

## **Falls prevention in the community: What older people say they need.**

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## **Abstract**

Uptake of and adherence to fall prevention interventions is often poor and we know little about how older people's perceptions of and beliefs about fall prevention interventions affect uptake.

This study aimed to explore older people's perceptions of the facilitators and barriers to participation in fall prevention interventions.

We undertook a qualitative study with older people who had taken part in, declined to participate or adhere to fall prevention interventions using semi-structured interviews (n=65), and 17 focus groups (n=122) with older people (including 32 South Asian and 30 Chinese older people) in primary and community care settings in the South of England. A number of factors acted as either barriers or facilitators to uptake of interventions. Older people also made recommendations for improving access to interventions.

Community nurses are ideally placed to screen older people, identify those at risk of falling and refer them to appropriate interventions as well as providing health promotion and education.

## **Keywords 3-5**

**Falls, older people, fall prevention, knowledge of services, ethnic groups**

## **Key points:**

- Falls in older people are common, and frequently unreported.

- Falls have a major impact on quality of life for older people as well as a significant morbidity and mortality
- Community health professionals have a major role to play in opportunistic screening and referral to fall prevention interventions.
- Understanding what encourages and motivates older people to attend fall prevention interventions is crucial if few are to minimise their risk of falling

## Background

About a third of older people aged over 65 living in the community fall each year (Yardley et al 2006). Falls are the leading cause of serious accidental injury (resulting in admission to hospital for four or more days) amongst people aged 65 and over (Cryer 2001). Falls are responsible for more than half of hospital admissions resulting from accidental injuries, in particular hip-fractures (HEA 1999). Hip fractures are an especially grave complication of falls in older adults. In 2000 the annual cost to the NHS was around £1.7 billion (Easterbrook et al 2001). As well as injuries, falls lead to psychological problems, such as a fear of falling resulting in restriction of activity, loss of mobility, an increase in dependency and disability, hypothermia, pressure-related injuries and infections (DH 2001).

The prevention and management of falls in older people has become a key public health priority (DH 2001). National guidance on the assessment and prevention of falls was published by the National Institute of Clinical Excellence (UK) in 2004, and recommended routine screening for falls in people aged over 75 followed by referral for multi-factorial falls risk assessment if required (NICE 2004). However, interventions to prevent falls can only be effective if older people attend, participate and adhere to them. Currently, uptake rates of community-based fall prevention interventions are very low, averaging about 50 per cent (Robertson et al 2001), but can be as low as 10 per cent (Day et al 2002).

Individual, interpersonal and environmental factors all play a part in whether older people adhere to treatments, and it has been suggested that developing a collaborative relationship between health practitioner and participant, as well as tailoring interventions to the individual and social context, will help promote adherence (Culos-Reed et al 2000). Recent studies by Yardley and Todd (2005) and Yardley et al (2006; 2007), on the views of older people about the prevention of falls found that information which emphasised the positive benefits of improving strength and balance as opposed to messages focusing on the avoidance of falls, was likely to be more effective in encouraging participation. Evidence-based recommendations for promoting the engagement of older people in falls prevention activities include:

increasing public awareness of the benefits of falls prevention interventions; encouraging participation through personal invitations, positive media images and role models; and tailoring interventions to meet individual need (Yardley et al 2007).

The aim of this research project was to explore the views, preferences and experiences of older people in relation to fall prevention interventions and to identify barriers and facilitators to uptake and participation of falls prevention interventions with a diverse sample of older people including those from two specific ethnic minority groups (South Asian and Chinese).

## **Methods**

We used a qualitative grounded-theory approach where participants were viewed as experts about their own experience.

We carried out 17 focus groups, facilitated by two researchers, lasting about an hour, with older people (n=122) attending (or who had previously attended) a fall prevention intervention. Where possible, focus groups were held directly following group-based interventions in order to minimise disruption to people's lives. In addition, semi-structured interviews were undertaken with a purposive sample of individuals (n=65). Interviews were undertaken with people who were unable or unwilling to attend a focus group or those who had not attended or had withdrawn from an intervention to which they had been invited or referred.

