

Participation of older people in learning studies: A scoping review

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Abstract

The participation and meaningful engagement of older people are strongly supported because of their individual and communal benefits. Currently there is a lack of general understanding of how older people participate in research activities. The purpose of this review was to examine the ways older people participate in learning studies. A search of abstracts of empirical studies published in English was conducted in three databases between 2015 and 2019 using scoping review methodology. The results showed that most often older people did participate as study subjects in clinical studies. Other participant roles included informants, partners, and multiple roles. The review addressed a paucity in qualitative and participatory roles in older people's learning studies. All participant roles are still needed to provide various standpoints for learning studies. Further studies are suggested to provide various meaningful and participatory ways for older people to get involved in research activities.

Keywords: older people, learning, participation, scoping review

Introduction

Worldwide, the number of older people is growing faster than any other age group. Referring to older people, we use a definition and procedures by Fudge (2007, p. 493):

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“Older people” were defined as those over 65 years of age, unless authors defined older people according to different age bands. Where authors did not specify an age, author-defined terms such as ‘older people’ were used’. The population ageing phenomenon is one of the most significant social transformations of the 21st century and has implications for many sectors of society. In response, the United Nations (2015) have highlighted the increased participation of older people in social decision-making processes and have called on governments to develop more innovative policies and public services targeted towards older people. Additionally, they are at the centre of a new action plan on ageing and health, the United Nations (UN) Decade of Healthy Ageing 2021–2030, which calls for ‘meaningful engagement and empowerment of older people.’

Researchers, policymakers, and service-providers have pointed to the significance of conducting the knowledge on ageing from the perspective of older people. Rather than consulting younger experts, knowledge production through collaboration helps societies to adapt research, geriatric services, and products to suit older people. (Chen et al., 2020.) In fact, cross-disciplinary research encouraging greater community participation and empowerment within decision-making has increased in recent decades (Beebeejaum et al., 2015). Recently, community members have been engaged to collect data and campaign on behalf of initiatives meeting the needs of communities (Tuckett et al., 2022). This is in line with the World Health Organization (WHO, 2020) that has identified a lack of qualitative data and data that relates to participatory processes of older people and further emphasised the importance of data in understanding healthy ageing.

WHO (2020, p. xi) defines healthy ageing as ‘the process of developing and maintaining the functional ability that enables wellbeing in older age’. The goal of the Decade is to optimize older people’s functional ability that includes one’s ability to learn, grow and make decisions. Other functional abilities include: a) ability to meet one’s basic needs; b) mobility; c) ability to build and maintain relationships; and d) ability to contribute. Functional ability combines the intrinsic capacity of the individual, the environment a person lives in and how people interact with their environment.

Even though their participation is strongly suggested, currently there is a lack of general understanding of older people’s participation in research activities. This study aims to fill in the gap by reviewing how older people have participated in studies concerning older adults’ learning. Our focus on learning studies reflects the emphasis on the WHO (Sibai & Hachem, 2021) and current studies (e.g., Chae & Kang, 2018) of the significance of lifelong learning in active ageing. Fast changes in current societies, especially digitalisation of public services and free time activities, highlight the importance of learning of all people. In this study we used the term ‘learning studies’ to refer to studies concerning older adults’ learning. The understanding of learning varied in the reviewed studies. The goal of this review study was to achieve an overview of the topic and, therefore, we used the general term of ‘learning’ to cover the variety of the studies and to be able to answer the research question.

Accordingly, this research aims to 1) exhibit an overall picture of roles that older people have had in learning studies to present the focus of current research, and 2) disclose the learning studies that use participatory methods with older people. Reviewed studies are classified based on the roles of older people as subjects, informants, or partners in research activities. This classification reflects various forms of social participation of older people in research that supports further research by providing concepts for describing the ways how older people socially participate in research. Simultaneously, research reveals the possible paradigmatic change in research methodologies by disclosing the learning studies that employed participatory methods. Results can be used to deepen understanding of different roles of older people as research participants as well

as developing innovative models for involvement of older people in research that is in line with the recommendations of WHO (2020).

