

## PEER REVIEW HISTORY

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### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Global evidence on falls and subsequent social isolation in older adults: A scoping review
<b>AUTHORS</b>	Thomas, Sonia; Parker, Amanda; Fortune, Jennifer; Mitchell, Gary; Hezam, Areej; Jiang, Ying; Degroh, Margaret; Anderson, Kerry; Gauthier-Beaupré, Amélie; Barker, Joan; Watt, Jennifer; Straus, Sharon; Tricco, Andrea

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Finnegan, Susanne University of Warwick, Warwick Clinical Trials Unit
<b>REVIEW RETURNED</b>	22-Mar-2022

<b>GENERAL COMMENTS</b>	<p>Thank you for producing this scoping review on falls and subsequent social isolation. This is a very important area of research.</p> <p>Abstract: A clear overview of the study</p> <p>Introduction: Page 6, lines 70-71: I feel that this first sentence needs restructuring e.g. Addressing social isolation is a priority in Canada...</p> <p>Methods: Search Strategy - Page 7, line 93: Can you clarify what an experienced information specialist is please? Eligibility Criteria - Page 7, line 101: Change the structure of this sentence e.g. The population of interest were older adults... Page 8, lines 109 - 111 also needs restructuring for clarity Page 8, line 113 - it might be good to give a couple of examples of the risk or protective factors that you are thinking about.</p> <p>Results: Table 1: Did the fact that 11 studies did not report the mean age of the participants make you worry about the quality of these papers? And 11 studies did not report whether the participants had a history of falling - can you just clarify why these were included - what variables did they include that warranted their inclusion in the review - was this fear of falling?</p> <p>Some of your studies are recorded as NR for all of the variables in the Tables in Appendix 3 i.e. Choi et al, Tinetti 1989 so why were they included?</p> <p>Discussion: Page 17, lines 289 - 291 - do you have any references to support these statements?</p>
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	Also, I appreciate that a scoping review does not allow for assessment of quality but did you have a feel for the quality of these papers and is the fact that you could not find any RCTs another gap in the literature.
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<b>REVIEWER</b>	Ambrens, Meghan Neuroscience Research Australia, Falls, Balance and Injury Research Centre
<b>REVIEW RETURNED</b>	29-Mar-2022

<b>GENERAL COMMENTS</b>	<p>Very interesting and important study that indicates the need for further research given our ageing population and the impact falls have on activity reduction and the health of older people.</p> <p>Discussion The authors indicate that a consistent measure of both social isolation and loneliness is needed. Do the authors want to put forward some suggestions about essential or key criteria for its measurement? I note in the introduction the authors referred to their own definition of social isolation.</p> <p>The COVID-19 pandemic highlighted the importance of technology in the continued delivery of health care. The authors also mention how COVID-19 has impacted this population however have not discussed the role of technology in reducing potentially isolation and loneliness. Would the authors like to make further comment on this please.</p>
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### VERSION 1 – AUTHOR RESPONSE

Reviewer # 1 Comments to the Author: Thank you for producing this scoping review on falls and subsequent social isolation. This is a very important area of research.

Abstract:

A clear overview of the study

Introduction:

Page 6, lines 70-71: I feel that this first sentence needs re-structuring e.g. Addressing social isolation is a priority in Canada...

Author Response: We thank Reviewer #1 for taking the time to review our manuscript and provide helpful feedback. We have restructured the first sentence of the Introduction as suggested on line 34-36: "Addressing social isolation in older adults is a growing priority in Canada, as over 30% older adults are at risk of social isolation [1]. Social isolation among older adults is associated with adverse health outcomes including cognitive decline, depression, anxiety, and dementia [2]."

Methods:

Search Strategy - Page 7, line 93: Can you clarify what an experienced information specialist is please?

Author Response: An experienced information specialist is an individual with formal training in Library and Information Science, who has several years of experience in developing and peer

reviewing search strategies for systematic and scoping reviews. We have revised to librarian in the main text to make this clearer on line 61.

