

# A Prospective Study of the Relationship Between Feared Consequences of Falling and Avoidance of Activity in Community-Living Older People

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**Purpose:** To identify the most common beliefs concerning the negative consequences of falling and determine whether these motivate avoidance of activity. **Design and Methods:** A questionnaire assessing feared consequences of falling was completed by 224 community-living people aged older than 75. Beliefs about the consequences of falling were related to demographic characteristics, falling history, and avoidance of activity. The questionnaires were completed again by 166 participants 6 months later. **Results:** Commonly feared consequences of falling were loss of functional independence and damage to identity. These fears were correlated with avoidance of activity (after adjusting for age, sex, and recent falling history) and predicted avoidance in activity 6 months later (after adjusting for baseline levels of avoidance). **Implications:** Concerns about damage to social identity, as well as functional incapacity, are common and may motivate avoidance of activity.

**Key Words:** Falls, Disability, Elderly, ADL, Anxiety

Fear of falling is the most commonly reported anxiety among older people, exceeding even fear of robbery or of financial difficulties (Howland et al., 1993). Estimates of the prevalence of fear of falling in community samples of older people range from 29% to 55% (Afken, Lach, Birge, & Miller, 1994; Howland et al., 1998; Tinetti, Mendes de Leon, Doucette, & Baker, 1994). Among people who have fallen or who are in residential care, the prevalence

of fear of falling can be as high as 50%–65% (Chandler, Duncan, Sanders, & Studenski, 1996; Franzoni, Rozzini, Boffelli, Frisoni, & Trabucchi, 1994; Liddle & Gilleard, 1995). Surprisingly, fear of falling is not solely determined by physical vulnerability; many people with poor balance or a history of falls remain confident, while fear of falling is not uncommon among those who have never fallen (Liddle & Gilleard, 1995; Chandler et al., 1996).

Fear of falling is known to be associated with worse health and balance, lower mobility and activity levels, higher levels of handicap and psychological distress, and poorer quality of life (Afken et al., 1994; Chandler et al., 1996; Lachman et al., 1998; Liddle & Gilleard, 1995; Tinetti et al., 1994; Vellas, Wayne, Romero, Baumgartner, & Garry, 1997). It is likely that these associations are partly due to concern about falling arising as a consequence of poor physical and/or mental health. However, fear of falling can potentially motivate a variety of behavioral changes that may adversely affect future health, mobility, and activity, including changes in posture and gait, avoidance of feared activities and environments, and increased medication use (Maki, 1997; Vellas, Cayla, Bocquet, de Pemille, & Albaredo, 1987; Yardley, 1998). Prospective studies have shown that fear of falling and loss of confidence in balance capabilities do indeed predict deterioration in physical functioning, decreases in activity, and even admission to institutional care (Cumming, Salkeld, Thomas, & Szonyi, 2000; Franzoni et al., 1994; Mendes de Leon, Seeman, Baker, Richardson, & Tinetti, 1996; Vellas et al., 1987).

Fear of falling has been assessed in two ways. Typically, it is measured by a single questionnaire item (Afken et al., 1994; Franzoni et al., 1994; Howland et al., 1998; Liddle & Gilleard, 1995; Vellas et al., 1987, 1997). This approach has the advantage of being simple, hence suitable for older people with mild cognitive impairment, and inclusive, as different aspects of fear of falling can be tapped by the same item. However, the single-item methodology is un-

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able to distinguish between excessive fear and rational anticipation of future falls, it makes no distinction between perceived risk of falling and fear of the consequences of falling, and it also leaves unanswered the question of what aspects of falling are anticipated and feared. Consequently, questionnaires have been developed to measure beliefs concerning personal capacity to carry out activities safely without falling (fall-related self-efficacy). These have been shown to correlate with single-item measures of fear of falling and to predict decline in activities of daily living (Hill, Schwarz, Kalogeropoulos, & Gibson, 1996; Mendes de Leon et al., 1996; Myers et al., 1996; Tinetti, Richman, & Powell, 1990; Tinetti et al., 1994). Such questionnaires have an exclusively functional focus, as they assess the impact of perceived falling risk on activity-related confidence.

