



# An integrative review of the factors influencing older nurses' timing of retirement

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## Funding information

This research was funded by the Burdett Trust for Nursing Grant under the Nurse retention program 2016.

## Abstract

**Aims:** To summarize the international empirical literature to provide a comprehensive understanding of older nurses' decision-making surrounding the timing of their retirement.

**Background:** The global nursing shortage is increasing. Among some countries it has become an economic imperative to consider raising the state pension age and to extend working lives.

**Design:** An integrative literature review using an integrated design.

**Data sources:** MEDLINE, CINAHL and Business Source Premier databases were searched for studies between January 2007 – October 2019.

**Review Methods:** Quality appraisal of the studies was conducted. Findings were summarized, grouped into categories and themes extracted. Two models were developed for data representation.

**Results:** A total of 132 studies were identified by the search strategy. Of these, 27 articles were included for appraisal and synthesis. Sixteen papers were quantitative, seven qualitative, and four mixed methods. The research took place in 13 different geographical locations. Most studies were of a questionnaire design, followed by interviews and focus groups. The total participant sample was 35,460. Through a synthesis of the studies, four themes were identified: Health, Well-being, and Family factors; Employer factors; Professional factors; and Financial factors.

**Conclusion:** This review not only revealed the heterogeneity of studies on this subject and confirmed previous findings but also established a ranking of criteria that influences nurses' decision-making: age, followed by personal and organizational factors. Four extracted themes of push and pull factors map onto these factors. No 'one-size-fits-all' strategy exists to ensure the extension of older nurses' working lives. Organizations need to foster an environment where older nurses feel respected and heard and where personal and professional needs are addressed.

**Impact:** Organizations need to implement HR policies addressing nurses' personal well-being and retirement preparation. Older nurses are more likely to extend their

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working lives if they feel committed to their organization and when professional standards are maintained.

#### KEYWORDS

decision-making, extended working lives, integrative review, older nurses, retirement, workforce

## 1 | INTRODUCTION

Demand for health care is rising due to an ageing population bringing increasing complexity (Haddad & Toney-Butler, 2019). Liu, Goryakin, Maeda, Bruckner, and Scheffler (2017) predict that by 2030, global demand for health workers will rise to 80 million, while supply is expected to reach only 65 million over the same period, resulting in a worldwide shortage (Liu et al., 2017). Internationally, nurses and midwives comprise the largest component of the healthcare workforce (47.5%) and represent more than 50% of the current nursing shortfall (World Health Organization, 2016). Nursing shortages are a worldwide concern (Wargo-Sugleris, Robbins, Lane, & Phillips, 2018).

The UK's Nursing and Midwifery Council (NMC) report annually on numbers of nurses and midwives on the NMC register. In March 2019, their data reveal that while there is now a small upward trajectory of registrants remaining on the register, 35% are now aged over 50 and retirement accounts for 50% of those leaving the register. Indeed, retirement is the most common reason for ceasing registration (NMC, 2019a). Data from the NMC register also indicate a changing trend in age of registrants, with a growth of 2,220 in those aged 61–65, compared with growth of only 1659 in those aged under 30, meaning that the number of registrants at/approaching retirement age is growing quicker than the next generation of nurses (NMC, 2019b), trends that other countries are also facing (Ryan, Bergin, White, & Wells, 2018; Schofield & Earnest, 2006; Warburton, Moore, Clune, & Hodgkin, 2014; Wargo-Sugleris et al., 2018). In the UK (which has the largest single-payer healthcare system in the world), the age profile among the qualified nursing workforce in England has changed; in 2007, 44% of the nursing workforce across all sectors was aged 45 or over, compared with 49% in 2017 (Royal College of Nursing, 2017), with variations according to specialty. For instance, 64% of general practice nurses (GPNs) are over 50, with only 3% under 40 years of age (Health Education England, 2015).

Older nurses represent a highly skilled and experienced component of the workforce, whose loss, if avoided or lessened, would not only improve nurse retention but also provide an ongoing cadre of experienced nurses to support, coach and mentor the next generation(s) of nurses. Not all nurses who reach retirement age may wish to fully retire, but several structural factors, such as pension, a lack of flexibility, and opportunity to reduce hours and change role, may militate against retaining this valuable component of the workforce.

This study presents the findings of an integrated review, which aimed to determine the factors that affect nurses' decision-making about timing of retirement. These factors are commonly recognized in the policy and research-orientated literature as 'push' and 'pull' factors (Vickerstaff, 2010, p870). This study is the first review of its kind to investigate the retention of the older nursing workforce since 2008. It not only confirms previous findings but also establishes more clearly the ranking of factors that influences nurses' decision-making.

### 1.1 | Background

#### 1.1.1 | Retirement as a choice

During times of high workforce supply and unemployment, early retirement has been used as a method to moderate the workforce, i.e., making room for younger workers, resulting in early age retirement as a norm for many (Vickerstaff, 2010). Banks and Smith's (2006) analyses of UK retirement data revealed that two thirds of men and 55% of women stopped working prior to their retirement age (Banks & Smith, 2006). Retirement decisions were not synonymous with drawing a pension, or a gradual process of labour-market withdrawal, but instead involved a fairly abrupt transition, which for many was a permanent decision.

Conversely, as the number of older people in high-income countries increases it has become an economic imperative to raise the state pension age and to extend working lives; remaining at work for longer is therefore increasingly an expectation and a reality (Vickerstaff, 2010). Indeed, the US abolished the mandatory retirement age for all workers in 2011 and many countries followed suit (Lain & Phillipson, 2019). Japan, a country with an Old Age Dependency Ratio above 50% (Finish Centre for Pensions, 2019), has had the largest increase in older workers in the age bracket 65–69, which jumped up from 35.7–44% in 2016 (Heizo, 2019; OECD, 2017a). Korea is following Japan's trend of an increasingly older workforce (OECD, 2018b) despite a lower Old Age Dependency Ratio (OADR). (The OADR is the ratio between the number of persons aged 65 and over and the number of persons between 15 and 64. The value is expressed per persons of working age (15–64) (OECD, 2017b)). In some European countries men aged up to 65 remain in the workforce (Denmark, Iceland, Ireland, Portugal, and Switzerland), whereas employees in Austria, Belgium, France, Hungary, Luxembourg, and the Slovak Republic tend to cease

working aged 60 (OECD, 2018a). As a general rule of thumb, women retire around 1–2 years earlier than men (OECD, 2018a). In some European countries (Finland, Cyprus, Denmark, Estonia, Greece, Italy, the Netherlands, Portugal, and Slovakia), the retirement age is being linked to life expectancy, a trend apparent more latterly in the UK (Finish Centre for Pensions, 2019).

Retirement can be understood as a social construct, with two competing models within people's expectations; one sees retirement as a phase of decline, the other as a phase of fulfilment and enjoyment of life after hard work (Hedges, Groom, & Sykes, 2009; Karp, 1989). Of relevance to this review, Vickerstaff (2010) observes that among public sector workers strong cultural assumption exists, whereby early retirement and its attendant opportunities for travel, new leisure interests/hobbies, and additional free time is an aspiration. Thus, the desire to extend working lives is not as evident in this population group as some of the survey data in studies of workers' intentions would suggest.

Frequently, many individuals do not have a choice over whether to retire. Moreover, much literature on retirement has focused on men, despite evident gender differences in retirement planning (Wels, 2016). Indeed, gender and age are key factors that influence the experience of paid employment (Philipson, 2007; Vickerstaff, 2010). As most nurses are women and increasingly older women, gender and age are important considerations, as are family circumstances and factors such as health and well-being. The employer's influence on individuals' perceptions of and intentions surrounding retirement also need to be considered. A survey undertaken by the NMC in 2017 revealed that working conditions, including staffing levels and workload, were cited by 44% of respondents as reasons for leaving the register early, while change in personal circumstances, for example, ill-health or childcare responsibilities were cited by 28% (NMC, 2017). Disillusionment with the quality of care provided to patients applied to 27% of those prematurely leaving the register (NMC, 2017).

### 1.1.2 | Defining the older nurse

In the literature what constitutes an 'older nurse' can be broad (Bell, 2013; Blakeley & Ribeiro, 2008a, 2008b). Some studies consider an older worker to be over the age of 50 (Vickerstaff, 2006, 2010; Wargo-Sugleris et al., 2018) while others consider 45 to be the age of an older worker (Adams, 1999; Shacklock & Brunetto, 2005). To ensure as many studies as possible are included, this review therefore considers the older nurse to be over the age of 45.

