


PROTOCOL

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# Psychosocial work determinants of older adults' participation in the job market: protocol for a scoping review of quantitative longitudinal studies

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## Abstract

**Background** More than one-third of the population in developed countries is aged 50 and older (hereafter older adults), and this proportion has been increasing every year. Aging is associated with labor shortages which places a large socioeconomic stress on individuals, organizations, and governments. Evidence on the influences of psychosocial factors in older workers mostly focuses on adverse health outcomes and early retirement, with little or no evidence of their influences on other aspects or assessments of older adults' participation in the job market. In this work, we aim to describe existing quantitative longitudinal studies on the relationship between psychosocial work factors and older adult's participation in the job market, and to explore how the outcome is operationalized in existing studies on this topic.

**Methods** The scoping review frameworks developed by the Joanna Briggs Institute (JBI) and Levac and colleagues will guide this study. We will perform a comprehensive search for eligible publications in the following databases: MEDLINE, AgeLine, CINAHL, PsycInfo, SCOPUS, ProQuest One Business, SOCindex, Abstracts in Social Gerontology, and Social Works Abstract. This work will focus on the job-demand-control-support, the effort-reward imbalance, the organizational justice, three renowned theoretical models, while paying attention to other work risk factors measured in selected studies. Studies involving older adults of 50 years old or more and published in English or French will be considered, regardless of publication date. Abstracts, full-text screening, and data extraction will be performed independently by two trained reviewers using standard methodology. While sorting studies, we will complete a narrative synthesis of findings considering, when possible, sex and gender.

**Discussion** While rigorous reviews are increasingly being recommended for decision-making in organizational and political guidelines, providing an overview of psychosocial work factors associated with older adult's participation in the job market is a crucial start point. This scoping review will contribute to the understanding of how to define and assess participation in the job market and its work-related determinants in older adults. Our findings may also help to prioritize if and what future systematic reviews on this topic should focus on.

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**Keywords** Active aging, Participation, Psychosocial work factors, Retirement, Work

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## Background

In Canada, as in most developed countries, approximately 38% of the population is 50 years or older (hereafter older adults) [1, 2], and this proportion is expected to increase in the next two decades [3]. While this reflects the sociomedical efforts to extend life expectancy, demographic aging leads to a severe labor shortage in developed countries, mainly because of the imbalance between the ratio of retirees to active workers. In Canada, for example, the number of working-age individuals for each retiree dropped from 8 to 3 between 1996 and 2022 [4], partly explained by the continuous and steady retirement of the baby boomers [5]. Consequently, close to 40% of small- and medium-sized Canadian businesses recently reported having difficulty hiring new employees, and the situation has worsened during and since the coronavirus disease 2019 (COVID-19) pandemic. According to the Organisation for Economic Co-operation and Development (OECD) [6], the post-COVID-19 increase in labor shortages may partly reflect structural changes, in particular changes in preferences, as some workers may no longer accept poor or strenuous working conditions. In 2021 compared to 2010, the labor shortage proportion was 10% higher in Canada, affecting more than half a million positions in Canada [7]. In response to labor shortages, many developed countries are promoting older adults' participation in the job market [8] beyond the usual retirement age when possible [9]. While some older workers may not want to work past retirement age (or even up to retirement age) or cannot work past retirement age due to lack of flexibility of employers to be able to accommodate work after retirement age, other older workers may be willing to do so. However, aging is associated with a higher probability of having one or multiple chronic conditions [10] and being more vulnerable to adverse psychosocial factors, which can, in turn, be detrimental to older adults [11]. In existing studies, older adults' participation in the job market seems to be measured in diverse ways, including retirement timing (early or late) [12], job retention [13] and return to work [14]. Findings from existing studies vary, and some suggest that the work environment is associated with early retirement [12, 15, 16], though it may depend on the nature and definition of the exposure to diverse psychosocial factors. For example, it is unclear whether factors from validated theoretical models can determine older adults' participation in the job market. The current review will focus on three specific theoretical models commonly used to assess work-related psychosocial factors and their impacts on older adults' outcomes in the workplace: the decision-control-support model [17], the effort-reward imbalance [18] model, and the organizational justice model [19, 20]. Our findings will address

the lack of a consensual definition and valid assessment of older adults' participation to the job market, which is a crucial step prior to designing prevention strategies targeting adverse psychosocial work factors in older workers.