The potentially very serious impact of falling on morbidity, mortality, and independent functioning is well-known and has been rated by older people at risk of falling as potentially more damaging to quality of life than cancer or heart attack (Salkeld et al., 2000). Previously, it may simply have been assumed that fear of physical harm and functional incapacity were the basis for fear of falling and the principal motivation for avoidance of activity, but emerging evidence has suggested that it is actually possible to distinguish between a number of different relevant fears. These fears include not only fear of incapacity and loss of independence, but also fear of pain and suffering, fear that the fall is a sign of terminal physical decline, and fear of social embarrassment. Although the latter might initially seem improbable as a serious concern, an analysis of the fears associated with handicap in a sample of older people with dizziness and imbalance (Yardley, 1998) found that anticipation of the social embarrassment of losing control in public was most closely associated with activity restriction, whereas fears of falling, serious illness, and physical harm were less strongly correlated with activity restriction. Although this sample was not representative of the general population of older people, these findings do indicate that, for some individuals, fears other than of morbidity and disability may be salient.

The aim of this study was therefore to establish what are the most common beliefs concerning the negative consequences of falling in a community-living sample of older people and to determine whether these motivate avoidance of activity. For this purpose, it was necessary to develop and validate specific measures of feared consequences of falling.

## Methods

### *Sample and Procedure*

This study was conducted on a convenience subsample of patients participating in the Wessex Fracture Prevention Trial, which is a pragmatic double-blind randomized controlled trial of an intramuscular injection of vitamin D in the prevention of hip fractures in elderly people. The trial aims to recruit

10,000 free-living men and women, aged 75 and older, living in the former Wessex region of the south of England. All eligible individuals in participating practices were invited to participate in the trial by their general practitioner. Excluded were those already taking in excess of 400 international units of vitamin D daily and those receiving bone-strengthening drugs or who had had bilateral hip replacements, active cancer, renal impairment, or a history of renal calculi. Uptake rate for the clinical trial was approximately half of those eligible. Ethical approval for both studies was given by the South West Multicentre Research Ethics Committee, and all participants gave written informed consent before participating.

At Time 1, random consecutive subsamples of all participants attending for injections in four general practices were asked to also complete the additional measures for this study (see Measures section below). The four practices were medium-sized practices (each with four to six partners) serving socioeconomically mixed urban (three) and semiurban (one) populations. Participants in the clinical trial were followed up with a postal questionnaire 6 months after their injection (Time 2), and members of this study subsample were also asked to repeat the additional measures for this study.

### *Measures*

**Demographics.**—Age (calculated from date of birth) and gender were recorded when the consequences of falling questionnaire was first completed. For the clinical trial, data were also collected on accommodation type (coding categories = own/rented home, live with family, warden-controlled residence, other) and mobility (walk without aid, walk slowly or use stick, walk with frame, cannot walk).

**Falls History.**—At Time 1, a single item asked, “During the past year, how often have you fallen over?” (coding categories = never, once, twice or more).

**Fear of Falling.**—At Time 1, a single item asked, “In general, are you afraid of falling over?” (coding categories = not at all, a little, quite a bit, very much). The last two coding categories were combined for analysis, as very few people reported extreme fear of falling.

**Consequences of Falling (CoF) Scale.**—Items for this scale were generated and piloted by Lucy Yardley in a series of four informal semistructured focus group discussions with older people. A total of 35 participants were asked about their worries about the perceived consequences of falling. Four different types of feared consequences of falling were identified from these discussions, and 4 items were developed from typical statements to assess each type of fear, yielding a total of 16 items. The fears assessed were of physical injury (e.g., “I will suffer serious harm”), longer term functional incapacity (e.g., “I will become disabled”), subjective anxiety (e.g., “I will lose

my confidence”), and social discomfort (e.g., “I will feel foolish”). Participants were asked to indicate whether they believed that if they fell over each statement would apply to them, using a 4-point response scale (coding categories = disagree strongly, disagree, agree, agree strongly). For the follow-up postal questionnaire, only the 12 items comprising the identified subscales (see Results section) were readministered.