## 2 | THE REVIEW

### 2.1 | Aims

The aim of this integrative review is to summarize and synthesize the global empirical literature to provide a comprehensive

understanding of older nurses' decision-making surrounding the timing of retirement. The guiding research question is as follows: "What are the reported push and pull factors that influence global older nurses' decision-making about the timing of their retirement?"

### 2.2 | Design

An integrative review methodology was employed since integrative reviews allow for the inclusion of differing methodologies and thus have the potential to build our understanding of nursing issues, informing research, practice, and policy (Whittemore & Knafl, 2005, p546). An integrative review, therefore, follows a 'systematic' process but is more inclusive than a systematic review as a range of studies (qualitative, quantitative, and mixed methods) are included. They follow the steps of problem identification, literature search, data evaluation, data analysis, and presentation, however, in praxis there has been significant variation in executing the aforementioned steps, especially concerning the step of data evaluation (Hopia, Latvala, & Liimatainen, 2016; Soares et al., 2014). This review follows an integrated analysis design that focuses on the qualitative aspects of the studies identified and 'qualitizes' the quantitative data for the purposes of data synthesis in a results-based matrix meaning that qualitative, quantitative, and mixed methods studies are identified in a single search, presented, and reported. The methodological differences between qualitative and quantitative studies are minimized as both are viewed as producing findings that can be readily synthesized into one another because they address the same research purpose and questions (Hong, Pluye, Bujold, & Wassef, 2017; Noyes et al., 2019). In addition, PRISMA and ENTREQ reporting guidelines have been followed (Moher, 2009; Tong, Flemming, McInnes, Oliver, & Craig, 2012).

### 2.3 | Search methods

A single systematic search (to cover all research types) of the literature was undertaken in October 2019 using the following databases:

- Ebsco: Medline (20 October 2019)
- Ebsco: Cinahl (20 October 2019)
- Ebsco: Business Source Premier (20 October 2019)

In addition, the resulting papers were hand searched for specific references, which may have been missed. These were then followed up by searching the specific journal or by using Google scholar and further cross-checked to identify if any key studies were missed by using the 'related journal article' function.

Search terms used were as follows: "older", "nurses", "retirement", with the 'and' Boolean operator. Articles between 2007 and 2019 were searched, with the start date reflecting the end of

a previous review conducted on the subject (Moseley, Jeffers, & Paterson, 2008). The selected database limiters were as follows: academic journals; English language articles; and published from 2007 as presented in Figure 2.

### 2.4 | Search outcomes

The search returned 132 articles, which were reduced to 95 after the removal of duplicates. At the screening stage, titles and abstracts were assessed against the following inclusion criteria:

- Empirical/primary peer-reviewed research articles
- Quantitative, qualitative, and mixed methods studies
- Included registered nurses from the age of 45 years and above onwards
- Explicitly referred to factors or reasons for the retirement decision/ intent to remain

Exclusion criteria were as follows:

- Insufficient details on the age of the nurses involved in the research provided
- Description of the working experiences of older nurses in general but not related to the retirement decision-making process

- Literature reviews of any kind
- Books

Following screening, a further 67 articles were removed, leaving 31 articles to be included in the analysis.

### 2.5 | Quality appraisal

Two researchers «redacted for reviewing purposes» independently assessed 31 full-text articles using the Mixed Methods Appraisal Tool (MMAT), Version 2018 (Hong et al., 2018). Articles were segregated according to whether they were of quantitative, qualitative, or mixed methods design and assessed using the criteria for their category within the tool (Figure 1 & supplementary Files S1, S2, S3 respectively). After quality appraising the articles the age criteria of older nurses in the Durosaiye, Hadjri, and Liyanage (2016) paper were not met and the Hewko, Reay, Estabrooks, and Cummings (2018) paper was the development of a conceptual model and not empirical data. In addition, the following paper was not about decision-making factors but about older nurses' experience of challenges in their work (Ang et al., 2017) and another was not retrievable as a full text (Walker, Clendon, & Willis, 2018). This resulted in a final sample of 27 articles (Figure 2) to be included in the final synthesis of 'push and pull' factors.