Older people's participation in society

Levasseur et al. (2010, p. 2146) define social participation as ‘a person's involvement in activities that provide interaction with others in society or the community.’ Conceptually, social participation has been presented as *activities* (Aroogh & Shahboulaghi, 2020) in areas such as civil, sports, cultural, productive, social, and entertaining activities or *memberships* in clubs, organizations, or societies (Kouvonen et al., 2012). Researchers have hinted that older people may differ in their social participation from their younger counterparts, as they spend less time in structured activities as employees (Levasseur et al. 2010). Referring to older adults, Aroogh and Shahboulaghi (2020) emphasise community-based activities and interpersonal interaction, active participation, and individual satisfaction. In turn, community participation refers to ‘active involvement in social, complex and nondomestic activities that occur outside of home’ (Chang et al., 2013, p. 772).

Social participation has many mental and physical benefits for older people. Consequently, it may prevent dementia (Kouvonen et al., 2012) and ease loneliness (Niedzwiedz et al., 2016). Social participation has been regarded as a key component of successful ageing (Levasseur et al. 2010). Ageing brings changes in older people's social circles, which heightens the risk for negative outcomes associated with social isolation and loneliness (Dawson-Townsend, 2019). Those social connections may be smaller in number due to deaths of family members and friends, geographical distance, or interactions may be diminished due to changes in health (Black et al., 2012). In general, staying home may bring less opportunities for social interactions.

In social gerontology, the study of the social world of older people has been on the move from the medical setting to the community setting (Weil et al., 2017). In research, community can mean either an individual's local neighbourhood or broader world as ‘a community’ (Merriam & Kee, 2014). Merriam and Kee (2014) suggest that promoting lifelong learning in a community of older people also enhances community wellbeing. For example, older people can actively contribute to community wellbeing through volunteering, caregiving, civic engagement, and intergenerational activities (Merriam & Kee, 2014) such as participation in research activities (Buffel, 2018).

Involvement in research activities provides one way for social participation (Llorente, Revuelta, & Carrió, 2021) and learning for older people. Research involvement may enhance existing competences and learning of new skills (Buffel, 2018). Simultaneously, the chance to describe one's own understanding may increase metacognition and self-awareness, which may enhance learning (Krätzig & Arbuthnott, 2009). Lifelong learning via participating in research can, therefore, support meaningful engagement and empowerment of older people that follows the UN Decade of Healthy Ageing 2021-2030 aspirations.

However, the participation of older people – whether socially, in further education or in civic engagement – can always be appropriated by the welfare state. Critical consideration should be employed to understand the economic and political motives that can be used in recommending older people to civic engagement (Martinson & Minkler, 2006). Also, some older people refuse civic engagement because they do not want and cannot do it (Martinson & Minkler, 2006). Participation of all, including older people, needs to be based on informed consent and their possibility to withdraw their participation whenever during the research process (Byrne, 2016).

Participation roles of older people in learning research

Adult education, including older people's education (The Council of the European Union, 2011), has a wide spectrum of practice and research (e.g., Grummell & Finnegan, 2020) that is reflected in the ways how various learners participate in research activities. The fundamental diversification of research paradigms occurred when qualitative inquiry developed separately from an already established tradition of quantitative method (Hammersley, 2013), shifting from empirical-analytical paradigm to interpretive or critical paradigm in participation research in adult education (Bagnall, 1989; Jennings, 2015). This gradual shift or diversification in the research paradigms is also reflected in the roles where learners participate in learning studies.

Traditionally learning has been studied from a behavioural psychological viewpoint where older learners have been, for instance, tested under time-constraints on various learning and memory tasks, often against younger learners (Merriam, 2001). Conventionally, behaviouristic testing is conducted in highly controlled clinical settings with an aim of generalising results. This requires replicability of the experiments to some degree (Bracht & Glass, 2011), where research participants, or *subjects*, are expected to execute the tasks based on the explicit instructions. Commonly in these studies the roles of the researcher, the researched, and the research user are distinct units (Quinton & Reynolds, 2018).