**Modified Survey of Activities and Fear of Falling in the Elderly (SAFFE) Scale.**—The SAFFE scale (formerly known as SAFE) was developed and validated as a face-to-face survey instrument assessing the role of fear of falling in activity restriction (Lachman et al., 1998). The major advantage of the SAFFE for the purpose of this study was that it not only assesses engagement in the basic instrumental activities of daily living (which are assessed by other scales) but also assesses engagement in optional social and physical activities that may contribute to quality of life among high-functioning older people living in the community. With permission from its authors, we modified the scale slightly for our purposes, as no self-administered version has yet been published.

From the original 22 activities, we omitted 5 that more than 95% of the original sample reported engaging in (Lachman et al., 1998), as these were considered likely to have poor discriminant validity in our relatively high-functioning community sample. Participants were asked to indicate whether they would avoid each activity in case they fell over on a 3-point scale (coding categories = would never avoid, sometimes avoid, always avoid). The original interview-based format of the SAFFE is able to distinguish between activities that are not undertaken (for reasons other than falling), those that are neither feared nor avoided, those that are feared but not avoided, and those that are feared and avoided. However, to simplify the self-administered format we chose to assess only avoidance. Some minor changes in wording were made to accommodate cultural and linguistic differences between the United Kingdom and the United States (e.g., “Walk half a mile” rather than “Walk several blocks”).

## Analyses

Missing data for up to two items on the CoF and on the SAFFE scales were replaced by extrapolating from similar items. One person did not reply to the item asking about falling history, and 14 did not reply to the single item assessing fear of falling. Data on accommodation and mobility for 28 participants could not be obtained owing to missing participant codes. Percentages reported for these items are expressed as proportions of respondents.

To identify the subscale structure of the CoF questionnaire, we used principal-components analysis with varimax rotation. Cronbach’s alpha coefficient was used to establish the questionnaires’ internal reliability. Pearson’s product-moment correlation was used to determine test-retest reliability over the

6-month measurement period for CoF scales. Pearson’s rank correlation was used to examine the test-retest reliability of SAFFE scores, as these were not normally distributed. In all subsequent parametric analyses, the log of the SAFFE scores was used in order to correct the skew in SAFFE scores.

The relationship of CoF scores to age, sex, and falling history at Time 1 was investigated using multivariate analysis of variance (MANOVA), entering sex and falling history as fixed factors and age as a covariate. Univariate general linear modeling was used to determine the relationship of age, sex, and falling history to logged SAFFE scores at Time 1, using the same procedure. Analysis of variance (ANOVA) was used to examine the relationship of CoF and logged SAFFE scores at Time 1 to the three response categories on the fear of falling item, using Tukey’s honestly significant difference (HSD) for post hoc comparisons.

To determine the cross-sectional relationship of the feared consequences of falling to avoidance of activity, we used a series of multiple regressions in which we determined the relationship of each of the CoF scores (and the single-item fear-of-falling measure, for comparison) to logged SAFFE scores after adjusting for age, sex, and falling history. For these analyses, the single items assessing fear of falling and falling history were recoded into binary variables (no fear vs fear and no falls vs falls). To determine the longitudinal relationship of the feared consequences of falling to avoidance of activity, we used a series of independent multiple regressions in which we determined the relationship of each of the CoF scores (and the single-item fear-of-falling measure, for comparison) to logged SAFFE scores at Time 2 after adjusting for logged SAFFE scores at Time 1. No adjustment was made for age, sex, and falling history as these variables did not predict logged SAFFE scores at Time 2, after adjusting for logged SAFFE scores at Time 1. The contribution of each variable to each regression equation is described in terms of the standardized beta coefficient and standard error of the beta coefficient, the proportion of additional variance explained when that variable was added to the equation ( $R^2$  change), and the  $F$  value and statistical significance (based on ANOVA) associated with the change in  $R^2$  resulting from adding that variable to the equation. To check that the reliability of the regression was not compromised by multicollinearity (i.e., correlation between the predictor variables in the equation), we also determined the tolerance of each variable before entry into the equation; high tolerances (which vary from 0 to 1) indicated that the reliability of the estimate of the regression coefficient was not significantly affected by collinearity between the predictor variables in the equation.

