies. A randomized controlled trial of this multifactorial intervention was conducted among 319 community-dwelling seniors aged 70 and older (Gitlin et al., 2006). The intervention showed its positive impact on several outcomes at the 6-month follow-up, notably on falls efficacy. It is encouraging to note that these benefits were sustained in the intervention group at the 12-month follow-up.

Cognitive Behavioral Interventions

More recent attention has been devoted to cognitive-behavioral interventions to address fear of falling among seniors and, more specifically, to one intervention called A Matter of Balance or AMB (Tennstedt, Peterson, Howland, & Lachman, 1998a). This intervention is of particular interest since it has been especially designed to limit fear of falling and promote physical and social activity among community-dwelling seniors. The original program, which includes eight 2-hour group sessions (two sessions per week), aims at increasing self-efficacy beliefs regarding falls and a sense of control over falling. More specifically, as described by Tennstedt and colleagues (1998b), the following strategies are used in the program: (1) restructuring misconceptions to promote a view of fall risk and fear of falling as controllable; (2) setting realistic goals for increasing activity; (3) changing the environment to reduce fall risk; and (4) promoting physical exercise to increase strength and balance. Thus, this program can be considered multifactorial as it addresses several fall risk factors.

The impact of AMB was initially examined through a randomized controlled trial involving 434 community-dwelling adults aged 60 and older (Tennstedt et al., 1998b). This trial showed a positive impact of the program on seniors’ mobility.
control and level of intended activities (i.e., activities that participants intent to perform in the coming week) immediately after the intervention. Among participants who attended five sessions or more, the program also demonstrated a positive impact on falls efficacy, perceived control over falling, and perceived ability to manage falls (Tennstedt et al., 1998b). Furthermore, the program showed positive effects on participants’ social function and mobility range at the 12-month follow-up.

Since this initial study, the AMB program has gained increased attention across the international scientific community. A Dutch version of the AMB program was developed in the Netherlands (Zijlstra, Tennstedt, van Haastregt, van Eijk, & Kempen, 2006). This version, called the AMB-NL, has also been studied through a randomized controlled trial involving 540 community-dwelling seniors aged 70 and older (van Haastregt et al., 2007; Zijlstra et al., 2009; Zijlstra et al., 2011). Findings from this trial showed several positive outcomes among program participants, such as a significant reduction of fear of falling and activity restriction (Zijlstra et al., 2009). The program was also found to be effective for increasing frequency of daily activities 6 months after the intervention and for increasing perceived control over falling and self-efficacy beliefs regarding physical activity up to 12 months after the intervention (Zijlstra et al., 2009; Zijlstra et al., 2011). Interestingly, this randomized controlled trial also showed a significant reduction in the number of recurrent falls among program participants 1 year after the intervention, highlighting the relevance of a cognitive behavioral intervention for fall prevention (Zijlstra et al., 2009). In addition to these positive outcomes, participants were very satisfied with the AMB-NL program; a substantial proportion of participants reported having experienced benefits from this program such as being less concerned about falling, behaving more safely, being more active, and knowing more about strategies to reduce negative consequences of falling (van Haastregt et al., 2007). An in-home adaptation of the AMB-NL program has been recently developed to enable frail older people to also benefit from this program. A randomized controlled trial of this program called A Matter of Balance at Home (AMB-Home) is currently being studied through a randomized controlled trial (Dorresteijn et al., 2011).

Interestingly, a version of the AMB program designed to be led by trained volunteers has been developed by a team from the Maine Health’s Partnership for Healthy Aging (2006). This version, called A Matter of Balance Volunteer-Lay Leader Model (MOB-VLL), was studied among 335 community-dwelling seniors using a quasi-experimental pre-post study design (Healy et al., 2008). Results of this study showed that three measures related to fear of falling, namely falls efficacy, falls management and falls control, were significantly improved among participants at the 6-week, 6-month, and 12-month follow-ups. Among other benefits, the study showed that program participants had improved levels of physical and social activity at the 6-week follow-up and a reduced number of self-reported falls at the 12-month follow-up (Healy et al., 2008). This volunteer lay leader version of the program has also recently been implemented and studied in underserved areas of South Carolina (Ullmann, Williams, & Plass, 2012). Interestingly, this study demonstrated that the MOB-VLL could also be implemented successfully among a population presenting with low levels of education and socioeconomic status (Ullmann et al., 2012). Another quasi-experimental study of the program was conducted among 562 adults aged 60 and older in South Florida (Batra, Melchior, Seff,
Fear of Falling among Seniors