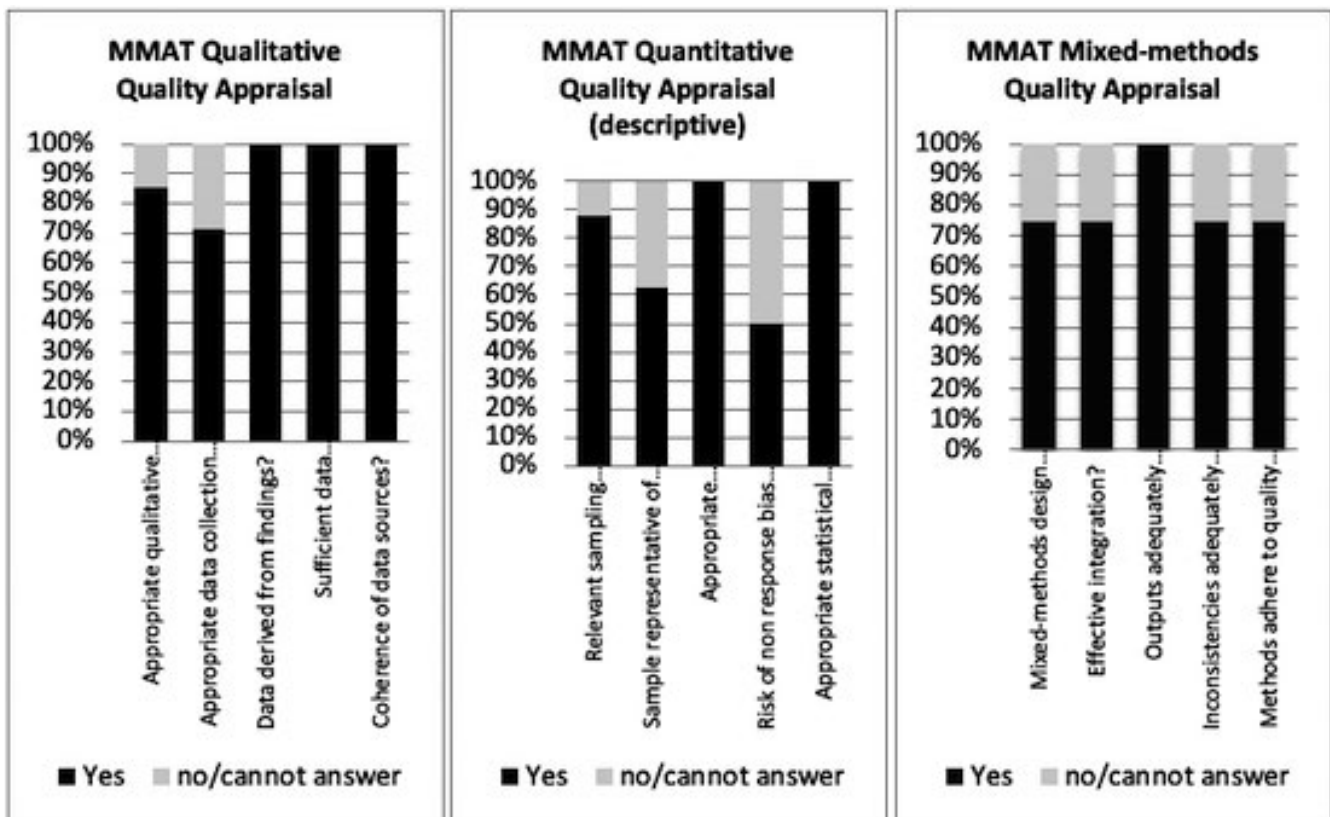


FIGURE 1 Quality appraisal graphs/tables

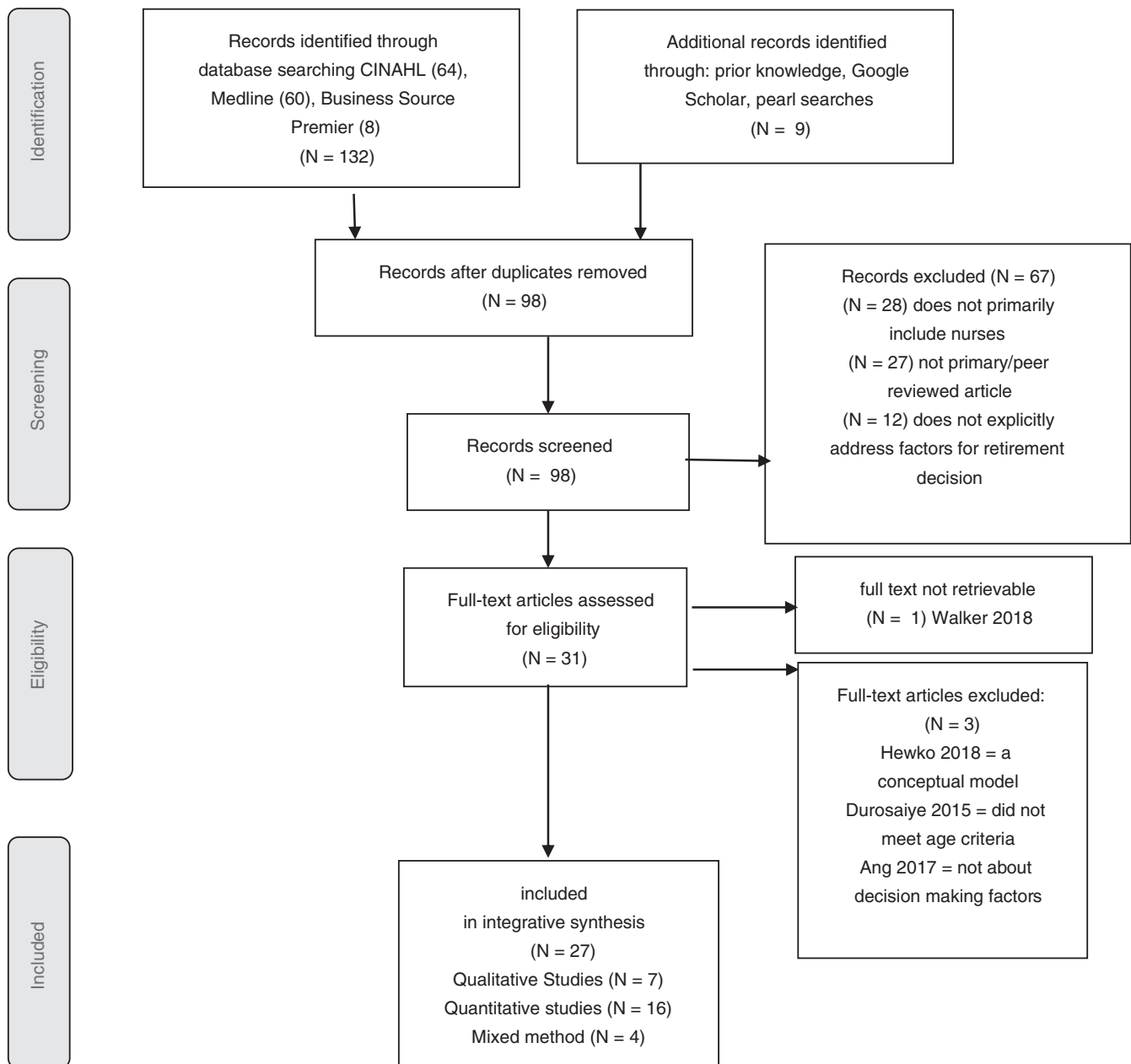


FIGURE 2 PRISMA 2009 Flow Diagram

## 2.6 | Data abstraction

Data from the included studies were extracted by three authors, «redacted for reviewing purposes», and categorized according to the source, country where the research took place, study aims and objectives, research methods, any instruments used to collect data, sample size, population, and age range, analysis types used, and main findings; separated into push and pull factors (Table 1). Table 1 provides an overview of all included research studies. To view data extraction by study design, see supplementary online Files S4, S5, and S6 (Table S4 Data extraction quant; Table S5 Data extraction qual; and Table S6 Data extraction mixed method). Categories were kept broad due to methodological differences across and within studies and therefore summary measures were not possible.

## 2.7 | Synthesis

Due to heterogeneity across studies and even within similar study methodologies, a meta-analysis or combining of quantitative data for further analysis was not possible. Studies were combined to summarize descriptive statistics of the study characteristics, but no further quantitative analysis was performed. Instead, the authors performed a combined inductive and deductive synthesis (Noyes et al., 2019) using an explanatory framework of personal and organizational factors. Organizational factors are the terms and conditions the employer sets in contrast to the personal factors which are related to individuals directly. Within each main category, the authors sorted the findings of the literature into a 'push' (barrier) or a 'pull' (enabling) factor and extracted four major themes. This approach

TABLE 1 Summary of included research articles

Citation	Aims and objectives	Research methods	Sample size/ population/age range	Main findings		Supplementary online file
				Push factors	Pull factors	
(1) Ang et al. (2016)	To determine associations among demographic variables, motivation to work, economic factors, work demands, and organizational attitudes towards older workers	<ul style="list-style-type: none"> <li>Quantitative study</li> <li>Cross-sectional survey</li> <li>Workplace-based sampling approach of 890 nurses</li> </ul>	534 nurses working in a healthcare cluster (tertiary care acute hospitals, specialized centres, community hospitals, and primary care clinics) who were aged 50 and above	Respondents who were Malay were less likely than Chinese respondents to want to work until age 65 and beyond and also those who still worked shift.	Financing one's retirement, societal trends in postponing retirement, and physical capability to continue working were factors significantly associated with older nurses' decisions to extend working life.	Please see Supplementary file S4 Table S4 Data_extraction_ quant
(2) Armstrong-Stassen and Stassen (2013)	To examine the role of target-specific satisfaction facets in the relationship between factors related to professional development and older nurses' intention to remain.	<ul style="list-style-type: none"> <li>Quantitative longitudinal panel study</li> <li>Random sample of 2,950 registered nurses</li> <li>Two-stage survey</li> </ul>	422 Hospital-employed registered nurses aged 45 to 64.	Availability of training and Job challenge was related to intention to remain through satisfaction with the job itself and satisfaction with the organization.	Development practices targeted to older nurses were linked to an intention to remain with the organization through satisfaction with professional development opportunities and satisfaction with the organization as a whole.	Please see Supplementary file S4 Table S4 Data_extraction_ quant
(3) Armstrong-Stassen and Schlosser (2010)	To explore two human resource practices: flexible work options and performance evaluation.	<ul style="list-style-type: none"> <li>Quantitative longitudinal panel study</li> <li>Random sample of 2,950 registered nurses</li> <li>Two-stage questionnaire</li> </ul>	528 Hospital-employed registered nurses aged 45 to 64.	None reported	Perceptions of the availability of flexible work options and performance evaluation practice were significantly related to perceived supervisor-related procedural justice. Supervisors are key representatives of the hospital organization – this relationship shapes the employee's attitude and intentions.	Please see Supplementary file S4 Table S4 Data_extraction_ quant
(4) Bennett et al. (2009)	To explore personal, professional, and organizational factors that would affect future participation (i.e., commitment) in the workforce of nurses.	<ul style="list-style-type: none"> <li>Qualitative semi-structured interviews and biographical methods.</li> <li>Voluntary recruitment</li> </ul>	37 senior F-grade nurses and healthcare assistants aged over 45 were interviewed at two different trusts <ul style="list-style-type: none"> <li>Acute setting trust</li> <li>Integrated mental health and social care trust</li> </ul>	There can be multiple expressions of commitment, which may differ at different levels of the organization. Personal commitment (i.e., to family and children) was very important.	Expressions of commitment were not expressed in isolation; meaning commitment is negotiated, contested, and sustained across and within multiple situations.	Please see Supplementary file S5 Table S5 Data_extraction_ qual

(Continues)



TABLE 1 (Continued)