## Results

### Participant Characteristics

Completed questionnaires were returned at Time 1 by 224 people (representing a 75% response rate from the target sample approached to participate).

The participants were 106 men and 118 women with a mean age of 80.7 years ( $SD = 4.25$ , range = 76 to 98). Most (168; 86%) lived in their own home, 17 (9%) lived in warden-controlled accommodation, and 9 (4%) lived with their families. Most (152; 78%) could walk unaided, but 44 (22%) used an aid. Nearly half had fallen in the past year; 59 (27%) had fallen once, 42 (19%) had fallen more than once, and 122 (55%) had not fallen. Over half reported some degree of fear of falling, but whereas 97 (46%) reported being a little afraid, only 22 (11%) reported more marked fear, and 91 (43%) reported no fear of falling. At Time 2, completed questionnaires were returned by 166 people (74% of the Time 1 sample), consisting of 79 men and 87 women with a mean age of 80.7 years ( $SD = 4.16$ ).

### Questionnaire Development

Principal-components analysis of the CoF questionnaire items revealed two factors with eigenvalues greater than 1, explaining a total of 69% of the variance in responses. Examination of the rotated factor loadings (see Table 1) indicated that the first factor reflected beliefs about the immediate and long-term physical and functional consequences of falling, and in particular the loss of control and incapacity that might result. The Loss of Functional Independence subscale (CoF-LFI) was therefore constructed from the six items with the highest loadings on this factor. The second factor loaded principally on items measuring concern about the possible social consequences of falling, such as feeling embarrassed and a nuisance to others. Loss of confidence also loaded highly on this factor, suggesting that personal identity and self-esteem might be threatened by the feared social consequences of falling. The Damage to Identity subscale (CoF-DI) was therefore constructed from the six items with the highest loadings on this

factor. Surprisingly, these included items measuring fear of being in pain and of being unable to get up after a fall. Although these items also loaded quite highly on the Loss of Functional Independence factor, the finding that these items were related to the theme of social embarrassment suggests that these aspects of falling may contribute to the perceived shame and indignity of falling. It is also evident that the items on the CoF-DI subscale reflect the immediate consequences of falling (pain and shame), whereas the CoF-LFI subscale assesses more enduring consequences (injury and disability). When the principal-components analysis was repeated on the 12 items administered at Time 2, the same factors emerged (see Table 1), explaining a total of 71% of the variance.

Psychometric properties of the newly developed CoF scales and the self-administered version of the SAFFE are given in Table 2. All scales had excellent internal reliability at both Time 1 and Time 2 and demonstrated satisfactory test-retest reliability over a 6-month period. Mean scores on the CoF-DI subscale were slightly higher than on the CoF-LFI subscale, suggesting that the former concerns were slightly greater and/or more common.

### Bivariate Predictors of Perceived Consequences of Falling and Avoidance of Activity

Effects of gender and falling history on perceived consequences of falling at Time 1 are shown in Figure 1, which suggests that perceived functional and social consequences of falling were greater among women than men and were particularly elevated in those who had fallen once during the past year. MANOVA revealed significant effects on CoF scores of age, Wilks's  $\lambda (2, 211) = 4.20, p < .05$ ; gender, Wilks's  $\lambda (2, 211) = 12.28, p < .001$ ; and falling history, Wilks's  $\lambda (2, 211) = 3.15, p < .05$ . Follow-up tests of between-subjects effects confirmed that female gender was related to higher scores on both scales ( $p < .001$ ) and showed that older age was also related to an increase in scores on the CoF-LFI ( $p =$