The increase of interest in learners' perceptions and experiences brought attention to the viewpoint of participants, which is commonly studied with qualitative methods 'that are aimed at discovering how human beings understand, experience, interpret, and produce the social world' (Mason, 1996, in Sandelowski 2004, p. 893). However, learners' experiences are also studied with quantitative research methods (Araiba, 2020). When research participants describe their personal experiences or understandings, they act as *informants* who consult the researcher of the issue under investigation, mostly via questionnaires and interviews. For instance, adult learners are internally motivated and self-directed in theories of andragogy and self-directed learning (Merriam, 2001). However, participative involvement as an informant does not necessarily entail participative control of the educational event (Bagnall, 1989) or research.

Recently, there has been a spike of interest in co-production and co-research with older people. In participatory action research (PAR), those affected by the research inquiry are involved in research as part of social action (Israel et al., 2008). As research *partners*, older people become more than study subjects as they contribute their expertise bidirectionally in collaboration with the researcher (Blair & Minkler, 2009). Working together is defined 'in a way that values all contributions, and that builds and sustains mutually respectful and productive relationships' (NIHR, 2019, p. 6). It is possible to empower older people to act in all phases of research, for instance, training them in data collection or analysis (Buffel, 2018). With the experiential knowledge, researchers get to experience the partnership with the older people, as well as their help in connecting with a hard-to-reach population (Blair & Minkler, 2009). Public participation in scientific research is also often termed citizen science (Jordan et al., 2012). Many definitions of citizen science exist; however, emphasis is not only in collaboration and communication but also in open science and data management (Heigl et al., 2019). In this article we use the wider term 'partner' to refer to various ways to collaborate with older people.

Multiple methods of qualitative or mixed methods inquiry are increasingly common in research. These require the acceptance of dialectical pluralism, as there might be multiple simultaneous explanatory factors behind phenomena associated with learning (Johnsson, 2012). In study designs, there may be *multiple roles* of older people to gain an expanded understanding of how they experience their reality. Moreover, key informants

are conventionally involved in research to provide deeper understanding of the subject of interest, often having a formal role in the community of interest where they are exposed to information that is targeted by the researcher (Marshall, 1996; Treblay, 1982). Aside from participation roles, throughout history older people's learning has been studied from the viewpoint of stakeholders such as doctors or family members. Therefore, the *non-participant* role is based on practical reasons, e.g., to have easier access to stakeholders compared to older people themselves (Weil et al., 2017), or beliefs that older people are not capable of sharing their own views because of illnesses such as dementia (Kowe et al., 2020).

All in all, researchers have a significant role in influencing the research participants through choosing the research topics, research design, and methods of analysing and reporting data (Quinton & Reynolds, 2018). Furthermore, researcher's choices reflect wider processes, interactions, and epistemologies that researchers give value to (in the context of adult education, see e.g., Grummell & Finnegan, 2020). Simultaneously, wider societal and cultural expectations influence how researchers interpret actions of older people, their learning processes, motivation, and possibilities to participate in research through current policies and practices of the funding agencies and research institutions as well as participating older people.

Methods

We conducted a scoping review to examine the current research regarding the participation of older people in learning studies. Levac, Colquhoun and O'Brien (2010) define a scoping review as mapping to present the breadth and depth of a field by summarising a range of available evidence. This is done by identifying all relevant literature of a particular field. Scoping review is suited for management of larger data and more general research problems, when the actual size of the data is not easily predicted. In contrast, systematic reviews are often guided by a carefully defined research question (Arksey & O'Malley, 2005; Levac et al., 2010).

We followed the five-stage model of Arksey and O'Malley (2005) to implement a scoping review: 1) Identifying the research question, 2) Identifying relevant studies, 3) Study selection, 4) Charting the data, and 5) Collating, summarising, and reporting the results, to observe how the methodological choices of researchers reflect the choices and changes that have happened in the roles of older people in research design over recent years. Specifically, we were interested in how older people participated in roles we defined from the larger research traditions, i.e., how older people participated as *subjects*, *informants*, or *partners*, or a combination of them in multiple roles. Secondly, we were interested in the quantitative information of the field and how many articles were published between 2015 and 2019 in three databases.