Citation	Aims and objectives	Research methods	Sample size/ population/age range	Main findings		Supplementary online file
				Push factors	Pull factors	
(5) Blakeley and Ribeiro (2008a)	To explore factors that influence nurses to retire early and the incentives that might encourage them to stay longer in employment.	Mixed-methods postal validated questionnaire 200 randomly selected nurses	Nurses in clinical, academic, and management positions 124 nurses aged 45 and older.	Only a quarter of respondents had done a large amount of retirement planning, of which 'keeping healthy' is one major strategy. SN and MER responses were compared but no significant differences were found.	None reported	Please see Supplementary file S6 Table S6 Data_extraction_mixedmethods
(6) Blakeley and Ribeiro (2008b)	To explore various factors and income sources that registered nurses believe is important in retirement planning.	Mixed methods postal validated questionnaire • 200 randomly selected nurses	Nurses in clinical, academic and management positions. 124 nurses aged 45 and older.	71% planned to retire by age 60. Staff nurses and nurse managers/educators/researchers differed significantly in two reasons for leaving. SNs' decisions to retire early are more strongly influenced by the failure of the organization to offer them incentives to stay in the job longer.	Incentives that might encourage nurses to stay longer in the workforce were related to being given acknowledgment for their good work and for their seniority. The other incentive was being able to have holidays in the summer months.	Please see Supplementary file S6 Table S6 Data_extraction_mixedmethods
(7) Boumans et al. (2008)	To gain insight into older nurses' retirement intentions and to establish factors determining early retirement intentions.	Quantitative cross-sectional questionnaire 145 nurses	100 nurses aged 45 or older in one hospital	77% of nurses wanted to retire before 65 years. Individual, work-related, and organizational factors contributed to older nurses' intention to retire early due to perceived health, marital status, gender, opportunities for change, and development, workload, and negative stereotyping of older employees.	None reported	Please see Supplementary file S4 Table S4 Data_extraction_quant
(8) Clendon and Walker (2016)	To identify why some nurses cope well with continuing to work as they age and others struggle.	Qualitative study • A secondary analysis of existing data collected in two separate studies • free-text survey, focus groups, and interviews	NZNO members aged over 50 years, which collected 3,273 free-text survey responses in 2012. Second round 2014 focus groups and interviews with nurses over 50 years (N = 46).	The challenges were as follows: physical challenges, fatigue, guilt, ageism, and demands to complete CPD.	The enablers were as follows: personal fitness, self-care, flexible working, and strong belief in ability to contribute to profession.	Please see Supplementary file S5 Table S5 Data_extraction_qual

(Continues)

TABLE 1 (Continued)

Citation	Aims and objectives	Research methods	Sample size/ population/age range	Main findings		Supplementary online file
				Push factors	Pull factors	
(9) Dordoni et al. (2019)	To gain insights into the relationships between healthcare professionals' age, workaholism and job satisfaction, by estimating the sequential mediating roles of workload perceptions and emotional exhaustion.	<ul style="list-style-type: none"> <li>Quantitative study</li> <li>Self-completed survey</li> <li>Stratified sampling</li> </ul>	750 healthcare professionals from one hospital in Northern Italy. 30% of the study population were over 50 years	In all age groups, there was a negative relationship between workaholism and job satisfaction to be sequentially (and partially) mediated by workload perceptions and emotional exhaustion. However, the indirect effects were not as strong in the older group.	None reported	Please see Supplementary file S4 Table S4 Data_extraction_quant
(10) Duffield et al. (2015)	To identify factors for nurses to make the decision to leave the workforce.	<ul style="list-style-type: none"> <li>Quantitative study</li> <li>Prospective randomized questionnaire</li> <li>Postal survey to 1,100 randomly selected nurses and midwives</li> </ul>	Registered nurses and midwives on the board of New South Wales, Australia, age 45 and over. A total of 459 responses received of which 352 were used for statistical analysis.	Key factors to leave the workforce prior to retirement or pension age were financial considerations (40.1%), i.e., having reached financial security at this point; and retirement age of partner (13.3%).	None reported	Please see Supplementary file S4 Table S4 Data_extraction_quant
(11) Eley et al., 2010	To compare and contrast the reasons that nurses provide for entering and leaving nursing	<ul style="list-style-type: none"> <li>Quantitative study</li> <li>Cross-sectional cohort design</li> <li>Online questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>Nurses (n = 272)</li> <li>Regional public health service district</li> <li>50 years of age or older</li> </ul>	Disillusionment with nursing was cited as the main reason for leaving.	Economic pressures retain nurses in work.	Please see Supplementary file S4 Table S4 Data_extraction_quant
(12) Falk et al. (2017)	To investigate factors that relate to Nurse Practitioners' (NP) intent to retire.	<ul style="list-style-type: none"> <li>Quantitative study</li> <li>Secondary data analysis of a national survey of nurse practitioners</li> </ul>	3,171 working nursing practitioners, 55 years of age and older. National sample	Around 59% of NPs over 60 and 15% of nurses over 55 intend to retire in the next 5 years. Intent to retire was greater when: working part-time, not having a masters' degree, being dissatisfied, and when working in primary care.	None reported	Please see Supplementary file S4 Table S4 Data_extraction_quant
(13) Flackler, 2019	To explore older, experienced hospital clinical nurses' perceptions of new roles in hospital clinical practice as they age	<ul style="list-style-type: none"> <li>Qualitative study</li> <li>Focus groups</li> <li>Purposive sampling</li> </ul>	20 hospital nurses aged 50 and older participated in one of five focus groups. Recruited from one trauma centre and three community hospitals.	Concerns about performance during a full 12-hr shift. Work environment not adjusted to their physical strength (person above 50).	Noting barriers to continuing hospital practice as they age, participants described important roles in teaching patients and families, acting as patient advocates, and mentoring the next generation of nurses	Please see Supplementary file S5 Table S5 Data_extraction_quant

(Continues)



TABLE 1 (Continued)

Citation	Aims and objectives	Research methods	Sample size/ population/age range	Main findings		Supplementary online file
				Push factors	Pull factors	
(14) Friedrich et al. (2011)	To discover incentives for seasoned nurses to continue in acute care and best practice for retention.	Qualitative study Semi-structured interviews	Thirteen registered nurses (over 62 years old) and semi-structured interviews with 12 nurses (age 55–62) in active practice working as acute care nurses in a 500 bed medical centre.	None reported	Four themes emerged: • Attitudes and experiences – pre-existing factors that influence retirement decisions • Retention factors: retention strategies • Important needs: (exercising mind and body; finances; camaraderie) • Unique contributions: (sharing expertise, making a difference)	Please see Supplementary file S5 Table S5 Data_extraction_ quant
(15) Friis (2007)	To analyse the relationship among health, lifestyle, work-related, and sociodemographic factors, and older nurses' exit from the labour market to Post-Employment Wage (PEW), an early retirement scheme.	• Quantitative study • Questionnaire • Longitudinal data from the Danish Integrated Database for Labor Market Research	A total of 19,898 nurses above the age of 44 returned the questionnaire. 5,538 nurses aged 51–59 from the longitudinal data	Nurses who had poor self-rated health were more likely to join PEW. Nurses on relatively low gross incomes were more likely to enter PEW compared with nurses with relatively high gross incomes (HR 1.60, CI 1.43–1.79). Having a retired or unemployed spouse increased the probability of joining PEW.	None reported	Please see Supplementary file S4 Table S4 Data_extraction_ quant
(16) Graham et al. (2014)	To identify reasons why older registered nurses remain in the workforce	• Quantitative study • Prospective randomized questionnaire • Postal survey to 1,100 randomly selected nurses (same instrument as in Duffield et al., 2015)	Registered nurses and midwives on the board of New South Wales, Australia, age 45 and over. 459 responses received of which 352 were used for statistical analysis. The respondents were grouped into two age subgroups (45–55 years and 56 years and older)	None reported	The need for income was identified as the most important reason for staying in nursing (61.9%), interesting work (12.2%), and good working relationships (3.9%). Reasons to encourage staying beyond the retirement age: flexible working conditions (42.9%) and continuing social interaction (41.2%), no financial disadvantage (31.5%), no loss of retirement benefits (27.8%), and a change in the type of work done (24.4%).	Please see Supplementary file S4 Table S4 Data_extraction_ quant

(Continues)

TABLE 1 (Continued)

