

What do community-dwelling Caucasian and South Asian 60–70 year olds think about exercise for fall prevention?

MARIA HORNE¹, SHAUN SPEED¹, DAWN SKELTON², CHRIS TODD¹

¹Faculty of Medical and Human Sciences, School of Nursing, Midwifery and Social Work, The University of Manchester, UK

²HealthQWest, School of Health and Social Care, Glasgow Caledonian University, Glasgow, Scotland G4 0HB, UK

Address correspondence to: Maria Horne, School of Nursing, Midwifery and Social Work, The University of Manchester, University Place, Oxford Road, Manchester M13 9PL, UK. Tel: (+44)161 3067680; Fax: (+44)161 306 7707.

Email: maria.horne@manchester.ac.uk

Abstract

Background: strategies to prevent falls often recommend regular exercise. However, 40% of over 50s in the UK report less physical activity than is recommended. Even higher rates of sedentary behaviour have been reported among South Asian older adults.

Objective: to identify salient beliefs that influence uptake and adherence to exercise for fall prevention among community-dwelling Caucasian and South Asian 60–70 year olds in the UK.

Methods: we undertook an ethnographic study using participant observation, 15 focus groups ($n = 87$; mean age = 65.7 years) and 40 individual semi-structured interviews (mean age = 64.8 years). Data analysis used framework analysis.

Results: young older adults do not acknowledge their fall risk and are generally not motivated to exercise to prevent falls. Those who had fallen are more likely to acknowledge risk of future falls. Whilst many of the beliefs about falls and exercise expressed were very similar between Caucasians and South Asians, there was a tendency for South Asians to express fatalistic beliefs more often.

Conclusion: fall prevention should not be the focus of strategies to increase uptake and adherence to exercise. The wider benefits of exercise, leading to an active healthy lifestyle should be encouraged.

Keywords: falls, fall prevention, exercise, physical activity, beliefs, Caucasian, South Asian

Introduction

Reducing the incidence of falls among older adults remains a key public health priority. Some 30% of community-dwelling adults aged 65 and over are reported to fall each year [1]. Serious falls also occur in fit and active older people [2]. Several empirical studies demonstrate that moderate intensity exercise is an effective intervention strategy for preventing falls in older adults [3–5, 6–8]. Other studies have shown that injuries, because of a fall, are reduced after the implementation of an exercise programme [9, 10, 11]. However, exercise is uncommon among older adults. For example, in a large representative sample of the UK, 40% of over 50 years of age reported less exercise than is considered nec-

essary to maintain good health [12]. Levels of physical activity are reportedly lower in South Asian groups than among the general population in the UK [13, 14–17], and therefore the potential benefits from exercise in terms of fall prevention are not realised in this group.

Little literature exists with regard to older adults' views about exercise and physical activity in relation to fall prevention and where there is research, most is very recent [18–23]. Collectively, these studies suggest that if older adults do not believe that they are at risk of falling, they are unlikely to take up measures to prevent falls. However, the focus of these studies tends to be adults aged 65 and over and usually Caucasian populations. Little is known about the beliefs of adults in the decade of retirement, i.e. those aged

60–70 years and even less about South Asian people's beliefs in this area.

Working with those entering old age could potentially produce substantial health benefits. This may bring about a favourable shift in the overall fall risk-factor distribution in the population with the longer term aim of changing population health [24]. It is important to improve and build upon our understanding of what young older adults think about falls and exercise for fall prevention. This will inform our understanding of how prevention programmes could or should be designed and presented to young older adults.

Study design

An ethnographic approach provides a framework for facilitating the incorporation of multiple voices and perspectives. First, participant observation was conducted for several months, totalling 60 hours to familiarise the researcher with the field. Second, 15 focus groups were conducted and analysed. Third, 40 semi-structured interviews were conducted to incorporate more breadth and depth to the emergent findings. Steps 2 and 3 constitute the main data pool on which this article is based.