Identifying relevant studies

Older people's learning has long been studied in gerontology and educational sciences (Kern, 2014), therefore, we covered the abstracts of scientific articles in biomedical and nursing science databases including PubMed (MEDLINE) and CINAHL as well as the educational database ERIC (ProQuest). The keywords for search included 'older adults', 'older people', and 'elderly people' and 'learning'. By using concepts of 'older adults', 'older people' and 'elderly people', we wanted to focus on studies where learners are over 65 years. In the publication from the NIHR (2019), instead of 'participation', nowadays research systemically refers to older people's 'involvement'. In research, the terms are

often used similarly, and our search strategy sought to encompass both and to observe these conceptual changes later in the research process.

We included empirical studies that were published in English in peer-reviewed scientific journals between 2015 and 2019. Additionally, we set inclusion and exclusion criteria: 1) Articles were written in English, 2) Articles were empirical studies and not reviews or non-refereed studies, such as articles in magazines, 3) Articles were available online or in databases, and 4) Articles referred to older peoples' (65+ years) learning, not learning of other people, such as younger cohorts, researchers, or professionals working with older people. Additionally, machine learning or service learning were excluded. However, learning was not always distinguishable in the abstracts, which required researcher interpretation. Decisions were based on the discussion and interpretation of both researchers in mutual agreement.

Charting the data

From the data, we extracted the following information: the authors, year of publication, name of the article, role of older people in the study (Table 1), participants (age, sample size), main results, and abstract. Additionally, information about health issues and other details, such as a younger comparison group or multiple methods in a study design were extracted.

Table 1. Roles of older people in learning studies (authors' own analysis)

Role of older person	Definition
Subject	Clinical studies, e.g., physiological, neurological assessments, tests
	Other way of being a study subject
Informant	Surveys, e.g., questionnaires, structured interviews
	Interviews, e.g., open, thematic, semi-structured, focus group
	Visual, artistic, creative methods
Partner	Older person as a co-researcher, e.g., identification and planning of research, gathering and analyzing research data
	Other type of active participation
Multiple roles	Multiple methods
	Mixed methods, e.g., questionnaire and an interview

