

**TITLE OF SYSTEMATIC REVIEW**

A systematic review of the experiences of older people with visual impairment of interventions aiming to prevent falls, with a particular focus on environmental and/or behaviour interventions.

**PRIMARY REVIEWER/CONTACT**

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**COMMENCEMENT DATE**

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**EXPECTED COMPLETION DATE**

September 2009

**BACKGROUND**

Falls are the leading cause of injury in people aged 75 years and over<sup>1</sup>. Falls in older people have been the subject of several systematic reviews including a Cochrane review<sup>2</sup> that has recently been divided into community and institutional dwelling - older people<sup>3</sup>. A recent systematic review has also focused on the effectiveness of environmental interventions alone in preventing falls amongst older people<sup>4</sup>. In addition, a systematic review of both qualitative and quantitative studies and reviews was undertaken to explore older people's views and experiences of falls prevention<sup>5</sup>.

However, to our knowledge, there have been no specific reviews which have focused on older people with visual impairment in terms of either the effectiveness of environmental and/or behavioural interventions to prevent falls, or exploring their views and experiences of such interventions. This is in spite of evidence to suggest that the rate of falls in older people with visual impairment is 1.7 times higher, and hip fractures are 1.3-1.9 times higher than within the general population<sup>6</sup>. It seems likely that the mechanisms of fall prevention within this group will be different, particularly with respect to environmental/behavioural components and we consequently also believe that the experience of such interventions will also differ.

Recent work has suggested that in order for older people to engage with activities to prevent falls, the benefits of interventions fitting with a positive self identify should be promoted; a variety of forms of social engagement are used; the intervention is designed to meet individual needs and preferences; and self management is promoted<sup>7</sup>. Whilst we have evidence to support these recommendations within the context of the general older population<sup>8,9</sup>, the extent to which these recommendations are transferable to older people with visual impairment is unclear.

This current review therefore seeks to extend the existing evidence base for engaging older people in falls prevention activities, through exploring the feasibility, appropriateness and meaningfulness of such interventions older people with visual impairment. The team is ideally placed to carry out this work, having experience and expertise in falls prevention research (Skelton, Ballinger), falls prevention services (Neil, Skelton), systematic reviewing (Howe, Ballinger, Neil, Skelton) and qualitative research (Ballinger). We have been funded by the Thomas Pocklington Trust and Help the Aged to carry out a systematic review of environmental and behavioural interventions to prevent falls amongst older people, and this supplementary review will provide additional information to support falls prevention with this group.

## **OBJECTIVES**

This review seeks to explore the experiences of older people with visual impairment who have participated in falls prevention activities, with a view to investigating how appropriate and meaningful they are.

## **CRITERIA FOR CONSIDERING STUDIES FOR THIS REVIEW**

### **Types of studies**

The review will consider any qualitative research which describes, explores or analyses the experiences of older people with visual impairment, carers, family, and health and social care providers who have either received or delivered falls prevention programmes. The study types to be considered within the review will include (but are not limited to) grounded theory, phenomenology, IPA, ethnography, (auto)biographical methods, action research, participatory research, conversation analysis, discourse analysis, case study and mixed methods (where at least one of the methods used is qualitative). If we are unable to locate qualitative research papers for inclusion in the review, we will consider conference papers and proceedings and where appropriate, information included in voluntary organisation, management and government reports.

### **Types of participants**

The review will focus on the experiences of older people (i.e. aged 65 or over) having visual impairment, including (but not limited to) low visual acuity, glaucoma, poor contrast sensitivity, poor depth perception and reduced visual field. It will also include research reporting the perspectives of others such as carers, family members and health and social care providers about delivering falls prevention interventions to this group of older people.

### **Phenomenon of interest**

This review will examine the experience of falls prevention activities from the perspective of older people with visual impairment, with respect to the appropriateness and meaningfulness of those activities. We suspect that environmental and/or behavioural interventions will have a particular resonance with this group of older people, but are also interested in exploring the experience of falls prevention more broadly to see if our expectations are supported by the evidence. In addition to environmental and behavioural falls prevention activities, this review will therefore also consider:

- exercise interventions
- pharmacological review

- comprehensive geriatric assessment
- review of footwear

### **Anticipated outcomes**

The anticipated outcome will be a synthesis of themes and categories deriving from data generated through engagement with older service users with visual impairment, carers, family and health and social care providers. This will therefore enable comparison with the views, perspectives and experiences of older people who fall more generally, and thus determine whether recommendations to enhance uptake and adherence of falls prevention activities<sup>7</sup> can be generalised to this group.