Participants were purposively sampled from a broad range of interventions (including falls clinics, postural stability classes, T'ai Chi classes and exercise classes in the community and care homes) in four geographical locations in the South of England. A total of 187 older people took part in this study, including 30 Chinese (Mandarin/Cantonese) and 32 South Asian (languages, Punjabi, Hindi, Gujarati and English) older people. Mean age of participants was 75 years (range 60-95). Topic guides were developed in consultation with the study steering group and incorporated issues raised by the systematic review undertaken as part of the study (Bunn et al 2008). Demographic data were collected and participants were asked to

complete the Falls Efficacy Scale (FES) to give an indication of their confidence in carrying out a range of activities of daily living without falling (Tinetti et al 2004).

## **Analysis**

Interviews and focus group data were fully transcribed and anonymised. Data analysis was qualitative, using a constant comparative approach drawing on the Grounded Theory method (Glaser and Strauss 1967). This involved reading field notes and transcripts and listening to interviews in order to gain a 'general sense' of the data. Following this, data were coded line-by-line, themes were identified and categories developed. Further analysis enabled us to refine the categories and determine connections between them. Data were coded independently by at least two researchers then discussed as a team. Data from South Asian and Chinese older people were translated and transcribed by the bilingual researchers and analysed separately initially before being compared to the rest of the data. Any disagreements were resolved through discussion.

## **Findings**

Older people described a number of practical considerations affecting both their uptake of interventions as well as their ability to adhere to interventions (summarised in Figure 1) which will be discussed below. (Other themes included health beliefs about falls and help-seeking behaviour).

Table 1 summarises the socio-demographic characteristics of participants.

[Insert table 1 about here]

[Insert figure 1 about here]

Both White British and older people from ethnic groups described similar experiences, though Chinese and South Asian older people had the additional difficulties of language.

## **Facilitators**

## Knowledge of availability and content of interventions

Knowledge of the existence of a falls intervention is an obvious but essential factor without which there can be no participation. Those older people attending interventions had found out about the intervention through a number of sources. Most interventions were accessed via the NHS, social services, and housing associations or, in the case of home modifications and assistive devices, had been directly purchased by the participant or their family.

Hearing about an intervention from others, appeared to be an effective stimulus to attendance and uptake. Often this was from friends, relatives or neighbours, as these participants explain:

Through a friend who has done it for years and is a right bossy lady and she said “you should go” so I thought I’d give it a try.

[Female, Attended EXTEND Exercise Class]

Health Care Professionals (HCPs) also encouraged attendance.

I’m diabetic and I started staggering around earlier this year, round about May. And I saw the doctor and the doctor recommended me to go to the Falls Clinic and I have had some benefit from it really.

[Attended Parkinson’s Society Exercise Group & Falls Clinic Group]

Primary and secondary HCPs who referred people to falls prevention services were effective facilitators to participation and uptake. Chinese and South Asian people tended to find out about activities based in their communities mainly through word of mouth and locally-based advertising.

## **Accessibility**

Accessibility of an intervention such as a falls clinic, postural stability or exercise class is of major importance in terms of participation. A convenient location with good accessibility for those using public transport, was crucial for all older people interviewed:

It either needs to be in the town centre where people are coming for their shopping and that sort of thing, or to the market on a Tuesday for instance or

it needs to be in the community centres out on that estate or that estate or in a village so people can get to it within their own neighbourhood.

[Osteoporosis Society]

A hospital venue for the location of a falls clinic was considered off-putting for some people and generally people felt a facility in the local community for clinics and classes would be the most acceptable. There was a general consensus that day-time attendance at interventions was preferable to evenings.