## Older adults' participation in the job market

Approximately one-quarter of older adults wish to increase their social participation after retirement [21], and governments are working for appropriate and better ways to support them [22]. Social participation refers to a person's involvement in activities that provide interaction with others [23] in community life and in important shared spaces, evolving according to available time and resources, and based on the societal context and what individuals want and are meaningful to them [24]. Older adults' participation in the job market goes beyond social activities by targeting productive activities and offering them a social status and income (hereafter socioeconomic activities) [22]. In related previous reviews [16, 25–27] on older adults' participation in the job market [28–30], the concept of “participation in the job market” by older workers is labeled and measured in diverse ways, including job retention, extension of working lives, return to work, unretirement, early or late retirement, and retirement timing. Given that previous knowledge synthesis mostly focused on early retirement, little is known for example about job retention, which is not necessarily the reverse of early retirement, although potentially related. In other words, removing factors causing early retirement may not systematically induce job retention, and vice-versa. This applies to other aspects or assessments of participation in the job market in older workers. Moreover, none of the previous reviews on this topic explicitly focused on related psychosocial work factors. Thus, we will be intentional in sorting and assembling evidence regarding which psychosocial work factors may foster which form of older adults' participation in the job market. This is especially crucial, knowing the beneficial effects of the social participation of older adults on their health, quality of life, and life expectancy. Acting on identified psychosocial factors associated with older adults' participation in the job market (including early retirement and job retention) represents a promising way to improve healthy and active aging, [23, 31] and eventually reduce labor shortages.

## Psychosocial work factors

In 1984, the Joint International Labour Organization/World Health Organization (ILO/WHO) Committee on Occupational Health defines psychosocial work factors as “interactions between and among work environment, job content, organizational conditions and

workers' capacities, needs, culture, personal extra job considerations that may, through perceptions and experience, influence health, work performance, and job satisfaction" [32]. The recent statement from the European Agency for Safety and Health at Work described a poor psychosocial work environment as including work characteristics such as excessive or conflicting work demands, unceasing high time pressure, lack of influence over the way the job is realized, a lack of support from managers and colleagues, poor interpersonal relationships, psychological or sexual harassment, poor communication, job insecurity, and violence from third parties. The strongest evidence on work-related psychosocial stressors based on the three most common theoretical models [17, 18, 33–35] suggests that some work stressors reflect poor psychosocial work environment characteristics and are known determinants of chronic conditions such as diabetes, cardiovascular diseases, depression, and related work incapacities [33–35]. Other work-related psychosocial risk factors such as long working hours [36], harassment, and bullying [37] are increasingly considered in this context [38] as they may interact with factors from the three common theoretical models. While psychosocial work factors can influence early retirement [16] and other form of older adult's participation in the job market [39], notably through health status [28], they can also lead to work exit through changes in work performance, productivity or job satisfaction [40].

### Objectives

The proposed scoping review aims to describe existing published findings from quantitative longitudinal studies on the relationship between psychosocial work factors and participation in the job market in people aged 50 years and older while accounting for the potential modifying effect of sex and gender. We will also explore how the outcome is operationalized in existing studies and whether the results differ by the definition and/or assessment of the outcome.

### Participants

This scoping review will focus on male and female adults aged 50 years and older, regardless of sex, gender, and other individual characteristics. While the World Health Organization used 60+ years as the cutoff, we chose 50 years of age as a cutoff after consultation with aging and organizational experts and to be able to capture the end of career. Our proposed age cutoff also seemed to be appropriate because (i) it represents the mid-century and close to mid-life expectancy in developed countries; (ii) it is the average between 40 and 60 years, a period often considered middle adulthood [41]; (iii) it is associated with important psychophysiological changes in both

male and female adults [41] which may inform one's decisions about retirement timing. From an epidemiological perspective and considering that the retirement age is approximately 62 years in most developed countries [9], including people aged between 50 and 60 years old will allow us to capture prospective studies on retirement transition. Retirees and former workers will be considered participants in selected studies if their relevant data at baseline are available. We will exclude studies without specific data subsets on older adults participating in the job market, such as volunteers, caregivers, or unpaid workers. We will also exclude studies that do not provide data or results specifically on seniors aged 50 years and older.

### Concept

This scoping review will focus on studies that examined the influence of psychosocial work factors on seniors' employment and early retirement. The independent variable will be any psychosocial work factor(s) of the work environment as defined by the three mentioned theoretical models, including but not limited to workload, job control, recognition, work-related stress, etc. [12]. We will not consider physical demands, economic challenges, and burnout (which is a consequence of work-related stress) as work-related independent variables [42]. Our primary outcome will be defined as the former or current employment status for someone aged 50 and older, respectively, early retirement and employment. The other outcomes derived from our primary outcome will be any measure of seniors' employment and retirement, including retirement timing, retirement age, work participation status, long-term sickness absence, disability pensions, and, to some extent, intention to quit or retire. To foster a potential causal interpretation of our findings, we will not consider studies on reverse causation that examine the influence of older adults' participation in the job market on psychosocial factors at work. Finally, studies using data collected at the group level, simulation scenarios, or validation studies will also not be considered.