### **Search strategy**

The search strategy will use a three step process. **Step one** will be the identification of MeSH terms and keywords within the key databases. An initial limited search of Medline and CINAHL will be carried out followed by an analysis of the text words used in the title and abstract, and index terms to describe the paper. Systematic reviews including elements in common with this proposed review<sup>2, 3, 4, 5</sup> will also be examined, and the search terms of these reviews extracted, reviewed and compared. Help with developing the search strategy will also be sought from an experienced librarian, with the aim of developing a comprehensive search strategy, specific to each of the databases searched.

The **second step** will be the execution of the search strategy within each of the databases identified below. The review will be limited to research published in the English language and will focus on literature from 1990 onwards. We plan to use Endnote, a management software system, within the review.

**Step three** will aim to capture additional studies which have not been included in the databases. In addition to research evidence from peer reviewed journals included within databases, we also aim to identify evidence from non-peer reviewed journals, conference proceedings, dissertations, reports, publications from voluntary organisations and websites. Grey literature will be included where relevant. The network of Joanna Briggs Collaborating Centres and the Joanna Briggs Institute will be interrogated to identify other literature which it is not possible to identify through other routes (e.g. research studies in progress). Additional strategies will include:

- Contact with key individuals within the field (e.g. those with research roles within voluntary and statutory organisations whose remit includes older people with visual impairment)
- Contact with Thomas Pocklington Trust, Royal National Institute for the Blind and Visibility, and exploration of web sites and research collections
- Analysis of relevant UK and Scottish government websites
- Contact with relevant professional bodies (e.g. RCN, COT, CSP)
- Exploration of the Kings Fund library and database
- Liaison with University departments with a record of research within this field
- Investigation of citations within research papers

Initial key words to be used in the first step of the search strategy include:

accidental fall,  
 old, older, elder, senior, aged  
 vision, visual disorders, eye disease, visual acuity, macular degeneration, glaucoma, cataract, ophthalmic  
 experience, subjective, perception, meaning  
 qualitative, qualitative findings, qualitative study, qualitative research, focus group, interview, participatory research, case study, mixed methods

Databases, search engines and journal aggregators to be explored include:

- CINAHL
- Pubmed/Medline
- Embase
- AMED
- Cochrane Library
- PsychINFO
- ASSIA
- Science Direct
- ISI Web of Knowledge
- Mednar
- Conference Proceedings

## **METHODS OF REVIEW**

### **Selection of papers**

Where possible, the abstracts of relevant papers will be reviewed in pairs according to agreed, prespecified criteria to determine if they

should be included in the review. Any areas of disagreement will be noted, and subject to review by a third contributor. Reasons for exclusion will also be noted.

### **Critical appraisal**

Full text copies of papers included in the review will be obtained, and independently reviewed in pairs using the Joanna Briggs QARI (Qualitative Assessment and Review Instrument) Appendix I). The prespecified items in QARI will be objectively assessed using additional criteria identified and agreed by the review team. Areas of disagreement will be resolved through involvement of a third, independent reviewer.

### **Data extraction and synthesis**

Data will be extracted from included papers using the QARI system. (Appendix II) Meta-synthesis will be completed, also using the QARI tool. This involves a synthesis of the themes and categories reported within relevant publications (reaching an agreed quality level as determined by the two reviewers), together with supporting data. This synthesis will be completed separately both for types of interventions (e.g. exercise, environmental, pharmacological etc) and for data contributions from different stakeholders (i.e. older service users, carers, family, health and social care providers). If appropriate, the findings will be subject to a metasynthesis which will result in a single set of findings which can inform health and social care provision in the area of falls prevention with older people with visual impairment.