Among the study participants, 160 attended the MOB-VLL and 402 attended its Spanish equivalent called Un Asunto de Equilibrio (ADE). The study showed improvements of participants’ fall management scores, readiness to exercise, and social activity after the program (Batra et al., 2012). Furthermore, a cost analysis of the MOB-VLL program delivered in South Florida also revealed that the program is relatively inexpensive to implement (Page, Batra, & Palmer, 2012). Finally, a French Canadian adaptation of the MOB-VLL program called Vivre en Équilibre has been recently developed by a team of researchers and practitioners in Quebec, Canada (Filiatrault et al., 2011a; Filiatrault et al., 2011b). An upcoming pragmatic study will examine the impact of this program on psychological fall-related factors and other health variables among community-dwelling seniors.

DISCUSSION

This paper aimed to provide occupational and physical therapists with a better understanding of the impact of fear of falling on seniors’ health and quality of life, and offer them guidance on how to assess fear of falling and other fall-related psychological factors and how to intervene on these factors. The actual state of knowledge about psychological factors associated with falls indicates that fear of falling is an important factor to be considered by health professionals working with seniors as it can have serious adverse effects on their health and quality of life. Moreover, fear of falling is now recognized as a fall risk factor of its own for the elderly (Cumming et al., 2000; Friedman et al., 2002).

Many tools with sound psychometric properties are now available to assess fall-related psychological factors. These include tools that measure fear of falling per se or activity restriction associated with such fear. Other tools are designed to measure balance confidence or falls efficacy using short or long versions of multi-item questionnaires. These multi-item tools can be useful in guiding clinicians about specific intervention objectives for seniors since they can pinpoint specific activities that are avoided by seniors or for which seniors report a lack of confidence or self-efficacy. These tools can also be useful to measure changes on a psychological or behavioral level following a fall prevention or rehabilitation intervention. However, clinicians and researchers must be very careful in selecting tools for assessing fall-related psychological factors. Indeed, they should not only consider the tools’ psychometric qualities and applicability in a given clinical or research context, but also pay attention to the constructs these tools are in fact measuring.

Several studies suggest that fear of falling and other fall-related psychological factors are amenable to change among community-dwelling seniors. More specifically, findings suggest that community-based Tai Chi programs, individualized or group exercise programs targeting seniors’ muscular strength and balance, and multifactorial interventions that combine exercise and educational strategies to reduce fall risks can have a positive impact on fear of falling and other fall-related psychological factors. One intervention called A Matter of Balance (AMB) is of particular interest since it was especially designed to address fear of falling and its consequences on seniors’ activities (Tennestedt et al., 1998a). This intervention has gained increased attention across the international scientific community in recent
years. There is growing evidence that *A Matter of Balance*, as well as adapted versions of this program, deserve a special attention from health professionals working with seniors who are afraid to fall. Since fear of falling is associated with several risk factors, it is probable that the optimal approach to deal with such fear is to use an intervention that targets both physical and psychological factors.

**CONCLUSION**

Occupational and physical therapists have an important role to play in fall prevention among seniors. This paper stresses on the importance for occupational and physical therapists to include fear of falling and other fall-related psychological factors in their assessment of fall risks among community-dwelling seniors and to intervene on these factors in a prevention and health promotion perspective. Several tools designed to assess fear of falling and other fall-related psychological factors among the elderly are now available. There is also growing evidence that fear of falling and other fall-related psychological factors are manageable among seniors through selected strategies that can help building their confidence and sense of control over falling. Despite the promising results of a growing number of studies, research in this domain can still be considered in its infancy. More studies are needed to identify the best interventions and approaches to address fall-related psychological factors and associated activity restriction among community-dwelling seniors.

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Fear of Falling among Seniors