**Table 1. Items Included in Loss of Functional Independence and Damage to Identity Subscales of the Consequences of Falling Questionnaire**

Item	Time 1		Time 2	
	Factor 1	Factor 2	Factor 1	Factor 2
<b>Loss of Functional Independence</b>				
I will be helpless.	<b>.87</b>	.23	<b>.86</b>	.29
I will not be able to cope alone.	<b>.83</b>	.27	<b>.85</b>	.26
I will lose my independence.	<b>.83</b>	.33	<b>.83</b>	.27
I will become disabled.	<b>.83</b>	.24	<b>.83</b>	.27
I will be severely injured.	<b>.82</b>	.30	<b>.80</b>	.31
I cannot continue to be active.	<b>.80</b>	.28	<b>.83</b>	.24
<b>Damage to Identity</b>				
I will be embarrassed.	.16	<b>.86</b>	.12	<b>.85</b>
I will feel foolish.	.12	<b>.80</b>	.12	<b>.85</b>
I will cause a nuisance.	.52	<b>.65</b>	.40	<b>.69</b>
I will lose my confidence.	.54	<b>.58</b>	.46	<b>.60</b>
I will be in pain.	.50	<b>.55</b>	.47	<b>.65</b>
I will have difficulty getting up.	.47	<b>.54</b>	.39	<b>.62</b>

Note: Loadings  $\geq .60$  are in bold.

**Table 2. Properties of Newly Developed Questionnaires**

Scale & Survey	Cronbach's $\alpha$	Test-Retest Reliability	Mean Score	SD	Median Score	Range
<b>SAFFE</b>						
Time 1	.92	–	24.0	6.8	21	17–45
Time 2	.91	.75	24.0	6.3	23	17–51
<b>CoF-LFI</b>						
Time 1	.94	–	12.2	4.1	12	6–24
Time 2	.94	.61	12.4	4.0	12	6–24
<b>CoF-DI</b>						
Time 1	.86	–	14.3	3.7	14	6–24
Time 2	.87	.64	14.4	3.8	15	6–24

Note: SAFFE = Survey of Activities and Fear of Falling in the Elderly scale; CoF = Consequences of Falling; LFI = Loss of Functional Independence; DI = Damage to Identity.

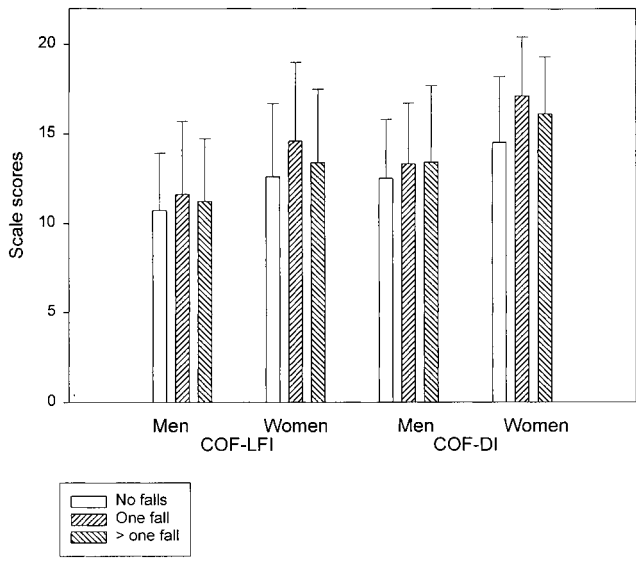


Figure 1. Loss of Functional Independence (COF-LFI) and Damage to Identity (COF-DI) subscale scores as a function of gender and falling history. CoF = Consequences of Falling.

.009) and CoF-DI ( $p = .008$ ). The effect of number of falls in the previous year did not reach significance for CoF-LFI scores ( $p > .1$ ) but was significantly related to CoF-DI scores ( $p < .05$ ); Tukey's HSD indicated no difference in CoF-DI scores between those who had fallen once and those who had fallen more than once, but both groups had significantly higher scores than those who had not fallen. There were no significant interactions.