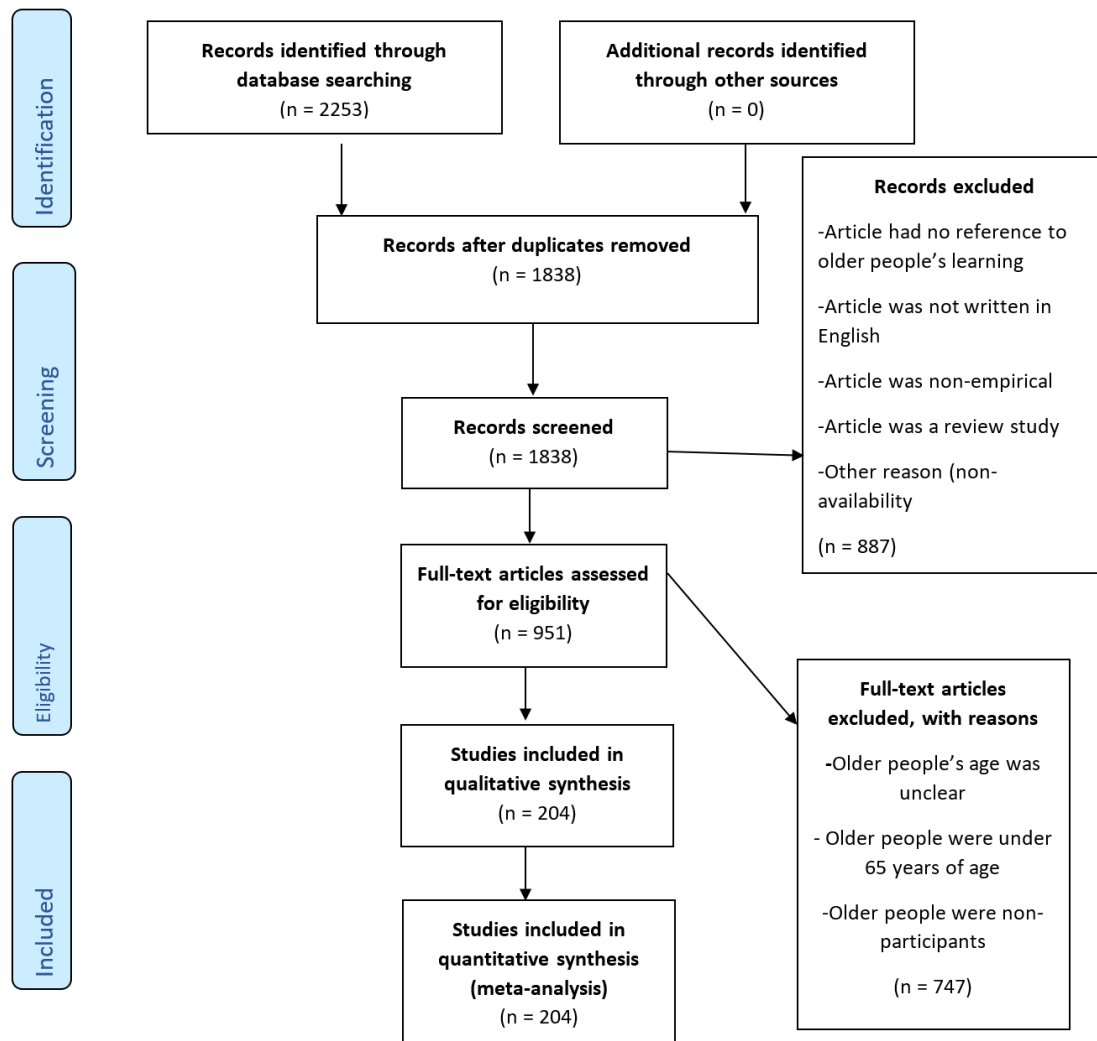
Due to the large amount of literature involved in our study, we decidedly focused on summarising and disseminating research findings, to describe the findings and range of research in a more detailed way (see also Arksey & O'Malley, 2005). To aid this, we applied methods of qualitative content analysis. Content analysis is a hybrid technique for analysis to objectively create inference from focal text to its social context, often including numerical descriptions of features, together with qualitative features of text (Bauer, 2000). First, the study abstracts were read. Next, the methodological portions of the articles were checked to support the interpretations from the abstracts. If necessary, the interpretations of the roles of older people were supported by skimming the full text article. In the results section, we classify the results by database and year, and the identified roles of older people, acquiring essential features to the field of interest. Citations in the Results section refer to reviewed articles as examples of review data.

Results

The scoping review resulted in 2253 articles, including ones added in databases subsequently between 2015 and 2019. Duplicates were removed (n=415) as were excluded articles (n=887) due to the subject of the article, language, format, and availability. Articles (N=951) were excluded due to lack of clarity in age (n=580), or where older people were under the age of 65 (n=167).

When examining the subject of articles, we excluded those focusing on other people's learning, such as student, service, and machine learning. Also, we excluded articles where older people's learning was studied by using key informants (n = 5). Eventually, 204 articles were included in the synthesis (See Supplementary material). The scoping review process is summarised in Figure 1. The review revealed that a quite even number of studies were published annually concerning the learning of older people. The number of articles varied from 25 in 2019 to 58 in 2015, being 40,8 on average.