The cultural appropriateness of the venue was of importance to older Muslim Asian women, in particular the venue had to somewhere they felt comfortable to attend with no men in the group.

Generally the cost of an exercise programme was not perceived as a barrier by those who attended exercise classes regularly as long as this was 'reasonable', though some people felt that whilst this was not a barrier for them, it might be for others who were less well-off.

Free sample lessons were thought to be a good way to increase uptake of exercise programmes:

But this yoga was run by the local Living Centre, Healthy Living Centre and they've got funding so we were able to go there. I mean they give you free sample lessons.

[Foot Health Talk/Slipper Exchange]

### ***Appropriate level/type of activity***

Participants were encouraged to attend exercise classes if the activity was at an appropriate level for their abilities and therefore they did not feel intimidated. The vast majority of people expressed a preference for being in a group aimed at older people because they believed the level of activity would be more suitable. There was also concern that younger people may not be tolerant of the needs of older people. The view of this participant below is typical:

Well I don't know. I think if you're in a mixed age group you might feel a bit more embarrassed about not being able to do some of the exercises and it's probably better to be in a more or less of our own age group and you can all

struggle together sort of thing.

[Female- Had not attended any fall prevention intervention]

It is also important that exercise is culturally appropriate, as illustrated by one of the Chinese people who discuss why they like T'ai Chi:

But I think most Chinese like to learn [T'ai Chi] because it's originally Chinese, isn't it? Lots of history to it and many different forms...Like we said, it's more or less our type of exercise.

[Chinese Focus Group, T'ai Chi group]

### ***High Quality Facilitation (Attitudes and qualities of staff)***

Many older people found that the qualities of the health professional/facilitator made a significant difference as to whether they persisted with an intervention or not. In many instances, people spoke warmly of the health professionals/facilitators involved as they felt that they were treated in a person-centred way:

... they have lots of old people in and they check them and various things but they also make them feel that they're worth something and it's pretty awful being old really.

[Female: Attended Falls Clinic]

Participants also appreciated the caring qualities expressed by facilitators, in the following case, this contributed to continuing attendance at the T'ai Chi class:

Yes, she's excellent. I remember once, when I was not too well she telephoned me and asked how I was. I was so surprised but thought it was a very nice and thoughtful gesture. So, when I felt better, I returned here...

[Chinese Focus Group T'ai Chi Group]

Participants who went to the Healthy Living Group organised by the health visitor (involved a series of 8 health promotion sessions for older people including a session on avoiding falls) continued to attend because the talks were relevant, interesting and because their views were valued:

Well I think it's nice for us to be able to voice our opinions to someone who really wants to listen rather than.... Well when you go to your doctor...

[Attended Independent Living Group]

In addition, the specialist knowledge of a facilitator who understands the needs of older people who have fallen was particularly praised. These experiences show the value to older people of services that are sensitive to their needs and treat people as individuals and this has a substantial impact on continued attendance.

### ***Appropriate design***

Design of assistive devices was important in determining whether these were used. The discomfort of hip protectors was raised by those who had worn them. The following woman also felt they were not effective because they 'shifted' when she fell:

Well I found, when I fell, they (hip protectors) didn't help me, they shifted... I tend not to fall on my hips, it's either backwards or my knuckles go forwards and I noticed that they'd shifted – they sort of chipped as I swivelled round...perhaps protected me somewhere, but not where they were supposed to.

[Attended Postural Stability Class]

Some people did not wear pendant alarms, hip protectors and slippers (from the slipper exchange) because they were uncomfortable:

... and you see I always wear these sorts, this sort of a slipper but they hadn't got my size and she insisted that I have the little bootie one...I only took it to shut her up (laughs) and I gave it away to my friend.