Method

A semi-structured interview guide provided a flexible framework for questioning for both focus groups and interviews. At the beginning of the focus groups/interviews the facilitator/interviewer clarified the meaning of exercise and physical activity. Physical activity was defined as any bodily movement produced by the skeletal muscles resulting in energy expenditure [25], for example organised activity such as dance, sports or informal activity such as walking, swimming and gardening. Exercise was defined as a subset of physical activity that is planned, structured and involves repetitive bodily movements with the purpose of improving some aspect of physical fitness, for example muscular strength and endurance [25]. Therefore, sport and walking can also be classed as exercise.

The participants were categorised as active, less active and sedentary on self-reported levels of exercise and physical activity using Department of Health guidelines for regular activity [26]. Active category constitutes 30 min of at least moderate intensity physical activity a day, on 5 or more days a week and <30 min a week is deemed as sedentary category [26]. A less active category was added as the distinction between active and sedentary was too extreme.

Sampling and recruiting

Adults aged 60–70 years were recruited in the North West of England. Potential participants for focus groups and interviews were identified through fieldwork observation. Purposive sampling [27] was used to recruit participants to both focus groups and in-depth interviews, to acquire access to a full range of beliefs with regard to falls and exercise for fall prevention. The sample was selected to include adults with very different experiences of participation or non-

participation in exercise and physical activity, but all were asked about exercise and physical activity in relation to fall prevention. Translated literature and interpreters were used with South Asian participants.

Analysis

Data analysis and classification followed the framework analysis approach [28]. This method of analysis was specifically designed to facilitate systematic analysis of qualitative data and has the ability to summarise and classify data within a thematic framework. Data analysis and collection were undertaken simultaneously. The themes were compared and contrasted within and across groups. The ATLAS/ti5.0 [29] qualitative analysis software programme assisted in coding, cross-referencing, storage and retrieval of data.

Findings and discussion

Table 1 presents the socio-demographic characteristics of the participants in the focus groups and interviews.

Confusion about exercise and physical activity

There were, perhaps unexpectedly, considerable similarities between the Caucasians and South Asians in the way they talked about falls, exercise and fall prevention. Despite clarification of the concepts of exercise versus physical activity, the majority of participants used the phrases interchangeably and even used the phrase 'physical exercise':

Well going on the allotment and digging over patches to plant things . . . so that is what you see as physical exercise. (LC2: Caucasian female, 62 years: Sedentary).

Only those with a history of doing sporting activities understood the difference.

The data from this study showed that there was some very limited general awareness that exercise could help in fall prevention, but this did not motivate the majority of either Caucasian or South Asian participants to undertake exercise:

I walk and I went to do exercise and now I understand exercise does stop you from falling but I didn't before? (BS 3: South Asian female, 63 years: Active)

Even when people had stumbled across information they did not necessarily make a strong connection to themselves:

I must have read it in a magazine or something [about exercise and fall prevention] . . . It strengthens your legs doesn't it, your bones etc. If you just sat down and never got up you wouldn't be able to get up and walk. . . . (D4: Caucasian female, 67 years: Less active)

Table 1. Sample

Interview type		No.	Gender	Mean age	Reported activity levels ^a
Focus groups	Caucasian	58	44 females 14 males	65.4	Active: 24 (41.4%) Less active: 26 (44.8%) Sedentary: 8 (13.8%)
	South Asian	29	13 females 16 males	66.1	Active: 14 (48.3%) Less active: 12 (41.4%) Sedentary: 3 (10.3%)
In-depth interviews	Caucasian	23	14 females 9 males	64.8	Active: 10 (43.5%) Less active: 9 (39.1%) Sedentary: 4 (17.4%)
	South Asian	17	10 females 7 males	65.2	Active: 8 (47.1%) Less active: 4 (23.5%) Sedentary: 5 (29.4%)

^aUsing DoH guidelines of regular activity [26] and adding a less active category (as the distinction between the active and sedentary are too extreme).

Clearly, a few people (both Caucasian and South Asian) were unaware of the potential benefits exercise may offer in terms of improved strength, balance and mobility, and often knowledge seemed to be gained by chance. Other studies have arrived at similar conclusions [20, 21]. However, this is the first study to identify such beliefs in South Asian older adults.