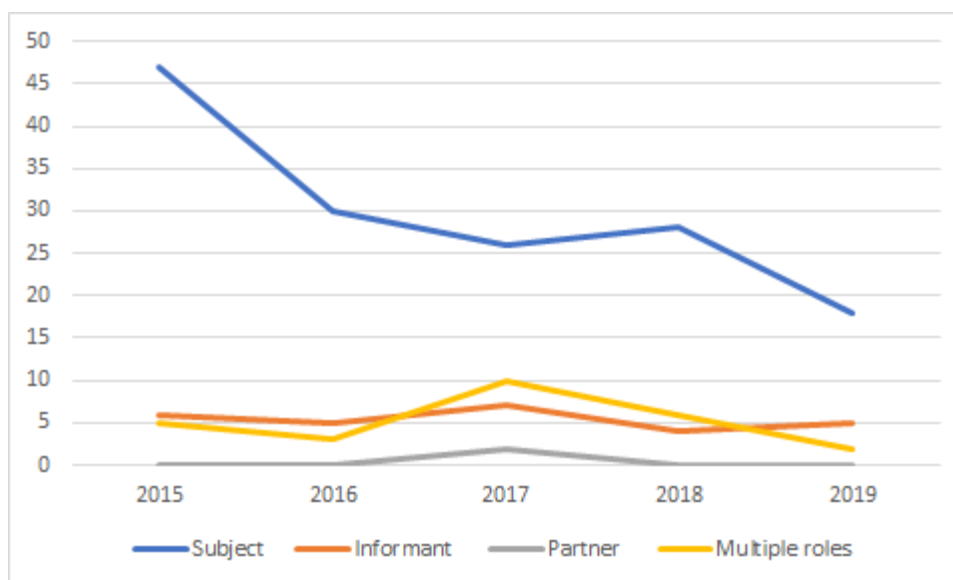
Figure 1. The Scoping review process studying participation of older people in learning studies (authors' own figure)



Older people participated in learning studies as *subjects* (73 %), as *informants* (13%), and in *multiple roles* (13%). Less frequently, older people participated as *partners* (1%).

Older people's participation in learning studies during 2015-2019 is illustrated in Figure 2.

Figure 2. Older people's participation in learning studies 2015–2019 (authors' own figure)



Older people participated in learning studies as study *subjects* in 149 (of 204) articles. Most often, they participated in clinical studies (n=149), which included tests as well as neurological or physiological assessments and experimental and quasi-experimental studies. For instance, older people participated as research subjects by taking part in brain measures (e.g., Santos Monteiro et al., 2018), in pre- and post-tests (e.g., Van den Steen et al., 2019), evaluation of different cognitive functions (e.g., Rahman-Filipiak et al., 2015), and measurements of vitamin concentrations (e.g., Annweiler et al., 2019).

Older people had the role of *informant* in 27 studies. They shared their opinions and experiences on learning via surveys (i.e., Bjursell et al., 2017; Hori et al., 2018; Åberg, 2016) and interviews or focus groups (Helterbran, 2017; Laes, 2015; Narushima et al., 2018). Studies varied from larger surveys (n=13) (Seifert et al., 2017) to qualitative interviews (n=9) with a smaller number of participants (Rawinski et al., 2017). Among surveys, interviews and focus groups, older people participated in learning studies through photographs (Breedon, 2016).

Older people had *multiple roles* (n=26) in many studies included in this review. Only one study (Boletsis & McCallum, 2017) mentioned utilising a mixed methodological approach with a questionnaire to assess older people's experiences (informant) while playing a serious game, and a correlational study to examine the scores (subject). Many studies, in turn, mentioned several separate roles in the research setting, and thus were included in the category *multiple roles*. For example, Petroka et al. (2019) utilised focus groups (informant) and observation (subject) to study healthy eating and disease self-management among older people, and Cavuoto et al. (2017) studied older people's sleeping with objective sleep quality measurements (subject) and surveys (informant).

Finally, older people had the role of *partner* in 2 articles. In Anderson et al. (2017) researchers conducted a community participatory research project where older people participated as researchers and research subjects. Data collection included individual semi-structured interviews. Strom and Strom (2017), in turn, included 20 trained resident volunteers in a grandparent education course at a large, assisted living facility.

Table 2 summarises the prevalence of each role by year. The results indicate that the role of study subject accounts for most of every year included. Additionally, studies where older people were in research partnership roles were in noticeably smaller numbers.