[Attended Foot Health Talk/Slipper Exchange]

Design and placement of adaptations such as pull cords could also be problematic and lead to anxiety. The following participant explained her concern about slipping in the bath and not being able to summon help:

...and we've got pull cords [for alarm], but the pull cord right the other side, by the toilet, so you can't possibly reach that if you're in the bath and you have a fall. That's the biggest problem of all; if you fall in the bath you can't get help. I

mean you've got pendants but you can't wear a pendant in the bath....

[Attended Osteoporosis Society]

### ***Experiencing Benefits***

Practical benefits such as improvements in physical strength and balance while attending an intervention helped with people's adherence, as reported here..

I haven't had a fall and that's why I want to continue doing T'ai Chi because I think doing exercise like this helps me. I think it makes me stronger. My muscles, my leg muscles are stronger, I think.

[Chinese Focus Group T'ai Chi Group]

Practical advice about preventing falls was appreciated. Various interventions provided advice on getting up after a fall, an area where many needed information:

... in the afternoon, after you've done all your exercises in the morning, we had a talk from somebody ... and also they showed you how to get up when you had fallen because I can't get up off the floor very easily.

[Attended Balance Group]

Social and emotional benefits were apparent for all older people, regardless of ethnicity or gender, and had an important effect on adherence. These related to feeling better 'in yourself' and enjoyment from attending, making and meeting friends and improved confidence. Food was a feature of interventions attended by Asian and Chinese older people which was viewed very positively and facilitated adherence.

## **Barriers**

### ***Lack of knowledge/information***

Lack of knowledge was a significant barrier to participation and uptake. Participants were reluctant to attend an intervention if they had no knowledge of what to expect and what would be expected of them. Many people reported that letters inviting people to a falls clinic or falls prevention exercise programme contained little information about what was involved:

Well with anything I think, even for younger people, you want to know what you're going to before you go.

[Male Did not attend Postural Stability Class]

Often information about interventions was limited. Getting information could be difficult and sometimes required persistence:

That's when I first asked the Doctor I was with, you know and he said he'd never heard of it.

[Male Attended Balance Group]

### ***Availability of interventions***

Sometimes interventions were withdrawn, usually due to financial difficulties, or services being time limited/funded on short-term basis. This mainly affected falls clinics, balance classes and podiatry services. Participants were often confused and disappointed that a service, which they had found to be of value, had been withdrawn.

... but, of course, just as we were finishing, it (falls prevention service) closed down and nobody knew what was happening anyway but they did hope that they would be able to keep a Balance Group going,... but it was all very nebulous because nobody knew what was happening.

[Female Attended Falls Clinic and Balance Group]

Difficulties were also caused when a fixed programme of exercise came to an end. Many participants who attended regularly exercise-based falls interventions found them to be beneficial and would have liked the classes to have continued for longer or to have had the opportunity to join a follow-on class. Often there were no suitable classes to which people could progress which affected motivation.

... it's a pity in way the Balance Group packed up when they did, you know, or finished when they did because you feel as if it might have helped if you'd carried on doing their exercises. Because their exercises are a lot different from the ones they give you to do at home.

[Male, Attended Balance Group]

For those living in care homes the exercise class remained inaccessible even when these were delivered in the home if there were insufficient staff to escort residents to the intervention or they could not access walking aids.

### ***Perceived lack of benefits***

Where there is no perceived benefit from participating in any fall intervention programmes, an adverse effect on adherence was reported. This was most apparent in relation to balance/stability classes where benefits may not be immediate.

I don't go to a lot of them (exercise classes) but I have been to some and I've come away and I've thought "what did I learn there except to throw this silly ball"

[Female Did not attend Care Home Exercise]

Experiencing negative outcomes was apparent in other interventions:

... my husband says I've got to throw them (slippers from the slipper exchange) because they make my feet smell.

[Attended Foot health talk/slipper exchange]

### ***Health issues***

One of the main reasons for participants not attending or withdrawing from an intervention related to poor health or having to attend hospital or dental appointments. Pain also prevented involvement in exercise-based interventions:

I've got quite a lot of arthritis now...mostly I'm in pain a lot, various parts of my body all the time, every day and so any kind of physical exercise is hard for me.