Citation	Aims and objectives	Research methods	Sample size/ population/age range	Main findings		Supplementary online file
				Push factors	Pull factors	
(17) Klug (2009)	To investigate the concerns of Boomer nurses to understand how workforce strategies can effectively retain older nurses	<ul style="list-style-type: none"> <li>Mixed-methods study</li> <li>Online survey</li> <li>Semi-structured interviews</li> <li>Convenience sample of 943 nurses</li> <li>Voluntary recruitment</li> </ul>	10 Nurses (for the interviews) and 374 nurses (for the survey) aged 44 years and older from one Children's hospital in Minnesota	Older nurses, as they near retirement, are primarily concerned about maintaining health insurance and financial benefits at this stage in their professional and personal lives.	Allowing older nurses to choose three options that are the most important to them provides Children's hospitals with an opportunity to improve its retention efforts in a reasonable manner, while acknowledging the concerns of the older nurse.	Please see Supplementary file S6 Table S6 Data_extraction_mixedmethods
(18) Liebermann et al. (2015)	To identify job-related resources which strengthen nurses' expectation of remaining in the same job until retirement age	<ul style="list-style-type: none"> <li>Quantitative study</li> <li>Longitudinal design</li> <li>Questionnaire sent to 953 nurses at a University hospital in Southern Germany.</li> </ul>	A total of 438 nurses responded (participation rate 46%). After the exclusion of participants with missing data, 387 nurses remained (41%). The response rate of the follow-up study on was n = 345 (89%). participants were aged 21–63 years	None reported	The expectation of remaining in the same job until retirement age is positively related to work-time control, role clarity, and colleague support. Supervisor support exerts an indirect effect via job resources.	Please see Supplementary file S4 Table S4 Data_extraction_quant
(19) Liu et al. (2018)	To describe the retirement planning practices of Mainland Chinese older nurses and to examine related personal and work factors.	<ul style="list-style-type: none"> <li>Quantitative study</li> <li>Cross-sectional survey questionnaire</li> <li>Convenience sample</li> <li>190 questionnaires distributed</li> </ul>	170 nursing staff members aged 50 years or older who were engaged in hospital clinical nursing and not yet retired, working at four large general hospitals in Changchun, Jilin Province, a provincial capital City.	The majority of the older nurses, regardless of age, degree level, job title, and designation, underwent insufficient retirement planning (n = 122, 80.3%).	Correlation analysis revealed that leadership and autonomy, cultural sensitivity, and control of practice in the job environment were related to the older nurses' retirement planning behaviour. A good job environment can strengthen nurse's willingness to remain in the job after retirement.	Please see Supplementary file S4 Table S4 Data_extraction_quant

(Continues)

TABLE 1 (Continued)

Citation	Aims and objectives	Research methods	Sample size/ population/age range	Main findings		Supplementary online file
				Push factors	Pull factors	
(20) Palumbo et al. (2009)	To explore rural RNs' perceptions of intent to stay in their current position, with their organization, and employment as a nurse and organizational practices as well as unit-level culture regarding older nurses in the workplace	<ul style="list-style-type: none"> <li>Quantitative study</li> <li>Postal questionnaire</li> <li>Convenience sample of 1,110 nurses</li> </ul>	583 RNs (53% response rate), in 12 Institutions (four hospitals, seven home health agencies, and one nursing home). 51% 40–54, 33% 55+	None reported	The majority (58%) of nurses either plans to or may work as a nurse after retirement. The top three HR practices reported by respondents as important to their decision to remain in their organizations were (a) recognition and respect, (b) having a voice, and (c) receiving ongoing feedback.	Please see Supplementary file S4 Table S4 Data_extraction_quant
(21) Sulander et al. (2016)	To explore the predictors of leaving before the typical retirement age and examine whether organizational justice moderated the association between job involvement and retirement intentions.	<ul style="list-style-type: none"> <li>Quantitative study</li> <li>Postal survey sent to 2,348 employees</li> </ul>	Sample population taken from 134 assisted living facilities providing 24h care. Of the respondents a sample of 446 nurses (age 50–69) was achieved.	About two thirds of the sample reported moderate or strong retirement intentions. Nurses who experience low levels of distributive justice, interactional justice, and procedural justice were more likely to have retirement intentions.	None reported	Please see Supplementary file S4 Table S4 Data_extraction_quant
(22) Topa et al. (2018)	To analyse the antecedents of the behaviours to prepare for retirement in nurses older than 55 years and to identify gender differences.	<ul style="list-style-type: none"> <li>Quantitative study</li> <li>A two-wave matched-pair longitudinal study</li> <li>Convenience sampling of 301 nurses</li> </ul>	Sample taken from five public hospitals, all nurses over 55 years, and who are still working for the next 6 months. 132 participants answered the survey at both waves.	Financial knowledge and retirement planning involvement were significantly related to retirement goals clarity. Greater financial knowledge is in support of self-insurance and less of public protection. Women are less strong in applying their financial knowledge to planning behaviours.	None reported	Please see Supplementary file S4 Table S4 Data_extraction_quant
(23) Valencia and Raingruber (2010)	To identify what motivates experienced nurses to continue working and to consider retirement	<ul style="list-style-type: none"> <li>Qualitative study</li> <li>Heideggerian phenomenological interviews</li> <li>Purposive sampling</li> </ul>	Sixteen Nurses split into two groups: 31–49 years old (younger nurses) and 50–65 years old (older nurses). The study was conducted in the Medical Intensive Care Unit (MICU) of a university medical centre.	Experiences that provoked thoughts of retirement in the older group were changes related to new technology. Older nurses did not want to work to the extent that their health was influenced.	Both groups expressed concern about changing benefits and financial security kept them working. The older nurse group valued working as a way to connect with patients and families.	Please see Supplementary file S5 Table S5 Data_extraction_quant

(Continues)

TABLE 1 (Continued)

Citation	Aims and objectives	Research methods	Sample size/ population/age range	Main findings		Supplementary online file
				Push factors	Pull factors	
(24) Voit and Carson (2012)	To explore the perceived opportunities for and barriers to implementing flexible strategies to engage older nurses in the workforce after they resigned from full-time work.	<ul style="list-style-type: none"> <li>Qualitative study</li> <li>Semi-structured interviews</li> <li>Targeted recruitment of 15 nurses</li> </ul>	Sample of 6 nurses and 9 nurse managers over 50 years old from community, hospital, and remote health in the Northern Territory.	None reported	The remoteness of the Northern Territory context implies specific barriers to the engagement of older nurses compared with other areas. All nurses and nurse managers interviewed were interested in continuing to work post-retirement.	Please see Supplementary file S5 Table S5 Data_extraction_qual
(25) Voit & Carson, 2014	To enhance the understanding of the retirement plans and post-retirement employment intentions of nurses and midwives living and working NT.	<ul style="list-style-type: none"> <li>Mixed-methods study</li> <li>Online survey</li> <li>Voluntary recruitment</li> </ul>	Convenience sampling of nurses (N = 207) who work for the NT Department of Health, response rate of 12%. 84% of which were over the age of 45.	None reported	A large number of respondents (73.2%) are interested in post-retirement work. Most preferred types of engagement include the gradual reduction in work hours in current work places, part year or seasonal employment, short-term placements, job sharing or job rotation, mentoring, research, and policy development or acting as Northern Territory representatives promoting jobs.	Please see Supplementary file S6 Table S6 Data_extraction_mixedmethods
(26) Warburton et al. (2014)	To identify potential strategies to improve the effort-rewards balance, thus the retention of older rural nurses and allied healthcare workers.	<ul style="list-style-type: none"> <li>Qualitative study</li> <li>Semi-structured phone interviews</li> <li>Purposeful stratified sample was drawn from 299 rural healthcare workers</li> </ul>	17 rural healthcare workers (nurses and allied health) aged 55 years or more, employed in the North Victorian Public sector.	Findings were that there is an imbalance between high effort and low rewards in all participants' discussions implying nursing work is high effort and low reward. Data were categorized into extrinsic and intrinsic factors. The latter included intention to retire, family influences, work enjoyment, financial influences, health, sense of self, and social input.	The main extrinsic factors included feeling valued by the organization, workload pressures, feeling valued by clients, collegial support, work flexibility, and a lack of options.	Please see Supplementary file S5 Table S5 Data_extraction_qual

(Continues)

TABLE 1 (Continued)

Citation	Aims and objectives	Research methods	Sample size/ population/age range	Main findings		Supplementary online file
				Push factors	Pull factors	
(27) Wargo-Sugleris et al. (2017)	To determine the relationships among job satisfaction, work environment, and successful ageing and how these factors relate to Registered Nurses' intent to retire.	<ul style="list-style-type: none"> <li>Quantitative study</li> <li>Correlational, descriptive, cross-sectional</li> <li>online survey</li> <li>Convenience sampling of 7,117 nurses</li> </ul>	2,789 Registered Nurses aged 40 years or older working in acute care in Florida.	Lowest job satisfaction was with advancement opportunities. Work environment explained 55% of the variance in job satisfaction.	Highest job satisfaction was with scheduling issues and co-workers. Successful ageing scores were also high with 81% reporting excellent or good health. Years to retirement were significantly associated with successful ageing, age, and income.	Please see Supplementary file S4 Table S4 Data_extraction_quant

was used due to a wide variation of research studies across a high number of countries.