### Context

This review is restricted to studies from developed countries using longitudinal quantitative designs. Although senior employment occurs in developing countries, we do not plan to include studies using data from such countries for three main reasons. First, work legislation, nature, and structure highly differ between developed and developing countries and may not be comparable [43]. Second, developed countries tend to have higher life expectancies than developing countries, which means that the follow-up period will be shorter and maybe insufficient in studies in the latter compared to the

former countries. In 2023, “the average life expectancy for those born in more developed countries was 75 years for men and 82 years for women. On the other hand, the respective numbers for men and women born in the least developed countries were 63 and 67 years” [44]. Third, demographic aging and labor shortages mostly occur simultaneously in developed countries. According to the International Labour Organization, between the years 2000 and 2030, the share of older workers in the labor force will have increased by 76% in developed economies compared to 2.5% in developing nations [45]. Finally, we will restrict this review to original studies published in peer-reviewed journals in either French or English; the two languages mastered by the research team, regardless of publication date.

### Types of sources

This scoping review will consider quantitative longitudinal study designs. We will not consider screening and simulation studies, reviews, text and opinion papers, books, chapters, editorials, letters, conference reports, thesis papers, and commentaries for inclusion. Following scoping review guidelines, we will complement our search by conducting a manual search (snowballing) of the references of selected full-text articles and existing reviews that meet the inclusion criteria. We will also contact three experts in the field to ask them if they know of any published work we may have missed. We do not intend to search sources of unpublished studies and gray literature.

### Methods

The proposed scoping review will be conducted in accordance with the JBI methodology for scoping reviews [46]. Data analyses and presentation will adhere to the Preferred Reporting Items in Systematic Reviews and Meta-analyses extension for protocols (PRISMA-P) [47] (see Additional file 1) and scoping reviews (PRISMA-ScR) [48].

### Eligibility criteria

We will consider empirical studies that meet the following criteria: using longitudinal designs; including a study population from developed countries; including older working adults of 50 years and older; measuring at least one psychosocial work factor from the three selected theoretical models as the independent variable; including at least one measure of older adults' participation in the job market, including the intention to quit, retirement timing, bridge employment, and return to work. Articles will be excluded if at least one of the criteria was clearly not met.

We will discard all articles that are systematic or narrative literature reviews, even if their topic is clearly related to our purpose, as mentioned previously. Additionally, we will exclude studies for which the full text is not available in English or French, or specific datasets or analyses restricted to eligible participants are not reported (see below).

### Search strategy

It has been shown that studies on psychosocial work factors are difficult to capture because the definition of those factors encompasses many different situations [38] and because no single keyword can effectively cover the entire concept [49]. To locate eligible studies, our final search strategy will use identified keywords and indexed terms while adapting it for each of the following databases: AgeLine, CINAHL, PsycInfo, SCOPUS, ProQuest One Business, SOCindex, Abstracts in Social Gerontology, MEDLINE, and Social Works Abstracts. The search strategy will combine clusters of keywords tailored to each database (i.e., MeSH terms, if applicable) using three core concepts: (1) people aged fifty years old or more (seniors), (2) participation in the labor market, and (3) psychosocial work factors especially those from the three selected models [17, 18, 33–35] (see Additional file 2). We leveraged on published strategies [49] and created our preliminary main strategy in MEDLINE with Full Text (Ebsco platform) on January 18, 2025. We intend to update the search just before performing the final data extraction and writing the article to identify and potentially include in our review relevant studies published after our initial search date.

### Study selection

A detailed selection guide with inclusion and exclusion criteria will be developed and tested. Following the search, two team members will collate all identified citations and upload them into Microsoft Excel while discarding duplicates. Selection will be carried out using Excel software that is easily accessible and relatively familiar to research team members. Microsoft Excel allows a complete step-by-step record of the selection by title, abstract, and full text. All screening team members will be trained to adequately use Excel files and the screening guide before starting. Given that reviewers have diverse research backgrounds and levels of experience, we will screen titles and abstracts in two different stages to ensure that reviewers have a similar understanding of the eligibility criteria. All reviewers will screen a preliminary convenience sample of 150 titles and will assess the degree of agreement among reviewers, discuss any disagreement as a group, and only proceed above a predetermined threshold of interrater agreement of 70%