[Female Did not attend T'ai Chi]

### ***Lack of time***

Perhaps a more surprising reason for not attending an intervention was that older people, although retired, often had other commitments, so found it difficult to attend regular interventions.

Don't believe that because you're retired that you have all the time in the world - you don't.

[Male Had not attended any fall prevention intervention]

Time pressures, due to caring responsibilities were another constraint. This participant, who had had several falls but had not sought any help, explains how her needs came second to those of her husband, for whom she was the main carer:

... and doing what I need to do for [husband]... he has plenty of appointments... so I've come to the conclusion that there isn't much time to do anything ... you always put yourself second don't you?

[Female Had not attended any fall prevention intervention (although had had several falls)]

### **Language**

South Asian and Chinese older people appeared to have even greater difficulty in finding out about falls prevention interventions due to language barriers, but also literacy problems, for example, many Chinese and Asian people were unable to read information even if it had been translated.

I didn't know that there is information about falls. I know old people do fall but I don't know that there is information available. Do you have them in Chinese?

[Chinese Female, attended T'ai Chi Class]

Older people made a range of suggestions of improving accessibility to interventions and exercise, these are presented in Table 2.

### **Discussion**

It is clear from the findings that a number of factors either facilitate or act as barriers to older people's uptake of fall prevention interventions. Understanding what encourages and motivates older people to attend fall prevention interventions is crucial to supporting older people to benefit from interventions, enabling health professionals to deliver effective services and ultimately increasing uptake rates for interventions and reducing falls, injuries and quality of life.

We found there was very poor knowledge about falls and their prevention among older people, a finding supported by others (e.g. Roe et al 2009).

The importance of having knowledge of, and information about, falls prevention services including details about what can be expected when attending a particular intervention were perceived as pivotal in encouraging uptake. Health professionals working in the community, including nurses, have a role in promoting fall prevention activities including exercise but they may have to develop their skills and knowledge in order to increase their effectiveness (Goodman et al 2011). For some participants from the South Asian and Chinese communities language difficulties were an issue. There was general agreement that attendance was enhanced when interventions were delivered in a language understood by participants. Written information was a particular challenge as some older people from ethnic minority groups had not had the opportunity to learn to read in their native language or in English (Horton and Dickinson 2011).

Preventative health teaching to enable people to assume responsibility for their own health has been found to require; a period of time, variety of media, respected role models, development of trust between the individual and the teacher (or expert), and regard to the belief system of the individual (Shearer and Davidhizar 2000).

Professional marketing expertise might encourage more effective dissemination of information regarding falls prevention services. Suggestions most widely supported by older people in this study were: mass media public health campaign- using the media most frequently used by older people such as television and radio, newspapers and magazines, personal invitation and talks. Hill et al (2009) found that delivery of fall prevention education was improved when using DVD format over a written workbook for older people in hospital settings. It would be useful to see a similar intervention trialled in the community setting. Nyman and Yardley (2009) have successfully used a web-based format to provide tailored information to older people a format likely to increase in the future, however this format would not be appropriate for all older people.

A major public health campaign to raise awareness of falls and fall prevention along the lines and profile of campaigns which have focused on conditions such as coronary heart disease and AIDS would help to raise the profile and knowledge of falls.

Attendance at exercise classes and falls clinics was influenced by the accessibility and appropriateness of the venue, especially location and transport. Also, exercise classes were more likely to be attended if they were set at an appropriate level geared to the needs of the older person. The vast majority of participants expressed a preference for falls prevention activities to be scheduled during the daytime. Uptake was facilitated by the opportunity to see/sample an intervention before participating and by going with a friend.