Conflicts of interests

N/A

### **Acknowledgement**

Following this submission to the Joanna Briggs Institute, our team will also be submitting a systematic review protocol to the Cochrane Eyes and Vision group, to explore the effectiveness of environmental and behavioural interventions in improving mobility and preventing falls with older people with visual impairment. We will also include a request for joint recognition of this review with the Joanna Briggs Institute.

## REFERENCES

1. Skelton D and Todd C (2004) What are the main risk factors for falls among older people and what are the most effective interventions to prevent these falls? Copenhagen: WHO Regional Office for Europe (Health Evidence Network report: <http://www.euro.who.int/document/E82552.pdf> Accessed 16.04.09)
2. Gillespie LD, Gillespie WJ, Robertson MC, Lamb SE, Cumming RG, Rowe BH (2003) Interventions for preventing falls in elderly people Cochrane Database of Systematic Reviews 2003(4):CD000340.
3. Gillespie LD, Robertson MC, Gillespie WJ, Lamb SE, Gates S, Cumming RG, Rowe BH. Interventions for preventing falls in older people living in the community. Cochrane Database of Systematic Reviews 2009, Issue 2. Art.No.: CD007146.
4. Clemson L, MacKenzie L, Ballinger C, Close J and Cumming RG (2008) Environmental interventions to prevent falls in community dwelling older people: A meta-analysis of randomized trials Journal of Aging and Health 20 (8) 954-71.
5. McInnes, E., Askie, L. (2004). Evidence review on older people's views and experiences of falls prevention strategies. *Worldviews on Evidence-Based Nursing*, 1, 20-37.
6. Legood R, Scuffham P & Cryer C (2002). Are we blind to injuries in the visually impaired? A review of the literature. *Injury Prevention*, 8, 155-160.
7. Yardley L, Beyer N, Hauer K, McKee K, Ballinger C, Todd C (2007) Recommendations for promoting the engagement of older people in activities to prevent falls *Quality and Safety in Health Care* 16 (3) 230-4.
8. Ballinger C and Payne S (2002) The construction of the risk of falling among and by older people *Ageing and Society* 22 (3) 305-324.
9. Ballinger C and Payne S (2000) Falling from grace or into expert hands? Alternative accounts about falling in older people *British Journal of Occupational Therapy* 63 (12) 573-579.

## Appendix I: JBI QARI Critical Appraisal Checklist for Interpretive & Critical Research

Reviewer \_\_\_\_\_ Date \_\_\_\_\_

Author \_\_\_\_\_ Year \_\_\_\_\_ Record Number \_\_\_\_\_

- |  | Yes                      | No                       | Unclear                  |
|--|--------------------------|--------------------------|--------------------------|
| 1. Is there congruity between the stated philosophical perspective and the research methodology?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Is there congruity between the research methodology and the research question or objectives?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Is there congruity between the research methodology and the methods used to collect data?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Is there congruity between the research methodology and the representation and analysis of data?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Is there congruity between the research methodology and the interpretation of results?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Is there a statement locating the researcher culturally or theoretically?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Is the influence of the researcher on the research, and vice-versa, addressed?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Are participants, and their voices, adequately represented?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Overall appraisal:                      Include                       Exclude                       Seek further info.

Comments (Including reasons for exclusion)

**Appendix II: JBI-QARI Data Extraction Form  
for Interpretive & Critical Research**

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Reviewer \_\_\_\_\_ Date \_\_\_\_\_  
Author \_\_\_\_\_ Year \_\_\_\_\_  
Journal \_\_\_\_\_ Record Number \_\_\_\_\_

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**Study Description**

Methodology \_\_\_\_\_  
\_\_\_\_\_

Method \_\_\_\_\_  
\_\_\_\_\_

Intervention \_\_\_\_\_  
\_\_\_\_\_

Setting \_\_\_\_\_  
\_\_\_\_\_

Geographical \_\_\_\_\_  
\_\_\_\_\_

Cultural \_\_\_\_\_  
\_\_\_\_\_

Participants \_\_\_\_\_  
\_\_\_\_\_

Data analysis \_\_\_\_\_  
\_\_\_\_\_

## Authors Conclusions

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## Comments

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Findings	Illustration from Publication (page number)	Evidence		
		Unequivocal	Credible	Unsupported

Extraction of findings complete    YES