Too young to fall

Many participants perceived themselves to be too young to have a fall and that falls happened to those people who were much older than they were:

I think that's after 80s [having a fall], when people are getting older. There is no place for thinking about it now. (I33: South Asian male, 63 years: Less Active)

Although aware of the risks, this man pushes it to the back of mind:

So really, in the back of your mind, it's always somebody had a fall and she has never really recovered . . . but to me that is 80s, I'm thinking that's well away. (H4: Caucasian male, 60 years: Active)

The idea of being too young to fall is also seen as a theme with other older adults [20]. Fall prevention advice is seen as relevant to older and frailer people than they perceive themselves to be [20].

The potential of exercise to prevent falls

Those who had experienced a fall held more positive beliefs about the potential benefits for exercise to prevent falls. They were more motivated to perform exercise for this reason. This appeared to stem from a fear of falling, which promoted a

belief that they may fall again. With hindsight, this South Asian female reflects on this point:

Yes it would motivate me [to perform exercise for fall prevention] . . . by falling it has frightened me and that prevented me going to do exercise because I thought I might fall again. (I31: South Asian female, 62 years: Sedentary)

A small minority of participants feared falling despite awareness of the potential benefits of exercise in fall prevention. They felt they were not in a position to undertake exercise because of existing health issues and limited mobility:

I can't [exercise] because of my arthritis, you know, I think I might fall. (I40: South Asian female, 62 years: Sedentary)

Thus, exercise was sometimes associated with a perceived risk of falling. Other studies have reported poor physical health and mobility issues as general barriers to both the initiation and maintenance of exercise and physical activity in general [30–32] and our findings reinforce these.

Clearly, beliefs about perceived and actual fears can result in activity restrictions and the motivation to initiate exercise and physical activity. This is consistent with the literature [33–35]. However, once it was explained that strength and balance exercises could help to reduce falls, the above lady was more motivated to perform exercises. Therefore, how health promotion messages about fall prevention are presented to older people will influence exercise and physical activity uptake.

Fall prevention exercises unnecessary

Older adults who perceived themselves to be fit and healthy, believed fall prevention exercises were not necessary for them personally:

... I just feel I'm not in a position ... that I'm very lucky in that I don't need to [exercise to prevent falls]. I'm not in a position that I feel I need to do any more than I do. Maybe if I was struggling with something, I'd say, "well yeah, I'll go and see if I can get a wee bit of exercise", but there again, I might say "I'll go to the physio, they might move those bones for me", rather than go to a sports or leisure centre. (I7: Caucasian female, 65 years: Active)

Generally, young older adults with no fall history did not acknowledge their risk of falling:

I wouldn't think about things like that, to be honest, when I'm going to fall. ... (I16: Caucasian male, 68 years: Active)

Others simply did not perceive falling to be a serious issue:

I'm not bothered if I fall ... As long as I have the strength I'll carry on walking. (I32: South Asian female, 70 years: Less active)

However, some did perceive that a loss of physical strength would motivate them to perform exercise for fall prevention, but were willing only to perform those pursuits they felt comfortable in doing, rather than specifically for fall prevention. These pursuits held more meaning and purpose for them than fall prevention exercises *per se*.

... if you haven't got the strength [you would need to do exercise to prevent falls]. But I am willing to do walking to keep me going to help prevent the falls. (I30: South Asian female, 67 years: Less active)

However, most people preferred physical activity for strength building because they felt that it was included into everyday life:

But, with the physical activity its everyday. I know what I'm doing because I have to move to get stuff for the house, for the cooking and everything. (I26: South Asian female, 63 years: Active)

And so exercise related to activities of daily living seemed to be a motivator:

I combine physical activity with exercise ... if you're climbing stairs and, if I go in to Marks and Spencer or wherever I'll invariably walk the stairs to the next floor, rather than take the escalator or a lift. (I6: Caucasian male, 63 years: Active)

Parallels can be seen in the existing literature [19–21, 23]. Community-dwelling inpatients, prior to discharge, felt there was no need to exercise because they were unlikely to fall [19].