Availability/continuity of services was a concern in some areas. Participants cited instances where services were discontinued or where no follow-up was available. This caused confusion and disappointment. In addition, the variability of services across different geographical areas meant that falls services had become a postcode lottery - some areas offering comprehensive services, others very limited interventions. This is likely to become more apparent in the current economic climate where cuts to local authority services which will include low level services such as exercise classes.

Where services were available, the qualities of the health professional/facilitator involved were important and had a profound impact on people's satisfaction with and adherence to interventions.

Overall, adherence to interventions was greatly facilitated by experiencing a multiplicity of benefits. These included improvements in physical strength and balance, receiving advice, and having a thorough assessment as well as social and emotional benefits such as making new friends, enjoyment, improved confidence and an escape from social isolation. In contrast, and as might be expected, not experiencing any advantages had an adverse effect on attendance especially if there was an expectation that benefits would quickly be apparent.

Issues associated with appropriate design and comfort had an impact on uptake and utilisation of aids and assistive devices as well as undertaking everyday activities such as walking to the shops. Participants spoke of the importance of the design and provision of hand rails to aid gripping, the discomfort of wearing hip protectors and pendant alarms and the unsuitable design of some of the slippers from the 'slipper exchange'. Poorly maintained pavements affected the confidence of older people in walking in public areas. Inclusive designs that enable full participation not just for

older people but also people with disabilities provide many challenges for designers however, providing rails that are safe and functional for people would be a low cost but effective tool in the prevention of falls and would increase uptake, utilisation and safety of both home and public places.

## **Conclusions**

HCPs working in community settings have a major role to play in fall prevention through screening and referral to fall prevention interventions (Unsworth 2003). NICE (2004) recommends that health professionals undertake brief opportunistic screening with older people they come into contact with. Community nurses in particular, frequently have contact with older people and are ideally placed to find those who are experiencing falls, provide information and refer them to appropriate community interventions. Ensuring that this is done in a way that enables older people to access and participate in fall prevention activities could make a significant impact on falls.

It is important that the outcomes of falls prevention activities are evaluated to ensure that negative impacts and outcomes *are* monitored and consideration given to reduce these as far as possible. Ensuring that people are aware that benefits, particularly for exercise-based programmes may not be apparent for some weeks may increase adherence.