Eligibility Criteria - Page 7, line 101: Change the structure of this sentence e.g. The population of interest were older adults...

Author Response: Changed, line 69.

Page 8, lines 109 - 111 also needs restructuring for clarity

Author Response: Changed, lines 76-78.

Page 8, line 113 - it might be good to give a couple of examples of the risk or protective factors that you are thinking about.

Author Response: Added, line 78-82: "Studies including participants reporting a history of falling (i.e., regardless of the proportion of the sample who fell), the role of fear of falling in this relationship, as well as any risk (e.g., medication use, frailty) or protective (e.g. exercise, gait or balance training) factors were considered eligible for inclusion."

Results:

Table 1: Did the fact that 11 studies did not report the mean age of the participants make you worry about the quality of these papers? And 11 studies did not report whether the participants had a history of falling - can you just clarify why these were included - what variables did they include that warranted their inclusion in the review - was this fear of falling?

Author Response: While the studies not reporting the mean age of their participants does demonstrate poor quality of reporting, we do not feel we can comment on the overall quality of these studies based on this alone. Many of these studies simply specified an age range or an age cut-off for eligibility (aged  $\geq 65$  years, for example).

The 11 studies you noted were considered eligible for inclusion in our review as they either reported on fear of falling related variables or only reported a mean number of falls for the whole population without specifying the proportion of the sample that had a history of falling.

Some of your studies are recorded as NR for all of the variables in the Tables in Appendix 3 i.e. Choi et al, Tinetti 1989 so why were they included?

Author Response: Choi, 2015 includes individuals aged  $\geq 65$  years but does not provide a detailed breakdown of their participant's age or even a range. Ferreira, 2018 included those aged 50 and older, however they provided age ranges of 60-69 and 70+, which met our inclusion criteria, but did not provide further detail. Tinetti, 1998 included those aged 71 years and older and similarly did not provide a detailed breakdown of participant age, or age range.

Discussion:

Page 17, lines 289 - 291 - do you have any references to support these statements?

Author Response: We have revised these lines to increase clarity and added in supporting references as suggested on lines 255 to 265: "A scoping review by Kasar et al. (2021) suggests that older adults face increased social isolation as a result of pandemic-related restrictions, which can result in increased loneliness and reduced quality of life [50]. They also highlighted how technology can be used to deliver virtual or tele-health support services, and to allow older adults stay

connected with their social networks [50]. A systematic review by Larson et al. (2021) assessed the impact of COVID-19 lockdowns on physical activity in older adults and reported that most studies demonstrated a decline in physical activity or an increase in sedentary behaviours in this population. The effectiveness of physical activity and exercise in preventing falls and fractures in older adults is well-established in the literature [51-53]. A decline in physical activity in older adults could lead to sarcopenia, and an increased risk of falls or fractures [53].”

Also, I appreciate that a scoping review does not allow for assessment of quality but did you have a feel for the quality of these papers and is the fact that you could not find any RCTs another gap in the literature.

Author Response: Yes, we agree that the lack of RCTs reflects a gap in the literature, and we have added this to our discussion as well on lines 251 to 253: “No randomized trials exploring interventions for social isolation after a fall were identified in our scoping review, highlighting another gap in the literature and an area for future research to explore.” However, without conducting formal quality assessments, we do not feel it is appropriate to comment on our feel of the quality of these papers.

Reviewer #2 Comments to the Author: Very interesting and important study that indicates the need for further research given our ageing population and the impact falls have on activity reduction and the health of older people.

#### Discussion

The authors indicate that a consistent measure of both social isolation and loneliness is needed. Do the authors want to put forward some suggestions about essential or key criteria for its measurement? I note in the introduction the authors referred to their own definition of social isolation.

Author Response: We thank Reviewer #2 for taking the time to review our manuscript and provide helpful feedback. We have revised the discussion to reference some existing work in the measurement of social isolation and loneliness.