[50]. Next, pairs of reviewers will independently screen a subset of titles based on the Population-Concept-Context (PCC) criteria. Once two reviewers have screened the titles independently, the results will be pooled, and agreement will be calculated for each pair. If the agreement is not optimal, title screening will be repeated by independent reviewers until we meet the target of 70% or higher. If the agreement is optimal, all titles retained by at least one reviewer will be considered for abstract screening. Reviewers will meet at the beginning, mid-term, and final stages of the abstract selection to discuss potential discrepancies and refine the search strategy if needed. In case of discrepancies, a third reviewer will read and discuss any disagreements in meetings with the two initial reviewers. Full-text copies of articles selected based on the abstracts will be retrieved, and two independent reviewers will screen them. Each pair of reviewers will compare their results and discuss any disagreement. If there are too many disagreements (more than 30%), a third reviewer will repeat the full-text screening. At each step, we will exclude articles if at least one of the eligibility criteria was clearly unmet. Systematic or narrative literature reviews whose topic is clearly related to our scope will be kept aside for future referencing in the final manuscript or for manual search of the reference. In addition, to identify references not yet captured in database searches, two people will apply eligibility criteria to the references of all selected articles that meet our criteria. Differences and disagreements between reviewers will be discussed with the senior author (RN) to reach a consensus. Another experienced researcher and author (ML) will resolve all remaining discrepancies.

#### Data extraction

A set of two or more independent reviewers will extract the data from selected papers using an extraction form developed by our team. Data extraction will concern specific details about the study design, independent and dependent variables and their measures, confounding and mediators/moderators variables (including other psychosocial work factors not captured by the three theoretical models), statistical analysis, estimates and statistical significance, limitations and strengths, and key findings relevant to the review question. Our extraction tool will be revised and modified as necessary during the extraction process. All reviewers will discuss disagreements that arise between them with the input of the senior author (RN). If appropriate, we may also contact the authors of selected papers to request missing or additional data. Relying on highly biased quantitative models may have disastrous consequences on evidence synthesis users and future research. Although not mandatory in scoping review guidelines, [46] and as discussed in a

previously published scoping review from our team [51], two team members (RN, ML) will independently perform in-depth analysis of original article methodological strengths and limitations to inform critical appraisal [52] in future systematic reviews.

#### Data management

We will consolidate reference titles, abstracts, and full texts into Zotero, a reference management software, before exporting them to Microsoft Excel. Duplicates will be removed using Zotero's automatic feature and manually upon selection.

#### Data analysis and presentation

From the data extracted from the included studies, we will follow three distinct steps: analysis (include and closely examine both characteristics of the included studies and the features of their statistical models), synthesis (compare and contrast these data across studies), and discussion (links to existing theoretical models, comparison with previous reviews and causal interpretation). The analysis and synthesis will focus on the psychosocial work factors associated with senior employment and early retirement. Where appropriate, we will provide in-depth analyses of potential explanations for data inconsistencies (i.e., study design, selection/participation, data measurements, etc.). If relevant and based on data availability, we may chart and narratively synthesize quantitative estimates by study design (e.g., prospective and nested case-control studies versus retrospective case-control studies) to better discuss potential implications of our results.

#### Anticipated results

Given that there is no extensive and rigorous review on this topic that was restricted to longitudinal prospective studies, we cannot guess in advance which definition or assessment of the outcome can be the most consistently used and which psychosocial work factors may be the strongest determinants of participation in the job market in older adults. Our plan is to assemble results based on the positive or negative associations between psychosocial work factors and the outcome while listing covariates and other adjustment variables. When possible, we will present relevant results from different perspectives: by selected theoretical models; by sex and/or gender; by definition or measure of older adults' participation in the job market; by geographical areas; and by calendar years. An appendix shows the complete review timeline (see Additional file 3).

## Discussion

This is a protocol for an ongoing scoping review that aims to describe knowledge from existing published findings on the psychosocial work factors associated with participation in the job market in people aged 50 years and older. We will further explore whether reported results vary by sex or gender.

Many experts agree on the value of extending older adults' working life beyond retirement age, especially for those who are able and willing to do so. Older adults' participation in the job market is increasingly important in developed countries for three main reasons. First, it can mitigate the negative effects of HealthCare and Social Security systems showing their bankruptcy [53]. Second, it can improve older adults' health and well-being [54]. Third, it can contribute to minimizing labor shortages caused by the current massive retirement of baby boomers [8].

For example, one may use our findings to get insight on work conditions often associated with prolonged working lives in older workers willing to do so.