Generally, fall prevention advice is seen as useful in principle, but of no personal relevance for them [21, 23]. However, older adults are motivated to participate in strength and balance training by a wide range of perceived benefits, for example improved health, and not just reduction of fall risk [21, 23]. Similar attitudes to fall prevention interventions are seen across a number of European countries and contexts [22]. Findings from this study are congruent, but extend to younger older adults and to South Asian populations. Hence, emphasising the social aspects of leading a healthy, active life and improving strength and balance might be more acceptable and effective than advice on fall prevention.

Fatalism

Both Caucasian and South Asian older adults felt that falls were a (biological) inevitability, a natural consequence of ageing:

... but sometimes you can't help it [fall] because of your age ... If that person is old, it is that age. (I33: South Asian male, 63 years: Less active)

It's your bones; they still get old [in relation to falls]. I don't feel it's any kind of exercise, it's just your body ageing; you cannot do what you did when you were younger. (K5: Caucasian female, 66 years: Less active)

Most participants felt that falling was out of their control:

... how can you avoid a fall? If it's going to happen, it will happen. (I25: South Asian female, 62 years: Active)

Whilst a common theme amongst the South Asians, fatalism was not restricted to this group:

I can only speak for myself. If you fall, you fall. (I16: Caucasian male, 68 years: Active)

Everyone falls so it doesn't really matter. (I32: South Asian female, 70 years: Less active)

Amongst many South Asians 'inshallah' or the idea of illness being down to God's will was very apparent:

Anything can happen at any time. I can't say I have any fears. Things can happen. God knows. God knows. (I29: South Asian male 67 years: Active)

This belief supported the notion that there was no need to change behaviour. Accepting that a fall is the will of God or Allah may become a significant barrier to behaviour change. These quotes illustrate that if you believe you have little control over what happens to you, you may see little point in exercising, which may not bode well for health promotion strategies. If falls are believed to be inevitable, unavoidable

or unpreventable, then older people are unlikely to initiate exercise regimes that may help in prevention.

Conclusions

The findings from this study suggest that fall prevention takes a low priority among both Caucasian and South Asian 60–70 year olds. Neither group recognised falls to be a serious health issue. Most young older adults appear not to be motivated to exercise purely for the prevention of falls. Falling is viewed as a negative image of ageing and considered as a physical weakness of the body and a consequence of poor health, which was variously defined by the participants. Therefore, exercising purely for the purpose of preventing a fall is seen as unnecessary when there are more general health issues. Hence, promoting exercise and physical activity for fall prevention is probably not the best strategy to encourage regular exercise and physical activity. Promoting the positive aspects of activity in later life, such as positive well-being, may be more appropriate and appears to be the way forward in increasing exercise and physical activity with regard to preventing falls in this age group [36].

Those who had fallen were more likely to recognise that they were at risk of future falls and thus when told that exercise might reduce that risk were more likely to say they would consider taking up a suitable fall prevention programme. However, fears of falling also acted as a barrier to taking exercise and physical activity and could mitigate against undertaking further activity.

There appear, in these samples, to be more similarities than dissimilarities between Caucasian and South Asian older adults' talk about uptake of exercise for fall prevention. However, there appear to be some differences in beliefs in the area of fatalism. Holding fatalistic beliefs means that falls are often seen as an unpreventable event. Older adults who hold such beliefs seem to attribute falls to the ageing process or due to poor health. Therefore, falls are perceived to be an occurrence out of their control, which can lead to an acceptance of the inevitable.

Whilst we may find differences in the future, the similarities seen in this data set could be due to the specific groups who attended focus groups and interviews. In one of the areas in which we recruited considerable health promotion work had been undertaken, which may have influenced the beliefs and health behaviours of the respondents. Our findings could also be a result of the demand characteristics of the data collection procedure, but there is no direct evidence to suggest that this is the case.