Table 2. Older people's participation in learning studies (N=204) (authors' own analysis)

	2015	2016	2017	2018	2019
Subject (n=149)	47 (81.0 %)	30 (78.9%)	26 (57.8%)	28 (73.7%)	18 (72.0%)
Informant (n=27)	6 (10.3%)	5 (13.2%)	7 (15.6%)	4 (10.5%)	5 (20.0%)
Partner (n=2)	-	-	2 (4.4%)	-	-
Multiple roles (n=26)	5 (8.6%)	3 (7.9%)	10 (22.2%)	6 (15.8%)	2 (8.0%)
Total (N=204)	58 (28.4%)	38 (18.6%)	45 (22.1%)	38 (18.6%)	25 (12.2%)

Discussion

This scoping review indicated studies with older people in different roles participating in research. Most of the current studies included older people as subjects where their learning was most often measured in a clinical setting. Simultaneously, only every fourth study included older people in the roles of informant, partner, or in multiple roles. Even though older people's roles varied considerably, they all met the definition of social participation referring to person's involvement and interaction with others (Levasseur et al., 2010). In comparison, only five articles were excluded, where older people were non-participants and older people's learning was researched from the viewpoint of key-informants such as professionals or next of kin. This review indicates that learning of older people is, therefore, mostly studied through their participation in research.

Community participation, as a part of social participation, takes place outside of home (Chang et al., 2013). The differences in research settings can be seen in this review study. A community aspect was reflected mostly in studies where older people were co-researchers but also partly in studies where they shared their perceptions or experiences via surveys, interviews, focus groups, or photographs. Compared to that, empirical-analytical methods and measurements of learning of older people have employed a behavioural psychological viewpoint in learning that requires highly controlled clinical settings for learning tests (Merriam, 2001; Bracht & Glass, 2011). Differences in research conditions reflect the change in the research of the older people's social world that has gradually shifted from the medical settings to the communities (Weil et al., 2017). Simultaneously, the emphasis of empirical-analytical methods can partly reflect the multidisciplinary research theme and the selection of the databases in this review to include both biomedical and educational databases.

This scoping review indicated studies with older people in active roles in all phases of research. In these two studies, older people were included as researchers in a participatory study (Anderson et al., 2017), or had an otherwise active role as resident volunteers in an education course for assisted living facility (Strom & Strom, 2017). This involvement in research allows for older people's influence on the learning situation, enhancing their personal and community capacity (Blair & Minkler, 2009), and co-learning between the researcher and the older person (Minkler, 2010). There may be a transfer of new skills into daily lives of older people that are used in everyday problem-solving and that support their overall wellbeing (Anderson et al., 2017).

Research involvement can be seen as part of civic engagement, which would have an aim to influence future policy (Scharf, 2001). Since social participation is seen as an important part of older people's rights and healthy ageing (Aroogh & Shahboulaghi, 2020; Kouvonen et al., 2012; Niedzwiedz et al., 2016), partner roles support the recommendations of the WHO (2020) for strengthening involvement of older people in research more than the roles of subject or informant. Simultaneously, key to adapting research, services and products to suit older people lies in consulting older people's experiential knowledge (Chen et al., 2020).

This review study revealed a lack of participatory methods in researching older people's learning. To develop research methods in line with international initiatives (UN 2015, WHO, 2020), learning studies of older people could utilise more qualitative and participatory methods, including creative, innovative, and arts-based approaches to support older people's active participation in research in multimodal ways. Researchers should gain more knowledge and experience on existing methods as well as develop new innovative methods to enable participation in research. Existing, conventional methods, such as questionnaires and interviews, can also be used in more participatory ways. Researchers can, for example, adjust research questions or discuss transfer and utilisation of the results in focus groups with older people. This also requires reflection of researchers' roles (see Wittmayer & Schöpke, 2014). Digital technology may also provide creative means to increase participation of older people since it enables the roles of the researcher and the researched to blur (Quinton & Reynolds, 2018). Halfpenny and Procter (2015) claim that digitalisation has supported the democratisation of research processes by increasing opportunities to participate in various types of research projects.