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## **Ethics approval**

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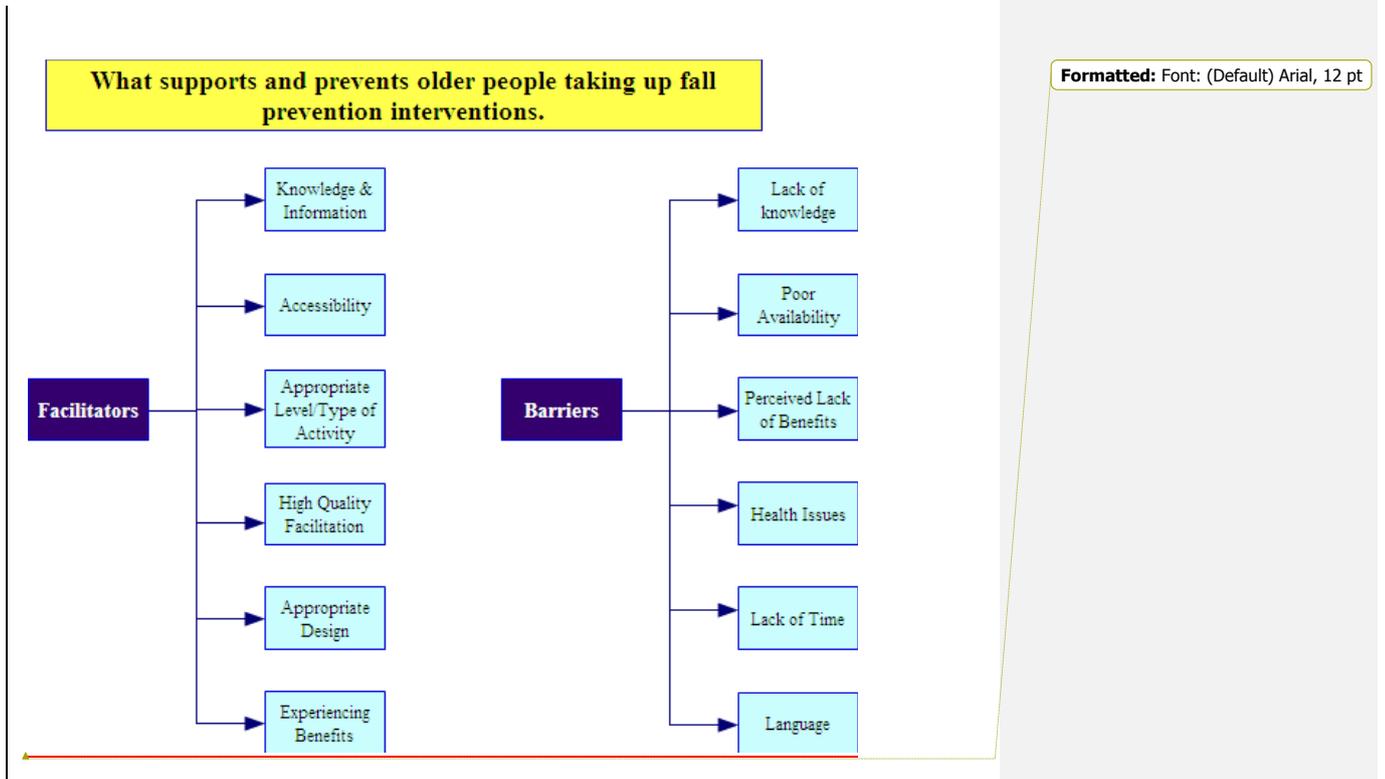
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**Table 1: Characteristics of participants**

<b>Participants</b>	<b>Number</b>	<b>Sex</b>	<b>Mean Age (years)</b>	<b>Experienced a fall in previous 2 years</b>	<b>Falls reported to health professional</b>	<b>Mean FES Score*</b>
White British	125	Female=90 Male=35	77.6	Yes=79 No=46	Yes=53 No=22	37.1 SD 24.3
South Asian	32	Female=26 Male=6	69.7	Yes=23 No=6	Yes=23 No=3	60.8 SD 21.8
Chinese	30	Female=21 Male=9	70.2	Yes=21 No=9	Yes=6 No=15	33.3 SD 11.4
	<b>187</b>	<b>Female=137 Male=50</b>	<b>75.0</b>	<b>Yes=123** No=61 Missing=3</b>	<b>Yes=82 No=40 Not applicable=61 Missing=4</b>	<b>40.7 SD 24</b>

\*164 participants completed the FES

Figure 1:



**Table 2: Older people’s recommendation for improving information about and access to interventions focusing on fall prevention.**

<b>Exercise</b>	Promotion of exercise through the life span Exercise information sheets. ‘Taster sessions’ for exercise groups
<b>Accessibility and Design</b>	More seats in public places Better maintenance of public footpaths. Design of hand rails Providing transport to a wider range of fall interventions. Venues easily accessible by public transport and close to a car park. Slipper exchanges need to provide the style and design of slippers people prefer. In care homes <ul style="list-style-type: none"> <li>• staff should be available to escort residents to exercise classes.</li> <li>• Residents should have easy access to their walking aids at all times</li> </ul>
<b>Advertising</b>	Needs to be accessible (media, formats, language and literacy) Professional marketing strategies to ensure information about falls prevention is disseminated effectively to the general public and health professionals.
<b>Education and Information: Older people</b>	Information readily available particularly in GP surgeries. Promotion of the wide range of benefits from accepting a falls intervention/assistive device especially with regard to walking aids and home modifications
<b>Education and Training: Health Professionals</b>	Training for health professional in falls prevention.