In the absence of quantitative synthesis on this topic, findings from our proposed review may serve as a lay directory to inform employers, governments, policymakers, and other stakeholders in this context regarding the psychosocial work factors potentially associated with older adult's participation in specific geographic areas or work settings. Such information may also be helpful to work teams reflecting on their recruitment, working and retirement policies, and what organizational adjustments can be made to foster prolonged working lives in older workers willing to do so. Such adjustments may concern age management practices, workplace health promotion, occupational safety and health management, flexible working time practices, knowledge transfer, training and lifelong learning, career development, employment exit, and transition to retirement. Age management practices can also help minimize occupational accidents and illnesses and improve the retention of experienced and qualified professionals who are motivated to stay active and productive [13]. Promoting a workplace with low or no psychosocial risk factors also benefits the well-being and cognitive function of people of all ages [55].

In 2014, Amorin et al. concluded in their review that there is "a shortage of studies in elderly inserted in the labor market, despite the great importance of the subject and of numerous publications related to diseases" [25] while pointing to the need for more longitudinal studies to determine causality of these factors among the older adults. Given that seniors' participation is still an emerging research topic, and because we restricted our search to prospective studies, we expect the small set of studies we will include to somehow support the causal

interpretation of our findings. Our review will attempt to point what future original studies and systematic reviews may better contribute to address the issue of causality and other gaps in knowledge that we may find.

## Strengths

Our proposed scoping review has five main strengths. First, restricting this work to longitudinal designs will limit the reverse causality that may occur in cross-sectional designs and thus facilitate cause–effect interpretation of selected models. Assembling findings from longitudinal studies is the first step towards building evidence-based recommendations in this context. Second, to the best of our knowledge, this will be the first knowledge synthesis on older adult's participation in the job market that focuses on psychosocial work environment while accounting for other independent factors. Targeting psychosocial risk factors can contribute to enhance strategies aiming at reducing related premature exit from work while improving health and well-being at work in older adults. Third, including middle-aged workers in our search will inform future work on prevention strategies at work that employers and policymakers can do or undo to foster a better workplace environment during the end of career of workers who are willing and able to work past retirement age. Indeed, some organizational interventions may require a long-term period to be implemented, which is of great importance if we want to capture its benefits before older workers eventually stop their participation in the job market. Fourth, our data extraction and results will provide insight concerning the diverse forms and/or measurement of the outcome in existing studies and thus inform future research about what measure of older adults' participation in the job market is valid and/or mostly associated with psychosocial work factors. Finally, we will search papers in diverse health and social science bibliographic databases, including MEDLINE, the largest and most widely used biomedical bibliographic database because of its comprehensiveness for high-quality articles [56–59], which will help us to also capture most relevant studies.

## Potential limitations

While we will use a systematic search in selected databases, we cannot ensure that we will capture all eligible studies. The major challenge identified in studies on this topic relates to finding a balance between the complexity of the information to be retrieved and the time available for retrieval [49, 58]. Moreover, our search strategy did not include grey literature, and we may miss ongoing work on this topic.

## Conclusion

In people aged 50 and older, psychosocial work factors represent potential determinants of their participation in the job market, including after the retirement age. Evidence from longitudinal studies can inform strategies aimed at promoting older adults' participation in the job market in a healthy and adapted work environment. Our findings may also contribute to informing work-related policies and providing guidelines for diverse stakeholders involved in active aging, including employers, employees, suppliers, communities, governments, and trade associations.

## Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s13643-025-02809-z>.

Additional file 1: Populated PRISMA-P 2015 Checklist.

Additional file 2: Preliminary search strategy.

Additional file 3: Review timeline.

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## Authors' contributions

RN, senior author, originally conceptualized and led the study as principal investigator. RN, FB, JD, and SR further contributed to the design of the study. RN, SR, and JD drafted the first version of the article with early revision by FB and HN. RN brought expertise in the definition of the search strategy for psychosocial work factors and senior employment and ML brought expertise in the definition of social participation. RN, AD, JD, ML, and SR brought methodological expertise in study screening and selection. RN and ML will prepare the dissemination plan and provide expertise in potential sex and gender differences in our results. RN, SR, MN, and HN collaborated to draft the grid for extraction data and perform pilot screening. All the co-authors critically revised the article and approved the final version for submission for publication. RN had full access to all the data in the study and had final responsibility for the decision to submit for publication. RN is the guarantor of the review.

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## Data availability

The dataset supporting the conclusions of the proposed review will be included in its additional files.

## Declarations

### Ethics approval and consent to participate

Not applicable.

### Consent for publication

Not applicable.

### Competing interests

The authors declare that they have no competing interests.

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