

STUDY PROTOCOL

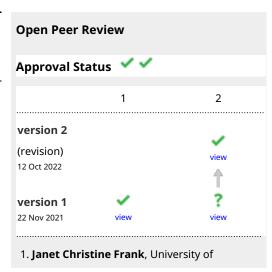
Postgraduate education in healthy and active ageing: learning needs, curriculum and expected outcomes: a scoping review protocol [version 2; peer review: 2 approved]

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Abstract

Background: As the European population ages, it becomes increasingly important to promote and facilitate healthy and active ageing and age-friendly societies. Professionals across a range of disciplines and sectors need knowledge and skills to support both. **Objective:** This scoping review aims to identify and map the literature on learning needs, learning outcomes and respective curricula in healthy and active ageing and age-friendly society concepts. **Inclusion criteria:** Studies focused on the teaching/learning process in healthy and active ageing and/or age-friendly society, of any design type, are eligible. Included studies may focus on undergraduate,



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postgraduate or continuing education and on any aspect of the educational process, such as needs analysis, content delivery, learner satisfaction/acceptability, or education outcome.

Methods: This review will follow the Joanna Briggs Institute (JBI) methodology for conducting scoping reviews. Four electronic databases, PubMed, EBSCO (Academic Search Complete), Scopus and Applied Social Sciences Index and Abstracts (ASSIA), will be searched, limited to studies published from 1st January 2000. Text language will be limited to English, German, Greek, Portuguese, Finnish, and Slovenian. Google Scholar and Research Gate will be searched for grey literature, limited to the first 50 results of each. Title and abstract screening, followed by full-text screening will be undertaken independently by at least two reviewers. The JBI extraction tool will be adapted for data extraction. Quality assessment will be conducted using a tool developed by Hawker and colleagues. A narrative synthesis will outline the data in relation to the aims and objectives outlined

Keywords

learning needs, needs analysis, healthy and active ageing, age-friendly society, education

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2. **Amy Jayne McKnight** , Queen's University, Belfast, UK

Any reports and responses or comments on the article can be found at the end of the article.



This article is included in the Ageing Populations collection.

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Author roles: Wiggin D: Conceptualization, Investigation, Methodology, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing; Penič B: Conceptualization, Investigation, Methodology, Writing – Review & Editing; Sulopuisto O: Conceptualization, Investigation, Methodology; Writing – Review & Editing; Mali J: Conceptualization, Funding Acquisition, Methodology, Writing – Review & Editing; Mali J: Conceptualization, Funding Acquisition, Methodology; Kuisma R: Conceptualization, Funding Acquisition, Methodology, Supervision, Writing – Review & Editing; Baptista F: Conceptualization, Funding Acquisition, Methodology, Writing – Review & Editing; Kukkonen T: Conceptualization, Methodology; Konstantakopolou O: Conceptualization, Methodology; Timonen L: Conceptualization, Methodology; Carnide F: Conceptualization, Methodology; Velanoki VS: Conceptualization, Methodology; Ströckl DE: Conceptualization, Methodology; Zymbal V: Conceptualization, Methodology; Cardadeiro G: Conceptualization, Methodology; Nevala E: Conceptualization, Methodology; Kaitelidou D: Conceptualization, Methodology; Sourtzi P: Conceptualization, Funding Acquisition, Methodology; Timmons S: Conceptualization, Funding Acquisition, Investigation, Methodology, Project Administration, Resources, Supervision, Writing – Review & Editing

Competing interests: No competing interests were disclosed.

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REVISED Amendments from Version 1

Thank you for your comments.