Different roles enabled different ways to participate for older people. The empirical-analytical study design, such as measurement as a basic practice, may restrict the access to older people's viewpoints where research participants are research subjects. A merely participative presence in research does not necessarily meet the aims of age-friendly initiatives of intergovernmental organisations (WHO, 2015), which encourage the development of innovative models for the involvement of older people in research. Wider involvement of older people in clinical research can be further supported by, for example, implementing critical and dialogical mixed methods research approach that expand participation of learners in research activities (e.g., Taylor & Raykov, 2020). Public perception needs to allow for more diverse view of older people and aging, and one way to accomplish this is through diverse research methodology and data (Woźniak, 2020; Buffel, 2018). Due to the diverse phenomena of ageing, consideration of multiple paradigms as well as practicing both qualitative and quantitative research is advised (Łuszczynska, 2020). We conclude that various methodologies are needed to study the complex issues of learning and ageing.

Finally, critical and ethical considerations are needed to notice that all older people do not want to or can participate in research and other activities in a community or society (see also Martinson & Minkler, 2006). Simultaneously, co-research may not fit

for every research but through critical examination of conditions, co-production of research could flourish (Beebejaum, 2015). Critical planning is also needed in considering who is involved in a participatory study. Often, people involved in research are more active, younger, and generally in better condition (Michelet et al., 2014; Murman, 2015) compared to non-participants. The active ageing paradigm has been criticised for not reflecting the diverse ageing experience of older people, as it emphasises physical health, independence, and productivity (Ranzijn, 2010). Future research should search for various ways to involve various voluntary older people in learning studies so that they are provided with opportunities for the individual and communal benefits from participation in community through research activities. Further studies are also needed on how meaningful engagement and participation are supported in research activities. The possibility to choose the role in research can increase motivation and possibilities of older people to participate in research and this should be carefully considered when planning and implementing the research projects.

Limitations of the study

There are some limitations to this study. Interpretations of roles of older people and their learning were based on the abstracts of articles. Reading the whole articles would provide a deeper understanding of the reviewed studies. However, two researchers questioned the validity of analysis about ambiguous abstracts and resulted in consultation of each other about this potential limitation. Additionally, the review produced only 25 articles from 2019, which is markedly less than in previous years. Without including articles from 2019, the average number of publications per year is 44,75. We assume the databases add articles subsequently, and thus we did not have access to all articles from 2019. Despite this, included articles are similar in content compared to articles from previous years.

The choice of the databases also has an effect on the review results. In this scoping review, we wanted to answer the research question from the multidisciplinary viewpoint to reflect the versatility of these learning studies. Older people's learning has long been a part of gerontology and geriatrics, while younger people's learning is associated with educational sciences and immediate sciences, such as psychology and sociology, however, this division is not categorical (Kern, 2014). Educational sciences have a lot to offer to research about learning of older people, especially to aspects concerning their attitudes and motivation, skills, and individual needs in learning, as well as enabling and supporting their learning through physical, social, and psychological learning environments. However, limiting the review only to educational sciences databases would have narrowed the scope and affected the results.

Conclusion

This review highlighted the strong emphasis of traditional learning research designs and participation roles of older people. Only few studies had older people in more active roles in research. Various roles have both strengths and weaknesses as well as different research focuses and, therefore, are all needed in providing a comprehensive view in older people's learning studies. However, the scarcity of partner roles in the reviewed studies raises concerns on limited possibilities of older people to actively get involved in a society through participation in research activities. Participation in research holds potential in providing meaningful and social activities to older people that support their wellbeing, learning and quality of life. This study is in line with the recommendations of the WHO

(2020) that calls for more qualitative and participatory approaches to support healthy ageing and meaningful engagement of older people in society. Research partnerships with older people are not, however, a panacea to all research activities. Partnerships require active participation and self-reflection from the researchers who may challenge the implicit power relations and self-evident practices in research. Researchers need to be aware and reflect on possible factors and influences concerning research ethics, power, well-being, and quality of life of older people as well as implementation of research activities. Currently, change in methodologies is still slowly unfolding (Buffel, 2018), as well as its influence on participative roles. This review urges researchers to take a more active role in initiating research partnerships with older people to support older people's involvement and the diversity of older people's experiences in learning research.

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