Avoidance of activities for fear of falling (logged SAFFE scores) at Time 1 also increased with older age,  $F(1, 207) = 10.11, p < .01$ ; female gender,  $F(1, 207) = 26.5, p < .001$ ; and a greater number of falls during the past year,  $F(2, 207) = 10.44, p < .001$ , with no significant interactions.

Responses to the single fear-of-falling item were positively related to avoidance of activities (logged SAFFE scores),  $F(2, 209) = 43.67, p < .001$ ; perceived functional consequences of falling (CoF-LFI),  $F(2, 209) = 39.48, p < .001$ ; and perceived social consequences of falling (CoF-DI),  $F(2, 208) = 61.37,$

$p < .001$ . All follow-up tests were significant ( $p < .001$ ), confirming that each increase in reported fear (none, a little, quite a bit/very much) was associated with a substantial increase in avoidance and perceived negative consequences of falling.

### Prediction of Avoidance of Activity

In the cross-sectional regression analyses, age, sex, and falling history explained a significant proportion of the variance in logged SAFFE scores at Time 1,  $R^2$  change = .28,  $F(3, 210) = 27.80, p < .001$ . When fear of falling, anticipated loss of functional independence, and potential damage to identity were entered into separate regression analyses, adjusting for age, gender, and falling history, each of these variables explained significant additional variance in logged SAFFE scores (see Table 3).

In the longitudinal analyses, logged SAFFE scores at Time 1 explained a significant proportion of the variance in logged SAFFE scores at Time 2,  $R^2$  change = .56,  $F(1, 159) = 202.34, p < .001$ . Age, gender, and falling history were unrelated to logged SAFFE scores at Time 2 after adjusting for logged SAFFE scores at Time 1,  $R^2$  change = .014,  $F(3, 152) = 1.69, p > .1$ , so there was no need to adjust for these variables in the subsequent longitudinal analyses of the relationship between fear of falling and avoidance of activity. After adjusting for Time 1 SAFFE scores, a significant proportion of variance in Time 2 SAFFE scores was predicted by fear of falling, CoF-LFI, and CoF-DI scores at Time 2 (see Table 3).

### Discussion

Our aim was to identify the most commonly feared consequences of falling and to determine whether these motivate avoidance of activity. This study revealed two important dimensions of the perceived negative consequences of falling. The first was expectation of physical harm and consequent lasting functional disability and loss of independence. The second was expectation of social embarrassment and indignity and consequent damage to personal confidence and identity. Concerns about damage to identity were at least as prominent as worry about

Table 3. Results of Separate Regression Analyses Evaluating Prediction of Avoidance of Activity by the Single Fear Item and by Each of the Consequences of Falling Scales

Variable	Standardized $\beta$	SE	Tolerance	$R^2$ change	F ( $R^2$ change)
Dependent variable = log SAFFE Time 1 <sup>a</sup>					
Single fear item	.30	.015	.80	.072	21.79***
Damage to Identity	.41	.002	.81	.136	48.34***
Loss of Functional Independence	.35	.002	.86	.105	33.32***
Dependent variable = log SAFFE Time 2 <sup>b</sup>					
Single fear item	.15	.013	.83	.019	6.70*
Damage to Identity	.16	.002	.72	.019	7.27**
Loss of Functional Independence	.21	.001	.81	.036	13.92***

Note: SAFFE = Survey of Activities and Fear of Falling in the Elderly scale.  
<sup>a</sup>Adjusting for age, gender, and falling history.  
<sup>b</sup>Adjusting for logged SAFFE scores at Time 1.  
 \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

functional consequences of falling and, perhaps surprisingly, were actually more salient to older sample members and those who had fallen than to the younger members and those reporting less postural instability.