- 1. We did refer to the Tricco *et al.* (2018) guidelines, but did not include the reference; this has now been added. The best practice guidance was published after we submitted the protocol to HRB Open, and so could not have been included.
- 2. We opted for a tool which appraised mixed-method studies. We chose not to use a JBI appraisal tool as there were none appropriate for appraising mixed-methods studies. The AACODS tool seems an appropriate option for grey literature. The checklist areas heavily overlap with our chosen tool. However, no sources were included from the grey literature.
- 3. We planned to screen the first 50 results of Google Scholar and Research Gate (100 total), had we found sources within our scope we would have broadened our search; this was not the case. We did not include Web of Science given the significant overlap with Scopus- according to Gavel and Iselid¹, Scopus covers 84% of journal titles included in WOS, while WOS only includes 54% of the journal titles in Scopus; according to Singh et al.², 99.11% of the journals indexed in Web of Science are also indexed in Scopus thus we chose Scopus preferentially.
- 4. This protocol was registered with OSF on 3 June 2021, this has been added to the manuscript. The protocol was published in HRB Open on 22 November 2021, our search considered publications from 2000 to 1 July 2021. This manuscript has been updated to reflect this.
- 1.Gavel Y, Iselid L. Web of Science and Scopus: a journal title overlap study. Online Information Review. 2008 Jan 1;32(1):8–21. doi:10.1108/14684520810865958
- 2.Singh VK, Singh P, Karmakar M, Leta J, Mayr P. The journal coverage of Web of Science, Scopus and Dimensions: A comparative analysis. Scientometrics. 2021 Jun 1;126(6):5113–42. doi:10.1007/s11192-021-03948-5

Any further responses from the reviewers can be found at the end of the article

Introduction

Our society is experiencing an increase in older populations¹. Those aged 65 and over currently make up 20.3% of the European population, which is expected to increase to almost one third by 2100². Increasing longevity is very welcome, but the challenges of an ageing demographic are well documented, such as a potential increased demand on health and social care systems³, reduced investment capital, rising demands on pension schemes, and decreases in labour supply⁴. While longevity can be associated with increasing quality of life, this is dependent on satisfactory physical, cognitive and mental health, and good relationships and social participation⁵. These latter factors may be a challenge in communities low in social capital, where typical family structures mean lower intergenerational support today than in the past⁶.

Healthy and active ageing (HAA) and age-friendly society concepts provide a multidimensional framework to not just address the challenges of an ageing demographic, but to profit from the success of greater longevity and value the potential ongoing contribution of older people to society. HAA encompasses healthy lifestyle promotion, comprising of nutritional,

physical activity and social practices throughout the life course⁷. An age-friendly society fosters HAA by building and maintaining intrinsic capacity across the life course and enabling greater functional ability in a person of any level of capacity¹. Combined, HAA and an age-friendly society involve many sectors, including but not limited to: health, transport, housing, labour, social protection, information and communication. They also require the action of many: government officials, service providers, industry professionals, civil society, older people and their representative organisations, families and friends.

A competent workforce in all sectors is needed to address the challenges and capitalise on an ageing Europe in a positive, comprehensive and meaningful way⁸. Crucial to educating the future workforce is assessing learning needs, to inform the development of relevant and applicable competencies and learning outcomes for educational curricula⁹. This scoping review aims to gain an understanding of the learning needs in HAA and age-friendly society.

Scoping reviews are an effective method to establish the extent of the research available on a particular topic, and thus identify knowledge and evidence gaps¹⁰. Therefore a scoping review will be conducted with the following objectives:

- To identify literature concerning learning needs, learning outcomes, educational content, evaluation, or processes, with respect to healthy and active ageing and age-friendly society concepts.
- To assess the quality of the included studies and, if indicated, generate improved evidence recommendations.
- To ultimately inform the development of a new postgraduate degree in Active Ageing and Age Friendly Society (Project website: https://www.emma-master.eu/).

Inclusion criteria

In line with the Joanna Briggs Institute (JBI) guidelines, the initial criteria will be broad, with the intention of creating inclusion and exclusion criteria during the search process, if appropriate. To capture as much relevant data as possible, the inclusion criteria will be limited to any study which reports on student learning needs (e.g. undergraduate, postgraduate, continuing professional development) in relation to HAA and age-friendly society. In the event where a publication is deemed relevant from abstract screening, but access to the full-text is not available, authors will be contacted to request the full-text article. An overview of this criteria is found in Table 1.