### 3 | RESULTS

#### 3.1 | Quality appraisal results

Overall, the quality of the studies combined was good with the appropriate methods being used to answer the questions being raised (Figure 1). The qualitative studies had the highest quality, followed by the mixed methods, and then the quantitative designs. Individually, the quantitative studies mainly lacked regarding response rates (a 60% response rate was used as threshold; Fincham, 2008) and therefore had a higher degree of risk of bias. Some also lacked in the sample being representative of the target population as well as the use of relevant sampling strategies. The qualitative studies slightly lacked in the data collection methods used and one study was deemed not to use the most appropriate qualitative approach. Only one study (Voit & Carson, 2014) from the mixed methods studies did not meet most criteria.

#### 3.2 | Combined descriptive results

Sixteen papers were based on quantitative research approaches, seven employed qualitative methods, and four employed mixed methods. The research took place in 13 different geographical locations (Table 2) with most taking place in Australia, the USA, and Canada. All of the quantitative studies were of a questionnaire design. Most the qualitative studies employed interviews (7) with one using a questionnaire and two using focus groups. The mixed methods studies mainly used questionnaires with one study employing an interview. The combined quantitative population sample was 47,973 with a response of 31,172 for all first-wave responses (a total of 30,844 when calculations are based on the second response rate). The combined mixed methods sample population was 1,550 with a response/participant rate of 839. There were 3,449 participants included in the qualitative studies of which 176 were interviewed.

The quantitative studies employed a variety of hypotheses and models to examine the relationships among workers, age, planning of retirement & retirement intentions, employer, work environment, and perceptions of job satisfaction. Of the 16 quantitative studies 4 studies (Armstrong-Stassen & Stassen, 2013; Dordoni et al., 2019; Falk, Rudner, Chapa, & Greene, 2017; Wargo-Sugleris et al., 2018) directly measured job satisfaction with their questionnaires, although with different instruments.

The significant findings of those studies pointed to the same reasons of which low job satisfaction clearly contributed to earlier retirement intentions. For example, significant findings were established for nurse practitioners, where the group of 55- to 59-year-olds, who had a lower nursing degree ( $p = .02$ ) and lower job satisfaction

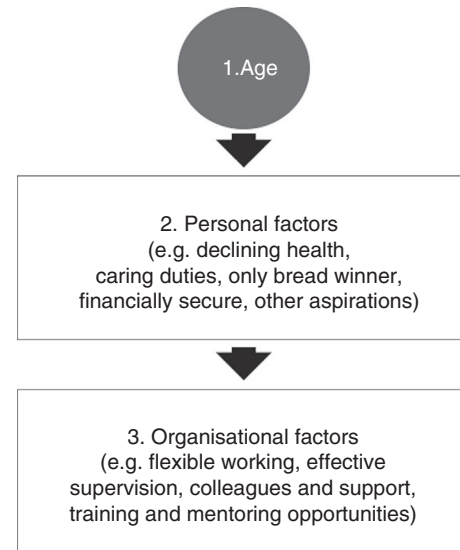
**TABLE 2** Geographical location of studies selected

Location of research conducted	Number of papers
Australia	6
Belgium	1
Canada	5
China	1
Denmark	1
Finland	1
Germany	1
Italy	1
New Zealand	1
Singapore	1
Spain	1
UK	1
USA	6

( $p = .01$ ), were working in primary care ( $p = .03$ ), and working part-time ( $p = .01$ ) were associated with intending to retire in 5 years or less (Falk et al., 2017). In contrast, higher job satisfaction significantly contributed to the intention to remain as found by several studies (Armstrong-Stassen & Stassen, 2013; Dordoni et al., 2019; Falk et al., 2017; Wargo-Sugleris et al., 2018).

Five quantitative studies (Ang et al., 2016; Boumans, de Jong, & Vanderlinden, 2008; Duffield et al., 2015; Friis, Ekholm, Hundrup, Obel, & Grønbaek, 2007; Graham et al., 2014) examined the individual circumstances of the worker in detail and established significant findings. There was a significant association between gender and intention to retire early ( $p < .01$ ) and between home situation and intention to retire early ( $p < .01$ ) (Boumans et al., 2008). Friis et al. reported that the most significant factors related to joining an early pension scheme were to be poor self-rated health (HR 1.28, 95% CI 1.16–1.41), relatively low gross income (HR 1.60, CI 1.43–1.79), and having a spouse who had retired (HR 1.64, 95% CI 1.49–1.80) or was unemployed (HR 1.62, 95% CI 1.38–1.91) (Friis et al., 2007). Similar results were found with Duffield et al., 2015 where the key factors to leave the workforce were reaching financial security (40.1%), followed by nurse health (17.4%), and the retirement age of partner (13.3%). Only one study established that ethnicity made a difference in retirement intentions by reporting Malay nurses were significantly less likely (OR 0.3, 95%CI 0.1–0.6) than Chinese nurses to want to work longer (Ang et al., 2016).

Three of the 16 studies included the topic of retirement planning (P. C. Liu et al., 2018; Palumbo, Mcintosh, Rambur, & Naud, 2009; Topa, Segura, & Pérez, 2018) and found that by supporting retirement planning nurses are more likely to remain in work until retirement. Further three quantitative studies (Armstrong-Stassen & Schlosser, 2010; Liebermann, Müller, Weigl, & Wegge, 2015; Sulander et al., 2016) reported from an organizational perspective and found that remaining in the same job until retirement age is

**FIGURE 3** Ranking of factors for decision-making around the timing of retirement

positively related to work-time control (Beta = 0.14,  $p = .003$ ), role clarity (Beta = 0.15,  $p = .003$ ), and colleague support (Beta = 0.18,  $p < .001$ ) (Liebermann et al., 2015), as well as age ( $p < .01$ ) and organizational tenure ( $p < .05$ ) (Armstrong Stassen & Schlosser, 2010). The mean age range when nurses intend to retire based on the literature reviewed was 60 years (Blakeley & Ribeiro, 2008b; Boumans et al., 2008; Duffield et al., 2015; Friis et al., 2007; Graham et al., 2014).

### 3.3 | Data synthesis results

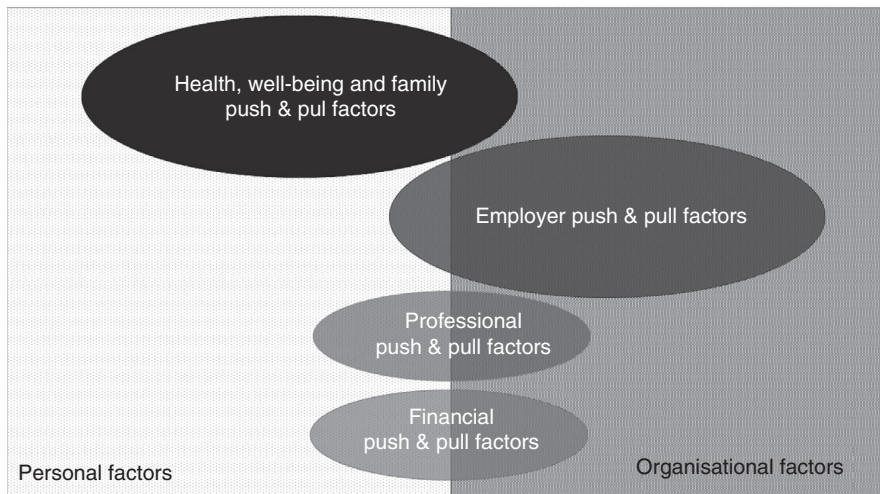
Using an explanatory framework the authors established the following ranking (see Figure 3): increasing age encourages nurses to think about the timing of their retirement, the decision to cease working as a nurse or to continue depends, firstly, on the personal situation and, secondly, on the terms and conditions provided by the employing organization.