Hence, it seems that fall prevention *per se* should not be the headline focus of health promotion strategies for this age group. The wider benefits of exercise and leading active, healthy lifestyles should be promoted and fall prevention should be mentioned in terms of secondary benefits rather than the primary aim.

Future research will need to investigate further the beliefs and attitudes of younger older people and people from eth-

nic minority groups towards health promotion in general and fall prevention in particular and compare these to other large scale surveys of attitudes and beliefs [23]. However, the findings presented here begin to address the important and currently under-researched area of the views of ethnic minority groups.

Key points

- A qualitative study showed that both Caucasian and South Asian young older adults are generally not motivated to initiate or maintain exercise purely to help prevent falls
 - Both Caucasian and South Asian young older adults tend not to acknowledge their risk of falls
 - More similarities than dissimilarities seem to exist between Caucasian and South Asian older adults in their beliefs about falls and exercise for fall prevention.
 - Fall prevention should not necessarily be the focus of health promotion strategies, but the peripheral benefits of exercise and leading active healthy lifestyles should be promoted.
-

Acknowledgements

We would like to thank everyone who took time to participate in the research study and to the staff of statutory and voluntary services for their time, support and facilitation.

Conflict of interest

There are no conflicts of interest.

Funding

This work was conducted as part of a PhD study. The doctoral programme was funded by a Fellowship Award from The University of Manchester, School of Nursing, Midwifery and Social Work.

Ethical approval

Ethical approval was gained from the Local Research Ethics Committee, for the two Primary Care Trusts where the research was conducted, and the University of Manchester Research Ethics Committee. Informed consent was given by all participants.

Supplementary data

Supplementary data are available at *Age and Ageing* online.