Population

Postgraduate students are of primary interest in this review; it is expected that they have a foundational knowledge of their respective field (e.g. healthcare, social care, engineering, architecture, computer science, exercise physiology, etc.) and an intention to deepen their knowledge and skills in a more specialised area. Undergraduate students are also targeted, as knowledge areas relevant to HAA can be extrapolated from undergraduate related studies. Professionals in a variety of

Table 1. Inclusion and exclusion criteria.

Inclusion criteria

- Any study design or education provider type
- Populations or samples must be professionals undertaking continuing education, or undergraduate or postgraduate students
- Must report on learning needs, or learning/ assessment processes, or delivery, or relevance, or acceptability, or outcome
- Must be relevant to healthy and/or active ageing as a concept
- Published after 1st January 2000

Exclusion criteria

- Study does not report on learning needs in the field of active ageing (e.g. study reports on healthy and/or active ageing, but not learning needs; or study reports on learning needs but not related to healthy and/or active ageing)
- Full-text publications in a language other than: English, Slovenian, Portuguese, Finnish, German, or Greek
- Full-text publication is not available after contacting authors
- Study is focused on second-level or high school education
- Study is reporting on public audiences (i.e. raising public awareness about healthy and/or active ageing)
- Study is primarily focused on life-long learning/older people as learners

fields developing their skill and/or knowledge base in HAA through continuing education offerings are also of interest.

Concept

This scoping review is designed to explore learning needs; defined as self-identified and personal specific interests or knowledge needs¹¹. In addition, all elements of the educational process are included as areas of interest, such as delivery, relevance, acceptability, and education outcome. These elements can offer insight into teacher-inferred learning needs, when self-identified student learning needs are not explicitly investigated. Together, data on learning needs, education relevance/ acceptability, and educational outcomes can contribute to the formulation of appropriate learning outcomes.

Context

Learning needs will be mapped in the context of HAA. As defined earlier, HAA considers healthy lifestyle promotion, consumption and nutrition practices as well as physical and social activity throughout the life course. An age-friendly society fosters HAA by building and maintaining intrinsic capacity across the life course and enabling greater functional ability in a person of any level of capacity.

Methods

This scoping review was registered with the Open Science Framework¹². The conduct of this scoping review will follow the guidance published by the JBI¹⁰.

Search strategy

Electronic searches for relevant publications will be conducted in PubMed, EBSCO (Academic Search Complete), Scopus, and ASSIA, limited to publications after 1st January 2000. Grey literature sources will initially include the first 50 results, ranked for relevance, of both Google Scholar and Research Gate searches. Publications deemed relevant from title and abstract screening will be eligible for full-text screening if published in English, Slovenian, Portuguese, Finnish, German, and Greek (as per the native fluency of the research team). Additional search methods will include forward and backward citation searching of included publications. The full search

strategy is outlined in Table 2; terms within a box are combined using "OR" (e.g. "student OR professional").

Study selection

Records will be imported into Covidence, where duplicates not detected by the Covidence data management software will be manually removed by one reviewer. Remaining records will be screened by one reviewer, with independent screening being carried out by one of two other reviewers, first by title and abstract and subsequently by full-text. Any disagreements will be resolved through discussion, and, where necessary, a third reviewer.

Extracting and charting results

Covidence will be used to manage citations and perform data extraction. A flow diagram using PRISMA-ScR guidelines¹³ will be generated to report the selection process and all results. Data will be extracted for all included studies by one reviewer and checked by one of two other reviewers. Authors will be contacted for additional information, if required.

The following fields will be extracted from the included studies:

- (1) Author(s)
- (2) Year of publication
- (3) Country of origin
- (4) Area/field of study
- (5) Study population
- (5a) Students (UG, PG, CPD, other, N/A)
- (5b) Stakeholders (learners, older persons, educators, N/A)
- (6) Aims/purpose of study
- (7) Methodology (e.g. type of study)
- (8) Key findings
- (8a) Type of programme/course
- (8b) Content/curriculum

Table 2. Search strategy.