From the literature analysed the authors derived four themes:

- Health, Well-being, and Family factors (mostly based on personal factors)
- Employer factors (mostly organizational factors, but some personal factors included)
- Professional factors (mixture of organizational and personal factors)
- Financial factors (mixture of organizational and personal factors)

Figure 4 visualizes the themes mapped onto the factors. The first and second themes are the largest groupings, i.e., with a high number of factors that influence the decision-making. Although professional and financial factors are smaller in numbers they are also crucially important to the decision-making.





**FIGURE 4** Push and pull factor themes placed onto key factors by size and interplay

### 3.4 | Health, well-being, and family factors

After sorting the findings by 'push' and 'pull' into the two main factor categories (personal and organizational) it became clear that personal health problems combined with age are the strongest push factor, i.e., this association is most likely to influence nurses' to make the decision to stop working (Boumans et al., 2008; Clendon & Walker, 2016; Duffield et al., 2015; Falk et al., 2017; Friis et al., 2007; Voit & Carson, 2014; Warburton et al., 2014; Wargo-Sugleris et al., 2018). This is followed by the wish to make time for family, leisure, and hobbies (Blakeley & Ribeiro, 2008b; Boumans et al., 2008; Duffield et al., 2015; Friis et al., 2007; Voit & Carson, 2014) and the wish (or need) to care for a family member (Bennett, Davey, & Harris, 2009; Boumans et al., 2008; P. C. Liu et al., 2018; Warburton et al., 2014). The wish to slow down (Boumans et al., 2008; Duffield et al., 2015; Falk et al., 2017; Voit & Carson, 2014; Wargo-Sugleris et al., 2018), and the feeling of 'exhaustion' (Blakeley & Ribeiro, 2008b; Clendon & Walker, 2016; Duffield et al., 2015) are also strong push factors for retirement. Living in rural areas (Warburton et al., 2014) or having peer groups with positive attitudes towards early retirement (Boumans et al., 2008) also supports early retirement decisions. At the same time, if a nurse is in good health, single or the main bread winner, she/ he is likely to continue working past retirement age (Boumans et al., 2008; Duffield et al., 2015; Falk et al., 2017; Graham et al., 2014). Being part of an organization and working also has a positive outcome on a person's well-being and health by providing a social network and the feeling of being empowered (Ang et al., 2016; Blakeley & Ribeiro, 2008a, 2008b; Boumans et al., 2008; Friedrich, Prasun, Henderson, & Taft, 2011; Liu et al., 2018; Topa et al., 2018; Warburton et al., 2014; Wargo-Sugleris et al., 2018). Therefore, the work place can directly support nurses in maintaining good health and well-being (Clendon & Walker, 2016; Falk et al., 2017; Liebermann et al., 2015; Sulander et al., 2016) and provide them with tools and knowledge for retirement preparations (Blakeley & Ribeiro, 2008a; Topa et al., 2018), which is likely to function as an enabler for nurses to extend their working lives.

### 3.5 | Employer factors

This theme represents the influence of employers on the push and pull factors in relation to nurses' retirement timing decision-making. Many of the factors identified in the literature such as job satisfaction, organizational satisfaction, flexible working, work pressure, not feeling valued, and having supportive colleagues are interconnected. For example, the factor *job satisfaction*, which addresses the feelings about the current role, pleasure in the work, or the commitment towards the role is a strong pull factor when rated highly (Ang et al., 2016; Armstrong-Stassen & Stassen, 2013; Bennett et al., 2009; Boumans et al., 2008; Clendon & Walker, 2016; Falk et al., 2017; Friedrich, Prasun, Henderson, & Taft, 2011; Graham et al., 2014; Liebermann et al., 2015; Liu et al., 2018; Palumbo et al., 2009; Voit & Carson, 2014; Warburton et al., 2014; Wargo-Sugleris et al., 2018). At the same time a positive feeling about work is likely to be influenced by a range of working conditions such as flexible working and a choice of working hours (Blakeley & Ribeiro, 2008b; Clendon & Walker, 2016; Friis et al., 2007; Graham et al., 2014; Liebermann et al., 2015; Voit & Carson, 2012, 2014; Warburton et al., 2014), organizational satisfaction (Armstrong-Stassen & Schlosser, 2010; Armstrong-Stassen & Stassen, 2013; Blakeley & Ribeiro, 2008b; Clendon & Walker, 2016; Friedrich et al., 2011; Klug, 2009; Liu et al., 2018; Palumbo et al., 2009; Topa et al., 2018; Warburton et al., 2014), and having supportive colleagues (Blakeley & Ribeiro, 2008b; Clendon & Walker, 2016; Eley, Eley, & Rogers-Clark, 2010; Friedrich et al., 2011; Liebermann et al., 2015; Liu et al., 2018; Warburton et al., 2014). The role of the supervisor is particularly important since the direct line manager plays a key role on how well organizational information and structure is translated into everyday working procedures (Armstrong-Stassen & Schlosser, 2010; Sulander et al., 2016).

Based on the literature analysed, the most referred to push factor is dissatisfaction with the organization and leadership (Armstrong-Stassen & Stassen, 2013; Bennett et al., 2009; Blakeley & Ribeiro, 2008b; Boumans et al., 2008; Falk et al., 2017; Klug, 2009; Liebermann et al., 2015; Liu et al., 2018; Sulander et al., 2016;

Wargo-Sugleris et al., 2018), which may be visible in communication break down between different organizational levels, no sense of belonging, by lack of development possibilities, as well as by lack of perceived organizational and interactional justice. In contrast, organizational satisfaction (Armstrong-Stassen & Schlosser, 2010; Armstrong-Stassen & Stassen, 2013; Blakeley & Ribeiro, 2008b; Clendon & Walker, 2016; Friedrich et al., 2011; Klug, 2009; Liu et al., 2018; Palumbo et al., 2009; Topa et al., 2018) is frequently referred to and therefore a strong pull factor since older nurses feel they have a voice that matters, receive support from line management, and are being offered preparations for retirement planning. A more tangible barrier to extending working life is dissatisfaction with the work environment, which relates to the physical work place and the constant introduction of changes as well as new technology (Boumans et al., 2008; Clendon & Walker, 2016; Liebermann et al., 2015; Liu et al., 2018; Valencia & Raingruber, 2010; Voit & Carson, 2014). If the organization is able to offer an environment and role where the stress levels are greatly reduced (Blakeley & Ribeiro, 2008b; Friedrich et al., 2011; Voit & Carson, 2012, 2014), then older nurses are more likely to extend their working life.

### 3.6 | Professional factors

Nursing is frequently portrayed as a vocation that attracts (mostly) women who are not driven by financial rewards alone, but by altruism, the ability to make a difference, and to help others; this portrayal evident in the studies selected (Eley et al., 2010; Storey, Cheater, Ford, & Leese, 2009). The findings from the review indicate that nurses work because they highly value their role as a nurse with associated high professional standards (Bennett et al., 2009; Boumans et al., 2008; Clendon & Walker, 2016; Friedrich et al., 2011; Warburton et al., 2014). To maintain high standards, nurses need and want to develop themselves personally and professionally. The literature analysed suggests that nurses over 45 years and older have less access to training and continued professional development (CPD) (Bennett et al., 2009; Blakeley & Ribeiro, 2008b; Boumans et al., 2008; Clendon & Walker, 2016; Liebermann et al., 2015; Warburton et al., 2014). This is notable, as providing access to CPD and training is a strong pull factor (Armstrong-Stassen & Stassen, 2013; Bennett et al., 2009; Blakeley & Ribeiro, 2008b; Clendon & Walker, 2016; Fackler, 2019; Palumbo et al., 2009; Voit & Carson, 2012), albeit Clendon and Walker (2016) observed that formalized CPD can add to older nurses' stress, some older nurses preferring training to be more vocational or informal.

### 3.7 | Financial factors

Financial factors affect both personal and organizational factors. Nurses will have to continue working when there is a need for income (Ang et al., 2016; Graham et al., 2014; Voit & Carson, 2012; Warburton et al., 2014; Wargo-Sugleris et al., 2018), necessity to

contribute to a pension fund (Graham et al., 2014), or to remain in work to have health care or social security (Falk et al., 2017; Valencia & Raingruber, 2010). This need is a strong pull factor and overrides personal desires such as following a hobby or other interests.