References

- (The very long list of references supporting this review has meant that only the most important are listed here and are represented by bold type throughout the text. The full list of references is available at *Age and Ageing* online as Appendix 1.)
- O'Loughlin J, Robitaille Y, Boivin JF, Suissa S. Incidence of and risk factors for falls and injurious falls among the community-dwelling elderly. *Am J Epidemiol* 1993; 137: 342–54.
 - Allander E, Gullberg B, Johnell O, Kanis JA, Ranstam J, Elffors L. (The MEDIS Group). Circumstances around the fall in a multinational hip fracture risk study: a diverse pattern for prevention. *Accid Anal Prev* 1998; 30: 607–16.
 - Robertson MC, Devlin N, Gardner MM, Campbell AJ. Effectiveness and economic evaluation of a nurse delivered home exercise programme to prevent falls: 1. Randomised controlled trial. *Br Med J* 2001; 322: 697–700.
 - Robertson MC, Gardner MM, Devlin N, McGee R, Campbell AJ. Effectiveness and economic evaluation of a nurse delivered home exercise programme to prevent falls: 2. Controlled trial in multiple centres. *Br Med J* 2001; 322: 701–3.
 - Barnett A, Smith B, Lord SR, Williams M, Bauman A. Community-based group exercise improves balance and reduces falls in at-risk older people: a randomised controlled trial. *Age Ageing* 2003; 32: 407–14.
 - Campbell AJ, Robertson MC, Gardner MM, Norton RN, Tilyard MW, Buchner DM. Randomised controlled trial of a general practice programme of home based exercise to prevent falls in elderly women. *Br Med J* 1997; 315: 1065–9.
 - Robertson MC, Campbell AJ, Gardner MM, Devlin N. Preventing injuries in older people by preventing falls: a meta-analysis of individual-level data. *J Am Geriatr Soc* 2002; 50: 905–11.
 - Skelton D, Young A, Walker A, Hoinville E. *Physical Activity in Later Life*. London: Health Education Authority, 1999.
 - Johnson MR, Owen D, Blackburn C. *Black and Minority Ethnic Groups in England: The Second Health and Lifestyle Survey*. London: Health Education Authority, 2000.
 - Erens B, Primatesta P, Prior G. *Health Survey for England. The Health of Minority Ethnic Groups '99*. London: Department of Health, 2001.
 - Hayes L, White M, Unwin N *et al*. Patterns of physical activity and relationship with risk markers for cardiovascular disease and diabetes in Indian, Pakistani, Bangladeshi and European adults in a UK population. *J Public Health Med* 2002; 24: 170–8.
 - Gill PS, Kai J, Bhopal RS, Wild S. *Health care needs assessment: black and minority ethnic groups*. Abingdon 2002. Available at: <http://hcna.radcliffe-oxford.com/bemgframe.htm>. (28 March 2007, date last accessed).
 - Health Education Board for Scotland. *The Construction of the Risks of Falling in Older People: Lay and Professional Perspectives*. Edinburgh: Scotland: Health Education Board for Scotland, 2001.
 - Simpson JM, Darwin C, Marsh N. What are older people prepared to do to avoid falling? A qualitative study in London. *Br J Community Nurs* 2003; 8: 152–9.
 - Yardley L, Todd C. *Don't Mention the F Word. Encouraging Positive Attitudes to Fall Prevention in Later Life*. London: Help the Aged Publishing, 2005.
 - Yardley L, Donovan-Hall M, Francis K, Todd C. Older people's views of advice about fall prevention: a qualitative study. *Health Educ Res* 2006; 21: 508–17.
 - Yardley L, Bishop FL, Beyer N *et al*. Older people's views of fall prevention interventions in six European countries. *The Gerontologist* 2006; 46: 650–660.
 - Yardley L, Donovan-Hall M, Francis K, Todd C. Beliefs and attitudes that predict older people's intention to undertake strength and balance training. *J Gerontol Psychol Sci* 2007; 62B: 119–25.
 - Caspersen CJ, Powell KE, Christenson GM. Physical activity, exercise and physical fitness: definitions and distinctions for health-related research. *Public Health Rep* 1985; 100: 126–31.
 - Department of Health. *At least five times a week. Evidence on the impact of physical activity and its relationship to health. A Report from the Chief Medical Officer*. London: Department of Health, 2004.
 - Patton MQ. *Qualitative Evaluation and Research Methods*, 2nd edition. Newbury Park, CA: Sage, 1990.
 - Ritchie J, Spencer E. *Qualitative data analysis for applied policy research*. In: Bryman A, Burgess RG, eds. *Analyzing Qualitative Data*. London: Routledge, 1994.
 - Muhr T. *ATLAS.ti 5.0 Scientific Software Development* [computer software]. Thousand Oaks, London: Sage, 2004.
 - Crombie IK, Irvine L, Williams B *et al*. Why older people do not participate in leisure time physical activity: a survey of activity levels, beliefs and deterrents. *Age Ageing* 2004; 33: 287–92.
 - Lawton J, Ahmad N, Hanna L, Douglas M, Hallowell N. 'I can't do any serious exercise': barriers to physical activity amongst people of Pakistani and Indian origin with Type 2 diabetes. *Health Educ Res* 2006; 21: 43–54.
 - Sport England. *Understanding participation in sport: what determines sports participation among recently retired people?* Available at: http://www.sportengland.org/recently_retired_full_report_january_2006.doc (12 January 2007, date last accessed).
 - Yardley L, Smith H. A prospective study of the relationship between feared consequences of falling and avoidance of activity in community-living older people. *Gerontologist* 2002; 42: 17–23.
 - Wilcox S, Castro C, King A, Housemann R, Brownson R. Determinants of leisure time physical activity in rural compared with urban older and ethnically diverse women in the United States. *J Epidemiol Community Health* 2000; 54: 667–72.
 - Lees FD, Clark PG, Nigg CR, Newman P. Barriers to exercise among older adults: a focus-group study. *J Aging Phys Activity* 2005; 13: 23–33.
 - Yardley L, Beyer N, Hauer K, McKee K, Ballinger C, Todd C. Recommendations for promoting the engagement of older people in activities to prevent falls. *Qual Saf Health Care* 2007; 16: 230–4.

Received 22 January 2008; accepted in revised form 11 June 2008