On lines 242 to 245: “Cornwall et al. (2009) highlight previous efforts to consolidate different measures of social isolation and build off this work. They combined multiple measures of social isolation to develop two scales that measure distinct dimensions of social isolation – social disconnectedness and perceived isolation [49].”

On lines 255 to 265: “A scoping review by Kasar et al. (2021) suggests that older adults face increased social isolation as a result of pandemic-related restrictions, which can result in increased loneliness and reduced quality of life [50]. They also highlighted how technology can be used to deliver virtual or tele-health support services, and to allow older adults stay connected with their social networks [50]. A systematic review by Larson et al. (2021) assessed the impact of COVID-19 lockdowns on physical activity in older adults and reported that most studies demonstrated a decline in physical activity or an increase in sedentary behaviours in this population. The effectiveness of physical activity and exercise in preventing falls and fractures in older adults is well-established in the literature [51-53]. A decline in physical activity in older adults could lead to sarcopenia, and an increased risk of falls or fractures [53].”

The COVID-19 pandemic highlighted the importance of technology in the continued delivery of health care. The authors also mention how COVID-19 has impacted this population however have not discussed the role of technology in reducing potentially isolation and loneliness. Would the authors like to make further comment on this please.

Author Response: We have revised the discussion to mention the important role technology may play in reducing isolation and loneliness (see our response to previous question).

1

### VERSION 2 – REVIEW

<b>REVIEWER</b>	Finnegan, Susanne University of Warwick, Warwick Clinical Trials Unit
<b>REVIEW RETURNED</b>	07-Jul-2022

<b>GENERAL COMMENTS</b>	Thank you for answering all my comments and questions. I feel that these have been answered satisfactorily and your paper is now ready for publication.
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<b>REVIEWER</b>	Ambrens, Meghan Neuroscience Research Australia, Falls, Balance and Injury Research Centre
<b>REVIEW RETURNED</b>	03-Aug-2022

<b>GENERAL COMMENTS</b>	<p>A timely, interesting and well written manuscript. The authors have presented a comprehensive study for review. I note that the search strategy is out of date. The search strategy indicates it was completed to January 2021. This search should be updated to see if any new articles have been published.</p> <p>Table 1: Please provide a description for the NR abbreviation</p> <p>Limitations: I wonder if it is worth noting CALD backgrounds in your limitations. Falls research into CALD populations is also very limited and I would assume would be a determinant of social isolation and or loneliness. Happy to hear your thoughts on this.</p>
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### VERSION 2 – AUTHOR RESPONSE

#### Manuscript ID bmjopen-2022-062124.R1: Response to Reviewers

#### Reviewer #1 Comments to the Author:

Thank you for answering all my comments and questions. I feel that these have been answered satisfactorily and your paper is now ready for publication.

*Author Response:* Thank you for your time reviewing our paper a second time.

Reviewer #2 Comments to the Author:

A timely, interesting and well written manuscript. The authors have presented a comprehensive study for review. I note that the search strategy is out of date. The search strategy indicates it was completed to January 2021. This search should be updated to see if any new articles have been published.

*Author Response:* This project was commissioned by the Public Health Agency of Canada and we don't have the capacity or funding to update the literature search at this time. We have added this as a limitation on lines 276-277: "In addition, we were unable to update the literature search due to lack of capacity and funding."

Table 1:

Please provide a description for the NR abbreviation

*Author Response:* All abbreviations have not been spelled out in Table 1.

Limitations:

I wonder if it is worth noting CALD backgrounds in your limitations. Falls research into CALD populations is also very limited and I would assume would be a determinant of social isolation and or loneliness. Happy to hear your thoughts on this.

*Author Response:* We have added this as a limitation on lines 273-276: "Furthermore, none of the included studies specifically focused on culturally and linguistically diverse (CALD) backgrounds, who might be at greater risk of social isolation after experiencing a fall. Additional research is warranted in this area"