In cross-sectional analyses, anticipated damage to identity, worry about loss of functional independence, and the single measure of fear of falling were all correlated with activity restriction after controlling for age, gender, and falling history. Whereas the CoF scales assess the perceived likelihood of clearly defined different negative outcomes of falling, the single item is a more ambiguous measure that may tap fear of physical or social outcomes but may also reflect perceived risk of falling and general fearfulness (Lawrence et al., 1998). Feared loss of functional independence, damage to identity, and the single-item measure of fear of falling were all also longitudinal predictors of reported levels of avoidance of activity at Time 2 after controlling for levels of avoidance at Time 1.

Fear of damage to identity could explain the previously identified association between fear of falling (assessed by a single item) and avoidance of situations in which falling might be publicly witnessed (and hence potentially socially embarrassing), such as going out and attending social gatherings (Afken et al. 1994; Howland et al., 1993; Vellas et al., 1987). Disclosure of feared damage to identity was commonplace in the anonymous responses to the questionnaire, whereas in the focus groups only a few individuals admitted to this concern. This is consistent with previous observations that older people may be reluctant to openly acknowledge and discuss their fears relating to falling (Howland et al., 1998; Liddle & Gilleard, 1995) and supports the use of a self-administered questionnaire. The reluctance of older people to publicly acknowledge risk and fear of falling is likely to be linked to fear of damage to identity and may impact on adherence to falling prevention measures. For example, although hip protectors are known to be extremely effective in preventing serious injury and disability in the event of a fall, Cameron and Quine (1994) found that 80% of their sample of women who had already sustained a fracture as a result of a fall nevertheless rejected their use on the grounds that they were not at risk—while recommending use of protectors by those other people whom they characterized as high-risk or nervous elderly people.

Our study provides only a tentative exploration of some of the complexities of fear of falling. Our sample may not be typical of the general population, as it consisted of a self-selected group of people sufficiently concerned about consequences of falling to take part in a clinical trial designed to reduce risk of fracture, and so we are unable to draw any conclusions about the wider prevalence of the beliefs and relationships found in this study. Although anticipation of damage to identity was strongest among the older members and those who had fallen in our community-living sample, it may be of less importance

for those who are more health impaired or living in institutions. The relatively short follow-up period of 6 months precluded examination of longer term patterns of influence of beliefs on behavior. In addition, there were many relevant dimensions of fear of falling that we were unable to assess, including general anxiety, perceived probability of falling, perceived cause of falling, perceived probability and timeline of recovery from falls, and falls self-efficacy. It is likely that some of these dimensions would have explained additional variance in activity avoidance; for example, falls efficacy is known to be a particularly good predictor of activities of daily living but is less predictive of social activity (Tinetti et al., 1994).

Despite these limitations, our study provides further evidence that beliefs about the consequences of falling may motivate avoidance of activity and highlights a previously overlooked aspect of fall-related fears relating to concern about the potential consequences of falling for personal identity. The values of independence, sense of individuality and self-worth, and freedom to decide what activities to undertake remain of primary importance to people in later life, despite the risks and threats posed by frailty (Forbes & Hoffart, 1998). It is therefore vital that interventions designed to foster safe activity do not carry unintentional negative messages concerning identity—for example, the implication that the older individual is no longer capable of independent activity or would be foolish to attempt such activity (Ballinger & Payne, 2000). Uptake and adherence is likely to be low when interventions unintentionally carry such implications, and there is a growing appreciation that variability in the effectiveness of falling prevention programs may be linked to levels of adherence (van Haastregt, Diederiks, van Rossum, de Witte, & Crebolder, 2000), as the success of such interventions relies on acceptance and consistent implementation by the older people targeted. It has been demonstrated that programs can be designed that successfully increase confidence and activity levels (Tennstedt et al., 1998). A better understanding of falling-related beliefs may help health professionals to design and implement falling-related interventions in such a way as to maximize acceptability, uptake, and adherence to measures that minimize falling risk and at the same time promote a reduction in concerns about both the physical and the psychosocial consequences of falling and hence an increase in activity and quality of life.

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