Details	Free text terms [title/abstract] and thesauri terms
1. Population: students	Student* ti,ab. Professional ti,ab.
2. Concept: learning needs	((learning or education* or training or knowledge) adj need*))ti,ab. ((learning or education* or training or profession* or knowledge) adj development))ti,ab. ((learning or education* or training or knowledge) adj relevance))ti,ab. ((learning or education* or training or knowledge) adj motivation))ti,ab. ((learning or education* or training or knowledge) adj competenc*))ti,ab. ((learning or education* or training or knowledge) adj requirement*))ti,ab. ((learning or education* or training or knowledge) adj delivery))ti,ab. ((learning or education* or training) adj process))ti,ab. ((barrier* N5 facilitator*) N5 learning ti,ab. Education ti,ab. Competenc* ti,ab. CPD ti,ab. Continu* professional development ti,ab. Curricul* ti,ab.
3. Context: healthy and active ageing	((health* or success* or active or positive or productive or vital or resilient or robust or optimal or competent or effective or good or independent or authentic or strategic) adj aging¬)ti,ab. ((assist* living or assist* technolog*) AND aging¬) NOT machine learning))ti,ab. (aging¬ adj (society or well or productively or "in place"))ti,ab. Age friendly ti,ab. Aging¬ N5 wellbeing ti,ab.
Combination	1 AND 2 AND 3
Limit/filters	English, Slovenian, Portuguese, Finnish, German, Greek full-text language Published between 2000 and 1 July 2021

Key: *, truncation; adj, adjacent to; ~, alternative spellings; Nx, near within x words; ti,ab., title and abstract searches.

- (8c) Learning needs identified, and process to identify
- (8d) Learning delivery and assessment
- (8e) Assessment of learning impact
- (8f) Barriers/facilitators to learning
- (8g) Evaluation of the programme (result and evaluator details)

During the screening process, it is possible that concept- and context-relevant publications with differing themes and publication types will arise, where these publications may not "fit" into the extraction criteria above. In this event, appropriate extraction criteria will be developed to present this information.

Quality assessment

Methodological quality will be independently assessed by two reviewers in articles where a defined research process can be identified. A tool developed by Hawker and colleagues will be used as it allows for the critical appraisal of studies of quantitative, qualitative, and mixed-method designs¹⁴. While quality assessment is not necessary for scoping reviews according to the JBI guidelines, it is recommended to improve the usefulness of the scoping review findings and to inform future research¹⁵.

Outcome presentation

As per the JBI methodology for scoping reviews¹⁰, the results of this scoping review will be presented in diagrammatic or tabular form, supported by a description that is in line with the objective of the review. The results will be accompanied by a narrative summary.

Study status

The current status of our study is that formal screening of search results against the eligibility criteria is ongoing.

Data availability

No data are associated with this article.

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 Reference Source
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- population ageing. Lancet. 2015; 385(9968): 658-661. PubMed Abstract | Publisher Full Text | Free Full Text
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 PubMed Abstract | Publisher Full Text | Free Full Text

Open Peer Review

Current Peer Review Status:





Version 2

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Amy Jayne McKnight 🗓



Queen's University, Belfast, UK

The authors have responded to my initial queries; however, their answers suggest that they have already completed their searches '...had we found sources within our scope we would have broadened our search; this was not the case'. Normally review protocols are published before data extraction starts to take account of external peer-review of the protocol. What is the current stage of this project?

I would encourage this project to reconsider using JBI's critical appraisal tools to assist in assessing the trustworthiness, relevance and results of published papers. There are a range of tools suited to individual types of publications that will be revealed from their search strategy. [BI's tools have been updated to reflect the content of different types of studies published more recently than the 2002 Hawker reference. Majid and colleague's 2018 review Appraising Qualitative Research for Evidence Syntheses may be of interest to this team¹.

References

1. Majid U, Vanstone M: Appraising Qualitative Research for Evidence Syntheses: A Compendium of Quality Appraisal Tools. Qual Health Res. 2018; 28 (13): 2115-2131 PubMed Abstract | Publisher Full Text

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: molecular epidemiology, postgraduate research, medical & biomedical education in the UK, healthy ageing, rare disease

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.