At the same time financial factors will work as a push factor when financial security has been reached and nurses feel the need to look after themselves or their family (see Health, Well-being, and Family factors) (Blakeley & Ribeiro, 2008b; Duffield et al., 2015; Friis et al., 2007; Voit & Carson, 2012; Wargo-Sugleris et al., 2018). Financial incentives from work (Blakeley & Ribeiro, 2008b; Friedrich et al., 2011; Palumbo et al., 2009; Topa et al., 2018; Valencia & Raingruber, 2010; Voit & Carson, 2012) will encourage some nurses to continue working, but based on this analysis financial incentives are not the dominant motivators for nurses to extend their working life when comparing it with the theme of professional factors.

## 4 | DISCUSSION

There was a modest amount of studies on this subject given its importance, the broadness of the search terms, and its inclusion/exclusion criteria. The review generated a breadth of papers, a reflection of the broad nature of the search terms and inclusion/exclusion criteria; there was also heterogeneity across the studies included which prohibited any meaningful quantitative analysis. The differing geographical study locations revealed a global issue in this area, however, no one country had enough data to draw any firm conclusions. However, the integrative review approach allowed for meaning to be made of what was available through the use of an appropriate qualitative framework to synthesize all results regardless of their differences, helping to give a bigger picture of the issues at hand. Furthermore, this integrative review employed evidence from a total of 35,460 respondents, but the estimated global workforce of nursing and midwifery is around 20.7 million (World Health Organization, 2016), which could be argued to be a response rate of 0.17% and this shows the urgent need for more large-scale research in the nursing workforce.

Despite the limited amount of evidence, this review offers a framework for nurses' retirement decision-making process by simplifying the number of factors (personal and organizational) and ranking these (Figure 3) with the four themes of push and pull factors involved (Figure 4). Other papers have used similar headings to group findings, e.g., personal, professional, and organizational factors (Bennett et al., 2009); personal, psycho-social, and organizational (Sulander et al., 2016); personal, financial, and organizational (Blakeley & Ribeiro, 2008b); individual, work-related, and organizational factors (Boumans et al., 2008); or individual, job-related, interpersonal, and organizational (Halter et al., 2017); however, they did not offer a direct ranking of factors.

The wider pool of literature around the extension of older workers' working life in various sectors (e.g., transport, hospitality, and local government) suggests better pay and other financial incentives are the strongest reasons (Vickerstaff, 2010). The greatest

push factors are declining health, impact of caring responsibilities on the ability to work, job satisfaction, and redundancy (Humphrey, Costigan, Pickering, Stratford, & Barnes, 2003, p55ff; Philipson & Smith, 2005, pp22–29; Smeaton & Vegeris, 2009, pp15–18). With the exception of redundancy, these factors are in line with the results of this integrative review, i.e., personal factors such as declining health override the ability or wish to continue working, the need for income forces nurses to continue working, and low job satisfaction leads to a timely exit for retirement. Furthermore, this review found that activities which allow nurses to maintain their professional standard have a stronger pull than financial incentives alone.

The HR department or nurse manager can greatly influence the employer, professional, and financial factors (i.e., the organizational factors), which in turn will influence personal factors or, in other words, if the work place looks after their workers, the workers will be healthy, motivated, and able to work for longer. Nurse managers working with hospital/employer HR departments will need to consider retention strategies based on their specific organizational and workforce requirements. The Good Governance Institute (2015) predicts Mental Health, Learning Difficulties, and Community Nursing to be particularly vulnerable to shortages in the UK (Good Governance Institute, 2015), thus specific strategies need to be considered for older nurses working in these specialities. Likewise there are specific challenges in retaining nurses (young and old) in rural areas (NHS UK, 2019; Voit & Carson, 2012; Warburton et al., 2014), whereas in urban areas nurses are more likely to continue working (Friis et al., 2007). The ethnicity of the nurse is also likely to play a role in their decision-making, especially when working globally, but this review only found one instance where ethnicity had a direct influence on the retirement decision-making, namely, Malay nurses were more likely to give up their professional role (over Chinese nurses) to look after their relatives (Liu et al., 2018).

Stordeur et al. (2003) discovered a U-shaped relationship between age and job satisfaction, where job satisfaction is high when nurses start in their roles and towards the end of their working lives, when they have experience and resilience. From the age of 30 job satisfaction decreases, which is likely to be at a time where nurses juggle family demands while developing their career path (or not) (Stordeur et al., 2003).

The nurse retention literature predominately addresses nurses of all ages and suggests a variety of organizational strategies. These strategies call for empowering work environments, shared governance structure, autonomy, respect, professional development, leadership support, continued patient interactions, adequate number of staff and skills, as well as collegial relationships within the wider healthcare teams (Chenoweth, Merlyn, Jeon, Tait, & Duffield, 2014; Eltaybani, Noguchi-Watanabe, Igarashi, Saito, & Yamamoto-Mitani, 2018; Fragar & Depczynski, 2011; Halcomb & Ashley, 2017; Twigg & McCullough, 2014). In short, any strategies that increase job and organizational satisfaction are likely to improve retention rates or delay retirement intentions.

Little research has been conducted into the reasons why younger nurses leave. Flinkman et al. (2008; 2015) researched young

registered Finnish nurses' intent to leave the profession and reasons included a perceived imbalance between salary and responsibility, the realization that working as a nurse is extremely demanding both physically and mentally (especially if nursing was a serendipitous career choice), as well as inflexible shift work rotas and working hours (Flinkman et al., 2008; Flinkman & Salanterä, 2015). Extrapolating from this, it can be suggested that younger nurses are more likely to be retained when given more pay, but also more support from managers and colleagues to deal with the demands of the nursing role (Flinkman, Leino-Kilpi, & Salanterä, 2010; Flinkman & Salanterä, 2015), role clarity (Liebermann et al., 2015), and opportunities for career development (Mills, Chamberlain-Salaun, Harrison, Yates, & O'Shea, 2016), as well as flexible work scheduling. In contrast, nurses near retirement are more likely to continue working when their job satisfaction and professional standards are addressed. This includes having a supervisor who understands their professional and personal needs as well as an organization where they feel heard, respected, and part of.

#### 4.1 | Limitations

There are limitations with this integrative review. The articles derived from different perspectives (e.g., human resource literature, nursing, and social policy) employed a range of research approaches, different theoretical concepts, and terminology. However, it was felt that the two main categories chosen (personal and organizational factors) allowed the authors to work effectively with the variety of terms, methods, and approaches. This review could have been further strengthened by broadening the search terms used and searching the grey literature.

## 5 | CONCLUSION

Global nursing workforce shortages as well as the skills and expertise of older nurses mean that it is an imperative that this skilled cadre of the nursing workforce are encouraged to remain in nursing. There is, however, no 'one-size-fits-all' strategy to ensure the extension of older nurses' working lives. Any organization, HR department, and nurse manager will need to consider retention strategies based on their individual organizational and workforce requirements. The organization needs to foster an environment where older nurses feel respected and heard. This can be achieved by offering opportunities to mentor and advise younger staff, colleagues, or patients, as well as with positive adjustments to the work environment to support nurses' health and well-being. To address specifically older nurses' job satisfaction, their supervisors need to be trained and empowered adequately. The supervisor should be able to provide support for the nurse' professional and personal needs. The latter may be flexibility in the work schedule, support in retirement preparation, or specific professional development.

**ACKNOWLEDGEMENT**

None.

**CONFLICT OF INTEREST**

None.

**AUTHOR CONTRIBUTIONS**

MM: Literature search, appraisal, data analysis, data representation, and manuscript drafting; KC: review literature & appraisal, data analysis, and review and editing of manuscript, SMW: review literature & appraisal, data analysis, and review and editing of manuscript.

**PEER REVIEW**

The peer review history for this article is available at <https://publons.com/publon/10.1111/jan.14442>

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Additional supporting information may be found online in the Supporting Information section.

**How to cite this article:** Markowski M, Cleaver K, Weldon SM. An integrative review of the factors influencing older nurses' timing of retirement. *J Adv Nurs*. 2020;76:2266–2285. <https://doi.org/10.1111/jan.14442>

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