Reviewer Report 03 May 2022

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? Amy Jayne McKnight 🗓

Queen's University, Belfast, UK

This scoping review protocol describes a proposed review to explore educational literature associated with health and active ageing. The topic is timely and of international interest given a worldwide focus promoting healthy ageing & the authors intention to develop an informed postgraduate degree in active ageing. The methods are acceptable – several queries are below to clarify the author's plans and maximise transparency of the subsequent review.

There have been more recent guidance published for scoping review protocols than the 2015 report cited here; I would encourage the authors to consider newer publications, ensure their scoping review complies with updated guidance and cite these in the protocol text. E.g.

- Tricco, AC, Lillie, E, Zarin, W, O'Brien, KK, Colquhoun, H, Levac, D, Moher, D, Peters, MD, Horsley, T, Weeks, L, Hempel, S et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. Ann Intern Med. 2018,169(7):467-473¹.
- Best practice guidance and reporting items for the development of scoping review protocols. Peters MDJ, Godfrey C, McInerney P, Khalil H, Larsen P, Marnie C, Pollock D, Tricco AC, Munn Z.JBI Evid Synth. 2022 Apr 1;20(4):953-968. doi: 10.11124/JBIES-21-00242²

Similarly, the data appraisal method cited is from 2002 – how does that compare to more recently published methods such as those below?

- Institute JB. Critical appraisal tools 2020
- Tyndall J. AACODS Checklist AACODS checklist (authority, accuracy, coverage, objectivity, date, significance for grey literature.

Is there a reason for Web of Science not being explicitly included in this review and limiting the grey literature search results to the first 50? Why are online grey literature databases such as GreyLit and OpenGrey not included in the search strategy? It is unusual to place such stringent limits on a broad scoping review that aims to, 'establish the extent of research available' as stated in the introduction.

Significant resources may have been published in the last two years – why does this 2022 protocol only consider publications from 2000-2020?

It is surprising that this scoping review protocol has not been formally registered/submitted for registration to the Open Science Framework. What are the dissemination plans for this review beyond informing the development of a new course?

References

- 1. Tomičić A, Malešević A, Čartolovni A: Ethical, Legal and Social Issues of Digital Phenotyping as a Future Solution for Present-Day Challenges: A Scoping Review. *Sci Eng Ethics*. 2021; **28** (1): 1 PubMed Abstract | Publisher Full Text
- 2. Peters MDJ, Godfrey C, McInerney P, Khalil H, et al.: Best practice guidance and reporting items for the development of scoping review protocols. *JBI Evid Synth*. 2022; **20** (4): 953-968 PubMed Abstract | Publisher Full Text

Is the rationale for, and objectives of, the study clearly described?

Yes

Is the study design appropriate for the research question?

Partly

Are sufficient details of the methods provided to allow replication by others?

Yes

Are the datasets clearly presented in a useable and accessible format?

Not applicable

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: molecular epidemiology, postgraduate research, medical & biomedical education in the UK, healthy ageing, rare disease

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Reviewer Report 08 December 2021

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Janet Christine Frank

UCLA Center for Health Policy Research, Fielding School of Public Health, University of California Los Angeles, Los Angeles, CA, USA

This submission focuses on the planned review protocol for a scoping review on learning needs, curriculum and expected outcomes for healthy and active aging and age friendly societies. This focus is important and will provide additional information for educators at the college and post-graduate levels. The purpose of a scoping review is well described. The planned methodology is sound and the planned data sources for extraction seem reasonable. The definitions for healthy and active aging, and age-friendly societies are appropriate.

It is well documented that content about healthy aging and age friendly societies is underutilized in all levels of education, and that much more needs to be included to address the current and future needs of the older adult population. Thus, it is important work to do and to report. As a Study Protocol article it is acceptable.

Is the rationale for, and objectives of, the study clearly described?

Yes

Is the study design appropriate for the research question?

Yes

Are sufficient details of the methods provided to allow replication by others?

Yes

Are the datasets clearly presented in a useable and accessible format?

No

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Competency-based geriatric and gerontology education; healthy aging curriculum development; educational program development and evaluation; diversity education; and behavioral health policy for older adults.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.